A NEW MULTIPLET TABLE FOR Fe I

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ABSTRACT

We have recorded spectra of iron-neon and iron-argon hollow cathode lamps in the region 1700 Å-5 μ m (59,000–2000 cm⁻¹), with Fourier transform (FT) spectrometers at the National Solar Observatory, Tucson, Arizona, and Imperial College, London, UK, and with a high-resolution grating spectrograph at the National Institute of Standards and Technology, Gaithersburg, Maryland. The uncertainty of the strongest lines in the FT spectra is less than 0.002 cm⁻¹ (0.2 mÅ at 3000 Å; 8 mÅ at 2 μ m). Pressure- and current-dependent shifts are less than 0.001 cm⁻¹ for transitions between low-lying levels, increasing to 0.006 cm⁻¹ for transitions between the most highly excited levels. We report 28 new energy levels of Fe I and revised values of another 818 levels. We have identified 9501 lines as due to 9759 transitions in Fe I, and these are presented in the form of a new multiplet table and finding list. This compares with the ~5500 lines due to 467 energy levels in the multiplet tables of Moore (1950, 1959). The biggest increase is in the near-ultraviolet and near infrared, and many of the new lines are present in the solar spectrum. Experimental log (gf) values are included where they are available. A further 125 unidentified lines due to Fe I are given. The tables are also available in computer-readable form.

Subject headings: atomic data — line: identification

1. INTRODUCTION

Spectra of low-charge states of iron play a significant role in solar and stellar spectroscopy due to the high cosmic abundance of iron. The atomic structure of the iron-group elements is complex, and departures from any pure coupling scheme result in a high density of lines in all wavelength regions. The number of identified iron lines in the solar spectrum exceeds that of any other element, and the prediction that many unidentified solar lines in the near-ultraviolet and near-infrared are almost certainly due to Fe I (Johansson 1987) has been recently verified (Nave & Johansson 1993b). An updated analysis of the spectrum of neutral iron, Fe I, has been a long-standing request from astronomers, along with the needs for more and better laboratory data for many other elements, as emphasized at several recent meetings (for example, Smith & Wiese 1992; Grevesse & Noels 1994; and the contributions of Kurucz and Lambert in Leckrone & Sugar 1993). The development of laboratory light sources and the techniques of Fourier transform (FT) spectrometry and high-resolution grating spectrometry have made it possible to record the spectrum with an accuracy and completeness not previously achievable. This has enabled us to extend the term system considerably and to identify many new lines in astrophysical spectra (Nave & Johansson 1993a, b). It is now possible to present an analysis of the spectrum which fulfills many current demands of astronomy.

Despite their age, the Revised Multiplet Table of Moore (1959) and the Ultraviolet Multiplet Table (Moore 1950) (both of which we shall refer to as MT) remain among the most widely used sources of data for users requiring extensive line lists of atomic spectra (Edlén & Martin 1988). This popularity is undoubtedly due to the accuracy with which Moore prepared them, the care with which she selected data to be included, and the convenient format in which the data are presented. However, modern astronomical observations supersede old ones in signal-to-noise ratio, resolution, wavelength accuracy, and spectral wavelength coverage. The lineby-line analysis of solar and stellar spectra has been replaced by comparisons between synthetic and observed spectra. All this puts new demands and requirements on the atomic data needs, and extensions and revisions to the MT have become an urgent necessity. Extensions are particularly needed in the nearultraviolet, where many new lines have been identified since the publication of the UV tables, and the near-infrared above 1.3 μ m, which is not covered by the MT. Revisions of the MT are required in all wavelength regions, as the accuracy of many lines in the MT has been substantially improved in recent years. The requirements of astronomy now demand wavelengths to within 1 mÅ in the visible and ultraviolet, and 0.001 cm⁻¹ in the infrared. The data in the MT do not fulfill these requirements—as a recent search for the antecedents of a weak Fe I line showed, some of the wavelengths quoted actually go

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back to measurements made over 100 years ago (Learner, Davies, & Thorne 1991).

In addition to the MT, Moore published three volumes of atomic energy levels (Moore 1971), which also became standard references for atomic spectra. These were updated for the iron-group elements by Sugar & Corliss (1985, hereafter AEL-SC). The table for Fe I in AEL-SC incorporates the revised levels of Crosswhite (1975) and Litzén (1976) and contains a list of references to earlier work. Since 1985, revisions to the energy levels and extensions to the term system have been made by Johansson (1987), Brown et al. (1988), O'Brian et al. (1991), Zhu & Knight (1992); further extensions based on the spectra presented in the current paper have been published by Johansson & Learner (1990), Nave & Johansson (1993a, b), Nave et al. (1994), and Johansson et al. (1994). Bièmont et al. (1985) also compiled a list of Fe I lines in the infrared solar spectrum.

The most recent compilation of gf-values for the iron-group elements is by Fuhr, Martin, & Wiese (1988). The table for Fe I includes gf-values for \sim 1950 lines, some of which have an uncertainty of only a few percent. More recent measurements include those of O'Brian et al. (1991), Bard, Kock, & Kock (1991), Kock, Kroll, & Schnehage (1984), and Meylan et al. (1993). In total, \sim 2600 Fe I lines now have measured gf-values. The majority of these are between 3000 Å and 1 μ m, where almost half of the observed Fe I lines now have measured gf-values. In the region below 3000 Å this drops to only 20%, and there are very few lines above 1 μ m with measured gf-values.

Many astrophysicists now use the calculations of semi-empirical gf values by Kurucz (1989), which are based on experimental energy levels such as the ones presented in the present study. The calculations have the advantage that they include significantly more lines than it is possible to measure in the laboratory, many of which are important in analyses of Fraunhofer spectra of the Sun and cool stars. The disadvantage of these calculations is that their accuracy cannot be estimated and is often poor, especially for weak lines that may be the lines of most interest in studies of the iron abundance in the Sun.

In this paper we present the analysis of the laboratory spectrum of Fe I in the form of a new multiplet table. The analysis is based on both FT and grating measurements of iron-neon and iron-argon hollow cathode lamps in the region 1700 Å to $5 \mu m$ (58,800–2000 cm⁻¹). The precision of the wavenumbers obtained from an FT spectrometer is up to an order of magnitude better than that obtainable with a grating spectrometer, but we have also included Fe I lines which were present in only the ultraviolet grating spectra, in which the number of Fe I lines is significantly higher (Nave & Johansson 1993a). We present revised values for 818 energy levels and values of 28 new levels. These give 9759 identifications of 9501 lines, which have been ordered into 2785 multiplets. Experimental gf-values are also given where they are available. A further 125 unidentified lines due to Fe I are presented.

2. EXPERIMENTAL DETAILS

The laboratory spectra used in this study were obtained using three different instruments: the f/55 IR-visible-UV FT spectrometer at the National Solar Observatory (NSO), Tuc-

son, Arizona, for the region $2000~\rm cm^{-1}$ to $35{,}000~\rm cm^{-1}$ (5–0.29 μm); the f/25 vacuum UV FT spectrometer at Imperial College, London, for FT spectra in the region $33{,}000~\rm cm^{-1}$ to $59{,}000~\rm cm^{-1}$ ($3000{-}1700~\rm \mathring{A}$); and the $10.7~\rm m$ grating spectrograph at the National Institute of Standards and Technology (NIST), Gaithersburg, Maryland, for high-dispersion grating spectra above $30{,}770~\rm cm^{-1}$ ($<3250~\rm \mathring{A}$).

The light source used for the FT investigations was a hollow cathode lamp, run in either neon or argon. In addition to Fe I spectra, this source also gives spectra of Fe II and the neutral and singly ionized spectra of the carrier gas used. The cathode was usually an uncooled open-ended cylinder of pure iron, 8 mm in bore and 35 mm long. The metal case of the lamp formed the anode. The running pressures were ~ 5 mbar of Ne or 4 mbar of Ar for the visible and IR observations, and 3-4 mbar of Ne for the UV observations. The currents ranged from 320 mA to 1.1 A. In general, Ne gave a better signal to noise ratio for Fe I except in the region $14,000-17,500 \text{ cm}^{-1}$ (7100-5700 Å), where the strong Ne lines raise the noise level in the spectrum. Argon-iron spectra were therefore used in this region and were also recorded in the region 17,500–35,000 cm⁻¹ (2857–5714 Å) to give an absolute wavelength calibration based on Ar II lines. One infrared spectrum was recorded with a water-cooled cathode as source and a higher current of 1.4 A. Survey spectra were taken out to 600 cm⁻¹ (16 μ m), but they showed hardly any Fe I lines because of the high noise level from the thermal infrared background.

The wavenumber, integrated intensity, width and damping of all lines in the FT spectra were obtained using Brault's DE-COMP program (Brault & Abrams 1989), which fits a Voigt profile to each line. The wavenumber scale was calibrated from 26 Ar II lines in the visible (Learner & Thorne 1988), and the calibration was carried into the UV and infrared using widerange spectra (Nave et al. 1991, 1992). Deuterium and tungsten lamps were used for intensity calibration.

The Doppler widths (half-width at half-maximum) varied from $\sim 0.012 \text{ cm}^{-1}$ at 5000 cm⁻¹ (0.05 Å at 2 μ m) to ~ 0.12 cm^{-1} at 50,000 cm^{-1} (5 mÅ at 2000 Å). This corresponds to a Doppler temperature of \sim 2500 K; the source is, however, not in thermal equilibrium, and the intensity distribution is generally quite different from that of astrophysical spectra. Lines emitted from levels of high excitation are also Lorentz broadened, so the observed line widths are often higher than this. The uncertainty of the wavenumber of each line is the sum of statistical and systematic errors. The statistical error is equal to the half-width at half-maximum divided by the signal-to-noise ratio (Brault 1987). For lines with a signal-to-noise ratio of \sim 100 this varies from \sim 0.0002 cm⁻¹ (0.8 mÅ at 2 μ m) in the infrared to 0.001 cm $^{-1}$ (0.01 mÅ at 3000 Å) in the ultraviolet. The weakest lines in the spectra have a signal-to-noise ratio of \sim 3, and the accuracy is then of the order 0.005 cm⁻¹ (0.02 Å at 2 μ m) in the infrared and 0.05 cm⁻¹ (5 mÅ at 3000 Å) in the ultraviolet. The most important systematic errors are the calibration error for each spectrum, which is of the order 0.001 cm⁻¹, and possible pressure or current-dependent shifts. The latter have been estimated at less than 0.001 cm⁻¹ for levels of low excitation, rising to ~ 0.006 cm⁻¹ for the highest excitation levels. A full description of the procedure, with details of the FT spectra used in the present investigation, has been given elsewhere (Learner & Thorne 1988; Nave et al. 1991, 1992).

Grating spectra have been recorded in the region $30,770-58,820 \text{ cm}^{-1}$ (3250-1700 Å) using iron-neon and iron-argon hollow cathode lamps. The iron-neon hollow cathode was run in continuous mode with DC currents of 0.6-0.8 A and a gas pressure of $\sim 1.3 \text{ mbar}$. The iron-argon hollow cathode was run in pulsed mode with peak currents of $\sim 100 \text{ A}$, pulse width of $70 \mu \text{s}$ and frequency 100 Hz, and pressure of $\sim 0.3-0.4 \text{ mbar}$. The spectra were calibrated from Ritz wavelengths obtained from interferometrically measured Fe II lines (G. Norlén, private communication), and the uncertainty in the grating wavelengths is $\sim 3 \text{ mÅ}$ ($\sim 50 \text{ mK}$ at 2500 Å). The grating spectra are being used in an extended and comprehensive analysis of Fe II (Johansson & Baschek 1988).

3. IDENTIFICATION OF LINES FROM KNOWN LEVELS

The procedure we have followed to identify Fe I lines is to compare wavenumbers of observed lines with wavenumbers derived from measured energy levels. We will call the latter "Ritz wavenumbers." The energy levels we have used in identifying the lines were from AEL-SC (Sugar & Corliss 1985), Brown et al. (1988), O'Brian et al. (1991), together with those we have located in our recent investigations of Fe I (Johansson & Learner 1991; Nave & Johansson 1993a; Nave et al. 1994; Johansson et al. 1994). To minimize the spurious coincidences of observed wavenumbers and Ritz wavenumbers, it is important to have a set of energy level values that is both accurate and appropriate to the sources used (O'Brian et al. 1991). We have therefore revised the energy levels from the observed transitions in the FT spectra, using a least-squares fitting program (Radziemski et al. 1972) in which each line was assigned a weight inversely proportional to the square of the wavenumber uncertainty.

The values of the revised energy levels are listed in Table 1. We have listed the terms in order of the energy of the lowest fine structure level of each term. With the exception of a few levels, which we have carefully checked, the values are within the estimated errors of those previously published. In addition, 28 new energy levels have been found that have not been published elsewhere, and these are marked with an asterisk beside the level value in column (4).

Many energy levels in Fe I cannot be adequately described in any particular coupling scheme. We have given LS designations to all the levels where no other coupling scheme is obvious in order to label them and to help identify which configurations are incompletely represented. JK designations have been assigned to levels due to the configurations $3d^64s(^6D)6d, 4f, 5g,$ and $3d^7(^4F)4f$. Abbreviated term designations are given in column (2). These are extensions of the term designations used in the MT and follow the convention established in earlier papers (Brown et al. 1988; Nave & Johansson 1993a). The term designations and abbreviations are discussed in detail in § 4.1. Nine of the levels could not be assigned to a configuration and are represented only by their energy level values.

The primary criterion for identification of the lines was coincidence between the observed wavenumber and the Ritz wavenumber derived from the energy levels in Table 1, taking into account the uncertainty of the wavenumbers, the uncertainty of the levels, and possible blended lines. In many cases more than one identification is possible, particularly in the

ultraviolet where many of the lines were detectable only in the less accurate grating spectra. Further criteria were thus applied to verify the identifications. In the grating UV spectra, Fe I and Fe II lines could often be distinguished by their relative intensities in spectra obtained from pulsed and unpulsed hollow cathodes. The absorption data of Brown et al. (1988) were also helpful as they contain no Fe II lines. Comparison was also made with published linelists and atlases of the solar spectrum (Moore, Minnaert, & Houtgast 1966; Moore, Tousey, & Brown 1982, 1992; Pierce & Breckinridge 1973; Swensson et al. 1970; Livingstone & Wallace 1991; Geller 1992), where all Fe I lines are present but Fe II lines of high excitation are absent.

4. TERM STRUCTURE AND TRANSITIONS

The term structure of the iron-group elements is described in detail in Johansson & Cowley (1988) and specific details pertaining to Fe I are given in Brown et al. (1988), Johansson & Learner (1991), and Nave & Johansson (1993a). The majority of the Fe I levels belong to the two configuration systems $3d^64snl$ or $3d^7nl$. Terms at low-excitation energies belong to the subconfigurations $3d^6(^ML)4s4l$ and $3d^7(^ML)4l$ and are often fairly well described in the LS coupling scheme. Higher excitation terms are usually of the form $3d^64s(^6D)nl$ or $3d^7(^4F)nl$ and are in intermediate or JK coupling. The strongest transitions occur within each system when the parent or grandparent term, ML , in the subconfiguration is unchanged.

4.1. Notation of Terms

In the MT the spectroscopic terms were abbreviated, as it was not possible at that time to describe them by their full spectroscopic notations. Since that time the convention used for the abbreviations has become well established and is the one adopted in the AEL-SC. The convention labels the lowest even-parity LS term of multiplicity M and orbital angular momentum L as $a^M L$, the next lowest, $b^M L$, and so on (e.g., the lowest 3F term is labeled a^3F , the next lowest b^3F ...). The lowest odd-parity term is labeled $z^M L^o$, the next lowest $y^M L^o$ and so on. We have kept to this convention for all the terms that are given in the MT, but it cannot in general be extended to higher terms. It is not consistent—for example the lowest 5D term is labeled a^5D , but the next lowest is labeled e^5D —and it is a useful designation only in LS coupling, which does not apply to highly excited terms.

All of the known highly excited terms in Fe I with n > 4 are formed by adding a running electron to either the $3d^64s$ 6D term or the $3d^7$ 4F term in Fe II. These two terms are called the "parent terms." Addition of one electron to each of these parents give the subconfigurations $3d^64s$ $(^6D)nl$ and $3d^7(^4F)nl$, and the abbreviations we have adopted are intended to indicate the parent of the subconfiguration. Terms of the form $3d^64s$ $(^6D)nl^ML$ are abbreviated to the form s $^6Dnl^ML$ and terms of the form $3d^7(^4F)nl^ML$ to $^4Fnl^ML$. Highly excited terms with n = 4 which were not labeled by Moore belong to other parents and grandparents and are of the form $3d^6(^ML')4s^4p(^3P)^ML$, $3d^6(^ML')4s^4p(^1P)^ML$, or $3d^7(^ML')4p^ML$. These have been given the abbreviations $L'sp3^ML$, $L'sp1^ML$, and $M'L'4p^ML$, respectively.

Many highly excited configurations with $l \ge 3$ are best de-

TABLE 1 Energy Levels of Fe i

Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)	Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)
$\frac{1}{2}$ $3d^64s^2$	a ⁵ D	4	.000				4	26627.607	.001
2, 20, 10		3	415.933	.001	$3d^{7}(a^{2}D)4s$	$a\ ^3D$	3	26224.967	.001
⊣ ນ		2	704.007	.001	()		2	26623.733	.001
		1	888.132	.001			1	26406,463	.001
		0	978.074	.001	$3d^6(^5D)4s4p(^3P)$	z $^5F^{ m o}$	5	26874.548	.001
$3d^{7}(^{4}F)4s$	$a\ ^5F$	5	6928.268	.001	() . ()		4	27166.818	.001
` '		4	7376.764	.001			3	27394.689	.001
		3	7728.059	.001			2	27559.581	.001
		2	7985.784	.001			1	27666.346	.001
		1	8154.713	.001	$3d^{7}(^{2}\!P)4s$	$a\ ^1P$	1	27543.001	.001
	$a\ ^3F$	4	11976.238	.001	$3d^{7}(a^{2}D)4s$	$a\ ^1D$	2	28604.611	.001
		3	12560.933	.001	$3d^{7}(^{2}\!H)4s$	$a\ ^1H$	5	28819.952	.001
		2	12968.553	.001	$3d^6(^5D)4s4p(^3P)$	z $^5P^{ m o}$	3	29056.322	.001
$3d^{7}(^{4}\!P)4s$	$a\ ^5P$	3	17550.180	.001			2	29469.022	.001
		2	17726.987	.001			1	29732.734	.001
		1	17927.381	.001	$3d^64s^2$	$a^{-1}I$	6	29313.006	.001
$3d^64s^2$	$a\ ^3P$	2	18378.185	.001		$b\ ^3D$	3	29371.810	.001
		1	19552.477	.001			2	29356.742	.001
	_	0	20037.815	.002		_	1	29320.024	.001
$3d^6(^5D)4s4p(^3P)$	z $^7D^{\circ}$	5	19350.890	.001		$b^{-1}G$	4	29798.934	.001
		4	19562.438	.001	$3d^6(^5D)4s4p(^3P)$	$z~^3F^{o}$	4	31307.243	.001
		3	19757.031	.001			3	31805.069	.001
		2	19912.494	.001		2	2	32133.989	.001
	2	1	20019.634	.001		$z~^3D^{o}$	3	31322.611	.001
$3d^64s^2$	a^3H	6	19390.167	.001			2	31686.349	.001
		5	19621.005	.001	0	2	1	31937.323	.001
	2 —	4	19788.250	.001	$3d^8$	$c\ ^3F$	4	32873.630	.001
	$b^3 F$	4	20641.109	.001			3	33412.715	.001
		3	20874.481	.001	7 (Arm)	5	2	33765.304	.001
7.0	2	2	21038.986	.001	$3d^{7}(^{4F})4p$	$y\ ^5D^{f o}$	4	33095.939	.001
$3d^{7}(^{2}G)4s$	$a\ ^3G$	5	21715.731	.001			3	33507.121	.001
		4	21999.129	.001			2	33801.570	.001
- 16 (57)	7 770	3	22249.428	.001			1	34017.101	.001
$3d^6(^5D)4s4p(^3P)$	$z^{7}F^{o}$	6	22650.414	.001		5 ==0	0	34121.601	.001
		5	22845.867	.001		y ${}^5F^{\circ}$	5	33695.395	.001
		4	22996.672	.001			4	34039.514	.001
		3 2	23110.937 23192.498	.001 .001			3	34328.750	.001
		1	23192.498	.001			2	34547.209	.001
		0	23270.382	.001	$3d^6(^5D)4s4p(^3P)$	z^3P^0	1 2	34692.146 33946.931	.001
$3d^{7}(^{4}P)4s$	b^3P	2	22838.321	.002	$3a^*(^*D)484p(^*F)$	$z \cdot F$	1	34362.871	.001 .001
3a (1)48	0 1	1	22946.814	.001			0	34555.595	.001
		0	23051.748	.001	$3d^6 4s^2$	b 1D	2	34636.790	.001
$3d^6(^5D)4s4p(^3P)$	$z^{7}P^{0}$	4	23711.454	.001	$3d^{7}(^{4}F)4p$	z ${}^5G^{\circ}$	6	34843.955	.001
\mathcal{I}_{a} (\mathcal{D}) 484 p (\mathcal{I})	2 1	3	24180.860	.001	3a (1)+p	2 G	5	34782.419	.002
		2	24506.915	.001			4	35257.322	.001
$3d^64s^2$	b^3G	5	23783.617	.001			3	35611.623	.001
5w 10	v G	4	24118.817	.001			2	35856.400	.001
		3	24338.765	.001		$z~^3G^{ m o}$	5	35379.206	.001
$3d^{7}(^{2}P)4s$	c^3P	2	24335.764	.001		~ 4	4	35767.562	.001
54 (1).0	0	1	24772.016	.001			3	36079.370	.001
		Ô	25091.597	.002		$y~^3F^{\circ}$	4	36686.174	.001
$3d^{7}(^{2}G)4s$	$a\ ^1G$	4	24574.653	.001		9 -	3	37162.744	.001
$3d^{6}(^{5}D)4s4p(^{3}P)$	$z^{5}D^{0}$	4	25899.987	.001			2	37521.158	.001
(-) ··· · P(-)		3	26140.177	.001	$3d^6(^5D)4s4p(^1P)$	$y~^5P^{o}$	3	36766.964	.001
		2	26339.694	.001	5= (=) 10 1p(1)	9 1	2	37157.564	.001
		1	26479.379	.001			ĩ	37409.552	.001
		0	26550.477	.001	$3d^{7}(^{2}F)4s$	$d^{3}F$	2	36940.588	.001
	b^3H	6	26105.906	.001	` /	-	3	36975.586	.001
$3d^{7}(^{2}H)4s$	0 11	0							

TABLE 1—Continued

Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)	Assigned Configuration	Term (abbr)	J	(Level cm ⁻¹)	Error (cm ⁻¹
$3d^{7}(^{4}F)4p$	<i>y</i> ³ <i>D</i> °	3	38175.352	.001			0	455	595.083	.001
		2	38678.036	.001	$3d^6(^3P)4s4p(^3P)$	$x{}^3D^{ o}$	3	452	220.678	.001
	_	1	38995.733	.001			2		281.830	.001
$3d^6(^5D)4s4p(^1P)$	x $^5D^{o}$	4	39625.801	.001			1		551.764	.001
		3	39969.850	.001	$3d^6(^3H)4s4p(^3P)$	$y~^3G^{o}$	5		294.843	.001
		2	40231.333	.001			4		128.399	.001
		1	40404.515	.001	2 16 (3> 4 (3>	5 ~ 0	3		62.971	.001
5 (6 0) + 2 +	7.00	0	40491.281	.001	$3d^6(^3F)4s4p(^3P)$	x $^5G^{\circ}$	6		508.358	.002
$3d^5(^6S)4s^2 4p$	y 7P $^{\circ}$	4	40421.935	.001			5		726.127	.001
		3	40207.088 40052.032	.001 .001			4		333.220 913.494	.002
2.16(5D) 4-4-(1D)	x $^5F^{\circ}$	2 5	40052.052	.001			3 2		964.954	.003
$3d^6(^5D)4s4p(^1P)$	$x {}^{\circ}F {}^{\circ}$	3 4	40594.429	.001	$3d^6(^3H)4s4p(^3P)$	z^3I°	7		978.005	.002
		3	40842.151	.001	3a (11)484p(1)	z 1	6		026.968	.002
		2	41018.048	.001			5		35.817	.002
		1	41130.596	.001	$3d^{7}(^{4}P)4p$	w $^5P^{ m o}$	3		37.094	.001
$3d^{8}$	d^{8} 3P	2	40871.409	.001	3w (1)+p	w 1	2		313.534	.001
Ju	<i>a</i> 1	1	41178.409	.001			1		10.378	.002
		Ô	41234.502	.001	$3d^6(^3P)4s4p(^3P)$	z $^3S^{\circ}$	1		600.815	.001
$3d^6(^3P)4s4p(^3P)$	z $^5S^{\circ}$	2	40894.987	.001	(-) (-)	y^3P^0	2		727.071	.001
3w (1) 10 .p(1)	$x^{5}P^{\circ}$	3	42532.738	.001		3 -	1		01.829	.001
	~ -	2	42859.775	.002			0		572.537	.003
		1	43079.020	.002	$3d^{7}(^{4}P)4p$	$u~^5D^{o}$	4		720.839	.001
$3d^6(^3H)4s4p(^3P)$	$y~^5G^{ m o}$	6	42784.349	.002	\		3	467	744.990	.001
5 () ·- · · · · · · · · · · · ·	9 -	5	42911.914	.001			2	468	388.514	.001
		4	43022.982	.002			1	471	77.231	.001
		3	43137.484	.001			0	471	71.528	.002
		2	43210.022	.002	$3d^6(^3F)4s4p(^3P)$	$x~^3F^{\circ}$	4		889.139	.001
$3d^64s(^6\!D)5s$	$e^{7}D$	5	42815.852	.001			3		92.709	.001
		4	43163.323	.001	(2-)	2	2		97.007	.001
		3	43434.624	.001	$3d^6(^3H)4s4p(^3P)$	$z~^3H^{\circ}$	6		982.317	.002
		2	43633.530	.001			5		008.368	.001
(2)	5 *0	1	43763.977	.001	2.17(411) #	5.77	4		106.481	.001
$3d^6(^3H)4s4p(^3P)$	z $^5I^{\circ}$	6	* 42903.858	.002	$3d^{7}(^{4}F)5s$	$e\ ^5F$	5		005.503	.001
		5	43460.118	.002			4 3		377.952	.001
	z $^5H^{\circ}$	4 6	43442.702 43321.093	.003 .005			2		755.534 036.670	.001
	z $^{\circ}H$ $^{\circ}$	5	42991.694	.003			1		221.321	.001
		4	43108.914	.002	$3d^{7}(^{4}P)4p$	$w~^3D^{o}$	3		017.185	.001
		3	43325.961	.002	34 (1)+p	w <i>D</i>	2		136.081	.001
$3d^6(^3P)4s4p(^3P)$	w 5D o	4	43499.502	.001			1		272.024	.001
3a (1)+0+p(1)	w D	3	43922.665	.001	$3d^6(^3G)4s4p(^3P)$	w $^5G^{o}$	6		363.373	.002
		2	44183.625	.001	54 (G) 15 1p(1)	w G	5		120.225	.001
		1	44411.157	.001			4		590.045	.001
		0	44458.931	.001			3		593.236	.001
$3d^6(^3F)4s4p(^3P)$	v $^5D^{o}$	4	44022.522	.001			2	478	331.150	.001
() 1 ()		3	44166.203	.001	$3d^6(^3P)4s4p(^3P)$	$Psp3\ ^1D^{f o}$	2	474	119.684	.001
		2	44664.072	.001	$3d^{7}(^{2}G)4p$	z $^1G^{o}$	4	474	152.714	.001
		1	44760.743	.001	$3d^{7}(^{4}P)4p$	$y~^3S^{f o}$	1	475	555.607	.001
		0	44826.897	.002	$3d^{6}(^{3}G)4s4p(^{3}P)$	$v^{5}F^{o}$	5	476	506.111	.001
	w $^5F^{\circ}$	5	44243.682	.002	, , - , ,		4	479	929.994	.001
		4	44415.071	.001			3	48	122.925	.001
		3	44551.332	.002			2	482	238.844	.001
		2	44285.451	.002		_	1		350.603	.001
	_	1	44378.339	.002	$3d^6(^3\!F)4s4p(^3\!P)$	$x~^3G^{ m o}$	5		334.547	.001
$3d^{7}(^{4}P)4p$	$y^{5}S^{0}$	2	44511.809	.001			4		312.115	.001
$3d^64s(^6D)5s$	$e^{5}D$	4	44677.003	.001		_	3		834.218	.002
		3	45061.326	.001	$3d^6(^3G)4s4p(^3P)$	y ⁵H°	6		855.140	.002
		2	45333.872	.001			5		231.277	.001
		1	45509.149	.001			4	483	361.879	.001

TABLE 1—Continued

Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)	Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)
		3	48475.683	.002		$e^{7}P$	4	50475.285	.001
$3d^{7}(^{4}F)5s$	$e\ ^3F$	4	47960.937	.001			3	50611.258	.001
, ,		3	48531.862	.001		_	2	50861.324	.001
		2	48928.385	.001		$e{}^5G$	6	50522.941	.001
$3d^54s^2(^6S)4p$	v 5P $^{\circ}$	3	47966.582	.001			5	50703.867	.001
		2	48163.443	.001			4	50979.576	.001
		1	48289.868	.001			3	51219.012	.001
$3d^6(^3H)4s4p(^3P)$	$Hsp3$ $^{1}I^{o}$	6	* 48098.290	.001			2	51370.142	.001
$3d^{7}(^{4}P)4p$	x^3P°	2	48304.640	.001	$3d^{7}(^{2}G)4p$	$z^{-1}F^{0}$	3	50586.875	.002
		1	48516.135	.001	$3d^6(^3F)4s4p(^3P)$	$x {}^1G^{o}$	4	50613.980	.002
		0	48460.110	.002	$3d^64s(^6\!D)4d$	$e^{7}G$	7	50651.629	.002
$3d^{7}(^{2}G)4p$	$z^{1}H^{0}$	5	48382.600	.001			6	50967.828	.001
$3d^6(^3H)4s4p(^3P)$	$y {}^1G^{o}$	4	48702.532	.001			5	51228.550	.001
$3d^{7}(^{2}G)4p$	w^3F°	4	49108.893	.001			4	51334.908	.001
		3	49242.883	.001			3	51460.515	.001
() () (2-)	2 - 0	2	49433.128	.002			2	51539.717	.001
$3d^6(^3F)4s4p(^3P)$	$v~^3D^{ { m o}}$	3	49135.020	.001	0.164 (612) #	u $^5F^{\circ}$	1	51566.799	.002
		2	49242.618	.001	$3d^64s(^6\!D)5p$	$u^{\circ}F^{\circ}$	5	51016.657	.001
	7.00	1	49297.632	.002			4	51381.454	.001 .001
$3d^64s(^6\!D)5p$	n 7D $^{\circ}$	5	49352.338	.001			3	51619.073 51827.410	.001
		4	49558.731	.001			2 1	51945.814	.001
		3	49805.254 50008.519	.001	$3d^6(^3G)4s4p(^3P)$	$x{}^3H^{ \mathrm{o}}$	6	51023.159	.001
		2	50152.616	.001 .001	$3a^{*}(^{*}G)484p(^{*}F)$	$x \cdot H$	5	51023.139	.002
217(20)4	$y^3 H^{\circ}$	1	49434.160	.001			4	51409.121	.002
$3d^7(^2G)4p$	$y \circ H \circ$	6 5	49604.424	.002	$3d^64s(^6D)5p$	t⁵D°	4	51076.625	.002
		4	49726.987	.002	3a 48(D)3p	i D	3	51361.388	.001
	$v~^3G^{ m o}$	5	49460.899	.002			2	51629.998	.001
	$v \cdot G$	4	49627.881	.001			1	51827.851	.001
		3	49850.587	.001			Ô	51941.537	.001
$3d^6(^3F)4s4p(^3P)$	$Fsp3\ ^1F^{\circ}$	3	49477.124	.001	$3d^64s(^6D)4d$	f ^{5}F	5	51103.188	.001
$3d^{6}4s(^{6}D)5p$	$n^{7}F^{\circ}$	6	49758.139	.002	24 15(2)	J –	4	51461.667	.001
34 48 (D)3p	70 1	5	50052.191	.001			3	51604.100	.001
		4	50303.222	.001			2	51705.011	.001
		3	50433.022	.001			1	51754.494	.001
		2	50555.759	.001		$e{}^5S$	2	51148.907	.001
		1	50627.433	.002	$3d^64s(^4\!D)5s$	$e\ ^3D$	3	51294.217	.001
		0	50659.680	.002	,		2	51739.917	.001
$3d^{7}(^{2}P)4p$	$w~^3P^{\circ}$	2	50186.831	.001			1	52039.889	.001
(-) ·F		1	50043.210	.001	$3d^{7}(a^{2}D)4p$	$v~^3F^{ m o}$	4	51304.601	.001
		0	49951.341	.002	` , -		3	51365.308	.001
$3d^64s(^6D)5p$	$n^{7}P^{0}$	4	50185.740	.001			2	51201.286	.002
- () 1		3	50628.369	.001	$3d^64s(^4\!D)5s$	$g\ ^5D$	4	51350.489	.001
		2	50901.169	.001			3	51770.554	.001
$3d^64s(^6D)4d$	$e\ ^7 F$	6	50342.126	.001			2	52049.820	.001
` ,		5	50833.435	.001			1	52214.342	.001
		4	51192.270	.001			0	52257.342	.001
		3	51148.845	.001	$3d^{7}(^{2}H)4p$	$u~^3G^{\circ}$	5	51373.907	.001
		2	51331.049	.001			4	51668.183	.002
	_	1	51207.995	.001		-	3	51825.770	.001
	$f^{7}D$	5	50377.905	.001	$3d^64s(^6D)4d$	e^7S	3	51570.094	.001
		4	50807.994	.001	$3d^6(^3H)4s4p(^3P)$	$Hsp3$ $^{1}H^{\circ}$	5	51630.175	.002
		3	50861.813	.001	$3d^64s(^6\!D)5p$	u $^5P^{\circ}$	3	51692.007	.001
		2	50998.642	.001			2	51944.781	.001
	-	1	51048.104	.001	7 (2-)	•	1	52110.598	.002
	$f\ ^5D$	4	50423.134	.001	$3d^{7}(^{2}P)4p$	$y \stackrel{1}{\longrightarrow} D^{\circ}$	2	51708.304	.001
		3	50534.394	.001	$3d^6(^3H)4s4p(^3P)$	$x^{1}D^{0}$	2	51762.073	.001
		2	50698.617	.001	$3d^64s(^6D)4d$	$e\ ^5P$	3	51837.235	.001
		1	50880.099	.001			2	52067.466	.001
		0	50981.009	.002			1	52019.666	.001

TABLE 1—Continued

Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)	Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹
$3d^{7}(^{2}P)4p$	u^3D°	3	51969.098	.001			2	54530.649	.002
		2	52296.916	.002			1	54603.136	.001
		1	52512.453	.002	$3d^6(^3D)4s4p(^3P)$	$Dsp3\ ^5F^{f o}$	5	54013.748	.002
7 . 2 .	${}^{2}P4p{}^{1}P^{0}$	1	52180.817	.002			4	53881.802	.002
$3d^7(a^2D)4p$	t^3D°	3	52213.227	.002			3	53733.590	.002
		2	52682.916	.001			2	53723.075	.002
2.17.(211).4	w^3H°	1	52857.800	.002	2.17(417) 4.1	3.00	1	53696.863	.004
$3d^{7}(^{2}H)4p$	$w^{\circ}H^{\circ}$	6 5	52431.443 52613.086	.002 .002	$3d^7(^4\!F)4d$	$e\ ^3G$	5	53739.434	.001
		4	52768.739	.002			4 3	54066.514 54379.380	.001 .001
	y^3I^{o}	7	52654.988	.003		f 3D	3	53747.496	.001
	<i>y</i> 1	6	52513.556	.002		, D	2	54066.769	.001
		5	52898.994	.003			1	54449.343	.001
$3d^{7}(^{4}F)5p$	$^4F5p~^3G^{ m o}$	5	52806.997	.002	$3d^{7}(a^{2}D)4p$	$x\ ^1F^{ extsf{o}}$	3	53763.276	.002
- ()-1	•	4	54017.577	.002	$3d^{6}4s(^{6}D)^{6}s$	$g^{7}D$	5	53800.855	.001
		3	54357.401	.001	()		4	54124.740	.001
$3d^{7}(a^{2}D)4p$	$v~^3P^{\circ}$	2	52916.291	.002			3	54404.775	.002
		1	53229.937	.002			2	54611.706	.002
$3d^6(^3G)4s4p(^3P)$	$Gsp3\ ^3F^{f o}$	4	52953.625	.001			1	54747.594	.001
		3	53357.511	.001	$3d^{7}(^{2}P)4p$	x^3S^0	1	53808.352	.002
	_	2	53749.401	.002	$3d^{7}(^{4}F)5p$	$^4F5p~^3D^{\circ}$	3	53837.847	.001
$3d^{7}(^{4}F)4d$	$g\ ^5F$	5	53061.314	.001			2	54342.775	.002
		4	53393.669	.001	- 7 (4-)	2	1	54807.246	.002
		3	53830.971	.001	$3d^{7}(^{4}\!F)4d$	$e^{3}H$	6	53840.616	.001
		2	54257.498	.001			5	54266.712	.001
2 17 (AT) 5	ATTE 500	1	54386.182	.001	2.16(3.0) 4. 4. (3.0)	D 25D0	4	54555.414	.001
$3d^{7}(^{4}\!F)5p$	⁴ F5p ⁵ G°	6	53069.353 53586.506	.002 .002	$3d^6(^3D)4s4p(^3P)$	$Dsp3\ ^5D^{f o}$	4	54301.336	.001
		5 4	53852.110	.002			3 2	53891.522 53913.016	.001
		3	54134.651	.002			1	53975.74	.002
		2	54257.675	.002	$3d^6(^3G)4s4p(^3P)$	$t~^3G^{ m o}$	5	53983.289	.003
	4F5p 5F °	5	53084.785	.001	Sa(G)+s+p(I)	ı u	4	54237.411	.003
	1 5p 1	4	53388.633	.001			3	54600.346	.001
		3	53661.075	.001	$3d^6(^3D)4s4p(^3P)$	t ⁵P°	3	54004.714	.001
		2	54042.523	.002	5		2	54112.226	.001
		1	54224.416	.002			1	54271.058	.002
$3d^{7}(^{2}H)4p$	${}^{2}H4p{}^{1}I^{\circ}$	6	53093.525	.002	$3d^64s(^6D)6s$	s $^6\!D6s$ 5D	4	54479.898	.001
$3d^{7}(^{4}F)4d$	h 5D	4	53155.141	.001	,		3	54864.827	.001
,		3	53545.829	.001			2	55134.164	.001
		2	53966.658	.001			1	55305.623	.002
	_	1	54132.547	.001		_	0	55390.516	.003
	f 5P	3	53160.589	.001	$3d^{7}(^{4}F)4d$	$f\ ^3F$	4	54683.318	.001
		2	53568.747	.001			3	55124.934	.001
	.5~	1	53925.196	.001	2 16 (3 (2) 4 4 (37))	1 ~~	2	55378.807	.005
	$f\ ^5G$	6	53169.142	.001	$3d^{6}(^{3}G)4s4p(^{3}P)$	$w^{1}G^{0}$	4	54810.852	.003
		5	53281.685	.001	$3d^7(^4\!F)4d$	$e^{\ 3}P$	2	54879.679	.001
		4	53768.975	.001			1	55376.086	.002
		3	54161.135 54275.672	.001	$3d^6(^1G)4s4p(^3P)$	$s{}^3G^{ m o}$	0	55726.52	.071
	$e{}^5H$	2 7	54375.673 53275.179	.001 .002	$3a^{\circ}(G)484p(P)$	s G	5 4	55429.815	.002
	e - n	6	53352.985	.002			3	55905.532 55790.692	.003 .002
		5	53874.253	.001		$v~^3H^{ \circ}$	6	55489.738	.002
		4	54237.209	.002		0 11	5	55525.558	.003
		3	54490.995	.001			4	55446.004	.002
$3d^6(^3G)4s4p(^3P)$	$y\ ^1H^{\circ}$	5	53313.434	.003	$3d^{7}(a^{2}D)4p$	$w\ ^1D^{\circ}$	2	55754.229	.003
$3d^{7}(^{4}F)5p$	${}^{4}F5p {}^{3}F^{\circ}$	4	53328.831	.001	$3d^{7}(^{2}H)4p$	${}^{2}H4p{}^{1}H^{\circ}$	5	55907.174	.002
· / ·	<i>x</i> -	3	54289.030	.001	$3d^{6}(^{3}G)4s4p(^{3}P)$	$Gsp3$ $^{1}F^{0}$	3	56097.832	.002
		2	54706.383	.002	$3d^{7}(^{4}F)6s$	4F6s 5F	5	56113.883	.001
	⁴ F5p ⁵ D°	4	53610.408	.001	· · · · · · · · · · · · · · · · · · ·		4	56516.214	.002
	•	3	53784.746	.002			3	57510.662	.004

TABLE 1—Continued

2. 4.	Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)	Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)
yy4Apus.			2	57528.508	.002			4	57125.246	.002
4			1	57754.095	.003			3	56726.888	.001
ν 4	$3d^64s(^6D)6p$	$s~^6\!D6p~^7D$ °	5	56120.327	.002			2	56952.209	.002
4			4	56516.740	.003	2164 (672)	6D< 5D0	1	57077.839	.002
			3	56555.062	.004	$3d^64s(^6D)6p$	$s~^6\!D6p~^5D$ °	4	56732.331	.002
			2 1	56933.378 57164.14	.005 .005			3	57168.527 57415.753	.002 .001
	$3d^64s(^6D)5d$	s 6D5d 5D	4	56207.548	.003			2 1	57401.140	.001
	3a-4s(D)3a	s Dou D	3	56337.122	.002			0	57610.715	.003
			2	56479.459	.002	$3d^64s(^6D_{9/2})4f$	s ⁶ D _{4.5} 4f [7.5]°	8	56778.787	.003
			1	56735.154	.003	54 15(29/2)13	0 24.3 .7 [7.0]	7	56778.769	.003
	$3d^64s(^6D)6p$	$s{}^6\!D6p{}^7F^{ { m o}}$	6	56260.978	.003		s ⁶ D _{4.5} 4f [6.5]°	7	56754.128	.002
	(-) - <u>r</u>	*	5	56502.953	.003			6	56756.499	.002
			4	56756.700	.004		s ⁶ D _{4.5} 4f [5.5]°	6	56748.897	.001
			3	57026.956	.004			5	56751.095	.001
			2	57140.420	.001		s ⁶ D _{4.5} 4f [4.5]°	5	56754.722	.001
			1	57174.426	.002		60	4	56754.928	.001
	- 16 (1-) (2-)	2 770	0	57121.600	.003		s ⁶ D _{4.5} 4f [3.5]°	4	56764.763	.001
	$3d^6(^1I)4s4p(^3P)$	$u{}^3H^{\circ}$	6	56333.956	.003		60 4650 610	3	56766.049	.001
			5 4	56382.658 56423.279	.002 .002		s ⁶ D _{4.5} 4f [2.5]°	3	56777.258 56779.534	.001 .001
	$3d^64s(^6D)5d$	$s~^6\!D5d~^5G$	6	56341.856	.002		s ⁶ D _{4.5} 4f [1.5]°	2 2	56789.695	.001
	3a 4s(D)3a	s D3a G	5	56550.630	.002		3 D4.54) [1.5]	1	56791.619	.002
			4	56673.141	.002	$3d^{7}(^{4}F)6s$	$^4F6s ^3F$	4	56808.263	.002
			3	57055.612	.002	24 (1)00	1 00 1	3	57218.823	.002
			2	57233.839	.002			2	57790.905	.002
		$s~^6\!D5d~^7F$	6	56427.973	.002	$3d^64s(^6D)6p$	$s~^6\!D6p~^5P^{ m o}$	3	56871.341	.003
			5	56842.729	.001			2	57437.190	.001
			4	57307.316	.002	7 (2> -	1	1 .	57741.468	.003
			3	57084.277	.002	$3d^{7}(^{2}H)4p$	$v {}^1G^{\circ}$	4	56951.297	.003
			2	57029.610	.003	$3d^6(^1I)4s4p(^3P)$	$x~^3I^{o}$	7	57027.509	.003
		60 (17 0	1	57213.740	.002			6	57070.167	.003
		s 6D5d 7D	5 4	56432.017 56452.014	.002 .002	$3d^64s(^6D_{7/2})4f$	s ⁶ D _{3.5} 4f [6.5]°	5 7	57104.213 57152.331	.007 .002
			3	57070.367	.002	$3a^{48}(D_{7/2})^{4}$	s D _{3.5} 4j [0.5]	6	57152.331	.002
			2	56842.807	.002		s ⁶ D _{3.5} 4f [5.5]°	6	57146.768	.002
			1	57004.355	.002		0 103.547 [5.5]	5	57147.780	.001
		$s~^6\!D5d~^7P$	4	56844.471	.002		$s~^6\!D_{3.5}4f~[4.5]^{ m o}$	5	57145.780	.001
			3	56462.012	.003		3.3 • 1 1	4	57147.167	.001
			2	57291.234	.002		s ⁶ D _{3.5} 4f [3.5]°	4	57149.109	.001
		$s{}^6\!D5d{}^7G$	7	56536.044	.003			3	57149.698	.001
			6	56874.912	.002		s ⁶ D _{3.5} 4f [2.5]°	3	57149.841	.002
			5	57126.819	.002		6	2	57152.411	.001
			4	57155.853	.001		$s^6\!D_{3.5}4f[1.5]^{\circ}$	2	57154.265	.002
			3	57361.362	.002		675 46 [0 6]0	1	57152.263	.002
			2	57450.660 57330.343	.002		s ⁶ D _{3.5} 4f [0.5]°	1	57154.992	.003
	$3d^64s(^6D)6p$	$s{}^6\!D6p{}^7P^{\circ}$	1 4	57320.343 56541.592	.003 .003	$3d^6(^3D)4s4p(^1P)$	$Dsp1\ ^3D^{o}$	0 3	57156.055 57346.144	.002 .002
	3a 4s(D)0p	s Dop I	3	56888.419	.003	Sa(D)+s+p(T)	DspiD	2	57074.911	.002
			2	57190.208	.002	$3d^64s(^6D)5d$	$s{}^6\!D5d{}^5P$	3	57160.138	.002
	$3d^6(^1G)4s4p(^3P)$	$u~^3F^{o}$	4	56592.699	.002	24 15(2)24	0 200 1	2	57403.130	.002
	5 (5) .5 .F(1)		3	56783.318	.002	$3d^64s(^6D_{5/2})4f$	$s~^6\!D_{2.5}4f~[5.5]^{\circ}$	6	57428.060	.002
			2	56858.649	.003	(3/2/ "	2.5 5 []	5	57429.093	.001
	$3d^64s(^6D)6p$	$s{}^6\!D6p{}^5F^{ m o}$	5	56707.280	.002		$s{}^6\!D_{2.5}4f[4.5]^{ m o}$	5	57437.924	.001
	` / 1	•	4	57064.342	.003			4	57439.219	.001
			3	57343.824	.002		s ⁶ D _{2.5} 4f [3.5]°	4	57437.797	.001
			2	57572.509	.002		<i>(</i>	3	57439.482	.001
		(= · · · · ·	1	57546.477	.003		s ⁶ D _{2.5} 4f [2.5]°	3	57432.844	.001
	$3d^64s(^6D)5d$	$s~^6\!D5d~^5S$ $s~^6\!D5d~^5F$	2	56720.405	.002		s ⁶ D _{2.5} 4f [1.5]°	2	57431.112	.002
		このロをようだ	5	56761.874	.002		0 U 1 - 1 f 1 5 0	2	57427.572	.002

Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)	Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)
		1	57426.433	.002	$3d^64s(^6D)7s$	s ⁶ D7s ⁵ D	4	58321.379	.003
	$s^6\!D_{2.5}4f[0.5]^{\circ}$	1	57421.465	.003			3	58762.452	.002
$3d^64s(^6D)5d$	$s^{6}D5d^{7}S$	3	57438.263	.002			2	59035.758	.004
$3d^6(^3D)4s4p(^3P)$	$t{}^3F^{\circ}$	4	57550.006	.003			1	59113.335	.004
50 (D):5:P(1)		3	57640.997	.002	$3d^64s(^4D)4d$	$s{}^4\!D4d{}^3G$	5	58492.231	.003
		2	57708.737	.003	(-)		4	58965.271	.003
$3d^6(^3P)4s4p(^1P)$	$Psp1\ ^3D^{\circ}$	3	57565.301	.002	$3d^{7}(^{4}F)5d$	$^4F5d\ ^5F$	5	* 58591.202	.002
$3d^64s(^6D_{3/2})4f$	$s^{6}D_{1.5}4f[4.5]^{\circ}$	5	57620.788	.002	24 (1)24		4	* 58592.070	.002
$3a + 8(D_{3/2}) + 3$	3 D[.54] [4.5]	4	57621.924	.002	Unknown	58661 ^e	4	* 58661.974	.003
	s ⁶ D _{1.5} 4f [3.5]°	4	57641.215	.001	$3d^64s(^4D)5p$	s ⁴ D5p ⁵ P°	3	58674.455	.002
	5 D _{1.5} 4 _J [5.5]	3	57642.379	.001	34 48(D)3p	3 D3p 1	2	59105.292	.002
	- 672 44 [2 5]0	3	57631.091	.001			1	59360.194	.002
	$s^{6}D_{1.5}4f$ [2.5]°			.001	$3d^64s(^4\!D)4d$	$s{}^4\!D4d{}^3D$	3	58682.318	.003
	670 4 ([1	2	57632.650		3a 4s(D)4a	s D4a D	2		
	$s{}^6\!D_{1.5}4f[1.5]^{\circ}$	2	57618.802	.002				58979.819	.002
	40.150	1	57617.005	.003	2.17.(417	4 5 4 6 [7 5]0	1	58965.748	.004
$3d^64s(^4\!D)4d$	s $^4\!D4d$ 5F	5	57660.949	.003	$3d^7(^4F_{9/2})4f$	${}^4F_{4.5}4f$ [7.5]°	8	58718.494	.003
		4	58118.871	.003		4	7	58722.560	.003
		3	58132.077	.003		⁴ F _{4.5} 4f [6.5]°	7	58706.064	.002
		2	58512.383	.004			6	58702.677	.002
		1	58363.420	.005		⁴ F _{4.5} 4f [5.5]°	6	58700.536	.002
	$i{}^5D$	4	57697.489	.002			5	58700.830	.002
		3	57813.938	.002		⁴ F _{4.5} 4f [4.5]°	5	58707.379	.003
		2	57974.133	.003			4	58704.909	.002
		1	58283.200	.003		⁴ F _{4.5} 4f [3.5]°	4	58711.243	.003
$3d^64s(^6D_{1/2})4f$	$s^6\!D_{0.5}4f[3.5]^{\circ}$	4	57743.129	.001			3	58714.644	.002
1/2/ 3	0.5	3	57744.928	.001		⁴ F _{4.5} 4f [2.5]°	3	58719.036	.002
	$s^6\!D_{0.5}4f[2.5]^{\circ}$	3	57743.048	.002		4.5 0 []	2	58723.285	.002
	0 150.5 (5 [510]	2	57743.366	.002	$3d^{7}(^{4}F)5d$	4F5d 5H	7	* 58710.807	.05
$3d^64s(^4\!D)5p$	s ⁴ D5p ⁵ D°	4	57763.820	.002	$3d^{6}(^{3}H)4s4p(^{1}P)$	$Hsp1^3I^\circ$	7	58792.251	.002
$3a^{3}4s(D)3p$	s DSp D	3	58033.502	.001	54 (11)+34p(1)	11001 1	6	58946.728	.003
		2	58330.564	.002			5	59085.823	.003
		1	58519.999	.002	$3d^{7}(^{4}\!F)5d$	$^4F5d~^3G$	5	* 58812.011	.05
2.164 (612)7	$s{}^6\!D7s{}^7D$	5	57897.047	.005	3a (1)3a	1 3a G	4	* 59204.229	.05
$3d^64s(^6\!D)7s$	s Dis D	4	58197.910	.003	Unknown	58831e	3	* 58831.226	.003
				.003	$3d^64s(^4D)4d$	s^4D4d^5S	2	58921.959	.003
		3	58480.304 58683.800	.003	Unknown	58906 ^e	4	* 58906.432	.003
		2	58759.575	.003	Ulikilowii	59077 ^e	1	* 59077.080	.002
a 16 ((AD) #	45.5 3.70	1			2364-(612) 163	$s^{6}D_{4.5}6d$ [6.5]	7	* 59179.13	.003
$3d^64s(^4\!D)5p$	s $^4\!D5p$ 3F $^{\circ}$	4	57917.250	.003	$3d^64s(^6D_{9/2})6d$	s D _{4.5} 0a [0.3]			
		3	59089.624	.003		60 (150 61	6	59146.37	.01
	4 2	2	58961.992	.002		$s^{6}D_{4.5}6d$ [5.5]	6	59124.07	.01
	s $^4\!D5p$ 3P $^{\circ}$	2	57999.457	.009		65 (11.5	5	59182.72	.01
	_	1	59343.803	.002		$s^6\!D_{4.5}6d$ [4.5]	5	59126.75	.01
$3d^64s(^4\!D)4d$	$g{}^5G$	6	58001.934	.002		6	4	59133.61	.01
		5	58271.458	.003		$s{}^6\!D_{4.5}6d$ [3.5]	4	59235.48	.01
		4	58520.159	.002			3	59251.39	.01
		3	58710.043	.003		$s^6\!D_{4.5}6d~[2.5]$	3	59217.20	.01
		2	58824.841	.003	$3d^64s(^4\!D)4d$	$s{}^4\!D4d{}^3S$	1	59154.658	.007
$3d^6(^3H)4s4p(^1P)$	$Hsp1\ ^3G^{o}$	5	58018.557	.003	$3d^{7}(^{4}\hat{F}_{7/2})4f$	$^4F_{3.5}4f$ [6.5]°	7	59271.886	.004
() 1()	•	4	58334.609	.003	, -,		6	59273.131	.004
		3	58600.340	.003		$^4F_{3.5}4f$ [5.5]°	6	59263.919	.003
$3d^64s(^4\!D)5p$	s ⁴ D5p ³ D°	3	58276.256	.003		3.3 5 ()	5	59265.021	.002
54 70 (D) 5p	J DJF D	2	58132.245	.002		⁴ F _{3.5} 4f [4.5]°	5	59264.880	.002
		1	58394.860	.002		- 3.3 -3 []	4	59262.295	.002
	s $^4\!D5p$ 5F $^{\circ}$	5	58147.003	.002		⁴ F _{3.5} 4f [3.5]°	4	59265.740	.002
	s DSP I	4	58481.297	.002		± 5.5 TJ [5.0]	3	59265.473	.002
		3	58757.624	.002		⁴ F _{3.5} 4f [2.5]°	3	59271.314	.002
		2	58906.112	.002		13.57 [2.3]	2	59270.154	.003
		1	58977.498	.002		⁴ F _{3.5} 4f [1.5]°	2	59276.235	.002
2 164 (47) 4 1	$s~^4\!D4d~^5P$				$3d^64s(^4\!D)4d$	$s^{4}D4d^{3}F$		59301.90	.003
$3d^64s(^4D)4d$	s D4d P	3	58481.851	.003	3a 48(D)4a	s D4a F	4		
		2	58213.120	.002			3	59522.710	.003

Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)	Assigned Configuration	Term (abbr)	J	Level (cm ⁻¹)	Error (cm ⁻¹)
		2	59815.554	.003			1	59718.13	.01
$3d^64s(^6D_{9/2})5f$	s ⁶ D _{4.5} 5f [7.5]°	8	* 59290.421	.003	$3d^64s(^6D_{5/2})6d$	$s^6\!D_{2.5}6d$ [4.5]	5	59718.72	.01
()/2/ •		7	* 59290.37	.003	· - / -/		4	59725.90	.01
	s ⁶ D _{4.5} 5f [6.5]°	7	* 59277.454	.003			3	59886.70	.01
		6	* 59275.88	.003		$s^{6}D_{2.5}6d$ [2.5]	3	59820.66	.01
	s ⁶ D _{4.5} 5f [5.5]°	6	* 59274.558	.003		$s\ ^6D_{2.5}6d\ [3.5]$	4	59878.64	.01
$3d^64s(^6D_{7/2})5f$	s ⁶ D _{3.5} 5f [6.5]°	7	* 59669.0	.003			2	59843.56	.01
		6	* 59670.08	.003		$s{}^6\!D_{2.5}6d[1.5]$	2	59780.48	.01
	$s^6\!D_{3.5}5f[5.5]^\circ$	5	* 59663.96	.003		(m	1	59766.92	.01
$3d^64s(^6D_{9/2})5g$	$s{}^6\!D_{4.5}5g$ [8.5]	9	59335.73	.01	7.4-	$s^{6}D_{6.5}6d$ [0.5]	1	59729.17	.01
		8	59335.72	.01	$3d^7(^4F_{3/2})4f$	$^4F_{1.5}4f$ [4.5]°	5	59960.478	.002
	$s{}^6\!D_{4.5}5g$ [7.5]	8	59331.269	.005		4	4	59960.952	.003
		7	59331.270	.004		$^4F_{1.5}4f$ [3.5]°	4	59947.019	.002
	$s^6\!D_{4.5}5g$ [6.5]	7	59329.645	.004		4 T 4 C 510	3	59947.320	.003
	6 F1	6	59329.642	.004		$^4F_{1.5}4f$ [2.5]°	3	59952.529	.003
	$s^{6}D_{4.5}5g$ [5.5]	6	59329.892	.004	2164 (65)) (1	60 (10.51	2	59947.762	.003
	6	5	59329.891	.003	$3d^64s(^6D_{3/2})6d$	$s ^6D_{1.5}6d [3.5]$	3	60097.02	.01
	$s{}^6\!D_{4.5}5g$ [4.5]	5	59331.286	.004		$s{}^6\!D_{1.5}6d[2.5]$	3	60075.92	.01
	60 5 [2.5]	4	59331.287 59333.255	.004		$s~^6\!D_{1.5}6d~[1.5]$	2	60085.50 60035.04	.01 .01
	$s^{6}D_{4.5}5g$ [3.5]	4 3	59333.255 59333.257	.004 .004		$s^{*}D_{1.5}0a_{[1.5]}$	2 1	59999.79	.01
	$s^6\!D_{4.5}5g$ [2.5]	3	59335.316	.003		$s\ ^6\!D_{1.5}6d\ [0.5]$	1	59968.52	.01
	8 D4.539 [2.3]	2	59335.317	.005	$3d^64s(^6D_{5/2})5g$	$s ^6D_{2.5}5g [6.5]$	7	59999.211	.007
	$s^6\!D_{4.5}5g[1.5]$	2	59337.081	.005	54 45 (125/2)39	3 D 2.539 [0.3]	6	59999.206	.004
	8 D4.539 [1.3]	1	59337.031	.005		$s^6\!D_{2.5}5g$ [5.5]	6	60001.343	.004
	$s{}^6\!D_{4.5}5g[0.5]$	1	59338.255	.007		0 12,539 [3.3]	5	60001.337	.004
	3 124.539 [0.3]	Ô	59338.27	.007		$s^6\!D_{2.5}5g$ [4.5]	5	60001.575	.004
Unknown	59390 ^e	3	* 59390.68	.007		0 22.309 [110]	4	60001.559	.007
$3d^64s(^6D_{7/2})6d$	$s^{6}D_{3.5}6d$ [5.5]	6	59541.12	.01		$s^6D_{2.5}5g$ [3.5]	4	60000.71	.007
50 10(2//2)00	0 2 3.302 [0.0]	5	59556.32	.01		2.5 5 []	3	60000.71	.008
	$s{}^6\!D_{3.5}6d[4.5]$	5	59463.51	.01		$s^6\!D_{2.5}5g$ [2.5]	3	59999.394	.005
	5.5	4	59532.84	.01			3 2	59999.390	.006
	$s^6\!D_{3.5}6d[3.5]$	4	59475.63	.01		$s^6\!D_{2.5}5g$ [1.5]	2	59998.124	.005
		3	59520.30	.01		_	1	59998.12	.01
	$s{}^6\!D_{3.5}6d$ [2.5]	3	59538.59	.01	$3d^6(^3F)4s4p(^1P)$	$Fsp1\ ^3F$ o	4	60095.595	.003
	,	2	59514.13	.01		6	3	60172.460	.003
	$s{}^6\!D_{3.5}6d[1.5]$	2	59569.37	.01	$3d^64s(^6D_{3/2})5g$	$s{}^6\!D_{1.5}5g$ [5.5]	6	60193.670	.007
(12)	1 ~ .	1	59590.85	.01		650 # 54.#3	5	60193.666	.005
$3d^6(^3P)4s4p(^1P)$ $3d^64p^2$	$Psp1$ $^{3}S^{\circ}$	1	59500.624	.003		$s^{6}D_{1.5}5g$ [4.5]	5	60197.940	.006
$3d^{6}4p^{2}$	$^5D4p^2$ 7F	5	* 59523.88	.01		650 € [2.6]	4	60197.937	.003
		4	* 59664.70 * 60533.109	.01		$s^{6}D_{1.5}5g$ [3.5]	4 3	60196.429 60196.43	.007 .01
2 17 (417) 4 6	⁴ F _{2.5} 4f [5.5]°	2 5	* 60333.109 59682.169	.01 .004		$s^6\!D_{1.5}5g$ [2.5]	3	60190.43	.007
$3d^7(^4F_{5/2})4f$	$^{4}F_{2.5}4f$ [3.5]°	5	59671.596	.004		5 D _{1.5} 5y [2.5]	2	60192.14	.01
	F2.54J [4.3]	4	59673.109	.003	$3d^64s(^6D_{1/2})6d$	$s^{6}D_{0.5}6d$ [1.5]	2	60128.60	.01
	⁴ F _{2.5} 4f [3.5]°		59671.463	.003	3a 43(D1/2)0a	3 D _{0.5} 0a [1.5]	1	60178.25	.01
	$F_{2.54J}[5.3]$	4 3	59671.958	.002	$3d^64s(^4\!D)4d$	$s{}^4\!D4d{}^3P$	1	60215.239	.003
	⁴ F _{2.5} 4f [2.5]°	3	59679.231	.002	$3d^{6}(^{3}F)4s4p(^{1}P)$	$Fsp1 \ ^3G^{\circ}$	5	60254.166	.003
	1.2.547 [2.3]	2	59680.302	.002	3a (1)+3+p(1)	r spr G	4	60466.160	.004
	⁴ F _{2.5} 4f [1.5]°	$\bar{2}$	59687.414	.002			3	60563.610	.005
$3d^64s(^6D_{7/2})5g$	$s {}^{6}D_{3.5}5g [7.5]$	2 8	59717.941	.007	$3d^64s(^6D_{1/2})5g$	$s{}^6\!D_{0.5}$ 5 g [4.5]	5	60309.69	.01
54 10(2//2)59	5 2 3.503 [7.0]	7	59717.94	.01	- (1/2)-5	0.5-5 [-]	4	60309.70	.01
	$s{}^6\!D_{3.5}5g$ [6.5]	7	59717.084	.005		$s^6\!D_{0.5}5g~[3.5]$	4	60309.711	.006
		6	59717.079	.004			3	60309.717	.005
	$s{}^6\!D_{3.5}5g$ [5.5]	6	59716.793	.004	$3d^6(^3H)4s4p(^1P)$	$t{}^3H^{\circ}$	6	60365.633	.004
		5	59716.792	.003			5	60549.112	.004
	$s{}^6\!D_{3.5}5g$ [4.5]	5	59716.936	.004		_	4	60757.592	.003
	_	4	59716.944	.004	$3d^6(^3F)4s4p(^1P)$	$Fsp1\ ^3D^{\circ}$	3	60806.666	.003
	$s{}^6\!D_{3.5}5g$ [3.5]	4	59717.325	.004	Unknown	62079e	6	* 62079.318	.004
	ć .	3	59717.317	.004		61724 ^e	4	* 61724.825	.004
	$s{}^6\!D_{3.5}5g$ [2.5]	3	59717.764	.004		62192 ^e	5	* 62192.731	.01
	60 5 [1.5]	2	59717.759	.004	2.36(30) 4.4(17)	62377e	4	* 62377.66	.01
	$s^6\!D_{3.5}5g[1.5]$	2	59718.13	.01	$3d^6(^3G)4s4p(^1P)$	$Gsp1~^3H^{\circ}$	6	63035.752	.005

scribed in the JK coupling scheme rather than the LS coupling scheme. In Fe I this applies to the subconfigurations $3d^{6}4s(^{6}D)6d$, 4 f, 5 g and $3d^{7}(^{4}F)4f$. In JK coupling the levels split into groups, and each group has as a parent the same fine-structure level in Fe II (Johansson & Learner 1990). The J-value of this parent level (J_c) is coupled to the angular momentum l of the running electron to give a resultant K, which is in turn coupled to the spin of the running electron to give the J-value of the level. In Fe I, J_c and K are half-integral and J is, as usual, integral. The full notation is, for example, $3d^64s(^6D_L)4f[K]_L$. The notation we use for the abbreviated term designation is $s^6D_L4f[K]$, with similar designations for other JK coupled subconfigurations. In the computer-readable file, J_c and K have been truncated to integers. For example, the two levels due to $3d^64s(^6D_{9/2})4f[\frac{11}{2}]$ are referred to as $s^6D_{4.5}4f[5.5]$ in the printed version of the table, and s6D4 4f[5] in the computer-readable version.

4.2. Transitions and Selection Rules

As a result of the mixed coupling in Fe I the only selection rules that can reliably be applied are $\Delta J = 0, \pm 1$ ($J = 0 \rightarrow J = 0$ 0) and change in parity (we do not see any parity forbidden lines in our laboratory spectra). However, the multiplets containing the strongest lines fall in the visible and follow traditional LS rules—the transitions are between levels of the same multiplicity, with $\Delta L = 0$, ± 1 (but not $L = 0 \rightarrow L = 0$). Among these, the strongest lines are the ones involving the levels with the highest J where the J-value changes in the same direction as the L-value—for example in multiplet a^5F-z^5D (number 88 in Table 2 [located at the end of this paper], or MT multiplet 15) the strongest lines correspond to J changing by -1 (sometimes called the "main diagonal"), with the strongest line being J = 5 to J = 4. The next strongest are for $\Delta J = 0$ (sometimes called the "first satellites"), and the weakest for $\Delta J = +1$ (sometimes called the "second satellites"). These rules are not always apparent from our intensities in Table 2, especially for multiplets involving the lowest terms (a^5D and a^5F) which may be affected by self-absorption.

However, many multiplets do not follow LS rules, even if the levels are of relatively low excitation. Transitions are seen both between levels with different multiplicities and with $\Delta L >$ 1. The former are sometimes called "intercombination lines," "spin-forbidden lines," or "intersystem lines," and their presence indicates the breakdown of the LS model. In complex spectra like Fe I they may be as common and strong as spin-allowed transitions. Multiplets of intercombination lines may not contain all of the theoretically predicted transitions between the two terms, and the intensities are often irregular as they depend on the degree of mixing with levels of other multiplicities. For example, in multiplet a^3H-z^5G (464, MT 168) the strongest lines are 6-5, 5-4, and 5-5. The 5-6 line is not observed and the 6-6 line is relatively weak. This multiplet is caused by mixing between the z^5G^o term and the z^3G^o term, and the intensities are similar to those observed in multiplet $a^3H-z^3G^o$ (465, MT 169). The lines to $z^5G_6^o$ are weak because there is no level with J = 6 in the z^3G^o term with which it can mix. Some multiplets are seen in which the multiplicity changes by 4. An example is the multiplet $a^1G-w^5G^o$ (963, MT 517), in which both the upper term and the lower term are

mixed. In many cases, and in particular for highly excited levels, it is difficult to identify exactly the way in which the levels are mixed, and a particular level may be described as a combination of several different LS components which all contribute more-or-less equally.

In highly excited levels, where the dominant LS component may contribute only 30%, the concepts of an LS term and a multiplet have in general no meaning. For the sake of consistency, we have arranged all the transitions into multiplets, assigning LS labels according to the largest LS component, but the majority of lines in the infrared are better arranged into "allowed supermultiplets" which consist of all the transitions between two subconfigurations built on the same parent term. These supermultiplets usually obey the rule $\Delta l = \pm 1$ (sometimes $\Delta l = 3$ transitions are observed), and one generally observes all the transitions in each supermultiplet. For example, the multiplets $n^7 D^o - s^6 D5 d^M L$ (2347–2354, 2356, and 2357) are due to 5p-5d transitions between terms having the parent term $3d^64s$ 6D , and if most of the lines in multiplet n^7D^o s^6D5d^5D (2347) are seen then lines of the same or greater intensity in multiplets $n^7D^o-s^6D5d^5G$ (2348), $n^7D^o-s^6D5d^5G$ $s^{6}D5d^{7}F$ (2349), $n^{7}D^{o}-s^{6}D5d^{7}D$ (2350) and so on, should also be observed.

Highly excited levels due to $3d^64s(^6D)nl$ odd-parity subconfigurations combine with the $3d^7(^4F)4s$ subconfiguration as well as the $3d^64s^2$ configuration, and the 3d-nl transitions are seen in the same spectral region as the 4s-nl transitions because of the similar energy of the 3d and 4s electrons in the transition elements. These transitions can also be regarded as allowed supermultiplets, because a possible alternative notation for $3d^7(^4F)4s$ is $3d^64s(^6D)3d$. For example, multiplet $a^5F-s^6D6p^5F$ (165) is due to a $3d^64s(^6D)3d-3d^64s(^6D)6p$ transition. The lines in multiplets of 3d-nl transitions often have irregular intensities due to the different coupling in the higher and lower subconfigurations.

In some cases, configuration interaction gives multiplets between terms with different parents-for example configuration interaction between $3d^64s(^6D)5d$ and $3d^7(^4F)6s$ gives rise to the multiplet $n^7D^{o-4}F6s^3F(2355)$, which is a transition between the $3d^64s(^6D)5p$ and $3d^7(^4F)6s$ subconfigurations. In rather rare cases, $\Delta l = 3$ transitions occur between terms of the same parent: the multiplet $a^3H-s^6D_{4.5}4f(516)$ involves transitions of the form $4s^2-4s4f$, which probably occur because of configuration interaction between $3d^64s^2$ and $3d^74s$.

5. TABLE OF MULTIPLETS

The new multiplet table for Fe I is given in Table 2. If a line is present in the FT spectra, the wavenumber and intensity is taken from these spectra; otherwise it is taken from the grating spectra. The criteria for ordering the multiplets are the same as in the MT. Each group of multiplets consists of multiplets with the same lower term, and the groups are ordered in increasing energy of the lower term $(a^5D, a^5F, a^3F...)$. Within each group, the multiplets are ordered in increasing energy of the upper term $(z^7D^o, z^7F^o, z^7P^o...)$. It should be noted, however, that some of the multiplets of Fe I listed in the MT are not ordered according to these criteria, as Moore only adopted the criteria part way through the typing of the Fe I table. This means that the order of multiplets in Table 2 is not necessarily

the same as in the MT. Within each multiplet the lines have been listed in wavelength order. This is partly so that the user can work systematically through a spectrum and multiplet and also because the irregular intensities observed in many multiplets rendered less meaningful the ordering scheme used in the MT—where the main diagonal, first satellites, and second satellites are listed in order of decreasing J.

A more important difference between Table 2 and the MT is that we present all the multiplets in one large table, which we consider to be more convenient for the user. This means that it is impossible to retain the old multiplet numbers of Moore, which in any case did not extend to the infrared, where many of our new multiplets are to be found. Our new numbers are given in column (1) of Table 2. The term designations are given in column (2), and underneath these designations are given the number of the multiplet in the MT, where one exists, with the usual prefix of "UV" for multiplet numbers taken from the UV multiplet table (Moore 1950). We have indicated designations that have changed since the MT with an asterisk after the number in the MT. Column (3) gives the two J-values for the transition.

The decision as to what constitutes a multiplet is particularly awkward where the levels are better described by the JK coupling scheme rather than the LS coupling scheme. We have decided to group all lines due to the same fine structure level of the parent, J_c , together. For example, in multiplet $z^7D^o-s^6D_{4.5}6d$ (454) all upper levels have the same parent level, $3d^64s^6D_{9/2}$ in Fe II, but have different K-values. For this reason we have labeled every line in these multiplets with the abbreviated term designation, to avoid confusion between levels of the same J-value but different K.

The intensity of the line is given in column (4). The intensities of lines in the FT spectra are the logarithms of the integrated intensities and are given to two decimal places. The intensities of lines observed only in grating spectra are integers, which are on a different scale to the FT spectra and are visual estimates of the photographic blackening in the continuous hollow cathode spectra. Lines marked "d0" are faint and diffuse, and those marked "d0?" are hardly detectable from the background. Lines marked "b" are broad, and those marked with an asterisk are blended with other unresolved lines. Where a line is not present in the continuous hollow cathode spectrum, the intensity has been taken from the pulsed hollow cathode and is given in italics in the printed version of Table 2 and in brackets in the computer-readable version.

In the lower multiplets many lines are affected by self-absorption or self-reversal. Self-absorption widens the line and reduces its intensity, but the wavenumber remains unaffected (Nave et al. 1991). Intensities and experimentally measured wavenumbers are given for all of these lines, but in almost all cases accurate gf values have been measured and should be used instead of the intensities. Self-reversed lines have a pronounced dip in the center of the line profile, and neither intensities nor accurate wavenumbers can be measured. No intensities are given for self-reversed lines, and the wavenumbers are Ritz wavenumbers. All the FT intensities have been corrected for the response of the spectrometers, but it was not possible to maintain a completely consistent scale throughout the whole spectral region covered by Table 2 because spectra in different spectral regions were obtained under several different source

conditions, which affect the relative intensities of the lines. Nevertheless the information is still useful because it can help in identifying lines in other sources, and in many cases it is the only alternative to a calculated gf value, which can sometimes be wrong by an order of magnitude.

The vacuum wavelength given in column (5) is derived from the measured wavenumber in column (8). Wavelengths and wavenumbers of self-reversed and masked (i.e., obscured by a much stronger line) lines are Ritz wavelengths and wavenumbers. The superscript to the wavenumber is a measure of its uncertainty, taking into account both the statistical and systematic errors described in § 2. The errors in wavenumbers of lines graded "A" are estimated to be less than $0.005~\text{cm}^{-1}$, lines graded "B" less than $0.01~\text{cm}^{-1}$, lines graded "C" less than $0.02~\text{cm}^{-1}$, and lines graded "D" greater than $0.02~\text{cm}^{-1}$. All known blended lines and all lines measured only in grating spectra have been assigned the grade D. The wavelength uncertainty $\Delta \lambda$ in Å is obtained from the wavenumber uncertainty $\Delta \sigma$ in cm⁻¹ by using the relation:

$$\Delta \lambda = \left| \frac{\Delta \sigma}{\sigma^2} \, 10^8 \right| = \left| \Delta \sigma \lambda^2 10^{-8} \right| \,, \tag{1}$$

and typical values are given in Table 3.

The air wavelengths in column 6 for all lines above 2000 Å have been derived from the wavenumbers using the Edlén dispersion formula (Edlén 1966):

$$\lambda_R(\text{air}) = \frac{10^8}{\sigma_R} \times \left(1 + 8342.13 \times 10^{-8} + \frac{15997}{3.89 \times 10^9 - \sigma_R^2} + \frac{2406030}{1.3 \times 10^{10} - \sigma_R^2}\right)^{-1}, \quad (2)$$

which agrees to within 1 mÅ with more recent infrared measurements by Peck & Reeder (1972). Column (7) gives the difference between the observed wavelength and the Ritz wavelength in mÅ. To obtain the Ritz wavelengths, the differences in column (7) should be subtracted from the wavelengths in column (5) or (6). Column (9) gives the difference between the observed wavenumber and the Ritz wavenumber, and the Ritz wavenumbers should be determined in a similar way. A large discrepancy between the measured wavelength of a line graded A and the Ritz wavelength is indicative of an unknown and unresolved blend. Lines which are known to be blended with other Fe I, Fe II, Ne, or Ar lines are marked in column (13) with the species of the blended line. Lines which are obscured by a much stronger line are marked with an "M" in column (13), together with the species of the stronger, masking line.

The wavenumbers of all lines are necessarily those emitted by the iron atom in a specific set of plasma conditions, and are not those of an isolated atom. A detailed discussion of possible wavenumber shifts is given in Learner & Thorne (1988). The majority of our lines with upper levels of low excitation (<6 eV) have a very small Lorentzian component to the line profile and can thus be expected to be relatively free from wavelength shifts. Lines graded A emitted from upper levels of low excitation should be selected where the accuracy of the wavelength is of particular importance, and the best of these are listed in the

TABLE 3 Grading Based on Four Wavenumber Uncertainties, $\Delta\sigma$, and the Corresponding Wavelength Uncertainties, $\Delta\lambda$, at Five Different Wavelengths λ

	A			Δλ (mÅ)		
GRADING	(cm^{-1})	$\lambda = 2000 \; \text{\AA}$	$\lambda = 5000 \text{ Å}$	$\lambda = 1 \mu m$	$\lambda = 2 \mu m$	$\lambda = 5 \mu m$
A B C D	<0.005 <0.01 <0.02 >0.02	<0.2 <0.4 <0.8 >0.8	<1.25 <2.5 <5.0 >5.0	<5 <10 <20 >20	<20 <40 <80 >80	<125 <250 <500 >500

three recently published tables of recommended wavelength standards (Learner & Thorne 1988; Nave et al. 1991; Nave et al. 1992). Lines originating from levels of high excitation are Lorentz broadened and may be subject to pressure shifts. A recent comparison of the 4f-5g transitions observed in our spectra with those observed in the Sun indicated that the solar wavenumbers were ~ 0.006 cm⁻¹ less than the laboratory wavenumbers, which is probably due to pressure or current-dependent shifts in the hollow cathode (Johansson et al. 1994). Another possible source of wavenumber shifts is unresolved or partly resolved isotope structure. We have as yet seen no evidence for isotope structure in Fe I, although it is of importance in Fe II, Ni II and Ni I (Rosberg, Johansson, & Litzén 1992; Litzén, Brault, & Thorne 1993).

Columns (10) and (11) contain the excitation potentials of the lower and upper levels of the transition, respectively. These are given in eV in the printed version of Table 2, and in eV and cm^{-1} in the computer-readable version. Experimental gfvalues have been taken from various sources in the literature and are given in column (12) (Fuhr, Martin, & Wiese 1990; O'Brian et al. 1991; Meylan et al. 1993; Johansson et al. 1994). We have not estimated the accuracy of these measurements, and the user is advised to consult the original references. In particular, we note that some measurements lead to a solar abundance of iron which is slightly greater than the currently accepted value (Holweger et al. 1991). Other recent measurements of gf-values or lifetimes in Fe I include Kock et al. (1984), Blackwell et al. (1986), Bard et al. (1991), and Engelke, Bard, & Kock (1993). We have not included calculated gf-values for the lines, partly because of their uncertain accuracy, but also because they are likely to be recalculated with the new levels included. Calculated gf-values for Fe I can be found in the tables of semi-empirical gf-values by Kurucz (1989) or Fawcett (1987). Although the absolute accuracy of these calculations is often rather poor, the relative accuracy of calculated gf-values of lines within a single multiplet can be quite good (Fawcett 1987; Blackwell et al. 1983). The calculations of the Opacity Project (Sawey & Berrington 1992) include multiplet oscillator strengths, which may be helpful in estimating g f values for lines due to highly excited levels that have not been measured or calculated by other groups.

Table 4 (located at the end of this paper) is a finding list for all the lines in Table 2. For all lines above 2000 Å we give an air wavelength, λ_{air} , a wavenumber, σ , and the number of the multiplet in Table 2, where the line can be found. We have only given vacuum wavelengths λ_{vac} below 2000 Å, as in the air

region they can easily be obtained from the wavenumber of the line:

$$\lambda_{\text{vac}}(\mathring{A}) = 10^8 / \sigma \,(\text{cm}^{-1}) \tag{3}$$

Table 5 gives 125 of the strongest unidentified lines in our spectra with a signal-to-noise ratio greater than 100. These are all probably due to Fe I, as they are present in either the solar spectrum or the absorption spectra of Brown et al. (1988). Some of these lines may well be due to the unclassified levels in Brown et al. (1988), but we have been unable to confirm them. The rest are probably due to highly excited levels that we have been unable to find.

6. Fe I LINES NOT LISTED IN TABLE 2

The MT contains lines and multiplets that are not listed in Table 2. Many of these lines have not been observed in any laboratory spectra, but are lines predicted from energy levels for which the Ritz wavelength coincides with a feature in the solar spectrum. They are designated in the MT by the symbol "⊙" in the intensity column and the letter "P" in the reference column. As we do not see them in our spectra, we are unable to say whether all these lines are in fact due to Fe I. The Ritz wavelengths in the MT were based upon old energy-level values, and more accurate wavelengths for them can be determined from the energy levels listed in table 1, provided that the identifications are correct and are unchanged. The Ritz wavenumber, σ_R in cm⁻¹, is given by the difference between the upper and lower level values of the transition, and the Ritz vacuum wavelength in A can be calculated from equation (3). To obtain the Ritz air wavelength $\lambda_R(air)$, the Edlén dispersion formula in equation (2) should be used (Edlén 1966).

Ritz wavenumbers and wavelengths for all Fe I lines are also listed in the calculations of semi-empirical gf-values by Kurucz (1989), and use of Kurucz's list has the advantage that calculated gf-values are also given, which would assist in judging whether a particular solar or stellar line is due to Fe I or not. It should be emphasized, however, that the wavelengths listed in Kurucz's calculations will only be correct for energy levels that have been determined experimentally. This means that reliable wavelengths of lines will only be found in the smaller line lists distributed by Kurucz. The larger line list also contains lines due to energy levels that have been calculated by atomic structure computer programs, and the wavelengths of these lines may be wrong by several angstroms or more, depending on the wavelength and accuracy of the calculations.

TABLE 5 Unidentified Lines due to Fe i

1994ApJS...94..221N

Int	λ_{air}	σ	Int	λ_{air}	σ	Int	λ_{air}	σ
	/Å	/cm ⁻¹		/Å	/cm ⁻¹		/Å	/cm ⁻¹
3.80	41471.539	2410.6348	2.20	14180.472	7050.0237	2.35	9236.8292	10823.255
3.17	18368.536	5442.6056	2.24	13123.425	7617.8779	2.14	9214.2681	10849.756
2.20	18113.004	5519.3879	2.40	12958.493	7714.8359	3.30	9204.0968	10861.746
2.77	18110.729	5520.0813	2.80	12916.319	7740.0267	2.87	9095.9422	10990.896
2.59	17979.386	5560.4067	2.09	12913.209	7741.8904	2.44	9084.5968	11004.622
2.54	17938.877	5572.9628	2.76	12865.058	7770.8665	2.63	9060.0159	11034.479
2.15	17803.363	5615.3827	1.88	12698.215	7872.9688	2.50	9057.6126	11037.407
2.12	17793.231	5618.5802	2.65	12392.752	8067.0249	2.86	8953.9108	11165.238
2.27	17644.269	5666.0152	2.10	12135.628	8237.9454	3.12	8926.6580	11199.325
2.77	17643.663	5666.2096	3.28	11938.937	8373.6631	2.92	8292.4419	12055.860
2.39	17569.444	5690.1454	2.04	11930.499	8379.5856	3.03	8291.7651	12056.844
2.53	17545.321	5697.9688	3.22	11923.192	8384.7204	2.56	8145.4757	12273.379
2.52	17332.564	5767.9115	1.91	11923.096	8384.7883	2.97	7994.4808	12505.190
2.98	17032.015	5869.6924	2.92	11861.268	8428.4945	2.08	7714.6066	12958.857
3.39	16976.239	5888.9774	3.10	11807.010	8467.2271	3.06	7546.1774	13248.094
2.46	16948.140	5898.7411	2.26	11705.986	8540.3000	2.34	7515.1033	13302.873
2.29	16867.294	5927.0141	3.28	11682.646	8557.3622	3.62	6755.6055	14798.437
2.19	16833.125	5939.0450	2.94	11385.664	8780.5702	3.78	6528.5349	15313.141
2.78	16820.519	5943.4963	2.77	11367.107	8794.9043	4.18	6501.6722	15376.409
2.52	16416.814	6089.6522	3.08	11365.797	8795.9181	2.40	6042.0952	16545.968
2.83	16403.383	6094.6381	2.37	11351.328	8807.1299	2.29	6020.0136	16606.659
2.28	16254.730	6150.3749	2.94	11303.885	8844.0939	1.77	5841.1345	17115.217
2.27	16016.678	6241.7862	2.03	11295.792	8850.4305	1.75	5756.8145	17365.901
2.07	15945.262	6269.7423	2.26	11293.941	8851.8813	1.88	5714.1535	17495.551
2.67	15904.414	6285.8449	2.32	11138.431	8975.4664	2.56	5693.6425	17558.576
2.07	15685.762	6373.4664	2.36	11032.613	9061.5534	3.72	5035.7002	19852.675
2.45	15506.297	6447.2311	2.15	10971.225	9112.2564	3.04	4927.8682	20287.087
2.64	15499.402	6450.0990	3.32	10452.751	9564.2382	3.24	4552.5416	21959.595
2.35	15459.314	6466.8251	2.46	10075.639	9922.2085	3.21	4529.6761	22070.444
2.51	15381.969	6499.3420	2.83	10071.820	9925.9709	3.47	4172.0394	23962.338
2.12	15376.929	6501.4725	3.49	9997.5987	9999.6604	4.41	4103.8328	24360.589
2.48	15357.284	6509.7890	2.29	9981.3252	10015.963	3.94	3587.7518	27864.655
3.03	15348.303	6513.5980	2.84	9908.6895	10089.385	4.01	3345.8301	29879.358
1.91	15289.469	6538.6626	2.89	9903.2800	10094.896	2.60	2578.2104	38774.983
2.14	15201.567	6576.4717	2.06	9898.0324	10100.248	2.84	2468.2960	40501.533
2.60	15178.255	6586.5725	2.43	9882.2720	10116.356	2.61	2410.0973	41479.485
2.09	15119.028	6612.3748	2.61	9879.6663	10119.024	2.91	2374.6531	42098.561
2.61	15095.852	6622.5264	3.01	9872.3366	10126.537	2.90	2373.8052	42113.597
2.48	14938.141	6692.4443	2.32	9778.3867	10223.832	2.81	2370.7738	42167.443
2.28	14824.802	6743.6095	2.55	9746.1376	10257.661	2.69	2365.3205	42264.652
2.08	14545.720	6872.9958	2.15	9613.4048	10399.289	2.80	2152.4802	46443.426
2.68	14353.427	6965.0729	3.18	9430.0982	10601.434			

The larger line list should be used only when the details of the spectrum are unimportant (e.g., for opacity and radiation transport calculations), and it cannot be used for high-resolution spectroscopy.

Two other publications also contain lists of Fe I lines that are not present in Table 2. Brown et al. (1988) have analyzed the absorption spectrum of Fe I in the range 1550 Å to 3215 Å. Roughly 800 of the 3000 lines they observed are below 1700 Å and fall outside the region of Table 2. Between 1700 Å and 3215 Å they also observed many lines which are not present in our spectra. These are due to highly excited odd-parity levels which are not well populated in a hollow cathode, but combine strongly with the ground term and consequently give strong lines in an absorption spectrum. Brown et al. (1988) list \sim 100 of these highly excited levels. In the infrared, Schoenfeld, Chang, & Geller (1994) have identified two supermultiplets in the region of 3900 cm⁻¹ (2.56 μ m) and 1350 cm⁻¹ (7.41 μ m),

due to $3d^64s(^6D)4f-6g$ and $3d^64s(^6D)5g-6h$, respectively, which have been observed in the solar spectrum. They also identify several features at longer wavelengths which are due to higher Rydberg transitions. All but the 4f-6g supermultiplet are outside the range of our emission spectra, and this supermultiplet is not present due to the high-excitation energy of the 6g levels.

7. SUMMARY

The total number of energy levels in Table 1 is 846, of which 28 are new. In comparison, the total number of energy levels from which the lines in the MT are derived is 467. Many of the new energy levels are of high excitation and are likely to be particularly useful in the interpretation of astrophysical spectra. The total number of lines in Table 2 is 9501, which are due to 9759 transitions arranged into 2785 multiplets. This compares with the \sim 5500 lines in the MT, of which \sim 1650 are

Ritz wavelengths of lines present in the solar spectrum, but not observed in laboratory spectra. The biggest increase is in the ultraviolet below 3000 Å, where the number of lines has increased from ~750 to ~2000, and in the infrared above 1 μm , where none of the ~3000 lines in Table 2 were given in the MT. The strongest lines have an uncertainty of less than 0.002 cm $^{-1}$ (0.2 mÅ at 3000 Å and 8 mÅ at 2 μm), which is up to an order of magnitude better than wavelength standards derived from previous data (Nave et al. 1991). Almost all of the lines are present in the solar spectrum and in many cases correspond to strong lines.

Table 5 gives a good indication of the current state of the analysis of Fe I. Almost all of the strongest lines in the visible have been identified. In spite of the many new identifications in the infrared, the largest proportion of unidentified lines fall between 1 and 2 μ m. In the near UV, both our FT and grating spectra contain many unidentified lines, many of which are also strong unidentified lines in the solar spectrum. At present, no laboratory spectra of sufficient quality beyond 5.4 μ m have been recorded, and it is not possible for us to estimate the contribution of Fe I to stellar spectra in this region. Table 2 also shows that relatively few lines in the infrared beyond 1 μ m and few lines in the ultraviolet below 3000 Å have measured gf-values. With the current interest in both ultraviolet and infra-

red astronomy they will almost certainly be required for stellar and solar spectroscopy.

Many users will prefer to have the new multiplet table in computer-readable form. For the time being, ascii versions of Tables 1 and 2 are available by anonymous FTP from ferrum.fysik.lu.se (130.235.92.170) at Lund University, in the directory pub/iron. The ascii version of Table 2 is also available sorted in wavelength order.

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REFERENCES

Bard, A., Kock, A., & Kock, M. 1991, A&A, 248, 315 Biémont, E., Brault, J. W., Delbouille, L., & Roland, G. 1985, A&AS, 61,

Blackwell, D. E., Booth, A. J., Haddock, D. J., Petford, A. D., & Leggett, S. K. 1986, MNRAS, 220, 549

Blackwell, D. E., Booth, A. J., Menon, S. L. R., Petford, A. D., & Smith, G. 1983, MNRAS, 204, 141

Brault, J. W. 1987, Mikrochim. Acta (Wien), III, 215

Brault, J. W., & Abrams, M. C. 1989, Technical Digest Ser. (Washington, DC: Opt. Soc. of America), 6, 110

Brown, C. M., Ginter, M. C., Johansson, S., & Tilford, S. G. 1988, J. Opt. Soc. Am., B5, 2125

Crosswhite, H. M. 1975, J. Res. NBS, 79A, 17

Edlén, B. 1966, Metrologia, 2, 71

Edlén, B., & Martin, W. C., ed. 1988, J. Opt. Soc. Am., B5, No. 10

Engelke, D., Bard, A., & Kock, M. 1993, Z. Phys. D., 27, 325

Fawcett, B. C. 1987, Rep. RAL-87-114 SERC, Rutherford Appleton Laboratory

Fuhr, J. R., Martin, G. A., & Wiese, W. L. 1988, J. Phys. Chem. Ref. Data, 17, Suppl. 4

Geller, M. 1992a, NASA RP 1224, Vol. 3 (Washington, DC: NASA Sci. Tech. Inf. Div.)

Grevesse, N., & Noels, A. 1994, Phys. Scripta, submitted

Holweger, H., Bard, A., Kock, A., & Kock, M. 1991, A&A, 249, 545 Johansson, S. 1987, Phys. Scripta, 36, 99

Johansson, S., & Baschek, B. 1988, Nuclear Instrum. Meth. in Phys. Res., B31, 222

Johansson, S., & Cowley, C. R. 1988, J. Opt. Soc. Am., B5, 2264 Johansson, S., & Learner, R. C. M. 1990, ApJ, 354, 755

Johansson, S., Nave, G., Geller, M., Sauval, A. J., Grevesse, N., Schoenfeld, W. G., Chang, E. S., & Farmer, C. B. 1994, ApJ, 428, 000

Kock, M., Kroll, S., & Schnehage, S. 1984, Phys. Scripta, T8, 84

Kurucz, R. L. 1989, private communication

Learner, R. C. M., Davies, J., & Thorne, A. P. 1991, MNRAS, 45, 414 Learner, R. C. M., & Thorne, A. P. 1988, J. Opt. Soc. Am., B5, 2045

Leckrone, D. S., & Sugar, J. 1993, Phys. Scripta, T47

Litzén, U. 1976, Phys. Scripta, 14, 165

Litzén, U., Brault, J. W., & Thorne, A. P. 1993, Phys. Scripta, 47, 628 Livingstone, W., & Wallace, L. 1991, National Solar Obs. TR, 91-001

Meylan, T., Furenlid, I., Wiggs, M. S., & Kurucz, R. L. 1993, ApJS, 85, 163

Moore, C. E. 1950, NBS Circ., No. 488 (MT)

——. 1959, NBS Tech. Note 30 (MT).

-----. 1971, NSRDS-NBS, 35, Vols. 1–3

Moore, C. E., Minnaert, M. G. J., & Houtgast, J. 1966, NBS Monog., 61

Moore, C. E., Tousey, R., & Brown, C. M. 1982, NRL Rep., 8653

----. 1992, unpublished

Nave, G., & Johansson, S. 1993a, A&A, 274, 961

----. 1993b, A&AS, 102, 269

Nave, G., Johansson, S., Axner, O., Ljunberg, P., Malmsten, Y., & Baschek, B. 1994, Phys. Scripta, in press

Nave, G., Learner, R. C. M., Thorne, A. P., & Harris, C. J. 1991, J. Opt. Soc. Am., B8, 2028

Nave, G., Learner, R. C. M., Thorne, A. P., & Murray, J. E. 1992, J. de Phys., Ser. 2, 2, 913

O'Brian, T. R., Wickliffe, M. E., Lawler, J. E., Whaling, W., & Brault, J. W. 1991, J. Opt. Soc. Am., B8, 1185

Peck, E. R., & Reeder, K. 1972, J. Opt. Soc. Am., 62, 958

Pierce, A. K., & Breckinridge, J. B. 1973, Kitt Peak Contr., No. 559

Radziemski, L. J., Fischer, K. J., Steinhaus, D. W., & Goldman, A. S. 1972, Comput. Phys. Comm., 3, 9

Rosberg, M., Johansson, S., & Litzén, U. 1993, MNRAS, 262, L1

Sawey, P. M. J., & Berrington, K. 1992, J. Phys., B25, 1451

Schoenfeld, W. G., Chang, E. S., & Geller, M. 1994, in Infrared Solar Physics, ed. D. Rabin, J. T. Jeffries, & C. Lindsey (Dordrecht: Kluwer), 350

Smith, P. L., & Wiese, W. 1992, Atomic and Molecular Data for Space Astronomy. Needs, Analysis, and Availability (Berlin: Springer)

Sugar, J., & Corliss, C. 1985, J. Phys. Chem. Ref. Data, 14, Suppl. 2

Swensson, J. W., Benedict, W. S., Delbouille, L., & Roland, G. 1970, Mem. Soc. R. Sci. Liège. 5

Zhu, Y., & Knight, R. D. 1992, J. Opt. Soc. Am., B9, 27

 $\label{eq:TABLE 2} \textbf{New Multiplet Table for Fe i}$

No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
1	a ⁵ D-z ⁷ D°	1-2	3.52	5256.4181	5254.9554	0.0	19024.362 ^A		0.110	2.469	-4.76 ^b	
	(1)	0 - 1	3.19	5251.6703	5250.2089	-0.3	19041.561 ^A		0.121	2.482	-4.94^{b}	
		2-3	3.20	5248.5110	5247.0504	0.0	19053.023 ^A		0.087	2.449	-4.95^{b}	
		1-1	3.35	5226.9809	5225.5261	-0.3	19131.503 ^A		0.110	2.482	-4.79 ^b	
		2-2	3.82	5206.0318	5204.5826	-0.5	19208.488 ^A		0.087	2.469	-4.33 ^b	
		3-3	4.35	5170.3378	5168.8981	0.3	19341.096 ^A		0.052	2.449	-4.00^{b}	
		4-5	4.19	5167.7212	5166.2822	0.0	19350.889 ^A		0.000	2.399	-4.20^{b}	
		3-2	2.28	5129.1084	5127.6796	-1.6	19496.566 ^E		0.052	2.469	-6.13^{b}	
		4-4 4-3	4.61 2.97	5111.8373 5061.4898	5110.4131 5060.0790	0.0 0.3	19562.438 ^A 19757.029 ^A		0.000	2.425 2.449	-3.76 ^b -5.46 ^b	
2	$a~^5D-z~^7F^{ m o}$	0-1	4.11	4490.9987	4489.7391	0.0	22266.762 ^A	0	0.121	2.882	-3.97 ^b	
	(2)	1 - 2	4.57	4483.4275	4482.1699	0.2	22304.364 ^A	-1	0.110	2.875	-3.50^{b}	
		1-1	2.12	4472.9321	4471.6772	0.6	22356.700 ^C	-3	0.110	2.882	-6.00^{b}	
		2 - 3	4.87	4462.9050	4461.6528	-0.2	22406.930 ^A	1	0.087	2.865	-3.21^{b}	
		$^{2-2}$	2.63	4446.7194	4445.4715	0.2	22488.489 ^A	-1	0.087	2.875	-5.44 ^b	
		2 - 1	3.69	4436.3941	4435.1489	-0.2	22540.829 ^A	1	0.087	2.882	-4.38^{b}	
		3-4	5.07	4428.5530	4427.3099	0.0	22580.739 ^A	. 0	0.052	2.851	-2.92ª	
		3-3	3.03	4406.2563	4405.0190	0.0	22695.003 ^A	. 0	0.052	2.865	-5.22^a	
		3 - 2	3.51	4390.4781	4389.2449	0.4	22776.563 ^L	-2	0.052	2.875	-4.58^{b}	II
		4-5	5.14	4377.1597	4375.9301	0.2	22845.865 ^A	-1	0.000	2.832	-3.03^{b}	
		4-4	2.60	4348.4557	4347.2336	0.2	22996.670 ^E		0.000	2.851	-5.50^{b}	
		4-3	•••	4326.978	4325.762	• • •	23110.817 ^L		0.000	2.865	• • •	ΜI
3	$a~^5D-z~^7P$ o	3-4	3.99	4292.6710	4291.4637	0.4	23295.519 ^A		0.052	2.940	-4.08^a	
	(3)	2 - 3	3.51	4259.5145	4258.3158	-0.2	23476.854 ^A		0.087	2.998	-4.32^{b}	
		1-2	3.08	4233.9182	4232.7263	-0.2	23618.784 ^A	_	0.110	3.038	-4.93 ^b	
		4-4	4.73	4217.3714	4216.1838	0.2	23711.452 ^A		0.000	2.940	-3.36^{b}	
		3-3	4.06	4207.8818	4206.6967	0.0	23764.926 ^A		0.052	2.998	-3.88^a	
		2-2	3.12	4201.1668	4199.9835	-0.7	23802.911 ^A		0.087	3.038		
		3-2 4-3	2.42 3.07	4150.9312 4135.5024	4149.7610 4134.3363	0.2 0.2	24090.980 ^B 24180.859 ^A		0.052 0.000	3.038 2.998	 -4.72 ^a	
4	a ⁵ D-z ⁵ D°	2-3	6.06	3931.4095	3930.2967	0.0	25436.170^{A}		0.087	3.241	-4.72 -1.49 ^a	
7	$\begin{array}{c} a & B - z & B \\ (4) & \end{array}$	1-2	6.02	3929.0321	3927.9199	0.0	25451.561^{L}		0.037	3.266	-1.49	I
	(7)	3-4	6.00	3924.0226	3922.9118	0.0	25484.053^{A}		0.052	3.211	-1.65^{b}	1
		0-1	5.81	3921.3683	3920.2581	0.2	25501.303^{A}		0.032	3.283	-1.05	
		1-1	5.37	3907.5864	3906.4798	0.2	25591.245 ^A		0.121	3.283	-2.24^{b}	
		$\frac{1}{2}$	6.03	3900.8122	3899.7074	0.0	25635.687 ^A		0.110	3.266	-1.53^{b}	
		1-0	5.87	3896.7602	3895.6564	0.0	25662.344 ^A		0.037	3.292	-1.67 ^b	
		3-3	5.74	3887.3836	3886.2823	0.2	25724.243 ^A		0.052	3.241	-1.08^{b}	
		2-1	6.11	3879.6726	3878.5733	0.2	25724.243 25775.371^{A}		0.032	3.283	-1.38^a	
		4-4		3861.0058	3859.9114		25899.987^{A}		0.000	3.211	-0.71^{b}	R
		3-2	6.04	3857.4651	3856.3716	0.1	25923.760^{A}		0.052	3.266	-1.29^{b}	- 1
		4-3	6.00	3825.5289	3824.4437	0.0	26140.176 ^A		0.000	3.241	-1.36^{b}	
5	$a~^5D-z~^5F^{ m o}$	1-2	6.28	3749.3276	3748.2622	0.0	26671.449 ^A		0.110	3.417	-1.02 ^b	
	(5)	0 - 1	6.04	3746.9643	3745.8995	0.0	26688.271 ^A		0.121	3.430	-1.34 ^b	
		2 - 3	6.40	3746.6260	3745.5613	0.0	26690.681 ^A		0.087	3.396	-0.77^{b}	
		3-4	• • •	3738.1941	3737.1315	• • •	26750.885 ^A		0.052	3.368	-0.57^{b}	R
		1 - 1	6.00	3734.3791	3733.3176	0.0	26778.213 ^A		0.110	3.430	-1.39 ^a	
		2-2	6.11	3723.6218	3722.5630	-0.1	26855.574 ^A	_	0.087	3.417	-1.29^{b}	
		4-5		3720.9928	3719.9347	• • •	26874.548 ^A		0.000	3.332	-0.42^a	R
		2-1	4.91	3708.8770	3707.8221	0.0	26962.339 ^A		0.087	3.430	-2.41 ^a	
		3-3	6.11	3706.6204	3705.5660	0.1	26978.754 ^A		0.052	3.396	-1.33 ^b	
		3-2	4.79	3684.1033	3683.0548	0.0	27143.647 ^A		0.052	3.417	-2.57^a	
		4-4 4-3	5.96 4.22	3680.9611 3650.3427	3679.9134 3649.3029	0.0 0.1	27166.818 ^A 27394.688 ^A		0.000	3.368 3.396	-1.60 ^b -3.20 ^a	
6	$a^{5}D-z^{5}P^{0}$	2-3	5.53	3527.0488	3526.0408	0.0	27354.086 28352.315^{A}		0.000	3.602	-3.20" -1.83a	
U	$a \circ D - z \circ P$ (6)	1-2	5.68	3327.0488 3498.8414	3497.8406	-0.1	28352.315 ⁻² 28580.890 ^A		0.087	3.654	-1.83 ^a -1.55 ^a	
	(0)	3-3	6.12	3496.6414	3490.5740	0.1	28640.387 ^A		0.110	3.602	-1.55° -1.11°	
		0-1	5.69									
		U I	3.09	3477.6972	3476.7018	0.0	28754.660 ^A	0	0.121	3.686	-1.51 ^a	

TABLE 2—Continued

$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	654 -1.05 ^a 686 -1.19 ^a 686 -1.37 ^a 6654 -0.96 ^a 6654 -0.96 ^a 6602 -0.67 ^a 881 -2.51 ^a 943 -2.62 ^a 984 -3.03 ^a 881 -2.22 ^a 943 -2.60 ^a 943 -3.03 ^a 984 -3.99 ^a 943 -3.88 ^a 883 -3.00 ^a 928 -2.88 ^a 883 -2.90 ^a 928 -3.11 ^a 928 -3.57 ^a 928 -4.08 ^a 9960 -3.57 ^a 928 -2.83 ^a 883 -2.60 ^a	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	686 -1.19°a 686 -1.37°a 654 -0.96°a 602 -0.67°a 881 -2.51°a 943 -2.62°a 984 -3.03°a 984 -3.99°a 984 -3.99°a 943 -2.88°a 883 -2.90°a -3.11°a 928 -3.57°a 928 -3.83°a	
$\begin{array}{c} 3-2 \\ 4-3 \\ 6.11 \\ 4-3 \\ 6.13 \\ 3441.5921 \\ 3440.6059 \\ 0.1 \\ 29056.320^{A} \\ -1 \\ 0.000 \\ 3. \\ 3. \\ 3. \\ 3. \\ 3. \\ 4. \\ 3. \\ 4. \\ 3. \\ 4. \\ 4$	654 -0.96° 602 -0.67° 881 -2.51° 943 -2.62° 984 -3.03° 881 -2.22° 943 -2.60° 984 -3.99° 943 -3.88° 883 -3.00° 928 -2.88° 883 -2.90° 960 -3.11° 960 -4.08° 960 -4.08° 928 -2.83° 928 -2.83°	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	602 -0.67° 881 -2.51° 943 -2.62° 984 -3.03° 881 -2.22° 943 -2.60° 984 -3.99° 943 -3.88° 883 -3.00° 928 -2.88° 928 -2.90° -3.11° 928 960 -4.08° 928 -3.57° 928 -2.83°	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	881 -2.51°a 943 -2.62°a 984 -3.03°a 881 -2.22°a 943 -2.60°a 984 -3.03°a 984 -3.99°a 943 -3.88°a 883 -3.00°a 928 -2.88°a 883 -2.90°a -3.11°a 928 960 -4.08°a 960 -3.57°a 928 -2.83°a	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	943 -2.62° 984 -3.03° 881 -2.22° 943 -2.60° 984 -3.99° 943 -3.88° 883 -3.00° 928 -2.88° 883 -2.90° 960 -3.11° 928 960 -4.08° 9928 -2.83°	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	984 -3.03° 881 -2.22° 943 -2.60° 984 -3.93° 943 -3.88° 883 -3.00° 928 -2.88° 883 -2.90° 960 -3.11° 928 960 -4.08° 960 -3.57° 928 -2.83°	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	881 -2.22° 943 -2.60° 984 -3.03° 984 -3.99° 943 -3.88° 883 -3.00° 928 -2.88° -2.90° 960 -3.11° 928 960 -4.08° 960 -3.57° 928 -2.83°	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	943 -2.60°a 984 -3.03°a 984 -3.99°a 943 -3.88°a 883 -3.00°a 928 -2.88°a -2.90°a 960 -3.11°a 928 960 -4.08°a 960 -3.57°a 928 -2.83°a	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	984 -3.03° 984 -3.99° 943 -3.88° 883 -3.00° 928 -2.88° 883 -2.90° 960 -3.11° 928 960 -4.08° 960 -3.57° 928 -2.83°	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	984 -3.99°a 943 -3.88°a 883 -3.00°a 928 -2.88°a 883 -2.90°a -3.11°a 920 -4.08°a 960 -4.08°a 960 -3.57°a 928 -2.83°a	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	943 -3.88° 883 -3.00° 928 -2.88° 883 -2.90° 960 -3.11° 928 960 -4.08° 960 -3.57° 928 -2.83°	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	883 -3.00° 928 -2.88° 883 -2.90° 960 -3.11° 928 960 -4.08° 960 -3.57° 928 -2.83°	
$(8) \qquad 1-2 \qquad 4.29 \qquad 3246.9413 \qquad 3246.0048 \qquad 0.1 \qquad 30798.216^A \qquad -1 \qquad 0.110 \qquad 3. \\ 3-3 \qquad 4.32 \qquad 3235.5468 \qquad 3234.6132 \qquad 0.1 \qquad 30906.677^A \qquad -1 \qquad 0.052 \qquad 3. \\ 0-1 \qquad 4.00 \qquad 3230.0525 \qquad 3229.1203 \qquad -0.1 \qquad 30959.249^A \qquad 1 \qquad 0.121 \qquad 3. \\ 2-2 \qquad 2.99 \qquad 3227.6462 \qquad 3226.7146 \qquad 1.1 \qquad 30982.330^B \qquad -11 \qquad 0.087 \qquad 3. \\ 1-1 \qquad 3.13 \qquad 3220.6960 \qquad 3219.7662 \qquad 0.2 \qquad 31049.189^B \qquad -2 \qquad 0.110 \qquad 3. \\ 2-1 \qquad 3.49 \qquad 3201.7095 \qquad 3200.7844 \qquad 0.0 \qquad 31233.315^A \qquad 0 \qquad 0.087 3. \\ 3-2 \qquad 4.31 \qquad 3197.9109 \qquad 3196.9868 \qquad 0.1 \qquad 31270.415^A \qquad -1 \qquad 0.052 3. \\ 4-3 \qquad 4.60 \qquad 3192.5820 \qquad 3191.6592 \qquad 0.1 \qquad 31322.610^A \qquad -1 \qquad 0.000 3. \\ 9 \qquad a \qquad ^5D-y \qquad ^5D^\circ \qquad 3-4 \qquad 5.31 \qquad 3059.9751 \qquad 3059.0858 \qquad 0.2 \qquad 32680.004^A \qquad -2 \qquad 0.052 4. \\ (9) \qquad \qquad 2-3 \qquad \dots \qquad 3048.4911 \qquad 3047.6046 \qquad \dots \qquad 32803.114^A \qquad \dots \qquad 0.087 4. \\ 1-2 \qquad 4.99 \qquad 3038.2727 \qquad 3037.3887 \qquad -0.1 \qquad 32913.438^A \qquad 1 \qquad 0.110 4. \\ \end{cases}$	928 -2.88°a 883 -2.90°a 960 -3.11°a 928 960 -4.08°a 960 -3.57°a 928 -2.83°a	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	883 -2.90° 960 -3.11° 928 960 -4.08° 960 -3.57° 928 -2.83°	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	960 -3.11 ^a 928 960 -4.08 ^a 960 -3.57 ^a 928 -2.83 ^a	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	928 960 -4.08° 960 -3.57° 928 -2.83°	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	960 -4.08 ^a 960 -3.57 ^a 928 -2.83 ^a	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	960 -3.57 ^a 928 -2.83 ^a	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	928 -2.83 ^a	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		
9 $a^{5}D-y^{5}D^{\circ}$ 3-4 5.31 3059.9751 3059.0858 0.2 32680.004 ^A -2 0.052 4. (9) 2-3 3048.4911 3047.6046 32803.114 ^A 0.087 4. 1-2 4.99 3038.2727 3037.3887 -0.1 32913.438 ^A 1 0.110 4.		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		
$1-2$ 4.99 3038.2727 3037.3887 -0.1 32913.438^A 1 0.110 4.	$103 -0.69^a$	
	154 -0.56^b	R
U-I 3.08 3020 7233 3023 8424 0.0 33039 0223 4 00 0 1771 4	191 -0.70^a 217 -0.84^b	
	$\begin{array}{ccc} 217 & -0.84^{b} \\ 154 & -0.36^{b} \end{array}$	R
	$103 - 0.03^a$	R
	191 -0.88 ^a	K
	$\frac{151}{217} -0.55^{b}$	
	$\frac{217}{230} -0.84^{b}$	
	$217 -0.59^{b}$	
	191 -0.53^a	R
	154 -0.58 ^b	R
10 $a^{5}D-y^{5}F^{\circ}$ 3-4 5.00 2974.1034 2973.2354 0.1 33623.579 ^A -1 0.052 4.	220 -0.66 ^b	
	$256 -0.90^{b}$	
(283 -1.13 ^a	
	178 -0.40^b	R
The state of the s	301 -1.34 ^b	I
1-1 4.67 2958.2286 2957.3645 -0.1 33804.014 ^A 1 0.110 4.	-1.16^{b}	
$2-2$ 4.84 2954.8032 2953.9400 -0.1 33843.202^A 1 0.087 4	283 -0.91^b	
	-0.78^a	
	-1.70^a	
·	-0.79^a	
	-1.48^a	
$4-3$ 4.11 2913.0101 2912.1573 -0.1 34328.751^A 1 0.000 4	.256 -1.63 ^a	
	.209 -1.48 ^b	
	.209 -1.73 ^b	
	.260 -2.22^b	
	.260 -3.06^b	
	.209 -1.36 ^b	
	.260 -1.94 ^a	
1-0 4.28 2970.2268 2969.3598 0.0 33667.463 ^A 0 0.110 4	-2.32^{b}	
12 $a^{5}D-z^{5}G^{\circ}$ 4-5 3.79 2875.0157 2874.1722 0.0 34782.419 ^A 0 0.000 4	.312 -1.90 ^a	
(UV2) 3-4 3.62 2870.1500 2869.3078 0.3 34841.384 ^A -4 0.052 4	.371 -1.99 ^a	
$2-3$ 3.20 2864.7040 2863.8631 -0.3 34907.620^{A} 4 0.087 4	.415 -2.31 ^a	
	.445 -2.89 ^a	I
	-2.78^a	II
$3-3$ 2.80 2841.2575 2840.4223 0.4 35195.684^B -5 0.052 4	.415 -2.46 ^a	

:												
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
2		4-4 4-3	2.88 2.29	2836.2904 2808.0709	2835.4564 2807.2439	0.0 -1.1	35257.321 ^A 35611.636 ^L		0.000 0.000	4.371 4.415	-2.45 ^a -2.86 ^a	
13	$a ^5D - z ^3G^{\circ}$ (UV3)	3-4 2-3	2.28	2828.7241 2826.829	2827.8920 2825.997	0.1 2.4	35351.627 ^C 35375.33 ^L	-30	0.052 0.087	4.434 4.473	-2.80 ^a	II
		4-5	3.06	2826.5191	2825.6875	0.0	35379.206 ^A		0.000	4.386	-2.94 ^a	
		3-3 4-4	1.66 2.23	2803.9922 2795.8287	2803.1662 2795.0047	-0.1 -0.7	35663.437 ^C 35767.570 ^E		0.052	4.473	-3.31°	
		4-4	0	2793.8287	2793.0047	-2.3	36079.40 ^L		0.000	4.434 4.473	-3.01 ^a	
14	$a~^5D-y~^3F^{\circ}$	3-4	3.26	2757.0814	2756.2667	0.2	36270.239 ^A	-2	0.052	4.548	 -2.17 ^a	
	(UV4)	2-3	2.77	2742.8270	2742.0158	0.2	36458.734 ^A		0.087	4.607	-2.49 ^a	
		1-2	2.08	2729.7778	2728.9698	0.6	36633.018 ^E		0.110	4.652	-3.06^a	
		4-4	1.77 1.89	2725.8232	2725.0162	0.6 0.4	36686.165 ^C 36746.805 ^C		0.000 0.052	4.548 4.607	-3.51 ^a	
		3-3 2-2	1.89	2721.3250 2716.1272	2720.5191 2715.3225	1.8	36746.803° 36817.127 ^C		0.032	4.652	• • •	
		4-3	2.51	2690.8668	2690.0682	-0.1	37162.746 ^A		0.000	4.607	-2.72 ^a	
15	$a~^5D{-}y~^5P$ o	2 - 3	3.44	2772.9286	2772.1101	0.1	36062.955 ^A		0.087	4.558	-1.48ª	
	(UV5)	1-2	3.80	2757.1428	2756.3282	0.0	36269.431 ^A		0.110	4.607	-1.10^a	
		3-3	4.33	2750.9537	2750.1406	0.1	36351.030 ^A		0.052	4.558	-0.66^a	
		$0-1 \\ 2-2$	3.80 4.21	2744.8791 2743.2166	2744.0674 2742.4053	0.1 0.1	36431.477 ^A 36453.556 ^A		0.121 0.087	4.638 4.607	-0.98 ^a -0.58 ^a	
		1-1	4.03	2738.1192	2737.3092	0.1	36521.419 ^A		0.110	4.638	-0.58	
		2-1	3.95	2724.3842	2723.5775	0.1	36705.543 ^A		0.087	4.638	-0.72^a	
		3-2	3.91	2721.7083	2720.9023	0.1	36741.630 ^E	-1	0.052	4.607	-0.24^a	
		4-3	4.03	2719.8330	2719.0274	0.1	36766.963 ^A		0.000	4.558	0.04^{a}	
16	$a {}^5D - y {}^3D$ °	$^{2-3}$	2.13	2668.7060	2667.9127	0.1	37471.344 ^B		0.087	4.733	-2.90^a	
	(UV6)	3-3 $1-2$	2.23 2.12	2648.3460 2646.2095	2647.5576 2645.4216	0.1 0.0	37759.417 ^A 37789.903 ^B		0.052 0.110	4.733 4.795	-2.42ª -2.75ª	
		$\frac{1-2}{2-2}$	2.12	2633.3788	2632.5939	0.0	37789.903 37974.028 ^A		0.110	4.795	-2.73^a	
		1-1	2.38	2624.1486	2623.3660	0.1	38107.598 ^A		0.110	4.835	-2.57ª	
		4-3	2.23	2619.4922	2618.7107	1.0	38175.338 ^A	-14	0.000	4.733	-2.43a	
		3-2	2.45	2613.5523	2612.7722	0.1	38262.100 ^A		0.052	4.795	-2.59^a	
1.7	a ⁵ D-x ⁵ D°	2-1	2.10	2611.5305	2610.7509	0.2	38291.722 ^B		0.087	4.835	-2.96 ^a	
17	a U - x U (UV7)	3-4 2-3	4.05 3.75	2550.3786 2546.7428	2549.6134 2545.9784	0.1 0.0	39209.865 ^A 39265.842 ^A		0.052 0.087	4.913 4.955	-0.69 ^a -0.31 ^a	
	(017)	1-2	3.67	2541.7353	2540.9721	0.0	39343.200 ^A		0.007	4.988	-0.33^a	
		0-1	3.62	2536.3689	2535.6070	-0.1	39426.441 ^A		0.121	5.009	-0.56^a	
		1 - 1	3.34	2530.5960	2529.8354	0.0	39516.383 ^A		0.110	5.009	-0.96a	
		$^{2-2}$	3.69	2529.8954	2529.1350	-0.1	39527.326 ^A		0.087	4.988	-0.32^a	
		3-3	3.82	2528.1950	2527.4350	0.3	39553.911 ^A		0.052	4.955	0.11 ^a	
		1-0	3.50	2525.0517	2524.2925	-0.1	39603.149 ^A		0.110	5.020	-0.51^a	
		$4-4 \\ 2-1$	4.07 3.71	2523.6084 2518.8595	2522.8494 2518.1017	0.1 0.1	39625.800 ^A 39700.507 ^A		0.000 0.087	4.913 5.009	0.26 ^a -0.26 ^a	
		3-2	3.78	2511.5911	2510.8349	0.1	39815.399 ^A		0.057	4.988	-0.22^{a}	
		4-3	3.76	2501.8858	2501.1319	-0.1	39969.850 ^A	1	0.000	4.955	-0.35^a	
18	$a~^5D-y~^7P$ °	1-2	3.02	2553.3717	2552.6058	-0.2	39163.902 ^A		0.110	4.966	-2.52^a	
	(UV8)	2-2	3.42	2541.4266	2540.6635	3.0	39347.979 ^A		0.087	4.966	-2.17ª	
		$\begin{array}{c} 2-3 \\ 3-2 \end{array}$	3.15 9	2531.4524 2522.953	2530.6916 2522.194	4.2 0.0	39503.014 ^A 39636.09 ^D		0.087 0.052	4.985 4.966	• • •	TT
		3-2 $3-3$	3.49	2513.1214	2512.3649	0.0	39030.09 39791.154 ^A		0.052	4.985	-1.88ª	II
		3-4	2.31	2499.6272	2498.8738	2.2	40005.966^{D}		0.052	5.012		II
		4-3	3.76	2487.1231	2486.3727	-0.6	40207.097^{B}		0.000	4.985	-1.70a	
		4-4	3.65	2473.9041	2473.1568	-0.2	40421.938 ^A		0.000	5.012	-1.64ª	
19	$a^{5}D - x^{5}F^{0}$	1-2	4.12	2491.9065	2491.1550	-0.1	40129.916 ^A		0.110	5.085	0.13^a	
	(UV9)	2-3	4.26 3.58	2491.3958 2490.5036	2490.6443 2489.7524	0.0	40138.143 ^A 40152.521 ^A		0.087 0.121	5.064	0.35^a	
		$0-1 \\ 3-4$	3.86	2488.8933	2489.7324	-0.3	40132.321^{-1} 40178.500^{B}		0.121	5.099 5.033	-0.19 ^a 0.55 ^a	
		1-1	4.00	2484.9376	2484.1876	0.2	40178.300 40242.460 ^A		0.032	5.099	-0.20^a	
		4-5	4.58	2484.0205	2483.2708	-0.3	40257.316 ^B		0.000	4.991	0.69^{a}	
		2-2	3.88	2480.5253	2479.7764	-0.1	40314.042^{A}	1	0.087	5.085	-0.10^a	

TABLE 2—Continued

:				17	ABLE 2—Co							
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{} \ (A)$	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
))).		3-3	3.60	2473.6422	2472.8949	0.0	40426.218 ^A	0	0.052	5.064	-0.08^a	
G.		2-1	3.18	2473.6186	2472.8713	-0.9	40426.604 ^A		0.087	5.099	-1.24ª	
)		4-4	3.97	2463.3923	2462.6473	0.1	40594.428 ^A		0.000	5.033	-0.32^a	
4		3-2	3.20	2462.9258	2462.1810	-0.1	40602.116 ^A		0.052	5.085	-1.30°	
		4-3	3.05	2448.4510	2447.7095	0.1	40842.149 ^A		0.000	5.064	-1.68ª	
20	$a~^5D-z~^5S$ °	1-2	1.85	2499.5717	2498.8184	0.0	40006.854 ^C		0.110	5.070	-3.24^a	
	(UV10)	2-2	2.94	2488.1205	2487.3699	0.1	40190.979 ^A		0.087	5.070	-1.90ª	
		3-2	1.57	2470.4144	2469.6679	0.9	40479.038 ^C	-15	0.052	5.070	• • •	
21	$a~^5D-x~^5P$ o	2 - 3	3.44	2390.7013	2389.9729	-0.1	41828.731 ^A		0.087	5.273	-1.57ª	
	(UV11)	1-2	3.43	2382.5628	2381.8362	1.8	41971.612 ^A		0.110	5.314	-1.73ª	
		0-1	3.12 3.70	2375.2435	2374.5186	-0.1	42100.947 ^A 42116.804 ^A		0.121	5.341	-2.10^a	
		3-3 2-2	3.19	2374.3492 2372.1546	2373.6245 2371.4304	0.0	42116.804 ⁻¹ 42155.768 ^A		0.052 0.087	5.273 5.314	-1.41 ^a -1.95 ^a	
		1-1	3.02	2370.1800	2369.4562	-0.1	42190.889 ^A		0.037	5.341	-2.19^a	
		4-3	6	2351.133	2350.413	2.2	42532.69 ^D		0.000	5.273	-3.03^a	
22	$a~^5D-y~^5G^{\circ}$	1-2	0?	2362.844	2362.122	0.6	42321.88 ^D		0.110	5.357		
22	(UV12)	$\frac{1-2}{2-3}$	2.68	2356.6299	2355.9092	-0.1	42433.477 ^A		0.110	5.348	-2.52 ^a	
	(0,12)	2-2	1.52	2352.6064	2351.8866	-1.8	42506.048 ^D		0.087			
		3-4	2*	2347.026	2346.308	-3.3	42607.11 ^D	60	0.052	5.334		
		3 - 3	1	2340.742	2340.025	2.7	42721.50 ^D		0.052	5.348		
		4-5	1.97	2330.3554	2329.6406	0.3	42911.909 ^B		0.000	5.320		
		4-4	d 0?	2324.337	2323.623	-2.2	43023.03 ^D		0.000	5.334	• • •	
23	$a~^5D-z~^5H^{\circ}$	2 - 3	0	2346.212	2345.494	3.3	42621.89 ^D		0.087	5.372		
	(UV13)	3-4	1	2342.313	2341.595	7.1	42692.85 ^D		0.052	5.345		
		3-3	0	2330.457	2329.742	-0.5	42910.04 ^D		0.052	5.372	• • •	
		4-5	6*	2326.033	2325.319	2.2	42991.65 ^D		0.000	5.330	••• ′	
24	$a~^5D-z~^5I^{ m o}$	3-4	1.34	2324.1355	2323.4220	0.9	43026.751 ^D		0.052	5.386	• • •	II
		4-4	2.68	2301.8827	2301.1741	0.0	43442.701 ^D		0.000	5.386	• • •	II
		4-5	1.45	2300.9598	2300.2514	-0.4	43460.125 ^B		0.000	5.388	•••	
25	$a ^5D - w ^5D^{\circ}$	3-4	3.49	2321.0705	2320.3577	0.0	43083.568 ^A		0.052	5.393	-0.99^a	
	(UV14)	2-3	3.37	2313.8153	2313.1041	-0.2	43218.662 ^A		0.087	5.446	-1.18 ^a	
		$1-2 \\ 0-1$	3.29 2.89	2309.7092 2302.3926	2308.9989 2301.6839	-0.1 0.2	43295.493 ^A 43433.080 ^A		0.110 0.121	5.478 5.506	-1.39 ^a -1.68 ^a	
		2-2	3.10	2299.9283	2299.2201	0.2	43479.617 ^A		0.121	5.478	-1.56^a	
		4-4	3.90	2298.8769	2298.1690	0.0	43499.502 ^A		0.000	5.393	-0.66^a	
		3-3	3.53	2298.4950	2297.7871	0.1	43506.730 ^A	-1	0.052	5.446	-1.10^{a}	
		1 - 1	2.59	2297.6345	2296.9269	0.1	43523.023 ^A		0.110	5.506	-2.02^a	
		1-0	3.14	2295.1152	2294.4081	0.1	43570.798 ^A		0.110	5.512	-1.55 ^a	
		2-1	3.39	2287.9552	2287.2496	0.0	43707.150 ^A		0.087	5.506	-1.28 ^a	
		3-2 4-3	3.35 3.39	2284.7904 2276.7289	2284.0856 2276.0258	0.1 0.0	43767.690 ^A 43922.664 ^A		0.052 0.000	5.478 5.446	-1.30° -1.17°	
•	50 500											
26	$a^{5}D-v^{5}D^{0}$	2-3	3.53	2300.8502	2300.1418	0.0	43462.195 ^A 43606.588 ^A		0.087	5.476	-1.56 ^a	
	(UV16)	3-4 $1-2$	3.38 2.66	2293.2315 2284.3600	2292.5248 2283.6552	0.1 0.1	43006.388 ⁻⁴		0.052 0.110	5.458 5.537	-1.68 ^a -2.22 ^a	
		0-1	2.43	2284.0088	2283.3041	0.0	43782.669 ^A		0.110	5.549	-2.22^{a}	
		1-1	d0?	2279.326	2278.623	0.0	43872.61 ^D		0.110	5.549		
		1-0	2.34	2275.8945	2275.1916	-0.2	43938.768 ^A		0.110	5.558	-2.32^a	
		2-2	2.44	2274.7935	2274.0908	1.6	43960.034 ^D		0.087	5.537	• • •	I
		4-4	2.55	2271.5645	2270.8626	0.0	44022.522 ^A		0.000	5.458	•••	
		2-1	2.28	2269.8004	2269.0988	-0.1	44056.737 ^A		0.087	5.549	·	77
		4-3 3-2	1.97 1.75	2264.1747 2259.9821	2263.4743 2259.2826	-0.1 0.1	44166.204^{D} 44248.138^{B}		0.000 0.052	5.476 5.537	-2.31 ^b	II
	55 555											
27	$a^{5}D-w^{5}F^{0}$	1-2	3.34	2304.2897	2303.5806	-0.2	43397.321 ^A 43400.265 ^A		0.110	5.491	-1.72°	
	(UV15)	0-1 1-1	3.13 2.41	2304.1334 2299.3683	2303.4243 2298.6603	0.0 0.1	43400.265 ^A		0.121 0.110	5.502 5.502	-1.76 ^a -2.42 ^a	
		2-2	2.63	2294.5552	2293.8482	0.6	43581.432 ^A		0.110	5.491	-2.42 -2.37 ^a	
		2-1	2.26	2289.6742	2288.9683	-0.2	43674.336 ^D		0.087	5.502		II
		2-3	2.56	2280.6410	2279.9371	0.2	43847.321 ^A		0.087	5.523	-1.99 ^a	

TABLE 2—Continued

					ABLE 2—Co							
No.	Multiplet (MT) 1	J-J	I ²	$\begin{array}{c} \lambda_{vac}^{3} \\ \text{(Å)} \end{array}$	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
		3-2	0	2279.484	2278.780	-3.1	43869.58 ^D		0.052	5.491		
		3-4	3.29	2272.7718	2272.0696	0.0	43999.138 ^D		0.052	5.507	-1.69 ^a	II
		3-3	2.81	2265.7550	2265.0543	0.0	44135.399 ^A		0.052	5.523	-2.11 ^a	
		4-5	3.32	2260.2097	2259.5102	-0.1	44243.682 ^A		0.000	5.485	-1.32^a	
		4-4 4-3	2.67 d0?	2251.4880 2244.604	2250.7904 2243.908	0.0 2.0	44415.071 ^A 44551.29 ^D		0.000	5.507 5.523	-2.08 ^a	
20	a ⁵ D-y ⁵ S°		2.15	2292.3313	2291.6249	-1.8	43623.711 ^B		0.110	5.519		
28	a U = y S (UV17)	$1-2 \\ 2-2$	1.04	2282.6976	2291.0249	-0.8	43807.817 ^C		0.110	5.519	• • •	
	(0117)	3-2	3.03	2267.7858	2267.0847	0.1	44095.875 ^A		0.052	5.519	 -1.75 ^a	
29	$a^{5}D-x^{3}D^{\circ}$	1-2	1.90	2252.5712	2251.8733	-0.8	44393.713 ^B		0.110	5.614		
29	(UV18)	$\frac{1-2}{2-3}$	2.20	2246.3493	2245.6528	-0.2	44516.674 ^A		0.087	5.606		
	(0110)	0-1	0.78	2243.4767	2242.7808	0.8	44573.674 ^C		0.121	5.648		
		$^{2-2}$	1.94	2243.2659	2242.5700	-2.0	44577.863^{B}		0.087	5.614		
		1 - 1		2238.958	2238.263	• • •	44663.632 ^D		0.110	5.648		MII
		3-3	2.08	2231.9066	2231.2132	0.1	44804.742 ^A		0.052	5.606	• • •	
		2-1	1.36	2229.7663	2229.0733	0.3	44847.749 ^B		0.087	5.648		
		3-2 4-3	2.01 1.72	2228.8645 2211.3776	2228.1717 2210.6885	0.1 -0.1	44865.895 ^A 45220.681 ^A		0.052 0.000	5.614 5.606	-2.11 ^b	
											• • •	
30	$a ^5D - y ^3G^{\circ}$	2-3	0.78	2229.2104	2228.5175	1.5	44858.933 ^D		0.087	5.649	• • •	II
	(UV19)	3-4 4-5	1.26 1.70	2221.6064 2207.7569	2220.9151 2207.0686	-0.4 0.0	45012.474 ^B 45294.842 ^A		0.052 0.000	5.632 5.616	• • •	
		4-3	0?	2201.7309	2207.0080	-1.9	45428.44 ^D		0.000	5.632		
	50 500											
31	$a ^5D - x ^5G^{\circ}$	1-2	1.51	2218.4337 2211.9247	2217.7431 2211.2355	-1.3 -0.4	45076.848 ^C 45209.496 ^D		0.110 0.087	5.699 5.692	•••	11
	(UV20)	2-3 $2-2$	1.43 d0?	2211.9247	2211.2333	1.0	45260.92 ^D		0.087	5.692		II
		3-4	1.72	2201.8051	2201.1180	0.3	45417.281 ^A		0.052	5.682		
		3-3	0.70	2197.9205	2197.2342	0.4	45497.552 ^C		0.052	5.692		
		4-5	1.77	2186.9338	2186.2498	0.2	45726.122 ^A	-4	0.000	5.669		
		4-4	0.70	2181.8237	2181.1407	0.1	45833.218^{D}	-2	0.000	5.682		II
32	$a~^5D-w~^5P^{ m o}$	1-2	2.56	2201.4113	2200.7243	-0.1	45425.405 ^A	3	0.110	5.742	-0.99^{b}	
	(UV21)	0 - 1	2.52	2201.0769	2200.3900	-0.1	45432.306 ^A		0.121	5.754		
		2-3	2.33	2201.0390	2200.3520	-0.1	45433.089 ^A		0.087	5.720		
		1-1	2.96	2196.7280	2196.0420	-0.1	45522.249 ^A		0.110	5.754	-0.59^{b}	
		$2-2 \\ 2-1$	3.19 2.97	2192.5242 2187.8787	2191.8391 2187.1945	-0.2 -0.1	45609.530 ^A 45706.374 ^A		0.087 0.087	5.742 5.754	-0.38 ^b	
		3-3	3.11	2187.1710	2186.4869	-0.1	45700.374 45721.163 ^A		0.052	5.720		
		3-2	2.97	2178.7630	2178.0807	-0.1	45897.603 ^A		0.052	5.742		
		4-3	3.51	2167.4533	2166.7733	-0.1	46137.096^{B}		0.000	5.720	0.13^{b}	
33	$a^{5}D-z^{3}S^{0}$	0-1	2.21	2191.8893	2191.2043	0.0	45622.741 ^A	0	0.121	5.778	-1.80^{b}	
33	(UV22)	1-1		2187.5767	2186.8926		45712.683 ^A		0.110	5.778		
	(/	2-1	2.60	2178.8009	2178.1186	0.2	45896.804 ^A		0.087	5.778		
34	$a~^5D-y~^3P^{\circ}$	1-0	1.20	2184.1499	2183.4665	0.1	45784.403 ^B	-2	0.110	5.786		
54	(UV23)	1-2	10	2181.552	2180.869	0.0	45838.93 ^D		0.110	5.793	•••	
	(/	0 - 1	2.24	2177.5223	2176.8402	0.0	45923.755 ^A	0	0.121	5.815	-1.66^{b}	
		1-1	2.19	2173.2660	2172.5848	0.0	46013.696 ^A		0.110	5.815	• • •	
		2-2	1.56	2172.8235	2172.1424		46023.066^{B}		0.087	5.793	• • •	
		2-1	d0?	2164.606	2163.927	1.9	46197.78 ^D		0.087	5.815	• • •	
		3-2	1.81	2159.3079	2158.6295		46311.136 ^A		0.052	5.793	• • •	
35	$a~^5D-u~^5D$ °	1-2	2.09	2173.8950	2173.2137		46000.381 ^A		0.110	5.813		
	(UV24)	2-3	2.39	2171.9781	2171.2972		46040.980 ^A		0.087	5.795	-1.60 ^b	
		2-2	2.50	2165.2283	2164.5488		46184.506 ^A 46199.155 ^A		0.087 0.121	5.813 5.849	• • •	
		$0-1 \\ 1-0$	1.90 2.04	2164.5418 2160.6022	2163.8624 2159.9237		46199.155 ^A 46283.392 ^A		0.121	5.849		
		1-1	1.95	2160.3344	2159.6558		46289.131 ^E		0.110	5.849		
		3-4	2.10	2159.5985	2158.9201	0.1	46304.903 ^A		0.052	5.792		
		3-3	2.79	2158.4727	2157.7945		46329.055 ^A		0.052	5.795		
		2-1	2.36	2151.7763	2151.0995		46473.232 ^L		0.087	5.849	• • •	I
		4-4	2.67	2140.3726	2139.6981	0.1	46720.837 ^A	-2	0.000	5.792	• • •	

TABLE 2—Continued

					ABLE 2—CC					<u> </u>		
No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		4-3	2.06	2139.2668	2138.5925	0.1	46744.988 ^A	-2	0.000	5.795	-1.87 ^b	
36	$a~^5D-x~^3F^{\circ}$	1-2	1.83	2159.4132	2158.7349	-0.0	46308.876 ^A	1	0.110	5.851		
	(UV25)	2 - 3	1.86	2155.6974	2155.0198	0.1	46388.700 ^A		0.087	5.839		
		3-4	2.36	2151.7763	2151.0995	-1.3	46473.232 ^D		0.052	5.813	• • •	I
		2-2	1.96	2150.8614	2150.1848	0.0	46493.000 ^A		0.087	5.851	• • •	
		3-3 $3-2$	2.21 d0?	2142.3931 2137.615	2141.7183 2136.941	0.0 -1.4	46676.774 ^A 46781.11 ^D		0.052 0.052	5.839 5.851		
		3-2 4-4	2.71	2132.6902	2132.0173	0.1	46889.136 ^A		0.000	5.813	-1.33 ^b	
		4-3	0.95	2123.4702	2122.7991	-0.8	47092.725^{D}		0.000	5.839		
37	$a~^5D-z~^3H^{\circ}$	3-4	1.04	2141.7607	2141.0859	-0.5	46690.558 ^C	10	0.052	5.840		
	(UV26)	4-5	0.90	2127.2813	2126.6094	0.5	47008.358 ^C	-10	0.000	5.828		
		4-4	0.70	2122.8495	2122.1785	-0.7	47106.495 ^C	15	0.000	5.840	• • •	
38	$a~^5D-w~^3D$ o	1-2	2.30	2162.2580	2161.5791	0.0	46247.949 ^A		0.110	5.844		
	(UV27)	0 - 1	1.74	2160.1096	2159.4311	0.0	46293.948 ^A		0.121	5.861		
		2-3	1.96	2159.2127	2158.5344		46313.178 ^A		0.087	5.829	• • •	
		1-1	1.04	2155.9207	2155.2430		46383.896 ^B		0.110	5.861	• • •	
		2-2	2.34	2153.6838	2153.0067		46432.071 ^A		0.087	5.844	• • •	
		2-1	1.45	2147.3966	2146.7207 2145.1896	-0.0 0.0	46568.017 ^A 46601.250 ^A		0.087 0.052	5.861 5.829	-1.56 ^b	
		3-3 3-2	2.44	2145.8652 2140.404	2143.1890		46720.148 ^L		0.052	5.844	-1.50	ΜI
		$\frac{3-2}{4-3}$	1.15	2126.8824	2126.2106		47017.175 ^E		0.000	5.829		141 1
20	5 D 5 CO			2128.1461	2127.4741	-1.2	46989.255 ^C		0.087	5.913		
39	$a {}^{5}D - w {}^{5}G^{\circ}$	$\frac{2-3}{3-4}$	1.18 0.90	2128.1401	2119.1366		40989.233 47174.107 ^E		0.057	5.900		
	(UV28)	3-4 4-5	1.57	2108.8053	2108.1371	0.4	47420.215 ^L		0.000	5.879		II
		4-4	d0?	2101.280	2100.614	0.4	47590.03 ^L		0.000	5.900		
40	a ⁵ D-Psp3 ¹ D°	1-2	1.60	2149.0794	2148.4032	0.0	46531.551 ^A		0.110	5.879		
40	(UV29*)	2-2	1.86	2140.6091	2139.9346		46715.676 ^A		0.087	5.879		
	(0,2))	3-2	0.30	2127.4884	2126.8165		47003.781 ^C		0.052	5.879		
41	$a~^5D-z~^1G^{ m o}$	3-4	0?	2125.996	2125.324	0.0	47036.78 ^L	0	0.052	5.883		
41	u D-2 G	4-4	0?	2107.361	2106.693	0.0	47452.72 ^L		0.000	5.883		
42	$a~^5D-y~^3S^{\circ}$	0-1	1.15	2146.9580	2146.2822	0.1	46577.529 ^L	-3	0.121	5.896		
1.2	(UV30)	1-1	0.60	2142.8211	2142.1461		46667.452 ^C		0.110	5.896		
43	a 5D-v 5F°	1-2	1.23	2111.9011	2111.2323	0.4	47350.702 ^E	³ -10	0.110	5.981		
73	(UV31)	2-3	0.85	2108.8621	2108.1939		47418.938 ^C		0.087	5.966		
	,	1 - 1	1.73	2106.9280	2106.2602	0.1	47462.467 ^A	⁴ -3	0.110	5.995		
		3-4	0.78	2104.6395	2103.9721	-0.6	47514.075 ^C		0.052	5.942		
		2-2	2.06	2103.7203	2103.0531		47534.837		0.087	5.981	• • •	
		4-5	0.78	2100.5707	2099.9042		47606.109 ^L		0.000	5.902		
		2-1	1.15	2098.7860	2098.1197		47646.593 ^E	_	0.087	5.995		
		3-3	1.20	2096.1298	2095.4641 2090.3833		47706.970 ^L 47822.910 ^c		0.052 0.052	5.966 5.981		
		3-2 4-4	2.07	2091.0480 2086.376	2090.3833	0.0 -0.4	47822.910 47930.01 ^I		0.032	5.942	• • •	
		4-4	0 d0?	2080.370	2077.348	-0.4	48122.95 ¹		0.000	5.966		
4.4	50 300			2091.5196	2090.8548		47812.127 ^L		0.000	5.928		I
44	$a ^5D - x ^3G^{\circ}$ (UV32)	4-4 4-5	1.73 0.95	2091.5196	2090.8348		47812.127 ⁻ 47834.565 ^L		0.000	5.928		1
	$a {}^{5}D - v {}^{5}P$ °						47262.561		0.087	5.947		
45		$\begin{array}{c} 2-3 \\ 1-2 \end{array}$	1.77 2.06	2115.8396 2115.2691	2115.1701 2114.5997		47202.301		0.087	5.971		
	(UV33)	0-1	2.19	2113.2031	2112.9688		47213.308		0.110	5.987		
		1-1	2.19	2113.6379	2108.9591		47401.734		0.121	5.987		
		2-2	2.56	2107.0626	2106.3948		47459.434		0.087	5.971		
		3-3	2.45	2103.0208	2102.3538		47550.647		0.052	5.947	_	
		2-1	2.40	2101.4646	2100.7978		47585.860	4 -1	0.087	5.987		
		3-2	2.75	2094.3501	2093.6848	0.0	47747.508		0.052	5.971		
		4-3	2.95	2084.7848	2084.1213	0.0	47966.5814	⁴ -1	0.000	5.947	-0.77 ^b	
46	$a~^5D-y~^5H$ °	3-4	4	2085.684	2085.020	1.7	47945.90 ¹	D -40	0.052	5.996		II
	y	4-5	d0?	2073.354	2072.693	10.7	48231.03	^D -250	0.000	5.980		

				17	ABLE 2—Co	ntinuea					
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	$ \sigma^{5} $ o-R ⁶ (cm ⁻¹) (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
47	$a^5D-x^3P^0$	1-2	1.53	2108.9710	2108.3028	0.9	47416.488 ^B -20	0.110	5.989		
4	(UV34)	0 - 1	1.59	2103.5777	2102.9105	0.0	47538.059 ^B -1	0.121	6.015		
		$^{2-2}$	1.36	2100.8130	2100.1464	0.6	47600.620^{D} -13	0.087	5.989		II
		1 - 1	1.76	2099.6054	2098.9390	0.2	47627.998 ^A -5	0.110	6.015		
		2 - 1	1.73	2091.5196	2090.8548	0.0	47812.127 D -1	0.087	6.015		I
		3-2	1.89	2088.1752	2087.5111	0.3	47888.701 ^A -6	0.052	5.989		
48	$a~^5D-v~^3D$ °	3-2	d0?	2048.059	2047.402	-1.7	48826.73 ^D 40	0.052	6.105		
40	a D-v D	4-3	d0?	2035.209	2034.555	0.8	49135.00 ^D -20	0.032	6.092	• • •	
										• • •	
49	$a~^5D-n~^7D$ °	3-3	1	2024.719	2024.067	10.2	49389.57 ^D -250	0.052	6.175		
		4-4	0	2017.810	2017.159	2.0	49558.68 ^D -50	0.000	6.144		
		3-2	0	2016.433	2015.782	2.0	49592.53 ^D -50	0.052	6.200	• • •	
		4-3	d4	2007.828	2007.179	8.1	49805.06 ^D -200	0.000	6.175	• • •	
50	a ^5D-n 7F $^{\circ}$	2 - 3	d0?	2010.898	2010.248	-0.4	49729.03 ^D 10	0.087	6.253		
		$^{2-2}$	2	2005.946	2005.297	-1.2	49851.79 ^D 30	0.087	6.268		
		3-4	1.15	2004.5184	2003.8697	-0.2	49887.294 ^C 5	0.052	6.237		
		3 - 3	0	1999.319		1.6	50017.04 ^D -40	0.052	6.253		
		4-5	1.54	1997.9134		-1.1	50052.219 ^C 28	0.000	6.205		
		4-4	3	1987.957		12.6	50302.90 ^D -320	0.000	6.237		II
51	$a~^5D-w~^3P$ °	0-1	d0?	2038.107	2037.452	0.0	49065.14 ^D 0	0.121	6.204		
52	$a~^5D-n~^7P^{ m o}$	2 - 3	1.11	2003.0285	2002.3800	-1.6	49924.403 ^C 41	0.087	6.277		
		4-4	1	1992.599		1.6	50185.70 ^D -40	0.000	6.222		
		2-2	d0?	1992.146		1.2	50197.13 ^D -30	0.087	6.311		
		3-3	0	1991.540		1.2	50212.40 ^D -30	0.052	6.277		
		3-2	d 0?	1980.776	•••	-1.2	50485.27 ^D 30	0.052	6.311		
		4-3	1	1975.178		0.0	50628.36 ^D 0	0.000	6.277	• • •	
53	$a~^5D-u~^5F^{\circ}$	2-3	1.94	1964.0551		-0.1	50915.069 ^B 3	0.087	6.400		
33	(UV35)	1-2	2.05	1963.1218		0.2	50939.274 ^A -4	0.110	6.426		
	(0,55)	3-4	2.64	1962.1108		0.0	50965.521 ^A 0	0.052	6.370		
		0-1	1.92	1962.0254		-0.1	50967.741 ^B 2	0.121	6.440	•••	
		4-5	2.79	1960.1441		-0.0	51016.658 ^A 1	0.000	6.325	•••	
		1-1	1.81	1958.5691		-0.0	51057.683 ^B 1	0.110	6.440		
		2-2	2.33	1956.0512		-0.1	51123.405 ^A 3	0.087	6.426		
		3-3	2.50	1953.0051		-0.1	51203.142^{A} 2	0.052	6.400		
		4-4	1.48	1946.2278		0.3	51381.446 ^C -8	0.000	6.370		
		3-2	1.70	1945.0913		0.3	51411.468 ^B -9	0.052	6.426		
		4-3	2.38	1937.2685	•••	0.0	51619.072 ^A 0	0.000	6.400	-1.07 ^b	
54	$a^{5}D-x^{3}H^{\circ}$	3-4	1.46	1961.0464	•••	0.2	50993.183 ^B -4	0.052	6.374	• • •	
55	$a~^5D-t~^5D$ °	2 - 3	0?	1974.057		10.5	50657.11 ^D -270	0.087	6.368	• • •	
	(UV36)	3-4	1.15	1973.9163	• • •	-0.7	50660.709 ^C 17	0.052	6.332		
		1-2	d0?	1970.760	• • •	0.4	50741.85 ^D -10	0.110	6.401		
		0 - 1	d0	1966.580	• • •	2.7	50849.70 ^D -70	0.121	6.426	• • •	
		2-2	1.64	1963.6337	• • •	-0.2	50925.994 ^B 4	0.087	6.401	• • •	
		1-1	1.41	1963.1043	•••	-0.4	50939.728 ^C 10	0.110	6.426	• • •	
		3-3	1.92	1962.8836	• • •	-0.0	50945.456 ^B 1	0.052	6.368	• • •	
		1-0	1.73	1958.7331	• • •	-0.1	51053.408 ^B 3	0.110	6.440	• • •	
		4-4	2.81	1957.8429	• • •	0.1	51076.622 ^A -3 51123.843 ^A -1	0.000	6.332	• • •	
		2-1	2.34	1956.0345	• • •	0.0		0.087	6.426	• • •	
		3-2 4-3	2.49	1952.5886	•••	0.0	51214.064 ^A 0 51361.386 ^A -1	0.052	6.401	• • •	
56	a ⁵ D-v ³ F°	4-3 3-4	2.69 0?	1946.9880 1965.076		0.0	51361.386 ^A -1 50888.62 ^D -40	0.000 0.052	6.368 6.361		
20		3-3	1.52	1962.7333		0.7	50949.357 ^C -17	0.052	6.368		
		4-4	1.28	1949.1427		-0.3	51304.608 ^D 7	0.000	6.361		
		4-3	1.83	1946.8391		-0.2	51365.312 ^B 4	0.000	6.368	• • • •	
57	$a~^5D-u~^5P$ o	2-3	2.42	1961.2458		0.0	50988.000 ^A 0	0.087	6.409		
31	(UV37)	1-2	2.20	1958.6086		-0.1	51056.652 ^A 3	0.110	6.440		
	. = ,	0-1	2.06	1955.7022		-0.2	51132.528 ^A 4	0.110	6.461	•••	
		1-1	2.22	1952.2685		0.1	51222.462^A -3	0.110	6.461		
								0.210	0.101	•••	

TABLE 2—Continued

•				TAJ	BLE 2—	-Continu	ed					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)		R ⁶ nK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		2-2	2.35	1951.5708		-0.1	51240.776 ^A	2	0.087	6.440		
Ç.		3-3	2.12	1950.2270		-0.3	51276.082 ^A	9	0.052	6.409		
ri)		2-1	1.78	1945.2758		-0.1	51406.593 ^B	2	0.087	6.461		
4		3-2	2.28	1940.6604		-0.1	51528.850 ^A	2	0.052	6.440	-1.44 ^b	
		4-3	2.49	1934.5351		0.0	51692.006 ^A	0	0.000	6.409	-1.00^{b}	
					• • •						-1.00	
58	$a ^5D - y ^1D^{ 0}$	$\frac{2-2}{3-2}$	d0? 1.51	1960.621 1949.6072		1.5 -0.5	_	-40 13	0.087 0.052	6.411 6.411	•••	
50	$a~^5D-u~^3D$ °		0	1050 646			_	20	0.007			
59	$a \ ^{\circ}D - u \ ^{\circ}D $	2-3	0	1950.646	• • •	0.8		20	0.087	6.443	• • •	
		3-3	d0?	1939.741	• • •	-3.8	51553.27 ^D 10 51881.13 ^D 13	00	0.052	6.443	• • •	**
		3-2	0	1927.483	• • •	-5.6			0.052	6.484	• • •	II
		4-3	1	1924.220	• • •	-0.4		10	0.000	6.443	• • •	
60	$a\ ^5D-t\ ^3D^{\circ}$	2 - 3	d0?	1941.400		0.0	51509.22 ^D	0	0.087	6.473		
		1-2	d0?	1930.701		4.5	51794.66 ^D -12	20	0.110	6.532		
		2 - 1	1.32	1917.4069		0.8	52153.772 ^C -		0.087	6.553		
61	5D 4DE 300	2 4	1									
61	$a ^5D - ^4F5p ^3G^{\circ}$	3-4	1	1865.612	• • •	-2.4		70	0.052	6.697	• • •	
		3-3	1.28	1853.8610	• • •	-0.3	53941.476 ^C	9	0.052	6.739	• • •	
		4-4	2	1851.248	• • •	-1.0	54017.61 ^D	30	0.000	6.697	• • •	
62	$a~^5D-Gsp3~^3F^{ m o}$	3-4	1.62	1903.3950		-0.4	52537.703 ^C	12	0.052	6.565		
		2 - 3	1.26	1899.2089		0.1		-3	0.087	6.615		
		1-2	1.38	1891.7440		-0.3	52861.276^{D}	7	0.110	6.664	•••	
		2-2	1.04	1885.1767		-1.2	_	33	0.087	6.664		
	5 D 4 E # 5 CO											
63	$a\ ^5D-^4F5p\ ^5G^{o}$	4-5	1.41	1866.1414	• • •	-0.1	53586.508 ^D	2	0.000	6.644	• • •	
		3-3	d0?	1861.542	• • •	-6.6	53718.91 ^D 19		0.052	6.712	• • •	
		3-2	d0?	1857.296	• • •	0.7		20	0.052	6.727	• • •	
		4-4	0	1856.930	• • •	-7.2	53852.32 ^D 2	10	0.000	, 6.677	• • • •	II
64	$a^{5}D-{}^{4}F5p^{5}F^{0}$	2-3	2.00	1888.3221		-0.0	52957.068^{B}	1	0.087	6.653		
	(UV40*)	3-4	2.40	1887.7648		-0.1	52972.702^{B}	3	0.052	6.619		
	(0.10)	4-5	1.69	1883.7789		-0.0	53084.785^{B}		0.000	6.581		
		1-2	2.05	1881.3115		-0.6		18	0.110	6.700		
		3-3	1.20	1878.1045		-1.1	_	32	0.052	6.653		
		1-1	1	1874.897		0.7	_	20	0.110	6.723		
		4-4	2.17	1873.0576		-0.3	53388.641 ^B	8	0.000	6.619		
		3-2	2.55	1864.7465		-0.0	53626.591 ^D	1	0.052	6.700		II
		4-3	2	1863.543		-5.6		60	0.000	6.653	• • • •	**
65	$a^{5}D-y^{1}H^{\circ}$	4-5	d0?	1875.697		-2.8	_	80	0.000	6.610		
66	$a^{5}D-{}^{4}F5p^{3}F^{0}$	3-4	1.74	1889.8979		-0.5	_	13	0.052	6.612		
00	a D - F Sp F	4-4	1.30	1875.1588		0.5	_	14	0.000	6.612		
		2-3	1.50	1866.191		-1.7	_	50	0.087	6.731	• • •	
		1-2	0	1858.106		0.3		10	0.110	6.782	• • •	
		3-3	1.70	1856.2151		1.0		29	0.052	6.731	• • •	
		2-2	d0?	1851.770		-0.3	_	10	0.032	6.782	• • •	
		4-3	1.38	1841.9940		1.3	_	.37	0.000	6.731		
67	$a^{5}D-{}^{4}F5p^{5}D^{0}$	2-3	1.82	1883.9226		0.1	53080.736^{B}	-3	0.087	6.668		
07	u D= 1 3p D	4-4	2.49	1865.3093		-0.2	53610.413 ^B	5	0.000	6.647		
		1-2	1.54	1864.1918		-1.1	~	33	0.110	6.761		
		1-1		1861.675		-2.1	_	60	0.110	6.770		
		4-3	1 1.70	1859.2635		0.3		-8	0.000	6.668		
		2-2	1.60	1857.8164		0.3	~	-10	0.087	6.761		
		2-2 $2-1$	1.68	1855.3174		-0.1	53899.132 ^D	4	0.087	6.770	• • •	II
		3-2	1.72	1847.9266	• • • •	0.4		12	0.052	6.761		11
68	$a~^5D-Dsp3~^5F^o$	0-1	1.36	1896.8581		1.2	52718.757 ^D -	-32	0.121	6.657		
00	w D-Dops I	1-2	0?	1892.689		2.1		-60	0.121	6.661		
		2-1	d0?	1887.047		0.0	52992.85 ^D	0	0.110	6.657	• • •	
		3-4			• • •		52992.83 ⁻² 53465.872 ^C	3		6.680	• • •	
			1.61	1870.3520	•••	-0.1	~		0.052		• • •	
		4-3	1.61	1861.0329	• • •	-0.4		12	0.000	6.662	• • • •	
		4-4	1.40	1855.9142	•••	-0.0	53881.802 ^C	1	0.000	6.680	• • •	
		4-5	2.24	1851.3804	• • •	-0.1	54013.752 ^C	4	0.000	6.697	• • • •	

TABLE 2—Continued

					BLE Z—							
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
69	$a^5D-x^1F^0$	2-3	0	1884.684		-0.7	53059.29 D	20	0.087	6.666		
70	$a^{5}D-x^{3}S^{0}$	0 - 1	0?	1892.853		-1.1	52830.31 ^D	30	0.121	6.671		
		1-1	0	1889.640		3.2	52920.13 ^D	-90	0.110	6.671		II
71	$a^{5}D-{}^{4}F5p^{3}D^{0}$	2 - 3	0	1882.036		-3.5	53133.94 ^D	100	0.087	6.675		
	•	3-3	1.53	1871.8913		0.3	53421.906^{D}	-8	0.052	6.675		
		2-2	1.41	1864.3215		-1.8	53638.818^{D}	51	0.087	6.737		
		4-3	1.56	1857.4308		1.4	53837.807^{D}		0.000	6.675		
		3-2	1.62	1854.3644		0.3	53926.834^{D}	-8	0.052	6.737		
		2-1	0	1848.318		0.0	54103.24 ^D	0	0.087	6.795		
72	$a~^5D-Dsp3~^5D^{\circ}$	1-2	1.61	1885.9074		0.4	53024.873^{C}	-10	0.110	6.684		
		1 - 1	1.20	1883.6799		1.1	53087.577^{D}	-31	0.110	6.692		
		2 - 3	1.72	1880.1407		0.2	53187.510^{C}	-5	0.087	6.681		
		2-2	1.59	1879.3807		-0.3	53209.017^{D}	8	0.087	6.684		
		2 - 1	1.70	1877.1685		0.4	53271.722^{C}	-10	0.087	6.692		
		3 - 3	1	1870.011		-1.0	53475.62 ^D	30	0.052	6.681		
		3-2	2.15	1869.2606		-0.2	53497.090^{C}	7	0.052	6.684		
		4-3	2.51	1855.5792		-0.3	53891.530^{B}	8	0.000	6.681		
		4-4	d0?	1841.582		6.8	54301.14 ^D	-200	0.000	6.732		
73	$a~^5D-t~^3G^{ m o}$	4-5	3	1852.424		-1.0	53983.32 ^D	30	0.000	6.693		II
74	$a~^5D-t~^5P$ °	1 - 2	1.65	1878.8480		-0.4	53224.104^{C}	10	0.110	6.709		
	(UV39)	0 - 1	1.89	1876.4197		0.1	53292.981^{C}	-3	0.121	6.729		
	` '	2-3	1.32	1876.1476		-0.1	53300.710^{D}	3	0.087	6.696		
		1-1	2.05	1873.2581		-0.0	53382.927^{B}	1	0.110	6.729		
		2-2	2.28	1872.3709		-0.1	53408.221^{B}	2	0.087	6.709		
		2-1	1.70	1866.8190		-0.2	53567.056 ^C	5	0.087	6.729		
		3-3	2.27	1866.0621		-0.2	53588.786 ^B	6	0.052	6.696		
		3-2	2.13	1862.3257		-0.3	53696.301 ^C	9	0.052	6.709		
		4-3	1	1851.688		-2.1	54004.78 ^D	60	0.000	6.696		
75	$a~^5D$ – $s~^6D$ 6 $p~^7D$ °	4-4	0?	1769.385		-2.2	56516.81 ^D	70	0.000	7.007		
76	$a^{5}D - s^{6}D6p^{7}F^{0}$	4-5	1	1769.820		0.9	56502.92 ^D	-30	0.000	7.005		
		3-2	0	1762.910		2.5	56724.40 ^D	-80	0.052	7.084		
77	$a^{5}D - s^{6}D6p^{7}P^{0}$	4-4	1	1768.611		1.3	56541.55 ^D	-40	0.000	7.010		
,,	<i>a b v b op</i> 1	4-3	3	1757.829		1.9	56888.35 ^D	-60	0.000	7.010	• • • •	
78	a ⁵ D-s ⁶ D6p ⁵ F°	2-3	0	1765.542		-0.3	56639.83 ^D	10	0.087	7.109		
		3-4	2	1765.275		0.0	56648.40 ^D	0	0.052	7.075		
		1-2	1	1764.156		1.2	56684.33 ^D	-40	0.032	7.138		
		4-5	1	1763.444		1.9	56707.22 ^D	-60	0.000	7.031		
		2-2	0	1758.443		0.3	56868.49 ^D	-10	0.087	7.138		
79	$a^{5}D - s^{6}D6p^{5}D^{0}$	3-4	1	1775.684		1.9	56316.33 ^D	-60	0.052	7.034		
	_	$^{2-2}$	3	1763.304		0.6	56711.72 ^D	-20	0.087	7.118		II
		4-4	3	1762.666		2.5	56732.25 ^D	-80	0.000	7.034		11
		3-3	1*	1762.037	•••	2.8		-90	0.052	7.088		
80	a ⁵ D-s ⁶ D6p ⁵ P°	0-1	0	1761.700		1.2	56763.35 ^D	-40	0.121	7.159		
	•	1-1	0	1758.914		2.2	56853.26 ^D	-70	0.110	7.159		
		4-3	1	1758.355		0.0	56871.34 ^D	0	0.000	7.051		
81	$a~^5D-Dsp1~^3D^{ m o}$	2-3	0	1765.471		0.6	56642.11 ^D	-20	0.087	7.110		
82	$a^{5}D - s^{4}D5p^{5}D^{0}$	3-3	2	1735.576		-5.7	57617.76 ^D	190	0.052	7.195		
~~	J _ J _ J _ J	4-4	6	1731.184		-3.9	_	130	0.000	7.193	•••	
		2-1	1	1729.616		-9.3		310	0.087	7.102	•••	II
		3-2	3	1726.678		-1.2	57914.68 ^D	40	0.057	7.232	•••	II
		4-3	4	1723.141		-1.5	58033.56 D	50	0.032	7.195		
83	$a~^5D-s~^4\!D5p~^5F^{ m o}$	2-3	3	1722.542		-3.6		120	0.087			
0.5	- D 0 D 3 P 1	3-4	4	1722.342		-3.0 -1.8	58065.43 ^D	60		7.285 7.251	• • •	17
		1-1	1	1722.193		-1.8	58089.41 ^D	40	0.052 0.110	7.251	• • •	II
		4-5	6	1721.464		-1.2	58147.07 ^D	40 60			• • • •	
		- - J	U	1/17.///	• • •	-1.0	30147.07	υU	0.000	7.209	• • •	

TABLE 2—Continued

				1.	ABLE 2—Co	ontinuea	<i>1</i>				115 · · · · · · · · · · · · · · · · · ·	
No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
1		2-2 4-4	2	1718.148 1709.944		-2.7 -4.1	58202.20 ^D 58481.44 ^D	90 140	0.087 0.000	7.303 7.251		
84	$a~^5D$ – $s~^4D$ 5 $p~^5P$ $^{\circ}$	1-2 3-3	1 4	1717.703 1716.486	•••	-3.5 -0.9	58217.28 ^D 58258.56 ^D	120 30	0.110 0.052	7.328 7.274	• • •	
		0-1	0	1712.852	• • •	-1.2	58382.16 ^D	40	0.032	7.359	• • •	
		2-2	3	1712.289		-1.8	58401.35 ^D	60	0.087	7.328		
		1-1	1	1710.216		-2.3	58472.15 ^D	80	0.110	7.359		
		2-1	1	1704.845		-3.5	58656.36 ^D	120	0.087	7.359	•••	II
		4-3	4	1704.320		0.6	58674.43 ^D	-20	0.000	7.274		
		2-3	d0?	1725.011	• • •	-6.0	57970.65 ^D	200	0.087	7.274		
85	$a^{5}F-z^{7}D^{\circ}$	3-4	1.32	8449.9604	8447.6391	2.1	11834.375 ^C	-3	0.958	2.425		
05	(12)	4-5	1.76	8351.3395	8349.0449	-0.7	11974.127 ^A	1	0.915	2.399		
	(12)	3-2	1.80	8207.1929	8204.9372	0.0	12184.434 ^A	0	0.958	2.469	•••	
		4-4	1.34	8206.3584	8204.1030	0.7	12185.673 ^A	-1	0.915	2.425		
		4-3	2.19	8077.3715	8075.1509	1.3	12380.265 ^A	-2	0.915	2.449	-5.06^{b}	
		5-5	2.51	8049.8317	8047.6185	0.6	12422.620^{A}	-1	0.859	2.399		
		5-4	2.48	7915.0437	7912.8670	0.6	12634.169 ^A	-1	0.859	2.425	-4.85^{b}	
86	$a~^5F-z~^7F^{\circ}$	1-2	3.05	6649.9169	6648.0810		15037.782 ^A	-2	1.011	2.875	•••	
	(13)	1-1	3.60	6626.8517	6625.0220		15090.122^{A}	-1	1.011	2.882	-5.35^{b}	
		1-0	3.17	6615.6521	6613.8254		15115.668 ^A	-1	1.011	2.885	• • •	**
		2-3	3.13	6611.5042	6609.6787	0.4	15125.151^{D} 15206.710^{D}	-1	0.990	2.865	· · ·	II
		2-2	4.00	6576.0444	6574.2284		15206.710 ²⁵ 15259.050 ^A	-3 -2	0.990	2.875 2.882	-5.02 ^a -5.79 ^b	II
		$\begin{array}{c} 2-1 \\ 3-4 \end{array}$	3.10 2.11	6553.4879 6549.3851	6551.6780 6547.5763		15259.050°C	-2 -4	0.990 0.958	2.851		
		3-3	4.28	6500.7350	6498.9392		15382.876 ^A	- 4 -2	0.958	2.865	-4.70 ^b	
		3-3	2.80	6466.4507	6464.6642		15464.434 ^A	-5	0.958	2.875	-4.70	
		4-5	4.52	6464.5111	6462.7251		15469.074^{D}	-29	0.915	2.832	-2.50^a	I
		4-4	4.45	6402.0872	6400.3180		15619.906 ^A	-1	0.915	2.851	-4.32^a	•
		5-6	4.45	6360.4557	6358.6976		15722.144 ^A	-2	0.859	2.808	-4.47^{b}	
		4-3	2.45	6355.5930	6353.8363	0.0	15734.173^{B}	0	0.915	2.865		
		5-5	3.58	6282.3553	6280.6182	0.4	15917.597 ^A	-1	0.859	2.832	-4.39^{b}	
87	$a~^5F-z~^7P^{\circ}$	4-4	1.53	6121.9435	6120.2494		16334.682 ^A	-8	0.915	2.940	-5.95^{b}	
	(14)	3-2	1.20	5959.8790	5958.2284		16778.864^{D}	8	0.958	3.038		I
		5-4	2.61	5958.3446	5956.6944		16783.185 ^A	0	0.859	2.940	-4.61 ^b	
		4-3	1.77	5950.9279	5949.2797		16804.102^{D}	7	0.915	2.998	•••	Ar
88	$a {}^5F - z {}^5D^{\circ}$	2-3	4.35	5508.3090	5506.7791	0.0	18154.392 ^A	0	0.990	3.241	-2.80^{b}	
	(15)	3-4	4.16	5502.9937	5501.4653		18171.927 ^A	0	0.958	3.211	-3.05^a	
		1-2	4.28	5499.0434	5497.5161	0.0	18184.981 ^A 18324.665 ^A	0	1.011	3.266	-2.85^{b}	
		$1-1 \\ 2-2$	5.06 5.26	5457.1257 5448.4306	5455.6095 5446.9168		18324.003 ⁻¹	-1 0	1.011 0.990	3.283 3.266	-2.09 ^a -1.91 ^a	
		1-0	5.20	5436.0344	5434.5238		18395.763 ^A	0	1.011	3.292	-2.12^{b}	
		3-3	5.16	5431.2060	5429.6967		18412.117 ^A	0	0.958	3.241	-1.88^{b}	
		2-1	5.16	5407.2781	5405.7752		18493.593 ^A	-1	0.990	3.283	-1.84 ^b	
		4-4	5.12	5398.6285	5397.1280		18523.223^{A}	0	0.915	3.211	-1.99^{b}	
		3-2	5.59	5372.9834	5371.4897	0.0	18611.634 ^A	0	0.958	3.266	-1.65^{b}	
		4-3	5.87	5329.5208	5328.0387	0.0	18763.413 ^A	0	0.915	3.241	-1.47^{b}	
		5-4	6.01	5271.0039	5269.5374	0.0	18971.718 ^A	0	0.859	3.211	-1.32^{b}	
89	$a~^5F-z~^5F$ °	1-2	3.94	5153.3461	5151.9109	-0.3	19404.868^{D}	1	1.011	3.417	-3.32^{b}	II
	(16)	2 - 3	4.14	5152.2744	5150.8395		19408.904 ^A	0	0.990	3.396	-3.04^a	
		3-4	4.20	5144.3613	5142.9285		19438.759 ^A	0	0.958	3.368	-3.07^a	
		4-5	4.13	5128.7880	5127.3593		19497.784 ^A	0	0.915	3.332	-3.31^{b}	
		1-1	4.18	5125.1476	5123.7200		19511.633 ^A	0	1.011	3.430	-3.07^{b}	
		2-2	4.20	5108.8708	5107.4474		19573.797 ^A	0	0.990	3.417	-3.09^{b}	
		3-3	4.37	5084.7555	5083.3386		19666.629 ^A 19680.561 ^A	0	0.958	3.396	-2.96 ^b -3.22 ^b	
		$\begin{array}{c} 2-1 \\ 4-4 \end{array}$	4.05 4.59	5081.1560 5053.0431	5079.7400 5051.6345		19680.561 ⁻¹ 19790.055 ^A	0 1	0.990 0.915	3.430 3.368	-3.22° -2.80^{b}	
		3-2	4.25	5042.4773	5031.0343		19790.033 ⁻⁴	0	0.913	3.417	-2.80°	
		5-2 5-5	4.23	5013.4664	5012.0684		19831.322 19946.279 ^A	0	0.859	3.332	-3.09 -2.64 ^b	
		4-3	4.27	4995.5228	4994.1295		20017.925^{A}	0	0.037	3.396	-3.08^{b}	
						5.0		Ü		2.270	2.00	

TABLE 2—Continued

					ABLE 2—Co	ontinue	u 					
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		5-4	4.07	4941.0654	4939.6867	-0.2	20238.550 ^A	1	0.859	3.368	-3.34 ^b	
90	$a~^5F-z~^5P$ °	1-2	2.00	4691.6823	4690.3697	-1.8	21314.316 ^D	8	1.011	3.654	-5.23 ^b	I
, ,	(17)	3-3	2.23	4688.6148	4687.3030	0.4	21328.261^{B}		0.958	3.602	•••	
		2-2	1.90	4654.7933	4653.4904	1.3	21483.231 ^C	-6	0.990	3.654		
91	a ${}^5F-z$ 3F ${}^\circ$	2-3	2.68	4198.2797	4197.0971	0.9	23819.280^{D}	-5	0.990	3.943		II
	(18)	4-4	4.11	4178.7713	4177.5939	-0.2	23930.479 ^A	_	0.915	3.881	-3.06^{b}	
		3-3	3.89	4153.3400	4152.1692	0.2	24077.008 ^A		0.958	3.943	-3.23^{b}	
		2-2	3.47	4141.0949	4139.9273	0.2	24148.203 ^A		0.990	3.984	-3.63 ^b	
		5-4 3-2	4.00 2.67	4101.8952 4097.3664	4100.7379 4096.2102	0.0 1.5	24378.975 ^A 24405.921 ^B	0 -9	0.859 0.958	3.881 3.984	-3.18^{b}	
	5 7 3 7 7 7						23531.634^{B}					
92	$a {}^{5}F - z {}^{3}D^{\circ}$ (19)	1-2 3-3	2.50 2.73	4249.5986 4238.2672	4248.4026 4237.0742	0.2 0.5	23531.634 ² 23594.548 ^B		1.011 0.958	3.928 3.883	-4.38 ^b	
	(19)	1-1	3.02	4204.7521	4203.5678	-0.9	23782.615^{A}		1.011	3.960	-3.87 ^a	
		4-3	4.13	4176.0898	4174.9131	0.2	23945.845 ^A		0.915	3.883	-2.97 ^b	
		2 - 1	3.65	4175.0972	4173.9207	0.0	23951.538 ^A		0.990	3.960	-3.29 ^a	
		3-2	4.06	4173.9209	4172.7448	0.3	23958.288 ^A	-2	0.958	3.928	-3.07 ^b	
93	$a~^5F-y~^5D$ °	3-4	4.00	3941.9931	3940.8776	0.2	25367.878 ^A	-1	0.958	4.103	-2.60^{b}	
	(20)	2 - 3	4.28	3918.2903	3917.1810	0.2	25521.335 ^A		0.990	4.154	-2.16^{b}	
		1-2	4.29	3899.1133	3898.0089	-0.2	25646.857 ^A		1.011	4.191	-2.04 ^a	
		4-4 3-3	5.40 5.44	3888.1498 3879.1174	3887.0482 3878.0182	0.0 0.2	25719.174 ^A 25779.060 ^A		0.915 0.958	4.103 4.154	-1.14 ^b -0.91 ^b	
		3-3 $2-2$	5.37	3873.5989	3872.5012	0.2	25815.786 ^A		0.938	4.134	-0.91°	
		1-1	5.25	3866.6190	3865.5231	0.0	25862.388^{A}		1.011	4.217	-0.98 ^b	
		1-0	5.31	3851.0585	3849.9666	0.1	25966.887^{A}		1.011	4.230	-0.87^{b}	
		2 - 1	5.58	3841.5269	3840.4375	0.1	26031.316 ^A		0.990	4.217	-0.51 ^b	
		3-2	5.77	3835.3102	3834.2225	0.0	26073.510 ^A		0.958	4.191	-0.30^{b}	
		4-3	5.88	3826.9668	3825.8812	0.1	26130.355 ^A 26167.671 ^A		0.915	4.154	-0.04^{b} 0.12^{b}	D
		5-4	• • •	3821.5094	3820.4252	• • • - ·			0.859	4.103		R
94	$a^{5}F-y^{5}F^{\circ}$	3-4	5.50	3800.6263	3799.5475	0.1	26311.453 ^A		0.958	4.220	-0.85^{b}	
	(21)	4-5 2-3	5.40 5.49	3799.5899 3796.0798	3798.5114 3795.0022	0.0	26318.630 ^A 26342.966 ^A		0.915 0.990	4.178 4.256	-1.11 ^b -0.76 ^b	
		1-2	5.35	3788.9559	3787.8802	0.0	26392.495^{A}		1.011	4.283	-0.76	
		1-1	5.66	3768.2621	3767.1918	0.0	26537.432 ^A		1.011	4.301	-0.39^{b}	
		$^{2-2}$	5.77	3764.8585	3763.7891	0.1	26561.423 ^A		0.990	4.283	-0.24^{b}	
		3-3	5.87	3759.3010	3758.2330	0.0	26600.690 ^A		0.958	4.256	-0.03^{b}	
		4-4	6.06	3750.5511	3749.4854	0.1	26662.748 ^A		0.915	4.220	0.16^{b}	
		$\begin{array}{c} 2-1 \\ 5-5 \end{array}$	5.39	3744.4263 3735.9258	3743.3621 3734.8638	0.1	26706.361 ^A 26767.127 ^A		0.990 0.859	4.301 4.178	-0.79 ^b 0.32 ^b	R
		3-3	5.55	3728.6791	3727.6190	0.1	26819.149^{A}	-1	0.958	4.283	-0.63^{b}	K
		4-3	5.60	3710.3017	3709.2464	-0.1	26951.986 ^A		0.915	4.256	-0.65^{b}	
		5-4	5.55	3688.5064	3687.4567	0.1	27111.245 ^A	-1	0.859	4.220	-0.83^{b}	
95	$a^{5}F-z^{3}P^{\circ}$	1-2	3.86	3877.1386	3876.0400	0.0	25792.217 ^A	0	1.011	4.209	-2.89^a	
	(22)	$^{2-2}$	4.96	3851.9099	3850.8179	0.0	25961.147 ^A		0.990	4.209	-1.73 ^b	
		1-1	4.45	3815.6058	3814.5232	0.0	26208.158 ^A		1.011	4.260	-2.39^{b}	
		3-2	5.60	3814.0468	3812.9645	0.0	26218.871 ^A		0.958	4.209	-1.05^a	
		$\begin{array}{c} 2-1 \\ 1-0 \end{array}$	5.08 4.62	3791.1692 3787.7522	3790.0929 3786.6768	0.0	26377.087 ^A 26400.882 ^A		0.990 1.011	4.260 4.284	-1.76 ^b -2.23 ^b	
	5 5											
96	$a^{5}F-z^{5}G^{\circ}$	4-5	5.99	3648.8822	3647.8428 3631.4632	0.1 0.1	27405.653 ^D 27529.262 ^A		0.915 0.958	4.312 4.371	-0.19^{b} 0.04^{b}	I
	(23)	3-4 2-3	6.06 5.92	3632.4984 3619.7998	3618.7679	0.1	27625.837 ^A		0.938	4.415	0.04^{a}	
		1-2	5.86	3609.8887	3608.8593	0.1	27701.685 ^A		1.011	4.445	-0.10^{b}	
		5-5	4.44	3590.1293	3589.1050	0.1	27854.150 ^A	-1	0.859	4.312	-2.12^{b}	
		2-2	5.43	3588.0085	3586.9848	0.1	27870.614 ^A		0.990	4.445	-0.80^a	
		4-4	5.22	3586.7288	3585.7054	0.0	27880.558 ^A		0.915	4.371	-1.19 ^b	
		3-3 5-6	5.46	3586.3422 3582.2153	3585.3189 3581.1930	0.1	27883.563 ^A 27915.687 ^A		0.958 0.859	4.415 4.320	-0.80 ^a 0.41 ^b	R
		3-0	4.03	3582.2133	3554.1182	0.3	28128.339 ^A		0.839	4.320	-2.21 ^a	N.
		4-3	3.66	3541.7215	3540.7097	0.1	28234.857 ^A		0.915	4.415	-2.49ª	

				1	ABLE 2—C	ontinue	Pd					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
97 97	$a^{5}F-z^{3}G^{0}$	4-5		3571.1171	3570.0977		28002.442 ^A		0.915	4.386	0.15^{b}	R
۲, کر	(24)	3-4	5.88	3566.3971	3565.3790	0.1	28039.502^{A}		0.958	4.434	-0.13^a	
1,	(= .)	2-3	5.58	3559.5315	3558.5151	0.1	28093.585 ^A		0.990	4.473	-0.63^a	
⊣),		3-3	5.00	3527.1739	3526.1658	0.1	28351.310 ^A	-1	0.958	4.473	-1.27ª	
		4-4	5.31	3522.2680	3521.2612	-0.1	28390.798^{D}		0.915	4.434	-0.99^a	Ar
		5-5	5.28	3514.8229	3513.8180	0.1	28450.936 ^A		0.859	4.386	-1.16^{b}	
		4-3	3.52	3484.0041	3483.0071	-0.2	28702.607^{B}		0.915	4.473	-2.73ª	
		5-4	3.45	3467.4915	3466.4988	0.1	28839.292^{B}		0.859	4.434	•••	
98	$a~^5F-y~^3F^{\circ}$	3-4	4.37	3453.2637	3452.2746	0.1	28958.113 ^A		0.958	4.548	-1.92°	
	(25)	2 - 3	4.12	3427.3649	3426.3825	2.9	29176.934 ^D		0.990	4.607	-1.91ª	I
		4-4	2.87	3411.8738	3410.8953	0.1	29309.408 ^B		0.915	4.548	-3.31 ^a	
		1-2	3.51	3405.2470	3404.2702	-0.1	29366.445 ^A		1.011	4.652	-2.58^a	
		3-3	2.34	3397.3514	3396.3767	-1.0	29434.694 ^D		0.958	4.607	• • •	
		5-4	3.07	3360.4517	3359.4864	0.2	29757.904 ^B		0.859	4.548	• • •	NI-
		4-3	2.60	3357.2771	3356.3125	-7.1	29786.043 ^D		0.915	4.607	•••	Ne
99	$a~^5F-y~^5P^{ m o}$	3 - 3	3.48	3443.6557	3442.6690	-0.4	29038.908 ^B		0.958	4.558	-2.66 ^a	
	(26)	$^{2-2}$	3.14	3427.9706	3426.9880	0.1	29171.779 ^B		0.990	4.607	-2.60^a	
		1 - 1	2.73	3418.2364	3417.2563	-1.6	29254.852^{D}		1.011	4.638	-3.39^{b}	
		4-3	3.90	3402.4948	3401.5187	0.0	29390.199 ^A		0.915	4.558	-2.06 ^a	
		2 - 1	2.60	3398.6133	3397.6382	0.2	29423.765 ^C		0.990	4.638	-3.17ª	
	5 0	3-2	3.42	3397.9505	3396.9755	0.0	29429.505 ^A		0.958	4.607	-2.43ª	
100	$a~^5F-y~^3D^{\circ}$	2-2		3258.151	3257.212		30692.252 ^D		0.990	4.795		ΜI
	(27)	4-3	3.07	3246.9022	3245.9657	0.1	30798.587 ^B		0.915	4.733	-2.77ª	
		1-1	0	3242.443	3241.508	8.4	30840.94 ^D 30949.90 ^D		1.011 0.958	4.835	•••	I
		3-2	2	3231.028	3230.096	7.3 1.0	31009.93 ^D		0.938	4.795 4.835	•••	
101	a ⁵ F-x ⁵ D°	2-1	1	3224.773 3135.0182	3223.843 3134.1100	0.1	31897.741 ^A		0.958	4.833	 -1.98 ^a	
101		3-4	3.76 3.79	3135.0182	3134.1100	-0.3	31897.741 31984.068 ^A		0.938	4.913	-1.98 ^a	
	(28)	$\begin{array}{c} 2-3 \\ 1-2 \end{array}$	3.79	3120.5366	3116.6315	-0.3 -0.1	31984.008 32076.621 ^A		1.011	4.933	-1.65 ^a	
		3-3	4.58	3101.5648	3110.0313	0.0	32070.021 32241.790^{A}		0.958	4.955	-0.87^a	
		$\frac{3-3}{2-2}$	4.45	3101.2032	3100.3035	0.0	32245.549 ^A		0.990	4.988	-0.87^a	
		4-4	4.68	3100.8678	3099.9682	0.0	32249.037 ^A		0.915	4.913	-0.97^a	
		1-1	4.25	3100.7941	3099.8945	-0.1	32249.803 ^A		1.011	5.009	-1.08a	
		1-0	4.15	3092.4740	3091.5765	-0.1	32336.569 ^A		1.011	5.020	-1.10 ^a	
		2-1	4.41	3084.6365	3083.7409	-0.1	32418.731^{A}		0.990	5.009	-0.88^a	
		3 - 2	4.62	3076.6131	3075.7196	0.0	32503.274 ^A		0.958	4.988	-0.65^a	
		4-3	4.83	3068.1354	3067.2439	-0.1	32593.086 ^A	1	0.915	4.955	-0.51^a	
		5-4	5.08	3058.3348	3057.4458	0.0	32697.532 ^A		0.859	4.913	-0.40^a	
102	$a~^5F-y~^7P$ °	$^{2-2}$	2.88	3118.5441	3117.6401	0.2	32066.245^{B}		0.990	4.966	-3.50^a	
	(29)	2 - 3	2.66	3103.5370	3102.6367	0.3	32221.301 ^C		0.990	4.985		
		3-2	3.13	3093.6795	3092.7817	0.3	32323.969 ^B		0.958	4.966	-3.22^a	
		3 - 3	3.50	3078.9099	3078.0157	0.1	32479.028 ^A		0.958	4.985	-2.51 ^a	
		3-4	2.59	3058.6775	3057.7884	0.6	32693.869 ^C		0.958	5.012		
		4-3	3.53	3045.9643	3045.0784	-0.2	32830.326 ^A		0.915	4.985	-2.17^a	
		4-4	3.28	3026.1609	3025.2800	0.1	33045.169 ^B		0.915	5.012	-2.69^a	
	5 5	5-4	3.39	2985.6390	2984.7681	-0.2	33493.668 ^A		0.859	5.012	-2.51°	
103	$a^{5}F-x^{5}F^{\circ}$	2-3	3.98	3043.5501	3042.6649	-0.1	32856.367 ^A 32863.336 ^A		0.990	5.064	-1.30^a	
	(30)	1-2	3.68	3042.9047	3042.0196	-0.1	32865.336 32866.370 ^A		1.011 0.958	5.085 5.033	-1.49 ^a -1.19 ^a	
		3-4	4.14	3042.6238	3041.7388 3040.4273	-0.1	32880.546 ^A		0.938	4.991	-1.19 ^a -1.43 ^a	
		4-5 1-1	4.22 4.02	3041.3120 3032.5192	3040.4273	0.0 -0.2	32880.546 ⁻³ 32975.884 ^A		1.011	5.099	-1,43" -1.24 ^a	
		$\frac{1-1}{2-2}$	4.02	3032.3192	3026.4619		32973.864 33032.265 ^A		0.990	5.085	-1.24 -1.12^a	
		3-3	4.19	3019.8624	3018.9830		33032.203 33114.092 ^A		0.958	5.064	-1.12	
		$\frac{3-3}{2-1}$	3.73	3017.0633	3016.1847		33144.813 ^A		0.990	5.099	-1.44^a	
		4-4	4.72	3010.4463	3009.5693		33217.666 ^A		0.915	5.033	-0.76^a	
		3-2	3.99	3003.9061	3003.0307	-0.1	33289.989 ^A		0.958	5.085	-1.30^a	
		5-5	5.05	3000.3863	2999.5118		33329.042 ^A		0.859	4.991	-0.60^a	
		4-3	4.09	2988.1621	2987.2906	-0.1	33465.387 ^A	1	0.915	5.064	-1.31 ^a	
		5-4	4.05	2970.3416	2969.4746	-0.1	33666.161 ^A	1	0.859	5.033	-1.60 ^a	

•	TABLE 2—Continued											
No.	Multiplet (MT) 1	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
2 104	a 5F-z 5S°	1-2	2.39	3054.3414	3053.4535	-0.7	32740.282^{D}	8	1.011	5.070	-3.09a	
104	(31)	2-2	2.93	3038.6637	3037.7796	0.0	32909.203 ^E		0.990	5.070	-2.62^a	
)	()	3-2	3.00	3015.0515	3014.1734	-0.1	33166.929 ^B		0.958	5.070	-2.76a	
105	$a^{5}F-x^{5}P^{\circ}$	2-3	2.52	2894.6109	2893.7627	-0.3	34546,957 ^E	4	0.990	5.273	-2.81ª	
103	(UV43)	1-2	2.32	2881.4244	2880.5793	0.3	34705.058 ^C		1.011	5.314		
	(01.5)	3-3	3.40	2873.1769	2872.3339	0.0	34804.679 ^A		0.958	5.273	-1.77ª	
		2-2	3.17	2867.4665	2866.6249	-0.1	34873.991 ^A		0.990	5.314	-1.91ª	
		1 - 1	2.88	2863.3353	2862.4947	0.0	34924.307 ^B		1.011	5.341	-2.37^a	
		2 - 1	3.08	2849.5519	2848.7147	-0.2	35093.237 ^A		0.990	5.341	-2.01 ^a	
		3-2	3.54	2846.4312	2845.5947	0.2	35131.712 ^D		0.958	5.314	-1.32^a	II
		4-3	3.71	2844.4668	2843.6308	0.0	35155.974 ^A		0.915	5.273	-1.23 ^a	
106	$a~^5F-y~^5G^{ m o}$	1-2	4.18	2852.6349	2851.7969	-0.2	35055.310 ^A		1.011	5.357	-0.69ª	
	(UV44)	2-3	4.20	2844.8125	2843.9764	-0.2	35151.702 ^A		0.990	5.348	-0.57ª	
		2-2	3.67	2838.9541	2838.1195	-0.2	35224.240 ^A 35294.923 ^A		0.990 0.958	5.357 5.334	-1.11 ^a -0.59 ^a	
		3-4 3-3	4.16 3.68	2833.2687 2824.1067	2832.4355 2823.2757	0.0 -0.2	35409.427 ^A		0.958	5.348	-0.39^{a}	
		3-3	2.64	2818.3334	2817.5038	0.0	35481.963 ^E		0.958	5.357	-2.05^a	
		4-5	4.08	2814.1150	2813.2864	-0.2	35535.151 ^A		0.915	5.320	-0.35^a	
		4-4	3.43	2805.3467	2804.5203	-0.1	35646.218 ^A	1	0.915	5.334	-0.95 ^a	
		4-3	2.81	2796.3642	2795.5400	-0.1	35760.721 ^A		0.915	5.348	-1.93ª	
		5-6	3.66	2788.9272	2788.1048	0.0	35856.081 ^A		0.859	5.304	-0.05^a	
		5-5	3.96	2779.0402	2778.2203	0.0	35983.646 ^E		0.859	5.320	-0.94 ^a	
		5-4	2.74	2770.4872	2769.6693	-1.7	36094.735 ^A		0.859	5.334	-2.13 ^a	
107	a ${}^5F-z$ 5I ${}^\circ$	3-4	2.98	2799.9720	2799.1469	-0.1	35714.643 ^L		0.958	5.386		II
		5-6	3.43	2779.6624	2778.8423	-0.2	35975.592 ^A		0.859	5.319		
		4-4	2.68	2772.6994	2771.8810	0.1	36065.936 ^A		0.915	5.386	• • •	
		4-5 5 4	1	2771.357	2770.539 2737.8329	-3.1 0.0	36083.40 ^L 36514.434 ^A		0.915 0.859	5.388 5.386	• • •	
		5-4 5-5	3.33 2.40	2738.6430 2737.3372	2736.5274	-0.3	36531.853 ^E		0.859	5.388		
	5 - 5 - 5											
108	$a^{5}F-z^{5}H^{\circ}$	2-3	3.30 3.98	2829.6405 2826.3872	2828.8082 2825.5557	-0.1 -0.2	35340.178 ^A 35380.856 ^A		0.990 0.958	5.372 5.345	-1.80 ^a -0.85 ^a	
	(UV45)	3-4 $3-3$	3.98 2.97	2809.1543	2823.3337	-0.2 -0.1	35597.902 ^A		0.958	5.372	-0.63 -2.43 ^a	
		4 – 5	3.80	2807.8111	2806.9842	-0.2	35614.931 ^A		0.915	5.330	-0.83^a	
		4-4	3.86	2798.6001	2797.7753	-0.1	35732.151 ^A		0.915	5.345	-1.32^a	
		4-3	2.19	2781.7025	2780.8818	-0.9	35949.208 ^E		0.915	5.372	-3.23^a	
		5-5	3.57	2772.8925	2772.0740	0.1	36063.425 ^A	-1	0.859	5.330	-1.53ª	
		5-4		2763.909	2763.092		36180.646 ^L	`	0.859	5.345	• • •	ΜI
		5-6	4.24	2747.7944	2746.9820	0.0	36392.825^{L}		0.859	5.371	• • •	II
109	$a~^5F-w~^5D^{\circ}$	3-4	2.60	2795.5261	2794.7021	0.0	35771.442 ^E		0.958	5.393	-1.94ª	
	(UV46)	2 - 3	2.81	2782.6565	2781.8356	-0.2	35936.883 ^A			5.446	-1.74ª	
		1-2	2.67	2775.5490	2774.7299	0.3	36028.908 ^L		1.011	5.478	-1.82ª	II
		3-3	3.56	2762.8426	2762.0266	-0.1	36194.606 ^E 36197.840 ^A		0.958	5.446	-0.85^a	
		$\begin{array}{c} 2-2 \\ 1-1 \end{array}$	3.42 3.36	2762.5958 2758.1304	2761.7798 2757.3155	0.1 0.0	36197.840 ⁻¹ 36256.444 ^E		0.990 1.011	5.478 5.506	-0.96 ^a -1.01 ^a	
		1-1	3.18	2754.5009	2753.6869	0.0	36304.218 ^E		1.011	5.512	-1.01 -1.34 ^a	
		2-1	3.29	2745.3392	2744.5275	0.2	36425.371 ^E		0.990	5.506	-1.07ª	
		3-2	3.63	2743.0654	2742.2542	0.1	36455.565 ^A		0.958	5.478	-0.72^a	
		4-3	3.91	2736.2849	2735.4753	-0.1	36545.902 ^A	2	0.915	5.446	-0.40^a	
		5-4	4.18	2734.3896	2733.5805	0.0	36571.233 ^A	0	0.859	5.393	-0.15^a	
110	$a~^5F-v~^5D$ °	2-3	3.55	2763.9258	2763.1095	-0.2	36180.421 ^A	3	0.990	5.476	-1.58ª	
	(UV48)	3-4	3.25	2755.2414	2754.4273	0.2	36294.460 ^A	-2	0.958	5.458	-1.78ª	
		3-3	3.44	2744.3770	2743.5654		36438.143 ^A		0.958	5.476	-1.42ª	
		1-2	2.16	2739.0236	2738.2133		36509.361 ^E		1.011	5.537	-2.64 ^a	
		1-1	2.91	2731.7904	2730.9819	0.1	36606.029 ^A		1.011	5.549	-1.68^a	
		4-4	3.50	2728.8287	2728.0210		36645.759 ² 36672.181 ^E	_	0.915	5.458	-1.46 ^a	
		$1-0 \\ 2-2$	3.20 2.16	2726.8626 2726.4091	2726.0553 2725.6019	0.1 0.5	36678.281 ^E		1.011 0.990	5.558 5.537	-1.21 ^a -2.56 ^a	
		2-2 $2-1$	3.53	2719.2417	2723.0019	0.3	36774.958 ²		0.990	5.549	-2.30^{a}	
		4-3	2.22	2718.1715	2717.3663	0.1	36789.437 ^E		0.915	5.476	-2.83^a	

į				TA	BLE 2—Co	ntinued						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
i i		3-2 5-4	3.81 2.72	2707.3845 2695.8353	2706.5819 2695.0355	-0.3 -0.1	36936.017 ^A 37094.254 ^A		0.958 0.859	5.537 5.458	-0.83^{a} -2.33^{a}	
111	$a~^5F-w~^5F$ °	1-2	3.35	2767.7263	2766.9091	-0.2	36130.740 ^A		1.011	5.491	-1.63 ^a	
	(UV47)	1 - 1	3.24	2760.6293	2759.8138	0.1	36223.625 ^E	-1	1.011	5.502	-1.58 ^a	
		2-2	3.40	2754.8461	2754.0321	-0.2	36299.668 ^A		0.990	5.491	-1.38 ^a	
		3-2	2.65 2.99	2735.4246 2734.8147	2734.6152 2734.0055	-0.4 0.0	36557.396 ^A 36565.548 ^A		0.958 0.990	5.491 5.523	-2.27ª -1.76ª	
		$\frac{2-3}{3-4}$	3.42	2725.7603	2734.0033		36687.012^{L}		0.958	5.507	-1.32^a	I
		3-3	2.68	2715.6739	2714.8693	0.0	36823.273 ^A		0.958	5.523	-2.19^a	•
		4-5	3.49	2712.4590	2711.6552		36866.917 ^A		0.915	5.485	-1.22a	
		4-4	3.45	2699.9075	2699.1067	0.1	37038.306 ^A		0.915	5.507	-1.26^a	
		4-3	3.74	2690.0107	2689.2122		37174.574 ^L		0.915	5.523	-0.89 ^a	II
		5-5	3.91	2679.8578	2679.0618	0.0	37315.413 ^A		0.859	5.485	-0.75 ^a	2 411
		2-1	2.56	2747.815	2747.002		36392.555 ^L 37486.802 ^A	' ' 0	0.990 0.859	5.502 5.507	 -1.07 ^a	MII
	<i>.</i>	5-4	3.56	2667.6055	2666.8125	0.0						
112	$a {}^{5}F - y {}^{5}S^{\circ}$	1-2	1.85	2750.4957	2749.6827	1.0	36357.083 ^E 36525.997 ^L	-13	1.011	5.519	-2.56 ^a	TT
	(UV49)	$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	3.57 2.65	2737.7761 2718.5918	2736.9661 2717.7865	2.0 0.0	36525.997 ² 36783.749 ^A		0.990 0.958	5.519 5.519	 -1.97ª	II
113	$a {}^5F - x {}^3D^{\circ}$	1-2	1.98	2693.4495	2692.6503	0.4	37127.111 ^C		1.011	5.614	-2.66^a	
	(UV50)	2-3	1.82 2.65	2685.6534 2681.2494	2684.8560 2680.4531		37234.887 ^C 37296.046 ^A		0.990 0.990	5.606 5.614	-2.85 ^a -1.73 ^a	
		$\begin{array}{c} 2-2 \\ 1-1 \end{array}$	2.85	2681.2494 2674.0078	2673.2132		37290.040° 37397.049 ^A		1.011	5.648	-1.73 -2.14^a	
		3-3	2.25	2667.1916	2666.3986		37492.620 ^A		0.958	5.606	-1.87ª	
		3-2	2.76	2662.8485	2662.0566		37553.770 ^E		0.958	5.614	-1.61a	
		2-1	2.09	2661.9850	2661.1933	2.0	37565.952 ^E		0.990	5.648		
		4-3	2.94	2642.4308	2641.6438	-2.0	37843.943 ^L	29	0.915	5.606	-1.32 ^a	II
114	$a~^5F-y~^3G^{\circ}$	2-3	2.64	2661.1887	2660.3972	-0.4	37577.193 ^A		0.990	5.649	-2.33^a	
	(UV51)	3-4	2.64	2652.4956	2651.7062	-0.4	37700.345 ^A	6	0.958	5.632	-2.04^a	
		3 - 3	0	2643.064	2642.277	2.1	37834.88 ^L		0.958	5.649		
		4-5	2.69	2637.2644	2636.4786		37918.079 ^E		0.915	5.616	-2.05^a	
		4-4	1.88	2628.0078	2627.2242		38051.638 ^E		0.915	5.632	-2.99 ^a	
		5-5 5-4	3.39 1.66	2606.4357 2597.3923	2605.6573 2596.6161		38366.571 ^E 38500.152 ^L	3 -3 22	0.859 0.859	5.616 5.632	-1.79 ^a -3.28 ^a	
	<i>.</i>											
115	$a^{5}F-x^{5}G^{\circ}$	1-2	3.06	2644.7862	2643.9986		37810.240 ² 37927.714 ²		1.011 0.990	5.699 5.692	-0.91 ^a -0.81 ^a	
	(UV52)	2-3	3.32 3.22	2636.5944 2633.0224	2635.8088 2632.2376		37979.168 ^A		0.990	5.699	-0.81 ^a	
		$\frac{2-2}{3-4}$	3.52	2624.3166	2623.5339		38105.159		0.958	5.682	-0.70^a	
		3-3	3.33	2618.7994	2618.0180		38185.437		0.958	5.692	-0.97^a	
		3-2	2.45	2615.2752	2614.4946		38236.894	· -1	0.958	5.699	-2.04^a	
		4-5	3.70	2607.6050	2606.8263	-0.2	38349.366 ^A		0.915	5.669	-0.56^a	
		4-4	3.40	2600.3439	2599.5669		38456.452		0.915	5.682	-0.87^a	
		4-3	2.33	2594.9267	2594.1510		38536.734		0.915	5.692	-1.88^a	
		5-6 5-5	3.96 3.41	2585.3095 2577.4617	2584.5360 2576.6902		38680.089 ² 38797.860 ²		0.859 0.859	5.655 5.669	-0.39 ^a -0.91 ^a	
		5-3 5-4	2.43	2570.3669	2569.5970		38904.952		0.859	5.682	-2.05^a	
116	5.00 3.70		2.47	2580.0424	2579.2702		38759.053		0.915	5.720	-2.46 ^a	
116	$a {}^{5}F - z {}^{3}I^{\circ}$ (UV53)	4-5 5-6	3.01	2557.6298	2579.2702		39098.700		0.859	5.706	-2.40	
117	$a^{5}F-w^{5}P^{\circ}$	1-2	0	2620.630	2619.848	4.1	38158.76 ¹	o -60	1.011	5.742		II
117	$a \rightarrow w \rightarrow$	2-2	0?	2609.076	2608.297	0.0	38327.75 ¹	0	0.990	5.742		
		3-2	0?	2591.654	2590.879	4.7	38585.40 ¹	⁻⁷⁰	0.958	5.742		
118	a ${}^5F-z$ 3S ${}^\circ$	1-1	2.77	2601.0474	2600.2703	3.5	38446.050	⁴ -52	1.011	5.778		
110	u 1 –z 5	2-1	0	2589.666	2588.891	0.7	38615.02		0.990	5.778		
119	$a^{5}F-y^{3}P^{\circ}$	1-0	4	2596.204	2595.428	2.7	38517.78	^D -40	1.011	5.786		
**/	(UV54)	1-2	0	2592.532	2591.757	1.3	38572.33	D -20	1.011	5.793		
		2-2	1.84	2581.2252	2580.4528		38741.292		0.990	5.793		
		1 - 1	1.87	2580.8372	2580.0648		38747.117	_	1.011	5.815		
		2-1	2.14	2569.6345	2568.8647		38916.041		0.990	5.815		
		3-2	2.14	2564.1673	2563.3989	-0.3	38999.015 ⁻	^A 4	0.958	5.793	-2.26 ^a	

				1 /	ABLE 2—Co	ntinued 	!					
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
120	$a~^5F-u~^5D^{\circ}$	1-2	1.56	2581.7235	2580.9509	-0.9	38733.815 ^C	14	1.011	5.813		
120	(UV55)	2-3		2580.032	2579.260		38759.206 ^L)	0.990	5.795		ΜI
S	(0 1 33)	2-2	2.08	2570.5136	2569.7436	-0.2	38902.732 ^E		0.990	5.813	-2.24 ^a	141 1
i		1-0	8	2562.997	2562.228	-0.2	39016.83 ^L		1.011	5.848		
		3-3	2.35	2562.9931	2562.2249	3.2	39016.883 ^E		0.958	5.795		
		1-1	2.02	2562.6232	2561.8551	0.2	39022.514 ^E		1.011	5.849	-2.31ª	
		3-2	2.20	2553.5966	2552.8307	0.1	39160.453 ^E		0.958	5.813	-2.16^a	
		2-1	1.85	2551.5767	2550.8112	-0.5	39191.454 ^E		0.990	5.849		
		4-4	1.88	2541.6787	2540.9155	-0.1	39344.076 ^E		0.915	5.792		
		4-3	2.32	2540.1197	2539.3569	0.1	39368.224 ^A		0.915	5.795	-1.79 ^a	
		5-4	2.73	2513.0319	2512.2754	-0.1	39792.571 ^A		0.859	5.792	-1.73ª	
121	$a~^5F-x~^3F$ °	1-2	2.28	2561.3250	2560.5573	0.1	39042.292 ^D	-1	1.011	5.851	-2.11 ^a	II
121	(UV56)	$\frac{1-2}{2-2}$	1.97	2550.2905	2549.5253	0.1	39211.219 ^E		0.990	5.851	-2.11 ^a	11
	(0 7 30)	3-3	1.83	2540.3499	2539.5871	-0.4	39364.656 ^B		0.958	5.839		
		3-3	1.78	2533.6374	2532.8761	0.0	39468.947 ^A		0.958	5.851	-2.16 ^a	
		4-3	12	2517.885	2517.127	3.8	39715.88 ^L		0.915	5.839		II
		5-4	2.91	2502.4480	2501.6940	0.0	39960.870 ^L		0.859	5.813	-1.51 ^a	II
	5 2											**
122	$a {}^5F - z {}^3H$ °	3-4	2.16	2539.4620	2538.6993	0.1	39378.420 ^B		0.958	5.840	-2.62ª	
	(UV57)	4-5	2.77	2523.2388	2522.4799	-0.1	39631.604 ^A		0.915	5.828	-1.92 ^a	
		4-4	2.06	2517.0080	2516.2506	0.4	39729.711 ^D	-	0.915	5.840	-2.50^a	II
		5-6	13	2496.625	2495.873	-1.2	40054.07 ^D		0.859	5.825	-1.76 ^a	
		5-5	2.73	2495.0038	2494.2515	0.0	40080.100 ^A		0.859	5.828	-1.95 ^a	
		5-4		2488.911	2488.160	0.0	40178.213 ^D		0.859	5.840	• • •	
123	$a~^5F-w~^3D$ °	1 - 2	2.25	2565.3281	2564.5594	0.0	38981.368 ^B		1.011	5.844	-2.15^a	
	(UV58)	2 - 3	1.83	2562.0399	2561.2719	0.1	39031.399 ^B		0.990	5.829		
		1 - 1	1.68	2556.4133	2555.6466	0.3	39117.306 ^C		1.011	5.861		
		$^{2-2}$	1.26	2554.2592	2553.4931	0.1	39150.294 ^C		0.990	5.844	• • •	
		2-1	2.27	2545.4207	2544.6566	0.1	39286.237 ^A		0.990	5.861	-2.08^a	
		3-3	4	2545.229	2544.465	-3.9	39289.19 D		0.958	5.829	• • •	
		3-2	8*	2537.563	2536.801	8.4	39407.89 ^D		0.958	5.844		II
		4-3	2.58	2522.6777	2521.9190	0.1	39640.419 ^A	-1	0.915	5.829	-1.79ª	
124	$a~^5F-w~^5G^{o}$	1 - 2	3.23	2520.3875	2519.6294	-0.1	39676.438 ^A		1.011	5.930	-1.20^a	
	(UV59)	2 - 3	3.19	2518.4188	2517.6611	-0.1	39707.454 ^A		0.990	5.913	-0.98^a	
		2-2	1.67	2509.7008	2508.9451	-1.3	39845.387 ^D		0.990	5.930		
		3-4	3.69	2508.6557	2507.9003	-0.1	39861.986 ^A		0.958	5.900	-0.79^a	
		3-3	1.28	2502.1776	2501.4236	-0.8	39965.189 ^D		0.958	5.913	-2.99^a	
		4-5	3.78	2497.2866	2496.5338	0.0	40043.461 ^A		0.915	5.879	-0.66 ^a	
		3-2	1.32	2493.5724	2492.8205	-0.9	40103.106 ^C		0.958	5.930		
		4-4	2.90	2486.7406	2485.9903	0.0	40213.281 ^A		0.915	5.900	-1.61 ^a	
		4-3	2.11	2480.3769	2479.6280	1.0	40316.454^{B}		0.915	5.913	-2.34 ^a	_
		5-6	3.78	2473.0883	2472.3411	-6.6	40435.273 ^D		0.859	5.872	-1.07^a	I
		5-5	3.85	2469.6263 2459.3128	2468.8799	0.0	40491.957 ^A		0.859	5.879	-0.62^a	
		5-4	2.46	2439.3128	2458.5688	0.7	40661.765 ^A		0.859	5.900	-2.06 ^a	
125	$a~^5F-Psp3~^1D$ °	2-2	7*	2535.890	2535.128	0.6	39433.89 ^D		0.990	5.879		
	(UV60*)	3-2	0?	2519.425	2518.667	1.3	39691.60 ^D	-20	0.958	5.879		
126	$a^{5}F-z^{1}G^{0}$	3-4	2.81	2517.3283	2516.5709	0.0	39724.655 ^A	0	0.958	5.883	-1.84 ^a	
.20	(UV61)	4-4	1.79	2495.2622	2494.5099	0.1	40075.948^{B}		0.915	5.883		
	` '	5-4	1	2467.643	2466.897	-3.0	40524.50 ^D		0.859	5.883		
127	a 5F-v 5F°	1-2	2.70	2494.7532	2494.0010	0.3	40084.125^{D}	-5	1.011	5 00 1		т
127	$a \circ F = v \circ F$ (UV62)	$\frac{1-2}{2-3}$	3.48	2494.7532 2491.4598	2494.0010	1.8	40084.123 ² 40137.111 ^A		0.990	5.981 5.966	-1.38 ^a	I
	(0 102)	1-1	3.46	2491.4398	2487.0659	-0.1	40137.111 40195.890 ^A		1.011	5.995	-0.75 ^a	
		3-4	3.31	2487.4424	2486.6919	-0.1	40193.890 40201.936^{A}		0.958	5.942	-0.73	
		4-5	1.15	2485.7473	2484.9972	-0.1	40229.351 ^C		0.938	5.902	-0.91	
		2-2	3.24	2484.2832	2483.5334	-0.1	40253.060^{A}		0.990	5.981	-1.01 ^a	
		$\frac{2}{2-1}$	3.01	2477.4048	2476.6566	-0.1	40364.820 ^A		0.990	5.995	-1.08^a	
		3-3	3.41	2475.5621	2474.8144	0.0	40394.866 ^A		0.958	5.966	-0.40^a	
		3-2	3.12	2468.4797	2467.7335	1.2	40510.765^{A}		0.958	5.981		
		4-4	3.84	2465.8948	2465.1492	-0.1	40553.231 ^A		0.915	5.942	-0.45^a	
							_		-			

TABLE 2—Continued

•				1.	ABLE 2—Co	ntinuea	!					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
		5-5	4.04	2458.3405	2457.5967	-0.3	40677.847 ^A	5	0.859	5.902	-0.32^a	
<u>.</u>		4-3	2.89	2454.2188	2453.4760	-0.2	40746.163 ^A	3	0.915	5.966	-0.92^a	
		5-4	2.85	2438.9219	2438.1826	0.1	41001.723 ^A	-2	0.859	5.942	-1.25^a	
1	5 — 2											
128	$a~^5F-x~^3G^{\circ}$	2-3	2.80	2509.5089	2508.7533	0.0	39848.434 ^A	0	0.990	5.930	-1.95ª	_
	(UV63)	3-4	2.70	2494.7532	2494.0010	-4.4	40084.125^{D}	70	0.958	5.928		I
		3-3	2.30	2493.3826	2492.6307	-0.1	40106.160 ^B	2	0.958	5.930	-2.46a	-
		4-4	3.78	2473.0883	2472.3411	4.8	40435.273 ^D	-78	0.915	5.928	-1.05a	I
		4-5	2.96	2471.7123	2470.9654	-0.1	40457.783 ^A	1	0.915	5.931	-1.62°	
		5-4	2.55	2445.9539	2445.2130	0.1	40883.845 ^A	-2	0.859	5.928	-2.02^a	
		5-5	3.20	2444.6124	2443.8718	-0.1	40906.280 ^A	2	0.859	5.931	-1.24 ^a	
129	$a\ ^{5}F-v\ ^{5}P^{o}$	1 - 2	2	2499.450	2498.697	-4.4	40008.80 ^D	70	1.011	5.971		
		1 - 1	1.99	2491.5816	2490.8301	0.3	40135.150^{D}	-5	1.011	5.987		II
		2 - 1	1.68	2481.1384	2480.3894	0.3	40304.079^{B}	-5	0.990	5.987		
		3-2	16*	2473.079	2472.332	-1.8	40435.42 ^D	30	0.958	5.971		I
120	a 5F-y 5H°	2-3	d5	2469.754	2469.008	1.8	40489.86 ^D	-30	0.990	6.010		
130	$a \circ F - y \circ H$	3-4	1.52	2469.734	2469.008	-0.4	40489.80 40633.826 ^C	-30	0.958	5.996	• • • •	
				2451.0038	2453.3855	-0.4	40633.826 ⁻²	41	0.958	6.010	• • •	
		3-3 4-5	1.58 0	2434.1284	2446.966	-2.3 -2.4	40747.003 40854.56 ^D	40	0.938	5.980	• • •	
		4-3 5-6	3	2447.707	2440.966	1.8	40834.30 ⁻ 40926.84 ^D	-30	0.913	5.933	• • •	
		3-6 4-4	2.10	2443.384 2439.9101	2439.1706	-0.1	40926.84 40985.116 ^B	-30 1	0.839	5.996	• • •	
		4-4	1.95	2439.9101	2439.1700	1.3	41098.896 ^D	-22	0.915	6.010	• • •	II
		5-5	2.05	2433.1334	2432.4174	-0.2	41098.890 41303.012^{B}	3	0.859	5.980	 -2.99 ^a	11
		5-3 5-4	2.03	2421.1309	2420.3937	2.9	41303.012 41433.56 ^D	-50	0.859	5.996		
								-30			• • •	
131	$a~^5F-x~^3P$ °	1 - 2	2.84	2490.6646	2489.9133	-0.1	40149.927 ^A	1	1.011	5.989	-1.39a	
	(UV65)	$^{2-2}$	2.81	2480.2292	2479.4804	0.1	40318.854^{D}_{-}	-2	0.990	5.989	-1.01ª	I
		1 - 1	2.11	2477.6138	2476.8656	0.4	40361.415 ^B	-7	1.011	6.015	-2.09^a	
		3-2	3.11	2464.4756	2463.7304	-0.1	40576.583 ^A	2	0.958	5.989	-1.13^{a}	
132	$a^{5}F-z^{1}H^{0}$	5-5	1	2412.291	2411.558	-1.7	41454.37 ^D	30	0.859	5.998		
133	$a {}^{5}F - y {}^{1}G^{\circ}$ (UV66)	4-4	1.72	2419.7980	2419.0630	0.2	41325.764 ^C	-4	0.915	6.038	•••	
134	$a~^5F-w~^3F$ °	$^{2-2}$	1.51	2412.6980	2411.9647	-1.9	41447.375 ^C	32	0.990	6.129		
	(UV67)	3-3	1.34	2408.7776	2408.0451	-0.5	41514.833^{B}	9	0.958	6.105		
		3-2	d0?	2397.792	2397.062	1.7	41705.03 ^D	-30	0.958	6.129		
		4-4	2.76	2396.2248	2395.4952	-10.5	41732.311^{D}		0.915	6.089		II
		4-3	2.19	2388.5753	2387.8474	9.0	41865.961 ^D	-157	0.915	6.105		II
135	$a~^5F-v~^3D^{\circ}$	1-2	1.78	2433.8059	2433.0677	-0.4	41087.911^{B}	7	1.011	6.105		
133	(UV68)	1-1	2.13	2430.5520	2429.8145	0.1	41142.918 ^B	-1	1.011	6.112		
	(0,400)	2-3	d1*	2430.177	2429.439	-1.8	41149.27 ^D	30	0.990	6.092		
		$\frac{2}{2-2}$	2.11	2423.8411	2423.1052	0.2	41256.830 ^B	-3	0.990	6.105		
		$\frac{2}{2-1}$	1.62	2420.6138	2419.8786	0.7	41311.836 ^C		0.990	6.112		
		3-2	1.71	2408.7934	2408.0610		41514.560^{C}	2	0.958	6.105		
		4-3	0*	2394.738	2394.009	1.7	41758.22 ^D		0.915	6.092		II
	5 - 7 - 7 - 2											
136	a ^5F-n 7D $^\circ$	3-3	0?	2376.585	2375.860	0.6			0.958	6.175	• • •	
		3-2	d0?	2365.160	2364.437	1.1	42280.44 ^D	-20	0.958	6.200	• • •	
		4-3	d0	2356.911	2356.191	4.4	42428.41 ^D	-80	0.915	6.175	• • •	I
		5-4	1.99	2345.7458	2345.0275	5.4	42630.365^{B}	-98	0.859	6.144	• • •	
137	$a~^5F-y~^3H^{\circ}$	4-5	0?	2368.114	2367.391	-1.7	42227.69 ^D		0.915	6.150		
	•	5-6	2	2352.621	2351.901	5.5	42505.79 D		0.859	6.129		
		5-5	1*	2343.226	2342.508	-2.7	42676.21 ^D	50	0.859	6.150		
120	$a^{5}F-n^{7}F^{\circ}$		0?		2342.551		42675.43 ^D	0	0.915	6.205		
138	$a \cdot F - n \cdot F \cdot$	4-5 4-4	0? 4	2343.269 2329.570	2342.551	0.0 3.8	42926.38 ^D		0.915	6.237	• • •	
		4-4 5-5					~	-10	0.859	6.205	• • • •	
			1.70	2318.8992	2318.1869						• • •	
139	$a^{5}F-z^{1}F^{0}$	4-3	2.76	2314.2754	2313.5641		43210.070 ^A		0.915	6.272	•••	_
140	$a^{5}F-u^{5}F^{0}$	2-3	2.43	2291.8263	2291.1199		43633.324 ^D		0.990	6.400	• • •	I
	(UV70)	4-5	2.07	2291.4809	2290.7746		43639.902 ^B		0.915	6.325	• • • •	
		3-4	1.75	2290.7723	2290.0662	-0.3	43653.400^{D}	5	0.958	6.370	• • •	II

TABLE 2—Continued

1 •				17	ABLE 2—Co	ontinued	<i>a</i>					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
		1-2	1.38	2289.7605	2289.0546	0.4	43672.690 ^B	-7	1.011	6.426		
4		1-1	1.45	2283.5690	2282.8644	-0.1	43791.101^{B}		1.011	6.440		
		2-2	1.58	2280.9373	2280.2333	0.0	43841.626^{B}	0	0.990	6.426		
		3-3	2.12	2278.3706	2277.6671	-0.1	43891.016 ^A	2	0.958	6.400		
		2-1	2.44	2274.7935	2274.0908	-0.2	43960.034^{D}	4	0.990	6.440		I
		4-4	2.26	2272.4851	2271.7830	0.1	44004.688^{A}	-1	0.915	6.370		
		5-5	2.69	2268.1708	2267.4695	-0.2	44088.391 ^A	3	0.859	6.325		
		3-2	1.98	2267.6070	2266.9059	-0.1	44099.352 ^A	2	0.958	6.426		
		4-3	1.73	2260.2799	2259.5804	0.0	44242.308^{B}	0	0.915	6.400		
		5-4	2.10	2249.5574	2248.8602	-0.2	44453.189 ^A	4	0.859	6.370		
141	$a~^5F-x~^3H^{\circ}$	3-4	d0?	2289.322	2288.616	0.0	43681.06 D	0	0.958	6.374		
171	(UV72)	5-4	1.68	2248.1578	2247.4608	-0.6	44480.864^{D}		0.859	6.374		
142	$a~^5F-t~^5D^{\circ}$	3-4	1.53	2306.8837	2306.1740	2.2	43348.523^{C}	-42	0.958	6.332		
	(UV71)	2 - 3	2.52	2305.4445	2304.7351	1.0	43375.584^{D}		0.990	6.368		II
	,	1 - 2	1.43	2300.1573	2299.4491	-0.2	43475.288^{C}	3	1.011	6.401		
		3 - 3	2.43	2291.8263	2291.1199	0.2	43633.324^{D}	-4	0.958	6.368		I
		$^{2-2}$	2.02	2291.2544	2290.5482	-0.1	43644.215 ^A	1	0.990	6.401		
		1 - 1	2.10	2289.7368	2289.0309	-0.2	43673.141 ^A	4	1.011	6.426		
		4-4	2.16	2288.3368	2287.6312	-0.1	43699.861 ^A	1	0.915	6.332		
		1-0	1.76	2283.7919	2283.0873	-0.1	43786.826 ^B	2	1.011	6.440		
		2 - 1	1.81	2280.9140	2280.2100	-0.4	43842.073^{B}	7	0.990	6.426		
		3-2	2.01	2277.8037	2277.1004	0.0	43901.939 ^B	0	0.958	6.401	1.16^{b}	
		4-3	2.13	2273.5217	2272.8193	-0.1	43984.625^{D}	2	0.915	6.368		II
		5-4	2.46	2265.0899	2264.3893	-0.1	44148.359 ^A		0.859	6.332		
143	$a~^5F-v~^3F$ °	2-3	d0?	2305.241	2304.532	-52.6	43379.41 ^D	990	0.990	6.368		
145	w 1 0 1	3-4	0	2294.814	2294.107	1.1	43576.52 D		0.958	6.361		
		3-3	1.56	2291.6195	2290.9132	-0.7	43637.261 ^C		0.958	6.368		
		4-4	1	2276.461	2275.758	0.0	43927.84 ^D	0	0.915	6.361		
		4-3	1.32	2273.3192	2272.6169	0.0	43988.543 ^C		0.915	6.368		
		5-4	2	2253.450	2252.752	-3.0	44376.40 ^D		0.859	6.361	• • •	II
144	$a~^5F-u~^5P$ °	2-3	1.66	2287.9985	2287.2930	-5.2	43706.322^{D}	99	0.990	6.409		
144	(UV73)	1-2	6	2283.626	2282.922	3.1	43790.00 ^D		1.011	6.440		
	(01/3)	1-1	d0?	2275.006	2274.303	-2.1	43955.93 D		1.011	6.461		
		2-2	1*	2274.841	2274.138	-6.2	43959.12 ^D		0.990	6.440		
		3-3	Ô	2274.595	2273.892	3.1	43963.88 ^D		0.958	6.409		
		$\frac{3-3}{2-1}$	1	2266.296	2265.595	-2.6	44124.87 ^D		0.990	6.461		
		3-2	1.52	2261.5871	2260.8873	-0.7	44216.736 ^B		0.958	6.440		
		4-3	2.06	2256.5598	2255.8611	-0.1	44315.245 ^A		0.915	6.409		
145	$a~^5F-y~^1D$ °	2-2	1	2287.149	2286.443	-2.1	43722.56 ^L	40	0.990	6.411		
146		2-2	d0?	2256.769	2256.070	0.0	44311.14 ^L	0	0.990	6.484	•••	
147	(UV75) $a^{5}F^{-2}P4p^{1}P^{0}$	1-1	0	2271.380	2270.678	0.0	44026.10 ^L	0	1.011	6.469		II
147	$a \cdot F - F + p \cdot F$	2-1	1.45	2262.6970	2261.9970		44195.046 ^L		0.990	6.469		II
148	a ${}^5F-t$ 3D ${}^{\circ}$	3-3	0	2247.941	2247.244	0.5	44485.15 ^L	-10	0.958	6.473		
140	$a \cdot F = \iota \cdot D$	1-2	1.58	2245.7699	2245.0735		44528.159^{L}		1.011	6.532		
		2-1	0?	2228.561	2227.868	0.5	44872.00 ^L		0.990	6.553		I
		3-2	d0?	2224.459	2223.767	4.5	44954.76 ^L		0.958	6.532		•
1.40	$a^{5}F^{-4}F^{5}p^{3}G^{0}$	4-5	0.95	2201.1785	2200.4915	1.1	45430.210^{L}	-23	0.915	6.547		
149	$a \circ F - F \circ p \circ G$				2178.982	4.3	45878.63 ^L		0.859	6.547		
		5-5	d0*	2179.664	2178.982 2159.6375		45878.63 ² 46289.524 ^E		0.839	6.697		
		3-4	1.52	2160.3160			46289.324 ² 46371.601 ^E		0.938	6.739		
		2-3	1.18	2156.4923	2155.8146		46629.355 ^E					
		3-3	1.36	2144.5718	2143.8965		_		0.958	6.739		
		4-4	0.95	2144.0445	2143.3693		46640.823 ^C	_	0.915	6.697		
		4-3	1.20	2128.5367	2127.8646		46980.633 ^E		0.915	6.739	,	
		5-4	d0?	2123.628	2122.957	3.2	47089.23 ¹		0.859	6.697		
150	$a~^5F-Gsp3~^3F^{ m o}$	4-4	1.20	2194.0958	2193.4103	0.0	45576.861 ^E		0.915	6.565		
	•	3-3	0.60	2191.5661	2190.8811	-0.9	45629.471 ^C	⁷ 19	0.958	6.615		
		2-2	1.26	2185.1439	2184.4602		45763.577 ^L	-39	0.990	6.664		
		2-2	1.20	2103.1733	2104.4002	1.7	.5.05.511	37	0.770	0.004	•••	

N					17	ABLE 2—Co	пипиеа						
ν. 4.	No.	Multiplet (MT) 1	J-J	I ²	λ _{vac} (Å)	λ _{qir} (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	BI.8
YY4ADUS.			4-3 3-2	1.32 0	2174.8245 2172.906	2174.1430 2172.225	1.1 0.9	$45980.722^{D} 46021.32^{\ \ D}$	-24 -20	0.915 0.958	6.615 6.664		
_ 7	151	$a~^5F-^4F5p~^5G^{ m o}$	1-2 3-4	1.30	2169.0581 2168.0663	2168.3778 2167.3862	0.0	46102.961 ^B 46124.051 ^B	0	1.011	6.727		
				1.40			0.0	46124.031 ⁻ 46141.085 ^A	0	0.958	6.677	• • •	
			5-6 2-3	2.10 7	2167.2659 2166.902	2166.5860 2166.222	0.0 0.9	46141.085 ⁻¹ 46148.84 ^D	0 -20	0.859 0.990	6.580	• • •	11
			4-5	2.00	2164.0459	2163.3667	0.9	46209.740 ^A	-20 -1	0.990	6.712 6.644	•••	II
			2-2	0.78	2161.1403	2160.4616	1.0	46209.740 46271.869^{D}		0.913	6.727	• • •	
			4-4	1.08	2151.6792	2151.0024	0.7	46475.330 ^C	-16	0.930	6.677	• • •	
			3-2	0.78	2149.1691	2148.4929	0.7	46529.609 ^B	-7	0.913	6.727	•••	
			5-5	1.15	2143.2413	2142.5663	-2.9	46658.301 ^D	63	0.859	6.644	• • •	
			4-3	1.04	2138.6769	2138.0027	0.2	46757.882^{D}	-4	0.037	6.712		
			5-4	0.70	2131.1132	2130.4405	0.3	46923.834 ^D	-7	0.859	6.677		
	152	a 5F $ ^4F$ 5F $^\circ$	3-4	1.00	2190.0732	2189.3886	-0.0	45660.574 ^C	1	0.958	6.619		
	132	$a \cdot r - r \cdot sp \cdot r$	4-5	3*	2187.803	2187.119	3.4	45707.95 ^D		0.936	6.581		
			3-3	0.70	2177.0827	2176.4007	-0.6	45933.028 ^C	12	0.958	6.653		
			4-4	1.08	2173.3521	2172.6709	-0.1	46011.872^{D}	3	0.915	6.619		II
			2-2	1.36	2171.2352	2170.5544	0.3	46056.733 ^D	-6	0.990	6.700		Ï
			1-1	1.26	2170.6244	2169.9437	0.4	46069.694 ^B	-8	1.011	6.723		•
			5-5	2.35	2166.5413	2165.8615	0.0	46156.517 ^A	0	0.859	6.581		
			4-3	1.88	2160.5596	2159.8810	0.2	46284.305^{A}	-5	0.915	6.653		
			3-2	1.72	2159.1527	2158.4745	0.0	46314.463 ^A	0	0.958	6.700		
			5-4	2.18	2152.3723	2151.6954	0.0	46460.363 ^A	-1	0.859	6.619		
	153	$a~^5F-y~^1H^{\circ}$	4-5	0.95	2176.9100	2176.2281	-0.1	45936.671 ^D	2	0.915	6.610	•••	
	154	$a\ ^{5}F-^{4}F5p\ ^{3}F^{o}$	3-4	0	2192.946	2192.261	1.0	45600.75 ^D	-20	0.958	6.612		
		(UV77)	4-4	1.18	2176.1809	2175.4991	0.1	45952.063^{C}	-3	0.915	6.612		
			2 - 3	0.78	2159.6762	2158.9978	0.4	46303.237 ^C	-8	0.990	6.731		
			5-4	1.58	2155.1465	2154.4690	0.2	46400.558^{B}	-4	0.859	6.612	• • •	
			1-2	d0?	2148.155	2147.479	4.6	46551.57 ^D		1.011	6.782	• • •	
			3-3	1.68	2147.7215	2147.0455	-0.0	46560.972 ^A	1	0.958	6.731	• • •	
			4-3	2.18	2131.6386	2130.9659	-0.1	46912.267 ^A	2	0.915	6.731	• • •	
			3-2	1	2128.641	2127.969	0.0	46978.33 ^D	0	0.958	6.782	• • •	II
	155	$a\ ^{5}F-^{4}F5p\ ^{5}D^{\circ}$	3-4	1	2179.488	2178.805	0.0	45882.34 ^D	0	0.958	6.647		
			3-3	1.36	2171.2352	2170.5544	-2.1	46056.733^{D}	45	0.958	6.668		I
			4-4	2.05	2162.9271	2162.2480	0.0	46233.644 ^A	0	0.915	6.647	• • •	
			1 - 2	0.48	2156.2918	2155.6141	1.0	46375.913 ^C	-22	1.011	6.761	• • •	
			4-3	0.60	2154.8020	2154.1246	0.2	46407.977^{C}	-4	0.915	6.668		
			1 - 1	1.51	2152.9259	2152.2488	0.2	46448.418 ^B	-5	1.011	6.770	• • •	
			$^{2-2}$	1.00	2148.4645	2147.7884	-0.2	46544.869 ^B	5	0.990	6.761	• • •	
			2-1	1.60	2145.1241	2144.4486	0.1	46617.350 ^B	-2	0.990	6.770	• • •	
			5-4	0.95	2142.1466	2141.4718	-0.2	46682.145 ^B	.5	0.859	6.647	• • •	
			3-2	1.87	2136.6344	2135.9607	0.5	46802.579 ^A	-11	0.958	6.761	• • •	
	156	$a~^5F-Dsp3~^5F^{ m o}$	2-3	0.70	2185.8977	2185.2139	0.4	45747.795 ^C	-9	0.990	6.662		
			3-2	0	2174.150	2173.469	1.4	45994.98 ^D	-30	0.958	6.661		
			3-4	1.28	2166.6711	2165.9913	-0.4	46153.752^{B}	9	0.958	6.680	• • •	
			4-4	0.78	2150.3060	2149.6296	1.4	46505.008^{D}		0.915	6.680	• • •	
			4-4	1	2150.304	2149.627	-0.9	46505.06 ^D	20	0.915	6.680	• • •	
			4-5	d0?	2144.225	2143.550	4.1	46636.89 ^D	-90	0.915	6.697	• • •	
			5-5	0.60	2123.7957	2123.1246	-1.3	47085.508 ^C	29	0.859	6.697	• • •	
	157	$a {}^{5}F - x {}^{3}S^{\circ}$ $a {}^{5}F - {}^{4}F5p {}^{3}D^{\circ}$	2-1	d0?	2182.335	2181.652	3.8	45822.48 ^D	-80 120	0.990	6.671	•••	**
	158	$a \cdot F - F \cdot Sp \cdot D^{\circ}$	$\frac{2-3}{3-3}$	3	2180.933	2180.250	5.7	45851.94 ^D 46109.790 ^B		0.990	6.675	• • •	II
			3-3	1.34	2168.7368	2168.0566	-0.1	46109.790 ² 46188.077 ^B	3 15	0.958	6.675	•••	
			1-2	1.34	2165.0609 2157.1731	2164.3814	-0.7	46188.077 ² 46356.967 ^B		1.011	6.737	• • •	
			$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	1.62 1.49	2157.1731 2145.2437	2156.4952 2144.5682	1.1 -1.6	46356.967 ² 46614.751 ^B		0.990 0.958	6.737 6.737	• • •	
			3-2 1-1	0.95	2143.5068	2144.3682	0.5	46652.522 ^D		1.011	6.795	•••	
			2-1	1.11	2135.7731	2135.0996	0.3	46821.453 ^D	-10 -8	0.990	6.795	• • •	
			2-1	1.11	2133.7731	2133.0330	U. 4	70021.433	-0	0.270	0.773	•••	

TABLE 2—Continued

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ_{qir}^{3} (A)	o-R ⁴ (mÅ)	$ \sigma^{5} $ o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) log(gf) ⁷ Bl. ⁸ (eV)
159	a ⁵ F-Dsp3 ⁵ D° (UV80)	1-1 2-3 2-2 2-1 3-3	2.02 8 2 2 0.70	2182.4018 2178.380 2177.359 2174.387 2166.2150	2181.7187 2177.697 2176.677 2173.706 2165.5352	-2.4 2.4 1.4 -0.5 -0.3	45821.077 ^B 50 45905.68 ^D -50 45927.20 ^D -30 4598.97 ^D 10 46163.470 ^C 7	1.011 0.990 0.990 0.990 0.958	6.692 6.681 6.684 6.692 6.681
		3-2 4-3 4-4 5-4	0.85 0.90 2.02	2165.207 2149.8551 2131.0802 2110.9040	2164.528 2149.1787 2130.4076 2110.2354	0.0 -0.2 0.5 -0.0	$\begin{array}{ccc} 46184.957^{D} & 0 \\ 46514.763^{B} & 5 \\ 46924.559^{B} & -12 \\ 47373.069^{A} & 1 \end{array}$	0.958 0.915 0.915 0.859	6.684 6.681 6.732
160	a ⁵ F-t ³ G° (UV81)	4-4 5-5 5-4	0.70 0.95 1.67	2133.9867 2125.1730 2113.7564	2133.3135 2124.5016 2113.0872	-0.0 1.3 0.0	$\begin{array}{ccc} 46860.648^{C} & 1 \\ 47054.993^{C} & -28 \\ 47309.142^{B} & 0 \end{array}$	0.915 0.859 0.859	6.724 6.693 6.724
161	a ⁵ F-t ⁵ P° (UV78)	1-2 2-2 3-3	0 1.04 1.04	2175.921 2167.9563 2160.9170	2175.239 2167.2762 2160.2383	-1.4 2.4 0.1	$\begin{array}{ccc} 45957.55 & D & 30 \\ 46126.391^{B} & -51 \\ 46276.651^{B} & -3 \end{array}$	1.011 0.990 0.958	6.709 6.709 6.696
162 163	$a^{5}F - s^{6}D6p^{7}D^{\circ}$ $a^{5}F - s^{6}D6p^{7}F^{\circ}$	4-4 4-5 5-5 4-3 5-4	d0? d0 1.20 0? 4	2035.001 2035.574 2017.1598 2014.091 2006.894	2034.347 2034.920 2016.5089 2013.441 2006.245	-1.7 0.0 1.2 0.0 7.2	49140.02 ^D 40 49126.19 ^D 0 49574.654 ^D -30 49650.19 ^D 0 49828.24 ^D -180	0.915 0.915 0.859 0.915 0.859	7.007 7.005 7.005 7.070 7.037 I
164	a 5F $-s$ 6D6p 7P $^\circ$	1-2 2-2 3-2 4-3 5-4	d0? 2 1 0 2	2039.340 2032.340 2021.750 2019.726 2015.591	2038.685 2031.687 2021.099 2019.075 2014.940	0.8 2.5 2.0 0.0 2.8	49035.47 ^D -20 49204.36 ^D -60 49462.09 ^D -50 49511.66 ^D 0 49613.25 ^D -70	1.011 0.990 0.958 0.915 0.859	7.090 7.090 7.090 7.053 7.010
165	a ⁵ F-s ⁶ D6p ⁵ F°	4-5 3-4 2-3 4-4 5-5 3-2 4-3 5-4	0 d0? 0 1 2 2 2 1.38	2027.144 2026.914 2026.013 2012.576 2008.883 2006.243 2001.319 1994.5705	2026.491 2026.261 2025.361 2011.926 2008.233 2005.594 2000.671	0.8 7.8 0.8 0.0 4.0 1.6 0.4 -1.3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.915 0.958 0.990 0.915 0.859 0.958 0.915 0.859	7.031 7.075 7.109 7.075 7.031 7.138 7.109 7.075
166	a ⁵ F – s ⁶ D6p ⁵ D°	3-4 1-1 4-4 2-1 2-2 3-3 5-4	0 1 1.30 0 0? 1.34 1.34	2040.639 2030.609 2026.1142 2023.666 2023.067 2022.6349 2007.8687	2039.984 2029.955 2025.4616 2023.013 2022.415 2021.9830 2007.2194	0.8 4.1 0.2 2.9 2.5 0.3 0.4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.958 1.011 0.915 0.990 0.990 0.958 0.859	7.034 7.117 7.034 7.117 7.118 7.088 7.034
167	$a^{5}F - s^{6}D_{4.5}4f$ [5.5]° $a^{5}F - s^{6}D_{4.5}4f$ [3.5]° $a^{5}F - s^{6}D_{4.5}4f$ [5.5]° $a^{5}F - s^{6}D_{4.5}4f$ [4.5]° $a^{5}F - s^{6}D_{4.5}4f$ [6.5]°	4-5 4-4 5-5 5-5 5-6	0 d0? 1 1 1.43	2025.345 2024.787 2007.113 2006.967 2006.8937	2024.692 2024.135 2006.464 2006.318 2006.2445	0.8 3.3 0.4 1.2 -0.8	49374.31 ^D -20 49387.91 ^D -80 49822.81 ^D -10 49826.42 ^D -30 49828.250 ^C 19	0.915 0.915 0.859 0.859 0.859	7.036 7.038 7.036 7.036 7.037
168	a 5F $-s$ 6D6p 5P o	2-3 3-3 1-2 4-3	d0? 3 d0? 1	2045.592 2034.868 2029.117 2020.427	2044.936 2034.214 2028.464 2019.775	-1.7 2.1 -1.6 2.9	48885.60 ^D 40 49143.23 ^D -50 49282.52 ^D 40 49494.50 ^D -70	0.990 0.958 1.011 0.915	7.051 7.051 7.121 7.051
169	$a^{5}F - s^{6}D_{3.5}4f$ [3.5]° $a^{5}F - s^{6}D_{3.5}4f$ [5.5]° $a^{5}F - s^{6}D_{3.5}4f$ [3.5]° $a^{5}F - s^{6}D_{3.5}4f$ [3.5]° $a^{5}F - s^{6}D_{3.5}4f$ [5.5]° $a^{5}F - s^{6}D_{3.5}4f$ [6.5]°	3-4 4-5 4-4 4-3 5-5 5-6	1 1 d0? 3 0	2023.431 2009.202 2009.155 2009.128 1991.255 1991.044	2022.779 2008.553 2008.505 2008.478 	1.6 0.4 7.3 3.6 -2.8 0.0	49421.01 ^D -40 49771.00 ^D -10 49772.17 ^D -180 49772.84 ^D -90 50219.59 ^D 70 50224.90 ^D 0	0.958 0.915 0.915 0.915 0.859 0.859	7.085 7.085 7.085 7.085 7.085 7.086
170	a ⁵ F-Dsp1 ³ D°	1-2 3-2	0? 1	2044.147 2026.476	2043.491 2025.823	1.3 4.1	48920.16 ^D -30 49346.75 ^D -100	1.011 0.958	7.076 II 7.076

TABLE 2—Continued

===					LE 2—Contil							
No.	Multiplet (MT) 1	J-J	I 2	$\begin{array}{c} \lambda_{vac}^{3} \\ \text{(Å)} \end{array}$	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} o-l (cm ⁻¹) (n		E(1) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		4-3	2	2001.226	2000.578	0.4	49969.37 ^D -	10 (0.915	7.110		
171	$a\ ^5F-s\ ^6D_{2.5}4f\ [2.5]^{\circ}$	1-2	1	2029.372	2028.719	2.9	49276.32 ^D -	70	1.011	7.120		
	$a^{5}F - s^{6}D_{2.5}4f[2.5]^{\circ}$	2 - 3	d0?	2022.366	2021.714	1.2			0.990	7.121		
	$a^{5}F - s^{6}D_{2.5}4f[3.5]^{\circ}$	2-3	0	2022.095	2021.444	1.6			0.990	7.121	•••	
	$a^{5}F - s^{6}D_{2.5}4f[1.5]^{\circ}$	3-2	d0?	2012.091	2011.441	-0.8			0.958	7.120	• • •	
	$a^{5}F$ - $s^{6}D_{2.5}4f$ [3.5]°	4-4	d0?	1997.560		-1.2	-		0.915	7.121		I
	$a^{5}F - s^{6}D_{2.5}4f$ [4.5]°	4-5	d0?	1997.560		3.6	_		0.915	7.121		I
	$a^{5}F - s^{6}D_{2.5}4f$ [4.5]°	4-4	d0?	1997.507		2.0	-	50 (0.915	7.121		
	$a^{5}F - s^{6}D_{2.5}4f$ [4.5]°	5-4	0?	1979.769	• • •	0.4		10 ().859	7.121		
172	$a^{5}F - s^{6}D_{1.5}4f$ [2.5]°	1-2	d0?	2021.104	2020.452	0.4	49477.92 ^D -1	10 1	1.011	7.145		
	$a {}^{5}F - s {}^{6}D_{1.5}4f [1.5]^{\circ}$	3-2	0	2004.377	2003.728	-2.4	_	60 ().958	7.144		
	$a^{5}F - s^{6}D_{1.5}4f$ [4.5]°	3-4	1	2004.254	2003.605	-0.4		10 ().958	7.144		
173	$a^{5}F-s^{6}D_{0.5}4f[3.5]^{\circ}$	2-3	0	2009.681	2009.031	0.0	49759.14 ^D	0 ().990	7.159		
174	$a^{5}F - s^{4}D5p^{5}D^{0}$	4-4	d0?	1984.634		-2.8	50387.13 ^D	70 (0.915	7.162		
.,,	u i o bsp b	3-2	d0?	1976.190		3.1).958	7.232		
		5-4	1	1967.127		0.0	50835.56 D).859	7.162		
175	$a^{5}F - s^{4}D5p^{3}F^{o}$											
175	$a \stackrel{5}{}F - s \stackrel{5}{}D \stackrel{5}{}p \stackrel{5}{}F \stackrel{5}{}$ $a \stackrel{5}{}F - t \stackrel{3}{}H \stackrel{6}{}$	4-3	0?	1933.757	•••	1.9			0.915	7.326	• • •	
176	$a \circ F - t \circ H \circ$	3-4 5-4	0 d0?	1885.741 1857.724	• • •	-0.4 0.3	_).958	7.533	• • •	II
		J -4	<u>uo:</u>	1637.724	•••	0.3	33829.31).859	7.533		
177	$a^3F-z^5F^0$	2-2	1.85	6853.5253	6851.6347	-1.9	14591.031^{C}	4 1	.608	3.417	-5.32^{b}	
	(34)	3-4	1.85	6846.5464	6844.6577	-8.9			.557	3.368		
		2 - 1	2.18	6803.7477	6801.8705	4.6		10 1	.608	3.430	-5.80^{c}	
		3-3	3.41	6741.3823	6739.5219	1.4		-3 1	.557	3.396	-4.95^{b}	
		4-5	3.55	6712.1721	6710.3195	0.9			.485	3.332	-4.88^{b}	
		3-2	2.51	6667.2676	6665.4271	0.0	14998.648 ^B		.557	3.417	•••	
		4-4	3.62	6583.0280	6581.2101	0.9			.485	3.368	-4.86 ^b	
		4–3	2.60	6485.7379	6483.9462	1.7	15418.446 ^B	-4 1	.485	3.396	• • •	
178	$a {}^3F$ – $z {}^5P$ $^{\circ}$	3-3	0.48	6062.3024	6060.6243	1.8	16495.383 ^A	-5 1	.557	3.602		
	(35)	4-3	1.61	5854.7708	5853.1483	-1.7	17080.088^{A}	5 1	.485	3.602	-5.28^{b}	
179	$a~^3F-z~^3F^{\circ}$	3-4	4.04	5334.3831	5332.8997	0.0	18746.310 ^A	0 1	.557	3.881	-2.78^a	
	(36)	2 - 3	3.89	5308.8376	5307.3610	0.0	18836.515 ^A	0 1	.608	3.943	-2.99^{b}	
		$^{2-2}$	4.76	5217.7263	5216.2740	0.0	19165.436 ^A	0 1	.608	3.984	-2.15^{b}	
		3-3	4.86	5196.3884	5194.9418	0.3	19244.135 ^A	-1 1	.557	3.943	-2.09^{b}	
		4-4	5.21	5173.0368	5171.5964	-0.3	19331.005 ^A	1 1	.485	3.881	-1.79 ^b	
		3-2	4.54	5109.0645	5107.6411	0.3		-1 1	.557	3.984	-2.42^{b}	
		4-3	4.75	5043.1619	5041.7560	0.0	19828.830 ^A	0 1	.485	3.943	-2.20^a	
180	$a~^3F-z~^3D^{\circ}$	2-3	3.59	5448.3885	5446.8746	1.8			.608	3.883	-3.11ª	
	(37)	$^{2-2}$	4.91	5342.5096	5341.0240	0.0		0 1	.608	3.928	-1.95 ^a	
		3-3	5.02	5330.0139	5328.5317	0.3		-1 1	.557	3.883	-1.85 ^a	
		2-1	5.46	5271.8231	5270.3564	0.0		0 1	.608	3.960	-1.34 ^a	
		3-2	5.64	5228.6447	5227.1895	0.3		-1 1	.557	3.928	-1.23a	
		4-3	5.88	5168.9278	5167.4885	0.0	19346.372 ^A	0 1	.485	3.883	-1.12 ^a	
181	$a~^3F-y~^5D^{ m o}$	3-4	1.85	4869.7332	4868.3734	-0.2	20535.006^{C}	1 1	.557	4.103		
	(38)	2-2	2.24	4800.0727	4798.7313	-0.5	20833.018^{B}		.608	4.191	-4.25^{b}	
		3-3	2.79	4774.1375	4772.8030	-0.9	20946.192 ^A	4 1	.557	4.154	-2.90^a	
		4-4	3.43	4734.9157	4733.5917	0.0	*	0 1	.485	4.103	-2.99 ^a	
182	$a~^3F-y~^5F^{\circ}$	2-3	2.43	4681.6048	4680.2948	0.0			.608	4.256	-3.77 ^b	
	(39)	3-4	3.48	4655.8015	4654.4983	0.2			.557	4.220	-2.78^{b}	
		2-2	3.18	4634.2091	4632.9117	0.0			.608	4.283	-2.91^{b}	
		4-5	4.11	4604.2305	4602.9410	0.2			.485	4.178	-2:21ª	
		2-1	2.88	4603.2903	4602.0010	0.2			.608	4.301	-3.15^{b}	
		3-3	3.66	4593.9379	4592.6511	0.0			.557	4.256	-2.45^{b}	
		3-2	2.17	4548.2916	4547.0169	-0.2	21986.277 ^A		.557	4.283	-3.73 ^b	
		4-4	4.14	4532.4187	4531.1482	0.2	22063.275 ^A	-1 1	.485	4.220	-2.16^{b}	

					I ABLE 2—C	ontinue	au					
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
183	$a {}^{3}F - z {}^{3}P^{\circ}$ (40)	3-2 2-1	2.08 2.04	4675.9562 4674.1385	4674.6478 4672.8305	-0.4 0.0	21386.000^{B} 21394.317^{C}		1.557 1.608	4.209 4.260	-4.79 ^b -4.24 ^b	
184	$a^{3}F-z^{5}G^{\circ}$	2-3	5.46	4416.3625	4415.1225	0.0	22643.069 ^A		1.608	4.415	-0.62^{b}	
	(41)	3-4	5.91	4405.9876	4404.7504	0.2	22696.387 ^A 22806.179 ^A		1.557	4.371	-0.14^{b}	
		4-5 2-2	5.15 3.27	4384.7766 4369.1311	4383.5450 4367.9036	0.4 0.2	22887.846 ^A		1.485 1.608	4.312 4.445	0.20 ^b -2.89 ^a	
		3-3	4.36	4338.2657	4307.9030	0.2	23050.686 ^A		1.557	4.445	-2.89 ^a -1.70 ^b	
		4-4	4.76	4295.3328	4294.1248	0.2	23281.083 ^A		1.485	4.371	-1.70	
		4-3	2.89	4230.9428	4229.7516	-1.8	23635.394 ^A		1.485	4.415	-3.43 ^b	
185	$a~^3F-z~^3G^{\circ}$	2-3	5.92	4326.9783	4325.7619	0.2	23110.816 ^A		1.608	4.473	0.01^{a}	
	(42)	3-4	5.80	4309.1139	4307.9023	0.2	23206.627 ^A		1.557	4.434	-0.07ª	
		4-5	5.80	4272.9627	4271.7605	0.4	23402.966 ^A		1.485	4.386	-0.16^{b}	
		3-3	5.33	4251.9836	4250.7869	0.2	23518.435 ^A 23791.323 ^A		1.557	4.473	-0.71^a	
		4-4 4-3	5.17 3.84	4203.2131 4148.8386	4202.0292 4147.6690	0.2 0.2	23791.323 ⁻⁴ 24103.131 ^A		1.485 1.485	4.434 4.473	-0.71 ^b -2.10 ^b	
186	$a~^3F-y~^3F$ °	3-4	5.56	4145.0367	4143.8680	0.3	24125.239 ^A		1.557	4.548	-0.51 ^a	
	(43)	2 - 3	5.35	4133.2237	4132.0582	0.0	24194.190 ^A		1.608	4.607	-0.67ª	
		$^{2-2}$	5.85	4072.8877	4071.7380	0.0	24552.604 ^A		1.608	4.652	-0.02^{b}	
		3-3	5.92	4064.7417	4063.5942	0.2	24601.809 ^A		1.557	4.607	0.06^{a}	
		4-4	6.00	4046.9554	4045.8124	0.2	24709.934 ^A		1.485	4.548	0.28^{b}	
		3-2	5.32	4006.3743	4005.2420	0.2	24960.224 ^A		1.557	4.652	-0.61 ^b	
	2 - 5 - 4	4-3	5.63	3970.3802	3969.2572	0.0	25186.505 ^A		1.485	4.607	-0.43 ^a	
187	$a^{3}F-y^{5}P^{\circ}$	2-3	1.85	4201.9625	4200.7789	1.1	23798.404 ^D		1.608	4.558	• • •	
	(44)	3-3	2.47	4131.2017	4130.0367	-0.3	24206.032 ^D 24596.633 ^C		1.557	4.558	• • •	I
		3-2 4-3	2.74 3.30	4065.5971 4033.7670	4064.4493 4032.6275	-0.3 0.5	24396.633° 24790.723 ^A		1.557 1.485	4.607 4.558	-2.38 ^a	
188	$a^3F-y^3D^{\circ}$	2-3	4.29	3967.1838	3966.0617	0.2	25206.798 ^A	-1	1.608	4.733	-1.66ª	
	(45)	3-3	5.48	3904.0514	3902.9457	0.2	25614.417 ^A	-1	1.557	4.733	-0.47^{b}	
		2-2	5.30	3889.6154	3888.5135	0.0	25709.483 ^A	0	1.608	4.795	-0.55^a	
		2 - 1	5.66	3842.1375	3841.0480	0.1	26027.179 ^A		1.608	4.835	-0.04ª	
		3-2	5.77	3828.9087	3827.8226	0.1	26117.102 ^A		1.557	4.795	0.06^{b}	
	3 - 5 - 5	4-3	5.88	3816.9233	3815.8403	0.1	26199.112 ^A		1.485	4.733	0.24^{a}	
189	$a^3F-x^5D^0$	2-3		3703.526	3702.472		27001.297 ^D	• • •	1.608	4.955	•••	ΜI
	(46)	3-4	2.46	3694.8287	3693.7774	1.9	27064.854 ^D 27408.917 ^D	-14	1.557	4.913	•••	MI
		3-3 $3-2$	 2.94	3648.448 3613.9666	3647.408 3612.9362	-3.7	27408.917 ⁻ 27670.427 ^C		1.557 1.557	4.955 4.988	•••	ΜI
		4-3	3.23	3572.2453	3571.2257	1.8	27993.598 ^C	-14	1.485	4.955	-2.60 ^b	
190	$a~^3F-x~^5F$ °	2-1	2.92	3550.8790	3549.8648	0.1	28162.041 ^C	-1	1.608	5.099	-2.54^{b}	
170	(48)	3-3	2.75	3535.9166	3534.9063	0.9	28281.210^{C}		1.557	5.064		
	(1-5)	3-2	2.97	3514.0578	3513.0531	-2.0	28457.130^{C}	16	1.557	5.085	-2.53^{b}	
		4-4	2.73	3494.2801	3493.2805	-0.9	28618.198^{C}		1.485	5.033	-2.89^{b}	
		4-3	2.74	3464.2948	3463.3028	1.1	28865.904 ^C		1.485	5.064	-2.72ª	
191	$a~^3F-x~^5P$ o	3-3	2.26	3336.4704	3335.5111	1.2	29971.793 ^D		1.557	5.273		
	(49)	4-3	2.97	3272.6265	3271.6835	0.3	30556.496 ^B		1.485	5.273	-2.77ª	
192	$a {}^{3}F - y {}^{5}G^{0}$ (50)	4-5	2.43	3232.5122	3231.5794	-1.7	30935.691 ^C	16	1.485	5.320	•••	
193	$a^3F-z^5H^\circ$	2-3	2.99	3294.0891	3293.1406	0.1	30357.406 ^B		1.608	5.372	-3.12 ^a	
	(51)	3-4	2.81	3273.5396	3272.5964	0.8	30547.973 ^C		1.557	5.345	-3.19ª	
		3-3	2.30	3250.4438	3249.5064	-0.2	30765.030 ^D		1.557	5.372		
		4-5 4-4	2.77 0	3224.1982 3212.065	3223.2675 3211.137	-0.8 5.2	31015.463 ^C 31132.62 ^D		1.485 1.485	5.330 5.345	-3.27 ^a	
194	$a^3F-z^5I^{\circ}$	3-4	2.60	3238.1569	3237.2226	0.4	30881.765 ^C		1.557	5.386		
177	(51a)	4-4	1	3177.990	3177.071	3.0	31466.43 ^D		1.485	5.386		II
	\ - /	4-5	2.51	3176.2305	3175.3119	1.8	31483.861 ^C		1.485	5.388	•••	
195	$a^3F-w^5D^{\circ}$	2-2	1	3203.583	3202.657	2.1	31215.05 ^D		1.608	5.478		
	(52)	3-3	2.40	3188.6000	3187.6783	0.5	31361.726 ^C		1.557	5.446	• • •	
		2-1	2.56	3180.3982	3179.4785	0.0	31442.604 ^C	0	1.608	5.506	• • •	

TABLE 2—Continued

	Multiplet	J-J	I ²	λ_{vac}^{3}	λ_{qir}^{3} (A)	o-R ⁴	σ ⁵ o-R ⁶	E(l)	E(u)	log(gf) ⁷	B1.8
	(MT) ¹			(Å)		(mÅ)	(cm ⁻¹) (mK)	(eV)	(eV)		
		4-4	11	3172.266	3171.348	5.0	31523.21 ^D -50	1.485	5.393		I
		3-2 $4-3$	3.01 3.11	3162.2861 3130.2401	3161.3710 3129.3331	-0.1 -0.4	31622.692^B 1 31946.431^B 4	1.557 1.485	5.478 5.446	-1.80 ^a -2.03 ^a	
106	a ³ F−v ⁵ D°	3-3		3164.029	3163.114			1.557	5.476		MII
196	$\begin{array}{c} a \circ F - v \circ D \circ \\ (53) \end{array}$	$\frac{3-3}{2-2}$	 0?	3155.023	3154.110	2.0	31605.27 ^D 31695.49 ^D -20	1.608	5.537		IVIII
	(33)	4-4	2.49	3120.4860	3119.5815	-0.7	32046.290 ^C 7	1.485	5.458	•••	
		3-2	0	3114.969	3114.066	7.8	32103.05 ^D -80	1.557	5.537		
		4-3	0	3106.560	3105.659	1.0	32189.95 ^D -10	1.485	5.476	• • •	
197	$a~^3F-w~^5F^{ m o}$	3-4	d0?	3139.307	3138.398	-2.0	31854.16 ^D 20	1.557	5.507		
		3-3	d0?	3125.944 3082.726	3125.038 3081.831	4.9 1.0	31990.34 ^D -50 32438.82 ^D -10	1.557 1.485	5.523 5.507	• • •	
		4-4 4-3	1 0?	3069.832	3068.940	1.0	32438.8210 32575.07 ^D -20	1.485	5.523		
100	$a~^3F-y~^5S^{\circ}$	2-2	0	3170.252	3169.335	2.0	31543.23 ^D -20	1.608	5.519		I
198	$\begin{array}{c} a \circ F - y \circ S \circ \\ (54) \end{array}$	3-2	2.60	3170.232	3128.8980	0.3	31950.873 ^C -3	1.557	5.519		1
199	$a^{3}F-x^{3}D^{\circ}$	2-3	d0	3100.569	3099.670	-1.0	32252.14 ^D 10	1.608	5.606		I
199	$\begin{array}{c} a & F - x & D \\ (55) & \end{array}$	2-3	3.18	3094.7032	3093.8052	0.0	32313.276^B 0	1.608	5.614	-2.04 ^a	•
	(33)	2-1	3.85	3069.0651	3068.1735	-0.1	32583.212 ^A 1	1.608	5.648	-1.33ª	
		3-3	3.20	3061.8732	3060.9833	-0.1	32659.746 ^D 1	1.557	5.606	-2.05^a	II
		3-2	4.00	3056.1508	3055.2624	-0.1	32720.898 ^A 1	1.557	5.614	-1.18 ^a	
		4-3	4.04	3008.0216	3007.1452	-0.2	33244.442 ^A 2	1.485	5.606	-1.16 ^a	
200	$a~^3F-y~^3G^{ m o}$	2 - 3	4.13	3068.0097	3067.1183	-0.3	32594.421 ^A 3	1.608	5.649	-1.42 ^a	
	(56)	3-4	4.04	3042.5223	3041.6372	-0.1	32867.467 ^A 1	1.557	5.632	-1.28^a	
		3-3	3.34	3030.1159	3029.2340 3000.4511	0.0 -0.4	33002.038^B 0 33318.608^A 4	1.557 1.485	5.649 5.616	-2.17 ^a -1.10 ^a	
		4-5 4-4	4.38 3.19	3001.3259 2989.3431	2988.4713	-0.4 -0.4	33452.166^A 5	1.485	5.632	-2.18^a	
		4-3	0	2977.374	2976.506	8.0	33586.64 ^D -90	1.485	5.649		
201	$a {}^3F - x {}^5G^{\circ}$	2-3	2*	3035.362	3034.479	-4.6	32945.00 ^D 50	1.608	5.692		
201	(57)	3-4	2.41	3005.5027	3004.6269	-1.5	33272.304^{C} 17	1.557	5.682	•••	
	()	4-5	2.04	2962.9747	2962.1095	2.0	33749.866^D -23	1.485	5.669		
202	$a^3F-y^3P^{\circ}$	2-2	1	2962.215	2961.350	0.0	33758.52 ^D 0	1.608	5.793		
	-	2 - 1	d0?	2946.960	2946.099	0.0	33933.27 ^D 0	1.608	5.815	• • •	
		3-2	1	2926.875	2926.019	0.0	34166.13 ^D 0	1.557	5.793	• • •	
203	$a~^3F-u~^5D$ o	2-2	d0	2948.115	2947.253	-0.9	33919.98 ^D 10	1.608	5.813	•••	
	(UV86)	3-4	2.32	2927.4086	2926.5522	0.1	34159.905 ^C -1	1.557	5.792	• • •	
		3-3 2-1	d0? 2.20	2925.345 2923.2344	2924.489 2922.3791	4.3 -0.4	$34184.00^{\ D}$ -50 $34208.683^{\ D}$ 5	1.557 1.608	5.795 5.849	•••	
		3-2	2.67	2913.1095	2912.2567	0.0	34327.580 ^B 0	1.557	5.813	-2.06 ^a	
		4-4	3.35	2878.1449	2877.3007	-0.1	34744.602 ^A 1	1.485	5.792	-1.29a	
		4-3	2.70	2876.1459	2875.3021	0.1	34768.751 ^B -1	1.485	5.795	-1.88ª	
204	$a~^3F-x~^3F^{\circ}$	2-3	2.69	2930.4751	2929.6179	-0.4	34124.160 ^B 5	1.608	5.839	-2.22ª	
	(UV87)	2-2	3.44	2921.5456	2920.6906	-0.3	34228.458 ^A 4	1.608	5.851	-1.39ª	
		3-3	3.45	2895.8834	2895.0348	-0.2	34531.777^{A} 2	1.557	5.839	-1.43°	
		3-2	2.58	2887.1624	2886.3160	-0.9	34636.084 ^B 11	1.557	5.851	-2.09^a	
		4-4 4-3	3.10 2.34	2864.2708 2847.6666	2863.4300 2846.8298	0.1 0.0	34912.900 ^A -1 35116.471 ^C 0	1.485 1.485	5.813 5.839	-1.34 ^a -2.13 ^a	
205	3 77 3 77 0						_				
205	$a {}^{3}F - z {}^{3}H^{\circ}$ (UV88)	3-4 4-5	2.85 2.34	2894.7289 2854.5224	2893.8806 2853.6840	-0.2 0.0	34545.549^B 2 35032.130^C 0	1.557 1.485	5.840 5.828	-2.11 ^a -2.35 ^a	
	(0 4 00)	4-4	2.48	2846.5497	2845.7132		35130.249^B 6	1.485	5.840	-2.10^a	
206	$a~^3F-w~^3D^{\circ}$	2-3	2.26	2936.9762	2936.1174	0.5	34048.625 ^C -6	1.608	5.829		
200	(UV89)	2-3	2.96	2926.7551	2925.8989	-0.3	34167.532^B 4	1.608	5.844	-2.28^a	
	(= . = /)	2 - 1	2.70	2915.1567	2914.3034		34303.473^B 2	1.608	5.861	-1.90^a	
		3-3	3.06	2902.2308	2901.3807	-0.1	34456.253 ^A 1	1.557	5.829	-1.66ª	
		3-2	1	2892.252	2891.405	0.8	34575.13 ^D -10	1.557	5.844	• • •	_
		4-3	d0*	2853.811	2852.973	6.5	35040.86 ^D -80	1.485	5.829	•••	I
207	$a^3F-w^5G^{\circ}$	2-3	2.08	2879.7944	2878.9498		34724.701 ^D 19	1.608	5.913	-2.50^a	
	(UV90)	2-2	2.78	2868.4036	2867.5617	-0.2	34862.598 ^B 2	1.608	5.930	-1.84ª	

TABLE 2—Continued

·					DEE 2 CO						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
<u>~</u>		3-3	2.28	2846.3840	2845.5476	0.6	35132.294 ^C -8	1.557	5.913	-2.18 ^a	
φ		3-2	1.77	2835.2509	2834.4172	-2.4	35270.247^D 30	1.557	5.930		I
1 9 9 4 A D U S		4-5	d0?	2821.360	2820.530	6.4	35443.90 ^D -80	1.485	5.879		
-1		4-3	0	2799.792	2798.967	3.9	35716.94 ^D -50	1.485	5.913		
208	$a~^3F-Psp3~^1D^{\circ}$	$^{2-2}$	5	2902.656	2901.805	-5.9	34451.21 ^D 70	1.608	5.879		
	(UV91*)	3 - 2	2.11	2868.7199	2867.8780	-0.2	34858.753 ^C 2	1.557	5.879		
209	$a^3F-z^1G^{\circ}$	4-4	2	2818.775	2817.945	4.8	35476.41 ^D -60	1.485	5.883	-2.90^a	
210	$a {}^3F - y {}^3S$ °	2-1	1	2891.259	2890.411	3.3	34587.01 ^D -40	1.608	5.896		
211	$a^{3}F-v^{5}F^{0}$	2-2	1.77	2835.2509	2834.4172	3.5	35270.247 ^D -44	1.608	5.981		I
211	(UV92)	3-4	2.03	2827.3284	2826.4966	-1.5	35369.079 ^C 19	1.557	5.942		•
	(0.7-)	3-3	2	2811.995	2811.167	4.0	35561.94 ^D -50	1.557	5.966		
		4-5	1.52	2806.6369	2805.8103	3.2	35629.831 ^C -41	1.485	5.902		
		4-4	2	2781.349	2780.528	-1.5	$35953.78 \stackrel{D}{=} 20$	1.485	5.942		
		4-3	1	2766.506	2765.689	0.0	36146.68 ^D 0	1.485	5.966		
212	$a {}^3F - x {}^3G^{\circ}$	2 - 3	2.88	2868.1511	2867.3094	-0.2	34865.666 ^B 2	1.608	5.930	-1.97ª	
	(UV93)	3-4	2.68	2836.7848	2835.9507	0.5	35251.176 ^B -6	1.557	5.928	-1.85^a	
		3 - 3	2.16	2835.0070	2834.1734	0.3	35273.281^{D} -4	1.557	5.930	-2.70^a	
		4-4	1.93	2790.4994	2789.6767	-0.2	35835.879^D 2	1.485	5.928		
		4-3	1.78	2788.7804	2787.9580	0.9	35857.969 ^D -11	1.485	5.930		
	3 5	4-5	3.11	2788.7537	2787.9314	-0.2	35858.312 ^A 3	1.485	5.931	-1.54 ^a	
213	$a~^3F-y~^5H^{\circ}$	2-3	2.81	2816.3357	2815.5066	-0.1	35507.131^B 1	1.608	6.010	-1.92^a	
		3-4 $3-3$	2.86 1.80	2793.2223 2784.3711	2792.3989 2783.5498	-0.1 -0.2	35800.946^{A} 1 35914.753^{C} 3	1.557 1.557	5.996 6.010	-1.91ª	
		3-3 4-5	2.84	2758.2375	2757.4226	0.2	36255.036^{A} -3	1.485	5.980	 -2.04ª	
214	$a^3F-x^3P^{\circ}$	2-1	1	2813.136	2812.307	4.7	35547.52 ^D -60	1.608	6.015		
214	(UV96)	3-2	2.00	2797.6921	2796.8676	-3.2	35743.748 ^C 41	1.557	5.989		
215	$a^{3}F-z^{1}H^{0}$	4-5	2.23	2746.7729	2745.9608	0.2	36406.359 ^B -3	1.485	5.998		
216	$a^3F-y^1G^{\circ}$	4-4	2.07	2722.8454	2722.0390	0.4	36726.287 ^B -6	1.485	6.038	-2.20 ^a	
	(UV97)						.				
217	$a^3F-w^3F^{\circ}$	2-3	d0?	2756.764	2755.950	-6.1	36274.41 ^D 80	1.608	6.105		
	(UV98)	2-2	1.77	2742.3879	2741.5768	0.2	36464.572 ^C -2	1.608	6.129	-2.40 ^a	
		3-4 $3-3$	0 1.94	2736.126 2726.1364	2735.317 2725.3293	-4.5 0.0	$36548.02 D 60 36681.950^B 0$	1.557 1.557	6.089 6.105	• • •	
		3-3	d0?	2712.077	2711.273	5.9	36872.11 ^D -80	1.557	6.129		
		4-4	2.02	2693.0473	2692.2482	-0.1	37132.656 ^B 1	1.485	6.089	-2.21ª	
218	$a~^3F-v~^3D$ °	3-3	1.88	2734.1746	2733.3655	-1.6	36574.109 ^D 22	1.557	6.092	-2.43ª	
219	$a^3F-y^3H^{\circ}$	3-4	2.50	2690.6275	2689.8289	0.1	37166.052 ^A -1	1.557	6.165	-1.53ª	
219	(UV99)	4-5	2.24	2657.5825	2656.7919	0.1	37628.183 ^D -2	1.485	6.150	-1.33 -1.77a	II
	(0,77)	4-4	0	2648.954	2648.165	0.0	37750.75 ^D 0	1.485	6.165		II
220	$a~^3F-v~^3G^{ m o}$	2-3	2.72	2711.3472	2710.5437	0.0	36882.034 ^A 0	1.608	6.180	-1.33ª	
220	(UV100)	3-4	2.72	2697.8213	2697.0210	0.0	37066.948 ^A 0	1.557	6.153	-1.33 -1.46 ^a	
	(01100)	3-3	1.52	2681.7092	2680.9128	0.2	37289.651 ^C -3	1.557	6.180	-1.40	
		4-5	2.67	2667.7580	2666.9650	0.1	37484.659^B -1	1.485	6.132	-1.22 ^a	
		4-4	0	2655.929	2655.139	2.1	37651.61 ^D -30	1.485	6.153		
221	$a~^3F-Fsp3~^1F^{ m o}$	2-3	1	2739.088	2738.278	5.3	36508.50 ^D -70	1.608	6.134		
221	w i i opo i	3-3	1	2708.842	2708.039	2.9	36916.15 ^D -40	1.557	6.134		I
		4-3	0	2666.599	2665.806	-4.3	37500.95 ^D 60	1.485	6.134		
222	$a^3F-n^7F^{\circ}$	3-4	1	2649.541	2648.752	-7.0	37742.39 ^D 100	1.557	6.237		
		3-3	0?	2640.463	2639.676	-4.2	37872.15 ^D 60	1.557	6.253		
223	$a~^3F-z~^1F$ °	3-3	d0	2629.782	2628.998	-1.4	38025.97 ^D 20	1.557	6.272		
224	$a~^3F-x~^1G^{\circ}$	3-4	1.56	2627.9118	2627.1282	1.3	38053.028 ^C -19	1.557	6.275		
	-	4-4	0	2588.148	2587.374	5.4	38637.66 ^D -80	1.485	6.275		
225	$a^3F-u^5F^o$	4-4	2.51	2537.7342	2536.9720	-0.9	39405.230 ^D 14	1.485	6.370		
		4-3	d0*	2522.527	2521.769	3.2	39642.78 ^D -50	1.485	6.400		

No. Multiplet J-J I 2 $\lambda_{vac}^{\ 3}$ $\lambda_{qir}^{\ 3}$ o-R ⁴ $\sigma^{\ 5}$ o-R ⁶ E(l) (MT) 1 (Å) (Å) (mÅ) (cm $^{-1}$) (mK) (eV)	E(u)	log(gf) ⁷	
	(eV)		Bl. ⁸
$a^{3}F - x^{3}H^{\circ}$ 4-5 2.02 2558.0377 2557.2707 0.8 39092.465 ^B -12 1.485 (UV101)	6.331		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	6.348 6.368		
3-4 1.85 2581.0665 2580.2941 -0.4 38743.674 ^B 6 1.557	6.361		
4-4 1 2542.692 2541.929 -1.3 39328.39 ^D 20 1.485	6.361		I
4-3 d0 2538.770 2538.008 -5.2 39389.15 ^D 80 1.485	6.368	• • •	
228 $a^{3}F - u^{3}G^{\circ}$ 2-3 2.11 2573.5260 2572.7554 1.5 38857.194 ^B -22 1.608	6.425	-1.76ª	
(UV102) $3-4$ 2.27 2557.0706 2556.3038 -0.1 39107.251 ^A 1 1.557	6.406	-1.65ª	
4-5 2.38 2538.2212 2537.4589 0.0 39397.669 ^A 0 1.485	6.369	-1.47ª	
4-4 2.50 2519.4045 2518.6465 1.5 39691.920 ^C -24 1.485	6.406	• • •	
229 $a^{3}F - Hsp3^{1}H^{\circ}$ 4-5 1.46 2521.8183 2521.0598 0.6 39653.927 ^D -10 1.485	6.401	•••	
230 $a^{3}F - y^{1}D^{\circ}$ 2-2 1.48 2581.3268 2580.5543 -1.1 38739.767 ^C 17 1.608	6.411	• • • •	
231 $a^{3}F - x^{1}D^{\circ}$ 2-2 4 2577.755 2576.984 5.3 38793.44 D -80 1.608	6.417		
232 $a^{3}F - u^{3}D^{\circ}$ 2-2 1 2542.692 2541.929 -1.3 39328.39 D 20 1.608	6.484	• • •	I
(UV104) 2-1 2 2528.838 2528.077 2.6 39543.86 ^D -40 1.608	6.510		
3-2 1.62 2516.6110 2515.8537 0.3 39735.978 ^C -4 1.557 4-3 0? 2500.447 2499.693 0.6 39992.85 ^D -10 1.485	6.484 6.443		
		• • •	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6.473	• • •	**
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6.532 6.532	• • •	II
4-3 1.30 2485.2755 2484.5255 0.1 40236.988 ^D -1 1.485	6.473		II
234 $a^{3}F-w^{3}H^{\circ}$ 4-5 0 2460.819 2460.075 -1.2 40636.87 ^D 20 1.485	6.523		
235 $a^3F - {}^4F5p^3G^{\circ}$ 4-5 1.77 2449.1342 2448.3925 0.2 40830.756 ^C -3 1.485	6.547		
3-3 0.85 2392.5480 2391.8192 1.3 41796.445 ^C -22 1.557	6.739		
4-4 2.28 2378.6100 2377.8843 -1.3 42041.361 ^B 23 1.485	6.697		
236 $a^3F - Gsp3^3F^{\circ}$ 3-4 d0? 2475.691 2474.943 -3.7 40392.76 D 60 1.557	6.565		
2-2 1.97 2452.1298 2451.3874 -1.7 40780.876 ^B 29 1.608	6.664		
3-3 2.06 2451.1857 2450.4435 -0.3 40796.583 ^B 5 1.557	6.615	• • •	
4-4 1.68 2440.3703 2439.6307 0.0 40977.387 ^B 0 1.485	6.565	• • •	
3-2 2.00 2427.8619 2427.1250 -2.2 41188.505 ^C 38 1.557	6.664	• • •	
237 $a^{3}F^{-4}F5p^{5}G^{\circ}$ 3-3 d1 2405.371 2404.639 4.6 41573.63 D -80 1.557	6.712	• • •	
4-4 1.83 2388.0097 2387.2820 -0.3 41875.876 ^B 5 1.485	6.677	• • •	
238 $a^{3}F^{-4}F5p^{5}F^{\circ}$ 2-3 1.61 2457.4519 2456.7083 -2.1 40692.557 ^D 35 1.608	6.653		II
$3-4$ 1.46 2449.3161 2448.5743 -1.5 40827.724^D 25 1.557 $2-2$ 0 2434.630 2433.892 -1.8 41074.00 D 30 1.608	6.619	• • •	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6.700 6.653		
4-3 4 2398.958 2398.227 3.5 41684.77 ^D -60 1.485	6.653		
$4-4$ 2414.736 2414.002 41412.395^D 1.485	6.619		MII
239 $a^{3}F^{-4}F5p^{3}F^{\circ}$ 3-4 1.76 2452.9103 2452.1678 -0.1 40767.899 ^C 2 1.557	6.612		
4-4 3 2418.232 2417.498 4.1 41352.52 ^D -70 1.485	6.612		
3-3 4 2396.475 2395.746 8.4 41727.95 ^D -147 1.557	6.731		
2-2 1.82 2395.9064 2395.1768 -1.6 41737.858 ^C 28 1.608	6.782		
4-3 0 2363.352 2362.630 0.6 42312.78 ^D -10 1.485	6.731	• • •	
240 $a^{3}F^{-4}F5p^{5}D^{\circ}$ 4-4 1.63 2401.8744 2401.1435 1.2 41634.150 ^C -20 1.485	6.647	• • •	
241 $a^{3}F - Dsp^{3}{}^{5}F^{\circ}$ 2-2 1.63 2453.7174 2452.9747 1.9 40754.489 D -32 1.608	6.661		II
2-3 4 2453.081 2452.338 -2.0 40765.07 ^D 33 1.608	6.662		
4-4 1.77 2386.3164 2385.5890 -1.6 41905.591 ^D 28 1.485	6.680		
242 $a^3F - x^1F^0$ 3-3 4 2427.052 2426.315 5.3 41202.25 D -90 1.557	6.666		
243 $a^{3}F^{-4}F5p^{3}D^{\circ}$ 3-2 2 2393.385 2392.656 1.1 41781.82 D -20 1.557	6.737		
2-1 1 2390.134 2389.406 1.7 41838.66 ^D -30 1.608 4-3 1.54 2388.8249 2388.0969 1.3 41861.587 ^D -22 1.485	6.795 6.675		
, 5 ANT ESOCIOETY ESOCIOYON I.S TIOULISMY *22 1.405	0.013	•••	

TABLE 2—Continued

				IABI	LE 2—Conti	пиеа					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ ⁵ o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) I (eV)	og(gf) ⁷	BI. ⁸
244	a ³ F-Dsp3 ⁵ D°	2-2 3-3 3-4 4-4	0 d0? 1 1.72	2442.330 2419.522 2395.756 2362.6642	2441.590 2418.787 2395.026 2361.9422	-2.4 6.4 -4.0 -0.2	$\begin{array}{cccc} 40944.51 & ^{D} & 40 \\ 41330.48 & ^{D} -110 \\ 41740.48 & ^{D} & 70 \\ 42325.100 & & 3 \end{array}$	1.608 1.557 1.557 1.485	6.684 6.681 6.732 6.732		
245	a ³ F-t ³ G ^o (UV107)	3-4 3-3 4-4	1 1.71 1.45	2399.435 2378.7205 2366.2379	2398.705 2377.9948 2365.5150	0.0 0.3 -0.3	$\begin{array}{ccc} 41676.48 & ^{D} & 0 \\ 42039.408 ^{C} & -5 \\ 42261.178 ^{C} & 5 \end{array}$	1.557 1.557 1.485	6.724 6.769 6.724	•••	
246	$a^3F-t^5P^0$	3-3 4-3	0 1	2412.913 2379.342	2412.180 2378.616	5.8 2.3	41443.68 ^D -100 42028.43 ^D -40	1.557 1.485	6.696 6.696		
247	a ³ F-s ³ G ^o (UV111)	2-3 3-4 4-5 4-4	1.20 1.89 1.86 d0?	2335.2399 2307.0920 2301.3062 2276.382	2334.5240 2306.3823 2300.5977 2275.679	-0.8 -0.5 -0.3 -3.1	42822.152 ^C 14 43344.609 ^B 10 43453.583 ^B 6 43929.36 ^D 60	1.608 1.557 1.485 1.485	6.917 6.931 6.872 6.931		
248	a ³ F−v ³ H° (UV108)	4-4 4-5	3 1.26	2300.452 2296.2478	2299.744 2295.5405	2.1 0.7	43469.72 ^D -40 43549.306 ^D -14	1.485 1.485	6.874 6.884		II
249	$a~^3F-^2H4p~^1H^{\circ}$	4-5	1.81	2276.2999	2275.5969	-0.3	43930.942^B 6	1.485	6.931		
250	a ³ F-Gsp3 ¹ F°	2-3 3-3 4-3	1.85 d0? 2	2318.6103 2296.903 2266.459	2317.8980 2296.196 2265.758	-0.3 0.5 -4.6	43129.284 ^C 5 43536.88 ^D -10 44121.69 ^D 90	1.608 1.557 1.485	6.955 6.955 6.955	•••	
251	$a^3F-u^3H^{\circ}$	3-4 4-5	0 0	2279.857 2251.928	2279.153 2251.230	-2.6 1.0	43862.40 ^D 50 44406.40 ^D -20	1.557 1.485	6.995 6.990		
252	a ³ F-u ³ F° (UV112)	2-3 2-2 3-3 3-2 4-4 4-3	0? 1.59 1.77 1.15 1.84	2282.333 2278.4182 2261.2970 2257.4539 2241.3253 2231.795	2281.629 2277.7147 2260.5972 2256.7549 2240.6298 2231.101	-2.1 -0.2 -1.3 1.1 0.0 4.5	D 43814.81 D 40 43890.099 B 3 44222.409 B 25 44297.694 D -21 44616.460 B 0 44806.99 D -90	1.608 1.608 1.557 1.557 1.485 1.485	7.040 7.049 7.040 7.049 7.016 7.040		
253	$a {}^{3}F - v {}^{1}G^{\circ}$ (UV113)	4-4	1.43	2223.4550	2222.7633	0.4	44975.050 ^C -8	1.485	7.061	•••	
254	$a^{3}F - t^{3}F^{\circ}$ (UV114)	2-3 2-2 3-4 3-3 3-2 4-4 4-3	0 1.28 0 1 d0? 0.48 0.60	2238.512 2235.1270 2222.763 2218.276 2214.947 2194.2457 2189.8724	2237.817 2234.4329 2222.071 2217.585 2214.257 2193.5602 2189.1878	-4.0 -0.1 0.5 0.0 0.0 1.0 -0.1	44672.53 ^D 80 44740.187 ^C 3 44989.06 ^D -10 45080.06 ^D 0 45147.81 ^D 0 45573.748 ^C -20 45664.761 ^C 2	1.608 1.608 1.557 1.557 1.557 1.485 1.485	7.146 7.155 7.135 7.146 7.155 7.135 7.146		II
255	a $^3F-Psp1$ $^3D^{\circ}$	3-3 4-3	0 1.20	2222.009 2193.5088	2221.318 2192.8234	2.0 0.1	45004.32 ^D -40 45589.059 ^C -3	1.557 1.485	7.137 7.137		
256	$a~^3F-s~^4\!D5p~^5D^{\circ}$	4-3	0.85	2171.2107	2170.5299	0.5	46057.253 ^D -11	1.485	7.195		
257	a ³ F-s ⁴ D5p ³ F°	3-4 4-4 2-2 2-3 3-2 4-3	0 0.48 0? d0? 1.26 1.20	2204.762 2176.7053 2174.225 2168.206 2155.1230 2122.5397	2204.074 2176.0234 2173.543 2167.526 2154.4456 2121.8688	-2.4 1.0 0.9 0.0 -0.2 0.7	$\begin{array}{ccccc} 45356.37 & ^D & 50 \\ 45940.991 & -21 \\ 45993.41 & ^D & -20 \\ 46121.08 & ^D & 0 \\ 46401.063 & 5 \\ 47113.371 & -15 \\ \end{array}$	1.557 1.485 1.608 1.608 1.557 1.485	7.181 7.181 7.310 7.326 7.310 7.326		
258	a 3F $-s$ 4D5p 3P o	3-2 2-1	0 0.48	2200.773 2156.3251	2200.086 2155.6474	-2.4 2.5	45438.58 ^D 50 46375.197 ^C -53	1.557 1.608	7.191 7.357		
259	$a~^3F-Hsp1~^3G^{ m o}$	2-3 3-4 3-3 4-5 4-4	0.95 1.54 0.48 1.77 1.04	2191.4546 2184.6634 2172.0513 2171.9149 2157.1081	2190.7697 2183.9799 2171.3703 2171.2340 2156.4303	-0.2 1.6 -1.1 -0.0 0.4	$\begin{array}{cccc} 45631.791^{B} & 5 \\ 45773.642^{B} & -33 \\ 46039.429^{C} & 23 \\ 46042.320^{A} & 1 \\ 46358.362^{C} & -8 \end{array}$	1.608 1.557 1.557 1.485 1.485	7.265 7.232 7.265 7.193 7.232		
260	a ^3F-s 4D5p $^3D^{\circ}$	2-2 2-3 3-3	0? 0 3	2214.171 2207.128 2187.451	2213.481 2206.440 2186.767	2.9 -1.9 0.5	45163.63 ^D -60 45307.75 ^D 40 45715.31 ^D -10	1.608 1.608 1.557	7.207 7.225 7.225	•••	II

				1A	BLE 2—Con	tinued						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
2		4-3	3	2159.828	2159.150	1.4	46299.98 ^D	-30	1.485	7.225		II
261	a $^3F-Fsp1$ $^3F^{ m o}$	2-3	d0?	2118.468	2117.798	-0.4	47203.92 ^D	10	1.608	7.460		
201	w 1 1 0p1 1	3-4		2103.728	2103.061	0.0	47534.662^{D}	0	1.557	7.451		
-		3-3	0.48	2100.3325	2099.6660	0.8	47611.508^{C}	-18	1.557	7.460		
		4-4	1.26	2078.1653	2077.5030	-0.5	48119.368 ^C	11	1.485	7.451		
		4-3	2.95	2074.8504	2074.1888	-1.0	48196.245^{D}	23	1.485	7.460	• • •	II
262	a ³ F-t ³ H° (UV115)	4-5	1	2058.763	2058.105	0.8	48572.85 ^D	-20	1.485	7.507	•••	
263	a $^3F-Fsp1$ 3D $^{\circ}$	3-3	0	2072.721	2072.059	-1.3	48245.77 ^D	30	1.557	7.539		
		4-3	1	2047.905	2047.248	0.8	48830.40 ^D	-20	1.485	7.539	• • •	
264	a ⁵ P-z ⁷ D°	3-4	2.34	49695.392	49681.845	-25	2012.259 ^B	1	2.176	2.425		
201	u 1 ~ 2	2-3	2.49	49260.088	49246.660	73	2030.041^{B}	-3	2.198	2.449		
265	$a~^5P-z~^7P$ °	2-3	2.24	15494.572	15490.339	0	6453.873 ^A	0	2.198	2.998	-4.57ª	
203	u - z - 1	1-2	2.23	15198.644	15194.492	0	6579.534 ^A	0	2.223	3.038		
		3-3	3.02	15081.411	15077.291	ő	6630.679^{D}	0	2.176	2.998	-4.20^a	I
		2-2	2.11	14749.425	14745.395	4	6779.925^{A}	-2	2.198	3.038		-
		3-2	1.30	14374.561	14370.633	0	6956.734 ^A	0	2.176	3.038		
266	$a~^5P-z~^5D$ o	3-4	4.38	11976.327	11973.050	3	8349.805^{A}	-2	2.176	3.211	-1.48ª	
200	(58)	1-2	4.34	11887.338	11884.085	1	8412.312 ^A	-1	2.223	3.266	-2.08a	
	(20)	2-3	4.39	11886.099	11882.847	1	8413.189 ^A	-1	2.198	3.241	-1.67ª	
		1-1	4.36	11693.176	11689.976	3	8551.996 ^A	-2	2.223	3.283	-2.07^{a}	
		3-3	4.22	11641.450	11638.264	3	8589.995 ^A	-2	2.176	3.241	-2.21a	
		2-2	4.40	11610.752	11607.575	1	8612.706 ^A	-1	2.198	3.266	-2.01a	
		1-0	3.95	11596.765	11593.591	1	8623.094 ^A	-1	2.223	3.292	-2.45^a	
		2 - 1	3.66	11425.450	11422.323	3	8752.390^{D}	-2	2.198	3.283	-2.70^a	II
		3-2	3.11	11377.195	11374.081	3	8789.512 ^A	-2	2.176	3.266	-3.24ª	
267	$a~^5P-z~^5F^{ m o}$	3-4	2.95	10398.646	10395.797	1	9616.636 ^A	-1	2.176	3.368		
	(59)	1-2	2.10	10381.846	10379.002	2	9632.198 ^A	-2	2.223	3.417		
		2 - 3	2.67	10343.720	10340.886	1	9667.701 ^A	-1	2.198	3.396		
		1 - 1	1.66	10268.033	10265.220	1	9738.963 ^A	-1	2.223	3.430		
		2-2	2.14	10170.256	10167.469	0	9832.594 ^A	0	2.198	3.417	• • •	
		3-3	2.03	10157.949	10155.165	2	9844.507 ^A	-2	2.176	3.396	• • •	
		2-1	1.53	10061.006	10058.249	-4	9939.363 ^B	4	2.198	3.430	• • •	
		3-2	1.11	9990.6078	9987.8696	0.0	10009.401 ^B	0	2.176	3.417	• • • •	
268	$a~^5P-z~^5P$ °	2-3	4.37	8826.6442	8824.2211	0.8	11329.334 ^A	-1	2.198	3.602	-1.54 ^a	
	(60)	3-3	3.91	8691.0119	8688.6255	1.5	11506.140 ^A	-2	2.176	3.602	-1.21^{b}	
		1-2	4.32	8664.2792	8661.9000	0.0	11541.641 ^A	0	2.223	3.654	-1.54^{a}	
		2-2	3.72	8516.4113	8514.0721	0.0	11742.035 ^A	0	2.198	3.654	-2.23^{b}	
		1-1	3.83	8470.7343	8468.4074	0.0	11805.352 ^A	0	2.223	3.686	-2.07^{b}	
		3-2	4.42	8390.0775	8387.7725	0.7	11918.841 ^A	-1	2.176	3.654	-1.49^{b}	
		2-1	4.34	8329.3450	8327.0563	0.0	12005.746 ^A	0	2.198	3.686	-1.53 ^b	
269	$a {}^5P - y {}^5D^{\circ}$	3-4	5.32	6432.6238	6430.8464	1.2	15545.756 ^A	-3	2.176	4.103	-2.01 ^b	
	(62)	2-3	4.71	6337.0826	6335.3308	0.8	15780.132 ^A	-2	2.198	4.154	-2.18 ^a	
		1-2	3.67	6299.5348	6297.7931	0.4	15874.188 ^A	-1	2.223	4.191	-2.74 ^b	
		3-3	3.43	6266.8669	6265.1340	1.2	15956.937 ^A	-3	2.176	4.154	-2.55^{b}	
		2-2	2.89	6221.0016	6219.2810	0.4	16074.582 ^A 16089.718 ^A	-1	2.198	4.191	-2.43 ^b	
		1-1	2.66	6215.1493	6213.4303	0.8		-2 -3	2.223	4.217	-2.48 ^a -2.88 ^b	
		1-0	2.38	6175.0438	6173.3356	1.1	16194.217 ^A		2.223	4.230		
		3-2 $2-1$	2.12 2.39	6153.3206 6138.6932	6151.6181 6136.9947	0.8 0.8	16251.388 ^A 16290.112 ^A	-2 -2	2.176 2.198	4.191 4.217	-3.30^{b} -2.95^{b}	
270	- 5 m 5 mo			6064.5271			16489.332 ^A					
270	$a^{5}P - y^{5}F^{0}$	3-4	1.53 1.64	6064.5271	6062.8484 6021.7912	0.7 2.2	16489.332 ^A 16601.757 ^A	-2 -6	2.176 2.198	4.220 4.256	-4.14 ^b	
	(63)	2-3			6021.7912		16601.757A 16619.826A		2.198	4.256	 1 60b	
		1-2 1-1	0.70 0.48	6016.9102 5964.8905	5963.2386	0.4 -1.1	16619.826 ⁷ 16764.767 ^A	-1 3	2.223	4.283	-4.68 ^b	
		3-3	1.15	5959.9838	5958.3332	0.0	16764.767 16778.569 ^A	0	2.223	4.301	•••	
		2-2	1.00	5945.2251	5943.5784	0.0	16820.221 ^A	0	2.178	4.283	•••	
		2-1	0.00	5894.4341	5892.8010	0.0	16965.157 ^B	-1	2.198	4.301	-4.03 ^b	
		- •	2.50		_ 5, 2.0010	0.5		•		501	55	

				7	Γ ABLE 2— C	ontinue	d				
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷ Bl. ⁸
271		3-2	0.00	5883.3811	5881.7510	0.0	16997.029 ^C	0	2.176	4.283	
271	a ^5P-z 3P $^{\circ}$	1-2	2.46	6242.3726	6240.6462	0.0	16019.550 ^A	0	2.223	4.209	-3.17ª
	(64)	2-2	2.02	6165.2502	6163.5445	0.4	16219.942 ^A		2.198	4.209	-3.84 ^b
l	•	3-2	1.15	6098.7692	6097.0814	-0.4	16396.751 ^B	1	2.176	4.209	
		1 - 1	2.22	6084.3946	6082.7106	0.0	16435.489 ^A		2.223	4.260	-3.57^{b}
		1-0	1.75	6013.8750	6012.2099	-0.4	16628.214 ^A	1	2.223	4.284	-4.20^{b}
272	$a~^5P-y~^3F^{\circ}$	3-4	2.28	5225.7528	5224.2983	-1.6	19135.999 ^C	6	2.176	4.548	-4.08^{b}
	(65)	2 - 3	2.01	5145.1567	5143.7237	0.5	19435.754^{B}	-2	2.198	4.607	-3.79 ^b
273	$a^{5}P-y^{5}P^{0}$	2-3	3.65	5252.1075	5250.6460	0.0	19039.976 ^A	0	2.198	4.558	-2.18^a
	(66)	3-3	3.92	5203.7846	5202.3360	0.3	19216.783 ^A	-1	2.176	4.558	-1.84^{b}
		1-2	3.47	5200.1588	5198.7111	0.3	19230.182 ^A		2.223	4.607	-2.14^{b}
		$^{2-2}$	2.56	5146.5270	5145.0937	-0.5	19430.579 ^B		2.198	4.607	-2.88^a
		1-1	3.14	5132.8984	5131.4687	0.3	19482.170 ^A		2.223	4.638	-2.51 ^a
		3-2	3.83	5100.1192	5098.6981	-0.5	19607.385 ^A		2.176	4.607	-2.03^a
		2-1	3.60	5080.6389	5079.2230	0.0	19682.564 ^A		2.198	4.638	-2.07^{b}
274	$a {}^5P - y {}^3D^{\circ}$	2-3	3.07	4890.3668	4889.0015	0.0	20448.364 ^A		2.198	4.733	-2.55^{a}
	(67)	1-2	2.23	4819.1245	4817.7781	-0.5	20750.657 ^B		2.223	4.795	-3.53^{b}
		$\frac{2-2}{1-1}$	2.36 1.60	4773.0307 4746.4557	4771.6965 4745.1286	0.0	20951.049 ^B 21068.352 ^C		2.198 2.223	4.795 4.835	-3.81 ^b -4.17 ^b
275	$a {}^5P - x {}^5D^{\circ}$	3-4	4.81	4529.8841	4528.6142	0.2	22075.620 ^A		2.176	4.913	-0.82^{b}
	(68)	2-3	4.10	4495.8241	4494.5632	0.0	22242.863 ^A		2.198	4.955	-1.14^{b}
		1-2 3-3	3.89 3.98	4483.5104 4460.3692	4482.2527 4459.1176	-0.2 0.2	22303.952 ^A 22419.669 ^A		2.223 2.176	4.988	-1.48 ^a -1.28 ^b
		3-3 1-1	3.98	4448.9658	4447.7173	-0.2	22419.009 ⁻¹ 22477.134 ^A		2.176	4.955 5.009	-1.28° -1.34 ^b
		$\frac{1-1}{2-2}$	4.13	4443.5861	4442.3390	-0.2	22504.346^{A}		2.198	4.988	-1.34
		1-0	3.62	4431.8580	4430.6140	0.0	22563.900^{A}		2.223	5.020	-1.66^{b}
		2-1	3.59	4409.6517	4408.4135	-0.2	22677.528^{A}		2.198	5.009	-1.78ª
		3-2	3.43	4408.9471	4407.7092	0.0	22681.152^{A}	0	2.176	4.988	-1.97ª
276	$a^{5}P-y^{7}P^{\circ}$	1-2	2.29	4519.8443	4518.5771	-1.2	22124.656^{B}	6	2.223	4.966	-3.94 ^b
	(69)	$^{2-2}$	2.18	4479.2747	4478.0182	0.4	22325.043^{B}	-2	2.198	4.966	-3.70^{b}
		2 - 3	3.25	4448.3788	4447.1304	0.2	22480.100^{A}		2.198	4.985	-2.73 ^a
		3-2	3.28	4444.0788	4442.8316	0.2	22501.851 ^A		2.176	4.966	-2.79^{b}
		3-4	1.85	4372.2093	4370.9810	4.2	22871.732^{D}	-22	2.176	5.012	• • •
277	$a~^5P{-}x~^5F^{ m o}$	3-4	2.47	4339.4675	4338.2478	-10.0	23044.302^{B}	53	2.176	5.033	-2.78^{b}
	(70)	2 - 3	2.60	4326.1648	4324.9486	0.4	23115.162^{C}	-2	2.198	5.064	
		2-2	2.37	4293.4919	4292.2844	-0.7	23291.065^B		2.198	5.085	-2.78^{b}
		3-3	2.16	4293.3253	4292.1178	0.4	23291.969 ^C	-2	2.176	5.064	-3.04^{b}
278	$a~^5P-z~^5S^{\circ}$	1-2	4.56	4353.9582	4352.7347	-0.2	22967.607 ^A	1	2.223	5.070	-1.29^a
	(71)	2-2	4.79	4316.2982	4315.0846	-0.2	23168.001 ^A	1	2.198	5.070	-0.97^a
		3-2	4.95	4283.6079	4282.4029	0.0	23344.807 ^A	0	2.176	5.070	-0.78^a
279	$a~^5P-x~^5P$ °	2 - 3	3.08	4031.3237	4030.1849	0.5	24805.748 ^A	-3	2.198	5.273	-2.31 ^a
	(72)	1-2	4.32	4010.8463	4009.7128	0.0	24932.394 ^A	0	2.223	5.314	-1.25^a
		3-3	3.65	4002.7931	4001.6617	0.3	24982.555 ^A	-2	2.176	5.273	-1.90 ^a
		2-2	4.58	3978.8662	3977.7410	0.0	25132.788 ^A 25151.652 ^C	0	2.198	5.314 5.341	-1.12^a
		$1-1 \\ 3-2$	2.86 4.47	3975.8820 3951.0709	3974.7576 3949.9530	-2.1 0.2	25151.652° 25309.594 ^A	13 -1	2.223 2.176	5.341	-2.61 ^a -1.25 ^a
		$\frac{3-2}{2-1}$	3.56	3944.4568	3943.3407	-0.2	25352.033^{A}	1	2.176	5.341	-1.25^a
200	50 500										
280	$a^{5}P - w^{5}D^{\circ}$	3-4 2-3	4.11 3.92	3853.6652 3817.4233	3852.5727 3816.3402	0.0 -0.3	25949.322 ^A 26195.680 ^A	0 2	2.176	5.393	-1.19 ^a -1.20 ^a
	(73)	1-2	4.23	3817.4233	3810.3402	-0.3 -0.1	26195.680 ⁻¹ 26256.245 ^A	1	2.198 2.223	5.446 5.478	-1.20° -0.99°
		3-3	3.29	3791.8305	3790.7540	-0.1	26372.487 ^B		2.223	5.446	-0.99** -1.84*a
		2-2	3.12	3779.7702	3778.6968	0.4	26456.635^B		2.178	5.478	-2.01^a
		1-1	3.77	3775.8966	3774.8243	0.0	26483.776 ^A	0	2.223	5.506	-1.45 ^a
		1 - 0	3.44	3769.0975	3768.0270	0.0	26531.550^{A}	0	2.223	5.512	-1.64 ^a
		3-2	4.35	3754.6778	3753.6109	0.0	26633.444 ^A	0	2.176	5.478	-0.89^a
		2 - 1	3.13	3747.5396	3746.4747	-0.6	26684.174 ^B	4	2.198	5.506	-2.41 ^a

•				17	ABLE 2—Co	ntinued	!					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
281	a 5P-v 5D°	2-3	3.79	3782.2603	3781.1863	-0.1	26439.217 ^A	1	2.198	5.476	-1.94ª	
ر. 201	(75)	3-4	4.33	3777.5275	3776.4548	0.0	26472.342 ^A		2.176	5.458	-1.49ª	
T,	(75)	3-3	3.61	3757.1357	3756.0683	0.3	26616.020 ^A		2.176	5.476	-2.12a	
⊣		1-2	3.18	3740.1789	3739.1158	0.3	26736.689 ^B		2.223	5.537	-2.33ª	
		3-2	3.75	3688.1467	3687.0971	0.3	27113.889 ^A		2.176	5.537	-1.76^a	
282	$a~^5P-w~^5F^{ m o}$	1 - 2	3.22	3793.9036	3792.8266	-1.0	26358.076 ^B		2.223	5.491	-2.50^a	
	(74)	1 - 1	3.18	3780.5817	3779.5082	0.3	26450.956^{B}		2.223	5.502	-2.26^a	
		2-2	2.79	3765.2777	3764.2081	-0.3	26558.466 ^C		2.198	5.491	• • •	
		2-1	2.75	3752.1554	3751.0893	0.4	26651.348 ^C		2.198	5.502		
		3-2	3.22	3740.3773	3739.3142	-0.1	26735.271 ^B		2.176	5.491	-2.32^{b}	
		2 - 3	3.46	3727.9560	3726.8961	-0.8	26824.351 ^A		2.198	5.523	-2.11 ^a	
		3-4	3.82	3722.3308	3721.2724	0.4	26864.888^{D}		2.176	5.507	-1.79ª	I
		3-3	3.47	3703.5455	3702.4920	-0.3	27001.153 ^A	2	2.176	5.523	-2.23a	
283	$a~^5P-y~^5S^{\circ}$	1-2	4.17	3761.6004	3760.5318	-0.3	26584.429 ^A	2	2.223	5.519	-1.23a	
203	(76)	$\frac{1}{2}$	4.87	3733.4577	3732.3964	-0.1	26784.822 ^A		2.198	5.519	-0.55^a	
	(70)	3-2	4.97	3708.9748	3707.9199	0.0	26961.628 ^A		2.176	5.519	-0.33 -0.47 ^a	
	5- 3-0										0.17	
284	$a^{5}P - x^{3}D^{0}$	1-2	2.53	3655.7153	3654.6741	2.8	27354.428 ^C		2.223	5.614	1.070	
	(77)	2-3	3.61	3637.1978	3636.1614	-0.4	27493.693 ^D		2.198	5.606	-1.87ª	I
		2-2	3.18	3629.1260	3628.0916	-0.3	27554.844 ^B		2.198	5.614	-2.24ª	
		3-2	2.94	3613.9666	3612.9362	9.1	27670.427 ^D		2.176	5.614	• • •	I
		2-1	2.60	3593.9171	3592.8919	-2.1	27824.793^{D}		2.198	5.648	• • •	
285	$a~^5P-w~^5P$ °	1 - 2	3.40	3522.8438	3521.8368	-0.6	28386.158^{B}	5	2.223	5.742	-1.49 ^a	
	(78)	2 - 3	3.10	3519.8758	3518.8697	1.6	28410.093^{B}		2.198	5.720	-1.96ª	
		1 - 1	2.90	3510.8655	3509.8616	-1.0	28483.005 ^C		2.223	5.754	-2.07^{b}	
		$^{2-2}$	3.47	3498.1488	3497.1482	-0.2	28586.548 ^B		2.198	5.742	-1.41ª	
		3 - 3	4.18	3498.1039	3497.1033	-0.1	28586.915 ^A		2.176	5.720	-0.94^a	
		2 - 1	3.77	3486.3378	3485.3402	-0.5	28683.394 ^A		2.198	5.754	-1.15 ^a	
		3-2	3.75	3476.6467	3475.6516	0.6	28763.348 ^A	-5	2.176	5.742	-1.11ª	
286	$a~^5P-z~^3S^{\circ}$	1-1	2.83	3487.5496	3486.5518	0.9	28673.427^{C}	-7	2.223	5.778		
200	(79)	2-1	3.10	3463.3437	3462.3520	-0.5	28873.831^{B}		2.198	5.778	-2.11^{b}	
207	, ,										-2.12 ^b	
287	$a^{5}P - y^{3}P^{0}$	1-0	3.34	3478.8465	3477.8509	-0.6	28745.160 ^B		2.223	5.786		
	(82)	1-2	3.80	3472.2596	3471.2656	0.0	28799.690 ^A		2.223	5.793	-1.44 ^a	
		1-1	4.21	3451.3167	3450.3281	-0.2	28974.449 ^A		2.223	5.815	-0.90^a	
		2-2	4.21	3448.2660	3447.2782	0.0	29000.083 ^A 29174.843 ^A		2.198	5.793	-1.02^a	
		2-1	4.11	3427.6106	3426.6280	-0.2			2.198	5.815	-0.99ª	
		3-2	4.12	3427.3649	3426.3825	0.0	29176.934 ^D		2.176	5.793	• • •	I
288	$a~^5P-u~^5D^{\circ}$	1-2	4.21	3452.9035	3451.9145	-0.1	28961.134 ^A		2.223	5.813	-1.00 ^a	
	(82a)	2 - 3	4.67	3446.1364	3445.1491	-0.1	29018.004 ^A		2.198	5.795	-0.54 ^a	
		2-2	4.41	3429.1756	3428.1927	-0.2	29161.528 ^A		2.198	5.813	-0.82^a	
		3-4	5.14	3428.1022	3427.1195	0.0	29170.659 ^A		2.176	5.792	-0.10^a	
		3 - 3	4.50	3425.2663	3424.2844	-0.1	29194.810 ^A		2.176	5.795	-0.70^a	
		1-0	4.34	3419.4876	3418.5071	-0.1	29244.148 ^A		2.223	5.848	-0.76^a	
		1 - 1	4.50	3418.8208	3417.8406	-0.2	29249.851 ^A		2.223	5.849	-0.68^a	
		3-2	3.44	3408.5094	3407.5317	-0.6	29338.338 ^A		2.176	5.813	-1.79ª	
		2-1	3.81	3395.5575	3394.5832	-0.1	29450.245 ^A	1	2.198	5.849	-1.35 ^a	
289	$a^{5}P-x^{3}F^{\circ}$	1 - 2	3.86	3416.5109	3415.5312	-0.2	29269.627 ^A	2	2.223	5.851	-1.39a	
	(83)	3-4	5.16	3408.4372	3407.4596	0.0	29338.959 ^A	0	2.176	5.813	-0.02^a	
	` '	2 - 3	4.50	3405.3308	3404.3539	-0.1	29365.723 ^A	1	2.198	5.839	-0.88^a	
		$^{2-2}$	4.17	3393.2787	3392.3049	-0.3	29470.023^{D}	3	2.198	5.851	-1.07ª	I
		3-3	4.26	3384.9507	3383.9791	0.0	29542.528 ^A	0	2.176	5.839	-1.11^a	
		3-2	3.35	3373.0424	3372.0738	0.1	29646.826 ^B	-1	2.176	5.851	-1.96ª	
290	$a^{5}P-z^{3}H^{\circ}$ (84)	3-4	3.54	3383.3732	3382.4020	-0.2	29556.302 ^A	2	2.176	5.840	-1.91ª	
291	$a^{5}P-w^{3}D^{\circ}$	1-2	4.29	3423.6375	3422.6560	-0.1	29208.700 ^A	1	2.223	5.844	-0.92^a	
	(85)	2-3	4.79	3414.1114	3413.1324	-0.1	29290.198 ^A		2.198	5.829	-0.40^a	
	. ,	1-1	4.17	3407.7769	3406.7995	-0.1	29344.644 ^A	1	2.223	5.861	-0.96^a	
		$^{2-2}$	4.59	3400.3086	3399.3331	-0.1	29409.095 ^A	1	2.198	5.844	-0.62^a	
		3-3	4.56	3393.6262	3392.6524	0.0	29467.005 ^A	0	2.176	5.829	-0.64^a	

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 2.198 1 2.176 2 2.223 3 2.198 4 2.176 1 2.176 0 2.223 2 2.198 4 2.223 5 2.176 5 2.198 0 2.223	5.861 5.844 5.879 5.879 5.879 5.883 5.896 5.896 5.981 5.942	-1.37°a -1.41°a2.10°a	
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1-1 2.71 3286.9618 3286.0151 -1.1 30423.232 ^C 10	2.223	5066		
		5.966	-1.90 ^a	
2-2 3.13 3277.4146 3276.4704 0.2 30511.855 ^B -:	2.198	5.995 5.981	-1.59 ^a	
	2.198	5.995	-1.39	
$3-2$ 3.69 3258.5321 3257.5927 -0.1 30688.665^A		5.981	-1.15^{a}	
	2.176	5.928		
297 $a^{5}P - v^{5}P^{\circ}$ 1-2 4.48 3307.3066 3306.3548 -2.5 30236.084 ^A 23	3 2.223	5.971	-0.40^a	
$(91) 2-3 4.56 3306.9225 3305.9708 -0.1 30239.596^{A}$		5.947	-0.33^a	
1-1 3.93 3293.5378 3292.5895 -0.1 30362.487 ^A		5.987	-0.89^{b}	
$3-3$ 4.71 3287.6998 3286.7530 0.0 30416.402^A (2.176	5.947	-0.17^a	
2-2 3.46 3285.5337 3284.5875 0.0 30436.455 ^A (5.971	-1.34 ^a	
2-1 4.24 3271.9427 3270.9999 -0.1 30562.882 ^A		5.987	-0.50^{b}	
$3-2$ 4.24 3266.5580 3265.6166 0.0 30613.263^A (2.176	5.971	-0.61 ^a	
298 $a^{5}P - x^{3}P^{\circ}$ 1-2 3.68 3291.9362 3290.9883 -0.1 30377.259 ^A		5.989	-1.21°	
$(95) 1-1 3.42 3269.1750 3268.2329 -0.3 30588.757^{A} 3$		6.015	-1.54 ^a	
$3-2$ 3.31 3251.5611 3250.6235 0.2 30754.458^D -2		5.989	-1.52°	I
2-1 3.65 3247.8974 3246.9607 -0.3 30789.150 ^A 3		6.015	-1.29ª	
299 a ${}^5P - y$ 1G ° 3-4 1 3210.032 3209.105 1.0 31152.34 D -10 (97)		6.038	•••	
300 $a^{5}P-w^{3}F^{\circ}$ 2-3 2.79 3173.0015 3172.0837 -0.5 31515.901 ^B 5		6.105	-2.12^a	
$(99) \qquad 3-4 \qquad 1 \qquad 3168.698 \qquad 3167.782 \qquad 1.0 \qquad 31558.70 ^{D} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -10^{-1} -$		6.089	• • • •	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		6.105	• • •	,
		6.129	• • •	I
301 $a^{5}P - v^{3}D^{\circ}$ 1-2 2.70 3193.3322 3192.4093 -1.5 31315.251 ^C 15		6.105		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		6.112		_
		6.092	-0.82^a	I
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		6.105 6.112	• • •	т
3-3 1 3166.077 3165.161 1.0 31584.83 ^D -10		6.092		I
302 a ${}^{3}P-n$ ${}^{7}D$ ° 3-4 1 3124.170 3123.265 4.9 32008.50 D -50 2-3 0 3117.378 3116.474 1.9 32078.24 D -20		6.144 6.175	• • •	
$1-2$ 0 3117.096 3116.193 0.0 32081.14 D 0		6.200		
1-1 0 3103.160 3102.259 1.0 32225.22 ^D -10		6.218	• • • •	
3-3 0* 3100.285 3099.385 -1.9 32255.10 ^D 20		6.175		
303 a ⁵ P-Fsp3 ¹ F° 2-3 2.18 3149.5928 3148.6809 0.1 31750.136 ^D -1		6.134		
3-3 0 3132.142 3131.235 -7.8 31927.03 ^D 80		6.134	• • • •	
304 $a^{5}P - w^{3}P^{0}$ 1-1 d0? 3113.739 3112.836 8.7 32115.73 $\stackrel{D}{=}$ -90		6.204		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		6.222	• • •	
$2-1$ 0 3094.427 3093.529 5.7 32316.16 D -60		6.204	• • •	II
$2-2$ d0? 3080.728 3079.833 -0.9 32459.86 D 10 $3-2$ 1 3064.042 3063.151 1.9 32636.63 D -20		6.222	• • •	
		6.222	• • •	
305 $a^5P-u^5F^\circ$ 3-4 1 2955.846 2954.983 0.9 33831.26 D -10		6.370	• • •	I
(UV117) 2-3 1 2950.543 2949.681 0.9 33892.07 ^D -10		6.400	• • •	
$egin{array}{cccccccccccccccccccccccccccccccccccc$		6.426	• • •	
1-1 1 2939.580 2938.720 -2.6 34018.47 ^D 30	2.2.2.5	6.440	• • •	

:											
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{} \ (A)$	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
70d 306		3-3 2-2	3 d0?	2935.229 2932.515	2934.371 2931.658	0.0 0.0	34068.89 ^D 0 34100.42 ^D 0	2.176 2.198	6.400 6.426		
306	$a~^5P-x~^3H^{ \mathrm{o}}$	3-4	0	2953.427	2952.564	-1.7	33858.97 ^D 20	2.176	6.374		
307	a ⁵ P-t ⁵ D° (UV118,10)	3-4 2-3 1-2 1-1 2-2	3.43 2.97 2.56 2.45 2.36	2982.7210 2973.1461 2967.1285 2949.8116 2949.5889	2981.8509 2972.2784 2966.2622 2948.9497 2948.7270	0.9 -0.4 -0.2 0.0 -1.7	33526.434^{D} -10 33634.405^{B} 5 33702.619^{B} 2 33900.470^{B} 0 33903.030^{C} 20	2.176 2.198 2.223 2.223 2.198	6.332 6.368 6.401 6.426 6.401	-0.56 ^a	I
308	a ⁵ P-v ³ F° (UV119,10)	2-3 3-4	1 0	2972.804 2962.576	2971.936 2961.711	3.5 0.9	33638.28 ^D -40 33754.41 ^D -10	2.198 2.176	6.368 6.361		
309	a ⁵ P-u ⁵ P° (UV121)	$ \begin{array}{r} 3 - 3 \\ 2 - 2 \\ 3 - 2 \end{array} $	2.32 d2 0	2928.9592 2922.457 2907.435	2928.1024 2921.602 2906.583	0.4 0.9 1.7	34141.821^{C} -5 34217.78^{D} -10 34394.58^{D} -20	2.176 2.198 2.176	6.409 6.440 6.440		II
310	a ^5P-u 3D $^{\circ}$	$3-3 \\ 2-2$	0 0	2905.382 2892.692	2904.531 2891.844	2.5 3.3	34418.88 ^D -30 34569.88 ^D -40	2.176 2.198	6.443 6.484		
311	$a\ ^5P-^2P4p\ ^1P^0$	2-1	0	2902.435	2901.585	0.0	34453.83 ^D 0	2.198	6.469		
312	a ^5P-t 3D $^{\circ}$	$\begin{array}{c} 2 - 3 \\ 1 - 2 \end{array}$	3 d0?	2899.712 2877.244	2898.863 2876.400	5.0 4.1	34486.18 ^D -60 34755.48 ^D -50	2.198 2.223	6.473 6.532		
313	$a~^5P-^4F5p~^3G^{ m o}$	3-4	d0	2742.169	2741.358	-6.0	36467.48 ^D 80	2.176	6.697		
314	a ⁵ P-v ³ P° (UV123)	$ \begin{array}{c} 2-2 \\ 3-2 \\ 2-1 \end{array} $	2.00 d1 d0?	2841.7727 2827.571 2816.670	2840.9374 2826.740 2815.841	0.1 5.6 2.4	35189.303 ^C -1 35366.04 ^D -70 35502.92 ^D -30	2.198 2.176 2.198	6.561 6.561 6.599	-1.84 ^a	II
315	a ⁵ P-Gsp3 ³ F°	2-3 3-3 1-2 2-2	d0 d0? 1 0	2806.586 2792.723 2791.581 2776.049	2805.759 2791.899 2790.758 2775.230	3.2 -0.8 1.6 0.0	35630.48 ^D -40 35807.35 ^D 10 35822.00 ^D -20 36022.42 ^D 0	2.198 2.176 2.223 2.198	6.615 6.664 6.664		П
316	$a^{5}P^{-4}F5p^{5}G^{0}$	3-4 2-3 2-2	1 /* 0	2754.681 2746.668 2737.422	2753.867 2745.856 2736.612	6.1 -6.0 -2.2	36301.85 ^D -80 36407.75 ^D 80 36530.72 ^D 30	2.176 2.198 2.198	6.677 6.712 6.727		
317	a ⁵ P- ⁴ F5p ⁵ F° (UV126*)	3-4 2-3 3-3 1-2 1-1 2-1	2.42 1.89 2.24 2.35 0 1.43	2790.2989 2782.8722 2769.2490 2768.9214 2755.047 2739.9153	2789.4762 2782.0513 2768.4315 2768.1039 2754.233 2739.1048	-0.2 -0.8 1.7 -0.3 0.8 -3.8	35838.455^B 2 35934.097^C 10 36110.873^D -22 36115.146^B 4 36297.02^D -10 36497.479^D 50	2.176 2.198 2.176 2.223 2.223 2.198	6.619 6.653 6.653 6.700 6.723 6.723		I
318	$a\ ^5P-^4F5p\ ^3F^{\circ}$	3-4 2-3 3-3	1 2.70 1.96	2794.967 2735.0765 2721.9130	2794.143 2734.2673 2721.1069	3.9 -0.4 -1.3	35778.60 ^D -50 36562.048 ^D 5 36738.867 ^D 18	2.176 2.198 2.176	6.612 6.731 6.731		I
319	a ⁵ P- ⁴ F5p ⁵ D°	2-3 3-4 3-3 2-1	2.24 2.38 2.00 2.57	2773.3272 2773.1382 2759.7985 2711.7778	2772.5086 2772.3197 2758.9833 2710.9741	-1.1 -0.1 2.7 -2.2	36057.772 ^B 14 36060.229 ^B 1 36234.529 ^D -36 36876.178 ^D 30	2.198 2.176 2.176 2.198	6.668 6.647 6.668 6.770		
320	a ⁵ P-Dsp3 ⁵ F°	1-1 1-2 2-2 2-3	0 1 d0 3?	2795.676 2793.631 2778.086 2777.270	2794.852 2792.807 2777.266 2776.451	-2.3 -0.8 5.4 1.8	35769.52 ^D 30 35795.71 ^D 10 35996.01 ^D -70 36006.58 ^D -23	2.223 2.223 2.198 2.198	6.657 6.661 6.661 6.662		
321	a ⁵ P-x ¹ F° (UV127)	2-3 3-3	1 1.64	2774.983 2761.4286	2774.164 2760.6129	1.5 -3.4	36036.26 ^D -20 36213.140 ^D 44	2.198 2.176	6.666 6.666		II
322	a ^5P-x $^3S^{\circ}$	$1-1 \\ 2-1$	2 1.98	2786.993 2771.5132	2786.172 2770.6951	0.8 -0.5	$35880.96 \stackrel{D}{-} -10$ 36081.372^{C} 7	2.223 2.198	6.671 6.671		
323	a 5P $ ^4F$ 3D $^\circ$	2-3 3-3 1-2	2.24 2.12 2.27	2769.2490 2755.7577 2746.0924	2768.4315 2754.9434 2745.2805	-1.0 0.5 1.1	36110.873 ^D 13 36287.660 ^B -7 36415.380 ^D -14	2.198 2.176 2.223	6.675 6.675 6.737		I

				IADL	E 2—Comini	<u></u>					
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
		3-2	0	2717.937	2717.132	-0.7	36792.61 ^D 10	2.176	6.737		
324	a ⁵ P-Dsp3 ⁵ D°	1-2	2.83	2778.8875	2778.0676	0.8	35985.624 ^D -11	2.223	6.684		II
	(UV128*)	1-1	2.71	2774.0514	2773.2326	0.0	36048.359 ^B 0	2.223	6.692		
	` ,	2 - 3	2.88	2765.1397	2764.3231	-0.2	36164.538 ^A 3	2.198	6.681		
		$^{2-2}$	2.06	2763.4975	2762.6813	0.0	36186.029^D 0	2.198	6.684		I
		3-3	2.92	2751.6869	2750.8736	-0.2	36341.344 ^A 2	2.176	6.681		
		3-4	2.77	2721.0026	2720.1967	-0.2	36751.159 ^A 3	2.176	6.732	• • •	
325	$a~^5P-t~^3G^{ m o}$	3-3	0	2699.039	2698.239	-3.6	37050.22 ^D 50	2.176	6.769	• • •	
326	a ^5P-t 5P $^{\circ}$	1 - 2	2.56	2763.5878	2762.7716	-0.1	36184.846 ^B 1	2.223	6.709		
	(UV125)	1 - 1	2.15	2751.5100	2750.6968	-0.2	36343.680^B 3	2.223	6.729		
		2-2	2.46	2748.3670	2747.5545	-0.2	36385.242^B 3	2.198	6.709		
		3-3	2.93	2743.1430	2742.3318	0.0	36454.534 ^A 0	2.176	6.696		
		2-1	2.83	2736.4218	2735.6122	-0.2	36544.074 ^A 3	2.198	6.729		
		3-2	2.70	2735.0765	2734.2673	-0.1	36562.048 ^D 2	2.176	6.709		I
327	$a\ ^5P - s\ ^6D6p\ ^7D$ °	3-4	0	2566.300	2565.531	-2.6	38966.60 ^D 40	2.176	7.007		
		3-2	3	2539.160	2538.397	5.2	39383.11 ^D -80	2.176	7.059		II
328	$a^{5}P - s^{6}D6p^{7}F^{0}$	2-2	0	2537.206	2536.444	0.0	39413.43 ^D 0	2.198	7.084		
0.20	w	3-3	1.51	2533.1353	2532.3742	0.3	39476.770 ^C -5	2.176	7.070		
		3-2	6	2525.871	2525.111	-4.5	39590.31 ^D 70	2.176	7.084		II
329	$a^{5}P - s^{6}D6p^{7}P^{0}$	3-4	d0?	2564.667	2563.898	0.0	38991.42 ^D 0	2.176	7.010		
327	a 1 3 Dop 1	2-3	1.23	2553.5343	2552.7683	1.5	39161.409 ^C -23	2.198	7.053		
		1-2	7	2546.943	2546.179	4.5	39262.75 ^D -70	2.223	7.090		I
		1-2	2.41	2546.9392	2546.1748	0.8	39262.814 ^D -13	2.223	7.090		I
		3-3	1.72	2542.0565	2541.2932	0.6	39338.229 ^D -10	2.176	7.053		
330	a ^5P-u 3F $^{\circ}$	3-3	1.81	2548.8650	2548.1001	-0.8	39233.149 ^C 12	2.176	7.040		
331	$a^{5}P - s^{6}D6p^{5}F^{0}$	1 - 1	0?	2524.030	2523.271	-5.1	39619.18 ^D 80	2.223	7.135		I
	•	1 - 2	2	2522.380	2521.621	1.3	39645.10 ^D -20	2.223	7.138		
		$^{2-2}$	4	2509.697	2508.942	5.0	39845.44 ^D -80	2.198	7.138		I
		3-2	1.52	2498.6061	2497.8530	0.9	40022.315^{C} -14	2.176	7.138	• • •	
332	$a~^{5}P - s~^{6}D6p~^{5}D^{\circ}$	3-4	0	2552.179	2551.414	-2.6	39182.20 ^D 40	2.176	7.034		
		2-3	1	2535.396	2534.634	-1.9	39441.57 ^D 30	2.198	7.088		
		1-2	0	2532.393	2531.632	1.9	39488.34 ^D -30	2.223	7.118		
		3-3	1.63	2524.0827	2523.3236	-0.5	39618.354 ^C 8	2.176	7.088	• • •	
333	$a^{5}P - s^{6}D_{4.5}4f$ [3.5]°	2 - 3	0	2561.534	2560.767	-2.0	39039.10 ^D 30	2.198	7.038		
	$a^{5}P - s^{6}D_{4.5}4f$ [2.5]°	2 - 3	d0?	2560.796	2560.028	-5.2	39050.36 ^D 80	2.198	7.039		
	$a ^5P - s ^6D_{4.5}4f [2.5]^{\circ}$	2 - 2	1	2560.652	2559.884	-0.7	39052.56 ^D 10	2.198	7.040		
	$a {}^{5}P - s {}^{6}D_{4.5}4f [1.5]^{\circ}$	2 - 1	1	2559.860	2559.092	0.0	39064.64 ^D 0	2.198	7.041		
	$a^{5}P - s^{6}D_{4.5}4f$ [4.5]°	3-4	1	2550.714	2549.949	2.0	39204.71 ^D -30	2.176	7.036		
	$a^{5}P - s^{6}D_{4.5}4f$ [3.5]°	3-4	1.41	2550.0720	2549.3069	0.2	39214.579 ^D -3	2.176	7.038		
	$a^{5}P - s^{6}D_{4.5}4f[3.5]^{\circ}$	3-3	1	2549.991	2549.226	2.6	39215.82 ^D -40	2.176	7.038		
	$a^{5}P - s^{6}D_{4.5}4f$ [1.5]°	3-2	1	2548.454	2547.689	1.9	39239.48 ^D -30	2.176	7.041	• • • •	
334	$a\ ^5P - s\ ^6D6p\ ^5P^{\circ}$	2 - 3	1.41	2554.6474	2553.8812	0.5	39144.345 ^D -8	2.198	7.051		
		3-3	2*	2543.155	2542.391	-4.5	39321.24 ^D 70	2.176	7.051		II
		1-2	2	2531.018	2530.257	0.0	39509.80 ^D 0	2.223	7.121		
		2-2	d0?	2518.239	2517.481	-5.1	39710.29 ^D 80	2.198	7.121	• • •	
		3-2	d0	2507.084	2506.329	1.9	39886.98 ^D -30 40014.485 ^C 4	2.176	7.121		
	,	2-1	1.72	2499.0950	2498.3418	-0.2		2.198	7.159		
335	$a^{5}P - s^{6}D_{3.5}4f$ [1.5]°	1-2	0	2549.273	2548.508	0.6	39226.87 ^D -10	2.223	7.086		
	$a^{5}P - s^{6}D_{3.5}4f [0.5]^{\circ}$	1-0	0	2549.158	2548.393	1.9	39228.64 ^D -30	2.223	7.086		
	$a {}^{5}P - s {}^{6}D_{3.5}4f [3.5]^{\circ}$	3-4	2	2525.322	2524.563	0.6	39598.91 ^D -10	2.176	7.085	• • •	II
336	$a~^5P-Dsp1~^3D^{\circ}$	1-2	d0?	2554.438	2553.671	-2.0	39147.56 ^D 30	2.223	7.076		I
		2-2	13*	2541.426	2540.663	-3.9	39347.99 ^D 60	2.198	7.076		I
		2-3	0?	2524.030	2523.271	-1.3	39619.18 ^D 20	2.198	7.110	• • •	I
337	$a~^5P-t~^3F^{\circ}$	$^{2-3}$	0	2505.382	2504.628	-3.8	39914.07 ^D 60	2.198	7.146		

No.	Multiplet (MT) ¹	J-J	I ²	A			σ^{-5}			E/1		D1 X
				$\lambda_{vac}^{}$ (Å)	$\begin{array}{c} \lambda_{qir}^{3} \\ \text{(A)} \end{array}$	o-R ⁴ (mÅ)	(cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	ві."
	$a~^5P-Psp1~^3D^{\circ}$	2-3	2	2510.147	2509.391	0.0	39838.31 ^D	0	2.198	7.137		
339	$a~^5P - s~^6D_{1.5}4f~[2.5]^{\circ}$	1 - 2	1	2518.556	2517.798	-1.3	39705.29 ^D	20	2.223	7.145		
	$a ^5P - s ^6D_{1.5}4f [3.5]^{\circ}$	2 - 3	0	2505.296	2504.542	-2.5	39915.44 ^D	40	2.198	7.147		
	$a {}^{5}P - s {}^{6}D_{1.5}4f [2.5]^{\circ}$	3 - 3	1.73	2494.9546	2494.2023	1.2	40080.890^{D}	-20	2.176	7.145		II
340	$a^{5}P - s^{6}D_{0.5}4f$ [3.5]°	2-3	1	2498.876	2498.122	-3.1	40018.00 ^D	50	2.198	7.159		
	$a^{5}P - s^{6}D_{0.5}4f$ [3.5]°	3-4	d0?	2487.994	2487.244	-4.3	40193.02 ^D	70	2.176	7.159		
341	$a^{5}P - s^{4}D5p^{3}D^{0}$	2-3	0	2466.138	2465.392	1.8	40549.23 ^D	-30	2.198	7.225		
341	u 1 – s D Sp D	3-2	1.49	2464.1417	2463.3966	-1.0	40582.081 ^D	17	2.176	7.207		e
		2-1	0?	2458.944	2458.200	0.6	40667.86 ^D		2.198	7.240		
342	a ³ P-z ⁷ P°	1-2	1.41	20183.903	20178.395	-20	4954.443 ^C	5	2.424	3.038		
343	$a {}^{3}P - z {}^{5}D^{\circ}$	0-1	0.48	15524.172	15519.932	-7	6441.567^{B}	3	2.484	3.283		
		1 - 2	1.72	14733.581	14729.555	0	6787.216^{A}	0	2.424	3.266		
		1 - 1	1.20	14436.472	14432.527	2	6926.900^{A}	-1	2.424	3.283		
		2 - 3	2.96	12883.292	12879.769	0	7761.991 ^A	0	2.279	3.241	-3.46 ^a	
		$^{2-2}$	2.51	12560.434	12556.999	0	7961.508 ^A	0	2.279	3.266	-3.63ª	
		2 - 1	1.71	12343.864	12340.487	3	8101.191 ^A	-2	2.279	3.283		
344	$a~^3P-z~^5F^{ m o}$	2-3	1.43	11090.774	11087.737	1	9016.503 ^A	-1	2.279	3.396	•••	
345	$a^{3}P-z^{5}P^{o}$	1 - 2	1.64	10084.158	10081.394	0	9916.544 ^A	0	2.424	3.654	• • •	
	(106)	1 - 1	0.95	9822.9357	9820.2429	1.0	10180.256^{B}	-1	2.424	3.686		
		2-3	2.74	9364.9304	9362.3616	0.9	10678.136 ^A	-1	2.279	3.602	-3.15^a	
		2 - 2	2.12	9016.4520	9013.9776	0.0	11090.837 ^A	0	2.279	3.654		
		2-1	2.55	8807.0437	8804.6258	0.0	11354.548 ^A	0	2.279	3.686	-3.23 ^b	
346	$a {}^{3}P - z {}^{3}F^{\circ}$ (107)	1-2	0.85	7948.1728	7945.9871	2.5	12581.508 ^A	-4	2.424	3.984	• • •	
347	$a^{3}P-z^{3}D^{\circ}$	0 - 1	2.35	8403.7088	8401.4000	0.0	11899.508 ^A	0	2.484	3.960		
	(108)	1 - 2	2.71	8241.3930	8239.1281	0.7	12133.871 ^A	-1	2.424	3.928	-3.18^a	
		1 - 1	1.82	8074.3845	8072.1647	0.7	12384.845 ^A	-1	2.424	3.960		
		2-3	2.64	7725.3335	7723.2080	0.6	12944.425 ^A	-1	2.279	3.883	-3.62^{b}	
348	$a^{3}P-y^{5}D^{\circ}$	1 - 0	2.00	6863.8354	6861.9420	4.7	14569.114^{C}	-10	2.424	4.230	-3.89^{b}	
	(109)	2 - 3	3.27	6609.8510	6608.0260	0.9	15128.934 ^A	-2	2.279	4.154	-4.03 ^b	
		2-2	4.20	6483.6614	6481.8703	0.0	15423.384 ^A	0	2.279	4.191	-2.98^{b}	
		2-1	3.01	6394.3059	6392.5388	0.4	15638.914 ^A	-1	2.279	4.217	-4.03 ^b	
349	$a {}^{3}P - y {}^{5}F^{\circ}$ (110)	1-1	2.34	6605.1642	6603.3404	0.0	15139.669 ^B	0	2.424	4.301		
350	$a^{3}P-z^{3}P^{0}$	0-1	2.53	6980.7765	6978.8516	0.5	14325.054 ^A	-1	2.484	4.260	-2.50^{b}	
	(111)	1-2	2.57	6947.1210	6945.2052	0.5	14394.452^{A}	-1	2.424	4.209	-2.48^{b}	
	` ,	1 - 1	4.72	6752.0157	6750.1525	0.9	14810.392 ^A	-2	2.424	4.260	-2.62^{b}	
		1 - 0	4.80	6665.2821	6663.4421	0.9	15003.116 ^A	-2	2.424	4.284	-2.48^{b}	
		2-2	5.41	6423.1257	6421.3508	0.8	15568.744 ^A	-2	2.279	4.209	-2.03^{b}	
		2-1	3.71	6255.9885	6254.2585	0.8	15984.684 ^A	-2	2.279	4.260	-2.43ª	
351	$a^{3}P-z^{3}G^{\circ}$	2-3	0.60	5649.3342	5647.7667	-5.4	17701.201 ^C	17	2.279	4.473	• • •	
352	$a {}^3P - y {}^3F^{\circ}$	1-2	2.13	5565.2400	5563.6950		17968.677 ^B	-4	2.424	4.652		
	(112)	2-3	2.92	5323.5213	5322.0408	-0.3	18784.559 ^A	1	2.279	4.607	-2.80 ^a	
353	$a~^3P-y~^5P^{\circ}$	1-2	0.60	5680.1774	5678.6016		17605.084 ^B	-2	2.424	4.607	-4.67 ^b	
	(113)	2-3	2.15	5438.1072	5436.5962	8.3	18388.751 ^A	-28	2.279	4.558	-2.96 ^a	
354	$a~^3P-y~^3D^{\circ}$	0 - 1	3.50	5274.8411	5273.3736	0.0	18957.917 ^A	0	2.484	4.835	-2.16^a	
	(114)	1-2	3.94	5228.6059	5227.1507	0.5	19125.557 ^A	-2	2.424	4.795		
		1 - 1	3.45	5143.1715	5141.7390	0.0	19443.256 ^A	0	2.424	4.835	-2.24 ^a	
		2 - 3	4.44	5051.2278	5049.8198		19797.167 ^A	1	2.279	4.733	-1.36ª	
		$^{2-2}$	3.59	4926.1443	4924.7695		20299.852 ^A	1	2.279	4.795	-2.11a	
		2-1	2.39	4850.2382	4848.8836	0.7	20617.544 ^B	-3	2.279	4.835	-3.14ª	
355	$a~^3P-x~^5D^{\circ}$	0-1	1.78	4909.9693	4908.5988	-6.3	20366.726^{D}	26	2.484	5.009	-4.16^{b}	
	(115)	1-2	2.20	4835.8577	4834.5069		20678.855^{B}	-1	2.424	4.988	-3.41 ^b	
		2 - 3	2.92	4631.4170	4630.1203	0.2	21591.664 ^A	-1	2.279	4.955	-2.59a	

No.	Multiplet (MT) ¹	J-J	I ²	$\lambda_{vac}^{}$ (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
		2-2	2.47	4576.0000	4574.7179	0.0	21853.147 ^A	0	2.279	4.988	-2.97 ^b	
356	$a^{3}P-z^{5}S^{\circ}$ (116)	2-2	2.83	4441.1272	4439.8808	-0.8	22516.806 ^B	4	2.279	5.070	-3.00^{b}	
357	$a^{3}P-x^{5}P^{\circ}$	2-2	3.01	4084.7020	4083.5492	-0.2	24481.590 ^A		2.279	5.314	-2.64 ^a	
	(117)	2-1	2.46	4048.4473	4047.3040	1.0	24700.828 ^C	-6	2.279	5.341	-2.80^a	
358	$a~^3P-w~^5D^{\circ}$	0-1	2.33	4102.8425	4101.6849	-0.8	24373.346 ^C		2.484	5.506	-2.59^{b}	
	(120)	1-2 1-1	3.09 1.95	4059.9003 4022.7394	4058.7539 4021.6028	0.2 -0.3	24631.147 ^A 24858.682 ^C		2.424 2.424	5.478 5.506	-2.09^a	
		$\frac{1-1}{2-3}$	3.66	3914.7402	3913.6318	0.2	25544.479 ^A		2.424	5.446	-1.66 ^b	
		2-2	2.68	3875.1516	3874.0535	-0.5	25805.442 ^C		2.279	5.478		
359	$a {}^{3}P - v {}^{5}D^{\circ}$ (122)	2-3	2.79	3877.7691	3876.6703	-0.8	25788.023 ^C	5	2.279	5.476	•••	
360	$a^{3}P-y^{5}S^{\circ}$	1-2	2.49	4006.5184	4005.3861	1.0	24959.326 ^B		2.424	5.519		
	(123)	2-2	3.06	3826.4882	3825.4027	0.1	26133.623 ^B	-1	2.279	5.519	-2.15^a	
361	$a~^3P-x~^3D$ °	0 - 1	3.90	3919.4249	3918.3153	0.2	25513.947 ^A		2.484	5.648	-1.38^a	
	(124)	1-2	4.22	3886.6117	3885.5106	0.2	25729.352 ^A		2.424	5.614	-1.09 ^a	
		$1-1 \\ 2-3$	3.90 4.61	3846.2595 3725.4362	3845.1689 3724.3770	0.1 -0.1	25999.286 ^A 26842.494 ^A		2.424 2.279	5.648 5.606	-1.39 ^a -0.82 ^a	
		2-3 $2-2$	3.88	3716.9686	3715.9116	0.1	26903.644 ^A		2.279	5.614	-0.82	
362	$a^{3}P-w^{5}P^{0}$	2-2	2.70	3579.6981	3578.6765	4.0	27935.317^{D}		2.279	5.742	-1.81 ^b	
	(127)	2-1	2.78	3567.3282	3566.3098	1.1	28032.184 ^C	-9	2.279	5.754	-1.78 ^b	
363	$a^{3}P-z^{3}S^{\circ}$	0-1	2.72	3764.6380	3763.5686	3.0	26562.979 ^C		2.484	5.778	• • •	
	(128)	$1-1 \\ 2-1$	2.53 3.54	3697.0821 3543.2556	3696.0302 3542.2434	-2.7 -0.4	27048.358^{C} 28222.632^{B}		2.424 2.279	5.778 5.778	 .:.	
364	$a^{3}P-y^{3}P^{\circ}$	0-1	3.44	3722.4519	3721.3934	0.0	26864.014 ^A	0	2.484	5.815	-1.38a	
	(131)	1-0	3.66	3687.3073	3686.2580	-0.1	27120.061 ^A	1	2.424	5.786	-1.62^{b}	
		1-2	3.86	3679.9078	3678.8603	-0.1	27174.594 ^A		2.424	5.793	-1.33^a	
		1-1	2.68	3656.3927	3655.3513	-1.2	27349.360 ^C		2.424	5.815	0.000	
		$\begin{array}{c} 2-2 \\ 2-1 \end{array}$	4.30 3.28	3527.4756 3505.8638	3526.4675 3504.8612	0.0 0.4	28348.885 ^A 28523.641 ^B		2.279 2.279	5.793 5.815	-0.92 ^a -1.79 ^a	
365	$a~^3P-u~^5D^{\circ}$	1-2	3.27	3658.1747	3657.1329	-0.1	27336.037 ^B		2.424	5.813	-1.91ª	
303	(130)	2-3	4.00	3525.2473	3524.2398	0.0	28366.804 ^A		2.279	5.795	-1.18^a	
	,	2-2	4.02	3507.5007	3506.4977	-0.1	28510.329 ^A		2.279	5.813	-1.17^a	
		2-1	3.73	3472.3371	3471.3431	-0.2	28799.047 ^A		2.279	5.849	-1.40 ^a	
366	$a^{3}P - x^{3}F^{0}$	1-2	3.13	3617.3512	3616.3199	-0.9	27644.537 ^B		2.424	5.851	-2.17 ^a	
	(132)	2-3.	2.49	3482.5601	3481.5635	1.8	28714.508 ^D		2.279	5.839	• • • •	
367	$a^{3}P-w^{3}D^{0}$	0-1	3.18	3671.8528	3670.8075	0.3	27234.207^{B}		2.484	5.861	-1.96 ^a	
	(133)	$1-2 \\ 1-1$	3.10 3.26	3625.3413 3607.5622	3624.3079 3606.5334	-0.9 -0.4	$27583.610^{B} 27719.550^{B}$		2.424 2.424	5.844 5.861	-2.00 ^a -1.73 ^a	
		2-3	3.09	3491.7428	3490.7438	0.6	28638.994 ^C		2.279	5.829		
368	$a^{3}P - Psp3^{1}D^{0}$	1-2	3.97	3588.4469	3587.4231	-0.3	27867.209 ^A 29041.499 ^A		2.424	5.879	 -1.39 ^b	
	(134)	2-2	4.08	3443.3484	3442.3619	0.0			2.279	5.879		
369	$a {}^{3}P - y {}^{3}S^{\circ}$ (135)	$0-1 \\ 1-1$	3.70 4.03	3634.0125 3571.0296	3632.9769 3570.0103	0.0 0.1	$27517.792^{A} 28003.128^{A}$		2.484 2.424	5.896 5.896	-1.44 ^a -1.46 ^a	
	(155)	$\frac{1-1}{2-1}$	3.43	3427.3068	3426.3243	-0.8	29177.429 ^A		2.424	5.896	-1.40 -1.62 ^a	
370	$a~^3P-v~^5F^{\circ}$	1-2	3.01	3485.9760	3484.9785	-0.5	28686.371 ^D	4	2.424	5.981	-1.78 ^a	II
370	(138)	2-2	3.46	3348.8879	3347.9255	-0.1	29860.659 ^A		2.279	5.981	-1.38ª	••
371	$a~^3P-v~^5P$ °	0 - 1	2.51	3539.5647	3538.5534	-1.1	28252.062^{D}		2.484	5.987		
	(137)	2-3	2.71	3379.7034	3378.7332	0.2	29588.395 ^C		2.279	5.947		
		2-2	3.14	3357.3660	3356.4015	0.3	29785.254 ^D 29911.683 ^B		2.279	5.971	-1.88ª	I
	3 D 3 D 2	2-1	3.24	3343.1753	3342.2144	0.0			2.279	5.987		
372	$a^{3}P - x^{3}P^{0}$ (139)	$0-1 \\ 1-2$	3.48 3.08	3511.4431 3477.9992	3510.4391 3477.0038	0.0 -0.1	28478.320 ^B 28752.163 ^B		2.484 2.424	6.015 5.989	-1.46ª	
	(137)	1-2 $1-0$	3.72	3477.9992	3477.0038	-0.1 -0.1	28907.633 ^A		2.424	6.008	-1.28 ^a	
		10	3.12								-1,20	

TABLE 2—Continued

No.	Multiplet (MT) 1	J-J	I ²	$\lambda_{vac}^{}$ (Å)	λ_{air}^{3} (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	BI.8
		2-2 2-1	3.55 3.20	3341.5249 3318.0755	3340.5643 3317.1209	-0.2 -0.3	$29926.457^{A} 30137.952^{B}$	2 3	2.279 2.279	5.989 6.015	-1.38 ^a -1.81 ^b	
373	$a {}^{3}P - w {}^{3}F^{\circ}$ (141)	2-3	2.63	3239.9466	3239.0119	-0.8	30864.706 ^C	8	2.279	6.105	•••	
374	$a^{3}P-v^{3}D^{\circ}$ (142)	1-2 $1-1$ $2-2$	2.83 2.46 2.23	3368.1213 3361.8906 3239.9769	3367.1540 3360.9248 3239.0421	-0.1 -1.5 1.6	29690.142 ^B 29745.168 ^C 30864.418 ^D	13 -15	2.424 2.424 2.279	6.105 6.112 6.105	•••	
375	$a~^3P-n~^7D^{\circ}$	2-1 $2-3$	2.28 d0	3234.2128 3181.964	3233.2795 3181.044	2.2 -6.1	30919.425 ^D 31427.13 ^D	-21 60	2.279 2.279	6.112 6.175	•••	II
376	$a^{3}P - Fsp3^{1}F^{0}$	2-3	2.30	3215.5412	3214.6127	-2.7	31098.964 ^D	26	2.279	6.134	•••	
377	(143*) a ³ P-w ³ P° (144)	0-1 $1-0$ $1-2$ $2-1$ $2-2$	2.88 2.73 2.84 2.76 3.40	3332.7333 3289.5963 3264.3103 3158.0573 3143.7993	3331.7750 3288.6490 3263.3694 3157.1432 3142.8889	-0.7 -0.3 1.2 -1.2 0.0	30005.401^D 30398.867^C 30634.343^B 31665.037^B 31808.646^A	3 -11 12	2.484 2.424 2.424 2.279 2.279	6.204 6.193 6.222 6.204 6.222	 -2.09 ^a -1.38 ^a	II
378	$a^3P-z^1F^0$	2-3	2.23	3104.7530	3103.8524	0.8	32208.681 ^D		2.279	6.272		II
379	$a~^3P-u~^5F^{\circ}$	$\begin{array}{c} 2 - 3 \\ 2 - 1 \end{array}$	d0 d0?	3008.348 2979.066	3007.471 2978.197	3.6 4.4	33240.84 ^D 33567.57 ^D		2.279 2.279	6.400 6.440	• • • •	
380	$a^{3}P-t^{5}D^{0}$	2-3	0	3031.841	3030.959	-4.6	32983.26 ^D		2.279	6.368	•••	
381	$a {}^{3}P - v {}^{3}F^{\circ}$ (145)	$2-2 \\ 2-3$	1 2.34	3046.632 3031.4860	3045.746 3030.6038	-1.9 0.1	$32823.13^{\ D} \ 32987.122^{\ D}$		2.279 2.279	6.348 6.368		II
382	$a~^3P-u~^3G^{ m o}$	2-3	2.26	2989.7544	2988.8826	2.0	33447.563^{D}	-22	2.279	6.425		
383	$a^{3}P-u^{5}P^{0}$	1-1 $2-2$ $2-1$	d0? d0 0	3071.432 2979.151 2964.508	3070.540 2978.282 2963.642	1.9 -0.9 0.0	32558.10 ^D 33566.61 ^D 33732.41 ^D	10	2.424 2.279 2.279	6.461 6.440 6.461	•••	
384	$a~^3P-y~^1D^{\circ}$	1-2	2	3109.859	3108.957	1.9	32155.80 ^D		2.424	6.411		
385	$a^{3}P-x^{1}D^{\circ}$	1-2	2	3104.669	3103.769	3.9	32209.55 ^D	-40	2.424	6.417		
386	a ³ P-u ³ D° (UV132,14)	0-1 $1-2$ $1-1$ $2-3$ $2-2$ $2-1$	3.08 3.31 3 3.18 2.85 2.46	3079.3265 3053.9535 3033.981 2976.9953 2948.2236 2929.6066	3078.4322 3053.0656 3033.098 2976.1266 2947.3621 2928.7497	0.3 -0.2 -1.8 -0.4 0.1 -0.8	32474.634 ^B 32744.441 ^A 32960.00 ^D 33590.916 ^A 33918.730 ^B 34134.276 ^C	2 20 4	2.484 2.424 2.424 2.279 2.279 2.279	6.510 6.484 6.510 6.443 6.484 6.510	-1.19 ^a -0.97 ^a -1.66 ^a -1.04 ^a -1.22 ^a	
387	a 3P 2P4p 1P $^\circ$	0-1 $1-1$ $2-1$	2.40 2.71 2.86	3111.0972 3064.8201 2958.3486	3110.1950 3063.9295 2957.4846	0.1 -0.4 -0.9	32143.001^{C} 32628.343^{B} 33802.642^{B}	-1 4 10	2.484 2.424 2.279	6.469 6.469 6.469	 -1.29 ^a	
388	a ³ P-t ³ D° (UV132,14)	2-3 2-2 2-1	3.15 2.34 3.21	2955.5157 2915.0499 2900.2642	2954.6523 2914.1966 2899.4146	-0.1 0.0 -0.3	33835.043 ^A 34304.730 ^C 34479.617 ^D	1 0	2.279 2.279 2.279	6.473 6.532 6.553	-1.01^a -0.75^a	I
389	$a~^3P-^4F5p~^3G^{\circ}$	2-3	3	2779.383	2778.563	0.0	35979.21 ^D	0	2.279	6.739		
390	a ³ P-v ³ P° (UV134,14)	0-1 $1-2$ $1-1$ $2-2$ $2-1$	2.28 3.15 2.65 3.45 2.49	3012.7625 2997.2594 2969.3446 2895.3527 2869.2961	3011.8849 2996.3857 2968.4779 2894.5042 2868.4541	-0.6 0.1 -0.4 -0.2 -0.2	33192.129 ^D 33363.812 ^A 33677.465 ^B 34538.107 ^A 34851.753 ^B	-1 5 2	2.484 2.424 2.424 2.279 2.279	6.599 6.561 6.599 6.561 6.599	-0.94 ^a -1.49 ^a -0.52 ^a -1.27 ^a	
391	$a~^3P-Gsp3~^3F^{ m o}$	$1-2 \\ 2-3$	1 2.00	2924.245 2858.8325	2923.389 2857.9930	5.1 1.0	34196.86 ^D 34979.314 ^D		2.424 2.279	6.664 6.615		
392	$a\ ^3P-^4F5p\ ^5G^{0}$	2-3	d6	2796.690	2795.865	-7.0	35756.56 ^D	90	2.279	6.712		
393	a^3P $ ^4F5p^5F^o$	$1-2 \\ 2-3$	d0? 2.02	2899.391 2834.2356	2898.542 2833.4022	3.4 0.6	$34490.00^{\ D}$ $35282.882^{\ C}$	-40 -7	2.424 2.279	6.700 6.653		

				IADI	LE 2—Coniii	писи					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ o-R ⁶ (cm ⁻¹) (mK	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
394	$a^{3}P-{}^{4}F5p^{3}F^{0}$	1-2 2-3	2.06	2844.6318 2784.674	2843.7959 2783.852	-2.3 0.0	35153.934^{D} 28 35910.85^{D} 0 36328.237^{C} 39	2.424 2.279	6.782 6.731		
395	a ³ P- ⁴ F5p ⁵ D°	2-2 0-1 1-2 1-1	1.99 1 1.64 1*	2752.6797 2893.077 2858.9289 2853.007	2751.8661 2892.229 2858.0894 2852.169	-3.0 4.2 3.0 -6.5	36328.237 ^C 39 34565.27 ^D -50 34978.135 ^D -37 35050.74 ^D 80	2.279 2.484 2.424 2.424	6.782 6.770 6.761 6.770		I
		$2-3 \\ 2-2$	1 1*	2824.342 2766.053	2823.511 2765.236	6.4 -10.7	35406.48 ^D -80 36152.60 ^D 140	2.279 2.279	6.668 6.761		
396	a ³ P-Dsp3 ⁵ F°	0-1 1-1 1-2 2-1 2-3	4.87 2.18 d3 d0? 1.90	2970.9732 2928.7382 2926.496 2831.362 2828.4219	2970.1060 2927.8815 2925.640 2830.529 2827.5899	3.8 -1.0 2.6 -0.8 0.0	33659.004^{D} -43 34144.397^{C} 12 34170.56^{D} -30 35318.69^{D} 10 35355.404^{C} 0	2.484 2.424 2.424 2.279 2.279	6.657 6.657 6.661 6.657 6.662		I
397	$a^{3}P-x^{3}S^{0}$	0-1 $1-1$ $2-1$	2.82 2.83 2	2961.1611 2919.2072 2822.456	2960.2963 2918.3528 2821.625	0.0 -0.1 1.6	33770.537 ^B 0 34255.876 ^B 1 35430.14 ^D -20	2.484 2.424 2.279	6.671 6.671 6.671		I
398	a ³ P- ⁴ F5p ³ D°	0-1 1-2 1-1 2-3	1 2.20 1.96 2.16	2876.093 2874.3632 2836.4921 2820.1053	2875.249 2873.5200 2835.6581 2819.2753	3.3 -1.4 -3.6 -0.6	34769.39 ^D -40 34790.314 ^C 17 35254.813 ^D 45 35459.669 ^C 8	2.484 2.424 2.424 2.279	6.795 6.737 6.795 6.675		
399	a ³ P-Dsp3 ⁵ D°	2-2 0-1 1-1 2-3 2-1	2 2.08 2.28 2.32 2*	2780.514 2946.5582 2905.0110 2815.8464 2809.183	2779.694 2945.6971 2904.1602 2815.0174 2808.356	1.5 2.1 -1.2 2.8 0.8	35964.57 ^D -20 33937.901 ^D -24 34423.277 ^C 14 35513.301 ^D -35 35597.54 ^D -10	2.279 2.484 2.424 2.279 2.279	6.737 6.692 6.692 6.681 6.692		
400	$a^{3}P-t^{3}G^{\circ}$	2-3	0	2760.738	2759.922	-2.3	36222.20 ^D 30	2.279	6.769	•••	
401	a ³ P-t ⁵ P° (UV136)	0-1 $1-1$ $2-3$ $2-2$	2 2 3 1.79	2921.138 2880.303 2806.899 2798.4555	2920.283 2879.458 2806.073 2797.6308	0.9 0.8 1.6 3.4	34233.23 ^D -10 34718.57 ^D -10 35626.50 ^D -20 35733.997 ^D -43	2.484 2.424 2.279 2.279	6.729 6.729 6.696 6.709		
402	$a^{3}P-w^{1}D^{0}$	2-2	1	2675.509	2674.714	-1.4	37376.07 ^D 20	2.279	6.912	•••	
403	$(UV140)$ $a^{3}P-u^{3}F^{\circ}$	2-3 2-2	0 1.52	2603.821 2598.7223	2603.043 2597.9457	2.0 1.1	38405.10 ^D -30 38480.448 ^D -16	2.279 2.279	7.040 7.049		II
404	$a^3P-s^6D6p^5F^0$	2-3	0	2566.364	2565.595	0.0	38965.63 ^D 0	2.279	7.109	•••	
405	$a^{3}P - s^{6}D6p^{5}D^{0}$	2-3 2-2	0? d0?	2577.959 2561.637	2577.187 2560.870	-2.0 2.0	38790.38 ^D 30 39037.53 ^D -30	2.279 2.279	7.088 7.118		
406	$a {}^{3}P-t {}^{3}F^{\circ}$ $a {}^{3}P-Psp1 {}^{3}D^{\circ}$	2-3	2.41	2546.9392	2546.1748	-0.1 -0.2	39262.814^D 2 39187.119^A 3	2.279 2.279	7.146 7.137		Ι
407 408	$a^{3}P - Fsp1^{5}D^{6}$ $a^{3}P - s^{4}D5p^{5}D^{6}$	2-3 0-1 1-2 1-1 2-3 2-2 2-1	2.81 1.66 1.95 1.53 1.79 2	2551.8589 2598.6057 2578.7753 2566.2383 2521.7296 2502.979 2491.169	2551.0934 2597.8291 2578.0034 2565.4694 2520.9711 2502.225 2490.418	-0.2 0.6 -0.7 -1.3 -0.4 -0.6 1.2	38482.175 ^B -9 38778.098 ^B 11 38967.542 ^C 20 39655.323 ^B 6 39952.39 ^D 10 40141.79 ^D -20	2.484 2.424 2.424 2.279 2.279 2.279	7.255 7.232 7.255 7.195 7.232 7.255		II
409	$a^{3}P - s^{4}D5p^{3}P^{0}$	1-2 0-1 2-2 2-1	1.76 3.23 2.39 1.53	2600.9841 2544.1417 2523.8966 2441.0717	2600.2070 2543.3780 2523.1376 2440.3319	-0.4 0.1 -0.2 0.2	38446.986^D 6 39305.986^D -2 39621.274^A 3 40965.613^C -4	2.424 2.484 2.279 2.279	7.191 7.357 7.191 7.357		II
410	$a~^3P-Hsp1~^3G^{ m o}$	2-3	0	2486.193	2485.443	0.6	40222.14 ^D -10	2.279	7.265	•••	
411	$a^{3}P - s^{4}D5p^{3}D^{0}$	0-1 $1-2$ $2-2$ $2-3$	1.90 2.04 1.92 2.31	2607.0823 2592.0318 2515.4662 2506.3873	2606.3037 2591.2568 2514.7092 2505.6324	-0.7 -0.4 -0.2 0.4	38357.056 ^B 11 38579.774 ^B 6 39754.062 ^B 3 39898.064 ^B -7	2.484 2.424 2.279 2.279	7.240 7.207 7.207 7.225		

					TA	BLE 2—Con	tinued						
,7,4	No.	Multiplet (MT) ¹	J-J	I 2	λ _{vac} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
NN4APON			2-1	1.57	2498.9587	2498.2056	0.5	40016.667 ^C	-8	2.279	7.240		
HAP	412	$a~^3P$ – $s~^4D5p~^5F$ $^{\circ}$	1-2	1	2541.056	2540.293	-4.5	39353.71 ^D		2.424	7.303		
y	412	a I -s DSp I	$\frac{1-2}{2-3}$	1.74	2476.5101	2475.7621	2.1	40379.404 ^D		2.279	7.285		
-		3 n 4 n = 5 n n											**
	413	$a ^3P - s ^4\!D5p ^5P^{\circ}$	$0-1 \\ 1-1$	d3 d0	2543.078 2512.074	2542.314 2511.317	-3.2 -1.9	39322.43 ^D 39807.75 ^D		2.484 2.424	7.359 7.359	• • •	II
			$\frac{1-1}{2-1}$	1.93	2440.0954	2439.3558	0.2	40982.005^{D}		2.424	7.359	•••	
		2 2 00										•••	
	414	$a~^3P-Psp1~^3S^{\circ}$	0-1	1	2534.035	2533.273	2.6	39462.76 ^D		2.484	7.377	•••	
			$1-1 \\ 2-1$	1.79 2.12	2503.2449 2431.7625	2502.4907 2431.0248	-0.1 0.1	39948.149 ^B 41122.437 ^A		2.424 2.279	7.377 7.377	• • •	
		22										•••	
	415	a ³ P-Fsp1 ³ D°	2-3	d0	2356.911	2356.191	3.9	42428.41 ^D		2.279	7.539	•••	
	416	z 7D $^{\circ}-d^8$ 3P	1-0	2.08	4713.6753	4712.3569	-0.2	21214.868 ^D		2.482	5.112		
			2-1	2.61	4702.3601	4701.0447	-0.4	21265.917^{D}	2	2.469	5.105	-1.86ª	I
	417	$z^{7}D^{\circ}-e^{7}D$	4-5	4.80	4300.4444	4299.2349	0.4	23253.411^{D}		2.425	5.308	-0.41^a	I
		(152)	3-4	4.94	4272.3558	4271.1538	0.2	23406.290 ^A		2.449	5.351	-0.35^{b}	
			5-5	5.35	4261.6736	4260.4744	0.2	23464.960 ^A		2.399	5.308	0.08^{a}	
			2-3	4.85	4251.3160	4250.1195	0.2	23522.128 ^A		2.469	5.385	-0.41 ^b	
			$4-4 \\ 1-2$	4.95 4.63	4237.1298 4234.7950	4235.9370 4233.6028	0.4 0.4	23600.882 ^A 23613.894 ^A		2.425 2.482	5.351 5.410	-0.34 ^b -0.60 ^b	
			3-3	4.03	4234.7930	4222.2131	-0.2	23613.894 ⁻¹ 23677.593 ^A		2.482	5.385	-0.60° -0.97 ⁶	
			1-1	4.26	4211.5296	4210.3436	0.2	23744.342 ^A		2.482	5.426	-0.97	
			5-4	4.47	4199.4872	4198.3043	-0.2	23812.431^{A}		2.399	5.351	-0.72^{b}	
			2-1	4.53	4192.6118	4191.4307	0.2	23851.481 ^A		2.469	5.426	-0.67^a	
			4 - 3	4.72	4188.9756	4187.7954	0.2	23872.185^{A}	-1	2.425	5.385	-0.55^{b}	
			3-2	4.69	4188.2189	4187.0390	0.0	23876.498 ^A	0	2.449	5.410	-0.55^{b}	
	418	$z^{7}D^{\circ}-e^{5}D$	3-4	2.41	4012.8453	4011.7113	-0.3	24919.974^{B}	2	2.449	5.539	-2.69 ^b	
		(156)	2 - 3	2.69	3976.3300	3975.2055	2.1	25148.818^{C}		2.469	5.587	-2.76 ^b	
			5-4	2.60	3948.4961	3947.3789	2.2	25326.098^{C}	-14	2.399	5.539		
	419	$z^{7}D^{\circ}-e^{7}F$	5-6	4.82	3226.7186	3225.7872	-0.1	30991.237 ^A	1	2.399	6.241	0.38^{a}	
		(155)	1 - 1	4.09	3206.3242	3205.3980	-0.2	31188.362^{A}	2	2.482	6.349	-0.34^a	
			2 - 3	4.17	3201.3965	3200.4716	-1.8	31236.368 ^A		2.469	6.341		
			4-5	4.47	3197.8515	3196.9274	0.1	31270.996^{D}_{D}		2.425	6.302	0.00^{a}	II
			2-1	3.12	3195.3473	3194.4238	-0.3	31295.503^B		2.469	6.349	-1.30°a	
			1-2	3.97	3193.7234	3192.8004	-0.1	31311.415^A		2.482	6.364	-0.42^a	¥
			$3-3 \\ 2-2$	6 2.72	3185.539 3182.8317	3184.618 3181.9114	-4.1 -0.9	31391.86 ^D 31418.564 ^C		2.449 2.469	6.341 6.364	 -1.87 ^a	I
			3-4	4.17	3181.1432	3180.2234	-0.9	31435.240 ^A		2.449	6.347	-0.22^a	
			5-5	3.83	3176.3634	3175.4447	0.0	31482.544 ^A		2.399	6.302	-0.62^a	
			3-2	2.61	3167.1607	3166.2444	-0.3	31574.021^{C}	3	2.449	6.364		
			4-3	2.95	3165.9196	3165.0036	0.8	31586.399 ^B	-8	2.425	6.341		
			4-4	3.78	3161.5723	3160.6574	0.0	31629.832 ^A	0	2.425	6.347	-0.58^a	
			5-4	2.32	3140.5697	3139.6601	2.3	31841.357^{D}	-23	2.399	6.347	• • •	
	420	$z^{7}D^{\circ}-f^{7}D$	4-5	4.26	3245.1236	3244.1876	0.0	30815.467 ^A	0	2.425	6.246	-0.27^a	
		(156)	2 - 3	2.77	3231.0888	3230.1563	-0.1	30949.320 ^B		2.469	6.306	-1.78ª	
			1-2	2.98	3227.9928	3227.0612	0.5	30979.003^{B}		2.482	6.323	-1.45 ^a	
			5-5	4.67	3222.9976	3222.0671	-0.2	31027.017 ^A		2.399	6.246	0.17^{a}	
			1-1	3.20	3222.8466	3221.9162	0.0	31028.470^{B}	-	2.482	6.329	-1.24^a	
			3-4 2-2	4.30 4.17	3220.5119 3216.8669	3219.5821 3215.9380	-0.1 -0.1	31050.964 ^A 31086.148 ^A		2.449 2.469	6.299 6.323	-0.19 ^a -0.32 ^a	
			3-3	4.20	3214.9410	3214.0126	1.1	31104.770 ^A		2.449	6.306	-0.32	
			2-1	4.03	3211.7568	3210.8292	0.2	31135.608 ^D		2.469	6.329	-0.04	II
			3-2	d1	3200.862	3199.938	3.1	31241.58 ^D		2.449	6.323	• • • •	
			4-4	3.98	3200.4551	3199.5304	0.0	31245.556 ^A	0	2.425	6.299	-0.51 ^a	
			5-4	3.69	3178.9321	3178.0128	-0.1	31457.105^{A}	1	2.399	6.299	-0.76^a	
	421	$z^7D^{\circ}-f^5D$	2-3	2.46	3265.6358	3264.6946	-0.9	30621.908^{C}	8	2.469	6.265		
		(157)	3-4	3.30	3260.9295	3259.9895	-0.1	30666.103^{A}	1	2.449	6.251	-1.37 ^a	
			3-3	3.87	3249.1413	3248.2042	0.0	30777.363 ^A		2.449	6.265	-0.67ª	
			2-2	3.37	3248.2169	3247.2801	0.1	30786.121 ^A	-1	2.469	6.286	• • •	

No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
3		1-1	3.13	3240.3922	3239.4574	0.2	30860.462 ^B	-2	2.482	6.308	-1.50°	
4		4-4	4.33	3240.3677	3239.4329	0.0	30860.695 ^A	0	2.425	6.251	-0.38^a	
		3-2	4.02	3231.8963	3230.9636	-0.2	30941.587 ^A	2	2.449	6.286	-0.52^{b}	
		1-0	3.27	3229.8308	3228.8987	0.0	30961.374 ^A	0	2.482	6.321		
		2 - 1	3.73	3229.1809	3228.2490	-0.1	30967.605 ^A		2.469	6.308	-0.76^a	
		4-3	4.28	3228.7274	3227.7955	0.1	30971.955 ^A		2.425	6.265	-0.27^a	
		5-4	4.01	3218.3064	3217.3772	0.0	31072.243 ^A		2.399	6.251	-0.68ª	
422	$z^{7}D^{\circ}{-}e^{7}P$	3-3	0	3241.047	3240.112	0.0	30854.23 ^D		2.449	6.275		
	(158)	4-4	4.03	3234.9009	3233.9675	-0.2	30912.848 ^A		2.425	6.258	-0.53^a	
		2-2	3.64	3231.1397	3230.2072	-0.2	30948.832 ^A		2.469	6.306	-0.79^a	
		4-3	4.14	3220.7344	3219.8046	0.0	31048.819 ^A		2.425	6.275	-0.41°	
		3-2	4.36	3214.9900	3214.0616	-0.3	31104.296 ^A		2.449	6.306	-0.04^a	
400	7.00 50	5-4	4.22	3212.9152	3211.9873	1.3	31124.382 ^A		2.399	6.258	-0.19^a	
423	$z^{7}D^{0}-e^{5}G$	4-5	3.81	3211.1565	3210.2291	0.0	31141.428 ^A 31172.052 ^B		2.425	6.286	-0.71°	
	(159)	5-6 2-3	2.97 3.98	3208.0018 3194.2230	3207.0752 3193.2999	-0.1 0.0	31172.052~ 31306.518 ^A		2.399 2.469	6.264	-1.58°	
		1-2	3.98 3.70	3194.2230	3188.8191	0.0	31350.518		2.489	6.350 6.369	-0.48 ^a -0.71 ^a	
		5-5	3.39	3189.4895	3188.5675	-0.3	31350.507 31352.980 ^A		2.462	6.286	-0.71^{-6}	
		3-3 4-4	3.16	3182.9758	3182.0555	-0.3	31417.141 ^A		2.425	6.320	-1.08^{a}	
		3-2	5.10	3163.247	3162.333	2.0	31417.141 31613.09 ^D		2.449	6.369		I
		3-2	2.87	3163.2453	3162.3300	0.8	31613.103 ^D		2.449	6.369		I
		5-4	2.32	3161.6889	3160.7740	2.0	31628.665 ^D		2.399	6.320		1
		4-3	2.80	3158.9015	3157.9873	-0.1	31656.574 ^B		2.425	6.350	-1.63ª	
424	$z^{7}D^{\circ}-e^{7}G$	1-2	2.62	3172.5800	3171.6623	-0.6	31520.088^{C}		2.482	6.390	-1.68ª	
	(160)	1 - 1	3	3169.859	3168.942	2.0	31547.14 ^D		2.482	6.393		
		2 - 3	2.82	3169.7711	3168.8542	0.1	31548.019 ^B		2.469	6.380	-1.56a	
		3-4	3.27	3166.7739	3165.8577	-0.1	31577.878 ^A		2.449	6.365	-1.14^a	
		5-6	3.52	3162.8615	3161.9463	-0.1	31616.939 ^A		2.399	6.319	-1.04ª	
		2-2	2.51	3161.8332	3160.9182	0.0	31627.222 ^C		2.469	6.390	• • •	
		2-1	0?	3159.127	3158.213	0.0	31654.31 ^D		2.469	6.393	0.600	
		4-5	3.72	3157.9502	3157.0362	0.0	31666.111 ^A 31703.492 ^B		2.425	6.351	-0.68^a	
		3-3 $4-4$	2.77 1	3154.2267 3147.381	3153.3136 3146.469	-0.9 2.0	31703.492 ^D		2.449 2.425	6.380	-1.56ª	
		5-4	10*	3126.553	3125.646	-8.8	31772.43 31984.11 ^D		2.423	6.365 6.365	• • • •	I
425	$z^7D^{\circ}-f^5F$	1-2	2	3156.032	3155.118	1.0	31685.36 ^D	-10	2.482	6.410		II
	(161)	2 - 3	3.01	3155.4100	3154.4966	0.3	31691.603^{B}		2.469	6.398	-1.31a	
		3-4	3.47	3154.1128	3153.1997	-0.1	31704.637 ^A	1	2.449	6.380	-0.97^a	
		1 - 1	0	3151.113	3150.201	4.0	31734.82 ^D		2.482	6.417		II
		5-5	2.47	3149.3773	3148.4654	-1.2	31752.309 ^C		2.399	6.336		
		4-4	d0?	3134.871	3133.963	-1.0	31899.24 ^D		2.425	6.380	• • •	
426	z 7D $^{\circ}-e$ 5S	1 - 2	3.48	3212.4106	3211.4828	0.1	31129.271 ^A		2.482	6.341	• • •	
	(162)	$^{2-2}$	13	3201.399	3200.474	7.2	31236.34 ^D		2.469	6.341	• • • •	I
		3-2	3.01	3185.5384	3184.6174	0.7	31391.868 ^B		2.449	6.341	•••	
427	$z^{7}D^{\circ}-g^{5}D$ (163)	3-4	2.52	3165.2119	3164.2961	-0.4	31593.461 ^C	4	2.449	6.366	•••	
428	$z^7D^{\circ}-e^7S$	2 - 3	3.50	3158.7993	3157.8850	0.0	31657.599^{D}		2.469	6.394	-0.77^a	I
	(164)	3-3	3.14	3143.3642	3142.4539	1.3	31813.049 ^B		2.449	6.394	-1.39a	
		4-3	4	3124.256	3123.351	2.9	32007.62 ^D	-30	2.425	6.394	• • •	
429	z 7D $^{\circ}-e$ 5P	2 - 3	0	3132.363	3131.455	-2.9	31924.78 ^D	30	2.469	6.427		
	(165)	1 - 1	1	3124.999	3124.093	2.0	32000.01 ^D		2.482	6.449		
		3 - 3	1	3117.184	3116.280	-2.9	32080.24 ^D		2.449	6.427	• • •	
		2-1	0	3114.569	3113.666	0.0	32107.17 ^D		2.469	6.449	• • •	
		4-3	1	3098.393	3097.494	0.0	32274.80 ^D	0	2.425	6.427	• • •	
430	$z^7D^{\circ}-g^5F$	5-5	d0?	2966.450	2965.584	7.9	33710.33 ^D	-90	2.399	6.579		
	-	4-4	1	2955.846	2954.983	-1.7	33831.26 ^D	20	2.425	6.620	• • • •	I
431	$z^7D^{\circ}-g^7D$	4-5	2.54	2920.6952	2919.8405	-0.6	34238.424 ^B	7	2.425	6.670	-0.98^a	
	(UV142)	3-4	2.49	2909.7080	2908.8560	-0.2	34367.710 ^B		2.449	6.710	-0.99^a	
		5-5	2.92	2902.7607	2901.9104	0.1	34449.964 ^B	-1	2.399	6.670	-0.61ª	

				1 A B	LE 2—Conti	nuea					
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ ⁵ o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
		2-3 4-4 1-2	2.40 2.48 2.04	2899.2000 2893.3255 2890.8353	2898.3506 2892.4776 2889.9879	0.6 -0.3 -0.6	34492.274 ^C -7 34562.305 ^C 3 34592.078 ^C 7	2.469 2.425 2.482	6.745 6.710 6.771	-1.00 ^a	
i		3-3	1.90	2886.1928	2885.3466	1.9	34647.720 ^D -23	2.449	6.745		I
		2-2	0?	2881.918	2881.073	8.3	34699.11 ^D -100	2.469	6.771	• • •	
		1-1	2	2879.529	2878.685	5.0	34727.90 ^D -60	2.482	6.788	• • •	
		5-4 2-1	2.32 1.90	2875.7216 2870.6676	2874.8779 2869.8253	-2.6 -0.2	34773.881^D 32 34835.102^D 3	2.399 2.469	6.710 6.788	• • •	
		4-3	2.11	2870.0706	2869.2283	-1.0	34842.349 ^C 12	2.425	6.745	• • •	
		3-2	2.46	2869.0567	2868.2147	1.0	34854.662^{D} -12	2.449	6.771		
432	$z^{7}D^{\circ}-s^{6}D6s^{5}D$	3-4	2	2879.947	2879.102	0.0	34722.86 ^D 0	2.449	6.754		
		4-4	2	2863.898	2863.057	0.8	34917.45 ^D -10	2.425	6.754		
		2-3	2	2861.040	2860.200	0.8	34952.32 ^D -10	2.469	6.802		
		3-3	1	2848.372	2847.535	1.6	35107.77 ^D -20	2.449	6.802	• • •	
		1-2 5-4	0	2847.826	2846.990	2.4	$35114.50^{D} -30$ $35128.962^{D} -45$	2.482	6.836	• • • •	
		3-4 4-3	2.00 2.42	2846.6540 2832.6708	2845.8175 2831.8378	3.6 1.3	35128.962^{D} -45 35302.372^{D} -16	2.399 2.425	6.754 6.802	• • •	
		3-2	2	2826.680	2825.849	-4.0	35377.19 ^D 50	2.449	6.836		
		2-1	0	2825.408	2824.577	0.0	35393.12 ^D 0	2.469	6.857		II
433	$z^{7}D^{\circ}-{}^{4}F6s^{5}F$	4-4	0	2706.082	2705.279	-1.5	36953.80 ^D 20	2.425	7.007		
433	2 D 1 00 1	5-4	2.05	2690.6786	2689.8800	-1.6	37165.346^D 22	2.399	7.007		I
		2-3	0	2659.711	2658.920	6.4	37598.07 ^D -90	2.469	7.130		
434	$z^{7}D^{\circ}-s^{6}D5d^{5}D$	2-2	d 0	2734.705	2733.896	-3.0	36567.01 ^D 40	2.469	7.002		
	~	1-1	d0?	2723.641	2722.834	-3.0	36715.56 ^D 40	2.482	7.034	•••	
		3-2	1.62	2723.1307	2722.3243	-0.9	36722.439^D 12	2.449	7.002		
435	$z^{7}D^{\circ}-s^{6}D5d^{5}G$	3-4	1	2708.842	2708.039	-2.9	36916.15 ^D 40	2.449	7.026		I
		4-5	0	2703.570	2702.768	4.4	36988.13 ^D -60	2.425	7.011		
		5-6	1.82	2703.3617	2702.5601	-1.0	36990.980 ^C 14	2.399	6.985		
		2-3	1.32	2692.2915	2691.4925	2.7	37143.081 ^C -37	2.469	7.074	• • •	
		3-3 $3-2$	1 d0?	2681.067 2668.315	2680.271 2667.521	0.0 -2.1	37298.58 ^D 0 37476.84 ^D 30	2.449 2.449	7.074 7.096	• • •	**
		3-2 4-3	0*	2667.157	2666.364	4.3	37493.11 ^D -60	2.425	7.096		II
426	$z^7D^{\circ}-s^6D5d^7F$										
436	$z'D^*-s'D5a'F$	5-6 2-3	2.80 2.26	2697.0812 2690.2123	2696.2811 2689.4138	-2.7 -0.4	37077.119^{A} 37 37171.788^{B} 6	2.399 2.469	6.996 7.077		
		1-1	1.89	2688.5986	2687.8005	0.6	37194.098 ^B -8	2.482	7.093		
		4-5	2.41	2682.3824	2681.5858	-0.2	37280.293 ^A 3	2.425	7.047		
		3-3	0	2679.009	2678.214	0.7	37327.23 ^D -10	2.449	7.077		
		5-5	1.61	2667.2471	2666.4541	-0.1	37491.840 ^C 1	2.399	7.047	• • •	
		3-4 4-4	2.16 1.56	2663.0951 2649.3686	2662.3032 2648.5800	-0.6 2.5	37550.292^B 8 37744.842^D -36	2.449 2.425	7.105 7.105	• • • •	II .
		5-4	d0?	2634.598	2633.813	-2.1	37956.46 ^D 30	2.423	7.105	• • • •	II .
127	$z^7D^{\circ}-s^6D5d^7D$	1-2	4	2715.674	2714.869	-6.6	n	2.482	7.047		
437	z D - s D a D	1-2 4-5	4 1.62	2713.674	2711.4589	-0.6 -0.4	36823.27 ^D 90 36869.585 ^B 6	2.482	6.996		I
		4-4	2.23	2710.7924	2709.9889	-0.5	36889.583^D 7	2.425	6.999		II
		2-2	d0?	2707.802	2706.999	0.0	36930.32 ^D 0	2.469	7.047		
		1 - 1	d0?	2703.815	2703.013	-3.7	36984.78 ^D 50	2.482	7.067		
		5-5	2.66	2696.7896	2695.9895	-0.1	37081.128 ^A 1	2.399	6.996	• • • •	
		3-2 2-1	2.28	2696.4514	2695.6514 2695.211	-0.3	37085.779 ^B 4 37091.84 ^D -20	2.449	7.047	• • •	11
		2-1 5-4	1 2.59	2696.011 2695.3355	2694.5359	1.5 -0.6	37091.84 ^D -20 37101.132 ^A 8	2.469 2.399	7.067 6.999		II
		2-3	1	2691.219	2690.420	0.0	37157.88 ^D 0	2.469	7.076		
		3-3	d1	2680.007	2679.211	0.0	37313.34 ^D 0	2.449	7.076	•••	
438	$z^7D^{\circ}-s^6D5d^7P$	3-4	2.47	2696.3311	2695.5311	0.4	37087.434 ^B -6	2.449	7.048		
		1-2	2.12	2683.0078	2682.2110	-0.2	37271.603^B 3	2.482	7.103		
		4-4	1.51	2682.2574	2681.4609	0.2	37282.029^D -3	2.425	7.048		II
		3-2	0	2664.232	2663.440	-4.3	37534.27 ^D 60	2.449	7.103	• • •	
439	z 7D ° $-s$ 6D5d 7G	1-1	1.72	2680.9124	2680.1162	-1.9	37300.734 ^C 26	2.482	7.107		
		3-4	2	2673.883	2673.089	2.1	37398.79 ^D -30	2.449	7.086		

TABLE 2—Continued

No.	Multiplet (MT) ¹	J-J	I ²	$ \begin{array}{c} \lambda_{vac}^{\ 3} \\ \text{(Å)} \end{array} $	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mk		E(u) (eV)	log(gf) 7	Bl. ⁸
_		2-1	d0	2673.241	2672.446	4.3	37407.78 ^D -60	2.469	7.107		
		1 - 2	1.70	2671.5800	2670.7860	-0.6	37431.034 ^C 8		7.123		
		5-6	1.90	2664.9597	2664.1673	0.1	37524.019^{B}_{-} -2	2.399	7.051		
		$^{2-2}$	1*	2663.956	2663.164	0.0	37538.16 ^D 0	2.469	7.123		
		4 - 5	2.12	2662.0964	2661.3047	0.0	37564.380 ^B 0	2.425	7.083		
		4-4	2	2660.042	2659.251	1.4	37593.39 ^D -20	2.425	7.086		
		3 - 3	1.74	2659.2674	2658.4764	-0.7	37604.341 ^C 10	2.449	7.112		
		5 - 5	2.40	2647.1809	2646.3928	-7.5	37776.035^D 107		7.083		
		5-4	d0?	2645.163	2644.376	7.7	37804.85 ^D -110	2.399	7.086		
		4-3	d0?	2645.580	2644.792	1.4	37798.90 ^D -20	2.425	7.112		
440	$z^{7}D^{\circ}-s^{6}D5d^{5}S$	$^{2-2}$	1	2716.809	2716.004	1.5	36807.89 ^D -20	2.469	7.032		
770	z D =3 D3a B	3-2	1.89	2705.3796	2704.5775	-1.2	36963.389 ^D 16		7.032		II
441	$z^{7}D^{\circ}-s^{6}D5d^{5}F$	2-3	1.57	2716.3256	2715.5208	-3.2	36814.438 ^D 44		7.033		
		3-3	0	2704.901	2704.099	-5.1	36969.93 ^D 70		7.033		
		$^{2-2}$	2.75	2699.8027	2699.0019	-2.1	37039.744^D 29		7.061		
		1 - 1	d0?	2698.461	2697.661	2.9	37058.16 ^D -40		7.077	• • •	
		2 - 1	2.05	2690.6786	2689.8800	-0.1	37165.346 ^D 1		7.077		I
		3-2	0	2688.521	2687.723	0.0	37195.17 ^D		7.061		
		4-5	1.79	2688.2122	2687.4142	-0.6	37199.444 ^C 8		7.037		
		3-4	2.03	2676.0706	2675.2755	-0.5	37368.222^{B} 7		7.082		
		5-5	0	2673.011	2672.217	0.0	37410.99 ^D	2.399	7.037		
		4-4	1.70	2662.2072	2661.4154	-0.6	37562.817^{B}_{-} 9		7.082		
		5 - 4	0	2647.300	2646.512	0.7	37774.34 ^D -10	2.399	7.082		
442	$z^{7}D^{\circ}-{}^{4}F6s^{3}F$	3-4	2.09	2698.9656	2698.1650	0.0	37051.232^B	2.449	7.043		
442	z D = ros r	4-4	2.32	2684.8646	2684.0674	-0.1	37031.232 37245.826^D 1		7.043		II
		2-3	1	2680.512	2679.716	0.7	37306.31 ^D -10		7.094		11
		5-4	2.55	2669.7032	2668.9096	1.7	37457.348 ^D -24		7.043		II
										• • •	11
443	$z^{7}D^{\circ}-s^{6}D5d^{5}P$	2 - 3	2.13	2684.7337	2683.9366	0.1	37247.642^{B} -1		7.087		
		1 - 2	0	2674.977	2674.182	0.0	37383.50 ^D		7.117		
		3 - 3	1	2673.576	2672.781	0.7	37403.09 ^D -10		7.087		
		4 - 3	1.71	2659.7378	2658.9467	0.6	37597.691 ^D -8	2.425	7.087		
444	$z^{7}D^{\circ}-s^{6}D5d^{7}S$	2-3	2.04	2664.8353	2664.0430	-0.2	37525.771^B 3	2.469	7.121		
444	$z \cdot D = s \cdot D \exists a \cdot \exists$	3-3	0	2653.841	2653.051	0.0	37681.23 ^D		7.121		
445	z 7D 0 $-s$ 4D4d 5F	4-5	1.62	2624.7757	2623.9929	1.2	38098.494 ^D -17		7.149		
		1 - 1	d3	2607.991	2607.212	6.1	38343.69 ^D -90		7.236		II
		$^{2-2}$	2.48	2590.6818	2589.9071	0.8	38599.877 ^C -12	2.469	7.254		
446	$z^{7}D^{0}-i^{5}D$	3-4	d0	2635.708	2634.923	-0.7	37940.47 ^D 10	2.449	7.153		
440	z	3-2	2.58	2616.6310	2615.8502	1.4	38217.081^D -21		7.188		Ne
	7										
447	z 7D $^{\circ}$ $-s$ 6D 7s 7D	4-5	2	2608.609	2607.831	0.0	38334.60 ^D (7.178		
		5-5	2.00	2594.2917	2593.5161	-0.7	38546.167 ^C 10		7.178		
		3-2	2	2568.924	2568.154	-2.6	38926.81 ^D 40	2.449	7.276	• • •	
448	$z^7D^{\circ}-g^5G$	5-6	0	2587.251	2586.477	-0.7	38651.06 ^D 10	2.399	7.191		
	· ·										
449	$z^{7}D^{\circ}-s^{6}D7s^{5}D$	3-4	5	2593.062	2592.286	-6.7	38564.45 ^D 100		7.231		Ĭ
		4-4	10	2580.044	2579.272	-5.3	38759.03 ^D 80		7.231		I
		5-4	0	2566.045	2565.276	0,0	38970.48 ^D (2.399	7.231	• • •	
450	$z^{7}D^{0}-s^{4}D4d^{3}G$	5-5	d0?	2554.837	2554.071	-5.9	39141.44 ^D 90	2.399	7.252		
		4-4	6*	2537.892	2537.130	3.2	39402.78 ^D -50	2.425	7.311		II
	7.00										
451	$z^{7}D^{\circ}-58661^{e}$	5-4	1.41	2543.8147	2543.0510	2.8	39311.040 ^D -44		7.273		
452	$z^{7}D^{\circ}$ -58906^{e}	3-4	d0?	2554.315	2553.549	-2.5	39149.44 ^D 39	2.449	7.303	• • • •	
	$z^{7}D^{\circ}-59077^{e}$		d0?	2560.329	2559.561	-2.2	39057.48 ^D 34		7.324		
453		1-1							1.324	• • • • •	
454	$z^{7}D^{\circ}-s^{6}D_{4.5}6d$ [3.5]	2 - 3	1.30	2542.0168	2541.2536	3.4	39338.843 ^D -52		7.346		
	$z^{7}D^{\circ}-s^{6}D_{4.5}6d$ [3.5]	3-4	d0	2533.032	2532.271	3.8	39478.38 ^D -60	2.449	7.344		
		3 - 3	1.30	2532.0083	2531.2474	1.1	39494.342 ^D -17	2.449	7.346		
	$z^{7}D^{\circ}-s^{6}D_{4.5}6d$ [3.5]	3-3	1.50								
	$z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [3.5]	3-3 4-5	1.41	2527.5311	2526.7712		39564.301 ^D -11	2.425	7.331		

TABLE 2—Continued

455 a 456 a a a a a a a a a a a a a a a a a a a	Multiplet (MT) 1 $z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	J-J 5-6 5-5 5-4 3-4 4-3 1-2 2-2 3-4 3-2 3-4 3-2 3-4 4-5 4-5	1.86 1.97 1.58 2.04 d5* 10 d2 2.13 5 0? 1.43 7 3 d0	λ _ν ³ _{αc} (Å) 2514.2566 2514.0869 2513.6564 2528.7730 2502.488 2528.459 2525.154 2524.7562 2521.631 2517.714 2515.2760 2514.089	2513.4998 2513.3302 2512.8998 2528.0129 2501.734 2527.699 2524.394 2523.9970 2520.872 2516.956 2514.5190 2513.332	o-R ⁴ (mÅ) -0.6 -0.8 2.2 -0.1 2.5 -2.6 5.1 1.3 0.0 1.3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	E(I) (eV) 2.399 2.399 2.399 2.449 2.425 2.482 2.469 2.469	E(u) (eV) 7.330 7.331 7.352 7.380 7.385 7.379 7.379	 	Bl. ⁸
455 a 456 a a a a a a a a a a a a a a a a a a a	$z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}D^{\circ} - s^{4}D4d$ ^{3}F $z^{7}D^{\circ} - s^{4}D4d$ ^{3}F $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	5-5 5-4 3-4 4-3 1-2 2-2 2-3 2-2 3-4 3-2 3-3 3-2 4-5	1.97 1.58 2.04 d5* 10 d2 2.13 5 0? 1.43 7	2514.0869 2513.6564 2528.7730 2502.488 2528.459 2525.154 2524.7562 2521.631 2517.714 2515.2760 2514.089	2513.3302 2512.8998 2528.0129 2501.734 2527.699 2524.394 2523.9970 2520.872 2516.956 2514.5190	-0.8 2.2 -0.1 2.5 -2.6 5.1 1.3 0.0 1.3	$\begin{array}{ccccc} 39775.872^C & 13 \\ 39782.684^C & -35 \\ \hline & 39544.870^C & 2 \\ 39960.23 & ^D & -40 \\ \hline & 39549.78 & ^D & 40 \\ \hline & 39601.55 & ^D & -80 \\ \hline & 39607.785^B & -21 \\ \hline & 39656.88 & ^D & 0 \\ \hline \end{array}$	2.399 2.399 2.449 2.425 2.482 2.469 2.469 2.469	7.331 7.352 7.380 7.385 7.379 7.379		II
455 a 456 a a a a a a a a a a a a a a a a a a a	$z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}D^{\circ} - s^{4}D4d$ ^{3}F $z^{7}D^{\circ} - s^{4}D4d$ ^{3}F $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	5-5 5-4 3-4 4-3 1-2 2-2 2-3 2-2 3-4 3-2 3-3 3-2 4-5	1.97 1.58 2.04 d5* 10 d2 2.13 5 0? 1.43 7	2514.0869 2513.6564 2528.7730 2502.488 2528.459 2525.154 2524.7562 2521.631 2517.714 2515.2760 2514.089	2513.3302 2512.8998 2528.0129 2501.734 2527.699 2524.394 2523.9970 2520.872 2516.956 2514.5190	-0.8 2.2 -0.1 2.5 -2.6 5.1 1.3 0.0 1.3	$\begin{array}{ccccc} 39775.872^C & 13 \\ 39782.684^C & -35 \\ \hline & 39544.870^C & 2 \\ 39960.23 & ^D & -40 \\ \hline & 39549.78 & ^D & 40 \\ \hline & 39601.55 & ^D & -80 \\ \hline & 39607.785^B & -21 \\ \hline & 39656.88 & ^D & 0 \\ \hline \end{array}$	2.399 2.399 2.449 2.425 2.482 2.469 2.469 2.469	7.331 7.352 7.380 7.385 7.379 7.379		II
455 a 456 a a a a a a a a a a a a a a a a a a a	$z^{7}D^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}D^{\circ} - s^{4}D4d^{3}F$ $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	5-4 3-4 4-3 1-2 2-2 2-3 2-2 3-4 3-2 3-3 3-2 4-5	1.58 2.04 d5* 10 d2 2.13 5 0? 1.43 7	2513.6564 2528.7730 2502.488 2528.459 2525.154 2524.7562 2521.631 2517.714 2515.2760 2514.089	2512.8998 2528.0129 2501.734 2527.699 2524.394 2523.9970 2520.872 2516.956 2514.5190	2.2 -0.1 2.5 -2.6 5.1 1.3 0.0 1.3	39782.684^{C} -35 39544.870^{C} 2 39960.23^{D} -40 39549.78^{D} 40 39601.55^{D} -80 39607.785^{B} -21 39656.88^{D} 0	2.399 2.449 2.425 2.482 2.469 2.469 2.469	7.331 7.352 7.380 7.385 7.379 7.379		II
455 a	$z^7D^\circ - s^4D4d^3F$ $z^7D^\circ - s^6D_{3.5}6d [1.5]$ $z^7D^\circ - s^6D_{3.5}6d [2.5]$ $z^7D^\circ - s^6D_{3.5}6d [3.5]$ $z^7D^\circ - s^6D_{3.5}6d [1.5]$ $z^7D^\circ - s^6D_{3.5}6d [3.5]$ $z^7D^\circ - s^6D_{3.5}6d [2.5]$ $z^7D^\circ - s^6D_{3.5}6d [4.5]$ $z^7D^\circ - s^6D_{3.5}6d [1.5]$ $z^7D^\circ - s^6D_{3.5}6d [1.5]$ $z^7D^\circ - s^6D_{3.5}6d [1.5]$ $z^7D^\circ - s^6D_{3.5}6d [4.5]$ $z^7D^\circ - s^6D_{3.5}6d [4.5]$ $z^7D^\circ - s^6D_{3.5}6d [4.5]$ $z^7D^\circ - s^6D_{3.5}6d [4.5]$	4-3 1-2 2-2 2-3 2-2 3-4 3-2 3-4 3-3 3-2 4-5	2.04 d5* 10 d2 2.13 5 0? 1.43 7	2502.488 2528.459 2525.154 2524.7562 2521.631 2517.714 2515.2760 2514.089	2501.734 2527.699 2524.394 2523.9970 2520.872 2516.956 2514.5190	2.5 -2.6 5.1 1.3 0.0 1.3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.425 2.482 2.469 2.469 2.469	7.352 7.380 7.385 7.379 7.379		II
456	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	4-3 1-2 2-2 2-3 2-2 3-4 3-2 3-4 3-3 3-2 4-5	d5* 10 d2 2.13 5 0? 1.43 7 3	2502.488 2528.459 2525.154 2524.7562 2521.631 2517.714 2515.2760 2514.089	2501.734 2527.699 2524.394 2523.9970 2520.872 2516.956 2514.5190	2.5 -2.6 5.1 1.3 0.0 1.3	39549.78 ^D 40 39549.78 ^D 40 39601.55 ^D -80 39607.785 ^B -21 39656.88 ^D 0	2.425 2.482 2.469 2.469 2.469	7.380 7.385 7.379 7.379		II
	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	1-2 2-2 2-3 2-2 3-4 3-2 3-4 3-3 3-2 4-5	10 d2 2.13 5 0? 1.43 7 3	2528.459 2525.154 2524.7562 2521.631 2517.714 2515.2760 2514.089	2527.699 2524.394 2523.9970 2520.872 2516.956 2514.5190	-2.6 5.1 1.3 0.0 1.3	$39549.78 \stackrel{D}{.} 40$ $39601.55 \stackrel{D}{.} -80$ 39607.785^{B} -21 $39656.88 \stackrel{D}{.} 0$	2.482 2.469 2.469 2.469	7.385 7.379 7.379		II
	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	2-2 2-3 2-2 3-4 3-2 3-4 3-3 3-2 4-5	d2 2.13 5 0? 1.43 7	2525.154 2524.7562 2521.631 2517.714 2515.2760 2514.089	2524.394 2523.9970 2520.872 2516.956 2514.5190	5.1 1.3 0.0 1.3	$39601.55 \stackrel{D}{-} -80$ $39607.785^{B} -21$ $39656.88 \stackrel{D}{-} 0$	2.469 2.469 2.469	7.379 7.379		11
	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	2-3 2-2 3-4 3-2 3-4 3-3 3-2 4-5	2.13 5 0? 1.43 7 3	2524.7562 2521.631 2517.714 2515.2760 2514.089	2523.9970 2520.872 2516.956 2514.5190	1.3 0.0 1.3	39607.785^B -21 39656.88 D 0	2.469 2.469	7.379		
	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	2-2 3-4 3-2 3-4 3-3 3-2 4-5	5 0? 1.43 7 3	2521.631 2517.714 2515.2760 2514.089	2520.872 2516.956 2514.5190	0.0 1.3	39656.88 ^D 0	2.469			
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	3-4 3-2 3-4 3-3 3-2 4-5	0? 1.43 7 3	2517.714 2515.2760 2514.089	2516.956 2514.5190	1.3			1.363		
2 2 2 2 2	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	3-2 3-4 3-3 3-2 4-5	1.43 7 3	2515.2760 2514.089	2514.5190		39718.57 ^D -20		7.374		
2 2 2 2 2 2	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	3-4 3-3 3-2 4-5	7 3	2514.089		2.0	39757.068 ^D -31	2.449 2.449	7.379		II
2 2 2 2 2	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	3-3 3-2 4-5	3			-1.9	39775.84 ^D 30	2.449	7.381		I
2 2 2	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	3-2 4-5		2513.730	2512.973	1.9	39781.52 ^D -30	2.449	7.382		-
2 2 2	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	4-5		2511.782	2511.026	-1.9	39812.37 ^D 30	2.449	7.385		
2 2	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	1_5	2.01	2506.1986	2505.4437	0.3	39901.068 ^B -4	2.425	7.372		
2 2	$z^{7}D^{\circ}-s^{6}D_{3.5}6d$ [4.5]	4-5	1.18	2500.3792	2499.6257	-3.3	39993.934 ^C 53	2.425	7.384		
2		5-5	2.17	2492.9827	2492.2309	1.6	40112.593 ^B -26	2.399	7.372		
	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [3.5]	5-4	7	2492.229	2491.477	0.6	40124.73 ^D -10	2.399	7.374		
2	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	5-4	0	2488.677	2487.926	-2.5	40181.99 ^D 40	2.399	7.381		
2	$z^{7}D^{\circ} - s^{6}D_{3.5}6d$ [5.5]	5-6	2.01	2488.1657	2487.4150	-1.3	40190.250^{C} 21	2.399	7.382	• • •	
457 2	$z^{7}D^{\circ}-{}^{5}D4p^{2}{}^{7}F$	5-5	0	2489.233	2488.482	-1.9	40173.02 ^D 30	2.399	7.380		I
	· 1	1 - 2	1.88	2468.3150	2467.5689	0.4	40513.468 ^D -6	2.482	7.505		I
		$^{2-2}$	1.92	2461.8045	2461.0600	0.4	40620.609 ^B -6	2.469	7.505		
		3-2	1.73	2452.4180	2451.6756	-0.3	40776.083^B 5	2.449	7.505		
458 2	$z^{7}D^{\circ}-s^{6}D_{2.5}6d$ [0.5]	1-1	1	2518.287	2517.529	0.0	39709.54 ^D 0	2.482	7.405		
	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [1.5]	1-2	2.02	2515.0369	2514.2800	-0.1	39760.848^B 2	2.482	7.412		
- 2	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [2.5]	1-2	1.82	2511.0530	2510.2970	-0.3	39823.930^D 4	2.482	7.419		II
2	$z^{7}D^{\circ}-s^{6}D_{2.5}6d$ [1.5]	$^{2-2}$	1.82	2508.2808	2507.5255	2.6	39867.944 ^D -42	2.469	7.412		
2	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [2.5]	$^{2-2}$	8	2504.310	2503.555	-5.6	39931.16 ^D 90	2.469	7.419		II
2	$z^{7}D^{\circ}-s^{6}D_{2.5}6d$ [3.5]	2 - 3	3	2501.615	2500.861	1.3	39974.18 ^D -20	2.469	7.425		
2	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [2.5]	3 - 3	2.00	2496.0289	2495.2764	-0.6	40063.639 ^C 10	2.449	7.417		
	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [3.5]	3-4	d3	2492.422	2491.670	-0.6	40121.62 ^D 10	2.449	7.424		
	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [4.5]	4-5	1.85	2490.2720	2489.5208	1.6	40156.256 ^C -25	2.425	7.404	• • •	
2	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [4.5]	4-4	1.52	2489.8258	2489.0748	0.6	40163.452 ^D -9	2.425	7.405	• • •	I
2	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [3.5]	4-4	2.35	2480.3915	2479.6426	-0.9	40316.216^D 14 40324.255^D -7	2.425 2.425	7.424 7.425	• • •	II II
	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [3.5] $z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [4.5]	4-3 5-5	1.04 2.18	2479.8970 2477.2200	2479.1483 2476.4719	0.4 -0.1	40324.233 -7 40367.831^B 2	2.399	7.404	• • •	11
4	$z^{7}D^{9} - s^{6}D_{2.5}6d$ [4.5] $z^{7}D^{9} - s^{6}D_{2.5}6d$ [4.5]	5-3 5-4	1.91	2477.2200	2476.4719	-0.1 -0.4	40307.831 2 40375.015^B 6	2.399	7.404		
	$z^{7}D^{\circ} - s^{6}D_{2.5}6d$ [3.5]	5-4	2.31	2467.4426	2466.6967	-2.6	40575.015 40527.792^B 42	2.399	7.424		
459	$z^{7}D^{\circ} - s^{6}D_{1.5}6d$ [1.5]	1-1	1.65	2501.2396	2500.4859	-1.3	39980.176 ^D 20 40122.63 ^D 80	2.482	7.439	• • • •	
<i>i</i>	$z^{7}D^{\circ} - s^{6}D_{1.5}6d$ [1.5] $z^{7}D^{\circ} - s^{6}D_{1.5}6d$ [2.5]	2-2	1 52	2492.359 2489.8258	2491.607 2489.0748	-5.0 -1.7	40122.63^{D} 80 40163.452^{D} 27	2.469 2.469	7.443 7.448	• • • •	I
	$z^{7}D^{9} - s^{9}D_{1.5}6d$ [2.5] $z^{7}D^{9} - s^{6}D_{1.5}6d$ [2.5]	$\begin{array}{c} 2-3 \\ 2-2 \end{array}$	1.52 0	2489.233	2489.0748	-0.6	40173.02 ^D 10	2.469	7.449		I
	$z^{7}D^{9} - s^{6}D_{1.5}6d$ [2.5] $z^{7}D^{9} - s^{6}D_{1.5}6d$ [3.5]	2-2 $2-3$	1.88	2489.233	2487.7678	-1.5	40173.02 10 40184.551 ^C 25	2.469	7.451		1
	$z^{7}D^{\circ} - s^{6}D_{1.5}6d$ [1.5]	3-2	d0?	2482.741	2481.991	-3.7	40278.07 ^D 60	2.449	7.443		
	$z^{7}D^{\circ} - s^{6}D_{1.5}6d$ [2.5]	3-3	2.81	2480.2292	2479.4804	2.2	40318.854 ^D -35	2.449	7.448		I
	$z^{7}D^{\circ} - s^{6}D_{1.5}6d$ [3.5]	3-3	1.36	2478.9278	2478.1793	-2.0	40340.021^D 32	2.449	7.451		
,	$z^{7}D^{\circ} - s^{6}D_{1.5}6d$ [2.5]	4-3	1.88	2468.3150	2467.5689	0.8	40513.468 ^D -13	2.425	7.448		I
	$z^{7}D^{\circ}-s^{6}D_{1.5}6d$ [3.5]	4-3	1.51	2467.0280	2466.2823	-1.2	40534.602^{C} 20	2.425	7.451		
460	$z^{7}D^{\circ}-s^{6}D_{0.5}6d$ [1.5]	1-2	1	2493.207	2492.455	-0.6	40108.98 ^D 10	2.482	7.455		
461	$z^{7}D^{\circ}$ -62079^{e}	5-6	2.12	2340.3624	2339.6453	0.1	42728.425^B -2	2.399	7.697	• • •	
462	$z^{7}D^{\circ}-62192^{e}$	4-5	9*	2345.755	2345.037	5.5	42630.19 ^D -100	2.425	7.711		
463	$z^{7}D^{\circ}-62377^{e}$	3-4	8	2346.281	2345.563	-0.6	42620.64 ^D 10	2.449	7.734		
		5-4	1.34	2324.1355	2323.4220	1.0	43026.751 ^D -18	2.399	7.734		II
464	$a^3H-z^5G^{\circ}$	4-5	2.85	6669.2601	6667.4191	0.4	14994.167 ^A -1	2.453	4.312	-4.40 ^b	
((168)	5-5	4.85	6595.6917	6593.8705	0.9	15161.412 ^A -2	2.433	4.312	-2.42 ^b	
		6-5	5.94	6496.7751	6494.9805	0.0	15392.252^{A} 0	2.404	4.312	-1.27 ^b	

i				T	ABLE 2—Co	ntinued	<u>!</u>					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
3		6-6	2.94	6470.9058	6469.1181	0.4	15453.787 ^A	-1	2.404	4.320		
<u>,</u>		4-4	4.52	6464.5111	6462.7251	-0.8	15469.074 ^A		2.453	4.371	-2.60^{b}	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		5-4	5.48	6395.3687	6393.6013	0.4	15636.315 ^A		2.433	4.371	-1.58 ^a	
4		4-3	4.57	6319.7647	6318.0175	-0.8	15823.374 ^A	2	2.453	4.415		
465	$a {}^{3}H - z {}^{3}G^{\circ}$	4-5	1.85	6413.9749	6412.2025	-0.4	15590.956^{L}	1	2.453	4.386		
	(169)	5-5	3.98	6345.9033	6344.1491	0.8	15758.198 ^A		2.433	4.386	-2.92^{b}	
		4-4	3.14	6258.0921	6256.3615	0.0	15979.311 ^A	0	2.453	4.434	-2.41a	
		6-5	3.98	6254.2850	6252.5554	0.0	15989.038 ^A		2.404	4.386	-1.69^{b}	
		5-4	3.78	6193.2716	6191.5584	0.4	16146.555 ^L		2.433	4.434	-1.42 ^a	I
		4-3	2.05	6138.3138	6136.6153	0.4	16291.119 ^A	-1	2.453	4.473	-1.40^{b}	
466	$a {}^{3}H - y {}^{3}F^{\circ}$	4-4	2.49	5917.8867	5916.2474	-0.4	16897.924 ^A	1	2.453	4.548	-2.99^{b}	
	(170)	5-4	0.78	5859.8892	5858.2654	-0.3	17065.169 ^A		2.433	4.548		
		4-3	0.60	5755.5656	5753.9697	2.0	17374.487 ^E	-6	2.453	4.607		
467	$a\ ^{3}H-y\ ^{5}G^{o}$	5-4	2.46	4273.1445	4271.9423	1.3	23401.970 ^C	-7	2.433	5.334		
	(171)	6-5	2.34	4251.3878	4250.1913	2.9	23521.731^{L}	-16	2.404	5.320		
468	$a^3H-z^5H^{\circ}$	4-5	1.72	4309.7067	4308.4949	1.5	23203.435 ^C	-8	2.453	5.330		
	(172)	5-4	2.31	4257.5079	4256.3097	-2.0	23487.919^{L}		2.433	5.345		
		4-3	3.16	4248.5018	4247.3061	0.4	23537.709 ^A		2.453	5.372	-2.71 ^a	
		6-5	1.60	4237.0104	4235.8177	-3.6	23601.547 ^L	20	2.404	5.330	• • •	
469	$a\ ^{3}H\!-\!z\ ^{5}I^{\circ}$	5-6	2.78	4295.0063	4293.7983	0.0	23282.853 ^E		2.433.	5.319		
	(172a)	6-6	1.70	4252.8386	4251.6417	-3.1	23513.707 ^C		2.404	5.319		
		4-4	2.58	4227.5331	4226.3428	-0.9	23654.457 ^E		2.453	5.386		
		4-5	2.45	4224.4226	4223.2332	-1.1	23671.874 ^B		2.453	5.388	• • •	
		5-4	2.95	4197.8539	4196.6715	0.2	23821.696 ^A		2.433	5.386	• • •	
		5-5 6-5	1.81 2.83	4194.7859 4154.5582	4193.6042 4153.3871	-1.1 0.5	23839.119 ^B 24069.948 ^B		2.433 2.404	5.388 5.388	• • •	
450	311 500										•••	
470	$a^3H-v^5D^\circ$	5-4	2.32	4098.1064	4096.9500	0.5	24401.514 ^D		2.433	5.458		
471	$a^{3}H - y^{3}G^{\circ}$	4-4 5-5	3.86 3.85	3900.1335 3895.0158	3899.0289 3893.9125	0.0 0.2	25640.148 ^A 25673.837 ^A		2.453 2.433	5.632 5.616	-1.81 ^a	
	(175)	3-3 4-3	3.63 4.69	3879.7703	3878.6709	-0.2	25774.722 ^A		2.453	5.649	-1.86 ^a -0.95 ^a	
		5-4	4.80	3874.8587	3873.7606	0.2	25807.393^{A}		2.433	5.632	-0.88^a	
		6-5	4.91	3860.3068	3859.2125	-0.1	25904.677 ^A		2.404	5.616	-0.75^a	
472	$a^3H-x^5G^0$	5-6	3.08	3848.0246	3846.9335	-1.0	25987.360^{B}	7	2.433	5.655	-2.00^a	
	(176)	4-3	2.58	3827.7119	3826.6261	-3.5	26125.268 ^L		2.453	5.692		
		5-4	2.52	3815.0158	3813.9334	0.6	26212.211 ^C	-4	2.433	5.682	-2.24^a	
473	$a\ ^{3}H-z\ ^{3}I^{\circ}$	4-5.	4.78	3795.4171	3794.3398	0.3	26347.565 ^A		2.453	5.720	-1.01 ^a	
	(177)	5-6	4.90	3787.0236	3785.9483	0.1	26405.962 ^A		2.433	5.706	-0.94^a	
		5-5	3.38	3771.4757	3770.4045	-1.1	26514.820^{B}		2.433	5.720	-2.30^{a}	
		6-7	5.07	3761.1181	3760.0497	-0.1	26587.838 ^A		2.404	5.700	-0.85 ^b	
		6–6	3.38	3754.2044	3753.1377	-0.3	26636.802 ^A		2.404	5.706	-2.50^a	
474	$a^{3}H - x^{3}F^{\circ}$	5-4	3.19	3667.2858	3666.2416	1.5	27268.123^{L}		2.433	5.813	-1.15^a	I
	(179)	4-3	2.86	3662.4064	3661.3635	0.8	27304.452 ^B		2.453	5.839	-2.45 ^b	
475	$a^{3}H-z^{3}H^{0}$	4-5	3.31	3673.7534	3672.7075	0.0	27220.118 ^B		2.453	5.828	-2.11^a	
	(180)	4-4 5-6	4.47 3.57	3660.5593 3654.7955	3659.5168 3653.7545	0.1 -0.1	$27318.230^{A} 27361.312^{A}$		2.453 2.433	5.840 5.825	-0.94 ^a -1.80 ^a	
		5-5	4.54	3651.3193	3650.2792	0.1	27387.361^{L}		2.433	5.828	-0.87^a	II
		5-4	3.58	3638.2853	3637.2486	0.1	27485.475 ^A		2.433	5.840	-1.79ª	
		6-6	4.70	3624.2191	3623.1860	-0.1	27592.151 ^A		2.404	5.825	-0.77ª	
		6-5	3.30	3620.8009	3619.7687	0.3	27618.199^{B}	-2	2.404	5.828	-2.22^a	
476	$a~^3H-w~^5G^{ m o}$	4-5	2.67	3618.9944	3617.9627	-1.4	27631.985 ^C	11	2.453	5.879		
	(181)	5-6	2.93	3604.5955	3603.5675	0.4	27742.364 ^C	-3	2.433	5.872		
		5-5	3.29	3597.2221	3596.1960	-1.2	27799.229 ^E		2.433	5.879	-2.04^{b}	
		4-4	3.07	3596.8906	3595.8646	0.4	27801.791 ^B		2.453	5.900	-2.14^{a}	
		4-3	2.75	3583.5868	3582.5642	-2.3	27905.003 ^C		2.453	5.913	-2.48^a	
		6-6 6-5	4.23 3.03	3574.8494 3567.5990	3573.8291 3566.5805	0.0 0.1	27973.206 ^A 28030.056 ^B		2.404 2.404	5.872	-1.22 ^a	
		0-3	3.03	2207.2990	2000.2002	0.1	∠0U3U.U30 [™]	-1	2.404	5.879	• • •	

:				IAL	SLE 2—Cont	шеи						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
477	$a^3H-z^1G^0$	4-4	2.72	3614.7465	3613.7159	0.9	27664.457 ^C	-7	2.453	5.883	•••	
478	$a~^3H-v~^5F^{\circ}$	4-4	2.62	3553.4398	3552.4250	-0.4	28141.746^{C}	3	2.453	5.942		
1	(182)	5-4	2.93	3532.4473	3531.4378	0.2	28308.986^{C}	-2	2.433	5.942	-1.95^a	
		4 - 3	2.46	3529.2470	3528.2384	2.2	28334.656^{D}	-18	2.453	5.966		
479	$a {}^{3}H - x {}^{3}G^{\circ}$	4-4	3.29	3568.3877	3567.3690	0.4	28023.861^{B}	-3	2.453	5.928	-2.09ª	
7//	(183)	4-3	3.32	3565.5749	3564.5570	-0.1	28045.968 ^B		2.453	5.930	-2.07^a	
	(103)	4-5	3.35	3565.5332	3564.5153	0.0	28046.296 ^B		2.453	5.931	-2.28^a	
		5-4	2.95	3547.2186	3546.2053	1.0	28191.102^{C}		2.433	5.928		
		5-5	3.33	3544.3976	3543.3851	0.4	28213.539^{B}		2.433	5.931	-1.99 ^a	
		6-5	3.35	3515.6323	3514.6272	-0.7	28444.385^{B}		2.404	5.931	-2.02^a	
480	$a^3H-y^5H^{\circ}$	5-6	3.59	3541.8127	3540.8009	0.6	28234.130^{B}	-5	2.433	5.933		
460	(183a)	4-3	3.05	3485.8480	3484.8506	1.1	28687.424 ^C		2.453	6.010	-2.77 ^a	
	(165a)	5-4	2.85	3479.3656	3478.3698	0.2	28740.872^{C}		2.433	5.996		
		6-5	2.74	3467.2756	3466.2829	2.6	28841.088^{C}		2.404	5.980	-2.73 ^a	
481	$a^3H-z^1H^{\circ}$	5-5	3.24	3476.8585	3475.8634	-0.2	28761.596 ^B	2	2.433	5.998		
	(186)											
482	$a^3H-w^3F^{\circ}$	4-4	2.43	3410.5663	3409.5881	-0.2	29320.644 ^D		2.453	6.089		
	(188)	4 - 3	2.95	3395.0516	3394.0774	-0.1	29454.633^{B}	1	2.453	6.105	-2.23^a	
483	$a^3H-y^3H^{\circ}$	5-6	2.71	3354.2241	3353.2603	0.0	29813.154^{C}	0	2.433	6.129	-2.05^a	
.02	(190)	4-4	3.07	3340.1548	3339.1946	0.6	29938.732^{B}		2.453	6.165	-1.69^a	
	(/	5-5	2.90	3335.1766	3334.2177	-0.1	29983.420^{B}		2.433	6.150	-2.05^a	
		6-6	2.80	3328.4529	3327.4957	0.6	30043.988^{C}		2.404	6.129		
		5-4	2.75	3321.5985	3320.6430	-0.7	30105.987^{B}		2.433	6.165		
484	a ^3H-v $^3G^{\circ}$	4-5	2.51	3370.1068	3369.1390	-0.2	29672.650 ^C	2	2.453	6.132		
707	(191)	5-4	3.04	3332.5694	3331.6111	-0.1	30006.877 ^B		2.433	6.153	-1.57 ^a	
	(171)	4-3	3.34	3326.4214	3325.4647	-0.1	30062.337^{B}		2.453	6.180	-1.56^a	
		6-5	3.46	3325.4930	3324.5366	0.2	30070.729^{A}		2.404	6.132	-1.50^a	
485	$a^{3}H - x^{1}G^{0}$	4-4	2.93	3244.0442	3243.1084	0.8	30825.721^{B}	-8	2.453	6.275	-2.17 ^a	
463	(192)	5-4	2.69	3226.5388	3225.6074	1.1	30992.964^B		2.433	6.275	-2.17	
486	$a {}^{3}H - x {}^{3}H {}^{\circ}$	4-5	2.66	3196.8832	3195.9594	-0.2	31280.467^{C}	2	2.453	6.331		
	(192a)	5-6	2.81	3184.4958	3183.5751	0.8	31402.145^{B}	-8	2.433	6.326		
		5-5	3.49	3179.8817	3178.9622	-0.1	31447.711 ^A	1	2.433	6.331		
		4-4	2.34	3162.4663	3161.5512	-2.0	31620.890^{D}	20	2.453	6.374		
		6-6	3.58	3161.2564	3160.3415	-0.2	31632.993 ^A	2	2.404	6.326		
		6-5	2.73	3156.7095	3155.7959	-0.9	31678.556^{B}_{-}	9	2.404	6.331		
		5-4	2	3145.834	3144.923	4.0	31788.07 ^D	-40	2.433	6.374		I
487	$a^3H-t^5D^{\circ}$	5-4	2	3179.089	3178.170	7.1	31455.55 ^D	-70	2.433	6.332		
		4-3	d0?	3167.252	3166.336	2.0	31573.11 ^D	-20	2.453	6.368		
488	$a~^3H$ – $v~^3F$ $^{\circ}$	4-4	2.88	3172.9561	3172.0383	-0.1	31516.352^{B}		2.453	6.361		
	(193)	4-3	5	3166.850	3165.934	-6.0	31577.12 $^{D}_{-}$		2.453	6.368		II
		5-4	3.07	3156.2070	3155.2934	-0.5	31683.600^{B}	5	2.433	6.361		
489	$a~^3H-u~^3G^{o}$	4-5	0	3165.993	3165.077	-1.0	31585.67 ^D	10	2.453	6.369		
	(194)	5-5	2.59	3149.3177	3148.4058	-0.9	31752.910^{C}	9	2.433	6.369		
		4-4	2.57	3136.7693	3135.8606	-0.2	31879.935^{D}	2	2.453	6.406		II
		6-5	3.80	3126.5886	3125.6825	-0.1	31983.741 ^A		2.404	6.369	-0.87^a	
		4-3	3.58	3121.3401	3120.4354	-0.2	32037.521 ^A		2.453	6.425	-1.13^a	
		5-4	3.64	3120.3995	3119.4949	-0.1	32047.179 ^A	1	2.433	6.406	-0.96^a	
490	$a^3H-Hsp3^1H^o$	4-5	d0?	3140.515	3139.606	1.0	31841.91 ^D	-10	2.453	6.401		
	(196a)	5-5	d0?	3124.105	3123.199	0.0	32009.17 ^D	0	2.433	6.401		
	•	6-5	3.36	3101.7361	3100.8363	-0.1	32240.009^{A}		2.404	6.401	-1.36 ^a	
491	$a^{3}H-u^{3}D^{\circ}$	4-3	1*	3107.440	3106.539	1.0	32180.83 ^D	-10	2.453	6.443		
402	(196) $a^{3}H-t^{3}D^{\circ}$	1 2	2	2084 046	2082 150	2.0	32424.94 ^D	20	2 452	6 472		ŢŢ
492	$a \ ^{3}H - t \ ^{3}D^{3}$ (197)	4-3	2	3084.046	3083.150	2.9	32424.94	-30	2.453	6.473	• • •	II

No.											
	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mK	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
493	a ³ H-w ³ H° (198)	5-6 4-5	1.95 2.28	3047.8104 3046.4747	3046.9241 3045.5887	-0.2 0.9	32810.440^{D} 2 32824.825^{C} -10	2.433 2.453	6.500 6.523	 -1.57 ^a	
	(170)	4-4	3.17	3032.0949	3031.2125	-0.9	32980.498 ^C 10	2.453	6.542		
		5-5	4.14	3031.0305	3030.1483	0.0	32992.080^{A} 0	2.433	6.523	-0.12^a	
		6-6	4.30	3026.5174	3025.6364	-0.2	33041.277 ^A 2	2.404	6.500	0.02^{a}	
		5-4	3.14	3016.7976	3015.9191	0.2	33147.732 ^A -2	2.433	6.542	-1.14^{b}	
		6-5	3.33	3009.9700	3009.0932	-0.3	33222.922^{A} 3	2.404	6.523	-0.94ª	
494	$a^{3}H-y^{3}I^{0}$	5-6	2.49	3040.2016	3039.3171	-0.5	32892.556 ^C 5	2.433	6.511	-1.54 ^a	
	(199)	4-5	2.83	3020.1670	3019.2875	-0.8	33110.752 ^B 9	2.453	6.558	-1.46 ^a	
	(· · /	6-6	2.61	3019.0142	3018.1351	-0.5	33123.395^{C} 6	2.404	6.511	-1.67^{b}	
		6-7	3.11	3006.1786	3005.3027	-0.3	33264.823 ^A 3	2.404	6.528	-1.22^a	
		5-5	2.90	3004.9893	3004.1136	-0.1	33277.989^B 1	2.433	6.558	-1.38^a	
		6-5	d0	2984.290	2983.419	0.9	33508.81 ^D -10	2.404	6.558		
495	$a{}^3H-{}^4F5p{}^3G^{\circ}$	4-5	0	3028.581	3027.700	1.8	33018.76 ^D -20	2.453	6.547		
		5-5	2.72	3013.3191	3012.4414	-0.5	33185.997^B 6	2.433	6.547		
		6-5	3.27	2992.5039	2991.6314	-0.2	33416.832^{A} 2	2.404	6.547		
		4-4	0	2921.478	2920.623	6.0	34229.25 ^D -70	2.453	6.697		
		5-4	2.43	2907.2659	2906.4145	-0.6	34396.578 ^C 7	2.433	6.697		
		4-3	2.11	2892.7541	2891.9062	1.5	34569.133 ^C -18	2.453	6.739	• • •	
496	$a~^3H\!-\!Gsp3~^3F^{ m o}$	4-4	0	3015.193	3014.315	0.0	33165.37 ^D 0	2.453	6.565		
		5-4	2.67	3000.0627	2999.1882	-1.5	33332.637 ^B 17	2.433	6.565		
		4-3	2	2978.919	2978.050	3.5	33569.22 ^D -40	2.453	6.615		
497	$a^{3}H-{}^{4}F5p^{5}G^{0}$	6-6	d0?	2969.199	2968.332	5.3	33679.12 ^D -60	2.404	6.580		
.,,		5-5	0	2944.164	2943.303	0.0	33965.50 ^D 0	2.433	6.644		
		6-5	6	2924.286	2923.431	-3.4	34196.38 ^D 40	2.404	6.644		I
		4-3	1*	2911.516	2910.663	2.5	34346.37 ^D -30	2.453	6.712		
498	$a^{3}H-{}^{4}F5p^{5}F^{0}$	5-5	d0?	2988.300	2987.429	-5.4	33463.84 ^D 60	2.433	6.581		
	•	4-4	0	2976.156	2975.287	0.0	33600.39 ^D 0	2.453	6.619		
		5-4	2.51	2961.4157	2960.5508	-0.5	33767.634 ^B 6	2.433	6.619		
		4-3	1.95	2952.2210	2951.3585	1.9	33872.803^D -22	2.453	6.653	• • •	
499	$a~^3H-z~^1I^{\circ}$	5-6	2.48	2987.5259	2986.6546	0.5	33472.513^{C} -6	2.433	6.583	-1.83^{b}	
	(200)	6–6	2.46	2967.0637	2966.1974	0.2	33703.355^D -2	2.404	6.583	• • •	I
500	$a^{\;3}H\!-\!y^{\;1}H^{\;0}$	4-5	0	2982.841	2981.970	8.0	33525.09 ^D -90	2.453	6.610		
	-	5-5	0	2968.040	2967.173	14.1	33692.27 ^D -160	2.433	6.610		
		6-5	0	2947.836	2946.975	6.1	33923.19 ^D -70	2.404	6.610	• • • •	
501	$a^{3}H-{}^{4}F5p^{3}F^{0}$	4-4	d0	2981.462	2980.592	0.0	33540.59 ^D 0	2.453	6.612		
	(UV147,20)	5-4	2.81	2966.6700	2965.8039	-0.1	33707.827^B 1	2.433	6.612		
		4-3	1	2898.493	2897.644	7.6	34500.69 ^D -90	2.453	6.731		
502	$a\ ^{3}H-^{4}F5p\ ^{5}D^{\circ}$	5-4	2.20	2942.0948	2941.2348	1.3	33989.387 ^C -15	2.433	6.647		
302	w 11 1 cp 2	4-3	1.90	2941.4822	2940.6223	2.5	33996.466 ^D -29	2.453	6.668		
503	a^3H $-Dsp3^5F^o$	4-3	2.78	2945.9125	2945.0516	0.0	33945.339 ^A 0	2.453	6.662		
303	a 11 12 3 p 3 1	5-5	1	2907.592	2906.741	1.7	34392.72 ^D -20	2.433	6.697		II
		6-5	2	2888.207	2887.360	1.7	34623.56 ^D -20	2.404	6.697		
504	$a^{3}H-{}^{4}F5p^{3}D^{\circ}$	4-3	2.04	2936.8911	2936.0324	-1.3	34049.611 ^D 15	2.453	6.675		
505	$a^3H-Dsp3^5D^{\circ}$	4-3 5-4	3 0	2932.271 2883.478	2931.413 2882.633	0.9 0.0	34103.26 ^D -10 34680.34 ^D 0	2.453 2.433	6.681 6.732	• • •	
										•••	
506	$a~^3H$ $-t~^3G^{\circ}$	5-5	2.04	2910.1668	2909.3147	-0.7	34362.291 ^D 8	2.433	6.693	• • •	
	(UV149)	4-4	1	2902.826	2901.976	-1.7	34449.19 ^D 20	2.453	6.724		
		6-5	2.30	2890.7473	2889.9000	-0.8	34593.131 ^C 10	2.404	6.693	-2.11 ^a	
		5-4	3	2888.805	2887.958	0.8	34616.39 ^D -10	2.433	6.724	-1.80^{a}	
	2	4-3	2	2872.567	2871.724	1.7	34812.07 ^D -20	2.453	6.769	•••	
505	$a~^3H-t~^5P^{\circ}$	4-3	2	2922.571	2921.716	0.9	34216.45 ^D -10	2.453	6.696	•••	
507							05000 005D 0				
507	$a~^3H-s~^3G^{\circ}$	5-5	2.66	2792.6091	2791.7858	0.2	35808.807^{D}_{-} -3	2.433	6.872		I
	$a {}^{3}H - s {}^{3}G^{\circ}$ (UV153)	5-5 4-3	2.66 1.79	2792.6091 2777.5867	2791.7858 2776.7671	0.2 -2.6	35808.807^{D} -3 36002.476^{D} 34 36039.620^{D} -27	2.433 2.453 2.404	6.872 6.917 6.872		I II

No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ 5 o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		4-4 5-4	d0? 2.24	2768.762 2755.9962	2767.944 2755.1819	3.8 0.5	36117.23 ^D -50 36284.520 ^B -7	2.453 2.433	6.931 6.931	 -1.28 ^a	
509	a ³ H-v ³ H° (UV151)	4-4 4-5 5-6 5-5 6-6 6-5	2.63 d0? 0 2.00 2.97 2.03	2804.4395 2798.199 2787.948 2785.1635 2770.1159 2767.3687	2803.6134 2797.375 2787.125 2784.3420 2769.2982 2766.5516	0.3 2.3 3.9 1.4 -0.1 -1.4	$\begin{array}{cccc} 35657.749^{B} & -4 \\ 35737.27 & D & -30 \\ 35868.68 & D & -50 \\ 35904.535^{C} & -18 \\ 36099.572^{A} & 1 \\ 36135.409^{D} & 18 \\ \end{array}$	2.453 2.453 2.433 2.433 2.404 2.404	6.874 6.884 6.880 6.884 6.880 6.884	-0.96 ^a -1.53 ^a -0.57 ^a	I
510	$a^{3}H-^{2}H4p^{1}H^{0}$	6-5	2.64	2738.4510	2737.6409	0.9	36516.995^B -12	2.404	6.931	-0.85^a	
511	$a~^3H\!-\!Gsp3~^1F^{ m o}$	4-3	11*	2754.099	2753.285	4.6	36309.52 ^D -60	2.453	6.955	• • •	II
512	a^3H – $s^6D6p^7D^\circ$	5-5 5-4	d0 1.38	2739.784 2710.3431	2738.973 2709.5398	6.8 2.6	36499.23 ^D -90 36895.698 ^D -36	2.433 2.433	6.958 7.007		
513	a^3H – $s^6D6p^7F^o$	5-6 5-5 4-3	<i>1</i> d7 1	2729.258 2711.348 2685.382	2728.450 2710.545 2684.585	-1.5 -5.1 3.6	36640.00 ^D 20 36882.02 ^D 70 37238.65 ^D -50	2.433 2.433 2.453	6.975 7.005 7.070		I
514	a ³ H-u ³ H° (UV154)	4-4 5-6 5-5 5-4 6-6 6-5	2.85 1 3.00 1.91 2.91 2.03	2729.6282 2723.832 2720.2260 2717.2236 2706.8150 2703.2518	2728.8202 2723.025 2719.4203 2716.4187 2706.0126 2702.4502	0.2 -2.2 0.1 0.2 0.1 0.5	$\begin{array}{cccc} 36635.026^A & -3 \\ 36712.99 & D & 30 \\ 36761.651^A & -1 \\ 36802.271^C & -3 \\ 36943.788^A & -1 \\ 36992.484^B & -7 \\ \end{array}$	2.453 2.433 2.433 2.433 2.404 2.404	6.995 6.984 6.990 6.995 6.984 6.990	-0.52 ^a -0.41 ^a -1.31 ^a -0.49 ^a -1.29 ^a	
515	a ³ H-u ³ F° (UV155)	4-4 4-3	1.94 d0?	2717.0624 2703.065	2716.2574 2702.264	-0.4 1.5	36804.455^{C} 6 36995.04^{D} -20	2.453 2.453	7.016 7.040	-1.43 ^a	
516	$a^{3}H - s^{6}D_{4.5}4f$ [5.5]° $a^{3}H - s^{6}D_{4.5}4f$ [4.5]° $a^{3}H - s^{6}D_{4.5}4f$ [5.5]°	4-5 4-4 5-6	2.22 0 6*	2705.4172 2705.139 2693.400	2704.6151 2704.337 2692.601	-2.3 0.0 7.3	36962.876 ^D 31 36966.68 ^D 0 37127.79 ^D -100	2.453 2.453 2.433	7.036 7.036 7.036		II
517	a ³ H-x ³ I° (UV156)	4-5 5-6 6-7 6-6	2.46 2.65 2.68 0	2679.8202 2670.2869 2656.9359 2653.928	2679.0242 2669.4933 2656.1454 2653.138	1.8 0.1 0.1 0.0	37315.937 ^A -25 37449.159 ^A -2 37637.340 ^B -1 37680.00 ^D 0	2.453 2.433 2.404 2.404	7.080 7.076 7.070 7.076	-0.89^{a} -0.73^{a} -0.59^{a}	
518	$a~^3H-t~^3F^{\circ}$	4-4 4-3 5-4	2 1.52 1.88	2648.184 2641.8162 2636.5069	2647.395 2641.0293 2635.7213	1.4 -0.1 1.9	37761.73 ^D -20 37852.747 ^C 1 37928.974 ^C -27	2.453 2.453 2.433	7.135 7.146 7.135	-1.25 ^a -1.39 ^a	II
519	$a^{3}H - s^{4}D5p^{3}F^{0}$	4-3	3	2544.442	2543.678	1.3	39301.35 ^D -20	2.453	7.326		
520	a $^3H-Hsp1$ $^3G^{\circ}$	4-5 5-5 4-4 6-5 5-4 4-3	0 1.81 1.49 2.86 2.80 2.75	2615.725 2604.3326 2594.2765 2588.7696 2583.0710 2576.5166	2614.944 2603.5546 2593.5010 2587.9954 2582.2981 2575.7453	-0.7 -0.2 -2.2 0.1 -0.4 -0.1	$\begin{array}{cccc} 38230.32 & ^D & 10 \\ 38397.554^C & 3 \\ 38546.392^C & 33 \\ 38628.389^B & -1 \\ 38713.609^A & 6 \\ 38812.092^A & 2 \\ \end{array}$	2.453 2.453 2.453 2.404 2.433 2.453	7.193 7.193 7.232 7.193 7.232 7.265		
521	a^3H – $s^4D5p^5F^o$	4-4 5-4	d0? 3	2584.441 2573.320	2583.668 2572.549	-2.7 -0.7	38693.09 ^D 40 38860.31 ^D 10	2.453 2.433	7.251 7.251	• • • •	II
522	$a^{3}H^{-4}F_{4.5}4f$ [5.5]° $a^{3}H^{-4}F_{4.5}4f$ [3.5]° $a^{3}H^{-4}F_{4.5}4f$ [5.5]° $a^{3}H^{-4}F_{4.5}4f$ [6.5]° $a^{3}H^{-4}F_{4.5}4f$ [4.5]° $a^{3}H^{-4}F_{4.5}4f$ [3.5]° $a^{3}H^{-4}F_{4.5}4f$ [6.5]°	4-5 4-4 5-6 5-6 5-4 5-4	d0? 10* 1.11 1.53 1 2 2.98	2569.859 2569.176 2558.8817 2558.7458 2558.596 2558.188 2543.4996	2569.089 2568.407 2558.1145 2557.9786 2557.829 2557.421 2542.7360	-4.0 0.7 -2.8 1.6 -1.3 3.9 -0.8	38912.64 ^D 60 38922.98 ^D -10 39079.572 ^C 42 39081.647 ^D -25 39083.93 ^D 20 39090.17 ^D -60 39315.909 ^D 13	2.453 2.453 2.433 2.433 2.433 2.433 2.404	7.278 7.279 7.278 7.278 7.278 7.279 7.278		II II
523	$a~^3H-Hsp1~^3I^\circ$	4-5 5-6 6-7 5-5 6-6	3.17 3.26 3.32 1.99 2.20	2544.6864 2542.8647 2537.9370 2533.9029 2528.0262	2543.9225 2542.1013 2537.1747 2533.1415 2527.2662	-0.1 -0.2 0.1 0.4 0.6	39297.573^B 1 39325.726^A 3 39402.082^A -1 39464.812^B -6 39556.552^B -9	2.453 2.433 2.404 2.433 2.404	7.325 7.308 7.289 7.325 7.308	0.70 ^a 0.75 ^a 0.73 ^a -0.66 ^a -0.36 ^a	

					LE 2—Contil	шеи						
No.	Multiplet (MT) [[]	J-J	I ²	$\lambda_{vac}^{}$ (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
524	$a^{3}H-{}^{4}F_{1.5}4f[3.5]^{\circ}$	4-3	1	2490.099	2489.348	1.2	40159.05 ^D	-20	2.453	7.432		II
J2 .	$a^{3}H - {}^{4}F_{1.5}4f$ [4.5]°	4-5	0	2489.279	2488.528	-2.5	40172.27 ^D	40	2.453	7.434		
	$a^{3}H - {}^{4}F_{1.5}4f$ [4.5]°	5-5	2.17	2478.9596	2478.2111	-1.8	40339.503^{D}	30	2.433	7.434		II
	$a^{3}H - F_{1.5}4f [4.5]^{\circ}$ $a^{3}H - {}^{4}F_{1.5}4f [4.5]^{\circ}$	5-4	2.17	2478.9370	2478.179	-4.9	40340.03 ^D	80	2.433	7.434		I
		3-4	2	2410.921				80		7.434	• • •	1
525	$a~^3H-Fsp1~^3F$ °	4-4	1.96	2480.9371	2480.1881	-0.3	40307.350^{C}	5	2.453	7.451		
		4-3	1.63	2476.2151	2475.4672	-0.2	40384.213^{C}	3	2.453	7.460		
		5-4	1.53	2470.6857	2469.9391	-0.2	40474.593^{C}	4	2.433	7.451		
501	3 77 77 13 000			2461 0452	2460 2007	1.0	40C22 142B	17	2 422			
526	$a^3H-Fsp1\ ^3G^{\circ}$	5-5	1.20	2461.0452	2460.3007	1.0	40633.143 ^B	-17	2.433	7.470	• • •	
		4-4	15*	2458.333	2457.589	-3.6	40677.97 ^D	60	2.453	7.497	• • •	II
527	$a^3H-t^3H^{\circ}$	5-6	1.62	2454.3118	2453.5690	0.5	40744.619^{B}	-9	2.433	7.484	-0.84^a	
	(UV157)	4-5	1.41	2453.3346	2452.5919	0.8	40760.849^{C}	-13	2.453	7.507		
	(8,137)	5-5	2.64	2443.3088	2442.5685	0.1	40928.105^{A}	-2	2.433	7.507	0.49^{a}	
		4-4	2.65	2440.8495	2440.1097	-0.1	40969.343 ^A	2	2.453	7.533	• • • •	
		6-6	3.24	2440.4846	2439.7449	-0.1	40975.468 ^A	2	2.404	7.484	0.60^{a}	
					2439.7449		40975.468 41136.562^{B}	-25	2.433			
		5-4	1.79	2430.9275		1.5				7.533	• • •	
		6-5	2	2429.608	2428.871	2.4	41158.90 ^D	-40	2.404	7.507	• • •	
528	$a~^3H-Gsp1~^3H^{\circ}$	6-6	0	2291.183	2290.477	0.5	43645.57 ^D	-10	2.404	7.815	• • •	
529	b 3F-z 5D°	4-4	0.48	19015.481	19010.290	14	5258.873 ^A	-4	2.559	3.211		
530	$b^3F-z^5F^{\circ}$	4-5	1.30	16042.511	16038.129	3	6233.438^{A}	-1	2.559	3.332		
330	$0 \Gamma = z \Gamma$	3-4	0.85	15892.344	15888.003	-3	6292.338^{A}	1	2.588	3.368		
		3-4 4-4	0.30	15324.028	15319.842	23	6525.699^B		2.559	3.368	• • •	
		4-4									• • •	
531	$b^3F-z^3F^{o}$	3 - 4	1.84	9585.1894	9582.5610	-0.9	10432.762 ^A	1	2.588	3.881		
	(202)	4-4	2.99	9375.4691	9372.8974	0.9	10666.133 ^A	-1	2.559	3.881	-2.61ª	
		2 - 3	1.85	9288.4310	9285.8829	1.7	10766.081 ^A	-2	2.608	3.943		
		3 - 3	3.12	9148.6395	9146.1293	0.8	10930.587 ^A	-1	2.588	3.943	-2.80^a	
		2-2	2.81	9013.0681	9010.5946	0.8	11095.001^{A}	-1	2.608	3.984	-2.95^a	
		4-3	1.81	8957.3975	8954.9390	2.4	11163.957 ^A	-3	2.559	3.943		
		3-2	1.45	8881.3843	8878.9464	1.6	11259.506^{B}	-2	2.588	3.984		
500	13.0 3.00				9389.4225		10647.361 ^A	-2	2.608	3.928		
532	$b^3F-z^3D^\circ$	2-2	1.48	9391.9986		1.8					2.060	
	(203)	4-3	2.73	9361.9810	9359.4130	1.8	10681.500 ^A	-2	2.559	3.883	-2.86^a	
		3-2	2.58	9249.0964	9246.5589	1.7	10811.867 ^A	-2	2.588	3.928	-2.94 ^a	
		2 - 1	2.37	9175.7127	9173.1951	0.8	10898.336 ^A	-1	2.608	3.960	• • •	
533	$b^{3}F-y^{5}F^{\circ}$	4-4	1.76	7463.5755	7461.5206	0.0	13398.404 ^A	0	2.559	4.220	-3.58^{b}	
504	(204) $b^{3}F-z^{5}G^{\circ}$	4 4	276	6941 7170	6839.8305	0.5	14616.212 ^A		2.559	4.371	-3.45 ^b	
534		4-4	2.76	6841.7179		0.5		-1				
	(205)	3-3	2.90	6785.5762	6783.7039	-0.5	14737.142 ^A	1	2.588	4.415	-3.98^{b}	
		$^{2-2}$	2.70	6748.8173	6746.9549	1.4	14817.411 ^A	-3	2.608	4.445	-4.35 ^b	
535	$b{}^3F - z{}^3G^{\circ}$	4-5	2.45	6785.1379	6783.2657	1.4	14738.094^{B}	-3	2.559	4.386	-4.52^{c}	
	(206)	2 - 3	3.07	6648.7673	6646.9318	0.9	15040.382^{A}	-2	2.608	4.473	-3.99^{b}	
	(200)	4-4	4.38	6610.9356	6609.1103	0.0	15126.452 ^A	0	2.559	4.434	-2.69^{b}	
		3-3	4.35	6576.8320	6575.0158	0.0	15204.889 ^A	0	2.588	4.473	-2.71ª	
		4-3	4.12	6477.4139	6475.6244	0.4	15204.00 A	-1	2.559	4.473	-2.71	
		4-3	4.12	04/7.4139	0473.0244	0.4		-1				
536	$b{}^3F$ – $y{}^3F$ $^{\circ}$	3-4	4.19	6324.4338	6322.6855	0.0	15811.692 ^A	0	2.588	4.548	-2.43^{b}	
	(207)	4-4	3.82	6232.4467	6230.7230	0.4	16045.063 ^A	-1	2.559	4.548	-1.28^{b}	
		2 - 3	2.74	6202.0285	6200.3129	0.0	16123.757 ^A	0	2.608	4.607	-2.44 ^b	
		3-3	3.83	6139.3904	6137.6917	0.0	16288.262^{A}	0	2.588	4.607	-1.40^{b}	
		2-2	3.68	6067.1615	6065.4822	0.0	16482.172^{D}	0	2.608	4.652	-1.53 ^b	I
		3-2	1.69	6007.2046	6005.5413	-0.7	16646.678^{A}	2	2.588	4.652		
E27	$b^3F-y^3D^{\circ}$			5835.5440	5833.9267	1.0	17136.363 ^A	-3	2.608	4.733	-3.66 ^b	
537		2-3	1.15									T
	(209)	3-3	1.76	5780.0558	5778.4533	-0.3	17300.871 ^D	1	2.588	4.733	-3.59 ^b	I
		4-3	3.05	5703.1265	5701.5446	0.0	17534.242 ^A	0	2.559	4.733	-2.22^{b}	
			0.20	5669.2376	5667.6648	-1.9	17639.056^{B}	6	2.608	4.795	-3.03 ^b	
		2-2	0.30									
		$\begin{array}{c} 2-2 \\ 3-2 \\ 2-1 \end{array}$	2.83 2.61	5616.8554 5568.9371	5615.2966 5567.3911	-0.6 -0.3	17803.556 ^A 17956.748 ^A	2	2.588 2.608	4.795 4.835	-2.25 ^a -2.67 ^a	

No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
538	b 3F-z 5H°	3-3	2.33	4454.0488	4452.7989	-0.6	22451.483 ^C	3	2.588	5.372	• • •	
539	$b^3F-w^5D^{\circ}$	3-3	2.00	4338.7366	4337.5171	-0.2	23048.184^{D}	1	2.588	5.446		
	(214)	4-3	2.61	4295.2457	4294.0377	0.2	23281.555^{B}	-1	2.559	5.446		
		3-2	2.53	4290.1628	4288.9560	0.7	23309.139 ^C	-4	2.588	5.478	-2.40^a	
540	$b^3F-v^5D^{\circ}$	3-4	2.49	4320.0155	4318.8010	-4.5	23148.065^{D}	24	2.588	5.458		
	(216)	3 - 3	2.22	4293.3707	4292.1631	-0.4	23291.723 ^C	2	2.588	5.476		
		4-4	2.46	4276.9019	4275.6986	0.4	23381.411 ^C		2.559	5.458	-2.86^a	
		4-3	2.16	4250.7761	4249.5797	-4.2	23525.116 ^C		2.559	5.476		
		3-2	2.36	4203.5140	4202.3300	-5.3	23789.620^{D}	30	2.588	5.537		
541	$b^3F-y^5S^{\circ}$	3-2	2.02	4230.5950	4229.4040	-1.6	23637.337 ^D	9	2.588	5.519		
542	$b^3F-x^3D^{\circ}$	2 - 2	2.98	4124.9294	4123.7661	0.7	24242.839^{B}		2.608	5.614		
	(217)	3-3	2.97	4107.4175	4106.2587	-0.3	24346.198 ^B		2.588	5.606	-2.30^{b}	
		3-2	3.75	4097.1268	4095.9707	0.2	24407.348 ^A		2.588	5.614	-1.48ª	
		2 - 1	3.73	4079.5053	4078.3539	0.2	24512.776 ^A	-1	2.608	5.648	-1.47 ^a	
		4-3	3.92	4068.4198	4067.2712	0.0	24579.568 ^A	0	2.559	5.606	-1.42 ^b	
543	$b^3F-y^3G^{\circ}$	2-3	3.47	4077.6407	4076.4898	0.0	24523.985^{A}		2.608	5.649	-2.11 ^a	
	(218)	3-4	3.54	4072.6698	4071.5201	-0.2	24553.918 ^A		2.588	5.632	-2.02^a	
		4-5	3.68	4056.1809	4055.0355	0.0	24653.733 ^A		2.559	5.616	-1.92ª	
		3 - 3	3.15	4050.4708	4049.3270	0.2	24688.488 ^A		2.588	5.649	-2.44^a	
		4-4	2.82	4034.3260	4033.1863	0.2	24787.288 ^B	_	2.559	5.632	-2.73^a	
		4-3	3.00	4012.5414	4011.4075	0.0	24921.861 ^A		2.559	5.649	-2.42ª	
544	$b^{3}F - x^{5}G^{0}$	2-3	2.31	4020.1779	4019.0420	-2.3	24874.521 ^C		2.608	5.692	-2.78^{b}	
	(219)	2 - 2	2.64	4011.8819	4010.7481	1.4	24925.958 ^D		2.608	5.699		
		3-4	2.81	4006.6146	4005.4822	1.8	24958.727 ^D		2.588	5.682		II
		4-5	2.62	3986.4431	3985.3159	-0.2	25085.019^{C}	1	2.559	5.669	• • • • •	
545	$b^{3}F-z^{3}I^{\circ}$ (220)	4-5	3.03	3922.3828	3921.2724	0.2	25494.707 ^B		2.559	5.720	-2.85 ^a	
546	$b~^3F-u~^5D$ °	3 - 4	3.22	3869.0171	3867.9205	0.0	25846.358^{B}		2.588	5.792	-1.85 ^a	
	(221)	3-2	2.84	3844.0788	3842.9887	-0.4	26014.035^{C}		2.588	5.813	-2.36^a	
		4-4	4.15	3834.3957	3833.3082	0.1	26079.729 ^A		2.559	5.792	-1.03 ^b	
		4-3	2.82	3830.8508	3829.7642	2.6	26103.862^{D}		2.559	5.795	-1.99 ^b	
547	$b^{3}F-x^{3}F^{0}$	3-4	3.05	3843.9863	3842.8963	-0.6	26014.661 ^B		2.588	5.813	-2.01^{a}	
	(222)	2 - 3	3.44	3838.2235	3837.1350	0.3	26053.720 ^A		2.608	5.839	-1.78^a	
		$^{2-2}$	4.09	3822.9190	3821.8345	-0.1	26158.022^{A}		2.608	5.851	-1.10^a	
		3-3	4.23	3814.1403	3813.0580	-0.1	26218.228^{A}		2.588	5.839	-1.07^a	
		4-4	3.98	3809.8097	3808.7286	-0.1	26248.030^{A}		2.559	5.813	-1.16 ^b	
		3-2	3.31	3799.0275	3797.9492	0.0	26322.526^{B}		2.588	5.851	-1.99 ^a	
	2 2	4-3	3.29	3780.4895	3779.4160	-0.3	26451.601 ^B		2.559	5.839	-1.99 ^a	
548	$b^{3}F-z^{3}H^{0}$	4-5	3.33	3792.5825	3791.5058 3777.4495	0.0	26367.258 ^A		2.559	5.828	-1.98 ^a -1.78 ^b	
	(223)	4-4	3.68	3778.5225		0.1	26465.371 ^A		2.559	5.840	-1./8	
549	$b^{3}F - w^{3}D^{\circ}$	2-3	2.89	3849.3802	3848.2888	-1.5	25978.208^{B}		2.608	5.829		
	(224)	2-2	3.24	3831.8443	3830.7574	0.0	26097.094 ^B		2.608	5.844	-1.94ª	
		3-3	3.54	3825.1598	3824.0746	0.7	26142.699 ^A		2.588	5.829	• • •	
		$3-2 \\ 4-3$	2.64 2.52	3807.8410 3791.3150	3806.7603 3790.2386	-0.3 0.3	26261.601 ^C 26376.073 ^C		2.588 2.559	5.844 5.829		
	. 3 - 5											
550	$b^{3}F - w^{5}G^{\circ}$	2-3	2.67	3751.7473	3750.6813	0.4	26654.247 ^C		2.608	5.913	• • •	
	(225)	4-5	3.27	3734.2529	3733.1914	-0.3	26779.118^{B} 26792.163^{A}		2.559	5.879		
		2-2	3.87	3732.4347	3731.3737	0.0			2.608	5.930	-1.45 ^b	
		3-3	3.74	3728.7339	3727.6738	-0.1	$26818.755^{A} 26948.942^{A}$		2.588	5.913	-1.49 ^a	
		4-4 3-2	3.48 3.13	3710.7208 3709.6577	3709.6654 3708.6025	-0.8 0.6	26948.942 ¹³ 26956.665 ^B		2.559 2.588	5.900 5.930	-1.75 ^a -2.08 ^a	
		$\frac{3-2}{4-3}$	2.70	3696.5663	3695.5146	-0.8	26936.663 ² 27052.132 ^C		2.588	5.930	-2.64^{a}	
 -	13 m n alma											
551	$b^{3}F - Psp3^{1}D^{\circ}$	$^{2-2}$	2.88	3790.6500	3789.5738	-0.3	26380.700 ^C 26545.204 ^B		2.608	5.879	2.146	
	(226)	3-2	3.14	3767.1588	3766.0888	-0.3			2.588	5.879	-2.14 ^b	
552	$b^{3}F-z^{1}G^{0}$	3-4	3.66	3762.4774	3761.4085	0.0	26578.233 ^A		2.588	5.883	-1.70^a	
	(227)	4 - 4	3.73	3729.7284	3728.6680	0.0	26811.604 ^A	. 0	2.559	5.883	-1.61ª	

TABLE 2—Continued

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\begin{array}{c} \lambda_{air}^{} \\ \text{(A)} \end{array}$	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	В
553	$b^3F-v^5F^{\circ}$	4-5	3.35	3708.5114	3707.4566	0.6	26964.997 ^A	-4	2.559	5.902	-1.74ª	
	(229)	3-4	4.53	3696.1031	3695.0515	-1.2	27055.522^{D}	9	2.588	5.942	-0.34^{a}	1
		3-3	2.61	3669.9370	3668.8921	2.6	27248.424^{C}	-19	2.588	5.966	-2.47^{b}	
		4-4	3.30	3664.4948	3663.4514	-0.8	27288.891^{B}		2.559	5.942	-1.70^a	
		4-3	2.62	3638.7710	3637.7342	1.3	27481.806 ^C		2.559	5.966		
554	$b^{3}F - x^{3}G^{0}$	2-3	4.17	3732.0072	3730.9463	0.0	26795.232 ^A	0	2.608	5.930	-1.29 ^a	
	(228)	3-4	4.15	3712.2785	3711.2227	-0.1	26937.634 ^A		2.588	5.928	-1.17^a	
	` '	4-4	2.64	3680.3937	3679.3461	-0.1	27171.006^{C}	1	2.559	5.928		
		4-5	4.43	3677.3578	3676.3110	-0.1	27193.438^{A}		2.559	5.931	-0.99^{b}	
555	$b^3F-y^5H^{\circ}$	2-3	4.00	3644.7537	3643.7154	0.1	27436.696 ^A	-1	2.608	6.010	-1.44ª	
	(231a)	3-4	4.02	3638.0308	3636.9941	0.0	27487.398^{A}		2.588	5.996	-1.46 ^a	
		4-5	3.98	3624.4797	3623.4466	0.0	27590.167 ^A		2.559	5.980	-1.60a	
		4-4	2.89	3607.4047	3606.3760	1.3	27720.760 ^C		2.559	5.996	-2.52^a	
556	$b^{3}F - x^{3}P^{\circ}$ (235)	3-2	2.41	3645.6241	3644.5855	1.6	27430.146 ^D	-12	2.588	5.989	-2.45^{b}	
557	$b^{3}F-z^{1}H^{\circ}$	4-5	2.94	3604.7090	3603.6810	0.1	27741.490 ^B	-1	2.559	5.998	-2.01ª	
558	$b^3F-y^1G^0$	3-4	2.88	3593.4953	3592.4702	-1.2	27828.059 ^C	9	2.588	6.038	-2.47 ^b	
	(237)											
559	$b^3F-w^3F^{\circ}$	2-2	3.06	3521.8532	3520.8465	-0.1	28394.142 ^C		2.608	6.129	-1.86 ^a	
	(238)	4-4	2.82	3512.7421	3511.7377	-0.7	28467.789 ^C		2.559	6.089	-2.43 ^b	
		3-2	3.58	3501.5662	3500.5647	-0.2	28558.649 ^B		2.588	6.129	-1.31 ^a	
		4-3	4.24	3496.2869	3495.2867	0.2	28601.772 ^A		2.559	6.105	-0.92^{b}	
60	$b~^3F-v~^3D$ o	2-2	3.47	3545.6426	3544.6298	-0.1	28203.632^{B}		2.608	6.105	-1.86 ^b	
	(239)	2-1	4.02	3538.7401	3537.7291	0.0	28258.645 ^A		2.608	6.112	-1.13ª	
		3 - 3	3.54	3538.5031	3537.4921	0.1	28260.538^{B}		2.588	6.092	-1.53ª	
		3-2	4.10	3525.0817	3524.0742	0.0	28368.137 ^A		2.588	6.105	-1.15^{b}	
		4-3	3.52	3509.5217	3508.5182	0.0	28493.911 ^B	0	2.559	6.092	-1.57ª	
61	$b^{3}F-y^{3}H^{\circ}$ (241)	3-4	2.56	3465.9031	3464.9108	-0.4	28852.509 ^D	3	2.588	6.165	•••	
562	$b^{3}F-v^{3}G^{\circ}$	3-4	3.66	3477.8497	3476.8543	0.0	28753.399 ^A	0	2.588	6.153	-1.28a	
	(242)	2 - 3	3.40	3470.8241	3469.8305	-0.1	28811.601^{B}	1	2.608	6.180	-1.63^{b}	
	,	4-5	3.71	3469.8378	3468.8445	-0.2	28819.791 ^A	2	2.559	6.132	-1.29a	
63	b ³ F-Fsp3 ¹ F° (243*)	4-3	3.40	3467.8856	3466.8927	-0.1	28836.015^{B}	1	2.559	6.134	•••	
64	$b^3F-w^3P^0$	2-1	2.51	3447.7745	3446.7868	0.7	29004.217 ^D	-6	2.608	6.204		
65	$b^{3}F - x^{3}H^{\circ}$	4-4	3.16	3250.1284	3249.1911	-0.4	30768.015^{B}	4	2.559	6.374		
	(248)							_				
66	$b^3F-v^3F^{\circ}$	2-2	3.08	3315.3967	3314.4428	-0.3	30162.303^{B}		2.608	6.348	• • •	
	(250)	3-2	2.86	3297.4131	3296.4638	0.1	30326.804^{B}	-1	2.588	6.348	• • •	
		3-3	3.25	3279.6761	3278.7313	1.1	30490.816 ^B		2.588	6.368	• • •	
		4-4	3.21	3261.2073	3260.2672	0.0	30663.491 ^A	0	2.559	6.361	• • •	
		4–3	2.54	3254.7624	3253.8239	-1.1	30724.209^{D}	10	2.559	6.368	• • •	
67	b ^3F-u $^3G^{\circ}$	4-5	3.36	3253.8527	3252.9144	-0.2	30732.799 ^A	2	2.559	6.369	-1.42 ^a	
	(252)	2-3	3.07	3248.1468	3247.2100	-0.2	30786.786 ^B		2.608	6.425	-1.73ª	
		3-4	3.30	3247.4169	3246.4802	-0.5	30793.706^{B}_{-}		2.588	6.406	-1.45 ^a	
		3-3	d0?	3230.887	3229.955	3.1	30951.25 ^D		2.588	6.425		
		4-4	14	3222.989	3222.059	-2.1	31027.10 ^D		2.559	6.406		
		4-3	1	3206.704	3205.778	0.0	31184.67 ^D	0	2.559	6.425	• • •	
68	$b^3F-Hsp3^1H^{\circ}$	4-5	2.88	3226.9449	3226.0135	0.3	30989.063^{B}	-3	2.559	6.401	-1.95 ^a	
569	$b^{3}F-y^{1}D^{\circ}$ (255)	3-2	2.30	3243.1933	3242.2578	1.6	30833.808^{D}	-15	2.588	6.411	•••	
570	$b^{3}F - x^{1}D^{\circ}$ (257)	2-2	3.13	3254.8813	3253.9428	0.0	30723.087^{B}	0	2.608	6.417	•••	
571	$b^{3}F-u^{3}D^{\circ}$	2-3	0	3233.094	3232.161	0.0	30930.12 ^D	0	2.608	6.443		
/ 1			2.40	3199.1886	3198.2642	0.3	31257.926^{D}		2.608	6.484		
7/1	(258)	2-2	2.40	3177.1000	3170.2042	0.5	31437.740		2.000	0.464		

No. Multiplet JJ 12 λ_{ch}^2 λ_{ch}^3 λ_{ch}^3					TAI	SLE 2—Com	тиеи						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			J-J	I 2	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)						log(gf) ⁷	Bl.8
Section Sec													
	572	$b^{3}F-^{2}P4p^{1}P^{0}$	2-1	2.87	3211.1139	3210.1865	-1.0	31141.841^{B}	10	2.608	6.469		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	573		3-3 4-3 2-2	2.66 3.56 1	3190.9387 3167.3518 3160.165	3190.0163 3166.4355 3159.250	0.4 0.2 1.0	31338.741 ^C 31572.116 ^A 31643.92 ^D	-4 -2 -10	2.588 2.559 2.608	6.473 6.473 6.532	-0.92 ^b	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	574		4-5	0	3127.744	3126.837	3.9	31971.93 ^D	-40	2.559	6.523		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	575	• •											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		=	4-5 4-4	4 2.00	3108.878 2996.1233	3107.976 2995.2499	-5.8 0.4	32165.95 ^D 33376.463 ^D	-4	2.559 2.559	6.547 6.697		
	577	$b^3F-v^3P^0$											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	578		4-4 2-3 3-3 2-2 4-3	3.01 1 2.67 2.43 2.20	3094.7758 3094.208 3078.5300 3057.1305 3056.5703	3093.8777 3093.310 3077.6359 3056.2418 3055.6817	-0.3 6.7 -0.7 0.2 -0.7	32312.518 ^B 32318.45 ^D 32483.036 ^D 32710.413 ^D 32716.408 ^D	3 -70 7 -2 7	2.559 2.608 2.588 2.608 2.559	6.565 6.615 6.615 6.664 6.615		II
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	579	b^3F $-^4F5p^5G^o$	4-4	2	3011.045	3010.168	-4.5	33211.06 ^D	50	2.559	6.677	• • • •	II
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	580	b ³ F- ⁴ F5p ⁵ F°	3 - 3	d0?	3050.031	3049.144	3.7	32786.55 ^D	-40	2.588	6.653		II
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	581	b ³ F- ⁴ F5p ³ F°	4-4 3-3 4-3 2-2	1 d1 d0? 11	3059.252 2992.700 2971.960 2970.226	3058.363 2991.828 2971.092 2969.359	0.0 -8.1 7.9 -6.2	32687.73 ^D 33414.64 ^D 33647.83 ^D 33667.47 ^D	0 90 -90 70	2.559 2.588 2.559 2.608	6.612 6.731 6.731 6.782		II
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	582	$b^{3}F^{-4}F5p^{5}D^{\circ}$	3-4 3-3 2-2 2-1	d0? 0 3 d0?	3054.744 3038.569 2985.823 2979.371	3053.856 3037.685 2984.952 2978.502	-3.7 2.8 5.3 1.8	32735.97 ^D 32910.23 ^D 33491.60 ^D 33564.13 ^D	40 -30 -60 -20	2.588 2.588 2.608 2.608	6.647 6.668 6.761 6.770		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	583	b ³ F-Dsp3 ⁵ F°	$2-1 \\ 2-3$	0 0	3062.052 3058.607	3061.162 3057.718	2.8 -1.5	32657.84 ^D 32694.62 ^D	-30 16	2.608 2.608	6.657 6.662		1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	584				3019.127	3018.248			0				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	585	$b^3F - {}^4F5p^3D^\circ$	4-3 2-2 3-2	11 0? 0	3012.351 3002.662 2987.904	3011.474 3001.787 2987.032	6.4 0.0 0.9	33196.66 ^D 33303.78 ^D 33468.28 ^D	-70 0 -10	2.559 2.608 2.588	6.675 6.737 6.737		
$4-4$ 0 2976.516 2975.648 -0.9 33596.32 D 10 2.559 6.724	586	$b~^3F-Dsp3~^5D^{\circ}$											
	587	$b^3F-t^3G^0$	4-5 4-4	0	2976.516	2975.648	-0.9	33596.32 ^D	10	2.559	6.693 6.724	• • •	

No.	Multiplet (MT) 1	J-J	I ²	$\lambda_{vac}^{}$ (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
588	$b^3F-w^1G^{\circ}$	4-4	0	2926.567	2925.711	0.9	34169.73 ^D -10	2.559	6.795		
589	b ³ F-s ³ G° (UV159)	2-3 4-5 3-4 4-3	2.00 2.20 2.32 2	2877.5567 2874.4977 2854.6102 2844.977	2876.7127 2873.6543 2853.7717 2844.141	0.2 1.6 -0.2 -6.5	34751.704^{C} -2 34788.687^{C} -19 35031.053^{C} 2 35149.67^{D} 80	2.608 2.559 2.588 2.559	6.917 6.872 6.931 6.917	 -1.19 ^a 	
590	b ³ F-v ³ H° (UV158)	3-4	2.04	2892.5562	2891.7084	2.1	34571.498 ^C -25	2.588	6.874	• • •	
591	$b^{3}F-w^{1}D^{\circ}$	$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	1 d0?	2880.580 2866.995	2879.735 2866.153	0.8 0.8	34715.23 ^D -10 34879.73 ^D -10	2.608 2.588	6.912 6.912		
592	$b^{3}F-^{2}H4p^{1}H^{\circ}$	4-5	2.35	2835.5863	2834.7526	-0.8	35266.075 ^C 10	2.559	6.931	-1.14 ^a	
593	b^3F - $Gsp3^1F$ °	2-3	1.90	2852.3479	2851.5100	0.7	35058.837 ^D -8	2.608	6.955		
594	$b^{3}F - s^{6}D6p^{7}D^{\circ}$	2-2	3	2785.954	2785.132	3.1	35894.35 ^D -40	2.608	7.059		
595	$b^3F - s^6D6p^7F^0$	2-3 2-2 2-1	2.49 2.54 2.03	2778.7084 2769.9705 2767.3687	2777.8885 2769.1528 2766.5516	2.1 -2.5 2.4	35987.943^D -27 36101.467^D 33 36135.409^D -31	2.608 2.608 2.608	7.070 7.084 7.088		II II I
596	$b^3F-u^3H^\circ$	3-4 4-5	d0? 1	2813.041 2797.866	2812.213 2797.041	5.5 0.8	35548.72 ^D -70 35741.53 ^D -10	2.588 2.559	6.995 6.990		II
597	b^3F – $s^6D6p^7P^0$	2-3 4-3	d0? 1	2789.451 2758.828	2788.628 2758.013	6.2 2.3	35849.35 ^D -80 36247.28 ^D -30	2.608 2.559	7.053 7.053		
598	b ³ F-u ³ F° (UV160)	2-2 3-3 4-4 4-3	1 1.92 2.42 0	2791.769 2784.8300 2781.5178 2766.843	2790.946 2784.0086 2780.6973 2766.026	6.2 0.1 -0.4 -4.6	$\begin{array}{cccc} 35819.58 & ^{D} & -80 \\ 35908.835 ^{C} & -1 \\ 35951.594 ^{B} & 5 \\ 36142.27 & D & 60 \\ \end{array}$	2.608 2.588 2.559 2.559	7.049 7.040 7.016 7.040	 -1.03 ^a	
599	$b^3F - s^6D6p^5F^0$	3-3 2-2 4-3	1 1 1.62	2742.027 2737.207 2724.5933	2741.216 2736.397 2723.7865	-1.5 -4.5 -0.8	36469.37 ^D 20 36533.59 ^D 60 36702.726 ^C 11	2.588 2.608 2.559	7.109 7.138 7.109		
600	$b{}^3F - s{}^6\!D6p{}^5D^{\circ}$	2-2	2?	2749.009	2748.197	1.5	36376.74 ^D -20	2.608	7.118		II
601	$b^3F-v^1G^{\circ}$	4-4	0*	2754.054	2753.240	5.3	36310.11 ^D -70	2.559	7.061		
602	$b^3F-x^3I^{\circ}$	4-5	2.31	2742.4955	2741.6844	-2.9	36463.141 ^B 38	2.559	7.080		
603	$b^{3}F - s^{6}D_{3.5}4f$ [2.5]° $b^{3}F - s^{6}D_{3.5}4f$ [0.5]° $b^{3}F - s^{6}D_{3.5}4f$ [4.5]° $b^{3}F - s^{6}D_{3.5}4f$ [3.5]° $b^{3}F - s^{6}D_{3.5}4f$ [4.5]° $b^{3}F - s^{6}D_{3.5}4f$ [3.5]° $b^{3}F - s^{6}D_{3.5}4f$ [3.5]° $b^{3}F - s^{6}D_{3.5}4f$ [3.5]°	2-3 2-1 3-4 3-3 4-4 4-4 4-3	2.24 2.10 3 d0? 8 2.51	2769.2490 2768.8559 2756.901 2756.704 2739.265 2739.1264 2739.088	2768.4315 2768.0384 2756.087 2755.890 2738.455 2738.3162 2738.278	-1.4 0.5 5.3 0.8 -6.0 0.8 6.0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.608 2.588 2.588 2.559 2.559	7.085 7.086 7.085 7.085 7.085 7.085 7.085		I
604	$b~^3F-Dsp1~^3D^{\circ}$	$\begin{array}{c} 2-2 \\ 3-3 \end{array}$	2.52 1.72	2775.0122 2741.8572	2774.1933 2741.0463	3.7 2.6	36035.877 ^B -48 36471.629 ^C -34	2.608 2.588	7.076 7.110		
605	b ³ F-t ³ F° (UV161)	2-3 2-2 3-4 3-2 4-4 4-3	1.67 3.12 1.62 2.12 2.86 1.78	2732.0899 2727.0401 2726.6133 2714.8645 2709.3739 2702.7119	2731.2814 2726.2328 2725.8060 2714.0601 2708.5708 2701.9104	0.4 0.0	36602.016^{D} 5 36669.794^{D} 43 36675.535^{C} 10 36834.251^{B} -5 36908.896^{A} 0 36999.874^{B} -13	2.608 2.608 2.588 2.588 2.559 2.559	7.146 7.155 7.135 7.155 7.135 7.146	-1.27 ^a -1.62 ^a -0.19 ^a -1.09 ^a	II II
606	$b~^3F-Psp1~^3D^{\circ}$	$3-3 \\ 4-3$	1.97 1.89	2725.4763 2708.2513	2724.6694 2707.4484	-1.0 -0.3	36690.834^{B} 14 36924.196^{B} 4	2.588 2.559	7.137 7.137		
607	$b^{3}F - s^{6}D_{1.5}4f [1.5]^{\circ}$ $b^{3}F - s^{6}D_{1.5}4f [2.5]^{\circ}$ $b^{3}F - s^{6}D_{1.5}4f [2.5]^{\circ}$ $b^{3}F - s^{6}D_{1.5}4f [4.5]^{\circ}$ $b^{3}F - s^{6}D_{1.5}4f [2.5]^{\circ}$ $b^{3}F - s^{6}D_{1.5}4f [3.5]^{\circ}$	2-2 2-3 3-2 4-4 4-3 4-3	2.29 ? 2.29 0? 0? 2.38	2733.7489 2732.827 2720.4861 2704.106 2703.439 2702.6102	2732.9399 2732.018 2719.6803 2703.304 2702.638 2701.8088	0.8 -3.0 2.3 0.7 4.4 0.3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.608 2.608 2.588 2.559 2.559 2.559	7.144 7.145 7.145 7.144 7.145 7.147		II II

					LE 2—Contii						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} o-R (cm ⁻¹) (m	R ⁶ E(nK) (e'		log(gf) ⁷	Bl. ⁸
608	b ³ F−s ⁴ D5p ⁵ D°	2-3	1	2703.102	2702.300	-1.5	36994.54 ^D 2	20 2.6	08 7.195		
	•	4-3	1	2674.342	2673.548	1.4	~	20 2.5			
		2-1	5	2668.011	2667.218	-5.7		80 2.6			II
		$\frac{2}{3-2}$	5	2669.803	2669.009	9.5	37455.95 ^D -13				II
	. 2 - 4 - 2 - 2									• • •	
609	$b~^3F$ – $s~^4D$ 5 $p~^3F$ °	3-4	0	2699.585	2698.784	2.2		30 2.5		• • •	
		4-4	1	2682.683	2681.887	2.2	37276.11 ^D -3	30 2.5			
		$^{2-2}$	0	2636.922	2636.136	0.0	37923.00 ^D	0 2.6	08 7.310		I
		3-2	1.73	2625.5306	2624.7476	-1.9		28 2.5	88 7.310		
		3-3	1	2616.765	2615.984	0.7	38215.13 ^D -1	10 2.5	88 7.326		
		4-3	7	2600.875	2600.098	-5.4		80 2.5	59 7.326		
610	$b^{3}F - s^{4}D5p^{3}P^{0}$	2-2	0	2705.595	2704.793	2.2	36960.44 ^D -3	30 2.6	08 7.191		
010	0 F-8 D3p F	3-2	0	2693.609	2692.810	4.4	_	50 2.0 50 2.5		• • • •	
		3-2	U	2093.009	2092.610	4.4		30 2.3	00 7.191	• • •	
611	$b~^3F-Hsp1~^3G^{ m o}$	4-5	1	2675.412	2674.617	1.4		20 2.5	59 7.193		
		3-4	1.54	2669.5022	2668.7087	-2.9		41 2.5	88 7.232		
		2 - 3	0	2662.313	2661.521	2.1	37561.32 ^D -3	30 2.6	08 7.265		
		4-4	d0?	2652.977	2652.188	0.0		0 2.5	59 7.232		
		3-3	2.64	2650.7011	2649.9121	-0.7		10 2.5			
		4-3	1.61	2634.4037	2633.6186	-1.6	-	23 2.5			II
	137 477 370										
612	$b{}^{3}F$ - $s{}^{4}\!D5p{}^{3}D^{\circ}$	2-1	1	2676.957	2676.162	1.4		20 2.6		• • •	
		4-3	1	2657.091	2656.300	0.0	37635.15 ^D	0 2.5	59 7.225	• • •	
613	$b^{3}F-{}^{4}F_{3.5}4f$ [4.5]°	3-4	d0?	2604.998	2604.220	4.1	38387.75 ^D -6	50 2.5	88 7.347		
0.0	$b^{3}F - {}^{4}F_{3.5}4f$ [2.5]°	3-3	2	2604.385	2603.607	3.4		50 2.5			I
	$b^{3}F - {}^{4}F_{3.5}4f$ [4.5]°	4-4	d0?	2589.255	2588.480	2.0		30 2.5			II
	$b^{3}F - {}^{4}F_{3.5}4f$ [4.5]°	4-5	3	2589.078	2588.304	-0.7		10 2.5			••
	$b^{3}F - {}^{4}F_{3.5}4f$ [4.5] $b^{3}F - {}^{4}F_{3.5}4f$ [2.5] \circ	4-3	d0	2588.651	2587.877	2.7		40 2.5		• • •	
										• • •	
614	$b~^3F-Psp1~^3S^{ m o}$	2-1	d2	2599.994	2599.217	0.0		0 2.6		• • •	
615	$b^{3}F-{}^{4}F_{1.5}4f$ [2.5]°	$^{2-2}$	3	2570.115	2569.345	0.0		0 2.6	08 7.432		
	$b^{3}F - {}^{4}F_{1.5}4f$ [2.5]°	2 - 3	d0?	2569.799	2569.029	0.0	38913.55 D	0 2.6	08 7.433		
	$b^{3}F^{-4}F_{1.5}4f[3.5]^{\circ}$	3-4	0	2559.347	2558.579	3.9	39072.47 ^D -6	60 2.5	88 7.432		G
	$b^{3}F - {}^{4}F_{1.5}4f$ [2.5]°	3-2	1	2559.290	2558.522	-3.3	39073.34 ^D 5	50 2.5	88 7.432		
	$b^{3}F - {}^{4}F_{1.5}4f$ [3.5]°	4-4	12*	2544.141	2543.378	-5.2	39305.99 ^D 8	80 2.5			I
616	$b^3F - Fsp1^3F^\circ$	3-4	2	2549.649	2548.884	1.3	39221.09 ^D -2	20 2.5	88 7.451		
010	0 1 1 0p1 1	3-3	2.50	2544.6600	2543.8961	-0.2		3 2.5			
		4-4	2.28	2534.5656	2533.8042	-0.4	39454.492 ^A	6 2.5			
		4-3	1.92	2529.6383	2528.8779	0.4		-7 2.5			
	2 2										
617	$b~^3F-Fsp1~^3G^{\circ}$	2-3	2.96	2530.0682	2529.3077	-0.2		3 2.6		0.51^a	
		3-4	2.82	2525.7832	2525.0238	-0.1		2 2.5			
		4-5	2.94	2524.4203	2523.6612	0.1		-2 2.5			
		3 - 3	1.81	2519.5816	2518.8236	-0.1		1 2.5	88 7.509		
		4-3	3	2504.856	2504.102	3.1	39922.45 ^D -5	50 2.5	59 7.509		
618	$b^3F-t^3H^{\circ}$	3-4	2.08	2507.3275	2506.5723	0.4	39883.103 ^B	-7 2.5	88 7.533	-0.76^a	
010	(UV163)	4-5	1.53	2505.7626	2505.0079	-0.4		7 2.5		-0.78^{a}	
										-0.56	
619	$b{}^3F-Fsp1{}^3D^{\circ}$	2 - 3	1.90	2514.6049	2513.8481	0.1		-1 2.6			
		3-3	1.72	2504.2461	2503.4917	0.4		-6 2.5			
		4-3	2.05	2489.6955	2488.9444	0.1	40165.555 ^A	-2 2.5	59 7.539	• • •	
620	$a {}^3G - z {}^3F^{\circ}$	5-4	2.54	10425.887	10423.030	2	9591.510 ^A	-2 2.6	92 3.881		
020		4-3	2.54	10423.887	10423.030	2		-2 2.0 -2 2.7		• • •	
	(264)	3-2	2.34	10197.902	10193.108	2		-2 2.7 -2 2.7		• • • •	
		3-2				2					
621	$a~^3G-y~^5F^{\circ}$	5-4	1.56	8114.3941	8112.1635	2.6		-4 2.6	92 4.220		
	(265)	4-3	1.23	8110.5507	8108.3212	1.3	12329.619 ^A	-2 2.7	27 4.256		
			1.05	7653.0511	7650.9450	2.3	13066.684 ^A	-4 2.6	92 4.312		
622	$a^{3}G_{-7}^{5}G^{0}$	2-7	1 22								
622	$a^{3}G-z^{5}G^{0}$	5-5 5-6	1.85								
622	a ³ G-z ⁵ G° (266)	5-6	1.23	7617.1795	7615.0831	2.3	13128.219 ^B	-4 2.6	92 4.320		
622							13128.219 ^B 13258.192 ^B		92 4.320 27 4.371	-3.85 ^b	

				1	ABLE 2—Co	ontinue	a					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
623	$a^3G-y^3F^0$	4-4	3.49	6808.7234	6806.8449	1.4	14687.041 ^A	-3	2.727	4.548	-3.21 ^b	
Ž,	(268)	3-3	3.94	6705.4182	6703.5674	0.9	14913.313 ^A		2.758	4.607	-3.16^{b}	
7		5-4	5.38	6679.8308	6677.9870	1.8	14970.439 ^A	-4	2.692	4.548	-1.42a	
4		4 - 3	5.19	6594.7348	6592.9138	1.3	15163.612 ^A	-3	2.727	4.607	-1.47 ^a	
		3 - 2	5.35	6548.0479	6546.2395	1.3	15271.727 ^A	-3	2.758	4.652	-1.54 ^a	
624	$a~^3G-y~^3D^{\circ}$	4-3	2.29	6181.9143	6180.2042	1.1	16176.219 ^A	-3	2.727	4.733	-2.65 ^a	
024	(269)	3-2	1.90	6086.9437	6085.2590	0.7	16428.606 ^A		2.758	4.795	-2.71^a	
605	` '						23032.399^{L}					
625	$a {}^{3}G - x {}^{3}D^{\circ}$	3-2	2.23	4341.7101	4340.4899	0.6	23032.399 ²² 23221.563 ²		2.758	5.614	• • •	
	(272)	4-3	2.08	4306.3423	4305.1314	-2.6			2.727	5.606	• • •	
626	$a~^3G-y~^3G^{o}$	3-3	3.54	4289.3523	4288.1458	0.0	23313.543 ^A		2.758	5.649	-2.06^a	
	(273)	4-4	3.79	4268.1654	4266.9645	0.0	23429.270 ^A		2.727	5.632	-1.81ª	
		4-3	2.73	4243.7905	4242.5960	0.2	23563.840 ^B		2.727	5.649	-2.65^a	
		5-5	3.93	4241.0415	4239.8477	-0.4	23579.114 ^A		2.692	5.616	-1.64ª	
		5–4	2.81	4217.1553	4215.9678	0.2	23712.667 ^B		2.692	5.632	• • •	
627	$a~^3G-x~^5G^{\circ}$	4-4	1.95	4195.6750	4194.4931	4.2	23834.067 ^D		2.727	5.682	-3.36 ^b	
	(274)	4-3	2.27	4181.5885	4180.4103	1.4	23914.357 ^C		2.727	5.692	-2.91^{b}	
		5-5	2.56	4164.8501	4163.6763		24010.468 ^C		2.692	5.669	,	
		5-4	2.38	4146.3685	4145.1995	-0.2	24117.490 ^C	1	2.692	5.682	-2.80^{b}	
628	$a~^3G-u~^5D^{\circ}$	3-4	2.56	4086.4016	4085.2483	0.5	24471.408^{B}	-3	2.758	5.792		
	(276)	4-4		4045.028	4043.885		24721.710^{D}	• • • •	2.727	5.792		ΜI
		4-3	2.34	4041.0793	4039.9379	-0.5	24745.864^{D}	3	2.727	5.795		
		5-4	4.24	3999.1832	3998.0527	0.3	25005.106 ^A	-2	2.692	5.792	-0.91^a	
629	$a~^3G-x~^3F$ °	3-4	3.02	4058.4895	4057.3435	0.3	24639.709 ^A	-2	2.758	5.813	-1.96 ^a	
027	(277)	3-3	2.89	4025.2335	4024.0963	0.2	24843.279 ^B		2.758	5.839	-2.74ª	
	(=,,,	3-2	3.82	4008.4050	4007.2721	-0.2	24947.579 ^A		2.758	5.851	-1.28ª	
		4-3	4.26	3985.0832	3983.9564	0.2	25093.579 ^A	-1	2.727	5.839	-1.02^a	
		5-4	4.13	3972.4462	3971.3227	0.3	25173.406 ^A	-2	2.692	5.813	-0.97^a	
630	$a~^3G-z~^3H$ °	3-4	4.57	4023.0032	4021.8665	0.0	24857.052^{D}	0	2.758	5.840	-0.73ª	II
000	(278)	4-5	4.88	3998.5225	3997.3922	0.2	25009.238^{A}		2.727	5.828	-0.48^a	
	(- : -)	4-4	4.24	3982.8973	3981.7711	0.2	25107.351^{A}	-1	2.727	5.840	-1.12^a	
		5-6	5.00	3957.7964	3956.6768	0.2	25266.585^{D}	-1	2.692	5.825	-0.43^a	II
		5-5	4.26	3953.7201	3952.6015	0.3	25292.635^{D}		2.692	5.828	-1.12^a	II
		5-4	3.89	3938.4425	3937.3279	0.2	25390.748 ^A	-1	2.692	5.840	-1.46ª	
631	$a~^3G-w~^3D$ °	3-3	2.34	4037.5070	4036.3665	-0.5	24767.759^{D}	3	2.758	5.829	-2.84^{b}	
	(279)	3-2	2.83	4018.2189	4017.0835	0.6	24886.648^{B}		2.758	5.844	-1.99a	
	, ,	4-3	3.56	3997.1134	3995.9835	0.2	25018.054 ^A	-1	2.727	5.829	-1.57^a	
632	$a~^3G-w~^5G^{\circ}$	3-4	3.74	3946.2338	3945.1172	-0.2	25340.617 ^A	1	2.758	5.900	-1.46 ^a	
032	(280)	4-5	3.93	3933.7407	3932.6273	-0.2	25421.096^{A}		2.727	5.879	-1.16^a	
	(200)	3-3	3.36	3930.2288	3929.1164	-0.6	25443.811 ^A		2.758	5.913	-1.88^a	
		3-2	4.09	3909.0410	3907.9341	-0.2	25581.722^{A}		2.758	5.930	-1.12^a	
		4-4	2.58	3907.6389	3906.5323	2.1	25590.901 ^C	-14	2.727	5.900		
		5-6	4.66	3898.9942	3897.8899	0.2	25647.640 ^A	-1	2.692	5.872	-0.74ª	
		4-3	3.90	3891.9430	3890.8405	-0.2	25694.107 ^A		2.727	5.913	-1.31 ^a	
		5-4	3.76	3864.8368	3863.7413	0.0	25874.314 ^A	0	2.692	5.900	-1.43ª	
633	$a {}^{3}G - z {}^{1}G^{\circ}$ (282)	5-4	4.24	3885.4595	3884.3587	0.0	25736.982 ^A	0	2.692	5.883	-1.09ª	
634	$a^{3}G-v^{5}F^{\circ}$	3-4	3.18	3893.9953	3892.8923	0.0	25680.565^{C}	0	2.758	5.942		
	(283)	5-5	3.67	3862.4350	3861.3402	-3.6	25890.403 ^A		2.692	5.902		
		4-4	2.86	3856.4070	3855.3138	-1.3	25930.873 ^C		2.727	5.942		
		4-3	3.25	3827.9273	3826.8415	-0.3	26123.798 ^B		2.727	5.966	-1.45 ^a	
		5-4	3.53	3814.7173	3813.6349	0.0	26214.262 ^A	0	2.692	5.942	-1.39 ^a	
635	$a~^3G-x~^3G^{\circ}$	3-4	3.71	3911.9514	3910.8437	-0.5	25562.690^{A}		2.758	5.928	-1.55 ^a	
	(284)	3-3	3.49	3908.5721	3907.4653	-0.2	25584.791 ^A		2.758	5.930	-1.88ª	
		4-4	3.51	3874.0191	3872.9212	0.0	25812.986 ^A		2.727	5.928	-1.75 ^a	
		4-3	3.63	3870.7050	3869.6080	0.1	25835.087 ^A		2.727	5.930	-1.81ª	
		4-5	3.91	3870.6552	3869.5583	-0.3	25835.419 ^A		2.727	5.931	-1.41 ^a	
		5-4	3.64	3831.9488	3830.8619	0.1	26096.382 ^A	-1	2.692	5.928	-1.67ª	

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3}	$\frac{\lambda_{air}^{3}}{(A)}$	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(1)	E(u)	log(gf) ⁷	B1.8
	(M1),	5-5	3.88	(Å) 3828.6576	3827.5716	(mA) 0.0	26118.815 ^A	<u>` </u>	(eV)	(eV) 5.931	-1.42 ^a	
636	$a~^3G-y~^5H^{\circ}$	3-4	3.26	3829.5903	3828.5040	-0.4	26112.454 ^B		2.758	5.996		
030	$a \cdot G - y \cdot H$	5-6	3.99	3825.6408	3824.5555	-0.4	26139.412 ^A		2.692	5.933	-2.20 ^a	
i		3-3	4.04	3812.9729	3811.8910	-0.4	26226.255 ^A		2.758	6.010	-1.42 ^a	
		4-5	3.23	3812.1168	3811.0350	0.4	26232.145 ^B		2.727	5.980	-2.31^a	
		4-4	4.05	3793.2313	3792.1544	0.1	26362.748 ^A		2.727	5.996	-1.43^a	
		4-3	3.06	3776.9267	3775.8541	0.0	26476.553 ^B		2.727	6.010	-2.30^{a}	
		5-5	4.05	3771.3726	3770.3015	0.1	26515.545 ^A	-1	2.692	5.980	-1.51 ^a	
		5-4	3.44	3752.8878	3751.8214	0.1	26646.147 ^A	-1	2.692	5.996	-2.04^a	
637	$a~^3G-x~^3P^{\circ}$	3-2	2.60	3838.0038	3836.9154	0.0	26055.211 ^C	0	2.758	5.989		
638	$a~^3G-z~^1H^{\circ}$	4-5	3.87	3790.2521	3789.1761	0.3	26383.469 ^A	-2	2.727	5.998	-1.29 ^a	
	(289)	5-5	3.11	3749.9697	3748.9041	-2.0	26666.882 ^B		2.692	5.998		
639	$a~^3G-y~^1G^{ m o}$	3-4	2.64	3780.2761	3779.2027	1.4	26453.094 ^C		2.758	6.038		
	(290)	4-4	3.12	3744.8408	3743.7765	-0.4	26703.405 ^B		2.727	6.038	-2.17 ^a	
		5-4	4.54	3705.5153	3704.4612	0.1	26986.800 ^A	-1	2.692	6.038	-0.58^a	
640	$a~^3G-w~^3F^{\circ}$	3-4	3.14	3723.0828	3722.0241	0.4	26859.462 ^B		2.758	6.089	-1.90^a	
	(291)	3-3	3.89	3704.6017	3703.5479	0.0	26993.455 ^A		2.758	6.105	-1.26a	
		4-4	4.21	3688.7077	3687.6580	-0.1	27109.765 ^A		2.727	6.089	-0.87^a	
		3-2	4.76	3678.6748	3677.6277	-0.3	27183.702 ^A		2.758	6.129	-0.21^a	
		4-3	4.63	3670.5662	3669.5212	0.1	27243.753 ^A		2.727	6.105	-0.48^a	
		5-4	4.93	3650.5462	3649.5063	0.1	27393.161 ^A		2.692	6.089	-0.15^a	
641	$a~^3G-v~^3D$ °	3-3	3.93	3719.4642	3718.4065	-0.3	26885.593 ^A	_	2.758	6.092	-1.12 ^a	
	(292)	3-2	3.51	3704.6381	3703.5842	0.0	26993.190 ^A		2.758	6.105	• • •	
	2 2	4-3	4.66	3685.1564	3684.1076	0.0	27135.890 ^A		2.727	6.092	-0.37 ^a	
642	$a^3G-y^3H^0$	3-4	4.53	3639.3335	3638.2965	-0.1	27477.559 ^A		2.758	6.165	-0.38^a	
	(294)	4-5	4.93	3622.4933	3621.4607	-0.3	27605.296 ^A		2.727	6.150	-0.02^a	
		5-6	5.28	3607.7082	3606.6794	0.1	27718.428 ^A 27727.858 ^A		2.692	6.129	0.32^a	
		4-4 5-5	4.83 4.79	3606.4813 3585.6826	3605.4528 3584.6594	0.0 -0.1	277888.693 ^A		2.727 2.692	6.165	-0.09^a	
		5-4	3.83	3569.9936	3568.9745	0.0	28011.255 ^A		2.692	6.150 6.165	-0.16ª -1.10ª	
643	$a~^3G-v~^3G^{\circ}$	3-4	4.94	3652.5073	3651.4669	0.0	27378.453 ^A	0	2.758	6.153	0.02^{a}	
	(295)	4-5	4.83	3641.4260	3640.3885	0.1	27461.769 ^A		2.727	6.132	-0.11^a	
	()	3-3	4.73	3623.0361	3622.0034	-0.1	27601.160 ^A		2.758	6.180	-0.15^a	
		4-4	4.10	3619.4177	3618.3858	-0.3	27628.754 ^A	2	2.727	6.153	-0.80^a	
		5-5	4.69	3604.2315	3603.2035	0.3	27745.166 ^A	-2	2.692	6.132	-0.26^a	
		4-3	4.05	3590.4763	3589.4519	0.0	27851.458 ^A	0	2.727	6.180	-0.85^a	
		5-4	3.64	3582.6691	3581.6467	-0.1	27912.151 ^A		2.692	6.153	-1.26ª	
644	a $^3G-Fsp3$ 1F $^{\circ}$	3-3 $4-3$	2.89 3.00	3672.7334 3639.2756	3671.6878 3638.2386	2.6 -0.1	27227.677 ^B 27477.996 ^B	-19 1	2.758 2.727	6.134 6.134	-2.04 ^a -2.17 ^a	
645	$a~^3G-z~^1F^{\circ}$	3-3	2.79	3528.8983	3527.8898	-1.2	28337.456 ^C		2.758	6.272		
043	(296)	4-3	2.75	3498.0036	3497.0030	1.2	28587.735^{D}		2.727	6.272		
646	$a~^3G-x~^1G^{o}$	3-4	2.90	3525.5265	3524.5188	-0.7	28364.558 ^C	6	2.758	6.275		
	(297)	4-4	3.30	3494.6889	3493.6892	0.0	28614.850^{D}	0	2.727	6.275	-1.85a	I
	, ,	5-4	3.38	3460.4174	3459.4265	0.0	28898.248 ^B	0	2.692	6.275	-1.63ª	
647	$a\ ^{3}G-x\ ^{3}H^{o}$	4-5	3.45	3440.0215	3439.0358	-0.1	29069.586 ^B	1	2.727	6.331		
	(299)	5-6	3.19	3412.1043	3411.1257	-0.1	29307.428 ^B	1	2.692	6.326		
		5-5	3.47	3406.8087	3405.8315	-0.1	29352.984 ^A		2.692	6.331		
		4-4	3.11	3400.2038	3399.2283	-1.3	29410.002 ^C		2.727	6.374		
		5-4	3.75	3367.7527	3366.7854	-0.2	29693.392 ^A		2.692	6.374	• • •	
648	$a~^3G-v~^3F^{ m o}$	3-2	3.78	3454.0096	3453.0204	-0.2	28951.859 ^A		2.758	6.348		
	(301)	3-3	3.40	3434.5522	3433.5679	0.4	29115.877 ^B		2.758	6.368		
		4-4	3.87	3412.3318	3411.3532	-0.3	29305.474 ^A		2.727	6.361	-1.06 ^b	
		4-3	3.85	3405.2777	3404.3008	-0.2	29366.181 ^A		2.727	6.368	• • •	
		5-4	3.97	3379.6492	3378.6789	-0.1	29588.870 ^A	1	2.692	6.361	• • •	

	$(MT)^{1}$		I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	BI.°
649	$a^3G-u^3G^{\circ}$	3-4	2.74	3399.1922	3398.2170	0.0	29418.754 ^C	0	2.758	6.406		
	(304)	3 - 3	4.17	3381.0806	3380.1100	-0.1	29576.343 ^A	1	2.758	6.425	-0.70^a	
		5-5	4.54	3371.7516	3370.7834	0.1	29658.175 ^A	-1	2.692	6.369	-0.27^a	
		4-4	4.27	3370.5153	3369.5474	-0.1	29669.054 ^A	1	2.727	6.406	-0.48^a	
		4-3	3.31	3352.7074	3351.7440	-0.1	29826.641 ^B	1	2.727	6.425	-1.59 ^a	
		5-4	3.68	3338.6249	3337.6651	0.0	29952.451 ^A	0	2.692	6.406	-1.04 ^a	
650	$a~^3G-Hsp3~^1H^{\circ}$	4-5	2.67	3374.8402	3373.8711	1.4	29631.033^{D}	-12	2.727	6.401	-2.28^a	II
	(303)	5-5	3.62	3342.8669	3341.9060	0.0	29914.443 ^A	0	2.692	6.401	-1.25 ^a	
651	$a^{3}G-x^{1}D^{0}$ (306)	3-2	3.57	3388.3780	3387.4055	-0.1	29512.646 ^A	1	2.758	6.417	•••	
652	$a {}^{3}G - u {}^{3}D^{\circ}$ (307)	4-3	2.41	3336.6748	3335.7155	1.2	29969.957 ^C		2.727	6.443	• • •	
653	$a~^3G-w~^3H^{ m o}$	4-5	2.38	3266.4847	3265.5433	0.7	30613.950^{C}	-7	2.727	6.523		
	(308)	5-6	2.66	3255.6620	3254.7233	-0.8	30715.719 ^C	8	2.692	6.500	-1.93ª	
		5-5	2.51	3236.5224	3235.5885	-0.6	30897.361 ^C	6	2.692	6.523		
		5-4	d0	3220.298	3219.368	-2.1	31053.03 ^D	20	2.692	6.542		
654	$a^{3}G-y^{3}I^{\circ}$ (309)	4-5	1	3236.257	3235.324	-2.1	30899.89 ^D	20	2.727	6.558	• • •	II
655	$a^{3}G-{}^{4}F5p^{3}G^{0}$	5-5	2.82	3216.3375	3215.4087	0.0	31091.265^{B}	0	2.692	6.547		
	•	3-4	0	3147.807	3146.895	0.0	31768.15 ^D	0	2.758	6.697		
		4-4	2.61	3123.2000	3122.2947	0.4	32018.443^{B}		2.727	6.697		
		3-3	2.68	3114.4911	3113.5881	-0.2	32107.974^{B}	2	2.758	6.739		
		5-4	2.41	3095.7981	3094.8997	-0.3	32301.848^{D}	3	2.692	6.697		
		4-3	3	3090.397	3089.500	-1.9	32358.30 ^D	20	2.727	6.739		
656	$a~^3G-Gsp3~^3F^{\circ}$	4-4	0*	3230.545	3229.613	-3.1	30954.53 ^D	30	2.727	6.565		
050	a a aspe :	3-3	0	3214.602	3213.674	3.1	31108.05 ^D	-30	2.758	6.615		
		5-4	2.65	3201.2409	3200.3159	0.6	31237.887^{C}	-6	2.692	6.565		
		4-3	2.70	3188.9391	3188.0173	-0.9	31358.391 ^C	9	2.727	6.615		
		3-2	2.83	3174.6060	3173.6878	0.1	31499.972^{B}	-1	2.758	6.664		
657	$a^{3}G-{}^{4}F5p^{5}G^{0}$	5-6	d0?	3189.416	3188.494	-7.1	31353.70 ^D	70	2.692	6.580		
		3-4	d0?	3164.288	3163.372	0.0	31602.69 ^D	0	2.758	6.677		
		4-4	2.49	3139.4238	3138.5145	0.1	31852.979^{C}	-1	2.727	6.677		
		5-5	0	3137.670	3136.761	0.0	31870.78 ^D	0	2.692	6.644		
		4-3	1	3111.830	3110.928	8.7	32135.43 ^D	-90	2.727	6.712		
		5-4	2.78	3111.7384	3110.8360	0.0	32136.378^{D}	0	2.692	6.677		H
		4-5	d0?	3165.832	3164.916	11.0	31587.27 ^D	-110	2.727	6.644	• • •	
658	$a{}^3G-{}^4F5p{}^5F^{0}$	4-5	2*	3216.914	3215.985	-3.1	31085.69 ^D	30	2.727	6.581		I
	•	5-5	d0	3187.865	3186.943	9.1	31368.96 ^D	-90	2.692	6.581		I
		4-3	2.53	3158.3654	3157.4513	-0.3	31661.948^{C}	3	2.727	6.653		
		3-2	2	3145.339	3144.428	1.0	31793.08 ^D	-10	2.758	6.700		
659	$a {}^{3}G - y {}^{1}H^{\circ}$ (311)	4-5 5-5	2.57 2.99	3193.4286 3164.7870	3192.5056 3163.8713	-0.2 -0.1	31314.306^{C} 31597.703^{B}	2 1	2.727 2.692	6.610 6.610		
660	$a^{3}G^{-4}F5p^{3}F^{0}$	4-4	1	3191.854	3190.932	-4.1	31329.75 ^D		2.727	6.612		
660	$a^{3}G = F5p^{3}F^{3}$ (310*)	5-4	2.87	3191.834	3162.3300		31613.103 ^D		2.692	6.612		I
	(310*)	3-4	2.23	3103.2453	3120.2322	-0.5	32039.607 ^D		2.758	6.731		•
				3096.944	3096.045	0.0	32289.90 ^D		2.727	6.731	•••	
		4-3 3-2	2 2.70	3081.0032	3080.1085		32456.961^B		2.758	6.782		
((1	$a{}^3G-{}^4F5p{}^5D^{\circ}$			3171.049	3170.131	0.0	31535.31 ^D		2.758	6.668		
661	$a \circ G - F \circ p \circ D$	3-3	1		31/0.131	3.0	31611.24 ^D		2.738	6.647	• • •	
		4-4	2	3163.432	3145.165	-1.0	31785.63 ^D		2.727	6.668	• • •	
		4-3	0?	3146.076	3134.412		31894.67 ^D		2.692	6.647	•••	
		5-4 3-2	4 2.28	3135.320 3097.7753	3096.8764	0.0 -1.0	$31894.07 - 32281.231^{D}$		2.758	6.761	• • • •	
,	30 F 25 F 2											
662	$a~^3G-Dsp3~^5F^{ m o}$	4-3	0	3151.153	3150.240	4.0	31734.42 ^D		2.727	6.662	• • •	
		4-4	2.42	3136.4993	3135.5907		31882.679 ^C		2.727	6.680	• • •	
		4-5	2	3123.573	3122.668	0.0	32014.62 ^D 32165.95 ^D		2.727 2.692	6.697	• • •	
				71110 070	2107076	116	27165 05 0	-120	7.607	P 28/1		I
		5-4 5-5	4 2.96	3108.878 3096.1654	3107.976 3095.2670	11.6 0.0	32103.93 32298.016 ^B		2.692	6.680 6.697	-1.52 ^a	

•				1 A B	LE 2—Conti	пиеа						
No.	Multiplet (MT) ¹	J-J	I 2	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
663	$a^3G-x^1F^{\circ}$	3-3	1	3173.208	3172.290	0.0	31513.85 ^D	0	2.758	6.666		
f 003	(312)	4-3	2.58	3148.2028	3147.2913	-0.7	31764.154 ^D		2.727	6.666		II
	$a^{3}G^{-4}F5p^{3}D^{\circ}$		d0?				31588.32 ^D					**
664	$a \circ G - F \circ p \circ D$	3-3 4-3	au? 7	3165.727 3140.828	3164.811 3139.918	9.0 -2.0	31388.32 ^D		2.758 2.727	6.675 6.675	• • •	
		3-2	0	3115.913	3115.010	1.9	32093.32 D		2.758	6.737		
	30 5 0550										• • •	
665	$a~^3G-Dsp3~^5D$ °	3-3	1	3160.349	3159.435 3157.289	2.0	31642.07 ^D		2.758	6.681	• • •	
		3-2 $4-3$	2 1	3158.203 3135.547	3137.289	0.0 2.9	31663.58 ^D 31892.36 ^D		2.758 2.727	6.684 6.681	• • •	
		3-4	0	3119.943	3119.038	2.9	32051.87 ^D		2.758	6.732	•••	
		4-4	2	3095.769	3094.871	4.8	32302.15 ^D		2.727	6.732		I
		5-4	2.71	3068.8398	3067.9482	0.1	32585.604^{B}		2.692	6.732		•
666	$a~^3G-t~^3G^{\circ}$	4-5	10*	3126.553	3125.646	4.9	31984.11 ^D		2.727	6.693		T
666	a = G = i = G (313)	3-4	3	3126.175	3125.269	1.0	31984.11 D		2.758	6.724		I
	(313)	4-4	2.96	3101.9023	3101.0024	0.0	32238.282^{B}		2.727	6.724	-1.14 ^a	
		5-5	3.50	3099.0885	3098.1893	0.5	32267.552^{A}		2.692	6.693	-0.92^a	
		3-3	2.66	3091.1020	3090.2048	-0.5	32350.922^{C}		2.758	6.769	-1.62°	
		5-4	2.64	3074.8716	3073.9785	-0.4	32521.683^{B}		2.692	6.724	-1.31 ^a	
		4 - 3	3.00	3067.3702	3066.4789	-0.1	32601.217^{B}	1	2.727	6.769	-1.05^a	
667	$a~^3G-t~^5P^{\circ}$	3-3	d2	3149.077	3148.165	-5.0	31755.34 ^D	50	2.758	6.696		
007		4-3	2	3124.457	3123.552	2.0	32005.56 ^D		2.727	6.696		
660	$a~^3G-w~^1G^{\circ}$	3-4	0	3071.118	3070.226	0.0	32561.43 ^D	0	2.758	6.795		
668	a = G = w = G (315)	3-4 4-4	1	3047.690	3046.803	-0.9	32811.74 ^D		2.736	6.795	• • •	
669	$a^{3}G - s^{3}G^{0}$	4-5	3.72	2991.2638	2990.3915	-0.1	33430.686 ^A		2.727	6.872	-0.24 ^b	
	(UV166)	3-3 3-4	3.28 d2	2981.4022 2971.227	2980.5324 2970.360	-0.1 -1.8	33541.265 ^A 33656.13 ^D		2.758 2.758	6.917 6.931	-0.81 ^a	T
		5-5	4.55	2966.1204	2965.2544	1.0	33714.073 ^D		2.692	6.872	· · · · · · · · · · · · · · · · · · ·	I I
		4-3	2.08	2959.3171	2958.4528	-1.6	33791.580 ^D		2.727	6.917		•
		4-4	3.52	2949.2954	2948.4336	-0.1	33906.403 ^A		2.727	6.931	-0.41 ^a	
		5-4	1.95	2924.8473	2923.9916	-1.5	34189.819^{D}	18	2.692	6.931		
670	$a~^3G-v~^3H^{\circ}$	3-4	3.83	3012.3585	3011.4810	-0.4	33196.580 ^A	4	2.758	6.874	-0.33^a	
070	(316)	4-4	2.00	2989.8150	2988.9432	-0.4	33446.885 ^D		2.727	6.874	-0.33	
	(310)	4-5	3.43	2982.7210	2981.8509	-0.5	33526.434^{D}		2.727	6.884		I
		5-6	3.93	2960.8569	2959.9922	0.0	33774.007^{A}		2.692	6.880	-0.07^a	
		5-5	2.51	2957.7201	2956.8562	0.1	33809.825^{B}	-1	2.692	6.884	-1.59 ^a	
671	$a~^3G-w~^1D$ °	3-2	2.15	2984.6460	2983.7754	-1.0	33504.811^{D}	11	2.758	6.912		
672	$a~^3G-^2H4p~^1H^{\circ}$	5-5	3.47	2924.7083	2923.8526	-0.2	34191.444 ^A	2	2.692	6.931	-0.38^a	
673	$a~^3G-Gsp3~^1F^{\circ}$	3-3	3.30	2954.3488	2953.4857	-0.3	33848.407 ^A	3	2.758	6.955	-0.48^a	
	•	4-3	2.26	2932.6612	2931.8035	-1.7	34098.722^{D}	20	2.727	6.955		I
674	$a~^3G-u~^3H^{\circ}$	3-4	3.13	2926.2138	2925.3577	-0.2	34173.853 ^A	2	2.758	6.995	-0.71a	
0, .	(UV167)	4-5	3.16	2908.3691	2907.5174	-0.2	34383.531 ^A		2.727	6.990	-0.65^a	
	,	4-4	2.08	2904.9354	2904.0846	-1.9	34424.173^{D}	23	2.727	6.995	-1.69 ^a	
		5-6	3.06	2888.6519	2887.8051	0.0	34618.224 ^A	0	2.692	6.984	-0.89^a	
		5-5	2.36	2884.5931	2883.7472	-0.7	34666.935 ^C		2.692	6.990	-1.40^a	
		5-4	0	2881.220	2880.375	1.7	34707.52 ^D	-20	2.692	6.995	• • •	
675	$a~^3G-u~^3F^{\circ}$	3-4	3	2911.780	2910.928	1.7	34343.25 ^D	-20	2.758	7.016	-1.56 ^a	
	(UV168)	3-3	0?	2895.712	2894.864	5.9	34533.82 ^D		2.758	7.040		
		4-4	2	2890.711	2889.864	0.8	34593.56 ^D		2.727	7.016		
		5-4	1	2867.222	2866.380	0.0	34876.97 ^D	0	2.692	7.016		
676	$a\ ^3G-s\ ^6\!D6p\ ^5F^{0}$	3-3	d0?	2849.464	2848.627	5.7	35094.32 ^D		2.758	7.109		
		4-3	0	2829.283	2828.451	4.0	35344.64 ^D	-50	2.727	7.109	• • •	
677	$a~^3G-s~^6D6p~^5D^{\circ}$	3-2	1	2843.629	2842.793	0.0	35166.33 ^D	0	2.758	7.118		
678	$a~^3G-x~^3I^\circ$	5-6	0	2828.502	2827.670	2.4	35354.40 ^D		2.692	7.076		
	(UV169)	5-5	d0?	2825.784	2824.953	5.6	35388.41 ^D	-70	2.692	7.080		

					E 2—Contin						
No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	$ \sigma^{5} $ o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
679	$a {}^{3}G - s {}^{6}D_{3.5}4f [4.5]^{\circ}$ $a {}^{3}G - s {}^{6}D_{3.5}4f [4.5]^{\circ}$	4-4 5-5	d0? 2	2845.115 2822.456	2844.279 2821.625	5.7 -7.2	35147.96 ^D -70 35430.14 ^D 90	2.727 2.692	7.085 7.085		I
680	$a~^3G-Dsp1~^3D^{\circ}$	4-3	1	2829.098	2828.266	4.8	35346.95 ^D -60	2.727	7.110		
681	$a~^3G - s~^6D_{2.5}4f~[3.5]^{\circ}$	4-3	d3	2821.645	2820.815	2.4	35440.32 ^D -30	2.727	7.121		
682	$a~^3G-t~^3F^{ m o}$	3-4	d0?	2832.811	2831.978	-4.0	35300.63 ^D 50	2.758	7.135		
	(UV170)	3-3	2	2825.537	2824.706	4.8	35391.50 ^D -60	2.758	7.146		
		3-2 4-4	2.22 1.80	2820.1326 2812.8685	2819.3026 2812.0403	-1.4 -1.7	35459.326 ^C 18 35550.898 ^C 21	2.758 2.727	7.155 7.135	-1.27 ^a	
		4-3	2.10	2805.6881	2804.8617	-0.9	35641.880^{C} 12	2.727	7.133	-0.70^a	
		5-4	2.61	2790.6244	2789.8016	0.1	35834.274 ^B -1	2.692	7.135	-0.61ª	
683	$a~^3G-Psp1~^3D^{ { m o}}$	3-3	1	2831.592	2830.759	4.0	35315.82 ^D -50	2.758	7.137		
		4-3	3	2811.665	2810.837	4.7	35566.11 ^D -60	2.727	7.137		
684	$a~^3G-s~^4\!D5p~^3F^{\circ}$	4-4	1	2784.107	2783.286	-2.3	35918.16 ^D 30	2.727	7.181		II
		5-4	1.73	2762.3137	2761.4978	-1.4	36201.537 ^C 19	2.692	7.181	• • •	**
	2	4-3	1	2696.103	2695.303	-5.1	37090.57 ^D 70	2.727	7.326	• • • •	II
685	$a~^3G-Hsp1~^3G^{\circ}$	4-5	0	2776.277	2775.458	-2.3	36019.46 ^D 30 36085.11 ^D -70	2.727	7.193	• • •	
		3-4 5-5	0 1.99	2771.226 2754.6060	2770.408 2753.7920	5.4 -0.5	36302.832^{C} 6	2.758 2.692	7.232 7.193	•••	
		4-4	1.66	2752.1311	2751.3177	0.1	36335.478 ^D -1	2.727	7.133		
		4-3	1.46	2732.1487	2731.3401	-1.3	36601.229 ^C 18	2.727	7.265		
		5-4	?	2730.830	2730.022	-1.5	36618.90 ^D 20	2.692	7.232		
686	$a\ ^3G-s\ ^4\!D5p\ ^5F^{ m o}$	3-4	0	2759.995	2759.180	-6.1	36231.95 ^D 80	2.758	7.251		I
		4-4	0?	2741.072	2740.261	6.0	36482.08 ^D -80	2.727	7.251	• • •	
687	$a~^3G-Hsp1~^3I^{\circ}$	4-5	1.77	2696.3883	2695.5884	3.4	37086.646 ^C -47	2.727	7.325		
		5-6	1	2685.932	2685.135	-1.4	37231.02 ^D 20	2.692	7.308	• • •	
688	$a~^3G-Fsp1~^3F^{\circ}$	3-4	d0	2642.277	2641.490	1.4	37846.14 ^D -20	2.758	7.451	• • •	_
		3-3	0 3*	2636.922	2636.136	2.1	37923.00 ^D -30 38096.52 ^D 50	2.758	7.460	• • •	I
		4-4 4-3	1.54	2624.912 2619.6307	2624.129 2618.8491	-3.4 0.7	$38096.52 \stackrel{D}{=} 50$ 38173.320^{C} -10	2.727 2.727	7.451 7.460	•••	
		5-4	1.94	2605.5329	2604.7547	-0.1	38379.864^B 1	2.692	7.451	• • •	
689	$a~^3G-Fsp1~^3G^{\circ}$	3-4	1	2616.660	2615.879	4.8	38216.66 ^D -70	2.758	7.497		II
	•	4-5	1.63	2614.0346	2613.2543	-0.3	38255.041 ^C 5	2.727	7.470		
		3-3	1.78	2610.0002	2609.2209	0.6	38314.173 ^B -9	2.758	7.509	-0.48^a	
		4-4	1.60	2599.6293	2598.8525	0.5	38467.023 ^C -7	2.727	7.497		
		5-5	2.23	2594.8120	2594.0363	-0.2	38538.438^B 3 38564.452^C -28	2.692	7.470	• • •	
		4-3 5-4	1.20 1.94	2593.0616 2580.6163	2592.2863 2579.8440	1.9 -0.3	38564.452 ^C -28 38750.433 ^B 4	2.727 2.692	7.509 7.497		
690	$a~^3G-t~^3H^{\circ}$	3-4	d3	2596.847	2596.071	-4.7	38508.24 ^D 70	2.758	7.533		
070	(UV171)	4-5	1	2594.036	2593.260	0.7	38549.97 ^D -10	2.727	7.507		
	(011/1)	5-6	2	2587.330	2586.556	1.3	38649.88 ^D -20	2.692	7.484		
		5-4	d0?	2561.352	2560.584	-0.7	39041.88 ^D 10	2.692	7.533		
691	$a~^3G-Gsp1~^3H$ $^{ m o}$	5-6	1.56	2420.1367	2419.4017	2.4	41319.980 ^C -41	2.692	7.815		
692	$z^{7}F^{\circ}-e^{7}D$	4-5	3.22	5045.6179	5044.2114	0.3	19819.178 ^A -1	2.851	5.308	-2.02^a	
	(318)	5-5	4.62	5007.5155	5006.1191	0.5	19969.983 ^A -2	2.832	5.308	-0.62^a	
		3-4	3.84	4986.9382	4985.5473	0.5	20052.384^{A} -2	2.865	5.351	-1.33ª	
		6-5	5.47	4958.9803	4957.5968	0.5	20165.436^{A} -2	2.808	5.308	0.23^{a}	
		4-4	4.82	4958.6820	4957.2986	0.5	20166.649 ^A -2	2.851	5.351	-0.41^a	
		2-3 5-4	4.12 5.29	4940.1923 4921.8768	4938.8138 4920.5031	-0.2 0.5	20242.127^{A} 1 20317.453^{A} -2	2.875 2.832	5.385 5.351	-1.08 ^a 0.07 ^a	
		3-4	5.29 4.84	4921.8768	4920.3031	0.5	20317.455 ⁻² -2 20323.686 ^A 0	2.865	5.385	-0.34^a	
		1-2	4.24	4904.6793	4903.3102	0.0	20388.693 ^A -1	2.882	5.410	-0.93^a	
		4-3	5.07	4892.8584	4891.4924	0.0	20437.951^{A} 0	2.851	5.385	-0.93	
		2-2	4.76	4892.1209	4890.7551	-0.2	20441.032^{A} 1	2.875	5.410	-0.39^a	
		0 - 1	4.26	4879.5736	4878.2112	0.0	20493.594 ^A 0	2.885	5.426	-0.89^a	

·				1	ABLE 2—Co	пипиеа	l 					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (A)	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
		3-2 2-1	4.80 4.39	4872.6789 4861.0990	4871.3182 4859.7414	0.2 -0.2	20522.592 ^A 20571.480 ^A	-1 1	2.865 2.875	5.410 5.426	-0.36 ^a -0.76 ^a	
693	$z^{7}F^{\circ}-e^{5}D$ (319)	3-4 4-4	1.95 2.16	4636.9152 4612.4766	4635.6170 4611.1849	0.6 0.9	21566.062^{C} 21680.327^{A}	-3 -4	2.865 2.851	5.539 5.539	-3.59 ^b	
	(31)	5-4	2.32	4580.6097	4579.3264	-4.2	21831.155^{D}	20	2.832	5.539		Ar
		2-3	1.88	4572.7190	4571.4378	0.2	21868.827 ^B	-1	2.875	5.587	-3.27 ^b	
		3-3	2.27	4555.7279	4554.4512	-0.2	21950.389 ^B	1	2.865	5.587	-3.05^{b}	
		1-2	1.78	4527.1326	4525.8635	-0.2	22089.037^{C}	1	2.882	5.620	-3.20^{b}	
		2-2	1.95	4516.4330	4515.1667	1.2	22141.367 ^C	-6	2.875	5.620	-3.23 ^b	
694	$z^{ 7}F^{ o}\!-\!e^{ 7}F$	6-6	4.75	3611.1888	3610.1591	0.0	27691.712 ^A	0	2.808	6.241	0.18^{a}	
	(321)	4-5	3.27	3592.3742	3591.3493	2.5	27836.744^{B}	-19	2.851	6.302	-1.82^{b}	
		0 - 1	3.17	3579.4040	3578.3825	0.1	27937.612 ^B	-1	2.885	6.349	-1.35ª	
		1 - 1	3.35	3576.1343	3575.1136	0.4	27963.156 ^B	-3	2.882	6.349	-1.04ª	
		5-5	4.30	3573.0151	3571.9953	0.1	27987.567 ^A	-1	2.832	6.302	-0.22ª	
		2 - 1	2.97	3569.4514	3568.4324	-1.8	28015.510^{B}	14	2.875	6.349	-1.52^a	
		3-3	4.06	3566.5995	3565.5813	-0.5	28037.911 ^A	4	2.865	6.341		
		2-2	3.69	3553.8429	3552.8280	-0.5	28138.554 ^A	4	2.875	6.364	-0.78ª	
	7-0 475	4-4	3.99	3546.6530	3545.6400	0.0	28195.597 ^A	0	2.851	6.347	-0.46 ^a	
695	$z^{7}F^{\circ}-f^{7}D$	4-5	2.80	3652.1378	3651.0975	1.3	27381.223 ^C 27532.038 ^A	-10	2.851	6.246	-1.77°	
	(322)	5-5	4.19	3632.1321	3631.0970	0.0	27532.038^{A} 27727.490^{A}	0 0	2.832 2.808	6.246	-0.33 ^a -0.34 ^a	
		6-5	4.20	3606.5291	3605.5006	0.0	27750.876 ^A	0	2.865	6.246	-0.34° -0.86°	
		3-3	3.47 3.12	3603.4899 3603.1103	3602.4621 3602.0827	0.0 0.9	27753.799^{B}	-7	2.882	6.306 6.323	-0.86 ^a	
		1-2 0-1	2.66	3600.0062	3598.9794	-1.0	27777.730 ^C	8	2.885	6.329		
		2-2	3.36	3596.3272	3595.3014	-0.3	27777.730° 27806.146^{B}	2	2.875	6.323	 -1.10 ^a	
		2-2 4-4	4.26	3595.6579	3594.6322	-0.3	27800.140 27811.322^{A}	1	2.851	6.299	-0.26^a	
		2-1	3.67	3589.9420	3588.9178	0.3	27855.603 ^A	-2	2.875	6.329	-0.20	
		3-2	3.68	3585.8089	3584.7858	-0.6	27887.710^{A}	5	2.865	6.323	-0.82^a	
		5-4	3.64	3576.2659	3575.2452	0.0	27962.127^{A}	0	2.832	6.299	-0.89^a	
696	$z^{7}F^{\circ}-f^{5}D$	3-4	2.51	3661.3692	3660.3265	1.3	27312.187^{D}	-10	2.865	6.251		II
	(323)	2 - 3	2.38	3657.3899	3656.3483	-0.9	27341.903^{D}	7	2.875	6.265		
	, ,	4-4	3.39	3646.1135	3645.0748	-0.3	27426.464^{B}	2	2.851	6.251	-1.28^a	
		4-3	3.69	3631.3827	3630.3478	0.1	27537.720 ^A	-1	2.851	6.265	-0.84^a	
		5-4	3.82	3626.1753	3625.1417	0.0	27577.266 ^A	0	2.832	6.251	-0.84^a	
		3-2	3.47	3624.8063	3623.7731	-0.1	27587.681 ^A	1	2.865	6.286		
		2 - 1	3.34	3611.7245	3610.6946	-0.7	27687.605^{B}	5	2.875	6.308	-1.21 ^a	
	7 7-	1-0	3.00	3605.3998	3604.3716	-0.4	27736.175 ^B	3	2.882	6.321	•••	
697	$z^{7}F^{\circ}-e^{7}P$	4-4	2.60	3639.1948	3638.1579	0.9	27478.606 ^C	-7	2.851	6.258		
	(324)	4-3	2.72	3621.2725	3620.2402	-2.1	27614.602^{D}	16	2.851	6.275	-1.78 ^b	
		5-4	3.64	3619.3308	3618.2990	0.0	27629.417 ^A 27668.830 ^B	0	2.832 2.875	6.258 6.306	-1.06 ^a -1.48 ^a	
		$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	3.03 3.77	3614.1752 3603.5532	3613.1448 3602.5255	-0.7 -0.1	27750.388 ^A	5 1	2.865	6.306	-0.69^a	
698	$z^{7}F^{\circ}-e^{5}G$	5-6	4.04	3613.0988	3612.0686	0.0	27677.073 ^A	0	2.832	6.264	-0.55^a	
070	(325)	4-5	3.69	3609.1708	3608.1416	0.0	27707.195^{A}	0	2.851	6.286	-0.87^a	
	(323)	5-5	3.99	3589.6334	3588.6093	0.1	27857.998 ^A	-1	2.832	6.286	-0.60^a	
		3-4	3.75	3588.2630	3587.2392	0.1	27868.637 ^A	-1	2.865	6.320	-0.87^a	
		6-6	3.48	3587.7621	3586.7385	-0.1	27872.528^{D}	1	2.808	6.264	-1.04^a	II
		4-4	3.19	3573.6105	3572.5905	-0.1	27982.904^{B}	1	2.851	6.320	-1.24^a	
		2-3	3.59	3568.0498	3567.0312	-0.1	28026.515^{A}	1	2.875	6.350	-0.95^a	
		3-3	3.18	3557.6965	3556.6806	0.0	28108.075^{B}	0	2.865	6.350	-1.38a	
		1-2	3.50	3555.5167	3554.5014	-0.3	28125.307^{D}	2	2.882	6.369	-1.03ª	II
699	$z^{7}F^{\circ}-e^{7}G$	6-7	5.14	3571.2736	3570.2542		28001.215 ^A	0	2.808	6.280	• • •	
	(326)	5-6	5.04	3555.9400	3554.9246		28121.959 ^A	-1	2.832	6.319	0.54^{a}	
		3-4	4.72	3543.0878	3542.0756		28223.969^{A}	-1	2.865	6.365	0.21^a	
		4-5	4.78	3542.0952	3541.0833		28231.878 ^A	0	2.851	6.351	0.25^{a}	
		2-3	4.60	3537.5666	3536.5559		28268.019 ^A	2	2.875	6.380	0.12^{a}	
		1-2	4.39	3534.2081	3533.1982		28294.882 ^A	1	2.882	6.390	-0.11 ^a	
		0-1	4.11	3534.0165	3533.0066		28296.416 ^A	-1	2.885	6.393	-0.32^a	
		6–6	3.67	3531.3959	3530.3868	0.0	28317.414 ^A	0	2.808	6.319	-0.95 ^a	

N					TAE	SLE 2—Cont	inued						
94	No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
AS.			1-1	4.07	3530.8288	3529.8198	0.0	28321.962 ^A	0	2.882	6.393	-0.36ª	
1994ApJS			4-4	4.08	3528.8013	3527.7928	0.0	28338.235 ^A		2.851	6.365	-0.30° -0.44°	
44			2-2	4.18	3527.6828	3526.6746	-0.2	28347.220^{A}		2.875	6.390	-0.44^{a}	
2			3-3	4.23	3527.3895	3526.3814	0.0	28349.577 ^A		2.865	6.380	-0.31^{-6}	
			2-1	3.17	3524.3160	3523.3087	0.0	28374.300^{B}		2.803	6.393		
			5-5	3.58	3523.2751	3522.2680	0.0	28382.683 ^B		2.832		-1.23a	
			3-3	3.15	3517.5630	3516.5574	0.7	28428.773 ^B			6.351	-0.99^a	
			3-2 4-3	3.13				_		2.865	6.390	-1.20 ^a	
			5-4	2.61	3513.2300	3512.2256	0.9	28463.835 ^C 28489.034 ^D		2.851	6.380	-1.49^a	
			3-4	2.01	3510.1225	3509.1188	0.9	28489.034 ²	-7	2.832	6.365	-2.12^{b}	
	700	z $^7F^{\circ}-f$ 5F	4-5	4.58	3557.8938	3556.8779	0.0	28106.516 ^A	0	2.851	6.336	-0.04^{b}	
		(327)	5-5	3.95	3538.9060	3537.8949	0.0	28257.320 ^A	0	2.832	6.336	-0.76^{b}	
			3-4	3.96	3527.2460	3526.2380	-0.1	28350.730 ^A	1	2.865	6.380	-0.54^a	
			$^{2-3}$	3.10	3519.6890	3518.6829	0.0	28411.601 ^C	0	2.875	6.398	-1.52 ^a	
			0 - 1	2.79	3510.7297	3509.7258	0.5	28484.107^{C}	-4	2.885	6.417		
			1 - 1	2.81	3507.5833	3506.5803	-0.1	28509.658^{C}		2.882	6.417		
	701	$z^{7}F^{0}-e^{5}S$	1 2	2.02									
	701		1-2	2.93	3583.7060	3582.6833	-0.6	27904.075^{B}		2.882	6.341	• • •	
		(328)	2-2	3.44	3576.9983	3575.9775	1.0	27956.401 ^B	-8	2.875	6.341	• • •	
	702	$z^{7}F^{0}-g^{5}D$	3-4	3.86	3541.1328	3540.1211	0.1	28239.551^{A}	-1	2.865	6.366	-0.80^a	
		(329)	4-4	3.22	3526.8615	3525.8535	-0.5	28353.821^{B}	4	2.851	6.366		
	702	$z^{7}F^{\circ}-e^{7}S$	2 2	3.09		2522 9076	1.0						
	703	$z \cdot F = -e \cdot S$ (330)	2-3	3.09	3523.9048	3522.8976	-1.9	28377.611 ^C	15	2.875	6.394	-1.34 ^a	
	704	$z^{7}F^{\circ}-g^{7}D$	1 5	d0?	3246.312	2245 275	0.0	20004 10 D	0	2.051	((70		
	704		4-5			3245.375	0.0	30804.19 ^D 30954.94 ^D		2.851	6.670	• • •	
		(333)	5-5	11	3230.502	3229.570	4.2			2.832	6.670	• • •	
			3-4	1	3224.368	3223.437	-2.1	31013.83 ^D		2.865	6.710	• • •	
			4-4	2.84	3212.5353	3211.6075	0.4	31128.063^B		2.851	6.710	-1.37ª	
			6-5	3.54	3210.2254	3209.2982	-2.2	31150.461^{D}		2.808	6.670	•••,	I
			2-3	1	3203.872	3202.947	4.1	31212.23 ^D		2.875	6.745		
			5-4	3.26	3197.0464	3196.1226	0.2	31278.870^{B}		2.832	6.710	-0.71^a	
			3-3	2.91	3195.5173	3194.5938	-0.1	31293.838^{B}	1	2.865	6.745		
			1-2	3	3188.079	3187.158	2.0	31366.85 ^D		2.882	6.771	• • •	II
			4-3	8	3183.894	3182.974	2.0	31408.08 ^D	-20	2.851	6.745		I
			$^{2-2}$	2.74	3182.7674	3181.8472	1.0	31419.198^{B}		2.875	6.771		
			0 - 1	4	3176.903	3175.984	1.0	31477.20 ^D	-10	2.885	6.788		
			3-2	2.78	3174.5247	3173.6065	-1.1	31500.779^{D}	11	2.865	6.771		II
			1 - 1	2.54	3174.3244	3173.4063	-0.9	31502.766 ^C	9	2.882	6.788		
			2 - 1	2.26	3169.0590	3168.1422	-1.2	31555.108^{C}	12	2.875	6.788		
	705	$z^{7}F^{\circ}-e^{3}H$	6-6	3	3206.136	3205.210	1.0	31190.19 ^D	-10	2.808	6.675		
	706	$z^{7}F^{\circ}-s^{6}D6s^{5}D$	3-4.	d0	3187.865	3186.943	0.0	31368.96 ^D	0	2.865	6.754		I
			4-4	1	3176.299	3175.381	4.0	$31483.18^{\ D}$	-40	2.851	6.754		
			5-4	3	3161.158	3160.243	5.0	31633.98 ^D	-50	2.832	6.754		
			2 - 3	d0?	3157.335	3156.421	4.0	31672.28^{-D}	-40	2.875	6.802		
			3-3	1	3149.226	3148.315	6.0	31753.83 ^D	-60	2.865	6.802		
			4-3	1	3137.930	3137.021	1.0	31868.14 ^D	-10	2.851	6.802		I
			1-2	d0?	3135.842	3134.934	-3.0	31889.36 ^D	30	2.882	6.836		
			$^{2-2}$	0	3130.709	3129.802	1.0	31941.65 ^D	-10	2.875	6.836		
			1 - 1	d 9	3119.068	3118.164	-6.8	32060.86 ^D	70	2.882	6.857		
	707	$z^{7}F^{\circ}-{}^{4}F6s^{5}F$	4 ~	d0									
	707	$z \cdot F \cdot - \cdot F \cdot os \cdot F$	4-5 5-5		3019.580 3005.882	3018.701	1.8	33117.19 ^D	-20	2.851	6.957	• • •	
				0		3005.006	-8.1	33268.11 ^D	90	2.832	6.957	• • •	
			1-2	0	2916.834	2915.980	-6.0	34283.75 ^D	70	2.882	7.132	• • •	
			2-3	0	2913.912	2913.059	2.5	34318.13 ^D	-30	2.875	7.130	•••	
	708	z 7F $^{\circ}$ $-s$ 6D $5d$ 5D	3-3	0	3009.666	3008.789	-8.2	$33226.28^{\ D}$	90	2.865	6.985		
			4-3	0	2999.352	2998.478	-7.2	33340.53 D	80	2.851	6.985		
			5-4	0	2997.444	2996.570	-6.3	33361.76 ^D	70	2.832	6.969		
			3-2	0	2996.829	2995.956	-6.3	33368.60 D	70	2.865	7.002		
			2 - 1	0	2981.279	2980.409	0.0	33542.65 ^D	0	2.875	7.034		
	709	$z^{7}F^{\circ}-s^{6}D5d^{5}G$	5-6		2985.428								
	109	∠ F -s D3a G	5-6 4-5	5 3	2985.428 2980.278	2984.558	-3.6	33496.03 ^D	40	2.832	6.985	•••	
			4-3 3-4	3 1	2980.278 2979.543	2979.408	2.7	33553.92 ^D		2.851	7.011	• • •	
			3-4	1	2919.543	2978.674	0.9	33562.19 ^D	-10	2.865	7.026	•••	

No.	Multiplet (MT) ¹	J-J	I ²	$\lambda_{vac}^{}$ (Å)	$\lambda_{qir}^{}$ (Å)	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7 Bl.8
)		4-4	1	2969.433	2968.566	0.0	33676.46 ^D 0	2.851	7.026	•••
		5-5	2	2966.943	2966.076	2.6	33704.73 ^D -30	2.832	7.011	
)		2-3	d0?	2953.059	2952.196	-6.1	33863.19 ^D 70	2.875	7.074	
1		3-3	2	2945.966	2945.105	-3.5	33944.72 ^D 40	2.865	7.074	
		1-2	d0?	2942.130	2941.270	1.7	33988.98 ^D -20	2.882	7.096	
		2-2	d0?	2937.608	2936.749	3.5	34041.30 ^D -40	2.875	7.096	
		4-3	d0*	2936.091	2935.232	4.3	34058.89 ^D -50	2.851	7.074	
710	z $^{7}F^{\circ}$ $-s$ $^{6}D5d$ ^{7}F	5-6	3	2977.776	2976.907	0.0	33582.11 ^D 0	2.832	6.996	
		6-6	2.84	2960.5448	2959.6802	-0.8	33777.567 ^B 9	2.808	6.996	
		4-5	2.28	2954.5541	2953.6910	0.1	33846.055^{C} -1	2.851	7.047	• • •
		2-3	2	2950.564	2949.702	-3.5	33891.82 ^D 40	2.875	7.077	• • • •
		3-2	4	2948.223	2947.361	-5.2	33918.74 ^D 60 33943.36 ^D 0	2.865	7.071	I
		0-1 1-1	0 1	2946.084	2945.223	0.0	_	2.885	7.093	• • •
		3-3	4	2943.864 2943.485	2943.004 2942.625	-4.3 0.9	33968.96 ^D 50 33973.33 ^D -10	2.882 2.865	7.093 7.077	
		5-5	2.60	2941.4475	2942.023	-0.4	33996.867 ^B 5	2.832	7.047	I
		2-1	1	2939.342	2938.483	1.7	34021.22 ^D -20	2.875	7.047	• • •
		3-4	2.83	2924.2863	2923.4307	0.1	34196.378 ^B -1	2.865	7.105	• • • •
		4-4	1	2914.544	2913.690	-3.4	34310.69 ^D 40	2.851	7.105	• • •
		5-4	0	2901.788	2900.938	-5.1	34461.51 ^D 60	2.832	7.105	
711	$z^{7}F^{\circ}-s^{6}D5d^{7}D$	3-4	d0?	2999.310	2998.436	6.3	33341.00 ^D -70	2.865	6.999	
		4-4	0?	2989.059	2988.187	0.0	33455.35 ^D 0	2.851	6.999	I
		5-5	2.30	2977.4188	2976.5500	1.1	33586.138^{C} -12	2.832	6.996	
		5-4	2.00	2975.6462	2974.7778	0.1	33606.146 ^D -1	2.832	6.999	I
		3-2	3	2964.557	2963.692	1.8	33731.85 ^D -20	2.865	7.047	
		6-5	2.41	2960.1892	2959.3247	-1.8	33781.624 ^C 21	2.808	6.996	
		2-3	1	2951.779	2950.917	0.0	33877.87 ^D 0	2.875	7.076	• • •
712	z $^7F^{\circ}$ $-s$ 6D5d 7P	3-3	d0?	2998.400	2997.526	-3.6	33351.12 ^D 40	2.865	7.000	II
		4-3	4.11	2988.1620	2987.2905	-4.3	33465.388^{D} 48	2.851	7.000	I
		3-4	3?	2964.410	2963.544	0.0	33733.53 ^D 0	2.865	7.048	• • •
		4-4	2.08	2954.4022	2953.5391	0.3	33847.795 ^D -4	2.851	7.048	•••
		2-2	2.26	2932.6612	2931.8035	1.1	34098.722^{D} -13	2.875	7.103	I
		3-2	d0?	2925.667	2924.811	4.3	34180.24 ^D -50	2.865	7.103	•••
713	z $^{7}F^{\circ}$ $-s$ $^{6}D5d$ ^{7}G	6-7	3.29	2951.1035	2950.2413	0.1	33885.629 ^A -1	2.808	7.009	• • •
		5-6	3.12	2938.6659	2937.8067	-0.2	34029.047 ^A 2	2.832	7.051	• • •
		3-4	2.30	2937.2966	2936.4378	0.5	34044.910 ^C -6	2.865	7.086	
		1-1	2	2934.662	2933.804 2929.304	2.6	34075.47 ^D -30	2.882	7.107	• • •
		2-1 4-5	0	2930.161		1.7	34127.82 ^D -20 34130.096 ^B -51	2.875	7.107	• • •
		4-3	3.31 2.26	2929.9654 2927.4717	2929.1084 2926.6153	4.4 1.0	34159.169 ^C -12	2.851 2.851	7.083 7.086	
		2-3	2.54	2926.6407	2925.7845	-0.3	34168.868^B 4	2.875	7.112	
		1-2	2.46	2923.4788	2922.6234	0.1	34205.823^{C} -1	2.882	7.112	
		6-6	1	2921.886	2921.031	1.7	34224.47 ^D -20	2.808	7.051	
		3-3	2.20	2919.6714	2918.8169	-0.4	34250.430^{C} 5	2.865	7.112	
		2-2	2.04	2919.0133	2918.1590	0.9	34258.151 ^D -11	2.875	7.112	
		5-5	d3	2917.068	2916.214	-3.4	34281.00 ^D 40	2.832	7.083	
		3-2	0	2912.083	2911.230	3.4	34339.68 ^D -40	2.865	7.123	
		4-3	d0?	2909.965	2909.113	1.7	34364.67 ^D -20	2.851	7.112	
		6-5	d0?	2900.531	2899.681	-3.4	34476.45 ^D 40	2.808	7.083	
714	$z^{7}F^{\circ}-s^{6}D5d^{5}S$	2-2	d0?	2982.592	2981.722	1.8	33527.88 ^D -20	2.875	7.032	
	~ 1 0 20 2	3-2	d3	2975.351	2974.483	-0.9	33609.48 ^D 10	2.865	7.032	
715	z $^7F^{\circ}$ $-s$ 6D5d 5F	2-3	d0?	2982.010	2981.140	-3.6	33534.43 ^D 40	2.875	7.033	
		3-3	0	2974.778	2973.910	0.0	33615.95 ^D 0	2.865	7.033	
		1 - 2	0	2966.702	2965.836	-7.0	33707.46 ^D 80	2.882	7.061	
		4-5	2	2961.631	2960.766	1.8	33765.18 ^D -20	2.851	7.037	
		3-2	d0*	2954.970	2954.107	-0.9	33841.29 ^D 10	2.865	7.061	
		3-4	4*	2939.940	2939.080	0.0	34014.30 ^D 0	2.865	7.082	
		4-4	2.20	2930.0952	2929.2381	-0.9	34128.584 ^C 10	2.851	7.082	•••

No.	Multiplet	J-J	I ²	λ_{vac}^{3}	١ 3	-1	σ^{-5} o-R ⁶				_
	(MT) ¹			(Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
716	$z^{7}F^{\circ}-{}^{4}F6s^{3}F$	4-4	2.38	2957.5653	2956.7014	-0.3	33811.595 ^C 4	2.851	7.043		
		5-4	2.08	2944.4320	2943.5714	-1.0	33962.408 ^D 12	2.832	7.043		
		2-3	2	2938.900	2938.040	-0.9	34026.34 ^D 10	2.875	7.094		
		1-2	0	2894.681	2893.833	-4.2	34546.12 ^D 50	2.882	7.165		II
717	$z^{7}F^{\circ}-s^{6}D5d^{5}P$	2 - 3	1	2943.978	2943.117	-0.9	33967.65 ^D 10	2.875	7.087		II
		3-3	2.26	2936.9261	2936.0674	-0.4	34049.205^{C} 5	2.865	7.087		
		1-2	2	2927.550	2926.694	3.4	34158.25 ^D -40	2.882	7.117		
		4-3	1	2927.102	2926.246	-0.9	34163.48 ^D 10	2.851	7.087		II
		$^{2-2}$	2.00	2923.0681	2922.2128	0.2	34210.630^{D} -2	2.875	7.117		
		3-2	d 0	2916.124	2915.271	8.5	34292.09 ^D -100	2.865	7.117		
718	z $^7F^{\circ}$ $-s$ 6D5d 7S	2-3	2.23	2920.0679	2919.2133	-1.2	34245.779^{D} 14	2.875	7.121		
		3-3	5*	2913.126	2912.273	-5.1	34327.39 ^D 60	2.865	7.121		
		4-3	0	2903.466	2902.615	0.0	34441.60 ^D 0	2.851	7.121		
719	$z^{7}F^{\circ}-i^{5}D$ (UV174)	2-3	d0?	2888.385	2887.539	1.7	34621.42 ^D -20	2.875	7.168		
720	$z^{7}F^{\circ}-s^{6}D7s^{7}D$	4-4	2.26	2840.8111	2839.9761	1.9	35201.214 ^C -23	2.851	7.215		
		6-5	2.37	2837.1488	2836.3147	-1.6	35246.653^D 20	2.808	7.178		
		2-3	d0?	2833.846	2833.013	5.6	35287.73 ^D -70	2.875	7.250		
		1-2	d0?	2821.754	2820.924	0.8	35438.95 ^D -10	2.882	7.276		
		3-2	1	2811.139	2810.311	7.1	35572.77 ^D -90	2.865	7.276		
721	$z^{7}F^{\circ}-g^{5}G$	5-6	14	2844.461	2843.625	0.8	35156.05 ^D -10	2.832	7.191		I
	(UV176)	4-5	d0?	2834.892	2834.059	5.6	35274.71 ^D -70	2.851	7.224		-
	` ,	6-6	d5	2828.726	2827.894	-6.4	35351.60 ^D 80	2.808	7.191		I
722	$z^{7}F^{0}-s^{6}D7s^{5}D$	3-4	d0?	2840.068	2839.233	0.8	35210.43 ^D -10	2.865	7.231		
		4-4	d1	2830.887	2830.054	6.4	35324.62 ^D -80	2.851	7.231		II
		5-4	2	2818.852	2818.023	6.4	35475.43 ^D -80	2.832	7.231		**
		4-3	d0?	2795.973	2795.149	4.7	35765.72 ^D -60	2.851	7.285		
		2 - 1	d0?	2783.902	2783.081	2.3	35920.80 ^D -30	2.875	7.329		II
		3-2	1	2783.590	2782.769	0.0	35924.83 ^D 0	2.865	7.319		
723	$z^{7}F^{\circ}-s^{6}D_{4.5}6d$ [2.5]	2-3	1	2775.874	2775.055	0.8	36024.69 ^D -10	2.875	7.342		
	$z^{7}F^{\circ}-s^{6}D_{4.5}6d$ [2.5]	3-3	2.50	2769.6041	2768.7864	1.5	36106.244 ^D -19	2.865	7.342		II
	$z^{7}F^{0}-s^{6}D_{4.5}6d$ [4.5]	4-4	d1	2767.256	2766.439	3.8	36136.88 ^D -50	2.851	7.331		
	$z^{7}F^{\circ}-s^{6}D_{4.5}6d$ [5.5]	4-5	2.06	2763.4975	2762.6813	1.5	36186.029 ^D -19	2.851	7.337		I
	$z^{7}F^{\circ}-s^{6}D_{4.5}6d$ [5.5]	5-6	d2?	2756.474	2755.660	-1.5	36278.23 ^D 20	2.832	7.330		
	$z^{7}F^{\circ}-s^{6}D_{4.5}6d$ [4.5]	5-5	0	2756.269	2755.455	-3.0	36280.93 ^D 40	2.832	7.331		
	$z^{7}F^{\circ}-s^{6}D_{4.5}6d$ [4.5]	5-4	3	2755.755	2754.941	3.8	36287.69 ^D -50	2.832	7.331		I
	$z^{7}F^{\circ}-s^{6}D_{4.5}6d$ [6.5]	5-6	1.58	2754.7803	2753.9663	-2.4	36300.535^{D} 32	2.832	7.333		
	$z^{7}F^{\circ}-s^{6}D_{4.5}6d$ [5.5]	5-5	0?	2752.022	2751.209	-4.5	36336.92 ^D 60	2.832	7.337		
	$z^{7}F^{\circ}-s^{6}D_{4.5}6d$ [5.5]	6–6	1.86	2741.7031	2740.8922	-1.9	36473.680^{C} 25	2.808	7.330		
	$z^{7}F^{\circ} - s^{6}D_{4.5}6d$ [4.5]	6-5	1.80	2741.4997	2740.6888	-3.8	36476.386 ^C 50	2.808	7.331	• • •	
	$z^{7}F^{\circ} - s^{6}D_{4.5}6d$ [6.5]	6-6	1	2740.031	2739.220	0.8	36495.94 ^D -10	2.808	7.333	• • •	
	$z^{7}F^{\circ} - s^{6}D_{4.5}6d$ [6.5] $z^{7}F^{\circ} - s^{6}D_{4.5}6d$ [5.5]	6-7 6-5	2.09 d0	2737.5723	2736.7625	0.1	36528.715 ^C -1	2.808	7.337	• • •	**
				2737.301	2736.491	-2.2	36532.34 ^D 30	2.808	7.337	• • •	II
724	$z^{7}F^{\circ}-s^{6}D_{3.5}6d$ [1.5]	1-2	2.70	2752.9638	2752.1502	3.5	36324.488^{D} -46	2.882	7.385		II
	$z^{7}F^{\circ}-s^{6}D_{3.5}6d$ [1.5]	1-1	1.88	2751.3367	2750.5234	3.3	36345.970 ^C -43	2.882	7.388		
	$z^{7}F^{\circ} - s^{6}D_{3.5}6d$ [2.5]	2-3	d0?	2751.331	2750.517	3.0	36346.05 ^D -40	2.875	7.382	• • •	I
	$z^{7}F^{\circ} - s^{6}D_{3.5}6d$ [3.5]	3-3	1	2746.547	2745.735	0.8	36409.35 ^D -10	2.865	7.379	• • •	
	$z^{7}F^{\circ}-s^{6}D_{3.5}6d$ [4.5]	3-4	0	2745.598	2744.786	-2.3	36421.94 ^D 30	2.865	7.381	• • •	_
	$z^{7}F^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}F^{\circ} - s^{6}D_{3.5}6d$ [3.5]	3-3	d1	2745.164	2744.352	-3.0	36427.70 ^D 40	2.865	7.382	• • •	G
	$z^{7}F^{\circ}-s^{6}D_{3.5}6d$ [3.5] $z^{7}F^{\circ}-s^{6}D_{3.5}6d$ [4.5]	4-3 4-4	1.62 2*	2737.9497	2737.1398	-4.0 5.2	36523.680 ^C 53	2.851	7.379	• • •	
	$z^{7}F^{9}-s^{6}D_{3.5}6d$ [4.5] $z^{7}F^{9}-s^{6}D_{3.5}6d$ [5.5]	4-4	1.78	2737.009 2735.2565	2736.199 2734.4472	-5.2 0.4	36536.24 ^D 70 36559.642 ^D -6	2.851	7.381	• • •	
	$z^{7}F^{9}-s^{6}D_{3.5}6d$ [3.5] $z^{7}F^{9}-s^{6}D_{3.5}6d$ [4.5]	4-3 5-4	3.42	2725.7603	2734.4472	-2.9	36687.012^{D} 39	2.851 2.832	7.384	• • •	т
	$z^{7}F^{\circ}-s^{6}D_{3.5}6d$ [5.5]	5-6	2.06	2725.1481	2724.3332	-2. 9 -0.1	36695.253 ^C 1	2.832	7.381 7.382	•••	I
	$z^{7}F^{\circ}-s^{6}D_{3.5}6d$ [5.5]	5-5	1	2723.1461	2724.3412	-3.0	36710.50 ^D 40	2.832	7.384		
	$z^{7}F^{\circ}-s^{6}D_{3.5}6d$ [4.5]	6-5	d0?	2716.431	2715.626	5.9	36813.01 ^D -80	2.808	7.372		
	J.J. 1					-					
725	$z^{7}F^{\circ}-{}^{5}D4p^{2}{}^{7}F$	3-4	2	2735.696	2734.886	0.0	36553.77 ^D 0	2.865	7.397		I

•				TABL	E 2—Continu	ied					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mK	E(l)) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
2		5-5	1*	2726.432	2725.625	3.0	36677.97 ^D -40	2.832	7.380		
706	7 0 60 (10 5)		2.55								**
726	$z^{7}F^{\circ} - s^{6}D_{2.5}6d$ [2.5] $z^{7}F^{\circ} - s^{6}D_{2.5}6d$ [3.5]	2-3 $2-3$	2.33 1	2730.1370 2725.224	2729.3289 2724.417	-2.7 -1.5	36628.198 ^D 36 36694.23 ^D 20	2.875 2.875	7.417	• • •	II
4	$z^{7}F^{9}-s^{6}D_{2.5}6d$ [3.5] $z^{7}F^{9}-s^{6}D_{2.5}6d$ [2.5]	3-3	d0?	2723.224 2724.073	2724.417	-1.5 -0.7	36709.74 ^D 10	2.865	7.425 7.417	• • •	
	$z^{7}F^{6}-s^{6}D_{2.5}6d$ [2.5] $z^{7}F^{6}-s^{6}D_{2.5}6d$ [4.5]	3-3 4-5	1	2723.158	2722.352	-0.7	36722.07 ^D 20	2.851	7.417	• • •	
	$z^{7}F^{\circ}-s^{6}D_{2.5}6d$ [4.5] $z^{7}F^{\circ}-s^{6}D_{2.5}6d$ [4.5]	4-4	3	2723.138	2721.815	-1.5 -5.9	36729.31 ^D 80	2.851	7.404	•••	I
	$z^{7}F^{\circ}-s^{6}D_{2.5}6d$ [3.5]	4-4	d7	2711.348	2710.545	-3.7	36882.02 ^D 50	2.851	7.424	• • • •	I
	• •										•
727	$z^{7}F^{\circ} - s^{6}D_{1.5}6d$ [0.5]	0-1	d0?	2724.934	2724.127	0.0	36698.14 ^D 0	2.885	7.435	• • •	
	$z^{7}F^{\circ} - s^{6}D_{1.5}6d$ [0.5] $z^{7}F^{\circ} - s^{6}D_{1.5}6d$ [1.5]	1-1 0-1	2	2723.044 2722.621	2722.237 2721.815	5.2 6.7	36723.61 ^D -70 36729.31 ^D -90	2.882 2.885	7.435 7.439	• • •	T
	$z^{7}F^{6}-s^{6}D_{1.5}6d$ [1.5] $z^{7}F^{6}-s^{6}D_{1.5}6d$ [1.5]	1-2	d0	2722.621	2721.813	0.0	36790.21 ^D 0	2.882	7.439	• • •	I
	$z^{7}F^{\circ}-s^{6}D_{1.5}6d$ [1.5]	2-1	d0	2716.114	2717.309	-4.4	36807.36 ^D 60	2.875	7.439	• • •	
	$z^{7}F^{\circ}-s^{6}D_{1.5}6d$ [1.5]	2-2	3	2714.254	2713.450	0.7	36842.53 ^D -10	2.875	7.443		
	$z^{7}F^{\circ}-s^{6}D_{1.5}6d$ [2.5]	$\frac{2}{2}$	0	2711.246	2710.443	0.7	36883.41 ^D -10	2.875	7.448		
	$z^{7}F^{\circ}-s^{6}D_{1.5}6d$ [3.5]	2-3	1.78	2709.6961	2708.8929	1.0	36904.508 ^C -14	2.875	7.451		
	$z^{7}F^{\circ}-s^{6}D_{1.5}6d$ [1.5]	3-2	4	2708.254	2707.451	-3.7	36924.16 ^D 50	2.865	7.443		Ī
	$z^{7}F^{\circ}-s^{6}D_{1.5}6d$ [2.5]	3-3	2.52	2705.2666	2704.4645	3.6	36964.934 ^D -49	2.865	7.448		
	$z^{7}F^{\circ}-s^{6}D_{1.5}6d$ [3.5]	3-3	1.54	2703.7170	2702.9153	-2.7	36986.120 ^C 37	2.865	7.451		
	$z^{7}F^{\circ}-s^{6}D_{1.5}6d$ [2.5]	4-3	2.44	2696.9234	2696.1233	-3.0	37079.288 ^D 41	2.851	7.448		II
728	$z^{7}F^{\circ}-s^{6}D_{0.5}6d$ [1.5]	1-2	1.78	2711.2183	2710.4148	-1.8	36883.787 ^C 24	2.882	7.455		
128	$z^{7}F^{6}-s^{6}D_{0.5}6d$ [1.5] $z^{7}F^{6}-s^{6}D_{0.5}6d$ [1.5]	0-1	1.78	2711.2183	2710.4148	2.2	36907.83 ^D -30	2.885	7.453	• • •	
	$z^{7}F^{\circ}-s^{6}D_{0.5}6d$ [1.5] $z^{7}F^{\circ}-s^{6}D_{0.5}6d$ [1.5]	2-2	13	2707.384	2706.582	5.9	36936.02 ^D -80	2.875	7.455	• • •	I
	$z^{7}F^{\circ}-s^{6}D_{0.5}6d$ [1.5]	3-2	0	2707.384	2700.502	-3.6	37017.72 ^D 50	2.865	7.455		1
										• • •	
729	$z^{7}F^{\circ}-62079^{e}$	5-6	2.22	2548.8452	2548.0803	-0.2	39233.454^B 3	2.832	7.697	• • •	
		6–6	2.42	2536.2104	2535.4486	-0.1	39428.905 ^A 1	2.808	7.697	• • •	
730	$z^{7}F^{\circ}-62192^{e}$	4-5	6	2551.276	2550.510	-1.3	39196.08 ^D 20	2.851	7.711		
		5-5	7*	2541.495	2540.732	-3.2	39346.92 ^D 50	2.832	7.711		
		6-5	9	2528.932	2528.172	-3.8	39542.38 ^D 60	2.808	7.711		
	2 5										
731	$b^3P-z^5P^0$	2-3	1.34	16082.346	16077.954	8	6217.998^{A} -3	2.831	3.602	• • •	
		0-1	0.85	14967.857	14963.767	4	6680.983^{A} -2	2.858	3.686	• • •	**
		1-1	1.46	14736.401	14732.375	4	6785.917 ^D -2	2.845	3.686	• • •	II
732	$b^3P-z^3F^{\circ}$	2-3	2.91	11152.317	11149.264	2	8966.746 ^A -2	2.831	3.943		
	(336)	1-2	2.43	10884.741	10881.760	1	9187.173 ^A -1	2.845	3.984		
		2-2	1.71	10757.702	10754.756	2	9295.665^{A} -2	2.831	3.984	• • •	
733	$b^{3}P-z^{3}D^{0}$	2-3	4.56	11786.492	11783.267	3	8484.288 ^A -2	2.831	3.883	-1.57ª	
	(337)	1-2	4.26	11442.259	11439.127	3	8739.533 ^A -2	2.845	3.928	-1.75a	
	()	2-2	3.40	11301.955	11298.862	3	8848.026 ^A -2	2.831	3.928	-2.59^a	
		0-1	3.69	11254.197	11251.116	1	8885.574 ^A -1	2.858	3.960	-2.19^a	
		1-1	3.48	11122.843	11119.798	1	8990.507 ^A -1	2.845	3.960	-2.20^a	
		2-1	1.99	10990.218	10987.209	2	9099.000^{A} -2	2.831	3.960		
734	b ³ P−y ⁵ D°	1-2	2.45	9212.5533	9210.0258	1.7	10854.754 ^A -2	2.845	4.191	-2.40^a	
, 54	(338)	2-2	2.91	9121.3845	9118.8816	0.0	10963.248 ^A 0	2.831	4.191	-2.12^a	
	(330)	0-1	1.79	9119.6351	9117.1327	0.8	10965.351 ^A -1	2.858	4.217	•••	
		1-1	1.76	9033.1919	9030.7129	2.4	11070.284 ^A -3	2.845	4.217		
		1-0	1.75	8948.7180	8946.2619	0.8	11174.785 ^A -1	2.845	4.230		
		2-1	2.01	8945.5192	8943.0639	-1.6	11178.781 ^A 2	2.831	4.217		
735	$b^{3}P-z^{3}P^{0}$	1-2	3.55	9090.8132	9088.3186	0.0	11000.116 ^A 0	2.845	4.209	-1.87ª	
133	(339)	2-2	3.33 4.16	9090.8132	8999.5566	0.8	11000.116 0 11108.609 ^A -1	2.843	4.209	-1.87 ^a	
	(339)	0-1	3.57	8840.8559	8838.4290	1.6	11311.122 ^A -2	2.858	4.260	-1.19 -1.87 ^a	
		1-1	3.56	8759.5926	8757.1876	0.8	11416.056^{A} -1	2.845	4.260	-1.91ª	
		2-1	3.84	8677.1291	8674.7465	0.8	11524.549 ^A -1	2.831	4.260	-1.68 ^a	
		1-0	3.67	8614.1696	8611.8040		11608.780^{A} -1	2.845	4.284	-1.85^a	
30 6	130 300										
736	$b^{3}P - y^{3}D^{\circ}$	2-3	4.27	6520.1681	6518.3671	1.3	15337.028 ^A -3 15731.220 ^A -2	2.831	4.733	-2.30 ^a -2.29 ^a	
	(342)	$1-2 \\ 2-2$	4.23 3.00	6356.7861 6313.2457	6355.0290 6311.5003	0.8 0.8	15/31.220 -2 15839.713 ^A -2	2.845 2.831	4.795 4.795	-2.29 ^a -3.23 ^b	
		2-2 0-1	2.88	6271.9593	6270.2250		15943.981 ^A -4	2.851	4.793	-3.23° -2.61^{a}	
		0-1	2.00	02/1.7373	0210.2230	1.0	13273.701 -4	2.030	₹.033	-2.01	

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl.8
		1-1	1.95	6230.9516	6229.2283	2.3	16048.913 ^E	³ -6	2.845	4.835	-2.97 ^b	
737	$b^{3}P-x^{5}D^{\circ}$ (343)	2-3	0.70	5837.1913	5835.5735	0.3	17131.527 ^A	-1	2.831	4.955		
738	$b^3P-z^5S^0$	2-2	2.08	5538.1179	5536.5801	-3.4	18056.676 ^L	11	2.831	5.070	-3.81 ^b	
739	(345) $b^{3}P - x^{5}P^{\circ}$	0-1	1.48	4993.1930	4991.8004	1.5	20027.265^{L}		2.858	5.341		
	(346)	1-1	1.78	4967.1660	4965.7804	0.5	20132.204 ^C		2.845	5.341	• • •	
740	$b^3P-w^5D^{\circ}$	$\begin{array}{c} 2-3 \\ 1-2 \end{array}$	3.18 2.89	4742.8559 4708.8049	4741.5297 4707.4877	0.0 -0.2	21084.343 ^A 21236.811 ^A		2.831 2.845	5.446 5.478	-1.76 ^a -2.31 ^a	
		$\frac{1-2}{2-2}$	2.67	4684.8705	4683.5597	-0.2	21230.811 21345.307 ^A		2.831	5.478	-2.31^{a}	
		0-1	2.23	4681.7773	4680.4672	-0.2	21359.410 ^E		2.858	5.506	-2.73^a	
		1-1	2.23	4658.8887	4657.5848	-0.9	21464.346 ^E		2.845	5.506	-2.90^{b}	
741	$b^3P-v^5D^{\circ}$	2-3	2.75	4688.6983	4687.3865	0.2	21327.881 ^A		2.831	5.476	-2.76 ^a	
	(348)	1-2	1.98	4604.6320	4603.3424	-0.8	21717.262 ^E		2.845	5.537	-3.14^{b}	
		1 - 1	1.78	4584.2240	4582.9397	-2.9	21813.943 ^C		2.845	5.549		
		2-2	1.48	4581.7432	4580.4596	-0.8	21825.754 ^C	_	2.831	5.537	•••	
742	$b^3P-w^5F^{\circ}$	0-1	1.78	4688.9828	4687.6709	0.7	21326.587 ^C	_	2.858	5.502	-3.78^{b}	
	(347)	1-2	2.19	4686.3358	4685.0246	0.9	21338.633 ^E		2.845	5.491	-3.34 ^b	
		1-1	2.04	4666.0242	4664.7183	0.7	21431.522^{L}		2.845	5.502		
~ 40	130 500	2-2	1.48	4662.6246	4661.3197	-4.1	21447.148 ^L		2.831	.5.491	-4.07 ^b	
743	$b^{3}P-y^{5}S^{\circ}$ (349)	1-2	2.94	4637.1444	4635.8462	-0.4	21564.996 ^A	2	2.845	5.519	-2.36 ^a	
744	$b^3P-x^3D^{\circ}$	1 - 2	4.40	4477.2746	4476.0186	0.0	22335.016 ^A	0	2.845	5.614	-0.82^a	
	(350)	2 - 3	4.66	4467.8053	4466.5518	0.4	22382.354 ^A		2.831	5.606	-0.60^a	
		$^{2-2}$	3.92	4455.6312	4454.3810	0.0	22443.509 ^A		2.831	5.614	-1.30^a	
		0-1	4.15	4444.4415	4443.1942	0.2	22500.015^{L}		2.858	5.648	-1.04 ^a	I
		$1-1 \\ 2-1$	4.09 2.98	4423.8100 4402.6793	4422.5681 4401.4429	0.2 0.0	22604.949 ^A 22713.442 ^A		2.845 2.831	5.648 5.648	-1.12^a -2.15^a	
745	$b^3P-w^5P^0$	2-3	2.43	4292.0719	4290.8647	0.2	23298.771 ^B		2.831	5.720	-2.13^a	
	(351)	0-1	2.06	4281.0743	4279.8700	1.3	23358.623 ^C		2.858	5.754	-2.33^{b}	
	` ,	1 - 1	2.34	4261.9282	4260.7289	0.9	23463.558 ^E		2.845	5.754		
		$^{2-2}$	2.52	4259.8099	4258.6112	-2.5	23475.226 ^E	14	2.831	5.742	-2.02^{b}	
		2-1	2.29	4242.3084	4241.1143	-2.7	23572.072 ^C		2.831	5.754	-2.51 ^b	
746	$b{}^{3}P-z{}^{3}S^{0}$	0 - 1	3.75	4246.4524	4245.2572	-0.4	23549.069 ^A	_	2.858	5.778	-1.17^{b}	
	(352)	1 - 1	3.50	4227.6142	4226.4240	-0.4	23654.003 ^A		2.845	5.778	-1.52^{b}	
		2-1	3.55	4208.3123	4207.1271	-0.4	23762.495 ^A		2.831	5.778	-1.46 ^b	
747	$b^{3}P - y^{3}P^{\circ}$	1-0	3.82	4214.8343	4213.6474	-0.4	23725.725 ^A		2.845	5.786	-1.29 ^b	
	(355)	$1-2 \\ 0-1$	4.09 3.43	4205.1692 4192.8577	4203.9848 4191.6765	0.2 -0.2	23780.256 ^A 23850.082 ^A		2.845 2.858	5.793 5.815	-1.01 ^a -1.49 ^a	
		$\frac{0-1}{2-2}$	4.22	4186.0712	4184.8918	0.2	23888.748 ^A		2.831	5.793	-0.87^a	
		1-1	3.20	4174.4914	4173.3151	0.0	23955.014 ^A		2.845	5.815	-1.69 ^a	
		2-1	4.27	4155.6701	4154.4987	-0.2	24063.508 ^A		2.831	5.815	-0.69^a	
748	$b^3P-u^5D^{\circ}$	2-3	4.69	4182.9332	4181.7547	0.0	23906.669 ^A	0	2.831	5.795	-0.37^a	
	(354)	1 - 2	4.20	4176.8130	4175.6361	0.0	23941.699 ^A		2.845	5.813	-0.83^a	
		2-2	4.28	4157.9708	4156.7988	0.0	24050.193 ^A		2.831	5.813	-0.81^a	
		1-0	2.38	4128.0186	4126.8545	2.9	24224.697 ^L		2.845	5.848	-2.54^{b}	
		$1-1 \\ 2-1$	2.96 4.16	4127.0443 4108.6474	4125.8804 4107.4883	0.2 0.0	24230.416 ^A 24338.910 ^A		2.845 2.831	5.849 5.849	-2.22 ^a -0.88 ^a	
749	$b^3P-x^3F^{\circ}$	1-2	3.68	4123.6785	4122.5155	0.0	24250.193^{A}		2.845	5.851	-0.88	
147	(356)	$\frac{1-2}{2-3}$	3.77	4122.9655	4122.3133	0.0	24250.195 ⁻⁴		2.831	5.839	-1.39 ^a	
	(350)	$\frac{2}{2-2}$	2.76	4105.3121	4104.1539	0.2	24358.684 ^E		2.831	5.851	-1.43	
750	$b^3P-w^3D^{\circ}$	2-3	4.43	4135.8438	4134.6776	0.0	24178.863 ^A	0	2.831	5.829	-0.65^a	
	(357)	1 - 2	4.07	4134.0649	4132.8992	0.0	24189.267 ^A		2.845	5.844	-1.01 ^a	
		0 - 1	4.04	4128.7721	4127.6078	0.0	24220.276 ^A		2.858	5.861	-0.96^a	
		2-2	3.72	4115.6059	4114.4450	0.0	24297.759 ^A		2.831	5.844	-1.30 ^a	
		1 - 1	4.06	4110.9614	4109.8017	0.0	24325.210 ^A		2.845	5.861	-0.94^a	
		2 - 1	2.84	4092.7080	4091.5531	0.3	24433.700 ^E	-2	2.831	5.861	-2.12^{b}	

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
751	$b^3P-w^5G^{\circ}$	2-3	2.43	4023.3494	4022.2127	0.3	24854.913 ^C	-2	2.831	5.913		
752	$b^{3}P - Psp3^{1}D^{\circ}$ (358*)	$1-2 \\ 2-2$	3.89 4.14	4086.1573 4068.1227	4085.0041 4066.9742	-0.2 0.0	24472.871 ^A		2.845	5.879	-1.28 ^b	
	, ,						24581.363 ^A		2.831	5.879	• • •	
753	$b^{3}P - y^{3}S^{\circ}$	0-1	3.66	4080.9899	4079.8380	-0.2	24503.859 ^A		2.858	5.896	-1.36 ^a	
	(359)	1-1	4.18	4063.5882	4062.4409	0.0	24608.793 ^A		2.845	5.896	-0.86a	
		2-1	3.83	4045.7518	4044.6092	0.0	24717.285 ^A		2.831	5.896	-1.22ª	
754	$b~^3P-v~^5F$ °	2 - 3	2.96	3954.9765	3953.8576	0.5	25284.600^{B}		2.831	5.966	-2.03^{b}	
	(362)	1-2	3.31	3953.8144	3952.6958	-0.3	25292.032^{B}		2.845	5.981	-1.39 ^a	
		2-2	3.97	3936.9267	3935.8124	-0.2	25400.524 ^A		2.831	5.981	-0.88^a	
		1 - 1	3.02	3936.4208	3935.3067	0.0	25403.788 ^B	0	2.845	5.995	-1.87^{b}	
755	$b^3P-v^5P^0$	2 - 3	2.36	3979.5817	3978.4564	-1.3	25128.269^{D}	8	2.831	5.947		
	(361)	1 - 2	3.22	3965.6370	3964.5153	-0.2	25216.630^{B}	1	2.845	5.971	-1.59 ^a	
		0 - 1	3.02	3962.2610	3961.1402	0.6	25238.115^{B}	-4	2.858	5.987	-1.79^{b}	
		2-2	3.63	3948.6481	3947.5309	-0.2	25325.123 ^A	1	2.831	5.971	-1.22^a	
		1 - 1	2.64	3945.8553	3944.7387	0.8	25343.048 ^C		2.845	5.987	-2.09^{b}	
		2 - 1	4.66	3929.0321	3927.9199	-2.3	25451.561 ^D	15	2.831	5.987		I
756	$b^{3}P-x^{3}P^{0}$	1-2	3.92	3943.5559	3942.4399	0.2	25357.825 ^A	-1	2.845	5.989	-0.95ª	
750	(364)	0-1	3.97	3927.0529	3925.9413	-0.3	25464.388 ^A		2.858	6.015	-0.94^a	
	(301)	2-2	3.84	3926.7553	3925.6438	0.2	25466.318 ^A		2.831	5.989	-1.03^a	
		1-0	3.90	3919.5251	3918.4154	0.0	25513.295^{A}		2.845	6.008	-1.01^{a}	
		1-1	3.56	3910.9370	3909.8296	0.2	25569.320^{A}		2.845	6.015	-1.32^a	
		2 - 1	3.50	3894.4125	3893.3094	0.0	25677.814 ^A	0	2.831	6.015	-1.51a	
757	$b^3P-w^3F^{\circ}$	2-3	3.71	3787.2246	3786.1494	0.1	26404.560 ^A	-1	2.831	6.105	-1.32ª	
758	$b^{3}P-v^{3}D^{\circ}$	0-1	3.01	3810.1211	3809.0399	-0.1	26245.885^{B}	1	2.858	6.112	-1.99^{b}	
,,,,	(367)	1-2	3.60	3802.8880	3801.8086	-0.1	26295.805 ^A		2.845	6.105		
	(/	2-3	4.03	3802.7587	3801.6794	-0.1	26296.699 ^A		2.831	6.092	-1.02^a	
		1-1	3.67	3794.9489	3793.8716	0.1	26350.816 ^A		2.845	6.112	-1.40^a	
		2-2	3.99	3787.2622	3786.1869	-0.1	26404.298 ^A	1	2.831	6.105	-0.90^{b}	
		2-1	3.22	3779.3879	3778.3147	-0.1	26459.311^{B}	1	2.831	6.112	-1.85a	
759	b ³ P-Fsp3 ¹ F° (368*)	2-3	2.57	3753.9220	3752.8554	-0.6	26638.806 ^C	4	2.831	6.134		
760	$b^{3}P-w^{3}P^{0}$	0-1	3.75	3704.8751	3703.8212	-0.1	26991.463 ^A	1	2.858	6.204	-1.20a	
760	(369)	1-0	3.74	3704.8731	3703.8212	0.0	27004.527 ^A		2.838	6.193	-1.20 ^a -1.14 ^b	
	(309)	2-1	3.60	3675.8100	3674.7636	0.0	27004.327 27204.888 ^A		2.831	6.204	-1.14° -1.32^{a}	
		1-2	3.81	3671.0695	3670.0244	-0.3	27240.018 ^A		2.845	6.222	-1.32^a -1.06^a	
		2-2	3.97	3656.5063	3655.4649	0.0	27348.510 ^A		2.831	6.222	-0.93^a	
	. 2 — 1 — -										-0.93	
761	$b^{3}P-z^{1}F^{0}$ (370)	2-3	2.64	3603.7926	3602.7648	1.0	27748.545 ^C	-8	2.831	6.272	•••	
762	$b {}^{3}P - v {}^{3}F^{\circ}$ (371)	1-2	2.89	3539.2627	3538.2516	0.0	28254.472 ^C	0	2.845	6.348	•••	
763	$b {}^{3}P - u {}^{3}G^{\circ}$ (372)	2-3	2.56	3449.7697	3448.7815	0.8	28987.442 ^D	-7	2.831	6.425	•••	
764	$b^{3}P-u^{3}D^{\circ}$	2 - 3	3.35	3432.7955	3431.8116	0.0	29130.777 ^A	0	2.831	6.443	-1.17^a	
	(376)	0-1	2.80	3394.3516	3393.3775	-0.3	29460.708^{C}	3	2.858	6.510		
		1-1	2.62	3382.3048	3381.3339	0.1	29565.638^{C}	-1	2.845	6.510	-1.86a	
765	$b^{3}P-^{2}P4p^{1}P^{0}$	1-1	2.98	3420.6747	3419.6939	0.5	29233.999 ^B	-4	2.845	6.469		
766	$b^3P-t^3D^{\circ}$	2 - 3	2.97	3404.2666	3403.2900	0.2	29374.903^{B}	-2	2.831	6.473	-1.32^a	
	(377)	1-2	2.48	3362.9147	3361.9487	-0.9	29736.110 ^C		2.845	6.532		
	•	0 - 1	3.10	3355.0233	3354.0594	-0.1	29806.052^{B}		2.858	6.553	-1.17ª	
		$^{2-2}$	2.41	3350.6872	3349.7243	-3.1	29844.624^{D}		2.831	6.532	•••	
		1-1	3.11	3343.2528	3342.2918	-0.6	29910.990^{B}		2.845	6.553	-1.32a	
	$b^{3}P-{}^{4}F5p^{3}G^{0}$	2-3	0	3172.681	3171.764	0.0	31519.08 ^D		2.831	6.739	•••	
767												
767 768	$b^3P-v^3P^{\circ}$	1-2	3.18	3336.7278	3335.7685	-0.6	29969.481 ^B	5	2.845	6.561	-1.20^a	
	b ³ P-v ³ P° (379)	1-2 2-2	3.18 3.64	3336.7278 3324.6927	3335.7685 3323.7364	-0.6 0.2	29969.481 ^B 30077.968 ^B		2.845 2.831	6.561 6.561	-1.20 ^a -0.60 ^b	

TABLE 2—Continued

No.	Multiplet	J-J	I ²	λ_{vac}^{3}	λ_{air}^{3}	o-R ⁴	σ^{-5} o-R ⁶	E(l)	E(u)	log(gf) ⁷ B	==- 31. ⁸
	(MT) ¹			(Å)	λ _{air} (A)	(mÅ)	(cm ⁻¹) (mK)	(eV)	(eV)	/	
7 (0	13D 4Es 500	2-1	2.59	3290.3827	3289.4351	1.4	30391.602^{C} -13	2.831	6.599	•••	
769	$b^{3}P-{}^{4}F5p^{5}G^{\circ}$	2-3	d0?	3195.259	3194.335	-4.1	31296.37 ^D 40	2.831	6.712	• • •	
770	$b^3P-^4F5p^3F^0$	$\frac{2-3}{1-2}$	d0? d0?	3179.576 3148.661	3178.657 3147.750	-2.0 3.0	31450.73 ^D 20 31759.53 ^D -30	2.831 2.845	6.731 6.782		
		2-2	1	3137.930	3137.021	-6.9	31868.14 ^D 70	2.831	6.782	•••	I
771	$b{}^{3}P-{}^{4}F5p{}^{5}D^{\circ}$	0-1	d0	3169.437	3168.521	4.0	31551.34 ^D -40	2.858	6.770		
		$1-2 \\ 2-2$	1 2	3166.178 3155.347	3165.262 3154.433	1.0 8.0	31583.82 ^D -10 31692.24 ^D -80	2.845 2.831	6.761 6.761		I
772	b ³ P-Dsp3 ⁵ F°	2-1	2.38	3240.5937	3239.6588	-0.2	30858.543^D 2	2.831	6.657		
112	0 1 -Dsp3 1	2-3	1	3236.747	3235.813	5.0	30895.22 ^D -48	2.831	6.662		
773	$b^3P-x^1F^0$	2-3	d0?	3233.636	3232.703	1.0	30924.94 ^D -10	2.831	6.666		
774	$b^3P-x^3S^o$	0 - 1	2.52	3251.3345	3250.3969	0.1	30756.602 ^C -1	2.858	6.671		
		1-1 2-1	d0? 2.99	3240.279 3228.9273	3239.344 3227.9953	0.0 -0.7	$30861.54 D 0 30970.038^B 7$	2.845 2.831	6.671 6.671	• • •	
775	b ³ P- ⁴ F5p ³ D°	2-1	2.34	3225.8552	3224.9240	-0.7	30970.038 7 30999.532^D 7	2.831	6.675	• • •	
775	$0 \circ F = (F \circ p) \circ D$	1-2	2.26	3185.1221	3184.2012	-1.1	31395.971 ^C 11	2.845	6.737		
		2-2	d0?	3174.157	3173.239	2.0	31504.43 ^D -20	2.831	6.737	• • •	
		$1-1 \\ 2-1$	1 d0?	3138.691 3128.031	3137.781 3127.125	1.0 -5.9	31860.42 ^D -10 31968.99 ^D 60	2.845 2.831	6.795 6.795		
776	b ³ P-Dsp3 ⁵ D°	0-1	4	3233.729	3232.796	-5.2	30924.05 ^D 50	2.858	6.692		
,,,	v . Zope z	1-2	d0?	3229.329	3228.396	1.0	30966.19 ^D -10	2.845	6.684		
		$1-1 \\ 2-1$	2	3222.801 3211.571	3221.871 3210.643	1.0 0.0	$31028.91 \stackrel{D}{-} -10$ $31137.41 \stackrel{D}{-} 0$	2.845 2.831	6.692 6.692	• • •	
777	b ³ P−t ⁵ P°	2-1 $2-3$	1	3208.583	3210.643	-1.0	31166.41 ^D 10	2.831	6.696	•••	
///	$0 \cdot F - t \cdot F$	2-3 $2-2$	0	3197.550	3196.626	-3.1	31273.94 ^D 30	2.831	6.709		II
		1-1	d0?	3192.422	3191.499	6.1	31324.18 ^D -60	2.845	6.729		
	. 2 — 2 00	2-1	1	3181.399	3180.479	2.0	31432.71 ^D -20	2.831	6.729	• • •	
778	$b^{3}P - s^{3}G^{0}$	2-3	0	3034.679	3033.796	-2.8	32952.41 ^D 30	2.831	6.917	• • •	**
779	$b^{3}P-w^{1}D^{0}$ (382a)	$1-2 \\ 2-2$	0 d0?	3048.091 3038.045	3047.205 3037.162	0.0	32807.42 ^D 0 32915.90 ^D 0	2.845 2.831	6.912 6.912		II
780	$b^{3}P - s^{6}D_{4.5}4f$ [2.5]°	2-3	0	2946.462	2945.601	-6.1	33939.01 ^D 70 33951.41 ^D 30	2.831	7.039	• • •	
701	$b^{3}P - s^{6}D_{4.5}4f [1.5]^{\circ}$ $b^{3}P - s^{6}D6p^{5}P^{\circ}$	2-2 $2-3$	3 d1	2945.386 2938.325	2944.525 2937.465	-2.6 1.7	33951.41 ^D 30 34033.00 ^D -20	2.831 2.831	7.041 7.051	• • •	
781	$b^{3}P-t^{3}F^{\circ}$		1.85	2873.3417	2872.4986	-0.6	34802.683 ^D 7	2.831	7.031	• • •	
782	(UV177)	2-3	1.83	28/3.341/	2872.4980	-0.0	34802.083 /	2.831	7.146	• • •	
783	b^3P - $Psp1^3D^{\circ}$	2-3	2.18	2879.6052	2878.7606	-0.2	34726.983 ^C 3	2.831	7.137	• • •	
784	$b{}^{3}P - s{}^{4}\!D5p{}^{5}D^{\circ}$	2-3	d1	2841.295	2840.460	-2.4	35195.22 ^D 30	2.831	7.195		
		$1-2 \\ 0-1$	2.14 1	2826.1542 2819.426	2825.3228 2818.596	-1.9 3.2	35383.773 ^D 24 35468.21 ^D -40	2.845 2.858	7.232 7.255		
		2-2	2	2817.520	2816.690	2.4	35492.21 ^D -30	2.831	7.232		
785	$b{}^3P$ – $s{}^4\!D5p{}^3F$ $^{\circ}$	1-2	2	2776.610	2775.791	2.3	36015.14 ^D -30	2.845	7.310		
		2-2	d0*	2768.266	2767.449	-0.8	36123.69 ^D 10	2.831	7.310	• • •	
706	$b^{3}P - s^{4}D5p^{3}P^{0}$	2-3	1	2758.527 2852.8528	2757.712	5.3	$36251.23^{\ D}$ -70 $35052.632^{\ C}$ -10	2.831	7.326	• • •	
786	$b^{\circ}P-s^{\circ}D5p^{\circ}P^{\circ}$	$1-2 \\ 2-2$	1.74 1.74	2844.0500	2852.0148 2843.2141	0.8 0.8	$35032.032^{\circ} -10$ $35161.126^{\circ} -10$	2.845 2.831	7.191 7.191		
		1-1	d0?	2747.483	2746.671	2.3	36396.95 ^D -30	2.845	7.357		
787	$b{}^{3}P - s{}^{4}\!D5p{}^{3}D^{\circ}$	1-2	1	2842.087	2841.252	1.6	35185.41 ^D -20	2.845	7.207		
		0-1 1-1	d0 d3	2829.413 2821.022	2828.581 2820.192	7.2 -7.2	35343.02 ^D -90 35448.14 ^D 90	2.858 2.845	7.240 7.240	•••	
		$\frac{1-1}{2-1}$	d0?	2812.425	2811.597	2.4	35556.50 ^D -30	2.831	7.240	• • • •	
788	$b{}^{3}P\!-\!s{}^{4}\!D5p{}^{5}F^{\circ}$	2-3	d0?	2784.020	2783.199	1.6	35919.28 ^D -20	2.831	7.285		
	-	$^{2-2}$	d0	2772.552	2771.734	-3.8	36067.85 ^D 50	2.831	7.303		

TABLE 2—Continued

7				TA	BLE 2—Con	tinued						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
789 789	b 3P-Psp1 3S°	0-1	d0	2743.568	2742.756	-0.8	36448.89 ^D	10	2.858	7.377		
A V	0 1 1 op 1 0	1-1	1.63	2735.6910	2734.8816	-1.9	36553.836^{D}		2.845	7.377		
ν 4.		2 - 1	1.67	2727.5944	2726.7869	-3.0	36662.343 ^C	40	2.831	7.377		
790	$b~^3P-Fsp1~^3F$ °	2-3	1	2678.515	2677.719	0.7	37334.12 ^D	-10	2.831	7.460		
791	$b{}^3P{-}Fsp1{}^3D^{\circ}$	2-3	1.41	2633.7723	2632.9873	-0.8	37968.355^{C}	11	2.831	7.539		
792	$z^{7}P^{\circ}-e^{7}D$	2-3	4.20	5283.2601	5281.7904	0.3	18927.707 ^A	-1	3.038	5.385	-0.83ª	
172	(383)	3-4	4.71	5268.0211	5266.5554	0.8	18982.460 ^A		2.998	5.351	-0.39^a	
	(303)	4-5	5.09	5234.3971	5232.9403	0.3	19104.397 ^A		2.940	5.308	-0.06^a	
		2-2	4.49	5228.3175	5226.8623	0.5	19126.612 ^A		3.038	5.410	-0.56^a	
		3-3	4.68	5193.7902	5192.3442	0.3	19253.762 ^A	-1	2.998	5.385	-0.42^a	
		2-1	4.50	5192.9007	5191.4550	0.3	19257.060 ^A	-1	3.038	5.426	-0.55^a	
		4-4	4.66	5140.8947	5139.4628	0.3	19451.867 ^A	-1	2.940	5.351	-0.51^a	
		3-2	4.35	5140.6833	5139.2515	0.5	19452.667 ^A	-2	2.998	5.410	-0.74^a	
		4-3	4.11	5070.1789	5068.7658	0.0	19723.170 ^A	0	2.940	5.385	-1.04ª	
793	$z^{7}P^{0}-e^{5}D$	3-4	2.18	4878.9686	4877.6064	1.9	20496.135^{B}		2.998	5.539	-3.15^{b}	
	(384)	2-3	1.78	4865.1379	4863.7793	2.1	20554.402 ^C		3.038	5.587		
		2-2	2.00	4801.4705	4800.1288	0.7	20826.953 ^D		3.038	5.620	-2.74 ^b	II
		3-3	2.57	4789.1654	4787.8269	0.0	20880.465 ^A		2.998	5.587	-2.60^a	
		4-4	2.84	4769.7298	4768.3965	0.0	20965.548 ^A		2.940	5.539	2.256	
		3-2	1.95	4727.4591 4683.8710	4726.1370	0.0	21153.012^{B}		2.998	5.620	-3.25^{b}	
70.	7.00 7.5	4-3	2.11		4682.5605	2.2	21349.862 ^B		2.940	5.587	-3.13 ^b	
794	$z^{7}P^{0}-e^{7}F$	2-3	3.07	3753.4810	3752.4145	-1.0	26641.936 ^B		3.038	6.341	0.709	т
	(385)	2-1	3.79	3745.1670	3744.1026 3726.9265	0.0	26701.079^{D} 26824.132^{A}		3.038 3.038	6.349 6.364	-0.70^a -0.32^a	I
		2-2 3-3	4.07 4.13	3727.9864 3708.0992	3720.9203	0.1 -1.5	26967.995 ^A		2.998	6.341		
		3-3	4.13	3708.0992	3707.0444	0.1	20907.993 27011.408 ^A		2.998	6.347	0.07^{a}	
		4-5	4.38	3687.0464	3685.9971	0.1	27011.400 27121.980^{A}		2.940	6.302	-0.13^a	
		3-2	3.35	3683.2159	3682.1676	0.1	27150.187 ^A		2.998	6.364	-0.98^a	
		4-3	3.66	3644.6617	3643.6233	0.3	27437.389 ^D		2.940	6.341		II
		4-4	3.64	3638.9044	3637.8675	2.1	27480.799^{A}		2.940	6.347	-1.01 ^b	
795	$z^{7}P^{\circ}-f^{7}D$	2-2	3.13	3774.7636	3773.6916	0.1	26491.725^{B}		3.038	6.323	-1.33ª	
	(386)	2-1	3.27	3767.7294	3766.6592	0.7	26541.184 ^B		3.038	6.329	-1.31 ^a	
		3-4	3.26	3755.5673	3754.5002	-0.3	26627.136 ^B		2.998	6.299	-1.34 ^a	
		4-5	4.07	3750.0302	3748.9646	-0.1	26666.452 ^A		2.940	6.246	-0.46^a	
		3-3	3.97	3747.9921	3746.9270	0.0	26680.953 ^A		2.998	6.306	-0.46^a	
		3-2 $4-4$	3.81 4.32	3728.8693 3690.5084	3727.8092 3689.4582	0.1 0.1	26817.781 ^A 27096.538 ^A		2.998 2.940	6.323 6.299	-0.70 ^a -0.17 ^a	
706	$z^{7}P^{\circ}-f^{5}D$	3-4	3.21	3810.6457	3809.5643	0.1	26242.272^{B}		2.998	6.251	-0.17	
796		3-4	3.51	3794.5578	3793.4806		26242.272 26353.532 ^A		2.998	6.265	-0.92^a	
	(387)	$\frac{3-3}{2-1}$	2.97	3794.3378	3793.4800	0.3	26373.178 ^B		3.038	6.308	-0.92 -1.55^a	
		3-2	3.51	3771.0584	3769.9874		26517.754 ^A		2.998	6.286	-1.55	
		4-4	3.84	3743.6805	3742.6166		26711.681 ^A		2.940	6.251	-0.89^a	
		4-3	3.89	3728.1524	3727.0924		26822.938 ^B		2.940	6.265	-0.60^a	
797	$z^{7}P^{\circ}-e^{7}P$	2-2	3.06	3794.4305	3793.3534	-1.0	26354.416 ^B	3 7	3.038	6.306		
	(388)	3-3	3.07	3783.5233	3782.4490	1.0	26430.391 ^B	³ -7	2.998	6.275	-1.75a	
	, ,	3 - 2	3.07	3748.0613	3746.9962	0.4	26680.460 ^E	3 -3	2.998	6.306		
		4-4	4.24	3736.3859	3735.3238	0.0	26763.831 ^A	0	2.940	6.258	-0.29^a	
		4-3	4.28	3717.4993	3716.4422	0.0	26899.803 ^A	0	2.940	6.275	-0.30^a	
798	$z^{7}P^{\circ}-e^{5}G$	2-3	2.70	3743.6200	3742.5560		26712.113 ^C		3.038	6.350		
	(389)	3-4	3.37	3731.5212	3730.4604		26798.722 ^A		2.998	6.320	-1.24 ^a	
		2-2	3.69	3722.5612	3721.5027		26863.225 ^A		3.038	6.369	-0.70^a	
		4-5	3.72	3704.7447	3703.6909 3697.4255		26992.413 ^A 27038.151 ^A		2.940 2.998	6.286	-0.85 ^a -0.56 ^a	
		3-3 $3-2$	3.95 2.84	3698.4778 3677.9194	3697.4255 3676.8725		27038.151 ²⁷ 27189.285 ^E		2.998	6.350 6.369	-0.56 ^a -1.64 ^b	
		3-2 4-4	2.84 3.19	3667.2858	3666.2416		27189.283 ² 27268.123 ^L		2.940	6.320		I
		4-3	3.67	3635.3637	3634.3278		27507.564 ^A		2.940	6.350		
		. 3	2.07	2023.3037	2021.5270	0.0	2,237.304	Ü	,, 10	0.550	0.01	

TABLE 2—Continued

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	No.	Multiplet (MT) 1	J-J	I ²	$\lambda_{vac}^{}$ (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
800	799		3-3	3.00	3665.7351	3664.6913	-0.5	27279.658^{B}	4	2.998	6.380	-1.91ª	
1	800	•	2-3	3.06	3690.4192	3689.3690	-1.1	27097.193^{B}	8	3.038	6.398	-1.43ª	
1949 3-3 3-3 3-2 3651 0.096 3650 0.296 0.0 2788 0.244 0.0 2.998 6.394 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016	801	•											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			3-3	3.92	3651.0696	3650.0296	0.0	27389.234^{A}	0	2.998	6.394	-0.50^a	
803	802												
1	803	$z^{7}P^{\circ}-g^{7}D$		2.40	3344.7219	3343.7605	0.9	29897.852^{C}		3.038	6.745		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		•										-0.83^a	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			3-3	2.81	3308.6383	3307.6862	0.1	30223.914^{B}	-1	2.998	6.745		
804				2.76	3288.0366	3287.0897		30413.287^{B}		2.940	6.710		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	004	7.00 4.00 5.0											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	804	$z^{7}P^{0}-{}^{4}F$ 6s ${}^{3}F$											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	805	$z^7 P^{\circ}$ – $s^6 D5 d^5 D$											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	806	$z^7 P^{\circ} - s^6 D5d^5 G$											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			4-5	0	3045.141	3044.256	-1.9	$32839.20^{\ D}$	20	2.940	7.011		·
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	807	~ ⁷ P°_° ⁶ D5d ⁷ F											I
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	807	2 1 -3 D3a 1	2 - 1	1	3057.469	3056.580	2.8	32706.79 ^D	-30	3.038	7.093		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$								33131.271^{C}					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	808							32497.38 ^D					ΙΤ
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		(390.)											11
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													II
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	809	$z^{7}P^{\circ}-s^{6}D5d^{7}P$	3-3	3	3097.776	3096.877	-5.8	32281.22 ^D	60	2.998	7.000		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													II
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	810	$z^{7}P^{\circ}-s^{6}D5d^{7}G$											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													I
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													
812 $z^7 P^{\circ} - s^6 D5 d^5 F$ 2-3 1 3103.663 3102.763 -1.0 32219.99 D 10 3.038 7.033													
	811		3-2	3			1.9		-20	2.998	7.032		
	812	$z^7 P^{\circ} - s^6 D5d^5 F$	2-3 $2-2$	1 0	3103.663 3082.118	3102.763 3081.223	-1.0 6.6			3.038 3.038	7.033 7.061		

No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\lambda_{air}^{} \ (A)$	o-R ⁴ (mÅ)	σ^{-5} o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) log(gf) ⁷ Bl. ⁸ (eV)
		3-3 2-1 3-4 4-5 4-4	1 3 2.54 3 d0	3072.571 3070.224 3035.4198 3025.674 2992.776	3071.679 3069.332 3034.5366 3024.793 2991.904	0.0 0.9 1.2 -6.4 0.0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.998 3.038 2.998 2.940 2.940	7.033 7.077 7.082 7.037 7.082
813	$z^7P^0-{}^4F6s^3F$	3-4 2-3	3 0	3064.911 3056.990	3064.020 3056.101	1.9 -0.9	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.998 3.038	7.043 7.094 I
814	$z^7 P^{\circ} - s^6 D5d^5 P$	2-2 3-3 4-3	0 3 0	3039.858 3032.212 2989.655	3038.974 3031.330 2988.783	-4.6 4.6 0.0	32896.27 ^D 50 32979.22 ^D -50 33448.68 ^D 0	3.038 2.998 2.940	7.117 7.087 7.087
815	$z^{7}P^{\circ}-s^{6}D5d^{7}S$	2-3 3-3 4-3	2.33 1 2.53	3036.6192 3006.842 2964.9987	3035.7357 3005.966 2964.1330	-1.2 -6.3 -1.8	32931.360^{D} 13 33257.48^{D} 70 33726.828^{D} 20	3.038 2.998 2.940	7.121 7.121 7.121 II
816	$z^{7}P^{0}-s^{4}D4d^{5}F$	3-4 3-2 4-4	3 1 d0?	2946.555 2912.768 2906.356	2945.694 2911.916 2905.505	6.1 -5.9 5.1	$33937.94 \stackrel{D}{-} -70$ $34331.60 \stackrel{D}{-} 70$ $34407.35 \stackrel{D}{-} -60$	2.998 2.998 2.940	7.206 I 7.254 7.206
817	$z^{7}P^{\circ}-i^{5}D$	3-2 4-4 4-3	d0 0 6	2959.166 2942.384 2932.339	2958.301 2941.524 2931.481	-2.6 -0.9 0.9	$33793.31 \stackrel{D}{=} 30$ $33986.05 \stackrel{D}{=} 10$ $34102.47 \stackrel{D}{=} -10$	2.998 2.940 2.940	7.188 7.153 7.168 II
818	z ⁷ P°-s ⁶ D7s ⁷ D	2-3 3-4 2-2 4-5 3-3 3-2 4-3	4 1 d1 2 d0? 0 3	2943.485 2939.710 2925.952 2925.211 2915.503 2898.306 2876.145	2942.625 2938.851 2925.096 2924.355 2914.649 2897.457 2875.301	4.3 7.8 -1.7 1.7 3.4 2.5 7.4	33973.33 ^D -50 34016.96 ^D -90 34176.91 ^D 20 34185.57 ^D -20 34299.40 ^D -40 34502.91 ^D -30 34768.76 ^D -90	3.038 2.998 3.038 2.940 2.998 2.998 2.940	7.250 I 7.215 II 7.276 7.178 7.250 7.276 7.250 I
819	$z^{7}P^{\circ}-s^{4}D4d^{5}P$	3-3	d0?	2915.367	2914.513	0.0	34301.00 ^D 0	2.998	7.251
820	$z^7 P^{\circ} - s^6 D7 s^5 D$	3-4 3-3 4-4	1 2 1	2929.075 2891.707 2889.344	2928.218 2890.859 2888.497	3.4 -4.2 0.0	34140.47 ^D -40 34581.65 ^D 50 34609.93 ^D 0	2.998 2.998 2.940	7.231 7.285 I 7.231
821	$z^7 P^{\circ} - ^4 F5d^5 F$	3-4 4-5	d0? d0?	2906.032 2866.995	2905.181 2866.153	2.5 0.8	34411.18 ^D -30 34879.73 ^D -10	2.998 2.940	7.264 II 7.264 I
822	$z^{7}P^{\circ}$ – $s^{4}D4d^{3}D$	3-2 4-3	d0? d0?	2873.645 2859.517	2872.802 2858.677	-4.1 -5.7	34799.01 ^D 50 34970.94 ^D 70	2.998 2.940	7.312 7.275
823	$z^{7}P^{\circ} - s^{6}D_{4.5}6d$ [2.5] $z^{7}P^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}P^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{7}P^{\circ} - s^{6}D_{4.5}6d$ [2.5]	3-3 4-5 4-4 4-3	d0? 2 d0? 1.80	2854.179 2823.638 2823.093 2816.4445	2853.340 2822.808 2822.262 2815.6154	-0.8 0.0 0.8 -1.1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.998 2.940 2.940 2.940	7.342 7.331 7.331 7.342
824	$z^{7}P^{\circ}$ – $s^{4}D4d^{3}S$	2-1	1.90	2886.1928	2885.3466	1.8	34647.720 ^D -22	3.038	7.334 I
825	$z^{7}P^{\circ}-s^{4}D4d^{3}F$	3-4 3-3 4-3	2.34 2.45 1	2847.2965 2829.5107 2792.414	2846.4599 2828.6784 2791.591	0.4 3.9 -3.9	35121.035^{D} -5 35341.800^{D} -49 35811.31^{D} 50	2.998 2.998 2.940	7.352 7.380 II 7.380
826	$z^{7}P^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{7}P^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}P^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}P^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{7}P^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{7}P^{\circ} - s^{6}D_{3.5}6d$ [5.5]	3-2 4-5 4-4 4-3 4-4 4-5	2.22 1.80 0 2.66 1 d0?	2830.1977 2797.0406 2796.092 2792.6091 2791.631 2789.803	2829.3652 2796.2163 2795.268 2791.7858 2790.808 2788.981	3.8 -1.3 -1.6 3.0 2.3 3.1	$\begin{array}{ccccc} 35333.221^D & -48 \\ 35752.073^C & 17 \\ 35764.20 & D & 20 \\ 35808.807^D & -39 \\ 35821.35 & D & -30 \\ 35844.82 & D & -40 \\ \end{array}$	2.998 2.940 2.940 2.940 2.940 2.940	7.379 I 7.372 7.374 7.379 I 7.381 7.384 II
827	$z^{7}P^{\circ}-^{5}D4p^{2}{}^{7}F$	4-5 4-4 2-2 3-2	1 0 2.16 2.09	2792.327 2781.391 2775.7570 2750.8640	2791.504 2780.571 2774.9379 2750.0509	0.0 0.8 -1.1 2.6	$35812.42 \stackrel{D}{-} 0$ $35953.23 \stackrel{D}{-} -10$ 36026.208^B 14 36352.215^B -34	2.940 2.940 3.038 2.998	7.380 7.397 7.505 7.505
828	$z^{7}P^{\circ} - s^{6}D_{2.5}6d$ [1.5] $z^{7}P^{\circ} - s^{6}D_{2.5}6d$ [2.5]	$2-1 \\ 2-3$	1 d0?	2836.074 2831.757	2835.240 2830.924	0.0 -1.6	35260.01 ^D 0 35313.77 ^D 20	3.038 3.038	7.410 7.417 II

TABLE 2—Continued

No.	Multiplet	J-J	I 2	λ_{vac}^{3}	λ_{sin}^3	o-R ⁴	σ^{-5}	o-R ⁶	E(1)	E(u)	log(gf) ⁷	B1.8
	(MT) ¹	-		(Å)	$\begin{array}{c} \lambda_{\boldsymbol{qir}}^{3} \\ \text{(A)} \end{array}$	(mÅ)	(cm ⁻¹)	(mK)	(eV)	(eV)	105(51)	DI.
	$z^{7}P^{\circ}-s^{6}D_{2.5}6d$ [2.5]	2-2	0	2829.921	2829.089	-1.6	35336.67 ^D		3.038	7.419		
	$z^{7}P^{\circ} - s^{6}D_{2.5}6d$ [4.5]	3-4	1.67	2813.3282	2812.4999	-3.8	35545.088^{D}		2.998	7.405		
	$z^{7}P^{\circ} - s^{6}D_{2.5}6d$ [2.5]	3-3	d0?	2805.852	2805.025	0.0	35639.80 ^D	0	2.998	7.417	• • •	
	$z^{7}P^{\circ} - s^{6}D_{2.5}6d$ [3.5] $z^{7}P^{\circ} - s^{6}D_{2.5}6d$ [3.5]	3-4	2.22 2.46	2801.2920	2800.4666	-2.7	35697.814 ^B		2.998	7.424	• • •	
	$z^{7}P^{9}-s^{6}D_{2.5}6d$ [3.5] $z^{7}P^{9}-s^{6}D_{2.5}6d$ [4.5]	3-3 4-5	2.46	2800.6655 2777.2167	2799.8403	3.1	35705.799 ^B		2.998	7.425	• • •	
	$z^{7}P^{\circ}-s^{6}D_{2.5}6d$ [4.5] $z^{7}P^{\circ}-s^{6}D_{2.5}6d$ [4.5]	4-3	2.13	2776.6633	2776.3972 2775.8439	-0.5 -0.4	36007.273 ^C 36014.450 ^C	7 5	2.940	7.404	• • •	
	$z^{7}P^{\circ}-s^{6}D_{2.5}6d$ [2.5]	4-4	1.64	2769.3750	2768.5573	-0.4	36109.231 ^C	26	2.940 2.940	7.405 7.417	•••	
	$z^{7}P^{\circ}-s^{6}D_{2.5}6d$ [3.5]	4-4	1.93	2764.9359	2764.1194	-1.4	36167.204 ^C	18	2.940	7.417	• • •	
	$z^{7}P^{\circ}-s^{6}D_{2.5}6d$ [3.5]	4-3	2	2764.319	2763.503	-1.5	36175.27 ^D	20	2.940	7.424	•••	II
829	$z^{7}P^{\circ}-s^{6}D_{1.5}6d$ [3.5]	2-3	0	2809.775	2808.947	4.7	35590.04 ^D		3.038	7.451		
	$z^{7}P^{0}-s^{6}D_{1.5}6d$ [2.5]	3-2	3	2785.163	2784.342	7.8	35904.54 ^D		2.998	7.449		I
	$z^{7}P^{\circ}-s^{6}D_{1.5}6d$ [3.5]	3-3	1.63	2784.2650	2783.4438	3.0	35916.121^{D}		2.998	7.451	• • •	
	$z^{7}P^{\circ}-s^{6}D_{1.5}6d$ [3.5]	4-3	2*	2748.346	2747.534	3.0	36385.52 ^D		2.940	7.451	• • •	
830	$z^{7}P^{0}-62192^{e}$	4-5	0	2598.660	2597.883	-6.1	38481.37 ^D	90	2.940	7.711	•••	
831	z ⁷ P°-62377 ^e	4-4	1	2586.243	2585.470	5.4	38666.12 ^D	-80	2.940	7.734	•••	II
832	$b{}^3G-z{}^3F^{ { m o}}$	4-4	2.02	13911.251	13907.448	0	7188.426 ^A	0	2.990	3.881		
		3-3	1.92	13393.509	13389.847	2	7466.303 ^A	-1	3.018	3.943	• • •	
		5-4	2.94	13291.463	13287.829	0	7523.626 ^A	0	2.949	3.881	-3.02^a	
		4-3	2.72	13010.245	13006.688	2	7686.250 ^A	-1	2.990	3.943	• • •	
		3-2	2.61	12828.369	12824.861	2	7795.223 ^A	-1	3.018	3.984	•••	
833	$b~^3G-y~^5F^{\circ}$	5-5	1.26	10089.006	10086.241	-2	9911.779 ^A	2	2.949	4.178		
	(399)	4-4	0.85	10079.946	10077.183	9	9920.688^{B}_{-}	-9	2.990	4.220		
		4-3	0.90	9794.3941	9791.7090	9.6	10209.922^{B}	-10	2.990	4.256		
		5-4	0.85	9750.4917	9747.8185	2.9	10255.893 ^B	-3	2.949	4.220	• • •	
834	$b^3G-z^5G^{\circ}$	4-5	2.07	9377.6943	9375.1221	-0.9	10663.602 ^A	1	2.990	4.312	• • •	
	(400)	3-4	1.81	9158.7194	9156.2064	0.0	10918.557 ^A	0	3.018	4.371		
		5-5	3.24	9091.8993	9089.4044	0.0	10998.802^{A}	0	2.949	4.312	-1.68 ^a	
		4-4	2.90	8977.8647	8975.4007	-0.8	11138.506 ^A	1	2.990	4.371	-2.22^a	
		3-3 $4-3$	2.31 1.34	8870.8641 8701.0953	8868.4290 8698.7061	-0.8 -0.8	11272.859 ^A 11492.806 ^C	1 1	3.018 2.990	4.415 4.415		
835	$b{}^3G$ – $z{}^3G$ °	4-5	1.64	8880.6816	8878.2438	-7.1	11260.397 ^C	9	2.990	4.386		
633	(401)	3-4	1.54	8749.8273	8747.4250	-0.8	11428.797 ^D	1	3.018	4.434	• • •	Ne
	(401)	5-5	2.74	8623.9690	8621.6007	-0.3	11595.589 ^A	1	2.949	4.386	-2.32 ^a	INC
		4-4	2.85	8584.6150	8582.2574	-0.7	11648.746 ^A	1	2.990	4.434	-2.32	
		3-3	3.02	8517.4479	8515.1084	-0.7	11740.606^{D}	1	3.018	4.473	-2.13	II
		4-3	1.67	8360.8195	8358.5224	1.4	11960.550^{D}	-2	2.990	4.473		II
		5-4	1.56	8344.4948	8342.2020	-2.8	11983.949^{B}	4	2.949	4.434		
836	$b~^3G-y~^3F^{\circ}$	4-4	1.41	7957.1226	7954.9345	0.0	12567.357 ^A	0	2.990	4.548	-3.86 ^c	
	(402)	5-4	3.44	7750.4017	7748.2694	-0.6	12902.557 ^A	1	2.949	4.548	-1.75 ^a	
		4-3	3.29	7666.4029	7664.2933	-0.6	13043.927 ^A	1	2.990	4.607	-1.68ª	
		3-2	3.12	7585.8761	7583.7882	-0.6	13182.393 ^A	1	3.018	4.652	-1.89 ^a	
837	$b^3G-z^5H^{\circ}$	3-3	2.36	5266.7093	5265.2439	2.2	18987.188^{B}	-8	3.018	5.372		
	(407)	4-3	2.61	5206.3999	5204.9506	3.5	19207.130^{D}	-13	2.990	5.372	• • •	
		5-4	2.26	5174.5661	5173.1252	1.3	19325.292 ^B	-5	2.949	5.345	• • •	
838	$b^3G-z^5I^0$	4-4 5-5	2.27 2.14	5174.9447 5082.2044	5173.5038 5080.7881	1.6 0.0	19323.878 ^C 19676.501 ^B	-6 0	2.990 2.949	5.386 5.388	•••	
839	b 3G-v 5D°	4-4	3.09	5024.1900	5022.7891	-0.3	19903.706 ^D	1	2.990	5.458	-2.20^{a}	II
840	$b^3G-x^3D^\circ$	4-3	1.78	4738.9192	4737.5941	0.7	21101.858^{D}	-3	2.990	5.606	-2.20	II
	(408)			4844 2222	1510 510:		21000 14	-				
841	$b^{3}G - y^{3}G^{0}$	3-4	2.85	4741.6660	4740.3401	0.0	21089.634 ^A	0	3.018	5.632	-2.63^a	
	(409)	4-5 3-3	2.90	4722.3214	4721.0006	0.0	21176.026^{A}	0	2.990	5.616	-2.80^a	
		1-1	3.95	4711.6012	4710.2833	-0.2	21224.207 ^A	1	3.018	5.649	-1.61ª	
						0.0	21200 5024		2.000	E (00		
		4-4	4.05	4692.7246	4691.4117	0.0	21309.582 ^A	0	2.990	5.632	-1.52ª	
						0.0 -0.4 0.0	21309.582 ^A 21444.155 ^A 21511.226 ^A	0 2 0	2.990 2.990 2.949	5.632 5.649 5.616		

i				TA	ABLE 2—Co	ntinued						
No.	Multiplet (MT) ¹	J-J	I 2	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
a		5-4	3.22	4620.0514	4618.7577	0.2	21644.781 ^A	-1	2.949	5.632	-2.41 ^a	
842	$b^3G-x^5G^{\circ}$	3-3	1.95	4635.0535	4633.7558	0.9	21574.724^{D}	-4	3.018	5.692	-3.03 ^b	II
012	(410)	4-4	2.00	4605.2387	4603.9489	0.4	21714.401^{B}		2.990	5.682	-2.84^{b}	
-	(110)	4-3	1.85	4588.2776	4586.9923	1.1	21794.671 ^C		2.990	5.692		
		5-4	1.80	4535.2280	4533.9567	-1.2	22049.608^{C}		2.949	5.682		
843	$b^{3}G-z^{3}I^{0}$	4-5	2.16	4541.9453	4540.6722	0.4	22016.998 ^B	-2	2.990	5.720		
043	(411)	5-6	2.38	4495.7257	4494.4648	0.0	22243.350^{B}	0	2.949	5.706	•••	
844	$b~^3G-u~^5D^{\circ}$	4-4	2.47	4424.3835	4423.1415	0.4	22602.019^{B}		2.990	5.792	-2.51^{b}	
	(412)	4-3	2.14	4419.6604	4418.4196	0.0	22626.173 ^C		2.990	5.795		
		5-4	3.27	4359.7242	4358.4991	-0.2	22937.231 ^A	1	2.949	5.792	-1.68ª	
845	$b~^3G-x~^3F^{\circ}$	4-4	2.40	4391.6814	4390.4480	0.0	22770.322^{B}		2.990	5.813	-2.50^{b}	
	(413)	3-2	3.18	4374.7896	4373.5607	0.0	22858.242 ^A		3.018	5.851	-1.83ª	
		4-3	3.37	4352.7670	4351.5439	0.0	22973.892 ^A		2.990	5.839	-1.73 ^a	
		5-4	3.08	4327.9699	4326.7533	0.0	23105.521 ^A	0	2.949	5.813	-1.93ª	
846	$b^3G-z^3H^{\circ}$	3-4	3.74	4392.1841	4390.9505	0.0	22767.716 ^A	0	3.018	5.840	-1.52 ^a	
	(414)	4-5	3.96	4368.8059	4367.5785	0.0	22889.550^{A}	-	2.990	5.828	-1.31ª	
		4-4	3.03	4350.1591	4348.9366	-0.2	22987.665 ^A	1	2.990	5.840	-2.14^a	
		5-6	4.02	4310.5866	4309.3745	0.0	23198.699 ^A		2.949	5.825	-1.19ª	
		5-5	3.19	4305.7516	4304.5408	0.2	23224.749 ^A		2.949	5.828	-2.03^a	
0.47	$b~^3G-w~^3D$ °	5-4 3-2	2.72 2.32	4287.6403 4386.4817	4286.4342 4385.2496	2.2 0.4	23322.852^{B} 22797.314^{B}		2.949 3.018	5.840 5.844	-2.44 ^b	
847	$6 ^{3}G = w ^{3}D^{3}$ (415)	3-2 4-3	2.72	4367.1236	4365.8967	0.4	22898.367 ^B		2.990	5.829	-2.25^a	
848	$b {}^{3}G - w {}^{5}G^{\circ}$	3-4	2.70	4300.8381	4299.6286	-0.6	23251.282^{B}	3	3.018	5.900		
	(416)	4-5	3.25	4291.5860	4290.3789	-0.4	23301.409 ^A	2	2.990	5.879	-1.72°	
		4-4	2.18	4260.5348	4259.3358	-0.7	23471.232^{C}		2.990	5.900		
		3-2	2.95	4256.6983	4255.5004	-0.2	23492.386 ^B		3.018	5.930	-2.01a	
		4-3	2.53	4241.8881	4240.6940	1.8	23574.408^{B}		2.990	5.913	• • •	
		5-6	3.80	4240.9262	4239.7324	0.2	23579.755^{A}		2.949	5.872	-1.53 ^a	
		5-4	2.20	4200.5444	4199.3612	-1.9	23806.438^{D}		2.949	5.900	• • •	
849	$b^{3}G-z^{1}G^{0}$	3-4	2.61	4326.3913	4325.1750	-0.7	23113.952^{B}		3.018	5.883	•••	
	(417)	4-4	2.73	4285.6109	4284.4054	0.2	23333.896^{D}		2.990	5.883	-2.60^{b}	II
		5-4	2.51	4224.9184	4223.7289	0.2	23669.096 ^B	-1	2.949	5.883	-2.91 ^b	
850	$b~^3G-v~^5F^{ m o}$	3-4	2.40	4238.8641	4237.6708	0.5	23591.226^{C}	-3	3.018	5.942	-2.37^{b}	
	(418)	4-4	2.34	4199.7110	4198.5281	2.5	23811.162^{D}	-14	2.990	5.942		
		5-5	3.01	4197.7135	4196.5311	0.0	23822.493 ^A	0	2.949	5.902	-2.11^{b}	
		4-3	2.97	4165.9559	4164.7818	2.3	24004.095^{D}	-13	2.990	5.966		
851	$b^{3}G-x^{3}G^{\circ}$	3-4	2.99	4260.1505	4258.9517	0.0	23473.349 ^A	0	3.018	5.928	-2.24^a	
	(419)	3-3	2.84	4256.1430	4254.9453	0.2	23495.451^{B}		3.018	5.930	-2.57ª	
	` ,	4-4	3.24	4220.6028	4219.4144	0.0	23693.298^{A}	0	2.990	5.928	-1.90^a	
		4-3	2.38	4216.6651	4215.4777	-4.3	23715.424 ^C		2.990	5.930		
		4-5	3.48	4216.6107	4215.4233	-0.2	23715.730 ^A		2.990	5.931	-1.76 ^a	
		5-4	2.46	4161.7251	4160.5521	0.0	24028.497 ^B		2.949	5.928	-2.88^{b}	
		5-5	3.39	4157.8434	4156.6714	-0.2	24050.930 ^A	1	2.949	5.931	-1.82^a	
852	$b~^3G-y~^5H^{\circ}$	3-4	3.04	4162.6577	4161.4844	0.0	24023.114 ^A		3.018	5.996	-2.15^a	
		4-5	3.51	4147.2334	4146.0642	0.0	24112.460 ^A		2.990	5.980	-1.97ª	
		3-3	3.38	4143.0314	4141.8633	0.2	24136.916 ^A		3.018	6.010	-1.93^a	
		4-4	3.53	4124.8917	4123.7283	0.0	24243.061 ^A		2.990	5.996	-1.86 ^a	
		4-3	2.31	4105.6182	4104.4599	-0.5	24356.868 ^C		2.990	6.010	2.024	
		5-5	3.36	4090.3712	4089.2169 4067.4872	0.0	24447.659 ^A 24578.263 ^C		2.949 2.949	5.980 5.996	-2.02 ^a · -3.13 ^b	
853	$b^3G-z^1H^0$	5-4 4-5	2.16 3.81	4068.6358 4121.3689	4120.2065	-0.3 0.0	24578.263° 24263.783 ^A		2.949	5.996	-3.13° -1.27^{a}	
	(423) $b^{3}G-y^{1}G^{\circ}$	4-4	3.39	4067.7336	4066.5852	0.2	24583.714 ^A		2.990	6.038	-1.58 ^a	
854	(424)											
855	$b^{3}G-w^{3}F^{\circ}$	3-3	2.51	4015.3999	4014.2652	-0.3	24904.120 ^B		3.018	6.105	 1 660	
	(426)	4-4	3.17	4001.5883	4000.4572	-0.3	24990.077 ^A	2	2.990	6.089	-1.66ª	

No.	Multiplet (MT) ¹	J-J	I ²	$\lambda_{vac}^{}$ (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
856	b 3G-v 3D°	3-3	2.42	4032.8672	4031.7280	0.2	24796.254 ^C		3.018	6.092		
857	(427) b ³ G-y ³ H°	4-4	4.05	3905.0038	3903.8979	0.0	25608.170 ^A	0	2.990	6.165	-0.81ª	
057	(429)	5-6	3.63	3898.5529	3897.4487	-0.2	25650.543 ^A		2.949	6.129	-1.28 ^a	
		5-5	4.01	3872.8455	3871.7480	-0.3	25820.808^{A}		2.949	6.150	-0.84^a	
		5-4	2.83	3854.5495	3853.4567	0.0	25943.369 ^C	0	2.949	6.165	-1.96^{b}	
858	$b~^3G-v~^3G^{\circ}$	3-4	3.67	3954.2701	3953.1514	-0.3	25289.117 ^A	2	3.018	6.153	-1.20^a	
	(430)	4-5	3.45	3946.0059	3944.8893	0.2	25342.081 ^A		2.990	6.132	-1.44ª	
		4-4	3.73	3920.1754	3919.0655	0.0	25509.063 ^A	-	2.990	6.153	-1.11 ^a	
		3-3	4.14 4.27	3919.7514	3918.6417	0.0	25511.822 ^A		3.018	6.180	-0.72^a	
		5-5 4-3	3.12	3894.4935 3886.2466	3893.3903 3885.1456	0.2 0.2	25677.280^{A} 25731.769^{B}		2.949 2.990	6.132 6.180	-0.60 ^a -1.88 ^a	
		5-4	2.88	3869.3289	3868.2323	-1.8	25731.709 25844.275^{C}		2.949	6.153	-1.00	
950	$b~^3G-Fsp3~^1F$ °		3.48	3977.9861	3976.8612	1.6	25138.348 ^D					7
859	6 G - F sp3 F (431*)	3-3 $4-3$	3.48 3.04	3943.4800	39/6.8612	-1.1	25138.348 ² 25358.313 ^B		3.018 2.990	6.134 6.134	-2.07 ^a	I
860	$b^3G-z^1F^{\circ}$	4-3	3.24	3778.1395	3777.0666	0.4	26468.054^{B}		2.990	6.272	-1.85 ^a	
861	(432) $b^3G - x^1G^{\circ}$ (433)	3-4	2.75	3805.8715	3804.7914	3.5	26275.191 ^C	-24	3.018	6.275		
862	$b^{3}G-x^{3}H^{\circ}$	4-5	4.16	3710.5892	3709.5338	-0.1	26949.898 ^A	1	2.990	6.331	• • •	
002	(435)	3-4	3.54	3694.0776	3693.0265	-0.3	27070.357^{D}		3.018	6.374		II
	(/	5-6	4.42	3671.1335	3670.0884	-0.1	27239.543^{A}		2.949	6.326	-0.70^{b}	
		5-5	3.24	3665.0038	3663.9602	-0.4	27285.101^{B}		2.949	6.331		
		4-4	3.24	3664.3025	3663.2591	-2.6	27290.323 ^B		2.990	6.374		
		5-4	3.57	3619.8445	3618.8126	0.9	27625.496 ^A	-7	2.949	6.374	• • •	
863	$b~^3G-v~^3F$ °	3-2	3.78	3722.6589	3721.6004	0.0	26862.520^{A}		3.018	6.348		
	(437)	3-4	2.99	3708.3944	3707.3396	-1.8	26965.848 ^B		3.018	6.361		
		4-3	3.89	3670.1968	3669.1519	-0.5	27246.495 ^A		2.990	6.368	-0.98^{b}	
		5-4	3.92	3633.5909	3632.5554	-0.1	27520.985 ^A		2.949	6.361	-1.03 ^b	
864	$b^3G-u^3G^{\circ}$	4-5	3.32	3669.0308	3667.9862	-8.6	27255.154^{D}		2.990	6.369	• • •	I
	(438)	3-4 $3-3$	2.86 2.71	3659.0623 3638.0824	3658.0203 3637.0458	1.6 -0.4	27329,406 ^C 27487.008 ^C		3.018 3.018	6.406 6.425	• • •	
		3-3 4-4	2.71	3629.8451	3628.8106	-0.4	27549.385 ^C		2.990	6.406	-2.28^{b}	
		4-3	2.82	3609.2034	3608.1742	1.0	27706.945 ^C		2.990	6.425	-2.26	
		5-4	3.41	3586.2130	3585.1897	-0.3	27884.568^{A}		2.949	6.406	-1.26a	
865	$b^3G-Hsp3^1H^o$	4-5	3.38	3634.8626	3633.8268	0.1	27511.356 ^B	-1	2.990	6.401	-1.46 ^a	
005	(440)	5-5	3.23	3591.1085	3590.0840	0.4	27846.555 ^B		2.949	6.401	-1.71^a	
866	$b^{3}G-x^{1}D^{\circ}$ (441)	3-2	3.57	3646.5328	3645.4940	-0.3	27423.310 ^A		3.018	6.417		
867	$b^{3}G-u^{3}D^{\circ}$	4-3	2.81	3590.6298	3589.6054	1.7	27850.267 ^C	-13	2.990	6.443		
868	$b^3G-t^3D^{\circ}$	4-3	2.58	3559.4291	3558.4127	2.0	28094.393^{D}		2.990	6.473		
869	$b^3G-w^3H^{\circ}$	3-4	3.49	3517.4145	3516.4090	0.0	28429.973^{B}	0	3.018	6.542	-1.25 ^b	
	(442)	4-5	3.66	3509.4780	3508.4745	0.2	28494.266 ^A		2.990	6.523	-0.88^a	
		5-6	3.79	3490.6664	3489.6677	0.0	28647.825^{A}		2.949	6.500	-0.75^a	
		4-4	2.76	3490.4103	3489.4117	-0.6	28649.927 ^C	5	2.990	6.542		
870	$b{}^3G-{}^4F5p{}^3G^{\rm o}$	5-4	2.32	3307.5370	3306.5851	-2.0	30233.978^{D}	18	2.949	6.697		
		4-3	2.30	3307.0326	3306.0809	-0.7	30238.589^{D}	6	2.990	6.739		
871	$b~^3G-Gsp3~^3F^{\circ}$	3-4	3.30	3494.6889	3493.6892	1.1	28614.850^{D}		3.018	6.565		I
		4-3	2.61	3420.1256	3419.1450	0.1	29238.692 ^C		2.990	6.615	• • •	
872	$b{}^3G-{}^4F5p{}^5G^{ m o}$	4-4	2.46	3363.2342	3362.2681	0.8	29733.285 ^D		2.990	6.677		
		5-4	2.34	3325.7386	3324.7821	-1.8	30068.509^{D}	16	2.949	6.677	• • • •	
873	b ³ G-y ¹ H° (446)	5-5	2.86	3386.4081	3385.4361	0.3	29529.814 ^B	-3	2.949	6.610	• • •	
874	b ³ G-Dsp3 ⁵ F° (450*)	5-5	2.91	3307.9573	3307.0053	-0.5	30230.136 ^B	5	2.949	6.697	•••	

No.	Multiplet (MT) ¹	J-J	I ²	$\lambda_{vac}^{\ 3}$ (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
875	$b^{3}G - x^{1}F^{\circ}$ (447)	3-3 4-3	2.51 2.41	3398.5266 3373.3125	3397.5515 3372.3438	-0.7 0.7	29424.516 ^C 29644.452 ^C		3.018 2.990	6.666 6.666		
876	$b^{3}G - Dsp3^{5}D^{\circ}$ (448)	4-4	2.49	3313.1749	3312.2216	-1.2	30182.530^{C}	11	2.990	6.732	•••	
877	$b^3G-t^3G^{\circ}$	4-4	2.99	3320.2082	3319.2531	0.0	30118.593^{B}	0	2.990	6.724	-1.26^a	
	(449)	5-5	3.32	3311.2940	3310.3412	-0.2	30199.674 ^A		2.949	6.693	-1.17ª	
		3-3	2.76	3304.5200	3303.5689	-0.1	30261.581 ^C	1	3.018	6.769	-1.78a	
		4-3	2.59	3280.6761	3279.7310	0.8	30481.522^{C}	-7	2.990	6.769		
878	$b^{3}G - w^{1}G^{\circ}$ (451)	4-4	2.98	3258.1739	3257.2345	-0.4	30692.039 ^B	4	2.990	6.795	-1.17ª	
879	$b^{3}G-s^{3}G^{\circ}$	4-5	2.43	3193.7664	3192.8433	0.4	31310.994 ^C	-4	2.990	6.872		
077	v	3-3	2.79	3179.4558	3178.5364	0.3	31451.923^{B}		3.018	6.917		
		3-4	1	3167.890	3166.974	1.0	31566.75 ^D		3.018	6.931		
		5-5	2.59	3159.9356	3159.0211	-1.8	31646.215^{C}		2.949	6.872		
		4-3	2.54	3157.3768	3156.4630	1.4	31671.861^{D}		2.990	6.917	•••	II
		4-4	2.87	3145.9680	3145.0570	-0.5	31786.719^{B}		2.990	6.931	-1.21a	
		5-4	2	3113.141	3112.238	1.0	32121.90 ^D		2.949	6.931		
880	b 3G-v 3H°	3-4	4	3214.685	3213.756	-1.0	31107.25 ^D		3.018	6.874	-1.82ª	
880		3-4 4-4	0	3192.115	3191.193	0.0	31107.23 ^D		2.990	6.874		
	(452)	4-4	3	3192.113	3183.109	0.0	31327.19 ⁻² 31406.74 ^D		2.990	6.884	•••	II
		5-4	d0?	3158.323	3157.409	1.0	31400.74 31662.37 ^D		2.949	6.874	•••	11
		5-6	2	3153.969	3153.056	4.0	31706.08 ^D		2.949	6.880	•••	I
		5-5	0	3150.407	3149.495	1.0	31741.93 ^D		2.949	6.884		1
881	$b^3G-w^1D^0$	3-2	0	3183.145	3182.225	0.0	31415.47 ^D		3.018	6.912	•••	
882	b ³ G- ² H4p ¹ H° (455*)	5-5	3.06	3112.9799	3112.0772	-0.4	32123.561 ^B	4	2.949	6.931	•••	
883	b^3G - $Gsp3$ 1F $^{\circ}$	3-3	2.74	3148.7065	3147.7948	-0.7	31759.073 ^B		3.018	6.955	-1.10 ^a	
884	$b{}^3G-u{}^3H^{\circ}$	3-4	0	3116.774	3115.870	4.9	32084.46 ^D		3.018	6.995		
	(456)	4-5	0	3099.447	3098.548	1.9	32263.82 ^D		2.990	6.990		
		5-6	0	3072.169	3071.277	3.8	32550.29 ^D		2.949	6.984	• • •	II
		5-5	1	3067.581	3066.689	5.6	32598.98 ^D		2.949	6.990	• • •	
		5-4	d1*	3063.764	3062.874	6.6	32639.59 ^D	-70	2.949	6.995	• • •	
885	$b{}^3G-u{}^3F^{\circ}$	3-4	0?	3100.401	3099.502	3.8	32253.89 ^D	-40	3.018	7.016		
	(457)	3-3	0	3082.187	3081.293	5.7	32444.49 ^D	-60	3.018	7.040		
		4-4	0?	3079.396	3078.502	-0.9	32473.90 ^D	10	2.990	7.016		
		3-2	2.68	3075.0412	3074.1481	-0.5	32519.889 ^B		3.018	7.049		
		4-3	2.57	3061.4275	3060.5378	0.0	32664.500^{C}	0	2.990	7.040	-1.18 ^a	
		5-4	1.95	3047.9357	3047.0493	-0.8	32809.091^{C}	9	2.949	7.016		
886	$b^{3}G-s^{6}D_{4.5}4f[3.5]^{\circ}$	3-4	1	3083.953	3083.057	6.7	32425.92 ^D	-70	3.018	7.038		I
	$b^{3}G-s^{6}D_{4.5}4f$ [3.5]°	4-3	d0?	3063.055	3062.164	7.5	32647.15 ^D	-80	2.990	7.038		
	$b^{3}G-s^{6}D_{4.5}4f$ [2.5]°	4-3	d0?	3061.997	3061.108	1.9	32658.42 ^D		2.990	7.039		
	$b^{3}G-s^{6}D_{4.5}4f$ [4.5]°	5-4	d0?	3032.933	3032.051	-5.5	32971.38 ^D		2.949	7.036		
887	$b^{3}G - v^{1}G^{0}$	5-4	1	3014.977	3014.099	-6.4	33167.75 ^D	70	2.949	7.061	• • •	I
000	(458) $b^{3}G-x^{3}I^{\circ}$	4-5	0	3031.642	3030.759	-2.8	32985.43 ^D	30	2.990	7.080		
888	(459)	4-3 5-6	d0?	3004.214	3003.338	-2.8 -2.7	33286.58 ^D		2.949	7.076		
000												
889	$b^3G-t^3F^\circ$	3-3	d0?	3002.799	3001.924	-1.8	33302.26 ^D		3.018	7.146	• • •	
	(UV178,46)	3-2	2	2996.704	2995.830	-1.8	33370.00 ^D 33522.19 ^D		3.018	7.155	1.406	
		4-3 5-4	2 2.46	2983.099 2961.5242	2982.228 2960.6594	-0.9 -0.7	33766.396 ^C		2.990 2.949	7.146 7.135	-1.49 ^a -1.00 ^a	
	2 . 4- 2										-1.00	
890	b 3G – s 4D 5 p 3F $^\circ$	4-4	d0?	2958.718	2957.854	0.9	33798.42 ^D		2.990	7.181	• • •	
		5-4	2	2929.662	2928.805	0.0	34133.63 ^D		2.949	7.181	•••	
891	$b~^3G-Hsp1~^3G^{ m o}$	4-4	1	2922.626	2921.771	0.0	34215.80 ^D		2.990	7.232		
		3-3	2	2918.726	2917.872	4.3	34261.52 ^D		3.018	7.265		II
		4-3 5-4	2.51 0	2900.1048 2894.279	2899.2551 2893.431	0.8 5.9	34481.513 ^D 34550.92 ^D		2.990 2.949	7.265 7.232	• • •	II

TABLE 2—Continued

				IAD	LE 2—Coniin	шеи						
No.	Multiplet (MT) 1	J-J	I ²	$\lambda_{vac}^{}$ (Å)	$\lambda_{qir}^{}$ (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
892	$b~^3G-s~^4\!D5p~^3D^{\circ}$	4-3	1	2927.625	2926.769	4.3	34157.38 ^D	-50	2.990	7.225		
893	$b~^3G-s~^4\!D5p~^5P^{\circ}$	3-2	d0?	2876.322	2875.478	-7.4	34766.62 ^D	90	3.018	7.328		
894	$b^{3}G-{}^{4}F_{4.5}4f$ [2.5]°	3-3	0*	2908.644	2907.792	0.0	34380.28 ^D	0	3.018	7.280		
	$b^{3}G-{}^{4}F_{4.5}4f$ [5.5]°	4-5	d0?	2891.671	2890.824	-5.0	34582.08 D	60	2.990	7.278		
	$b^{3}G-{}^{4}F_{4.5}4f[5.5]^{\circ}$	5-6	d0?	2863.941	2863.100	0.0	34916.92 ^D	0	2.949	7.278	•••	II
	$b^{3}G^{-4}F_{4.5}4f$ [4.5]°	5-4	d0?	2863.584	2862.744	1.6	34921.27 ^D		2.949	7.278		**
895	$b~^3G-Hsp1~^3I^{ m o}$	5-6	d0?	2843.891	2843.055	1.6	35163.09 ^D	-20	2.949	7.308		
896	$b^{3}G-{}^{4}F_{3.5}4f$ [3.5]°	3-4	d0?	2863.114	2862.273	-2.5	34927.01 ^D	30	3.018	7.348		
	$b^{3}G-{}^{4}F_{3.5}4f$ [5.5]°	4 - 5	d0?	2845.250	2844.414	-7.3	35146.30 ^D	90	2.990	7.348		
	$b^{3}G-{}^{4}F_{3.5}4f$ [4.5]°	5-4	d0?	2818.596	2817.766	0.8	35478.66 ^D	-10	2.949	7.347		
897	$b^{3}G-{}^{4}F_{2.5}4f$ [3.5]°	3-3	2.22	2830.1977	2829.3652	-2.3	35333.221^{D}	29	3.018	7.398		I
	$b^{3}G-{}^{4}F_{2.5}4f$ [3.5]°	4-4	d0?	2812.735	2811.906	4.0	35552.59 D	-50	2.990	7.398		
	$b^{3}G-{}^{4}F_{2.5}4f$ [3.5]°	4-3	d0?	2812.687	2811.859	-3.2	35553.19 ^D	40	2.990	7.398		
	$b^{3}G^{-4}F_{2.5}4f$ [4.5]°	4-4	d0?	2812.603	2811.775	3.2	35554.25 ^D	-40	2.990	7.398		
898	$b~^3G-Fsp1~^3F^{\circ}$	3-3	2	2790.662	2789.839	-7.0	35833.79 ^D	90	3.018	7.460		
		4-4	2	2779.573	2778.753	1.5	35976.75 ^D	-20	2.990	7.451		
		4-3	3	2773.640	2772.822	-3.8	36053.70 ^D	50	2.990	7.460		
		5-4	2.08	2753.9116	2753.0978	-0.6	36311.986 ^B	8	2.949	7.451		
899	$b~^3G-Fsp1~^3G^{\circ}$	4-5	2	2767.367	2766.550	-6.1	36135.43 ^D	80	2.990	7.470		I
	- 4	3-3	0	2760.539	2759.724	2.3	36224.81 ^D	-30	3.018	7.509		•
		4-4	d1	2751.232	2750.419	0.0	36347.35 ^D	0	2.990	7.497		
		4-3	0	2743.872	2743.060	-3.8	36444.85 ^D	50	2.990	7.509	•••	
		5-4	1.78	2726.0918	2745.000	-0.5	36682.550^{C}	7	2.949	7.497	• • • •	
900	b 3G-t 3H°	5-6	1	2733.587	2732.778	3.0	36581.97 ^D	-40	2.949	7.484	•••	II
700	0 0 0 11	5-5	d0?	2719.943	2719.138	1.5	36765.47 ^D	-20	2.949	7.507		11
		5-4	1	2704.607	2703.805	1.5	36973.95 ^D	-20	2.949	7.533		
901	$b~^3G-Gsp1~^3H^{ { m o}}$	5-6	1.86	2547.6321	2546.8676	0.0	39252.135^{A}	0	2.949	7.815		
902	$c^{3}P-z^{5}P^{\circ}$	1-2	1.51	21290.167	21284.357	9	4697.004^{D}	-2	3.071	3.654	•••	I
		2 - 3	1.63	21183.949	21178.169	13	4720.555 ^A	-3	3.017	3.602		_
		2-2	1.04	19480.813	19475.495	8	5133.256 ^A	-2	3.017	3.654		
		2 - 1	1.96	18528.918	18523.860	0	5396.969 ^A	ō	3.017	3.686		
903	$c^{3}P-z^{3}F^{o}$	1-2	1.08	13583.309	13579.596	-6	7361.976 ^B	3	3.071	3.984		
		2 - 3	2.18	13388.131	13384.471	4	7469.302^{A}	-2	3.017	3.943		
		2-2	1.46	12823.419	12819.912	-12	7798.232^{B}	7	3.017	3.984		
904	$c~^3P-z~^3D^{\circ}$	0 - 1	1.46	14607.660	14603.669	4	6845.723^{A}	-2	3.111	3.960		
		1 - 2	0.90	14462.698	14458.746	-13	6914.339^{B}	6	3.071	3.928		
		2 - 3	3.31	14312.611	14308.700	4	6986.845 ^A	-2	3.017	3.883	-2.67ª	
		$^{2-2}$	2.45	13604.363	13600.644	4	7350.583^{A}	-2	3.017	3.928		
		2-1	0.95	13155.208	13151.611	10	7601.552^{A}	-6	3.017	3.960		
905	$c^3P-z^3P^{\circ}$	1-2	2.43	10899.287	10896.302	4	9174.912 ^A	-3	3.071	4.209		
	(461)	0 - 1	2.67	10786.005	10783.051	1	9271.273^{A}	-1	3.111	4.260		
	•	1 - 1	2.61	10426.602	10423.745	3	9590.852^{A}	-3	3.071	4.260		
		2-2	1.11	10404.565	10401.715	1	9611.165 ^A	-1	3.017	4.209		
		1-0	2.81	10221.211	10218.410	2	9783.576 ^A	-2	3.071	4.284	-2.76 ^b	
		2-1	1.41	9972.9673	9970.2338	1.0	10027.106^{A}	-2 -1	3.017	4.260	-2.70	
906	$c {}^{3}P - y {}^{3}D^{\circ}$ (463)	2-3	1.70	7225.6518	7223.6610	2.6	13839.582 ^B	-5	3.017	4.733	-2.21ª	
907	$c^{3}P-x^{5}P^{\circ}$	0-1	2.19	5559.4462	5557.9028	5.9	17987.403^{D}	-19	3.111	5.341		I
	(464)	1-1	1.95	5462.3944	5460.8769	3.9	18306.990 ^C		3.071	5.341	-3.58^{b}	•
908	$c^3P-w^5D^{\circ}$	2-3	2.39	5105.4526	5104.0302	-0.3	19586.902 ^B	1	3.017	5.446	-2.87^{b}	
	(465)	2-2	2.15	5038.3268	5036.9222	0.5	19847.859 ^D	-2	3.017	5.478		II
909	$c~^3P-v~^5D$ °	2-3	2.31	5042.7532	5041.3474	0.5	19830.437 ^B	-2	3.017	5.476		
	(466)								•	. , •	. •	

				TA	BLE 2—Co	ntinued						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
910 911	$c^{3}P-w^{5}F^{\circ}$	2-2	1.78	5012.6097	5011.2120	-0.5	19949.688 ^I	2	3.017	5.491		
911	$c~^3P-x~^3D^{\circ}$	1-2	2.29	4875.7151	4874.3537	0.5	20509.812^{L}	3 -2	3.071	5.614	-3.03 ^b	
<i>y</i>	(467)	1-1	1.78	4812.3730	4811.0284	-5.1	20779.769 ^C		3.071	5.648	-5.05	
-	(107)	2-3	3.62	4788.1452	4786.8070	0.0	20884.914		3.017	5.606	-1.61 ^a	
		2-2	2.98	4774.1648	4772.8303	-1.4	20946.072		3.017	5.614	-2.19^a	
		$\frac{2}{2-1}$	2.14	4713.4241	4712.1057	0.0	21215.999 ^I		3.017	5.648	-3.13^{b}	
912	$c^{3}P-w^{5}P^{0}$	2-1	2.30	4530.0909	4528.8210	0.4	22074.612 ^I		3.017	5.754		
913	(468) $c^{3}P-z^{3}S^{\circ}$ (469)	2-1	3.35	4491.3437	4490.0840	-0.4	22265.052	2	3.017	5.778	-1.58 ^b	
914	$c^{3}P-y^{3}P^{\circ}$	0-1	2.05	4585.0052	4583.7208	1.3	21810.226^{E}	³ -6	3.111	5.815		
717	(472)	1-0	2.43	4566.1008	4564.8214	-0.8	21900.524 ^E		3.071	5.786		
	(412)	1-1	3.05	4518.7914	4517.5245	0.4	22129.811		3.071	5.815	-1.86ª	
		2-2	2.95	4466.0195	4464.7665	0.4	22391.304 ^A		3.017	5.793	-2.00^a	
		$\frac{2}{2-1}$	3.05	4431.4330	4430.1891	0.0	22566.064 ^A		3.017	5.815	-1.75^a	
	2 - 5										1.75	
915	$c^{3}P-u^{5}D^{\circ}$	0-1	2.67	4527.8302	4526.5608	-0.2	22085.634		3.111	5.849	• • •	
	(471)	1-0	1.40	4464.3852	4463.1326	2.2	22399.501 ^C		3.071	5.848	• • •	
		2-3	2.66	4462.4487	4461.1967	0.8	22409.221 ^E		3.017	5.795		
		2-1	2.69	4378.0040	4376.7742	1.5	22841.459 ^E	3 -8	3.017	5.849	-2.34ª	
916	$c {}^{3}P - x {}^{3}F^{\circ}$ (473)	$\begin{array}{c} 2 - 3 \\ 2 - 2 \end{array}$	1.60 2.54	4394.2581 4374.2106	4393.0240 4372.9817	-5.0 -4.8	22756.970 ^L 22861.268 ^L		3.017 3.017	5.839 5.851	-2.63 ^b	
917	$c^{3}P-w^{3}D^{\circ}$	0 - 1	1.90	4508.4774	4507.2132	-2.0	22180.437 ^C	7 10	3.111	5.861		
71,	(474)	1-1	4.15	4444.4415	4443.1942	-1.4	22500.015^{L}		3.071	5.861		I
	(1, 1)	2-3	2.20	4408.8950	4407.6571	0.2	22681.420 ^C		3.017	5.829		•
		2-2	2.72	4385.9041	4384.6722	0.0	22800.316 ^E		3.017	5.844	-2.16 ^b	
		2-1	2.19	4359.9093	4358.6842	0.4	22936.257 ^C		3.017	5.861		
010	3 70 3 70											
918	$c {}^{3}P - y {}^{3}S^{\circ}$	0-1	2.88	4451.5648	4450.3156	-0.2	22464.011 ^A 22783.590 ^A		3.111	5.896	-1.99°a	
	(476)	$1-1 \\ 2-1$	3.51 3.59	4389.1239 4306.6615	4387.8912 4305.4505	0.2 0.2	22783.590° 23219.842 ^A		3.071 3.017	5.896 5.896	-1.52^a	
											-1.33ª	
919	$c~^3P{-}v~^5F^{ m o}$	1-2	3.15	4261.3343	4260.1352	0.0	23466.828 ^A		3.071	5.981	-1.52 ^a	
	(476a)	1 - 1	2.57	4241.1362	4239.9424	0.0	23578.587 ^E		3.071	5.995		
		2-2	3.60	4183.5613	4182.3826	-0.2	23903.080	1	3.017	5.981	-1.18 ^a	
920	$c^{3}P - v^{5}P^{0}$	0 - 1	2.52	4310.6659	4309.4538	-0.4	23198.272^{E}	3 2	3.111	5.987		
	(478)	1-2	2.68	4275.0713	4273.8685	0.7	23391.423 ^E		3.071	5.971		
	,	1-1	2.60	4252.0885	4250.8918	-0.5	23517.855^{E}		3.071	5.987		
		2-2	3.06	4196.8000	4195.6179	0.0	23827.678 ^A		3.017	5.971	-1.80^a	
		2 - 1	2.72	4174.6482	4173.4719	-1.9	23954.114 ^C	' 11	3.017	5.987		
921	$c^{3}P-x^{3}P^{0}$	0-1	3.67	4269.0276	4267.8265	-0.2	23424.538 ^A	1	3.111	6.015	-1.17ª	
921		1-2	3.45	4249.4200	4248.2240	0.0	23532.623 ^A		3.071	5.989	-1.17 -1.29 ^a	
	(482)	1-2 $1-0$	3.52	4221.5304	4220.3417	0.4	23688.092 ^A		3.071	6.008	-1.29	
		1-1	3.57	4211.5694	4210.3833	0.0	23744.118 ^A		3.071	6.015	-1.24^{a}	
		$\frac{1-1}{2-2}$	3.71	4172.0775	4170.9018	0.0	23968.874 ^A		3.017	5.989	-1.24	
		2-2 $2-1$	3.15	4135.5869	4134.4207	0.9	24180.365^{L}		3.017	6.015	-1.70^a	I
922	$c^{3}P-w^{3}F^{0}$	2-3	2.91	4014.9164	4013.7818	-0.2	24907.119 ^A		3.017	6.105	-2.15^a	•
923	(485) $c^{3}P-v^{3}D^{\circ}$	0-1	2.47	4131.2017	4130.0367	0.3	24206.032^{L}	-2	3.111	6.112		I
723	(486)	1-1	2.47	4077.3689	4076.2180	-0.7	24206.032 ⁻¹ 24525.620 ^E		3.071	6.112	-2.03 ^b	1
	(400)	$\frac{1-1}{2-3}$	2.93	4077.3089	4070.2180	0.2	24323.620 ⁻ 24799.254 ⁰		3.017	6.092	-2.03° -2.57°	
		$\frac{2-3}{2-2}$	3.37	4014.9594	4013.8248	0.2	24906.852 ^A	_	3.017	6.105	-2.57	
		$\frac{2-2}{2-1}$	2.97	4006.1108	4004.9785	0.2	24961.866 ^A		3.017	6.112		
924	c ³ P-Fsp3 ¹ F°	2-3	3.04	3977.5104	3976.3856	0.8	25141.355 ^L		3.017	6.134	-2.18 ^a	II
025	$(487*)$ $c^{3}P-w^{3}P^{\circ}$	0 1	2 15	4007.7560	1006 6212	0.2	24951.613	1 1	2 1 1 1	6 204	-1.37ª	
925		0-1	3.45	4007.7569 3971.5123	4006.6242 3970.3891	-0.2 -0.2	24951.613 ² 25179.325 ²		3.111	6.204	-1.37 ^a -1.08 ^b	
	(488)	1-0	3.73	39/1.5123 3957.0749	3970.3891		251 /9.325 ² 25271.192 ²		3.071 3.071	6.193 6.204	-1.08°	
		$1-1 \\ 1-2$	3.41 3.63	3937.0749 3934.7133	3933.5997	0.2 0.5	252/1.192 ¹ 25414.812 ¹		3.071	6.204	-1.53 ^a -1.16 ^a	I
		$\frac{1-2}{2-1}$	3.03 4.01	3934.7133	3888.8216	-0.2	25414.812 ⁻² 25707.446 ²		3.017	6.222	-0.88^{a}	1
		2-1	7.01	2007.7230	5000.0210	-0.2	23101.440	1	5.017	0.204	-0.08-	

TABLE 2—Continued

	Multiplet	J-J	I 2	λ_{vac}^{3}	$\frac{\lambda_{air}^{3}}{\lambda_{air}}$	o-R ⁴	σ 5	o-R ⁶	E(1)	E(u)	log(gf) ⁷ Bl. ⁸
	(MT) ¹			(Å)	$(A)^{\frac{3}{air}}$	(mÅ)	(cm ⁻¹)	(mK)	(eV)	(eV)	
· 		2-2	4.33	3868.3123	3867.2159	0.0	25851.067 ^A		3.017	6.222	-0.45 ^a
926	$c^{3}P-z^{1}F^{0}$ (489)	2-3	2.95	3809.3620	3808.2810	-0.6	26251.115 ^B	4	3.017	6.272	-1.94 ^a
927	$c^3P-t^5D^{\circ}$	1-2	2.71	3723.2864	3722.2277	-1.5	26857.993 ^C		3.071	6.401	
	(490)	2-3	3.06	3700.1914	3699.1387	-0.7	27025.629 ^B	5	3.017	6.368	-1.19 ^b
928	$c~^3P-v~^3F^{\circ}$	1-2	3.20	3783.6839	3782.6096	0.0	26429.269 ^B	0	3.071	6.348	-1.86 ^b
	(491)	$^{2-2}$	3.30	3722.2434	3721.1850	0.3	26865.519 ^B		3.017	6.348	
		2-3	3.58	3699.6555	3698.6029	-0.1	27029.544 ^A	1	3.017	6.368	-1.26 ^b
929	$c {}^{3}P - u {}^{3}G^{\circ}$ (493)	2-3	3.41	3637.6856	3636.6491	-0.1	27490.006 ^B	1	3.017	6.425	-1.38 ^a
930	$c^{3}P - y^{1}D^{\circ}$ (494)	1-2	3.63	3712.4642	3711.4083	0.0	26936.287 ^A	0	3.071	6.411	-0.88^a
931	$c^{3}P - x^{-1}D^{\circ}$ (495)	1-2	3.06	3705.0680	3704.0140	-0.1	26990.058 ^B	1	3.071	6.417	-1.80 ^b
932	$c^{3}P-u^{3}D^{\circ}$	0 - 1	4.02	3646.8590	3645.8201	-0.3	27420.857 ^A	2	3.111	6.510	-0.54^a
	(496)	1-2	4.30	3633.0742	3632.0388	0.1	27524.899 ^A		3.071	6.484	-0.18^a
	•	2-3	4.56	3618.8178	3617.7861	-0.1	27633.334 ^A	1	3.017	6.443	-0.01^a
		1 - 1	3.53	3604.8460	3603.8179	0.1	27740.436 ^A	-1	3.071	6.510	-1.00^a
		$^{2-2}$	3.97	3576.3907	3575.3700	0.0	27961.151 ^A	0	3.017	6.484	-0.53 ^a
		2 - 1	3.19	3549.0343	3548.0206	1.1	28176.679 ^B	-9	3.017	6.510	-1.26^{b}
933	$c^{3}P^{-2}P4p^{1}P^{0}$	0-1	3.23	3691.5052	3690.4547	-0.1	27089.221 ^B	1	3.111	6.469	-1.13^{a}
933	•	1-1	3.78	3648.4631	3647.4238	-0.1	27408.801 ^A	1	3.071	6.469	-0.69^a
934	$c {}^3P$ – $t {}^3D$ °	1 - 2	3.36	3582.8299	3581.8075	0.1	27910.898 ^B		3.071	6.532	-1.08 ^a
	(497)	1 - 1	3.60	3560.5199	3559.5033	-0.4	28085.786^{B}		3.071	6.553	-0.97^{b}
		2-1	3.36	3506.0612	3505.0586	0.0	28522.035^{B}	0	3.017	6.553	-1.01 ^a
935	$c {}^{3}P - v {}^{3}P^{\circ}$	0 - 1	3.12	3553.8700	3552.8551	0.1	28138.339^{B}	-1	3.111	6.599	-1.47ª
	(499)	1 - 2	3.16	3553.1207	3552.1060	0.3	28144.273 ^B		3.071	6.561	-1.37^{b}
		1 - 1	2.96	3513.9590	3512.9544	-1.2	28457.930 ^C	10	3.071	6.599	
		2-2	3.22	3498.8878	3497.8870	1.8	28580.511^{B}		3.017	6.561	• • •
		2-1	3.58	3460.9051	3459.9140	-0.5	28894.176 ^A	4	3.017	6.599	-0.93^a
936	$c~^3P-Dsp3~^5F$ °	1-1	2.67	3457.2344	3456.2443	-0.8	28924.854 ^C		3.071	6.657	•••
937	$c^{3}P-x^{1}F^{\circ}$ (503)	2-3	2.46	3398.1787	3397.2037	-2.0	29427.528 ^D		3.017	6.666	•••
938	$c^3P-x^3S^{\circ}$	$1-1 \\ 2-1$	2.81 3.19	3443.9592 3392.9832	3442.9724 3392.0096	-1.5 -0.1	29036.349 ^C 29472.589 ^B		3.071 3.017	6.671 6.671	•••
939	$c^{3}P-{}^{4}F5p^{3}D^{\circ}$	2-3	2.73	3389.5917	3388.6189	0.5	29502.078 ^C	-4	3.017	6.675	
,,,	or rop z	1-2	2.30	3381.7176	3380.7468	-1.6	29570.772^{D}		3.071	6.737	
		0-1	2.32	3365.2277	3364.2611	-2.6	29715.671^{D}		3.111	6.795	•••
940	$c^{3}P-t^{5}P^{\circ}$ (502)	2-1	2.56	3340.5371	3339.5768	-1.5	29935.306 ^C	13	3.017	6.729	•••
941	$c^{3}P-w^{1}D^{0}$	1-2	6	3227.651	3226.720	-6.3	30982.28 ^D	60	3.071	6.912	I
741	(505)	$\frac{1}{2}$	5	3182.844	3181.924	2.0	31418.44 ^D		3.017	6.912	
942	c ^3P-u 3F $^{\circ}$	1 - 2	2.20	3116.5607	3115.6572	-1.9	32086.652^{D}	20	3.071	7.049	
		2-3	2.15	3081.8963	3081.0014	-0.2	32447.555^{D}		3.017	7.040	
		2-2	d0?	3074.764	3073.871	5.7	32522.82 ^D		3.017	7.049	
943	$c~^3P$ – $s~^6D$ 6 $p~^5D$ °	2-1	d0?	3024.307	3023.426	-4.6	33065.43 ^D		3.017	7.117	•••
944	$c\ ^3P - s\ ^6\!D_{2.5}4f\ [3.5]^{ m o}$	2-3	0	3020.806	3019.926	-2.7	33103.75 ^D	30	3.017	7.121	• • •
945	$c^{3}P-t^{3}F^{\circ}$ (506)	2-3	13	3002.533	3001.658	1.8	33305.21 ^D	-20	3.017	7.146	•••
946	$c^3P-Psp1^3D^{\circ}$	2-3	0	3009.371	3008.495	0.0	33229.53 ^D		3.017	7.137	•••
947	$c~^3P$ – $s~^4D$ 5 $p~^5D$ °	0-1	d0?	2991.472	2990.600	3.6	33428.36 ^D		3.111	7.255	• • •
		2-3	d0	2967.551	2966.685	-7.0	33697.82 ^D		3.017	7.195	•••
948	c 3P – s 4D 5 p 3F $^{\circ}$	2-2	3	2887.990	2887.143	5.0	34626.16 ^L	-60	3.017	7.310	•••

TABLE 2—Continued

:				1/1	BLL 2—Con	iiiiicu						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)		-R ⁶ mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
949	c^3P - $s^4D5p^3P^0$	1-2 0-1	1	3009.554 2919.526	3008.678 2918.672	-5.4 6.0		60 -70	3.071 3.111	7.191 7.357		
950	$c^{3}P - s^{4}D5p^{3}D^{\circ}$	1-1 0-1	1* d0?	2892.540 3002.702	2891.692 3001.827	7.5 -6.3	34571.69 ^D 33303.34 ^D	-90 70	3.071 3.111	7.357 7.240		
,,,,	0 1 0 207 -	2-2 2-3	d0?	2958.885 2946.333	2958.020 2945.471	-2.6 0.0	33796.52 ^D 33940.50 ^D	30 0	3.017 3.017	7.207 7.225	•••	
951	c 3P – s 4D5p 5P $^\circ$	1-1	0?	2891.168	2890.320	5.9	34588.10 ^D	-70	3.071	7.359	•••	
952	c^3P - $Psp1^3S^o$	$0-1 \\ 1-1$	3 2	2906.215 2879.474	2905.364 2878.629	0.0 2.5	34409.02 ^D 34728.57 ^D	0 -30	3.111 3.071	7.377 7.377		
0.50	3 D D 13 D 0	2-1	2	2843.747	2842.911	-0.8	35164.87 ^D	10	3.017	7.377	•••	**
953	$c^{3}P-Fsp1^{3}D^{\circ}$	2-3	2.03	2741.9121	2741.1012	0.2	36470.899 ^D	-3 	3.017	7.539		II
954	$a {}^1G - z {}^3F$ °	4-4 4-3	1.41 1.04	14853.127 13830.466	14849.068 13826.686	0 4	6732.589 ^A 7230.414 ^A	0 -2	3.047 3.047	3.881 3.943	•••	
955	$a~^1G-z~^3D^{\circ}$	4-3	1.64	14819.291	14815.242	-9	6747.961 ^A	4	3.047	3.883	•••	
956	$a {}^1G - z {}^5G^{\circ}$	4-4 4-3	1.58 1.11	9360.9583 9060.4577	9358.3905 9057.9713	0.9 0.0	10682.667 ^A 11036.970 ^B	-1 0	3.047 3.047	4.371 4.415		
957	$a^{1}G - y^{3}F^{0}$	4-3	1.15	7944.0176	7941.8330	0.6	12588.089 ^A	-1	3.047	4.607		
958	(508) $a {}^{1}G - y {}^{3}G^{\circ}$	4-4	2.15	4795.3020	4793.9619	0.5	20853.744 ^B	-2	3.047	5.632	-3.53 ^b	
959	(512) $a {}^{1}G - z {}^{3}I^{\circ}$	4-5	2.04	4637.9692	4636.6707	0.6	21561.161 ^C	-3	3.047	5.720	-3.77 ^b	
960	(513) $a {}^{1}G - u {}^{5}D^{\circ}$ (514)	4-4	2.92	4515.4500	4514.1839	-0.2	22146.187 ^A	1	3.047	5.792	-2.05^{b}	
961	$a {}^{1}G - x {}^{3}F^{\circ}$ (515)	4-4 4-3	3.06 2.34	4481.3936 4440.8805	4480.1366 4439.6341	-0.2 -0.2	$22314.487^{A} \\ 22518.057^{D}$	1 1	3.047 3.047	5.813 5.839	-1.93 ^a -2.84 ^b	I
962	$a^{1}G-z^{3}H^{0}$	4-5	3.06	4457.5765	4456.3257	0.0	22433.715^{A}	0	3.047	5.828	-2.17^{a}	•
, 52	(516)	4-4	3.04	4438.1663	4436.9206		22531.828 ^A	1	3.047	5.840	-2.13 ^a	
963	$a {}^{1}G - w {}^{5}G^{\circ}$ (517)	4-5 4-4	2.59 3.10	4377.2159 4344.9186	4375.9862 4343.6975	-0.2 0.2	22845.572 ^B 23015.391 ^A	1 -1	3.047 3.047	5.879 5.900	-1.88 ^b	
964	$a {}^{1}G - z {}^{1}G^{\circ}$ (518)	4-4	4.44	4370.9998	4369.7718	0.0	22878.061 ^A	0	3.047	5.883	-0.80 ^a	
965	$a {}^{1}G - x {}^{3}G^{\circ}$ (520)	4-4 4-5	3.44 3.80	4303.3960 4299.2455	4302.1858 4298.0364		23237.462 ^A 23259.895 ^A	0 2	3.047 3.047	5.928 5.931	-1.72 ^a -1.43 ^a	
966	$a~^1G-y~^5H$ °	4-5 4-4	4.02 3.28	4227.1459 4203.9370	4225.9557 4202.7530		23656.624 ^A 23787.226 ^A	0	3.047 3.047	5.980 5.996	-1.41 ^a -2.22 ^a	
967	$(521*)$ $a {}^{1}G - z {}^{1}H^{\circ}$	4-4		4200.2783	4199.0952		23787.220 23807.946^D	-1	3.047	5.998	0.16^{a}	II
968	(522) a ¹ G-y ¹ G°	4-4	4.80	4144.5831	4143.4146		24127.879 ^A	0	3.047	6.038	-0.20^a	
969	(523) $a^{1}G-w^{3}F^{0}$	4-4	3.86	4075.9363	4074.7858		24534.240 ^D	0	3.047	6.089	-1.11ª	II
970	(524) $a {}^{1}G - y {}^{3}H^{\circ}$	4-3 4-5	2.61 3.33	4053.7978 3995.2426	4052.6531 3994.1132		24668.226 ^B 25029.769 ^A	-4 -2	3.047 3.047	6.105 6.150	-1.62 ^a	
	(526)				4017.1485		24886.245 ^A	-1	3.047	6.132	-1.06 ^a	
971	$a {}^{1}G - v {}^{3}G^{\circ}$ (527)	4-5 4-4	3.58 3.37	4018.2840 3991.5018	3990.3733		25053.227 ^A	-1 -1	3.047	6.153	-1.51 ^a	
972	$a~^1G-Fsp3~^1F^{ m o}$	4-3	4.47	4015.6656	4014.5308		24902.472 ^A	1	3.047	6.134	-0.59 ^a	
973	$a {}^{1}G - z {}^{1}F^{\circ}$ (528)	4-3	4.70	3844.3469	3843.2568	0.0	26012.221 ^A	0	3.047	6.272	-0.24 ^a	
974	$a {}^{1}G - x {}^{1}G^{\circ}$ (529)	4-4	4.68	3840.3449	3839.2558	-0.1	26039.328 ^A	1	3.047	6.275	-0.33 ^a	
975	$a^{1}G - x^{3}H^{\circ}$ (531)	4-5 4-4	3.07 3.41	3774.4305 3726.5504	3773.3586 3725.4908		26494.063 ^B 26834.469 ^A	2 2	3.047 3.047	6.331 6.374	-2.17 ^b -1.54 ^b	

TABLE 2—Continued

No.	Multiplet (MT)	J-J	I ²	λ _{vac} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
976	$a {}^{1}G - v {}^{3}F^{0}$ (532a)	4-4	3.30	3741.1224	3740.0591	0.3	26729.946 ^B	-2	3.047	6.361		
977	$a {}^{1}G - u {}^{3}G^{\circ}$ (533)	4-5	4.11	3731.4472	3730.3864	0.0	26799.254 ^A	0	3.047	6.369	-0.65 ^a	
978	a ¹ G-Hsp3 ¹ H° (534a*)	4-5	4.53	3696.1031	3695.0515	0.0	27055.522^{D}	0	3.047	6.401	•••	I
979	$a {}^{1}G - u {}^{3}D^{\circ}$	4-3	2.87	3650.3730	3649.3332	-2.3	27394.461^{C}	17	3.047	6.443		
980	a ¹ G-w ³ H° (536)	4-4	3.08	3546.8439	3545.8308	0.8	28194.080^{B}	-6	3.047	6.542		
981	$a^{1}G - y^{3}I^{\circ}$ (537)	4-5	2.93	3530.5331	3529.5242	0.9	28324.334 ^C	-7	3.047	6.558	•••	
982	$a^{1}G^{-4}F5p^{3}G^{0}$	4-3	2.52	3357.6477	3356.6831	-0.9	29782.755^{C}	8	3.047	6.739		
983	$a~^1G-Gsp3~^3F^{\circ}$	4-3	3.02	3474.2915	3473.2970	1.3	28782.847^{C}	-11	3.047	6.615		
984	$a {}^{1}G - {}^{4}F5p {}^{5}F^{0}$ (539*)	4-3	3.50	3438.0297	3437.0445	-0.6	29086.427 ^B	5	3.047	6.653		
985	$a^{1}G-y^{1}H^{\circ}$ (540)	4-5	3.43	3479.6187	3478.6229	0.0	28738.781 ^B	0	3.047	6.610	•••	
986	$a {}^1G-{}^4F5p {}^5D^{\circ}$	4-3	3.71	3423.4739	3422.4924	-0.4	29210.096^{A}	3	3.047	6.668		
987	$a {}^{1}G - x {}^{1}F^{\circ}$ (541)	4-3	3.95	3425.9921	3425.0100	-0.2	29188.625 ^D	2	3.047	6.666	-0.50^a	II
988	a 1G $ ^4F5p$ 3D $^{\circ}$	4-3	2.83	3417.2599	3416.2800	-2.1	29263.212^{D}	18	3.047	6.675		
989	a ¹ G-Dsp3 ⁵ D° (542*)	4-3	2.83	3411.0060	3410.0278	0.5	29316.864 ^C	-4	3.047	6.681	• • •	
990	$a^{-1}G - t^{-3}G^{\circ}$ (542a)	4-3	2.79	3330.4807	3329.5229	-0.4	30025.696 ^C	4	3.047	6.769	•••	
991	$a {}^{1}G - w {}^{1}G^{\circ}$ (544)	4-4	4.21	3307.2914	3306.3396	-2.7	30236.223 ^A	25	3.047	6.795	-0.07ª	
992	$a {}^{1}G - s {}^{3}G^{\circ}$	4-5	2.28	3240.9473	3240.0123	-1.5	30855.176 ^D	14	3.047	6.872		
	(548)	4-3 4-4	3.15 3.07	3203.4813 3191.7393	3202.5558 3190.8167	-0.1 -0.1	31216.040 ^B 31330.880 ^B	1 1	3.047 3.047	6.917 6.931	-1.18 ^a -1.12 ^a	
993	$a {}^{1}G - v {}^{3}H^{\circ}$ (545)	4-4 4-5	d0 3.51	3239.252 3230.9233	3238.318 3229.9909	3.1 -0.1	$30871.32^{\ D} \ 30950.905^{A}$	-30 1	3.047 3.047	6.874 6.884	 -0.74 ^a	II
994	$a {}^{1}G - {}^{2}H4p {}^{1}H^{\circ}$	4-5	3.09	3191.5720	3190.6495	-0.1	31332.522^{B}	1	3.047	6.931	-1.02ª	
995	$a\ ^1G-Gsp3\ ^1F$ o	4-3	3.34	3172.2689	3171.3513	-0.1	31523.179^{A}	1	3.047	6.955	-0.71^a	
996	$a~^1G-u~^3H$ °	4-5	0?	3143.854	3142.944	-7.9	31808.09 ^D	80	3.047	6.990		II
997	$a\ ^1G-u\ ^3F^{\circ}$	4-4	1	3123.230	3122.324	-8.8	32018.14 ^D	90	3.047	7.016		
		4-3 4-3	3 2.23	3104.756 3104.7530	3103.855 3103.8524	1.0 -1.6	32208.65 ^D 32208.681 ^D	-10 17	3.047 3.047	7.040 7.040		I
998	$a~^1G-s~^6D6p~^5F^{\circ}$	4-4 4-3	<i>1</i> d0	3077.907 3051.657	3077.013 3050.770	6.6 8.4	-	-70 -90	3.047 3.047	7.075 7.109		II
999	$a~^1G-x~^3I^{\circ}$	4-5	2	3074.128	3073.235	0.9	32529.55 ^D		3.047	7.109		11
1000	(549) a ¹ G-s ⁶ D _{2.5} 4f [5.5]°	4-5	3	3043.726	3042.841	-2.8	32854.47 ^D	30	3.047	7.120	•••	
1001	$a~^1G-s~^4D5p~^3F^{ m o}$	4-3	0?	2897.293	2896.444	0.0	34514.98 ^D	0	3.047	7.326		
1002	$a~^1G-Hsp1~^3G^{ m o}$	4-4	0	2962.087	2961.222	-1.8	33759.98 ^D	20	3.047	7.232		
1003	$a~^1G-Hsp1~^3I^{\circ}$	4-5	0	2897.620	2896.771	7.6	34511.08 ^D	-90	3.047	7.325		
1004	$a {}^{1}G - {}^{4}F_{3.5}4f [4.5]^{\circ}$	4-4	0?	2882.871	2882.026	0.0	34687.64 ^D	0	3.047	7.347		
	$a {}^{1}G - {}^{4}F_{3.5}4f [4.5]^{\circ}$	4-5	<i>I</i>	2882.650	2881.805	-5.8 5.0	34690.30 ^D 34690.30 ^D	70 60	3.047	7.348	• • •	I
	$a {}^{1}G - {}^{4}F_{3.5}4f [5.5]^{\circ}$ $a {}^{1}G - {}^{4}F_{3.5}4f [3.5]^{\circ}$	4-5 4-4	<i>I</i> d0?	2882.650 2882.586	2881.805 2881.741	5.0 0.8		-60 -10	3.047 3.047	7.348 7.348		I
1005	$a^{-1}G - Fsp1^{-3}G^{\circ}$	4-5	1	2802.721	2801.895	-7.1	35679.61 ^D	90	3.047	7.470		
1005	a a ropr o	4-4	d0?	2786.171	2785.349	-3.1	35891.55 ^D	40	3.047	7.497		
		4-3	1	2778.632	2777.812	1.5	35988.93 ^D	-20	3.047	7.509		II

•					17	TELE 2—Con	шпиеи						
ν 4.	No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
rapoa.	1006	$a~^1G-t~^3H^{\circ}$	4-5 4-4	d0? d7	2779.748 2763.736	2778.928 2762.920	-1.5 2.3	35974.48 ^D 36182.90 ^D	20 -30	3.047 3.047	7.507 7.533		
133,	1007	a $^1G-Fsp1$ $^3D^{\circ}$	4-3	0	2759.995	2759.180	4.6	36231.95 ^D	-60	3.047	7.539		I
•	1008	$z^5D^{\circ}-c^3F$	3-4	1.38	14851.225	14847.167	4	6733.451 ^A 7073.022 ^A	-2	3.241	4.076		
			2-3 $1-2$	1.00 0.70	14138.228 13725.102	14134.364 13721.350	-2 9	7285.920 ^D	1 -5	3.266 3.283	4.143 4.186	• • • •	I
	1009	$z^5D^{\circ}-d^3F$	2-2 4-4	1.28 1.08	9433.1569 8971.8800	9430.5696 8969.4176	-9.8 6.4	10600.905 ^D 11145.936 ^B	11 -8	3.266 3.211	4.580 4.593		II
	1010	$z^{5}D^{\circ}-d^{8}{}^{3}P$ (551*)	$3-2 \\ 2-1$	2.80 2.51	6788.2999 6739.1289	6786.4268 6737.2691	1.4 0.9	14731.229 ^A 14838.713 ^B	-3 -2	3.241 3.266	5.067 5.105		
	1011	$z^5D^{\circ}-e^7D$	4-5	1.85	5911.6112	5909.9736	0.7	16915.862 ^A	-2	3.211	5.308	-2.78 ^b	
		(552)	3-4	0.00	5874.3538	5872.7261	-1.0	17023.149^{B}	3	3.241	5.351		
			2-3	1.40	5849.6876	5848.0665	0.0	17094.930 ^A	0	3.266	5.385	٠٠٠,	
			1-2	1.32	5829.4928	5827.8771	0.0	17154.151 ^A	0	3.283	5.410	-3.41 ^b	
			0-1	1.11	5809.3941	5807.7838	0.0	17213.499 ^A	0	3.292	5.426	-3.41 ^b	
			$\begin{array}{c} 4-4 \\ 1-1 \end{array}$	2.21 1.34	5792.6238 5785.4986	5791.0180 5783.8947	0.7 0.7	17263.334 ^A 17284.595 ^A	-2 -2	3.211 3.283	5.351 5.426	-2.23ª	
			$\frac{1-1}{2-2}$	1.73	5782.4074	5780.8043	0.7	17293.835 ^A	-2 -1	3.266	5.410	•••	
			3-3	2.05	5782.2031	5780.6001	0.0	17294.446 ^A	Ô	3.241	5.385	-2.64 ^b	
	1012	z 5D 0 $-e$ 5D	3-4	4.22	5394.6671	5393.1676	0.0	18536.825 ^A	0	3.241	5.539	-0.91 ^b	
		(553)	2 - 3	4.29	5341.4147	5339.9294	0.0	18721.632 ^A	0	3.266	5.587	-0.72^a	
			4-4	4.89	5325.6601	5324.1790	0.0	18777.015 ^A	0	3.211	5.539	-0.24 ^b	
			3-3	4.53	5285.0913	5283.6210	0.0	18921.149 ^A	0	3.241	5.587	-0.52^a	
			$0-1 \\ 2-2$	3.89 4.06	5274.6311 5264.7711	5273.1636 5263.3063	-0.3 0.0	18958.672 ^A 18994.178 ^A	1 0	3.292 3.266	5.642 5.620	-0.97 ^b	
			1-1	3.36	5254.9240	5253.4617	-0.6	19029.771 ^A	2	3.283	5.642	-0.97 ^b	
			1-0	3.94	5231.3045	5229.8485	3.3	19025.771 19115.691 ^A	-12	3.283	5.653	-1.07	
			4-3	3.95	5218.8420	5217.3893	0.0	19161.339 ^A	0	3.211	5.587	-1.16 ^a	
			2-1	4.06	5216.6327	5215.1806	0.0	19169.454 ^A	0	3.266	5.642		
			3-2	4.09	5210.0442	5208.5940	0.0	19193.695 ^A	0	3.241	5.620	-0.98^{b}	
	1013	z 5D $^{\circ}-e$ 5F	4-5	4.26	4738.0983	4736.7734	0.4	21105.514 ^A	-2	3.211	5.828	-0.75°	
		(554)	3-4	3.98	4708.5916	4707.2745	0.4	21237.773 ^A	-2	3.241	5.874	-1.08 ^b	
			2-3	3.74	4669.4412	4668.1344	0.2	21415.839 ^A	-1	3.266	5.921	• • •	
			4-4	3.56	4655.9318	4654.6286	-2.8	21477.978 ^A	13	3.211	5.874	1.206	
			1-2	3.47	4638.8020	4637.5034	0.0	21557.290 ^A 21615.356 ^A	0	3.283 3.241	5.956 5.921	-1.39 ^b -1.34 ^b	
			$3-3 \\ 0-1$	3.54 3.16	4626.3406 4614.4949	4625.0453 4613.2027	0.2 0.0	21615.356 ²⁴ 21670.844 ^A	-1 0	3.241	5.978	-1.34° -1.67 ^b	
			$\frac{0-1}{2-2}$	3.43	4608.9376	4607.6469	0.0	21670.844 21696.974^{D}	-1	3.266	5.956	-1.07	I
			1-1	3.21	4599.4054	4598.1171	0.0	21741.941 ^A	0	3.283	5.978	-1.57 ^b	
			4-3	2.49	4575.4981	4574.2162	0.4	21855.544^{B}	-2	3.211	5.921	-2.50^{b}	
			2 - 1	2.54	4570.0437	4568.7632	-0.6	21881.629^{A}	3	3.266	5.978		
			3-2	2.63	4566.9416	4565.6619	0.0	21896.492 ^A	0	3.241	5.956	-2.25^{b}	
	1014	z 5D 0 $-e$ 3F	3-4	3.19	4582.7918	4581.5080	-0.2	21820.760^{D}	1	3.241	5.946	-1.83^{b}	I
		(555)	4-4	2.88	4532.9009	4531.6302	4.3	22060.928^{D}		3.211	5.946		I
			2-3	2.63	4506.0942	4504.8306	0.0	22192.168^B	0	3.266	6.017	-2.27 ^b	
			3-3 $2-2$	2.37 1.95	4465.9405 4426.9948	4464.6875 4425.7521	-3.0 0.8	22391.700 ^B 22588.687 ^D	15 -4	3.241 3.266	6.017 6.066	•••	
	1015	$z^{5}D^{\circ}-e^{7}F$	2-3	3.22	4030.7680	4029.6293	-2.9	24809.168^{A}	18	3.266	6.341	•••	
	1015		1-2	2.64	4030.7680	4029.6293	-2.9 -1.8	24809.168 ¹² 24851.681 ^D	11	3.283	6.364	• • •	T
		(556)	4-5	1.95	4023.8727	4009.5420	-1.8	24933.456 ^D	8	3.211	6.302		I II
			2-2	2.66	4001.3832	4000.2522	-0.5	24991.358 ^D	3	3.266	6.364	-1.62 ^b	I
			3-3	2.85	3998.6141	3997.4838	0.3	25008.665^B	-2	3.241	6.341		•
	1016	$z^5D^{\circ}-f^7D$	0-1	2.60	4082.0290	4080.8769	0.8	24497.621 ^B	-5	3.292	6.329	-1.80^{b}	
		(557)	2-3	3.10	4077.9510	4076.8000	0.0	24522.119^{A}	0	3.266	6.306	-1.18ª	
		•	1 - 1	2.29	4070.2168	4069.0678	1.5	24568.716^{D}	-9	3.283	6.329	-1.89^{b}	
			2-2	2.41	4055.3222	4054.1771	-1.0	24658.953 ^C	6	3.266	6.323	-2.06^{b}	
			3-4	2.27	4053.8675	4052.7227	2.5	24667.802^{C}	-15	3.241	6.299		

				17	ABLE 2—Co	пипиеа						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
		2-1	3.21	4047.2053	4046.0623	0.2	24708.408 ^A	-1	3.266	6.329	-1.30 ^a	
4		3-3	3.43	4045.0391	4043.8966	-0.7	24721.640 ^A	4	3.241	6.306	-0.83ª	
		4-4	2.54	4014.7740	4013.6395	0.6	24908.002 ^E	-4	3.211	6.299		
1017	$z^{5}D^{0}-f^{5}D$	2-3	2.51	4133.1373	4131.9718	0.7	24194.696 ^C	· -4	3.266	6.265		
	(558)	1 - 2	2.84	4128.9487	4127.7843	-0.5	24219.240 ^A		3.283	6.286		
		0 - 1	2.98	4110.2156	4109.0561	-0.5	24329.624 ^A	3	3.292	6.308	-1.56a	
		2-2	3.23	4105.2718	4104.1136	0.0	24358.923 ^A	0	3.266	6.286		
		3-3	3.58	4099.3324	4098.1758	0.0	24394.216 ^A	0	3.241	6.265	-0.88^a	
		1 - 1	2.70	4098.2397	4097.0834	0.0	24400.720^{E}	0	3.283	6.308	-1.69^{b}	
		1 - 0	3.26	4081.3611	4080.2092	0.0	24501.630 ^A	0	3.283	6.321	-1.22^{b}	
		4-4	4.05	4077.7801	4076.6291	0.0	24523.147 ^A		3.211	6.251	-0.53^a	
		2-1	3.55	4074.9125	4073.7623	0.2	24540.404 ^A		3.266	6.308	-0.90^a	
		3-2	3.70	4071.9202	4070.7707	0.3	24558.438 ^A		3.241	6.286	-0.79^{b}	
		4-3	3.35	4059.3632	4058.2170	0.0	24634.406 ^L	0	3.211	6.265	-1.11 ^a	II
1018	z $^5D^{\circ}-e$ 7P	2-3	2.45	4120.0488	4118.8868	1.0	24271.557 ^B		3.266	6.275	-1.51^{b}	
	(559)	3-4	2.20	4109.2922	4108.1330	2.9	24335.091 ^C		3.241	6.258	-2.14^{b}	
		3-3	3.70	4086.4563	4085.3031	0.2	24471.080 ^A		3.241	6.275	-0.81^a	
		2-2	2.29	4078.0322	4076.8811	-0.2	24521.631 ^C		3.266	6.306	• • •	
		4-4	4.02	4069.1265	4067.9777	-0.2	24575.299 ^A		3.211	6.258	-0.47 ^a	
		4-3	3.54	4046.7367	4045.5939 4043.9770	0.3	24711.269 ^A		3.211	6.275	-0.90^a	
		3-2	2.82	4045.1194		-0.3	24721.149 ^B		3.241	6.306	•••	
1019	$z^5D^{\circ}-e^5G$	4-5	3.90	4031.6275	4030.4885	0.2	24803.879 ^A		3.211	6.286	-0.56^a	
	(560)	3-4	3.71	4025.8625	4024.7250	0.2	24839.398 ^A		3.241	6.320	-0.75 ^a	
		2-3	3.15	4019.4033	4018.2675	0.5	24879.315 ^A		3.266	6.350	-1.23 ^a	
	_	1-2	2.85	4017.5546	4016.4194	-0.2	24890.763 ^B		3.283	6.369	-1.60 ^b	
1020	z $^5D^{\circ}-e$ 7G	1 - 1	2.45	3986.0611	3984.9340	-0.6	25087.423 ^D		3.283	6.393		
	(561)	3-4	3.57	3969.0840	3967.9614	0.2	25194.730 ^A		3.241	6.365	-0.89^a	
		3-3	2.43	3949.3937	3948.2763	-0.6	25320.342^{D}		3.241	6.380		
		4–5	3.54	3948.1120	3946.9949	0.2	25328.562 ^A		3.211	6.351	-1.00 ^a	
1021	z 5D ° $-f$ 5F	0 - 1	3.42	3967.6217	3966.4995	0.0	25204.016 ^A		3.292	6.417		
	(562)	1-2	3.74	3964.2218	3963.1005	-0.2	25225.632 ^A		3.283	6.410	-0.70^{b}	
		2-3	3.83	3958.1381	3957.0184	0.2	25264.404 ^A		3.266	6.398	-0.56^a	
		1-1	3.38	3956.4606	3955.3413	-0.2	25275.116^{A}		3.283	6.417	-1.01 ^b	
		3-4	3.92	3949.2147	3948.0973 3941.2753	-0.2	25321.490 ^A		3.241	6.380	-0.56^a	
		2-2 $2-1$	3.41 3.63	3942.3909 3934.7133	3941.2753	-0.2 -1.9	25365.318 ^A 25414.812 ^D		3.266 3.266	6.410 6.417	-1.01 ^b	
		3-3	3.39	3934.7133	3926.0132	0.0	25463.922 ^A		3.241	6.398	-0.93 ^a	I
		4 –4	2.83	3912.1069	3910.9991	0.0	25561.674 ^C		3.241	6.380	-0.93	
1000	5 D											
1022	$z^{5}D^{\circ}-e^{5}S$ (563)	1-2	2.51	4053.5853	4052.4406	1.5	24669.519 ^C		3.283	6.341	•••	
1023	$z^5D^{\circ}-e^3D$	2-3	2.27	4007.2902	4006.1576	0.5	24954.519 ^C 25154.037 ^C		3.266	6.359	1.00h	
	(564)	3-3	2.70	3975.5050 3936.9747	3974.3807 3935.8605	0.3	25154.037° 25400.214 ^C		3.241	6.359	-1.90 ^b	
		2-2 $2-1$	2.61 2.61	3891.0224	3889.9202	1.4 1.2	25700.186 ^C		3.266 3.266	6.415 6.452		
1001	500 50											
1024	$z^{5}D^{\circ}-g^{5}D$	3-4 2-3	3.06 3.32	3966.6308	3965.5088 3931.1172	0.0 -0.3	25210.312 ^B 25430.861 ^B		3.241	6.366	-1.78 ^a -1.14 ^b	
	(565)	2-3 4-4	3.79	3932.2302 3929.1951	3928.0829	-0.5 -0.5	25450.801^{-2}		3.266 3.211	6.419 6.366	-0.93^a	
		1-2	3.28	3910.7649	3909.6576	-0.5	25430.303 25570.445^{B}		3.283	6.453	-0.93	
		3-3	3.49	3901.6200	3900.5150	-0.5	25630.379 ^D		3.241	6.419	-0.92^{b}	II
		2-2	3.32	3889.5181	3888.4162	0.0	25710.126^{B}		3.266	6.453		**
		1-0	3.18	3879.2811	3878.1819	-1.5	25777.972^{D}		3.283	6.479		
		2-1	2.79	3864.7860	3863.6906	-0.9	25874.654 ^C		3.266	6.474		
1025	$z^{5}D^{\circ}-e^{7}S$ (566)	2-3	2.61	3963.4731	3962.3520	0.3	25230.397 ^C	-2	3.266	6.394	-1.73 ^b	
1026	$z^{5}D^{\circ}-e^{5}P$	0-1	3.14	3926.3119	3925.2005	-0.9	25469.194 ^B	6	3.292	6.449	-1.40 ^b	
	(567)	2-3	3.04	3921.9473	3920.8370	0.3	25497.538^{L}	-	3.266	6.427	-1.33 ^a	II
		1-1	3.22	3915.3816	3914.2730	-1.4	25540.295 ^B	9	3.283	6.449	-1.43 ^b	
		2-1	2.70	3894.0852	3892.9822	-0.2	25679.972 ^C	1	3.266	6.449		

No.	:					SLE 2—Coni							
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	No.		J-J	I ²	$\lambda_{vac}^{}$ (Å)	$\lambda_{air}^{}$ (Å)						log(gf) ⁷	Bl. ⁸
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2		3-3	2.85	3891.4982	3890.3958	2.1	25697.044^{B}	-14	3.241	6.427	-1.58 ^a	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1						-1.5		10				
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $)		4-3	3.35	3855.4596	3854.3666	0.4	25937.245 ^B	-3	3.211	6.427	-1.10^a	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	1027	z 5D $^{o}-g$ 5F	4-5	3.27	3681.7054	3680.6575	0.0	27161.326^{D}	0	3.211	6.579		II
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		(568)	3-4	3.10	3669.2552	3668.2105	0.5	27253.487^{D}	-4	3.241	6.620	-1.26^{b}	II
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				3.06			0.1		-1	3.266			
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $													I
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$												• • •	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			0-1	2.84	3592.5089	3591.4840	0.6	27835.700°	-5	3.292	6.743	-1.46°	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1028												
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		(569)											I
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $							0.9		-7	3.241			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1029												
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		(570)											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			2-1	3.10	3625.0954	3624.0621	2.8	27585.481 ^C	-21	3.266	6.686	-1.50^{b}	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1030	z 5D $^{\circ}-f$ 5G	1-2	4.10	3619.4177	3618.3858	5.8	27628.754^{D}	-44	3.283	6.741		I
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				3.10	3594.3481	3593.3227	-2.2		17	3.266	6.715	-1.41^{b}	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			1-2	2.84	3584.7047	3583.6818	-1.0	27896.301 ^C	8	3.283	6.741		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1031	$z^5D^{\circ}-f^3D$	3-3	2.58	3622.2292	3621.1966	1.3	27607.309^{D}	-10	3.241	6.664		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$								27969.959^{D}	-4				Ne
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1022	~5D0 ~6D6~5D	1 1	2 00	3/08 060/	3/07 0505	.00	28570 018 ^C	7	3 211			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1032	2 D -8 D08 D											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1000	5 DO 4 DC 5 D											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1033	$z^{\circ}D^{\circ} - F \circ s^{\circ}F$											ш
$ \begin{array}{c} 3-3 & 0^* & 3187.708 \\ 2-1 & d0? & 3183.257 \\ 3182.336 & 3.0 & 31414.37 & -30 \\ 4-3 & 0 & 3163.484 & 3162.568 & -4.0 & 31610.72 & -40 & 3.211 & 7.130 & \dots \\ 4-3 & 0 & 3234.638 & 3233.705 & 7.3 & 30915.36 & -70 & 3.241 & 7.074 & \dots \\ 4-3 & d0? & 3299.689 & 3208.762 & -4.1 & 31155.67 & -40 & 3.211 & 7.074 & \dots \\ 4-3 & d0? & 3299.689 & 3208.762 & -4.1 & 31155.67 & -40 & 3.211 & 7.074 & \dots \\ 4-5 & 1 & 3231.780 & 3233.847 & 4.2 & 30942.70 & -40 & 3.211 & 7.047 & \dots \\ 4-5 & 1 & 3231.780 & 3230.847 & 4.2 & 30942.70 & -40 & 3.211 & 7.047 & \dots \\ 4-5 & 1 & 3231.780 & 3230.847 & 4.2 & 30942.70 & -40 & 3.211 & 7.047 & \dots \\ 3-4 & 2.87 & 3208.5085 & 3207.5817 & 0.8 & 31167.130^C & -8 & 3.241 & 7.015 & \dots \\ 1036 & z^5D^o-s^6D5d^7D & 3-3 & 0 & 3233.094 & 3232.161 & 7.3 & 30930.12 & -70 & 3.241 & 7.076 & \dots \\ 4-3 & 0 & 3208.170 & 3207.243 & -4.1 & 31170.42 & -40 & 3.211 & 7.076 & \dots \\ 4-3 & 0 & 3208.170 & 3207.243 & -4.1 & 31170.42 & -40 & 3.211 & 7.076 & \dots \\ 2-1 & d0? & 3227.824 & 3226.893 & 2.1 & 30890.62 & -20 & 3.266 & 7.107 & \dots \\ 3-4 & 3^* & 3224.186 & 3223.255 & 9.4 & 31015.58 & -90 & 3.241 & 7.086 & \dots \\ 4-5 & 0 & 3202.371 & 3201.446 & -2.1 & 31226.86 & -20 & 3.211 & 7.086 & \dots \\ 4-5 & 0 & 3202.371 & 3201.446 & -2.1 & 31226.86 & -20 & 3.211 & 7.086 & \dots \\ 4-5 & 0 & 3202.371 & 3201.446 & -2.1 & 31226.86 & -20 & 3.211 & 7.086 & \dots \\ 4-5 & 1 & 3240.242 & 3239.307 & 0.0 & 31255.86 & -0 & 3.211 & 7.061 & \dots \\ 4-5 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & -0 & 3.211 & 7.082 & \dots \\ 4-5 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & -0 & 3.211 & 7.082 & \dots \\ 4-5 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & -0 & 3.211 & 7.082 & \dots \\ 4-5 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & -0 & 3.211 & 7.082 & \dots \\ 4-6 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & -0 & 3.211 & 7.082 & \dots \\ 4-6 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & -0 & 3.211 & 7.082 & \dots \\ 4-6 & 0 & 3202.538 & 3201.613 & 2.1 & 31255.23 & -20 & 3.211 & 7.082 & \dots \\ 4-6 & 0 & 3202.538 & 3201.613 & 2.1 & 31255.23 & -20 & 3.211 & 7.043 & \dots \\ 4-7 & 0 & 3235.383 & 3224.586 & 3.1 & 309$													11
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{c} 4-3 & 0 & 3163.484 & 3162.568 & -4.0 & 31610.72 & 0 & 0 & 3.211 & 7.130 & \dots \\ 1034 & z^5D^\circ-s^6D5d^5G & 3-3 & d0 & 3234.638 & 3233.705 & 7.3 & 30915.36 & 0 & 70 & 3.241 & 7.074 & \dots \\ 1035 & z^5D^\circ-s^6D5d^7F & 3-2 & d0^* & 3237.352 & 3236.418 & 0.0 & 30889.44 & 0 & 0 & 3.241 & 7.071 & \dots \\ 4-5 & 1 & 3231.780 & 3230.847 & 4.2 & 30942.70 & 0 & 40 & 3.211 & 7.047 & \dots \\ 3-4 & 2.87 & 3208.5085 & 3207.5817 & 0.8 & 31167.130^C & -8 & 3.241 & 7.105 & \dots \\ 1036 & z^5D^\circ-s^6D5d^7D & 3-3 & 0 & 3233.094 & 3232.161 & 7.3 & 30930.12 & 0 & 70 & 3.241 & 7.076 & \dots \\ 4-3 & 0 & 3208.170 & 3207.243 & -4.1 & 31170.42 & 0 & 40 & 3.211 & 7.076 & \dots \\ 4-3 & 0 & 3208.170 & 3207.243 & -4.1 & 31170.42 & 0 & 40 & 3.211 & 7.076 & \dots \\ 1037 & z^5D^\circ-s^6D5d^7G & 1-1 & 0 & 3242.443 & 3241.508 & 2.1 & 30840.94 & 0 & 2.0 & 3.283 & 7.107 & \dots \\ 2-1 & d0? & 3227.824 & 3226.893 & 2.1 & 30980.62 & 0 & 2.0 & 3.266 & 7.107 & \dots \\ 3-4 & 3^* & 3224.186 & 3223.255 & 9.4 & 31015.586 & 0 & 3.211 & 7.086 & \dots \\ 4-5 & 0 & 3202.371 & 3201.446 & -2.1 & 31226.86 & 0 & 3.211 & 7.086 & \dots \\ 4-5 & 0 & 3202.371 & 3201.446 & -2.1 & 31226.86 & 0 & 3.211 & 7.086 & \dots \\ 4-5 & 0 & 3224.3484 & 3244.547 & -1.1 & 30812.05 & 0 & 3.211 & 7.086 & \dots \\ 4-5 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & 0 & 3.211 & 7.061 & \dots \\ 4-5 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & 0 & 3.211 & 7.033 & \dots \\ 4-5 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & 0 & 3.211 & 7.037 & \dots \\ 4-5 & 1 & 3240.242 & 3239.307 & 0.0 & 30861.89 & 0 & 3.211 & 7.082 & \dots \\ 4-4 & 0 & 3202.538 & 3201.613 & 2.1 & 31225.23 & 0 & 20 & 3.211 & 7.082 & \dots \\ 4-4 & 40? & 3235.383 & 3234.450 & 3.1 & 31078.61 & 0 & 3.241 & 7.094 & \dots \\ 4-4 & 40? & 3235.383 & 3234.450 & 3.1 & 31078.61 & 0 & 3.241 & 7.094 & \dots \\ 4-4 & 40? & 3235.383 & 3234.450 & 3.1 & 31078.61 & 0 & 3.241 & 7.094 & \dots \\ 4-4 & 40? & 3235.383 & 3234.450 & 3.1 & 31078.61 & 0 & 3.241 & 7.094 & \dots \\ 4-4 & 40? & 3235.383 & 3234.450 & 3.1 & 31078.61 & 0 & 3.241 & 7.094 & \dots \\ 4-4 & 40? & 3235.383 & 3234.450 & 3.1 & 31078.61 & 0 & 3.241 & 7.094 & \dots \\ 4-4 & 40? & 3235.383 &$								31414.37 ^D					
$\begin{array}{c} 1034 z ^5D^{\circ} - s ^6D5d ^5G \\ 3 - 3 d0 \\ 4 - 3 d0? \\ 3209.689 3208.762 - 4.1 31155.67 {}^D 40 3.211 7.074 \dots \\ 4 - 3 d0? 3209.689 3208.762 - 4.1 31155.67 {}^D 40 3.211 7.074 \dots \\ 4 - 5 1 3237.352 3236.418 0.0 30889.44 {}^D 0 3.241 7.071 \dots \\ 4 - 5 1 3231.780 3230.847 4.2 30942.70 {}^D - 40 3.211 7.047 \dots \\ 3 - 4 2.87 3208.5085 3207.5817 0.8 31167.130^{\circ} - 8 3.241 7.105 \dots \\ 4 - 3 0 3208.170 3207.243 - 4.1 31170.42 {}^D 40 3.211 7.076 \dots \\ 4 - 3 0 3208.170 3207.243 - 4.1 31170.42 {}^D 40 3.211 7.076 \dots \\ 4 - 3 0 3224.2443 3241.508 2.1 30840.94 {}^D - 20 3.283 7.107 \dots \\ 3 - 4 3^* 3224.186 3223.255 9.4 31015.58 {}^D - 90 3.241 7.086 \dots \\ 4 - 5 0 3202.371 3201.446 - 2.1 31226.86 {}^D 0 3.211 7.086 \dots \\ 4 - 5 0 3202.371 3201.446 - 2.1 31226.86 {}^D 0 3.211 7.086 \dots \\ 4 - 5 1 3240.242 3239.307 0.0 30861.89 {}^D 0 3.211 7.033 \dots \\ 4 - 5 1 3240.242 3239.307 0.0 30861.89 {}^D 0 3.211 7.033 \dots \\ 4 - 4 0 3202.538 3201.613 2.1 31025.25 {}^D 0 3.241 7.082 \dots \\ 4 - 4 0 3202.538 3201.613 2.1 31025.25 {}^D 0 3.241 7.082 \dots \\ 4 - 4 0 3202.538 3201.613 2.1 31025.25 {}^D 0 3.241 7.082 \dots \\ 4 - 4 0 3202.538 3201.613 2.1 31025.25 {}^D 0 3.241 7.084 \dots \\ 4 - 4 0 3202.538 3201.613 2.1 31025.25 {}^D 0 3.241 7.094 \dots \\ 4 - 4 0 3202.538 3201.613 2.1 31078.61 {}^D - 30 3.241 7.094 \dots \\ 4 - 4 0 3202.538 3201.613 3.1 31078.61 {}^D - 30 3.241 7.094 \dots \\ 4 - 4 0 3202.538 3201.613 3.1 31078.61 {}^D - 30 3.241 7.094 \dots \\ 4 - 4 0 3202.538 3201.613 3.1 31078.61 {}^D - 30 3.241 7.094 \dots \\ 4 - 4 0 3202.538 3201.613 3.1 31078.61 {}^D - 30 3.241 7.094 \dots \\ 4$								31610.72 ^D					
$\begin{array}{c} 1035 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1035 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1036 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1037 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1038 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^5D^{\circ} - s \ ^6D5d \ ^7F \\ 1039 z \ ^7F $	1024	~5 D0 ~6D545C		40					-70				
$ \begin{array}{c} 1035 z^5D^{\circ} - s ^6D5d ^7F \\ - A - 5 1 \\ - 3 - 2 d0^* \\ - 4 - 5 1 \\ - 3 - 4 2.87 \\ - 3 - 4 2.87 \\ - 3 - 208.5085 \\ - 3 207.5817 \\ - 3 - 4 2.87 \\ - 3 208.5085 \\ - 3 207.5817 \\ - 3 - 4 2.87 \\ - 3 208.5085 \\ - 3 207.5817 \\ - 0.8 31167.130^C \\ - 8 3.241 \\ - 7.105 \\ - 8 3.241 \\ - 7.105 \\ 105 \\ 1036 \\ - 2 5 - 2 ^6D5d ^7D \\ - 4 3 0 \\ - 3 2 3 0 3233.094 \\ - 4 3 3 3 2321.611 \\ - 7.3 30930.12 ^D - 70 \\ - 70 3.241 \\ - 7.076 \\ - 10 3.241 \\ - 7.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.076 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 \\ - 10 3.241 \\ - 1.070 $	1034	$z \cdot D = s \cdot D = a \cdot G$						31155.67 ^D					
$ \begin{array}{c} 4-5 & 1 \\ 3-4 & 2.87 \\ 3-4 & 2.87 \\ 3-4 & 2.87 \\ 3-4 & 2.87 \\ 3208.5085 \\ 3207.5817 \\ 3208.5085 \\ 3207.5817 \\ 0.8 \\ 31167.130^C \\ 0.8 \\ 31167.130^C \\ 0.8 \\ 31167.130^C \\ 0.8 \\ 3.241 \\ 7.105 \\ 0.8 \\ 3.241 \\ 7.076 \\ 0.0 \\ 0.0 \\ 3.241 \\ 7.076 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.0 \\ 0.$	1025	5D0 .6D5J7E											
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2-2 d0? 3179.527 3178.607 0.0 31451.22 0 3.266 7.165													
2 2 100 2150 402 2150 567 20 21650 76 D 20 2241 7165													
5 Z GO. 5157,70Z 5150,507 -5.0 51050,70 50 5.271 7.105													
			J - L	GO:	3137,702	5156.507	5.0	51050.70	50	J,271	7.103	•••	

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No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
1040	z $^5D^{\circ}$ $-s$ 6D5d 5P	4-3 3-2	0 d0?	3198.957 3198.673	3198.033 3197.749	-3.1 0.0	31260.19 ^D 30 31262.96 ^D 0	3.211 3.241	7.087 7.117		
1041	z ⁵ D°-s ⁴ D4d ⁵ F	4-5 2-3 0-1	5 2.92 9	3148.513 3145.4075 3143.366	3147.601 3144.4967 3142.456	-7.9	31761.03 ^D 60 31792.383 ^B 1 31813.03 ^D 80	3.211 3.266 3.292	7.149 7.207 7.236		II
		1-1 3-4 3-3 2-1 1-2 2-2	2.40 3.13 5 5 2.81 <i>I</i>	3136.3659 3127.0827 3125.792 3122.682 3121.7803 3108.234	3135.4573 3126.1765 3124.886 3121.777 3120.8754 3107.333	0.7 1.0 -2.0 -0.1 6.8	31884.035 ^C -5 31978.687 ^A -7 31991.89 ^D -10 32023.75 ^D 20 32033.004 ^B 1 32172.61 ^D -70 32218.887 ^D 4	3.283 3.241 3.241 3.266 3.283 3.266 3.211	7.236 7.206 7.207 7.236 7.254 7.254 7.206		ΤΤ
		4-4 4-3 3-2	2.59 2.34 0*	3103.7695 3102.5002 3089.068	3102.8692 3101.6001 3088.172	1.9 -1.0	32232.069 ^D -20 32372.22 ^D 10	3.211 3.241	7.207 7.254	• • • • • • • • • • • • • • • • • • • •	II
1042	z ⁵ D° – i ⁵ D (578*)	2-3 1-2 3-4 2-2 3-3 4-4 3-2 4-3	4 1 2.87 2.78 3.10 3.29 2.92 2.83	3177.201 3175.136 3168.8376 3161.1113 3157.1876 3144.9012 3141.2996 3133.4258	3176.283 3174.218 3167.9209 3160.1965 3156.2738 3143.9905 3140.3898 3132.5180	-0.7 0.1 0.0 -0.2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3.266 3.283 3.241 3.266 3.241 3.211 3.241 3.211	7.168 7.188 7.153 7.188 7.168 7.153 7.188 7.168	-0.18 ^a -0.09 ^a	
1043	z 5D ° $-s$ 6D 7 s 7D	1-1 4-4 4-3	d0? d5 1	3097.874 3096.165 3069.343	3096.975 3095.267 3068.451	0.0 -8.6 4.7	32280.20 ^D 0 32298.02 ^D 90 32580.26 ^D -50	3.283 3.211 3.211	7.285 7.215 7.250		I
1044	z ⁵ D° – g ⁵ G	1-2 2-3 4-5 3-4 3-3 4-4	0 2 0 2 5 d0?	3091.626 3089.243 3089.141 3088.331 3070.332 3065.586	3090.729 3088.346 3088.244 3087.434 3069.440 3064.695	1.9 -3.8 1.0 2.9 8.5 -0.9	32345.44 ^D -20 32370.39 ^D 40 32371.46 ^D -10 32379.95 ^D -30 32569.77 ^D -90 32620.19 ^D 10	3.283 3.266 3.211 3.241 3.241 3.211	7.293 7.279 7.224 7.255 7.279 7.255		
1045	z ⁵ D° – s ⁴ D4d ⁵ P (578a*)	1-2 2-2 3-2 2-3 3-3 4-3	2.63 2.69 0 2.66 4 d0?	3151.2191 3137.4096 3117.901 3111.1781 3091.987 3069.192	3150.3068 3136.5008 3116.997 3110.2759 3091.090 3068.301	-0.3 7.8	31733.750 ^C 9 31873.428 ^C 3 32072.86 ^D -80 32142.165 ^C 9 32341.66 ^D -10 32581.86 ^D 0	3.283 3.266 3.241 3.266 3.241 3.211	7.217 7.217 7.217 7.251 7.251 7.251		
1046	z 5D ° $-s$ 6D 7 s 5D	3-4 4-4 1-2 2-2	0 0 0 d0	3107.413 3084.385 3071.586 3058.473	3106.512 3083.490 3070.694 3057.584	8.7 1.9 -8.5 0.9	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3.241 3.211 3.283 3.266	7.231 7.231 7.319 7.319		II II
1047	z 5D ° $-^4F5d$ 5F	3-4 4-5 4-4	d0? 3 2	3081.485 3058.927 3058.847	3080.590 3058.038 3057.958	0.0 0.9 1.9	32451.89 ^D 0 32691.20 ^D -10 32692.06 ^D -20	3.241 3.211 3.211	7.264 7.264 7.264		
1048	z 5D $^{\circ}$ $-s$ 4D4d 3D	2-3 1-2 3-3 2-2 4-3 3-2	d0? 0 2 0 2 0	3091.899 3076.890 3072.939 3063.716 3050.425 3045.102	3091.002 3075.996 3072.046 3062.826 3049.538 3044.217	3.8 8.5 0.0 1.9 0.9 1.9	32342.58 ^D -40 32500.35 ^D -90 32542.14 ^D 0 32640.10 ^D -20 32782.32 ^D -10 32839.62 ^D -20	3.266 3.283 3.241 3.266 3.211 3.241	7.275 7.312 7.275 7.312 7.275 7.312		П
1049 1050	$z^{5}D^{\circ} - 59077^{e}$ $z^{5}D^{\circ} - s^{6}D_{4.5}6d$ [3.5] $z^{5}D^{\circ} - s^{6}D_{4.5}6d$ [5.5] $z^{5}D^{\circ} - s^{6}D_{4.5}6d$ [2.5] $z^{5}D^{\circ} - s^{6}D_{4.5}6d$ [3.5]	1-1 2-3 4-5 4-3 4-4	0 d0? <i>I</i> d1 3	3067.704 3038.426 3004.562 3001.452 2999.804	3066.813 3037.542 3003.687 3000.577 2998.930	2.9 -7.4 0.9 0.0 -0.9	32597.67 ^D -31 32911.78 ^D 80 33282.72 ^D -10 33317.21 ^D 0 33335.51 ^D 10	3.283 3.266 3.211 3.211 3.211	7.324 7.346 7.337 7.342 7.344		I
1051	$z^{5}D^{\circ} - s^{4}D4d^{3}S$	1-1 2-1	0 d0?	3060.419 3047.392	3059.530 3046.505	0.9 0.9	32675.26 ^D -10 32814.95 ^D -10	3.283 3.266	7.334 7.334		-

No.	Multiplet (MT) ¹	J-J	I ²	$\begin{array}{c} \lambda_{vac}^{3} \\ \text{(Å)} \end{array}$	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
1052	$z^{5}D^{0}-59390^{e}$	3-3	1	3007.473	3006.596	-0.6	33250.51 ^L	7	3.241	7.363	• • •	
1053	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [1.5]	1 - 1	d0	3020.101	3019.221	0.0	33111.48 ^L	0	3.283	7.388		
	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [2.5]	2-2	0	3014.367	3013.489	-1.8	33174.46 ^L		3.266	7.379		
	$z^{5}D^{0}-s^{6}D_{3.5}6d$ [3.5]	2 - 3	2*	3013.811	3012.933	1.8	33180.58 ^L		3.266	7.379		I
	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [2.5]	2 - 3	1	3012.149	3011.271	0.0	33198.89 ^L	0	3.266	7.382		
	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [1.5]	2-2	0	3009.360	3008.483	0.9	33229.66 ^L		3.266	7.385		
	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [1.5]	2 - 1	2	3007.416	3006.539	0.9	33251.14 ^L	-10	3.266	7.388		
	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [3.5]	3-4	3	2999.804	2998.930	-4.5	33335.51 ^L		3.241	7.374		I
	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [2.5]	3-2	1	2996.349	2995.475	0.0	33373.95 ^L		3.241	7.379		
	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [4.5]	3-4	3	2994.665	2993.792	-4.5	33392.72 ^L		3.241	7.381		
	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [2.5]	3-3	d0?	2994.154	2993.281	0.0	33398.42 ^L		3.241	7.382		
	$z^{5}D^{\circ}-s^{6}D_{3.5}6d$ [4.5]	4-5	1	2979.424	2978.555	0.0	33563.53 ^L		3.211	7.372		
	$z^{5}D^{\circ} - s^{6}D_{3.5}6d$ [4.5]	4-4	d0	2973.284	2972.416	0.0	33632.85 ^L		3.211	7.381		
1054	$z^{5}D^{\circ}-^{5}D4p^{2}$	3-4	0	2982.885	2982.015	-5.3	33524.59 ^L	60	3.241	7.397		
		4-4	d 0	2961.668	2960.803	-3.5	33764.76 ^L	40	3.211	7.397		
		1-2	d1	2936.538	2935.679	1.7	34053.71 ^L	-20	3.283	7.505		G
1055	$z^{5}D^{\circ}-s^{6}D_{2.5}6d$ [1.5]	0 - 1	d0	3010.558	3009.681	0.9	33216.43 ^L	-10	3.292	7.410		
	$z^{5}D^{\circ}-s^{6}D_{2.5}^{5}6d$ [1.5]	1-1	1	3004.126	3003.251	0.0	33287.55 ^L		3.283	7.410		
	$z^{5}D^{\circ}-s^{6}D_{2.5}6d$ [0.5]	2 - 1	d0?	2994.947	2994.074	-8.1	33389.57 ^L		3.266	7.405		
	$z^{5}D^{\circ}-s^{6}D_{2.5}^{2.5}6d$ [1.5]	2-2	0?	2990.359	2989.487	-0.9	33440.80 ^L		3.266	7.412		
	$z^{5}D^{\circ}-s^{6}D_{2.5}^{2.5}6d$ [2.5]	2 - 3	1	2986.772	2985.901	0.0	33480.96 ^L		3.266	7.417		
	$z^{5}D^{\circ}-s^{6}D_{2.5}^{2.5}6d$ [2.5]	2-2	0	2984.727	2983.857	-2.7	33503.90 ^L		3.266	7.419		
	$z^{5}D^{\circ}-s^{6}D_{2.5}^{2.5}6d$ [4.5]	3-4	d0	2977.454	2976.585	-0.9	33585.74 ^L		3.241	7.405		
	$z^{5}D^{\circ}-s^{6}D_{2.5}^{2.5}6d$ [1.5]	3-2	3	2972.628	2971.760	2.7	33640.27 ^L		3.241	7.412		
	$z^{5}D^{\circ}-s^{6}D_{2.5}6d$ [2.5]	3-2	3	2967.064	2966.198	2.6	33703.35 ^L	-30	3.241	7.419	•••	I
	$z^{5}D^{\circ} - s^{6}D_{2.5}^{2.5}6d$ [2.5]	3-2	2.46	2967.0637	2966.1974	2.4	33703.355^{L}	-27	3.241	7.419		I
	$z^{5}D^{\circ}-s^{6}D_{2.5}^{2.5}6d$ [3.5]	3-3	1	2963.272	2962.407	3.5	33746.48 ^L	-40	3.241	7.425		
1056	$z^{5}D^{\circ} - s^{6}D_{1.5}6d$ [0.5]	1-1	1	2986.039	2985.168	-2.7	33489.18 ^L		3.283	7.435		
	$z^{5}D^{0}-s^{6}D_{1.5}6d$ [1.5]	1 - 1	0	2983.250	2982.380	-6.2	33520.49 ^L	70	3.283	7.439		
	$z^{5}D^{\circ}-s^{6}D_{1.5}6d$ [2.5]	1-2	2.00	2975.6462	2974.7778	-2.2	33606.146^{L}	25	3.283	7.449		I
	$z^{5}D^{\circ}-s^{6}D_{1.5}6d$ [0.5]	2 - 1	d0?	2973.642	2972.774	1.8	33628.80 ^L		3.266	7.435		
	$z^{5}D^{\circ}-s^{6}D_{1.5}6d$ [1.5]	$^{2-2}$	5.14	2967.7650	2966.8986	-3.9	33695.390^{D}		3.266	7.443		I
	$z^{5}D^{\circ}-s^{6}D_{1.5}6d$ [2.5]	2 - 3	0?	2964.170	2963.304	-2.6	33736.26 ^D	30	3.266	7.448		
	$z^{5}D^{\circ}-s^{6}D_{1.5}6d$ [2.5]	$^{2-2}$	0?	2963.326	2962.461	-4.4	33745.86 ^D	50	3.266	7.449		II
	$z^{5}D^{\circ}-s^{6}D_{1.5}6d$ [3.5]	2 - 3	1	2962.314	2961.449	-5.3	33757.39 ^D	60	3.266	7.451		
	$z^{5}D^{\circ}-s^{6}D_{1.5}6d$ [2.5]	3-2	2.75	2945.9125	2945.0516	-1.4	33945.339 ^B		3.241	7.449		
1057	$z^{5}D^{\circ}-s^{6}D_{0.5}6d$ [1.5]	0-1	d0	2973.724	2972.856	-8.0	33627.87 ^D	90	3.292	7.461		II
	$z^{5}D^{\circ}-s^{6}D_{0.5}6d$ [1.5]	1-2	d0?	2971.838	2970.971	0.9	33649.21 ^D	-10	3.283	7.455		
	$z^{5}D^{\circ}-s^{6}D_{0.5}6d$ [1.5]	1 - 1	d 0?	2967.465	2966.598	6.2	33698.80 ^L	-70	3.283	7.461		
	$z^{5}D^{\circ}-s^{6}D_{0.5}6d$ [1.5]	$^{2-2}$	d0?	2959.543	2958.679	-7.9	33789.00 ^D		3.266	7.455		
	$z^{5}D^{\circ}-s^{6}D_{0.5}6d$ [1.5]	2-1	2.04	2955.2076	2954.3443	-1.2	33838.570^{D}		3.266	7.461		I
1058	$z^{5}D^{\circ}-62192^{e}$	4-5	d0?	2755.366	2754.552	-5.3	36292.82 ^D	70	3.211	7.711		
1059	b 3H-z 5G°	5-4	1.68	11228.029	11224,956	3	8906.282 ^A	-2	3.267	4.371		
1007		4-3	1.23	11130.882	11127.834	1	8984.014 ^A		3.301	4.415		
1060	$b^{3}H-z^{3}G^{0}$	6-5	2.20	10783.647	10780.694	-1	9273.300^{A}	1	3.237	4.386		
	(579)	5-4	1.80	10619.632	10616.723	2	9416.522 ^A		3.267	4.434		
	,	4-3	1.91	10580.039	10577.141	1	9451.761 ^A		3.301	4.473		
1061	$b^3H-z^5H^{\circ}$	4-4	0.78	6067.4803	6065.8009	0.4	16481.306 ^B	-1	3.301	5.345		
	(581)	5-5	0.78	6009.3788	6007.7150	0.4	16640.655 ^A		3.267	5.330		
	(- /	4-3	1.00	5988.6146	5986.9563	0.0	16698.353 ^A		3.301	5.372		
		5-4	0.30	5967.3469	5965.6943	3.2	16757.866 ^B		3.267	5.345		
		6-6	1.18	5953.1024	5951.4536	-4.3	16797.964 ^A		3.237	5.319		
		6-5	0.30	5922.1435	5920.5030	3.2	16885.778 ^B		3.237	5.330		
1062	$b^3H-z^5I^{\circ}$	4-4	0.00	5947.0375	5945.3903	0.0	16815.095 ^B		3.301	5.386		
1002	0 H-Z I	4-4	0.00	5940.8857	5939.2402	1.1	16813.093 ⁻ 16832.507 ^B		3.301	5.388	• • •	
											• • •	
		5-4	1.00	5850.8064	5849.1850	0.7	17091.661 ^A	-2	3.267	5.386		

No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		5-5	0.00	5844.8466	5843.2268	-3.1	17109.089 ^C	9	3.267	5.388	•••	
		6-5	0.70	5762.2912	5760.6935	1.3	17354.208^{D}		3.237	5.388		I
1063	$b{}^3H-y{}^3G^{ m o}$	5-4	1.85	5241.8141	5240.3553	-1.1	19077.365^{C}		3.267	5.632		
	(584)	6-5	2.41	5211.3353	5209.8847	-0.8	19188.940 ^B	3	3.237	5.616	-3.26^{b}	
1064	$b^{3}H-z^{3}I^{\circ}$	4-5	2.29	5126.0477	5124.6198	0.5	19508.207 ^B	-2	3.301	5.720	-2.96^{b}	
	(585)	5-6	2.50	5082.3524	5080.9361	0.3	19675.928 ^A		3.267	5.706	-3.09^{b}	
		5-5	2.51	5054.3903	5052.9814	-0.3	19784.780 ^B		3.267	5.720	• • •	
		6–7	2.79	5032.1816	5030.7786	0.5	19872.097 ^A	-2	3.237	5.700	-2.83ª	
1065	b ³ H-u ⁵ D° (586)	4-4	2.18	4976.8004	4975.4122	0.0	20093.231 ^B		3.301	5.792	•••	
1066	$b^{3}H-x^{3}F^{0}$ (587)	4-4	2.36	4935.4612	4934.0839	0.2	20261.531 ^A	-1	3.301	5.813	• • •	
1067	$b^3H-z^3H^{\circ}$	4-5	1.48	4906.5857	4905.2161	-2.4	20380.771 ^C	10	3.301	5.828		
	(588)	4-4	3.45	4883.0812	4881.7178	0.0	20478.873 ^A		3.301	5.840	-1.78ª	
		5-5	3.49	4840.8967	4839.5445	0.0	20657.330 ^A		3.267	5.828	-1.82^a	
		6–6	3.54	4790.0956	4788.7569	0.2	20876.410 ^A		3.237	5.825	-1.76 ^a	
1068	$b^3H-w^5G^{\circ}$	4-5	1.78	4809.4017	4808.0579	2.3	20792.607 ^C	-10	3.301	5.879		
		5-5	1.78	4746.2699	4744.9428	2.3	21069.177^{C}		3.267	5.879	• • •	
		6-6	1.90	4704.2285	4702.9125	-0.9	21257.471 ^C		3.237	5.872	• • •	_
		6-5	2.00	4691.6823	4690.3697	0.4	21314.316 ^D		3.237	5.879	• • •	I
1069	$b^{3}H-z^{1}G^{\circ}$ (590)	4-4 5-4	2.06 2.71	4801.8959 4738.9605	4800.5540 4737.6354	-0.5 0.4	20825.108 ^B 21101.674 ^A	2 -2	3.301 3.267	5.883 5.883	 -2.25 ^a	
1070	$b^3H-v^5F^0$	6-5	2.34	4651.1184	4649.8165	0.0	21500.205 ^B		3.237	5.902	-2.69 ^b	
1071	$b^3H-x^3G^{\circ}$	4-3	2.38	4715.5104	4714.1915	-0.4	21206.612^{B}		3.301	5.930	• • • ;	
	(591)	4-5	1.30	4715.4368	4714.1179	-0.7	21206.943 ^C	3	3.301	5.931	-2.67^{b}	
		5-4 6-5	2.09 2.57	4659.5988 4602.2230	4658.2947 4600.9340	0.4 2.1	21461.075 ^B 21728.630 ^B	-2 -10	3.267 3.237	5.928 5.931	-3.04 ^b -2.57 ^a	
1072	$b^3H-y^5H^\circ$	5-6	2.12	4650.2786	4648.9769	3.0	21504.088 ^C		3.267	5.933		
	(593*)	4-5	2.37	4628.8427	4627.5467	-0.4	21603.672^{B}		3.301	5.980		
	, ,	4-4	1.85	4601.0302	4599.7415	1.7	21734.263^{C}	-8	3.301	5.996		
		6-6	2.22	4597.8627	4596.5748	-0.4	21749.236^{B}_{-}		3.237	5.933		
		4-3	2.43	4577.0625	4575.7802	0.4	21848.074^{B}		3.301	6.010		
		5-5	3.01	4570.3361	4569.0555	2.1	21880.229^{D}		3.267	5.980	٠٠٠,	Ne
		5-4	2.08	4543.2149	4541.9416	-1.0	22010.845 ^B		3.267	5.996	-3.13^{b}	
		6-5	2.23	4519.6992	4518.4321	0.8	22125.366 ^B	-4	3.237	5.980	-3.20^{b}	
1073	$b^{3}H-z^{1}H^{0}$	4-5	3.27	4596.6461	4595.3586	0.2	21754.992^{D}		3.301	5.998	-1.76^a	II
	(594)	5-5	2.40	4538.9457	4537.6734	2.7	$22031.548^{D} 22276.699^{C}$	-13 5	3.267	5.998	-2.88 ^b -2.84 ^b	Ne
1074	$b^3H-y^1G^{\circ}$	6-5	2.04 2.85	4488.9954 4530.0269	4487.7364 4528.7570	-1.0 0.0	22276.699 ^s 22074.924 ^A	0	3.237 3.301	5.998 6.038	-2.84° -1.99°	
1074 1075	$\begin{array}{c} b {}^{3}H - y {}^{1}G^{3} \\ (595) \\ b {}^{3}H - w {}^{3}F^{0} \end{array}$	4-4 4-4	2.83	4448.1441	4528.7570	-0.2	22074.924	1	3.301	6.089	-1.99	
1075	(596) $b^{3}H-n^{7}D^{\circ}$	5-4	2.26	4308.9162	4307.7046	0.2	23207.692^{C}	-1	3.267	6.144		
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1077	$b^{3}H-y^{3}H^{0}$	5-6 4-4	2.30 2.90	4332.1696 4329.1203	4330.9519 4327.9034	-0.2 -0.2	23083.122 ^B 23099.381 ^A		3.267 3.301	6.129 6.165	 -1.74 ^a	
	(597)	5-5	4.80	4329.1203	4299.2349	-4.8	23059.361 23253.411 ^D		3.267	6.150	-1./4	I
		6-6	3.62	4286.6478	4285.4420	0.4	23233.411 23328.252^{A}		3.237	6.129	-1.20 ^a	•
1078	$b^{3}H - v^{3}G^{0}$	4-4	3.16	4347.7745	4346.5526	0.2	23000.273 ^A	-1	3.301	6.153	-1.72ª	
10/0	(598)	5-5	2.86	4327.1564	4325.9400	-0.9	23109.865^{A}		3.267	6.132	-1.72 -1.83^a	
	()	6-5	2.64	4281.7441	4280.5396	4.2	23354.969 ^D	-23	3.237	6.132	-2.07^{b}	II
1079	$b^3H-z^1F^{\circ}$	4-3	2.20	4173.7497	4172.5735	-0.7	23959.271 ^C		3.301	6.272	•••	
1080	$b^{3}H-x^{1}G^{0}$ (599)	4-4	3.02	4169.0336	4167.8587	-0.2	23986.374 ^A	1	3.301	6.275	-1.86 ^a	
1081	$b^3H-x^3H^\circ$	5-6	2.47	4053.1578	4052.0133	-0.2	24672.121 ^C	1	3.267	6.326		
		5-5	2.60	4045.6873			24717.679^{B}		3.267	6.331		

No.	Multiplet (MT) ¹	J-J	I ²	$\lambda_{vac}^{}$ (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶	E(l)	E(u)	log(gf) 7	B1. ⁸
	(1411) -	6-6	2.49	4013.2832	4012.1490	-0.3	24917.255 ^B		(eV)	(eV) 6.326	•••	
		6-5	3.54	4005.9597	4004.8275	0.2	24962.807 ^A	-1	3.237	6.331	• • •	
1082	$b^{3}H - v^{3}F^{\circ}$ (603)	4-3 5-4	2.96 3.68	4042.4135 4007.4434	4041.2717 4006.3108	0.7 -0.3	24737.697 ^B 24953.565 ^A		3.301 3.267	6.368 6.361	 -0.99 ^b	
1083	$b{}^3H$ $-u{}^3G^{\circ}$	4-3	4.17	3968.5431	3967.4206	-0.2	25198.164 ^A		3.301	6.425	-0.60^a	
	(604)	6-5	4.37	3957.5750	3956.4554	0.2	25267.999 ^A		3.237	6.369	-0.34ª	
		5-4	4.31	3949.8925	3948.7749	-0.2	25317.145 ^A		3.267	6.406	-0.36ª	
1084	$b^{3}H - Hsp3^{1}H^{\circ}$ (606*)	5-5 6-5	2.66 4.23	3955.8319 3917.8402	3954.7127 3916.7310	0.5 0.2	25279.133 ^D 25524.267 ^A	_	3.267 3.237	6.401 6.401	-0.60ª	II
1085	$b^3H-w^3H^{\circ}$	4-4	4.36	3825.3889	3824.3037	-0.1	26141.133 ^A		3.301	6.542		
	(607)	5-5	4.51	3807.7763	3806.6957	0.0	26262.047 ^A		3.267	6.523	0.02^{a}	
		6-6	4.63	3798.5931	3797.5149	0.1	26325.536 ^A		3.237	6.500	0.11^a	
	. 2 . 2	6-5	2.83	3772.5630	3771.4916	0.3	26507.178^{D}		3.237	6.523	-1.85 ^b	I
1086	$b^{3}H-y^{3}I^{\circ}$	5-6	4.81	3822.2622	3821.1778	0.1	26162.517 ^A 26271.385 ^D		3.267	6.511	0.20^a	
	(608)	4-5 6-6	4.87 3.20	3806.4228 3786.7815	3805.3426 3785.7063	0.1 0.0	262/1.385 ² 26407.650 ^B		3.301 3.237	6.558 6.511	0.31 ^a -1.37 ^a	I
		5-5	3.03	3766.7700	3765.7001	1.6	26547.944 ^D		3.267	6.558	-1.37 -1.26a	II
		6-7	5.06	3766.6089	3765.5389	0.1	26549.080 ^A		3.237	6.528	0.48^{a}	
1087	$b^{3}H-{}^{4}F5p^{3}G^{0}$	6-5	3.79	3745.1670	3744.1026	1.5	26701.079 ^D	-11	3.237	6.547		I
1007	0 II 1 5p G	5-4	3.36	3614.4740	3613.4434	-0.5	27666.543 ^D		3.267	6.697		Î
		4-3	3.56	3606.2295	3605.2010	0.0	27729.794^{D}		3.301	6.739	•••	II
1088	$b{}^3H\!-\!Gsp3{}^3F^{ m o}$	5-4	2.64	3759.0345	3757.9665	1.4	26602.576 ^C		3.267	6.565	•••	
1089	$b^{3}H-{}^{4}F5p^{5}G^{0}$	5-4	3.43	3636.2214	3635.1852	-0.5	27501.076 ^B		3.267	6.677	• • •	
		4-3	3.11	3635.4324	3634.3965	0.0	27507.044 ^B	0	3.301	6.712	• • •	
1090	$b^{3}H-z^{1}I^{0}$	5-6	4.54	3739.3680	3738.3051	0.0	26742.487 ^A		3.267	6.583	-0.03^a	
	(609)	6–6	2.71	3705.4039	3704.3499	1.1	26987.611 ^C	-8	3.237	6.583	• • •	
1091	$b^3H-y^1H^{\circ}$	6-5	3.25	3675.4527	3674.4064	-0.8	27207.533^{B}	6	3.237	6.610		
1092	$b^{3}H-{}^{4}F5p^{3}F^{0}$	5-4	3.20	3706.7523	3705.6979	-0.3	26977.794 ^B	2	3.267	6.612		
		4-3	3.21	3615.1430	3614.1123	0.0	27661.423 ^B		3.301	6.731		
1093	$b^3H-^4F5p^5D^{\circ}$	4-3	3.05	3682.2733	3681.2252	0.1	27157.137 ^B		3.301	6.668	•••	
1094	b^3H – $Dsp3^5F^o$	5-4	3.13	3632.2994	3631.2643	-0.8	27530.770 ^B		3.267	6.680		
		6–5	4.37	3583.2224	3582.1999	0.0	27907.841 ^A		3.237	6.697	-0.30 ^a	
1095	$b^3H-x^1F^0$	4-3	3.49	3685.1865	3684.1376	-0.1	27135.669 ^A	1	3.301	6.666	-0.88ª	
1096	$b{}^{3}H-{}^{4}F5p{}^{3}D^{\circ}$	4-3	2.96	3675.0869	3674.0407	-0.1	27210.241 ^B	1	3.301	6.675		
1097	b ³ H-Dsp3 ⁵ D° (613a*)	5-4	3.68	3577.7798	3576.7587	0.4	27950.295 ^A	-3	3.267	6.732	-0.78 ^b	
1098	$b^3H-t^3G^{\circ}$	6-5	4.70	3587.1361	3586.1126	-1.2	27877.392 ^A		3.237	6.693	0.17^{a}	
	(611)	5-4	4.37	3585.9809	3584.9577	-0.1	27886.373 ^A		3.267	6.724	0.07^{a}	
		4-3	4.14	3574.9090	3573.8886	-0.1	27972.740 ^A		3.301	6.769	-0.11ª	
1099	$b^{3}H-w^{1}G^{0}$ (613)	4-4	3.34	3548.2077	3547.1942	0.3	28183.243 ^B	-2	3.301	6.795	-0.92ª	
1100	$b^3H-s^3G^{\circ}$	5-5	3.31	3438.9343	3437.9489	0.1	29078.776 ^B		3.267	6.872		
		4-3	2.56	3428.9926	3428.0097	0.1	29163.084 ^C	-1	3.301	6.917	•••	
1101	$b^3H-v^3H^{\circ}$	4-4	3.54	3470.0053	3469.0119	-0.5	28818.400 ^A		3.301	6.874	-0.86^a	
	(614)	5-5	3.58	3427.6484	3426.6659	-0.2	29174.521 ^A		3.267	6.884	-0.68ª	_
		6–6	4.03	3403.2322	3402.2559	0.1	29383.831 ^D		3.237	6.880	-0.31ª	I
1102	$b^3H-u^3H^o$	4-5	2.73	3360.7743	3359.8088	0.3	29755.048 ^C		3.301	6.990	•••	
	(617)	4-4	3.76	3356.1920	3355.2277	-0.1	29795.673 ^A		3.301	6.995	-0.41^a	
		5-6 5-5	2.41 3.83	3335.2307 3329.8235	3334.2718 3328.8659	-1.7 -0.2	29982.933 ^D 30031.622 ^A		3.267 3.267	6.984 6.990	-0.39 ^a	
		1-1	3.63	3347.8433	<i>ᲔᲔ</i> ∠Გ.ᲒᲔᲔᲧ	-0.2	30031.022**	Z	3.207	ひ.タタひ	-0.39	
		5-4	2.68	3325.3267	3324.3703	0.9	30072.233 ^C	-8	3.267	6.995		

7					TA	BLE 2—Cont	inued						
94	No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
994Apus.	1103	$b^{3}H - u^{3}F^{\circ}$ (618)	4-4	2.98	3337.2162	3336.2567	-0.3	29965.095 ^B	3	3.301	7.016	-1.13 ^a	
ン シ	1104	$b^3H-x^3I^0$	4-5	4.15	3281.2056	3280.2604	0.3	30476.603 ^D		3.301	7.080	-0.13^a	II
-		(620)	5-6	4.21	3255.3005	3254.3619	-0.1	30719.130 ^A		3.267	7.076	-0.06^a	
			5-5	2.88	3251.6967	3250.7590	-0.1	30753.176 ^B	1	3.267	7.080	-1.30°	
			6-7 6-6	4.25 2.80	3233.9850 3229.5296	3233.0518 3228.5975	-0.1 -0.2	30921.603 ^A 30964.262 ^B	1 2	3.237 3.237	7.070 7.076	-0.01 ^a -1.45 ^a	
			6-5	0?	3225.982	3225.051	0.0	30998.31 ^D		3.237	7.080	-1.45	
	1105	$b^3H-t^3F^{\circ}$	4-3	d0	3224.409	3223.478	-5.2	31013.44 ^D	50	3.301	7.146		
	1105	0 11 - 1	5-4	1	3205.231	3204.305	-3.1	31199.00 ^D	30	3.267	7.135		
	1106	$b^3H-Hsp1^3G^{\circ}$	5-5	1	3157.809	3156.895	-1.0	31667.53 ^D	10	3.267	7.193		
	1100		4-4	0	3153.882	3152.969	4.0	31706.96 ^D	-40	3.301	7.232		
			6-5	3	3133.557	3132.649	2.9	31912.62 ^D	-30	3.237	7.193		
			4-3	3	3127.660	3126.754	-3.9	31972.78 ^D	40	3.301	7.265		
			5-4	10*	3126.600	3125.694	-3.9	31983.62 ^D	40	3.267	7.232		
	1107	$b~^3H-Hsp1~^3I^{ m o}$	4-5	2.53	3080.8831	3079.9885	-0.9	32458.226^{C}	10	3.301	7.325	-0.88^a	
			5-6	2.64	3067.8884	3066.9970	-1.9	32595.710^{B}	20	3.267	7.308	-0.50^a	
			6-7	2.49	3059.3807	3058.4914	-0.8	32686.354 ^C	9	3.237	7.289		
			6–6	0?	3044.989	3044.103	-0.9	32840.84 ^D	10	3.237	7.308	• • • •	II
	1108	$b~^3H-Fsp1~^3F^{ m o}$	4-4	0	2987.927	2987.056	-2.7	33468.02 ^D	30	3.301	7.451		
			4-3	2	2981.081	2980.211	-1.8	33544.88 ^D	20	3.301	7.460	• • •	
			5-4	1	2963.439	2962.574	-1.8	33744.58 ^D	20	3.267	7.451	• • •	
	1109	$b~^3H$ – $Fsp1~^3G$ °	4-4	2.04	2955.2076	2954.3443	-1.5	33838.570^{D}	17	3.301	7.497		I
			5-5	5	2949.585	2948.724	4.4	33903.07 ^D	-50	3.267	7.470		I
			4-3	0	2946.722	2945.860	-0.9	33936.02 ^D	10	3.301	7.509		
			5-4	1	2931.251	2930.393	0.0	34115.13 ^D	0	3.267	7.497	• • •	
			6–5	2	2928.406	2927.549	-0.9	34148.27 ^D	10	3.237	7.470	• • •	
	1110	$b^3H-t^3H^{\circ}$	4-5	1.95	2947.9821	2947.1207	-0.3	33921.508^{D}	4	3.301	7.507	• • •	
		(UV182)	5–6	2.20	2939.9129	2939.0534	-1.6	34014.613 ^C	19	3.267	7.484	• • •	
			4-4	10	2929.974	2929.117	0.0	34129.99 D	0	3.301	7.533	0.25^a	
			5-5	3.09	2924.1412	2923.2856	-0.2	34198.075^A	2	3.267	7.507	0.29^a	TT
			6-6 5-4	3.45 0	2918.8791 2906.422	2918.0248 2905.571	0.0	34259.727 ^D 34406.56 ^D	0 0	3.237 3.267	7.484 7.533	0.29 ^a	II
	1111	b ³ H-Gsp1 ³ H°	6–6	2	2707.837	2707.035	0.0	36929.84 ^D	0	3.237	7.815		
-	1112	$a^3D-z^3F^{\circ}$	3-4	1.74	19676.227	19670.857	0	5082.275 ^A	0	3.251	3.881		
	1112	a D-z T	2-3	1.58	19300.045	19294.777	4	5181.335 ^A	-1	3.301	3.943		
			1-2	0.78	17459.548	17454.781	0	5727.525 ^A	0	3.274	3.984		
			3-2	1.97	16923.268	16918.647	-6	5909.024^{D}	2	3.251	3.984		II
	1113	$a {}^{3}D - z {}^{3}D^{\circ}$	2-3	1.08	21281.689	21275.882	14	4698.875 ^A	-3	3.301	3.883		
	1110		2-2	1.30	19752.637	19747.246	0	5062.615 ^A	0	3.301	3.928		
			3-3	1.60	19616.928	19611.574	19	5097.638 ^A	-5	3.251	3.883		
			1-2	2.00	18939.806	18934.636	4	5279.885^{A}	-1	3.274	3.928		
			2-1	0.48	18819.685	18814.548	14	5313.585^{B}	-4	3.301	3.960		
			1-1	1.71	18080.374	18075.438	0	5530.859 ^A	0	3.274	3.960	• • •	
	1114	$a~^3D-z~^3P^{\circ}$	2-2	1.46	13655.240	13651.507	2	7323.196 ^A	-1	3.301	4.209		
			3-2	1.28	12950.081	12946.540	8	7721.959 ^A	-5	3.251	4.209		
			1-0	1.54	12271.248	12267.891	2	8149.130 ^A	-1	3.274	4.284	• • •	
	1115	$a~^3D-y~^3F^{\circ}$	3-4	2.17	9559.1273	9556.5059	0.0	10461.206 ^A	0	3.251	4.548	•••	
		(622)	2-3	1.53	9488.5564	9485.9541	-0.9	10539.011 ^A	1	3.301	4.607	• • •	
			2-2	1.20	9176.4798	9173.9620	0.0	10897.425 ^A	0	3.301	4.652	• • •	
			3-3	1.68	9142.6264	9140.1178	0.8	10937.776 ^A	-1	3.251	4.607	• • •	
		3- 3	1-2	1.32	8997.0964	8994.6271	-1.6	11114.697 ^B	2	3.274	4.652		
	1116	$a^{3}D-y^{3}D^{\circ}$	3-3	2.75	8367.9326	8365.6336	1.4	11950.383 ^A	-2	3.251	4.733	-1.91 ^a	
		(623)	$\begin{array}{c} 2-2 \\ 1-2 \end{array}$	2.58	8295.7942 8148.9172	8293.5146 8146.6773	1.4 2.7	12054.301 ^A 12271.569 ^A	-2 1	3.301 3.274	4.795	-2.14 ^a	
			$\frac{1-2}{2-1}$	1.40 1.80	8082.7695	8080.5475	1.3	12271.369 ⁻¹ 12371.997 ^A	-4 -2	3.301	4.795 4.835	• • •	
			4-1	1.00	0002.7093	0000.5413	1.5	143/1.77/	-2	5.501	₹.033	• • •	

No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ_{qir}^{3} (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		3-2 1-1	1.85 2.08	8030.1497 7943.2736	8027.9418 7941.0892	0.6 0.6	12453.068 ^A 12589.268 ^A		3.251 3.274	4.795 4.835	-2.58 ^b	
1117	$a^3D-z^5S^0$	3-2	2.00	6816.6233	6814.7426	-0.5	14670.020^{C}		3.251	5.070		
1118	$a^3D-x^5P^0$	3-2	0.48	6011.4907	6009.8263	-0.7	16634.809 ^D	2	3.251	5.314	• • • •	I
1119	(624) $a^{3}D-x^{3}D^{\circ}$	2-2	1.90	5359.6048	5358.1147	1.4	18658.092 ^D	-5	3.301	5.614		
1117	(628)	3-3	2.00	5264.3457	5262.8809	-0.8	18995.713 ^B		3.251	5.606	-2.66^{b}	
	(020)	1-1	1.95	5223.2168	5221.7630	3.0	19145.290^{C}		3.274	5.648		
1120	$a~^3D-y~^3G^{\rm o}$	2-3	1.90	5280.0493	5278.5804	5.9	18939.217 ^D	-21	3.301	5.649	• • •	
1121	$a~^3D-z~^3S^{\circ}$	2-1	2.02	5005.7373	5004.3414	1.0	19977.077 ^C	-4	3.301	5.778	• • •	
1122	$a ^3D - y ^3P^{\circ}$ (631)	3-2	1.85	4877.5498	4876.1879	1.4	20502.097 ^C	-6	3.251	5.793	-3.38 ^b	
1123	$a^{3}D-u^{5}D^{\circ}$	2-2	2.31	4934.6719	4933.2948	1.9	20264.772^{B}		3.301	5.813		
	(630)	3-3	2.73	4873.2889	4871.9281	-0.2	20520.023^{A}		3.251	5.795	-2.15^a	
	•	3-2	1.90	4839.4365	4838.0847	-3.7	20663.563 ^C		3.251	5.813	٠٠٠,	
		1-1	2.11	4814.4580	4813.1128	-0.5	20770.770^{B}		3.274	5.849	-2.89 ^b	
1124	$a^{3}D-x^{3}F^{0}$ (632)	3-3	1.90	4792.0823	4790.7431	-3.2	20867.755 ^D	14	3.251	5.839	-3.24 ^b	
1125	$a^{3}D-w^{3}D^{\circ}$	2-3	2.00	4903.5326	4902.1638	-2.2	20393.461 ^C	9	3.301	5.829		
	(633)	2-2	2.05	4875.1125	4873.7513	0.2	20512.347 ^B	-1	3.301	5.844		
	(/	3-3	2.36	4809.4922	4808.1483	0.2	20792.216 ^B	-1	3.251	5.829	-2.79^{b}	
		1 - 1	2.51	4792.5855	4791.2462	-0.7	20865.564 ^A	3	3.274	5.861	-2.51 ^b	
1126	$a~^3D-w~^5G^{ m o}$	3-4	2.48	4680.5343	4679.2247	-1.1	21365.082^{D}	5	3.251	5.900		I
1127	$a~^3D-Psp3~^1D^{\circ}$	1 - 2	3.19	4758.9085	4757.5780	-0.5	21013.222^{A}		3.274	5.879	,	
	(634*)	3-2	1.78	4718.1587	4716.8390	1.8	21194.709 ^C	-8	3.251	5.879	-3.41 ^b	
1128	$a ^3D - y ^3S^{\circ}$ (635)	2-1	2.36	4777.4027	4776.0673	-0.5	20931.876 ^B	2	3.301	5.896	-2.70 ^b	
1129	$a^{3}D-v^{5}F^{0}$	1 - 2	1.30	4580.3499	4579.0667	-2.7	21832.393 ^C		3.274	5.981		
	(640)	3-2	1.99	4542.5873	4541.3141	-1.9	22013.886 ^E		3.251	5.981	-2.95 ^b	
1130	$a~^3D-v~^5P$ °	2-1	2.16	4615.4979	4614.2054	-0.2	21666.135 ^E		3.301	5.987	-2.62^{b}	
1150	(638)	3-2	1.85	4558.2024	4556.9250	0.6	21938.473 ^E		3.251	5.971	-2.71 ^b	
1131	$a^3D-x^3P^{\circ}$	$^{2-2}$	1.95	4612.3555	4611.0638	2.1	21680.896 ^C	-10	3.301	5.989		
	(641)	2-1	2.60	4567.7944	4566.5145	-0.4	21892.404 ^E		3.301	6.015	-2.38°	
	, ,	1 - 2	2.25	4566.5898	4565.3102	-0.6	21898.179 ^E		3.274	5.989	-2.51 ^b	
		3-2	2.32	4529.0524	4527.7827	-0.4	22079.674 ^E	3 2	3.251	5.989	-2.74 ^b	
1132	$a~^3D-v~^3D$ °	2-3	1.60	4442.2156	4440.9689		22511.289 ^L		3.301	6.092		
	(645)	2-1	2.67	4410.3579	4409.1195		22673.897 ^E	3 -1	3.301	6.112	-2.23^{b}	
		1-2	2.57	4379.0217	4377.7916		22836.151 ^E		3.274	6.105	-2.31 ^b	**
		3-2	3.01	4344.4922	4343.2712	0.2	23017.650 ^L		3.251	6.105	-1.70 ^b	II
1133	$a~^3D-Fsp3~^1F$ o	2 - 3	2.79	4375.7184	4374.4892		22853.390		3.301	6.134	-2.47 ^a	
	(648)	3-3	2.34	4300.6765	4299.4670	0.2	23252.156 ^C		3.251	6.134	• • • •	
1134	$a~^3D-w~^3P^{\circ}$	2-1	3.22	4269.9502	4268.7488		23419.477		3.301	6.204		
	(649)	1 - 0	2.38	4247.2082	4246.0128		23544.878 ^E		3.274	6.193		
		$^{2-2}$	3.08	4243.9239	4242.7294		23563.099		3.301	6.222		
		1 - 1	3.05	4230.7013	4229.5102		23636.743		3.274	6.204		
		3-2	3.82	4173.2982	4172.1222	0.2	23961.863	· -1	3.251	6.222	-0.89ª	
1135	$a^{3}D-z^{1}F^{0}$	$\begin{array}{c} 2-3 \\ 3-3 \end{array}$	3.13 1.95	4173.0753 4104.7712	4171.8993 4103.6131		23963.143 ² 24361.894 ⁰		3.301 3.251	6.272 6.272		
	(650)										_	
1136	$a^{3}D-x^{3}H^{\circ}$	3-4	3.51	3970.7507	3969.6276		25184.155		3.251	6.374		_
1137	$a~^3D-t~^5D^{\circ}$	3-4	2.64	4023.8727	4022.7358		24851.681 ¹		3.251	6.332		I
	(654)	2-3	2.96	4042.4135	4041.2717		24737.697 ¹		3.301	6.368		I
		1 - 2	2.30	3964.5534	3963.4320	1.9	25223.522	-12	3.274	6.401		

No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
1138	$a^3D-v^3F^0$	2-3	3.46	4041.7797	4040.6381	-0.2	24741.576 ^A	1	3.301	6.368	-1.12 ^b	
	(655)	1 - 2	3.76	4033.1000	4031.9607	0.0	24794.823 ^A	0	3.274	6.348	-1.06 ^b	
		3-2	2.61	4003.7926	4002.6609	-0.2	24976.319 ^C		3.251	6.348		
		3-4	3.87	3987.2990	3986.1717	0.0	25079.634 ^A		3.251	6.361		
		3-3	2.83	3977.6711	3976.5463	0.3	25140.339 ^C		3.251	6.368		
1139	$a~^3D-u~^3G^{\circ}$	2-3	2.97	3967.9323	2066 0100	-1.1	25202.043 ^B	- 7				
1139	(659)	3-4	3.28	3930.3208	3966.8100 3929.2083	0.0	25202.043 ² 25443.216 ^A		3.301 3.251	6.425 6.406	-1.95 ^a -1.36 ^a	
1140	$a^3D-y^1D^{\circ}$	2-2	3.42	3986.5144	3985.3873	0.2	25084.570 ^A		3.301	6.411	-0.99^a	
	(661)	1-2	4.18	3952.2814	3951.1632	-0.2	25301.842 ^A		3.274	6.411	-0.30^a	
1141	$a {}^{3}D - x {}^{1}D^{\circ}$ (662)	2-2	3.48	3977.9861	3976.8612	-1.4	25138.348 ^D	9	3.301	6.417	•••	I
1142	$a^3D-u^3D^0$	2-2	3.44	3895.1153	3894.0120	0.2	25673.181 ^A	-1	3.301	6.484	-0.93^a	
	(663)	3-3	3.81	3884.3805	3883.2800	0.0	25744.131 ^A		3.251	6.443	-0.69ª	
		3-2	3.07	3835.5433	3834.4554	3.4	26071.926^{B}	-23	3.251	6.484		
		1 - 1	3.37	3830.5384	3829.4518	-0.1	26105.991 ^B	1	3.274	6.510	-1.06^a	
1143	$a^{3}D-^{2}P4p^{1}P^{0}$	1-1	4.02	3879.8252	3878.7259	-0.5	25774.357 ^A	3	3.274	6.469	-0.44ª	
1144	$a^3D-t^3D^{\circ}$	2-3	3.50	3907.8537	3906.7471	0.0	25589.494 ^A		3.301	6.473	-0.95ª	
	(664)	3-3	4.39	3847.8909	3846.7998	-0.6	25988.263 ^A		3.251	6.473	-0.02^a	
	(001)	2-2	4.06	3837.4187	3836.3304	-0.3	26059.184 ^A		3.301	6.532	-0.02	
		$\frac{2}{2-1}$	3.48	3811.8373	3810.7557	-0.1	26234.068^{A}		3.301	6.553	-0.90^a	
		1-2	2.62	3805.6912	3804.6111	2.5	26276.436 ^C		3.274	6:532		
		1-1	3.21	3780.5272	3779.4537	0.0	26451.337 ^B		3.274	6.553	-1.17ª	
		3-2	3.58	3779.5823	3778.5090	-0.1	26457.950 ^A		3.251	6.532	-0.90^a	
1145	$a{}^3D-{}^4F5p{}^3G^{\circ}$	3-4	3.31	3598.0789	3597.0526	0.0	27792.609 ^B		3.251	6.697		
1146	$a^{3}D-v^{3}P^{0}$	2-2	3.14	3803.3583	3802.2789	0.7	26292.553^{B}	-5	3.301	6.561	-1.21^a	
	(666)	2-1	3.32	3758.5224	3757.4546	0.4	26606.200 ^A		3.301	6.599	-1.28^a	
	()	3-2	4.02	3746.5360	3745.4713	0.3	26691.322^{A}		3.251	6.561		
1147	$a~^3D$ – $Gsp3~^3F^\circ$	3-4	3.73	3741.3028	3740.2395	0.0	26728.657 ^A	0	3.251	6.565	-0.58 ^b	
1147	a D G5p3 1	2-3	3.77	3740.5863	3739.5231	0.1	26733.777 ^A		3.301	6.615		
		1-2	3.34	3657.2513	3656.2097	-0.3	27342.939 ^B		3.274	6.664		
44.40	3 D 4 FT 5 CO										•••	
1148	$a^3D-{}^4F5p^5G^0$	2-3	2.65	3634.9212	3633.8853	0.5	27510.913 ^D		3.301	6.712	•••	
		3-4	3.48	3619.6290	3618.5971	0.3	27627.141 ^A	-2	3.251	6.677	•••	
1149	$a{}^{3}D-{}^{4}F5p{}^{5}F^{o}$	2-3	3.22	3698.5883	3697.5360	-0.1	27037.343^{B}	1	3.301	6.653		
		3-3	3.17	3644.8321	3643.7937	0.1	27436.106 ^B	-1	3.251	6.653		
		1-2	2.81	3618.4579	3617.4263	-2.9	27636.082^{C}	22	3.274	6.700	•••	
1150	$a^{3}D-{}^{4}F5p^{3}F^{0}$	3-4	3.43	3689.5104	3688.4605	-0.5	27103.867 ^A	4	3.251	6.612	-0.90^{b}	
	•	2-3	3.12	3614.6368	3613.6062	-0.1	27665.297^{B}	1	3.301	6.731	-1.04 ^b	
		1-2	3.17	3533.5788	3532.5691	-0.1	28299.921^{B}	1	3.274	6.782	•••	
1151	$a^{3}D-{}^{4}F5p^{5}D^{0}$	2-2	2.99	3583.3427	3582.3201	1.5	27906.904 ^B					
1131	a D- r sp D	1-2	2.72	3555.6582	3554.6428	-0.3	27906.904 ⁻ 28124.188 ^D		3.301 3.274	6.761 6.761		
1150	$a^3D-Dsp3^5F^0$										•••	
1152	a D-Dsp3 F	2-1	3.00	3693.6988	3692.6478	-0.4	27073.133^B	3	3.301	6.657	• • •	
		2-2 1-2	2.62 2.80	3690.1269 3660.7761	3689.0768 3659.7336	0.3	27099.339 ^C	-2	3.301	6.661	• • •	
		3-3	3.22	3635.2240	3634.1881	-0.1 0.0	27316.612 ^C 27508.621 ^A	1 0	3.274	6.661	• • •	
		3-4	3.23	3615.7430	3614.7121	0.0	27656.833^{B}		3.251 3.251	6.662 6.680	•••	
1152	-3D -3C0										• • •	
1153	$a^{3}D-x^{3}S^{0}$	2-1	3.07	3678.5509	3677.5038	0.1	27184.618 ^B	-1	3.301	6.671	•••	
1154	a 3D $ ^4F5p$ 3D $^{\circ}$	3-3	3.21	3621.4980	3620.4656	-0.5	27612.883 ^B	4	3.251	6.675	•••	
		2-2	3.09	3607.6285	3606.5998	0.3	27719.040 ^B	-2	3.301	6.737		
		3-2	2.61	3556.4637	3555.4481	-1.3	28117.818^{D}		3.251	6.737	•••	
		1-1	2.72	3521.0296	3520.0231	-0.1	28400.784^{D}	1	3.274	6.795	•••	
	30 0 2500	1-2	2.38	3635.4968	3634.4608	-0.7	27506.557^{D}	5	3.274	6.684		
1155	$a~^3D\!-\!Dsp3~^5D^{ m o}$		2.50	000011700	505 11 1000		21300.331			0.004	• • •	
1155	$a^{3}D-Dsp3^{3}D^{3}$ (672*)	3-3	3.36	3614.4740	3613.4434	1.6	27666.543 ^D 28076.372 ^A		3.251	6.681	•••	I

TABLE 2—Continued

				17101	LE 2—Comin							
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
1156	$a^3D-t^3G^{\circ}$	2-3	3.44	3574.4138	3573.3936	-0.4	27976.615 ^E	3 3	3.301	6.769	-0.85 ^a	
1130	(673)	3-4	3.43	3569.8424	3568.8234	0.3	28012.441 ^E	3 -2	3.251	6.724	-0.94^a	
	,	3-3	2.53	3524.1821	3523.1748	0.0	28375.378^{L}	0	3.251	6.769	•••	
1157	$a^{3}D-t^{5}P^{\circ}$ (674*)	3-3	2.98	3599.7440	3598.7173	-0.8	27779.753 ^E	6	3.251	6.696	-1.40 ^b	
1158	$a^3D-w^1D^{\circ}$	$^{2-2}$	2.62	3432.8266	3431.8427	-2.1	29130.513 ^C		3.301	6.912	,	
	(676)	1-2	3.48	3407.4140	3406.4367	-0.5	29347.769	4	3.274	6.912	-0.59 ^b	
1159	a ³ D-u ³ H° (679)	3-4	3.04	3311.4436	3310.4907	0.1	30198.310 ^E	³ -1	3.251	6.995	-1.04ª	
1160	$a^{3}D-u^{3}F^{0}$	2-3	3.77	3315.6953	3314.7413	-0.3	30159.587		3.301	7.040	-0.08^a	
	(680)	$^{2-2}$	2.96	3307.4337	3306.4818	-0.7	30234.922 ^E		3.301	7.049		
		3-4	3.86	3292.9690	3292.0208	0.0	30367.732 ² 30452.189 ²		3.251 3.274	7.016 7.049	-0.07 ^a -0.56 ^a	
		1-2 3-3	3.32 2.81	3283.8362 3272.4277	3282.8903 3271.4847	-0.3 -0.2	30432.189 ² 30558.353 ¹		3.274	7.049	-0.30	
	2 (- : 5 2											**
1161	$a~^3D-s~^6D6p~^5F$ °	3-4	d0? 4	3242.618 3233.870	3241.682 3232.937	9.5 4.2	30839.28 ¹ 30922.70 ¹	⁻⁾ -90 -40	3.251 3.301	7.075 7.135	• • •	II
		$\begin{array}{c} 2-1 \\ 2-2 \end{array}$	4 d5	3233.870	3232.937	0.0	30948.77 ¹		3.301	7.138		I
		3-3	3	3213.485	3212.557	0.0	31118.86 ¹		3.251	7.109		
		1-1	d0?	3211.310	3210.383	7.2	31139.94 ¹		3.274	7.135		
1162	$a^{3}D-v^{1}G^{0}$ (681)	3-4	3.33	3254.5374	3253.5990	-0.4	30726.333	4 4	3.251	7.061	-0.64ª	
1163	$a^{3}D-Dsp1^{3}D^{\circ}$	3-3	3	3213.248	3212.320	1.0	31121.16 ¹	-10	3.251	7.110		
1164	$a~^3D-t~^3F^{\circ}$	2-3	0	3224.015	3223.084	3.1	31017.23	-30	3.301	7.146		
	(682)	2-2	d 0	3216.979	3216.051	-5.2	31085.06 ¹		3.301	7.155		
		1-2	1	3194.653	3193.730	-2.0	31302.30		3.274	7.155	• • •	
		3-2	4	3176.231	3175.312	-9.1	31483.86 ¹		3.251	7.155	•••	I
1165	$a~^3D$ – $s~^4\!D$ 5 $p~^5D$ °	2-3	d 0?	3183.729	3182.808	5.1	31409.71		3.301	7.195	• • •	_
		3-3	8	3143.806	3142.895 3134.249	-4.0 -5.9	31808.58 ¹ 31896.33 ¹		3.251 3.301	7.195 7.255	•••	I
		$\begin{array}{c} 2-1 \\ 3-2 \end{array}$	d0 d0	3135.157 3114.725	3134.249	2.9	32105.56 ¹		3.251	7.232		
	3 D 4D 6 3 E10			3155.3429	3154.4295		31692.277 ¹		3.251	7.181		
1166	a^3D - $s^4D5p^3F^0$	3-4 2-2	2.32 d0?	3092.317	3091.420	3.8	32338.21		3.301	7.310		
		1-2	d0?	3071.678	3070.785	1.9	32555.50		3.274	7.310		
		3-2	1	3054.643	3053.755	-1.9	32737.05		3.251	7.310		
		3-3	0	3042.776	3041.891	-6.5	32864.73		3.251	7.326	•••	
1167	$a^3D-s^4D5p^3P^0$	2-2 3-2	1* 1	3187.176 3147.182	3186.254 3146.270	-1.0 3.0	31375.74 ³ 31774.46 ³		3.301 3.251	7.191 7.191		
1168	$a~^3D-Hsp1~^3G^{\circ}$	3-4	1	3114.336	3113.433	6.8	32109.57	D -70	3.251	7.232		
1169	$a^{3}D-s^{4}D5p^{3}D^{\circ}$	2-3	3	3159.305	3158.391	0.0	31652.53	D 0	3.301	7.225		
1109	u D-3 D3p D	1-2	d0?	3152.015	3151.102	4.0	31725.74		3.274	7.207		
		2-1	1	3147.516	3146.604	3.0	31771.09		3.301	7.240		II
		3-2	0	3134.078	3133.170	-2.9	31907.31	D 30	3.251	7.207	•••	I
1170	$a~^3D-Psp1~^3S^{\circ}$	2-1	1	3041.644	3040.759	-5.6	32876.96		3.301	7.377		
1171	$a~^3D-Fsp1~^3F^{\circ}$	3-4	2.00	2952.4116	2951.5490	1.0	33870.616		3.251	7.451	• • •	
1172	$a~^3D-Fsp1~^3G^{ m o}$	3-4	d0?	2920.463	2919.608	3.4	34241.15	D -40	3.251	7.497		
1173	$a~^3D-t~^3H^{\circ}$	3-4	d0?	2895.806	2894.957	-5.9	34532.70	D 70	3.251	7.533		
1174	$a~^3D-Fsp1~^3D^{\circ}$	3-3	2	2891.707	2890.859	3.3	34581.65	^D -40	3.251	7.539	•••	I
1175	$z^{5}F^{\circ}-c^{3}F$	4-4	2.11	17522.905	17518.121	-12	5706.816		3.368	4.076		
		3-3	1.62	16616.744	16612.206	0	6018.026		3.396	4.143		
		1-2	1.34	16396.267	16391.789	22	6098.949		3.430	4.186		
		2-2	1.20	16114.160	16109.759	3	6205.722		3.417	4.186		
1176	$z^{5}F^{\circ}-d^{3}F$	4-4 5-4	1.89 0.90	10122.355 9831.5144	10119.581 9828.8192	-10 2 10.6	9879.124 10171.373		3.368 3.332	4.593 4.593		Ne

i				TA	BLE 2—Cor	itinued					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷ Bl. ⁸
1177	$z^{5}F^{\circ}-e^{7}D$	5-5	2.30	6273.0133	6271.2788	0.8	15941.302^{E}	3 -2	3.332	5.308	
11//	(685)	5-4	0.60	6139.1971	6137.4984	-0.4	16288.775 ^E		3.332	5.351	
1170	$z^{5}F^{\circ}-e^{5}D$	3-4	1.98	5786.2625	5784.6584	0.0	17282.313 ^A		3.396	5.539	-2.67 ^b
1178	(686)	2-3	2.48	5713.7163	5712.1316	0.0	17202.313 ⁻⁴		3.417	5.587	-2.67° -2.06^{b}
	(000)	4-4	3.50	5710.9623	5709.3783	0.3	17510.184 ^A	-	3.368	5.539	-2.06 -1.24 ^b
		3-3	3.73	5660.3869	5658.8164	0.0	17666.637 ^A		3.396	5.587	-0.84^{a}
		1-2	2.60	5660.1020	5658.5317	0.0	17667.526 ^A		3.430	5.620	•••
		$^{2-2}$	3.77	5626.1035	5624.5422	0.0	17774.291 ^A		3.417	5.620	-0.90^{b}
		5-4	4.57	5617.2028	5615.6439	0.0	17802.455 ^A	-	3.332	5.539	-0.14^{b}
		1 - 1	3.66	5604.5006	5602.9451	-0.3	17842.803 ^A		3.430	5.642	• • •
		4-3	4.41	5588.3071	5586.7559	0.0	17894.507 ^A		3.368	5.587	-0.14 ^a
		1-0	3.73	5577.6371	5576.0888	-0.9	17928.739 ^A		3.430	5.653	-1.00^{b}
		3-2 2-1	4.25 3.99	5574.3899 5571.1647	5572.8424 5569.6181	-0.3 0.0	17939.183 ^A 17949.568 ^A		3.396 3.417	5.620 5.642	-0.31 ^b -0.54 ^b
1179	$z^{5}F^{0}-e^{5}F$	4-5	3.43	5040.6572	5039.2520	0.5	19838.683 ^A		3.368	5.828	-1.57 ^a
	(687)	3-4	3.41	5004.1883	5002.7927	0.5	19983.261 ^A		3.396	5.874	-1.58 ^b
		5-5 2-3	4.12 3.19	4967.4747	4966.0889	0.2 0.2	20130.953 ^A 20195.951 ^A	_	3.332 3.417	5.828	-0.87^a
		2-3 4-4	3.19	4951.4876 4947.7686	4950.1060 4946.3881	0.2	20195.951 ⁻¹ 20211.131 ^A		3.368	5.921 5.874	-1.67 ^b -1.17 ^b
		3-3	3.49	4911.3878	4910.0169	0.3	20360.844 ^A		3.396	5.921	-1.17
		1-2	3.00	4909.1021	4907.7318	0.0	20370.324 ^A		3.430	5.956	-1.84 ^b
		2-2	3.23	4883.5069	4882.1434	0.2	20477.088 ^A		3.417	5.956	-1.64 ^b
		5-4	3.05	4877.2394	4875.8776	0.5	20503.402 ^A		3.332	5.874	-2.02^{b}
		1 - 1	3.13	4865.0023	4863.6437	0.0	20554.975 ^A	0	3.430	5.978	
		4-3	3.17	4857.0297	4855.6732	0.2	20588.715 ^A		3.368	5.921	•••
		3-2	3.14	4844.4970	4843.1438	0.5	20641.978 ^A		3.396	5.956	-1.84 ^b
		2 - 1	2.85	4839.8637	4838.5118	0.0	20661.739 ^A	0	3.417	5.978	-1.95^{b}
1180	z $^5F^{o} - e$ 3F	3-4	2.66	4862.3363	4860.9785	0.7	20566.245 ^A		3.396	5.946	-2.43 ^b
	(688)	4-4	2.86	4809.0525	4807.7088	0.5	20794.117 ^A		3.368	5.946	-2.20^{b}
		2-3	2.20	4768.1988	4766.8659	0.2	20972.280 ^E		3.417	6.017	-2.31^{b}
		5-4	2.46	4742.3957	4741.0696	0.0	21086.389 ^E		3.332	5.946	
		3-3	2.24	4730.9996	4729.6766	-2.0	21137.182^{B}		3.396	6.017	-2.47 ^b
1181	$z^{5}F^{\circ}-e^{7}F$	5-6	3.08	4261.1983	4259.9992	0.2	23467.577 ^A		3.332	6.241	-1.26 ^a
	(689)	2-3	3.53	4239.2172 4225.7025	4238.0238	0.4	23589.261 ^A 23664.704 ^A	_	3.417	6.341	1.040
		1-2 4-5	3.29 3.91	4225.7025	4224.5128 4224.1717	-0.4 0.4	23666.615 ^A		3.430 3.368	6.364 6.302	-1.04 ^a -0.51 ^a
		3-3	3.44	4209.7896	4208.6040	0.0	23754.156 ^A	_	3.396	6.341	-0.51
		$^{3}_{2-2}$	2.99	4206.7233	4205.5385	-0.5	23771.471 ^A	-	3.417	6.364	-1.44 ^a
		3-4	3.37	4202.1078	4200.9242	-0.2	23797.581 ^A		3.396	6.347	-0.83^a
		5-5	3.11	4173.8169	4172.6408	0.2	23958.885 ^A		3.332	6.302	-1.19a
		4-3	2.45	4169.7898	4168.6147	0.3	23982.024 ^E		3.368	6.341	-1.94 ^b
		4-4	2.09	4162.2500	4161.0769	-2.6	24025.467 ^B	15	3.368	6.347	-1.69 ^b
1182	$z^{5}F^{\circ}-f^{7}D$	3-3	2.30	4261.2797	4260.0806	-0.9	23467.129 ^B		3.396	6.306	
	(690)	2 - 1	2.13	4257.4036	4256.2055	5.1	23488.494 ^C		3.417	6.329	
		3-2	2.63	4236.5799	4235.3873	1.4	23603.945 ^E		3.396	6.323	-1.68 ^a
		4-4	1.85	4229.9093	4228.7184	1.1	23641.169 ^L		3.368	6.299	-2.54^{b}
		5-4	2.15	4178.2631	4177.0858	9.6	23933.390 ^D		3.332	6.299	•••
1183	$z^{5}F^{\circ}-f^{5}D$	2-2	2.08	4321.6979	4320.4829	-3.5	23139.054 ^L		3.417	6.286	• • •
	(691)	1-1	2.11	4307.7900	4306.5787	-1.3	23213.759 ^L		3.430	6.308	• • •
		3-2 $1-0$	2.62 2.36	4291.1215 4289.1450	4289.9146 4287.9385	-0.6 -1.5	23303.931 ^E 23314.670 ^D		3.396 3.430	6.286 6.321	•••
		2-1	2:50	4289.1430	4287.9383	1.3	23314.670 ⁻²		3.430	6.308	• • •
		4-3	2.76	4279.4353	4278.2314	1.1	23367.569 ^E		3.368	6.265	-1.74 ^b
		5-4	3.07	4246.5397	4245.3444	0.0	23548.585^{A}		3.332	6.251	-1.61^a
1184	$z^{5}F^{0}-e^{7}P$	4-3	2.94	4265.4037	4264.2034	0.0	23444.440 ^A		3.368	6.275	-1.51 ^a
1185	(692) $z^{5}F^{\circ}-e^{5}G$	4-5	4.20	4248.6213	4247.4255	0.2	23537.047 ^A	-1	3.368	6.286	-0.24^a
1105	(693)	3-4	4.18	4240.0035	4238.8100	0.2	23584.886 ^A		3.396	6.320	-0.24
	/							-		5	

TABLE 2—Continued

				1	ABLE 2—C	ontinue	<i>a</i>					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
		5-6	4.73	4228.6171	4227.4266	0.0	23648.393 ^A	0	3.332	6.264	0.27ª	
4		2-3	3.90	4226.6443	4225.4543	-0.2	23659.431 ^A		3.417	6.350	-0.51ª	
))		1 - 2	3.84	4218.7336	4217.5456	0.0	23703.796 ^A	0	3.430	6.369	-0.48^a	
i		2-2	3.53	4199.8170	4198.6341	-0.2	23810.561 ^A	1	3.417	6.369	-0.78^a	
		4-4	3.96	4199.4297	4198.2469	0.2	23812.757 ^A	-1	3.368	6.320	-0.46ª	
		3-3	3.68	4197.3907	4196.2083	-0.5	23824.325^{A}		3.396	6.350	-0.70^a	
		5-5	3.96	4196.5112	4195.3291	0.0	23829.318 ^A		3.332	6.286	-0.49^a	
		3-2	2.42	4170.9316	4169.7562	-1.0	23975.459 ^C		3.396	6.369	-1.91 ^b	
		4-3	2.34	4157.6257	4156.4538	0.9	24052.189 ^C		3.368	6.350	• • •	
		5-4	2.36	4148.5116	4147.3420	-0.7	24105.031 ^B	4	3.332	6.320	• • •	
1186	z 5F $^{\circ}-e$ 7G	1-2	3.00	4188.7671	4187.5870	-0.4	23873.373 ^A		3.430	6.390	-1.23ª	
	(694)	2 - 3	2.62	4183.9366	4182.7577	-0.4	23900.936^{B}		3.417	6.380	-1.66 ^b	
		3-4	2.38	4177.0756	4175.8986	4.4	23940.194^{D}		3.396	6.365	• • •	
		$^{2-2}$	2.62	4170.1167	4168.9416	-1.6	23980.144 ^B		3.417	6.390	-1.65 ^b	
		4-5	4.02	4155.9770	4154.8055	0.2	24061.731 ^A		3.368	6.351	-0.40^{a}	
		3-3	2.88	4155.2698	4154.0985	0.0	24065.826 ^B		3.396	6.380	-0.37^{b}	
		5-6	3.57	4150.5351	4149.3650	0.0	24093.279 ^A		3.332	6.319	-0.85^a	
		4-4	2.79	4137.6880	4136.5213	0.5	24168.086 ^B		3.368	6.365	-1.52 ^a	
		4-3	2.04	4116.2974	4115.1363	3.4	24293.677 ^C		3.368	6.380		
		5-5 5-4	2.20 3.02	4106.0991 4088.2476	4104.9407 4087.0939	-2.4 0.2	24354.015 ^C 24460.358 ^A		3.332 3.332	6.351 6.365	-2.18 ^b -1.40 ^b	
1187	$z^{5}F^{0}-f^{5}F$	4-5	3.82	4177.7431	4176.5659	0.0	23936.369 ^A	0	3.368	6.336		
	(695)	1-2	3.62	4159.9650	4158.7924	0.2	24038.664 ^A		3.430	6.410	-0.67^{b}	
		2-3	3.92	4158.9523	4157.7801	0.3	24044.517 ^A	-2	3.417	6.398	-0.40^a	
		3-4	4.09	4155.0709	4153.8997	0.0	24066.978 ^A	0	3.396	6.380	-0.32^a	
		1 - 1	3.15	4151.4194	4150.2491	0.0	24088.147 ^A		3.430	6.417	-1.26^{b}	
		$^{2-2}$	2.75	4141.5701	4140.4024	-0.5	24145.432^{D}		3.417	6.410	• • •	II
		2 - 1	2.58	4133.1009	4131.9354	0.7	24194.909 ^B		3.417	6.417	•••	
		3-3	2.37	4130.6259	4129.4611	0.7	24209.406 ^C		3.396	6.398	-1.97 ^b	
		5-5	3.46	4127.3466	4126.1827	-0.3	24228.641 ^A		3.332	6.336	-0.96^{b}	
		4-4	2.87	4116.0987	4114.9376	-0.3	24294.850 ^B		3.368	6.380	-1.45°	
		3-2	2.76	4113.4789	4112.3185	-0.2	24310.323 ^B		3.396	6.410	-1.75^{b}	
		4-3	2.67	4092.1083	4090.9535	0.2	24437.281 ^B		3.368	6.398	-1.76 ^b	
1188	$z^{5}F^{0}-e^{3}D$	3-3	2.11	4184.1850	4183.0061	1.8	23899.517 ^C		3.396	6.359	-2.17^{b}	
	(697)	4-3	2.97	4144.6657	4143.4972	0.2	24127.398 ^B		3.368	6.359	• • •	
		2-2	3.15	4135.5869	4134.4207	-5.1	24180.365 ^D		3.417	6.415		I
		3-2	2.97	4107.5817	4106.4229	0.3	24345.225 ^A		3.396	6.415	-1.50 ^a	
		1-1	2.37	4102.8099	4101.6523	0.3	24373.540 ^C 24480.307 ^A		3.430	6.452	• • •	
	5 · 5 ·	2-1	2.91	4084.9161	4083.7632	0.0			3.417	6.452	•••	
1189	$z^{5}F^{\circ}-g^{5}D$	3-4	2.20	4174.3579	4173.1816	3.5	23955.780 ^D		3.396	6.366		
	(698)	4-4	3.21	4135.0217	4133.8557	0.0	24183.670 ^A	0	3.368	6.366	-1.31 ^a	
		3-3	3.06	4102.4185	4101.2611	-0.2	24375.865 ^A		3.396	6.419	-1.38 ^b	
		5-4	3.85	4085.6446	4084.4915	-0.2	24475.942 ^A 24490.234 ^B		3.332	6.366	-0.71^a	
		2-2	2.86	4083.2603	4082.1079	0.7	24490.234 ² 24547.996 ^B		3.417	6.453	-1.54 ^b	
		1-1	2.89	4073.6523 4066.5292	4072.5024 4065.3812	-0.2	24547.996 ² 24590.995 ^B		3.430 3.430	6.474 6.479	-1.32 ^b	
		1-0 $4-3$	2.97 3.61	4064.4232	4063.3812	0.0 -0.2	24590.993 24603.737 ^A		3.368	6.419		
		2-1	3.12	4056.0122	4054.8669	0.5	24654.758 ^A		3.417	6.474	-0.94 ^b	
		3-2	3.22	4055.9509	4054.8056	0.0	24655.131 ^A		3.396	6.453	••••	
1190	z $^5F^{\circ}-e$ 5P	2-3	2.59	4119.0146	4117.8528	0.3	24277.651 ^B		3.417	6.427		
	(700)	1 - 2	2.15	4098.1736	4097.0172	1.0	24401.114^{D}		3.430	6.455		
		3-3	2.60	4091.2272	4090.0726	0.3	24442.544 ^B		3.396	6.427	-1.78 ^b	
		$^{2-2}$	2.73	4080.3198	4079.1681	0.3	24507.883 ^B		3.417	6.455	-1.20^{b}	
		4-3	2.68	4053.4401	4052.2954	2.3	24670.403 ^C		3.368	6.427		
		3-2	2.94	4053.0499	4051.9053	-0.3	24672.778 ^B		3.396	6.455	-1.43 ^b	
1191	z $^5F^{\circ}-g$ 5F	3-4	2.67	3846.3059	3845.2153	1.0	25998.972 ^C		3.396	6.620		
	(701)	5-5	3.55	3818.7229	3817.6395	0.1	26186.765 ^A		3.332	6.579	-0.70 ^b	
		4-4	2.89	3812.8864	3811.8045	0.1	26226.850 ^C		3.368	6.620	• • •	_
		2-3	4.87	3806.4228	3805.3426	0.6	26271.385^{L}	' -4	3.417	6.674	• • •	I

No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	λ_{air}^{3} (A)	o-R ⁴ (mÅ)	$ \begin{array}{ccc} \sigma^{5} & \text{ o-R}^{6} \\ \text{(cm}^{-1}) & \text{(mK)} \end{array} $	E(1) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		1-1	2.53	3742.5385	3741.4748	0.6	26719.832 ^C -4	3.430	6.743		
1192	z $^5F^{\circ}-h$ 5D	4-4	4.39	3847.8909	3846.7998	8.7	25988.263 ^D -59	3.368	6.590		I
	(702)	5-4	3.25	3805.0893	3804.0094	0.0	26280.592^{B}_{-} 0	3.332	6.590	-1.04 ^b	
		4-3	3.09	3790.8954	3789.8192	2.6	26378.992^{B} -18	3.368	6.639	-1.23^{b}	
		2-2	2.62	3786.8616	3785.7865	-2.2	26407.091 ^C 15	3.417	6.691		
		1 - 1	2.67	3778.4033	3777.3303	-0.9	26466.206 ^C 6	3.430	6.711	• • •	
1193	$z^{5}F^{0}-f^{5}P$	4-3	2.99	3847.0760	3845.9851	0.4	25993.768 ^B -3	3.368	6.591	-1.18^{b}	
	(703)	3-2	3.04	3820.5771	3819.4932	0.1	26174.056 ^B -1	3.396	6.641	-1.30^{b}	
		2 - 1	2.83	3792.8191	3791.7424	0.1	26365.613 ^C -1	3.417	6.686	-1.39^{b}	
1194	z ${}^5F^{\circ}-f$ 5G	4-5	2.73	3829.2369	3828.1507	0.3	26114.864 ^D -2	3.368	6.606		II
1174	(704)	5-6	3.28	3803.0634	3801.9840	0.3	26294.592^{A} -2	3.332	6.592	-1.01 ^b	
	(, 0 .)	3-4	2.58	3791.5718	3790.4954	-0.1	26374.286 ^C 1	3.396	6.666		
		4-4	2.83	3759.0941	3758.0261	0.4	26602.154 ^C -3	3.368	6.666		
		1-2	2.63	3744.0085	3742.9445	-2.1	26709.341 ^C 15	3.430	6.741		
1105	z $^5F^{\circ}-e$ 3G	4-5	3.05	3763.2727	3762.2036	0.0	26572.616 ^B 0	3.368	6.663	-1.18^{b}	
1195		4-3 3-4		3749.275	3748.209		n	3.396	6.703		МΙ
	(705)	$\frac{3-4}{2-3}$	2.69	3749.273	3748.209	 -1.7	$26671.825^{D} \dots 26819.811^{C} 12$	3.417	6.742	• • •	IVI I
		2-3 5-5	3.82	3728.3871	3721.2724	-0.3	26864.888^{D} 2	3.332	6.663	• • •	I
										• • •	1
1196	z $^5F^{\circ}-f$ 3D	3-3	2.92	3794.6643	3793.5871	2.2	26352.792^{B} -15	3.396	6.664	• • •	
	(706)	$^{2-2}$	2.83	3772.5630	3771.4916	1.4	26507.178^{D} -10	3.417	6.703	• • •	I
1197	$z^{5}F^{0}-s^{6}D6s^{5}D$	4-3	3.03	3610.3661	3609.3366	-1.7	27698.022^B 13	3.368	6.802		
		3-2	2.77	3604.9696	3603.9415	-1.4	27739.485 ^C 11	3.396	6.836		
		2 - 1	2.58	3604.1165	3603.0886	-1.3	27746.051 ^C 10	3.417	6.857		
1198	$z^{5}F^{0}-s^{6}D5d^{7}F$	2-2	4.17	3393.2787	3392.3049	0.7	29470.023 ^D -6	3.417	7.071		I
1170	2 1 -s D3a 1	3-3	3.94	3368.1835	3367.2161	-0.7	29689.594 ^D 6	3.396	7.077		Ne
	f== (n=17n										
1199	$z^{5}F^{\circ}-s^{6}D5d^{7}D$	4-5	2.94	3417.0261	3416.0463	-1.8	29265.214 ^B 15	3.368	6.996	• • •	
	(708*)	2-3	2.45	3388.5895	3387.6169	-2.1	29510.804 ^D 18	3.417	7.076	• • •	I
1200	z $^5F^{\circ}$ $-s$ 6D5d 5F	5-5	2.26	3345.9010	3344.9393	1.1	29887.316^{D} -10	3.332	7.037		
1201	$z^{5}F^{0}-s^{4}D4d^{5}F$	1-1	2.45	3257.6399	3256.7007	0.3	30697.070 ^C -3	3.430	7.236		
1201	2 1 -3 D44 1	3-4	2.54	3254.7624	3253.8239	-2.9	30724.209^D 27	3.396	7.206		I
		3-3	2.88	3253.3670	3252.4289	0.0	30737.387^{C} 0	3.396	7.207		
		2-1	1	3246.346	3245.410	-2.1	30803.86 ^D 20	3.417	7.236		
		1-2	d0	3241.905	3240.970	-2.1	30846.06 ^D 20	3.430	7.254		
		4-4	3.00	3230.8034	3229.8710	-0.2	30952.054^B 2	3.368	7.206		
		2-2	2.30	3230.7262	3229.7938	0.8	30952.793 ^D -8	3.417	7.254		
		4-3	4	3229.427	3228.494	0.0	30965.25 ^D 0	3.368	7.207		
		3-2	d0?	3213.601	3212.673	-4.1	31117.74 ^D 40	3.396	7.254		
		5-4	1	3200.578	3199.653	-3.1	31244.36 ^D 30	3.332	7.206		
1202	z ${}^5F^{\circ}$ $-i$ 5D	3-3	2.49	3287.3916	3286.4448	-0.5	30419.254 ^C 5	3.396	7.168		
1202	(710*)	4-4	2.83	3275.3946	3274.4508	-0.3	30530.673^D 3	3.368	7.153		II
	(710)	3-2	2.54	3270.1714	3269.2290	0.7	30579.437 ^C -7	3.396	7.188	•••	
		4-3	2.71	3262.9489	3262.0084	-0.5	30647.124 ^C 5	3.368	7.168	•••	
		5-4	3.02	3244.3355	3243.3996	-1.4	30822.953 ^D 13	3.332	7.153		Ne
1202	$z^{5}F^{\circ}-s^{6}D7s^{7}D$	4-4	d0?	3222.575	3221.644	0.0	31031.09 ^D 0	3.368	7.215		
1203	z · r · -s · D /s · D	3-3	au? 2*	3222.575	3215.985	-7.2	31085.69 D 70	3.396	7.213	•••	I
		3-3 1-1	4	3216.143	3215.215	8.3	31093.14 ^D -80	3.430	7.285	• • • •	1
		2-2	12	3212.923	3213.213	-9.3	31124.31 ^D 90	3.417	7.276		I
		3-2	d0?	3195.994	3195.070	-5.1	31289.17 ^D 50	3.396	7.276	•••	1
460:	5.00 5~										
1204	$z^{5}F^{\circ}-g^{5}G$	4-5	4.20	3214.9410	3214.0126		31104.770 ^D 129	3.368	7.224	• • •	I
	(711)	3-4	3.46	3212.8030	3211.8751	0.0	31125.469 ^A 0	3.396	7.255	• • •	
		5-6	3.74	3212.6052	3211.6774	0.0	31127.385^{A} 0	3.332	7.191	• • •	T
		2-3	3.54	3210.2254	3209.2982	0.0 0.0	31150.461^D 0 31158.495^B 0	3.417 3.430	7.279 7.293	• • •	I
		$1-2 \\ 2-2$	3.13 2.36	3209.3976 3198.4382	3208.4706 3197.5140	0.0	31158.495 ^D 0	3.430	7.293	• • •	
		3-3	2.30 d5	3193.329	3197.3140	7.1	31315.28 ^D -70	3.396	7.279	•••	I
		3-3 4-4	3*	3189.452	3188.530	0.0	31353.35 ^D 0	3.368	7.255		•
		7-4	,	J107.7J4	2100.330	0.0	01000.00	5.500	1.200	• • • •	

<u>:</u>											
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (Å)	o-R ⁴ (mÅ)	$ \begin{array}{ccc} \sigma & 5 & \text{o-R}^6 \\ \text{(cm}^{-1}) & \text{(mK)} \end{array} $	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
0 0 1 1		5-5 4-3	3 0	3185.028 3170.252	3184.107 3169.335	1.0 0.0	31396.90 ^D -10 31543.23 ^D 0	3.332 3.368	7.224 7.279	• • • •	I
1205	z 5F ° $-s$ 4D4d 5P	2-2 3-2 3-3	2.57 2.34 2.57	3262.2660 3244.8109 3216.7623	3261.3256 3243.8749 3215.8334	-0.1 -0.6 0.3	30653.540^{C} 1 30818.437^{D} 6 31087.159^{C} -3	3.417 3.396 3.396	7.217 7.217 7.251		
1206	z 5F $^{\circ}$ $-s$ 6D $7s$ 5D	4-4 5-4	d0? 1	3209.803 3179.967	3208.876 3179.047	0.0 -3.0	31154.56 ^D 0 31446.87 ^D 30	3.368 3.332	7.231 7.231		
1207	z 5F $^{\circ}$ $-s$ 4D4d 3G	4-5 3-4 3-4	5 2 2.20	3192.297 3167.508 3167.5031	3191.374 3166.592 3166.5867	0.0 2.0 -2.6	$31325.41 D 0 31570.56 D -20 31570.608^D 26$	3.368 3.396 3.396	7.252 7.311 7.311		II
1208	z $^5F^{\circ}$ $-^4F$ 5 d 5F	3-4 4-4 5-5	d0* d0 2.30	3205.388 3182.158 3152.9172	3204.462 3181.237 3152.0045	-8.2 3.0 -0.5	$31197.47 \stackrel{D}{-} 80$ $31425.22 \stackrel{D}{-} -30$ 31716.659^D 5	3.396 3.368 3.332	7.264 7.264 7.264		II
1209	$z^{5}F^{0}-58661^{e}$	3-4	0?	3198.235	3197.310	3.6	31267.25 ^D -35	3.396	7.273		
1210	z $^5F^{\circ}$ $-s$ 4D4d 3D	2-3 3-3 2-2 3-2	7 3 0? d0?	3213.088 3196.153 3182.669 3166.044	3212.160 3195.230 3181.749 3165.128	2.1 1.0 6.1 -3.0	31122.71 ^D -20 31287.61 ^D -10 31420.17 ^D -60 31585.16 ^D 30	3.417 3.396 3.417 3.396	7.275 7.275 7.312 7.312	•••	
1211	$z^{5}F^{0}-58831^{e}$	3-3 4-3	0 0	3181.014 3158.118	3180.094 3157.204	1.7 -2.2	31436.52 ^D -17 31664.43 ^D 22	3.396 3.368	7.294 7.294		
1212	$z^{5}F^{0}-58906^{e}$	3-4 4-4	0* 1	3173.417 3150.635	3172.500 3149.723	-2.7 -1.6	31511.77 ^D 27 31739.63 ^D 16	3.396 3.368	7.303 7.303		
1213	z $^5F^{\circ}$ $ ^4F5d$ 3G	4-5 5-5	0 d0?	3160.038 3131.113	3159.123 3130.205	0.0 -5.9	31645.19 ^D 0 31937.53 ^D 60	3.368 3.332	7.292 7.292		II
1214	$z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [2.5] $z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [2.5] $z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [5.5] $z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [3.5] $z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [3.5] $z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [4.5] $z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [6.5] $z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [6.5] $z^{5}F^{\circ} - s^{6}D_{4.5}6d$ [5.5]	2-3 3-3 4-5 4-3 4-4 4-3 5-5 5-4 5-6 5-5	3.50 d0? 0 1 d0? 0 d0 0? 5	3158.7993 3142.423 3123.441 3120.086 3118.316 3116.762 3100.569 3099.898 3098.679 3095.189	3157.8850 3141.513 3122.536 3119.181 3117.412 3115.858 3099.670 3098.998 3097.780 3094.291	1.9 -5.9 -5.9 -1.0 6.8 0.0 5.8 -5.8 0.0 -1.9	31657.599 ^D -19 31822.58 ^D 60 32015.97 ^D 60 32050.40 ^D 10 32068.59 ^D -70 32084.58 ^D 0 32252.14 ^D -60 32259.13 ^D 60 32271.82 ^D 0 32308.20 ^D 20	3.417 3.396 3.368 3.368 3.368 3.368 3.332 3.332 3.332 3.332	7.342 7.342 7.337 7.342 7.344 7.346 7.331 7.333 7.333		I
1215 1216	$z^{5}F^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{5}F^{\circ} - s^{6}D_{3.5}6d$ [1.5] $z^{5}F^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{5}F^{\circ} - s^{6}D_{3.5}6d$ [4.5] $z^{5}F^{\circ} - s^{6}D_{3.5}6d$ [2.5] $z^{5}F^{\circ} - s^{6}D_{3.5}6d$ [5.5] $z^{5}F^{\circ} - s^{6}D_{3.5}6d$ [3.5] $z^{5}F^{\circ} - s^{6}D_{3.5}6d$ [3.5]	1-2 2-2 3-4 4-4 4-3 4-5 5-4 3-4 4-5	d1 0? 1 3 3.11 4 6 d0? 5	3139.932 3124.034 3111.566 3089.658 3089.1112 3087.420 3067.377 3098.858 3090.520	3139.023 3123.129 3110.663 3088.761 3088.2145 3086.524 3066.486 3097.959 3089.623	-3.0 -9.8 0.0 -1.0 0.0 0.0 -4.7 5.8 4.8	31847.82 ^D 30 32009.89 ^D 100 32138.16 ^D 0 32366.04 ^D 10 32371.771 ^D 0 32389.50 ^D 0 32601.14 ^D 50 32269.95 ^D -60 32357.01 ^D -50	3.430 3.417 3.396 3.368 3.368 3.368 3.332 3.396 3.368	7.379 7.385 7.381 7.381 7.382 7.384 7.374 7.397 7.380		Ne I
		5-5 2-2	d0? 0?	3062.859 3032.743	3061.969 3031.860	9.4 6.4	32649.23 ^D -100 32973.45 ^D -70	3.332 3.417	7.380 7.505	• • •	
1217	$z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [0.5] $z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [1.5] $z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [0.5] $z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [1.5] $z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [2.5] $z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [3.5]	1-1 1-1 2-1 2-1 2-2 2-3	d8 4 0? 0 1	3118.881 3115.200 3108.525 3104.882 3097.514 3093.380	3117.977 3114.297 3107.623 3103.982 3096.616 3092.482	3.9 -8.7 -1.0 0.0 1.9 1.0	32062.78 D -40 32100.67 D 90 32169.60 D 10 32207.34 D 0 32283.95 D -20 32327.10 D -10	3.430 3.430 3.417 3.417 3.417 3.417	7.405 7.410 7.405 7.410 7.419 7.425		II
	$z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [4.5] $z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [2.5] $z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [2.5] $z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [3.5] $z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [4.5]	3-4 3-3 3-2 3-4 4-5	0? 1 d0? 1 2.82	3092.977 3083.953 3081.774 3078.442 3072.0175	3092.079 3083.057 3080.879 3077.548 3071.1251	-8.6 4.8 2.8 0.0 0.4	32331.31 ^D 90 32425.92 ^D -50 32448.84 ^D -30 32483.96 ^D 0 32551.898 ^D -4	3.396 3.396 3.396 3.368	7.405 7.417 7.419 7.424 7.404	•••	I
	$z \cdot r \cdot -s \cdot D_{2.5}0a [4.3]$	4-3	2.82	3072.0173	30/1.1231	0.4	32331.098~ -4	3.308	7.404	•••	Ne

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No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} o-R (cm ⁻¹) (m	, ,	E(u) (eV)	log(gf) ⁷	B1.8
	$z^{5}F^{\circ}-s^{6}D_{2.5}6d$ [3.5] $z^{5}F^{\circ}-s^{6}D_{2.5}6d$ [3.5]	4-4 4-3	0 2	3056.990 3056.245	3056.101 3055.357	-8.4 0.0	32719.89 ^D	0 3.368 0 3.368	7.424 7.425		I
1218	$z^{5}F^{\circ} - s^{6}D_{2.5}6d$ [4.5] $z^{5}F^{\circ} - s^{6}D_{1.5}6d$ [0.5]	5-5 1-1	1 2 1	3044.681 3095.769 3092.772	3043.796 3094.871 3091.875	0.9 1.9 0.0	32844.16 ^D -1 32302.15 ^D -2 32333.45 ^D		7.404 7.435 7.439	•••	II I
	$z^{5}F^{\circ} - s^{6}D_{1.5}6d$ [1.5] $z^{5}F^{\circ} - s^{6}D_{1.5}6d$ [1.5] $z^{5}F^{\circ} - s^{6}D_{1.5}6d$ [1.5]	1-1 $2-1$ $2-2$	0 0	3082.595 3079.248	3081.700 3078.354	0.0	32440.20 ^D 32475.46 ^D	0 3.417 0 3.417	7.439 7.443		
	$z^{5}F^{\circ} - s^{6}D_{1.5}6d$ [3.5] $z^{5}F^{\circ} - s^{6}D_{1.5}6d$ [2.5] $z^{5}F^{\circ} - s^{6}D_{1.5}6d$ [2.5]	2-3 3-2 4-3	2 0? 3	3073.380 3058.967 3038.666	3072.487 3058.078 3037.782	-2.8 3.7 -6.5	32537.47 ^D 3 32690.77 ^D -4 32909.18 ^D 7		7.451 7.449 7.448	• • • • • • • • • • • • • • • • • • • •	I
1219	$z^{5}F^{\circ}-s^{6}D_{0.5}6d$ [1.5] $z^{5}F^{\circ}-s^{6}D_{0.5}6d$ [1.5]	$1-2 \\ 2-1$	3 2	3080.504 3065.728	3079.610 3064.837	2.8 -0.9	32462.22 ^D -3 32618.68 ^D 1	0 3.430 0 3.417	7.455 7.461		
1220	$z^{5}F^{\circ}-62192^{e}$	4-5 5-5	d0? d0?	2855.022 2831.398	2854.183 2830.565	-6.5 -4.0	35318.24 ^D 5	3.368 3.332	7.711 7.711		
1221	z ⁵ F°-62377 ^e	3-4	0?	2858.534	2857.694	0.0	34982.97 ^D	0 3.396	7.734	•••	
1222	a ^1P-z 3F $^{\circ}$	1-2	1.54	21781.818	21775.874	9	4590.985 ^A -	2 3.415	3.984		
1223	$a^{1}P-z^{3}D^{0}$	1-2	1.59	24135.077	24128.493	6		1 3.415	3.928	• • •	
1224	$a^{1}P-z^{3}P^{0}$	1-2 1-1 1-0	2.33 1.71 1.85	15615.403 14663.038 14260.062	15611.138 14659.031 14256.165	-10 2 4	6819.869 ^A -	4 3.415 1 3.415 2 3.415	4.209 4.260 4.284		
1225	$a^{1}P-y^{3}D^{0}$ (713)	1-2 1-1	1.45 1.57	8980.6617 8731.5449	8978.1969 8729.1475	-2.4 3.8		3 3.415 5 3.415	4.795 4.835		
1226	$a {}^{1}P - x {}^{5}P^{\circ}$	1 - 1	1.70	6436.6545	6434.8760	-1.2	15536.021^D	3 3.415	5.341		
1227	$a {}^{1}P - y {}^{3}P^{\circ}$ (716) $a {}^{1}P - u {}^{5}D^{\circ}$	1-0 1-2	2.91	5227.5211 5169.1512	5226.0661 5167.7118	2.5 -6.1	_	9 3.415 3 3.415	5.786 5.813	•••	
1228 1229	(717) a ¹ P-Psp3 ¹ D°	1-2	3.08	5031.0203	5029.6176	-0.5		2 3.415	5.879	-2.05^{b}	
1230	$(718*)$ $a {}^{1}P - x {}^{3}P^{\circ}$ (720)	$1-2 \\ 1-0$	2.08 2.71	4816.5808 4780.7756	4815.2350 4779.4394	5.1 0.0	20761.616 ^C -2 20917.108 ^A	2 3.415 0 3.415	5.989 6.008	 -2.02 ^a	
1231	$a^{1}P - w^{3}F^{0}$	1-2	1.85	4568.2685	4566.9885	-1.0	21890.132^{B}	5 3.415	6.129	-2.08^{b}	
1232	(723) $a^{1}P-w^{3}P^{\circ}$ (725)	1-0	2.43	4462.6250	4461.3729	0.6		3 3.415	6.193		
1233	$a^{1}P-t^{5}D^{\circ}$	1-2	1.98	4151.6179	4150.4476	0.3		2 3.415	6.401	• • •	
1234 1235	$a {}^{1}P - y {}^{1}D^{\circ}$ (726) $a {}^{1}P - x {}^{1}D^{\circ}$	1-2 1-2	3.97 3.36	4138.1645 4128.9772	4136.9977 4127.8128	-0.2		0 3.4151 3.415	6.411 6.417	-0.45 ^a	
1236	(727) $a^{1}P-u^{3}D^{\circ}$	1-1	2.88	4004.8938	4003.7619	0.2	_	1 3.415	6.510	-1.31 ^a	
1237	(728) $a^{1}P-t^{3}D^{\circ}$ (729)	1-2 1-1	3.58 2.75	3977.7380 3950.2591	3976.6132 3949.1414	-0.3 0:6	~	2 3.415 4 3.415	6.532 6.553	-0.85 ^a -1.56 ^b	II
1238	$a^{1}P-v^{3}P^{0}$ (731)	1-1	3.68	3893.0292	3891.9264	-0.3		2 3.415	6.599	-0.73ª	
1239	a ^{1}P – $Gsp3$ ^{3}F $^{\circ}$	1-2	3.31	3815.8616	3814.7789			2 3.415	6.664	. • • •	
1240	$a^{1}P^{-4}F5p^{5}F^{0}$	1-2	2.56	3773.6548	3772.5831	1.9	26499.509 ^C -1		6.700	• • •	
1241	$a^{1}P^{-4}F5p^{3}F^{0}$	1-2	2.86	3681.4258	3680.3779	-0.9		7 3.415	6.782	• • •	
1242	a $^{1}P-Dsp3$ $^{5}F^{\circ}$	1-2	2.68	3819.7015	3818.6178	2.6	26180.056 ^D -1			•••	
1243	$a ^1P - x ^3S^{\circ}$	1-1	3.53	3807.2972	3806.2167	-0.3		2 3.415		-0.82^{b}	
1244	a 1P $ ^4F$ $5p$ 3D $^\circ$	1-1	2.57	3667.8113	3666.7670	3.8	27264.216 ^C -2	3.415	6.795	• • •	

$y - w^{-1}D^{\circ}$ $y - w^{-1}D^{\circ}$ $y - w^{-1}D^{\circ}$ $y - w^{-1}F^{\circ}$	1-1 1-2 1-2 1-2 1-1 1-1 1-1 2-3 2-2	2.88 3.54 3.59 2.48 d0? d0? 2.01	λ_{vac}^{3} (Å) 3783.1915 3544.6874 3411.1475 3315.0201 3228.201 3241.298	3782.1173 3543.6749 3410.1692 3314.0663 3227.269	o-R ⁴ (mÅ) 4.2 -0.5 -0.1 0.7	(cm ⁻¹) 26432.709 ^B 28211.232 ^B 29315.648 ^A 30165.730 ^C	o-R ⁶ (mK) -29 4 1 -6	E(l) (eV) 3.415 3.415 3.415 3.415	(eV) 6.692 6.912 7.049	 -0.77 ^b -0.35 ^a	
$y - w^{1}D^{\circ}$ $y - u^{3}F^{\circ}$ $y - t^{3}F^{\circ}$ $y - t^{3}F^{\circ}$ $y - t^{3}F^{\circ}$ $y - s^{4}D5p^{5}D^{\circ}$ $y - s^{4}D5p^{3}D^{\circ}$ $y - z^{3}D^{\circ}$ $y - z^{3}F^{\circ}$ $y - z^{3}G^{\circ}$ $y - z^{3}F^{\circ}$	1-2 1-2 1-2 1-1 1-1 2-3 2-2	3.54 3.59 2.48 d0? d0? 2.01	3544.6874 3411.1475 3315.0201 3228.201	3543.6749 3410.1692 3314.0663 3227.269	-0.5 -0.1 0.7	28211.232 ^B 29315.648 ^A	4 1	3.415 3.415	6.912 7.049	-0.77^{b} -0.35^{a}	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1-2 1-2 1-1 1-1 2-3 2-2	3.59 2.48 d0? d0?	3411.1475 3315.0201 3228.201	3410.1692 3314.0663 3227.269	-0.1 0.7	29315.648 ^A	1	3.415	7.049	-0.35 ^a	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1-2 $1-1$ $1-1$ $2-3$ $2-2$	2.48 d0? d0? 2.01	3315.0201 3228.201	3314.0663 3227.269	0.7						
$2-t^{3}F^{\circ}$ $5)$ $2-s^{4}D5p^{5}D^{\circ}$ $2-s^{4}D5p^{3}D^{\circ}$ $3-z^{3}D^{\circ}$ $3-z^{3}P^{\circ}$ $3-z^{3}G^{\circ}$ $3-z^{3}F^{\circ}$	1-1 $1-1$ $2-3$ $2-2$	d0? d0? 2.01	3228.201	3227.269		30165.730^{C}	-6	3 415	7 155		
$0-s^{4}D5p^{5}D^{\circ}$ $0-s^{4}D5p^{3}D^{\circ}$ $0-z^{3}D^{\circ}$ $0-z^{3}P^{\circ}$ $0-z^{3}G^{\circ}$ $0-z^{3}F^{\circ}$	1-1 2-3 2-2	d0? 2.01					-	5115	7.155	• • •	
$0-z^{3}D^{\circ}$ $0-z^{3}P^{\circ}$ $0-z^{3}G^{\circ}$ $0-y^{3}F^{\circ}$	2-3 2-2	2.01	3241.298		-1.0	30977.01 ^D	10	3.415	7.255		
$0-z^3P^\circ$ $0-z^3G^\circ$ $0-y^3F^\circ$	2-2			3240.363	1.1	30851.84 ^D	-10	3.415	7.240	•••	
$0-z^3G^\circ$ $0-y^3F^\circ$			36791.772	36781.740	14	2717.999 ^A	-1	3.546	3.883	•••	
$0-y^3F^0$	2-3	1.08	18718.462	18713.353	4	5342.319 ^A	-1	3.546	4.209	• • •	
		1.26	13378.373	13374.716	16	7474.750 ^A	-9	3.546	4.473		
	2-3	1.78	11684.794	11681.596	3	8558.131 ^A	-2	3.546	4.607		
	2-2	1.92	11691.866	11688.667	-1	8552.954^{B}	1	3.546	4.607		
O−y ³ D° 7)	2-2	1.72	9927.1102	9924.3891	-1.0	10073.425 ^A	1	3.546	4.795		
	2-3	2.14	8618.8411	8616.4741	-8.2	11602.488^{B}	11	3.546	4.985		
$D-x^3D^{\circ}$	2-2	0.00	5996.2043	5994.5439	0.7	16677.217 ^B		3.546	5.614		
	2-1	0.60	5900.6982	5899.0635	1.7	16947.147 ^A		3.546	5.648	•••	
$O-y^3G^0$	2-3	0.60	5896.7970	5895.1633	0.3	16958.359 ^A		3.546	5.649	• • •	
$0-x^3F^{\circ}$	2-3	2.23	5408.8791	5407.3758	-6.4	18488.119^{D}	22	3.546	5.839	• • •	Ar
)−v ⁵ F° 5)	2-3	1.30	5123.4004	5121.9732	6.8	19518.287 ^D	-26	3.546	5.966		
$D - x^{3}P^{\circ}$	2-1	2.13	5022.2173	5020.8170	0.0	19911.524 ^B	0	3.546	6.015	•••	
$D-w^3F^{\circ}$	2-3	2.88	4845.3671	4844.0138	0.2	20638.271 ^A	-1	3.546	6.105	-2.05 ^a	
	2-3	2.39	4870.8240	4869.4639	0.5	20530.407 ^B	-2	3.546	6.092	-2.52^{b}	
1)	2-1	2.57	4832.5518	4831.2019	4.7			3.546			II
$(D-v)^3G^0$	2-3	2.47	4706.7736	4705.4570	-0.2			3.546	6.180		
$D-Fsp3$ $^{1}F^{0}$	2-3	4.06	4790.9897	4789.6508	-0.2	20872.514 ^A	1	3.546	6.134	-0.96ª	
$D-w^3P^{\circ}$	2-1	2.29	4664.4837	4663.1782	-0.2	21438.600 ^E	1	3.546	6.204	-2.42 ^b	
$D-z^{-1}F^{0}$	2-3	3.89	4549.1224	4547.8474	0.2	21982.262 ^A	-1	3.546	6.272	-1.01 ^a	
$D\!-\!u$ $^5F^{o}$	2-3	2.04	4345.0904	4343.8692	-3.8	23014.481 ^L	20	3.546	6.400		
06) D-t ⁵ D°	2-2	1.95	4343.0340	4341.8134	1.5			3.546	6.401		
$D-v^3F^{\circ}$	2-2	2.40	4425.4302	4424.1879	0.2	22596.673 ^E	3 -1	3.546	6.348	•••	
$D-u$ 3G °	2-3	2.54	4306.4180	4305.2070	0.7	23221.155 ^E	3 -4	3.546	6.425	-2.07 ^b	
$D-y^{-1}D^{\circ}$	2-2	3.56	4328.3124	4327.0956	0.0	23103.693	0	3.546	6.411	-0.80^a	
$D-x$ 1D $^{\circ}$	2-2	2.11	4318.2616	4317.0475	-1.1	23157.467 ⁰	6	3.546	6.417	-2.17 ^b	
52)	2-1	2.62	4182.7285	4181.5500	0.5	23907.839 ¹	3 -3	3.546	6.510		
	2-1	3.00	40.41 56.45			00555 005					
53)			4241.5647	4240.3708	0.0	23576.2054	4 0	3.546	6.469	-1.27 ^a	
	$y-v^3D^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-Fsp3^1F^\circ$ $y-w^3P^\circ$ $y-w^3P^\circ$ $y-v^3F^\circ$ $y-v^3F^\circ$ $y-v^3F^\circ$ $y-v^3F^\circ$ $y-v^3F^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$ $y-v^3G^\circ$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

TABLE 2—Continued

					BLE 2—Con							
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	Bl.
1278	$a {}^{1}D - {}^{4}F5p {}^{3}G^{0}$	2-3	2.84	3883.0738	3881.9736	-0.6	25752.794 ^C	4	3.546	6.739	•••	
1279	$a {}^{1}D - v {}^{3}P^{\circ}$ (766)	2-1	2.99	4060.8601	4059.7135	0.0	24625.325 ^A	0	3.546	6.599	-1.37ª	
1280	$a^{1}D$ - $Gsp3^{3}F^{0}$	$\begin{array}{c} 2 - 3 \\ 2 - 2 \end{array}$	2.66 2.56	4039.9310 3976.9659	4038.7899 3975.8412	0.3 -1.3	24752.898 ^E 25144.797 ^C		3.546 3.546	6.615 6.664		
1281	$a {}^{1}D - {}^{4}F5p {}^{5}F^{\circ}$	2-3	3.13	3990.9855	3989.8572	-0.6	25056.468 ^E		3.546	6.653	-1.08 ^b	
1282	$a ^{1}D - ^{4}F5p ^{5}D^{\circ}$	2-3	3.21	3971.3840	3970.2608	-0.6	25180.139 ^E		3.546	6.668		
1283	$a {}^{1}D - x {}^{1}F^{\circ}$ (769)	2-3	3.38	3974.7734	3973.6493	-0.5	25158.667 ^A		3.546	6.666	-1.02 ^a	
1284	$a ^1D - Dsp3 ^5D^{\circ}$	2-2	2.88	3951.2559	3950.1379	-0.6	25308.409 ^L	4	3.546	6.684		
1285	$a {}^{1}D - t {}^{3}G^{0}$ (771)	2-3	3.10	3846.7858	3845.6950	0.9	25995.729 ^E	-6	3.546	6.769	-1.04ª	
1286	$a {}^{1}D - s {}^{3}G^{\circ}$ (774)	2-3	3.90	3678.3532	3677.3061	0.1	27186.079 ^A	-1	3.546	6.917	-0.49 ^a	
1287	$a {}^{1}D - w {}^{1}D^{\circ}$ (772)	2-2	4.16	3683.2924	3682.2441	-0.8	27149.623 ^L	6	3.546	6.912	0.24 ^b	N
1288	$a ^1D - Gsp3 ^1F^{\circ}$	2-3	3.56	3637.2600	3636.2236	-0.3	27493.223 ^A	2	3.546	6.955	-0.52^a	
1289	a ¹ D-Fsp1 ³ F°	2-3	0?	3167.778	3166.861	-2.0	31567.87 ^L	20	3.546	7.460		
1290	$a^{1}H-y^{3}G^{\circ}$ (780)	5-4	1.34	6021.0329	6019.3659	0.0	16608.446 ^A	. 0	3.573	5.632	-3.36 ^b	
1291	$a^{1}H - x^{5}G^{\circ}$ (781)	5-4	0.00	5877.7624	5876.1338	-3.5	17013.277 ^C	10	3.573	5.682	• • •	
1292	$a^{1}H-z^{3}I^{\circ}$	5-6	0.70	5811.5822	5809.9713	-0.7	17207.018^{A}		3.573	5.706		
		5-5	0.78	5775.0515	5773.4503	0.7	17315.863 ^A	-2	3.573	5.720		
1293	$a {}^{1}H - u {}^{5}D^{\circ}$ (782)	5-4	2.30	5586.3154	5584.7647	-0.3	17900.887 ^A		3.573	5.792	-2.32 ^b	
1294	$a^{1}H-x^{3}F^{\circ}$ (783)	5-4	2.44	5534.2839	5532.7472	0.3	18069.185 ^A		3.573	5.813	-2.15 ^b	
1295	$a^{1}H-z^{3}H^{\circ}$ (784)	5-6 5-4	1.30 2.64	5505.8912 5468.5070	5504.3620 5466.9878	0.3 0.6	18162.364 ^C 18286.527 ^A		3.573 3.573	5.825 5.840	 -2.23 ^a	
1296	$a^{1}H-w^{5}G^{\circ}$ (785)	5-6 5-4	2.28 2.75	5392.7456 5327.6244	5391.2466 5326.1428	-2.9 0.3	18543.430 ^L 18770.092 ^A		3.573 3.573	5.872 5.900]
1297	$a\ ^1H-z\ ^1G^{ m o}$	5-4	3.94	5366.8911	5365.3991	0.3	18632.761 ^A		3.573	5.883	-1.02 ^a	
1298	(786) $a^{1}H-v^{5}F^{0}$	5-4	2.06	5232.8449	5231.3885	-6.3	19110.064 ^C	23	3.573	5.942		
1299	(787) $a^{1}H-x^{3}G^{\circ}$	5-4	2.94	5265.3300	5263.8650	0.0	18992.162 ^A	0	3.573	5.928	-2.14^a	
12,,,	(788)	5-5	2.36	5259.1186	5257.6553	0.6	19014.593 ^E		3.573	5.931		
1300	$a^{1}H-y^{5}H^{\circ}$	5-6	3.38	5253.4277	5251.9659	-1.1	19035.191 ^A		3.573	5.933		
	-	5-5	2.52	5151.6318	5150.1971	0.0	19411.325 ^E		3.573	5.980		
		5-4	2.63	5117.2037	5115.7781	1.0	19541.923 ^A		3.573	5.996	-2.74 ^b	
1301	$a \ ^1H-Hsp3 \ ^1I^{\circ}$	5-6	2.86	5187.1702	5185.7260	1.1	19278.334 ^E	-4	3.573	5.963	• • •	
1302	$a {}^{1}H - z {}^{1}H^{\circ}$ (790)	5-5	3.49	5111.7829	5110.3588	0.3	19562.646 ^A		3.573	5.998	-1.37ª	
1303	$a^{1}H-y^{1}G^{0}$ (791)	5-4	3.80	5029.5286	5028.1264	0.3	19882.579 ^A		3.573	6.038	-1.12 ^a	
1304	$a {}^{1}H - w {}^{3}F^{\circ}$ (792)	5-4	2.84	4928.7937	4927.4182	0.2	20288.940 ^A		3.573	6.089	-2.07ª	
1305	$a {}^{1}H - y {}^{3}H^{\circ}$ (793)	5-6 5-5	1.95 2.17	4851.0236 4811.2827	4849.6688 4809.9384	0.5 -1.6	20614.206 ^C 20784.478 ^E		3.573 3.573	6.129 6.150	-2.68 ^b -2.72 ^b	
1306	$a^{1}H-v^{3}G^{0}$ (794)	5-4	2.36	4805.8622	4804.5193	1.6	20807.921 ^E	3 -7	3.573	6.153	-2.59 ^b	
1307	$a {}^{1}H - x {}^{1}G^{\circ}$ (795)	5-4	3.18	4588.4129	4587.1276	0.0	21794.028 ^A	0	3.573	6.275	-1.74ª	

					TABI	LE 2—Conti	пиеа						
94.	No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
994ApJS	1308	a ¹ H-x ³ H° (796)	5-6 5-5 5-4	2.79 2.11 2.30	4503.8539 4494.6313 4426.8990	4502.5909 4493.3707 4425.6563	0.0 -0.6 -1.4	22203.207 ^A 22248.766 ^C 22589.176 ^C	0 3 7	3.573 3.573 3.573	6.326 6.331 6.374	-2.35 ^b -3.04 ^b	
-	1309	$a^{1}H-u^{3}G^{\circ}$ (797)	5-5 5-4	2.91 2.15	4433.8124 4376.7063	4432.5678 4375.4768	0.0 -0.2	$22553.954^{A} \\ 22848.232^{D}$	0 1	3.573 3.573	6.369 6.406	-1.60 ^b	
	1310	$a^{1}H-Hsp3^{1}H^{\circ}$	5-5	3.39	4383.9994	4382.7680	0.2	22810.222^{A}	-1	3.573	6.401	-1.31ª	
	1311	(799a*) a ¹ H-w ³ H° (799)	5-4	2.38	4175.5786	4174.4019	1.7	23948.777 ^D	-10	3.573	6.542	•••	
	1312	$a^{1}H-y^{3}I^{\circ}$ (800)	5-6	4.51	4220.5488	4219.3604	0.4	23693.601 ^A	-2	3.573	6.511	0.00^{a}	
	1313	$a^{1}H-z^{1}I^{0}$ (801)	5-6	4.68	4119.7070	4118.5450	0.2	24273.571 ^A	-1	3.573	6.583	0.21ª	
	1314	$a^{1}H - t^{3}G^{\circ}$ (803)	5-5	2.55	3974.0393	3972.9155	3.5	25163.314 ^D	-22	3.573	6.693	•••	
	1315	$a {}^{1}H - w {}^{1}G^{0}$ (804)	5-4	3.78	3847.5003	3846.4094	-0.1	25990.901 ^A	1	3.573	6.795	-0.47 ^a	
	1316	$a^{1}H-s^{3}G^{\circ}$ (807)	5-5	3.98	3758.0051	3756.9374	0.0	26609.863 ^A	0	3.573	6.872	-0.25 ^b	
	1317	$a^{1}H-v^{3}H^{\circ}$ (805)	5-5	4.42	3744.5324	3743.4682	0.1	26705.604 ^A		3.573	6.884	0.15^{a}	
	1318	$a^{1}H-^{2}H4p^{1}H^{0}$	5-5	3.96	3691.7772	3690.7267	-0.4	27087.225^{A}	3	3.573	6.931	-0.17 ^a	
	1319	$a^{1}H-u^{3}H^{\circ}$ (808)	5-5 5-4	2.97 3.54	3628.0903 3622.7517	3627.0562 3621.7190		27562.710 ^B 27603.327 ^A		3.573 3.573	6.990 6.995	-1.37 ^a -0.72 ^a	
	1320	$a^{1}H-u^{3}F^{\circ}$ (809)	5-4	3.67	3600.6521	3599.6251	-0.1	27772.747 ^A	1	3.573	7.016	-0.39 ^a	
	1321	$a {}^{1}H - v {}^{1}G^{\circ}$ (810)	5-4	4.34	3554.7537	3553.7386	0.1	28131.344 ^A	-1	3.573	7.061	0.27 ^a	
	1322	$a^{1}H - x^{3}I^{0}$ (811)	5-6 5-5	2.68 3.06	3539.7933 3535.5359	3538.7820 3534.5257		$28250.237^{D} \\ 28284.255^{D}$		3.573 3.573	7.076 7.080	-1.73 ^b -1.34 ^a	I
	1323	$a^{1}H-t^{3}F^{0}$	5-4	2.45	3480.6735	3479.6774		28730.072^{D}		3.573	7.135		
	1324	(812) $a^{1}H-t^{3}H^{\circ}$ (813)	5-5	0	3151.672	3150.760	-3.0	31729.19 D	30	3.573	7.507	•••	II
	1325	$z^{5}P^{\circ}-e^{5}D$	2-3	5.34	6413.4216	6411.6493 6408.0184		15592.301 ^A 15601.136 ^A		3.654 3.686	5.587 5.620	-0.72 ^a	
		(816)	1-2 3-4	4.87 5.69	6409.7896 6401.7704	6400.0012		15620.679 ^A		3.602	5.539	-0.52^{b}	
			1-1	4.81	6338.5765	6336.8243		15776.413 ^A		3.686	5.642	-1.05^{b}	
			1-0	4.03	6304.2365	6302.4936		15862.349 ^A	0	3.686	5.653	-0.91 ^c	
			2-2	4.52	6303.2439	6301.5012	0.8	15864.847 ^A		3.654	5.620		
			3-3	3.69	6248.0467	6246.3188	0.8	16005.002 ^A	-2	3.602	5.587	-0.88^a	
			2 - 1	2.90	6234.3654	6232.6412	0.8	16040.125 ^A		3.654	5.642	-0.96 ^c	
			3-2	2.71	6143.4318	6141.7320	1.1	16277.547 ^A	-3	3.602	5.620	-1.61 ^b	
	1326	$z^{5}P^{\circ}-e^{7}F$ (819)	$\begin{array}{c} 2-1 \\ 3-2 \end{array}$	1.85 2.59	4600.0284 4489.3922	4598.7400 4488.1331		21738.996 ^L 22274.730 ^E		3.654 3.602	6.349 6.364	_	
		• •				4701.0447		21265.917 ^L		3.686	6.323	_	I
	1327	$z^5P^0-f^7D$	1-2	2.61	4702.3601			21203.917 ⁻ 21315.369 ^L		3.686	6.329		
		(820)	1-1	2.79	4691.4506	4690.1380 4673.1636		21313.369 ⁻² 21392.792 ^A		3.654	6.306		
			2-3	3.14	4674.4717			21392.792 ⁻¹ 21529.621 ⁻²		3.654	6.323		
			2-2	3.15	4644.7636	4643.4634		21529.621		3.654	6.329		
			2-1	2.51	4634.1179	4632.8204 4596.0605		21579.080		3.602	6.299		
			3-4	2.83	4597.3482			21731.670 ² 21805.490 ²	-	3.602	6.306		
			3-3 $3-2$	2.45 3.61	4586.0010 4557.4030	4584.7164 4556.1259		21942.321		3.602	6.323	-0.79ª	
	1328	$z^{5}P^{\circ}-f^{5}D$	1-2	3.01	4769.6536	4768.3203	3 -0.2	20965.883		3.686	6.286		
	1520	(821)	2-3	3.19	4747.1274	4745.800		21065.371		3.654	6.265		
		\ /	1-1	3.32	4728.7170	4727.394	5 -4.7	21147.385		3.686	6.308	-1.16 ^a	
			2-2	3.12	4710.4057	4709.088	0.0	21229.594		3.654	6.286		
			1-0	2.98	4706.2646	4704.948		21248.274	⁴ -1	3.686	6.321	-1.57 ^b	•

				IAE	SLE 2—Cont	іпиеа						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		3-4	3.79	4680.1554	4678.8458	0.0	21366.812	0	3.602	6.251	-0.83 ^a	
<u>)</u> ,		2 - 1	3.09	4670.4782	4669.1711	-1.7	21411.084 ^A		3.654	6.308	-1.21^a	
,		3-3	3.24	4655.9081	4654.6050	-3.5	21478.087^{L}		3.602	6.265	-1.08^a	II
1		3-2	3.39	4620.5818	4619.2880	-0.2	21642.296 ^A	1	3.602	6.286	-1.12^{b}	
1329	$z^{5}P^{0}-e^{7}P$	2-3	3.32	4729.8685	4728.5457	-0.4	21142.237 ^A	2	3.654	6.275	-1.17ª	
1329	(822)	2-2	2.36	4674.5781	4673.2700	-0.4	21392.305^{E}		3.654	6.306	-1.17	
	(622)	3-4	3.73	4668.7597	4667.4531	-0.4	21418.965 ^A		3.602	6.258	-0.75^a	
		3-3	3.39	4639.3086	4638.0098	0.0	21554.936^{L}		3.602	6.275	-0.73	II
		3-2	2.61	4586.1039	4584.8192	0.0	21805.001 ^A		3.602	6.306	-1.12	11
1000	5 Do 5 G											
1330	$z^{5}P^{0}-e^{5}G$	$\begin{array}{c} 2-3 \\ 2-2 \end{array}$	2.07 2.32	4597.7033	4596.4155 4564.6986	0.0 1.3	21749.990 ^E 21901.113 ^E		3.654 3.654	6.350	-2.32^{b}	
	(823)	3-2	2.52	4565.9780	4560.0881	-0.4	21901.113 ⁻² 21923.256 ^A		3.602	6.369	-1.92 ^b	
				4561.3662			21923.236 ⁻¹ 22162.700 ^C			6.320		
		3-3	1.85	4512.0856	4510.8205	-2.2	22313.814 ^C		3.602	6.350	-2.89^{b}	
		3-2	2.20	4481.5288	4480.2717	1.2			3.602	6.369	• • • •	
1331	$z^{5}P^{0}-e^{7}G$ (824)	3-3	2.30	4463.4478	4462.1955	-2.4	22404.205 ^C		3.602	6.380	•••	
1332	z 5P $^{\circ}-f$ 5F	$^{2-2}$	2.64	4497.2144	4495.9531	0.2	22235.987 ^E		3.654	6.410	-1.72^{b}	
	(825)	2 - 1	2.18	4487.2311	4485.9725	2.6	22285.458 ^C	-13	3.654	6.417	-2.35^{b}	
		3-4	3.16	4463.2221	4461.9698	1.2	22405.338^{L}		3.602	6.380	-1.21a	I
		3-3	3.09	4435.0272	4433.7824	0.4	22547.776 ^A	-2	3.602	6.398	-1.27ª	
1333	$z^{5}P^{0}-e^{5}S$	1-2	2.58	4669.3683	4668.0616	0.0	21416.173 ^A	0	3.686	6.341		
	(826)	2-2	3.62	4612.5706	4611.2789	-0.2	21679.885 ^A		3.654	6.341		
	()	3-2	3.78	4526.4058	4525.1368	0.0	22092.584 ^A		3.602	6.341		
1334	$z^{5}P^{\circ}-e^{3}D$	2-3	2.39	4581.8610	4580.5774	0.2	21825.193 ^E	-1	3.654	6.359	-2.09 ^b	
1334	(827)	1-2	2.21	4543.9722	4542.6986	1.2	21023.193 22007.177 ^E		3.686	6.415		
	(627)	3-3	2.23	4496.8291	4495.5680	0.6	22237.892^{E}		3.602	6.359	-2.12^{b}	
		$^{3-3}_{2-2}$	2.66	4490.1663	4488.9069	0.8	22270.890^{E}		3.654	6.415	-1.83^a	
		1-1	2.73	4482.8668	4481.6093	0.2	22307.154 ^A		3.686	6.452	-1.42^{b}	
		3-2	2.41	4408.4707	4407.2329	-1.6	22683.603 ^L		3.602	6.415		
1335	$z^{5}P^{\circ}-g^{5}D$	3-4	3.66	4485.4780	4484.2198	-0.2	22294.168 ^A	1	3.602	6.366	-0.86^a	
1333	$\begin{array}{c} z \cdot P \cdot -g \cdot D \\ (828) \end{array}$	$\frac{3-4}{2-3}$	2.93	4483.9971	4482.7393	0.0	22294.108 22301.531 ^A		3.654	6.419	-0.86** -1.35 ^b	
	(626)	1-1	2.88	4448.0804	4446.8321	0.0	22481.608 ^A		3.686	6.474	-1.33 ^b	
		1-0	2.62	4439.5893	4438.3433	0.2	22524.606 ^A		3.686	6.479	-1.63 ^b	
		2-2	2.02	4428.541	4427.298		22580.798^{L}		3.654	6.453	-1.03	МΙ
		3-3	3.34	4402.5261	4401.2899	0.0	22714.232^{A}		3.602	6.419	-0.92^{b}	141 1
		2-1	2.40	4396.5088	4395.2741	-0.2	22745.320^{B}	-	3.654	6.474	-1.83^{b}	
		3-2	2.61	4349.0548	4347.8326	-0.8	22993.502 ^E		3.602	6.453	-1.66 ^b	
1006	5 mg - 7 g											
1336	$z^{5}P^{0}-e^{7}S$	$\begin{array}{c} 2-3 \\ 3-3 \end{array}$	2.39 2.16	4524.6672 4441.7259	4523.3987 4440.4793	-0.4 0.0	22101.073 ^B 22513.771 ^C		3.654 3.602	6.394 6.394	-1.99 ^b -2.07 ^b	
	(829)											
1337	z 5P $^{\circ}-e$ 5P	1-1	3.23	4486.9341	4485.6756	-0.2	22286.933 ^A		3.686	6.449	-1.02^{b}	
	(830)	1-2	3.91	4477.3315	4476.0755	0.0	22334.732 ^A		3.686	6.455	•••	
		2-3	3.92	4470.6298	4469.3756	0.0	22368.213 ^A		3.654	6.427	-0.48^{a}	
		2-1	3.57	4434.4634	4433.2187	0.2	22550.643 ^A		3.654	6.449	-0.70^{b}	
		2-2	2.63	4425.0830	4423.8408	-0.6	22598.446 ^B		3.654	6.455	-1.61 ^b	
		3-3	3.71	4389.6397	4388.4068	-0.2	22780.913 ^A		3.602	6.427	-0.68^a	
1000	5 po 6 pc 5 p	3-2	2.52	4345.7209	4344.4995	0.4	23011.142 ^B		3.602	6.455	•••	
1338 1339	$z^{5}P^{\circ}-s^{6}D6s^{5}D$ $z^{5}P^{\circ}-s^{4}D4d^{5}F$	3-4 1-2	2.69 2.49	3933.3576 3474.6787	3932.2443 3473.6842	0.6 1.1	25423.572^{C} 28779.639^{D}		3.602 3.686	6.754 7.254	•••	
1337	∠ 1 — в D4u F	$\frac{1-2}{2-2}$	2.82	3443.1258	3442.1393	-1.9	29043.377 ^L		3.654	7.254	• • •	Ne
		3-4	3.23	3440.8543	3439.8684	-0.1	29043.577 29062.550 ^E		3.602	7.206	• • •	1 10
		3-3	3.12	3439.2921	3438.3066	0.5	29002.330 29075.751 ^E		3.602	7.207	•••	
		3-2	2.54	3394.8877	3393.9136	0.7	29456.055 ^C		3.602	7.254		
1240	$z^{5}P^{\circ}-i^{5}D$						28550.470^{D}					
1340	$z^{3}P^{3}-i^{3}D$ (835*)	$1-1 \\ 3-3$	2.58 3.00	3502.5693 3477.3397	3501.5676 3476.3444	-0.6 0.0	28550.470 ² 28757.616 ^C		3.686 3.602	7.226 7.168	-0.47ª	
	(033 ·)	3-3 3-2	2.90	3477.3397 3458.0772	3476.3 444 3457.0869	0.8	28737.816 ² 28917.804 ^C		3.602	7.188		
		5-4	2.30	3730.0772	J -1 J 1.0009	0.0	20717.004	-1	3.002	7.100	•••	

					BLE 2—Com	inucu						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\begin{array}{c} \lambda_{air}^{} \\ (A) \end{array}$	o-R ⁴ (mÅ)	σ 5 (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	B1. ⁸
1341	$z^{5}P^{\circ}$ – $s^{4}D4d^{5}P$	2-3 3-2	3.05 2.94	3446.7519 3429.7312	3445.7645 3428.7481	0.8 -0.7	29012.822 ^B 29156.804 ^D		3.654 3.602	7.251 7.217	-0.63 ^b	Ne
1342	z $^5P^{\circ}$ $-s$ 4D4d 3D	1-2 2-2	2.76 2.45	3419.1446 3388.5895	3418.1643 3387.6169	0.4 -0.8	29247.081 ^C 29510.804 ^D		3.686 3.654	7.312 7.312		I
1343	z ⁵ P°-59077 ^e	$1-1 \\ 2-1$	2.76 2.28	3407.8094 3377.4608	3406.8320 3376.4911	-2.2 1.8	$29344.364^{L} \\ 29608.042^{L}$		3.686 3.654	7.324 7.324		Ne
1344	$a^{1}I-z^{3}I^{\circ}$ (837)	6-7 6-6	0.48 0.60	6000.6001 5983.0219	5998.9385 5981.3650	-0.7 -0.4	16665.000 ^A		3.634 3.634	5.700 5.706		
1345	$a^{1}I-z^{3}H^{0}$	6-5	2.06	5651.1986	5649.6306	0.3	17695.361 ^A	-1	3.634	5.828	-2.77 ^b	
1346	(838) $a {}^{1}I - w {}^{5}G^{\circ}$ (839)	6-6	2.41	5540.0545	5538.5162	0.9	18050.364 ^D	-3	3.634	5.872	•••	3
1347	$a^{1}I - H sp3^{1}I^{\circ}$	6-6	2.54	5323.3150	5321.8345	-1.1	18785.287 ^B	4	3.634	5.963	•••	
1348	$a {}^{1}I - x {}^{3}G^{\circ}$ (841)	6-5	2.63	5399.1185	5397.6178	-0.6	18521.542 ^A	2	3.634	5.931	-2.48 ^b	
1349	$a^{1}I-y^{5}H^{\circ}$	6-5 6-6	2.82 3.03	5285.8953 5393.1216	5284.4248 5391.6225	0.0 -1.2	18918.271 ^A 18542.137 ^A		3.634 3.634	5.980 5.933	-2.42 ^a	
1350	$a^{1}I-z^{1}H^{0}$	6-5	3.95	5243.9504	5242.4911	0.3	19069.593 ^A		3.634	5.998	-0.97ª	
1351	(843) $a^{1}I-v^{3}G^{0}$	6-5	2.37	4963.2986	4961.9140	0.2	20147.891 ^B	-1	3.634	6.132	-2.29 ^b	
1352	(845) $a^{1}I - x^{3}H^{\circ}$ (846)	6-6 6-5	2.07 2.31	4606.1415 4596.4955	4604.8515 4595.2080	1.5 0.8	21710.145^{B} 21755.705^{B}		3.634 3.634	6.326 6.331		
1353	a $^{1}I-u$ $^{3}G^{\circ}$	6-5	2.88	4532.9009	4531.6302	-5.8	21733.703 22060.928^{D}		3.634	6.369		
1354	(847) $a^{1}I - H sp3^{1}H^{\circ}$	6-5	3.09	4480.8597	4479.6028	4.6	22317.146 ^A	-23	3.634	6.401		
1355	(848*) a ¹ I-y ³ I°	6-6	3.36	4310.2426	4309.0307	0.0	23200.550 ^A		3.634	6.511	-1.15 ^a	
1356	(849) $a^{1}I-z^{1}I^{0}$	6-5 6-6	2.34 3.44	4239.8018 4205.1227	4238.6084 4203.9383	-3.8 -0.2	23586.008^{D} 23780.519^{A}		3.634 3.634	6.558 6.583	 -0.99 ^a	
1357	(850) $a^{1}I-y^{1}H^{\circ}$	6-5	2.65	4166.5920	4165.4177	-0.2	24000.430^{B}		3.634	6.610		
	(851)										•••	
1358	$a^{1}I-v^{3}H^{\circ}$	6-5	3.47	3814.9669	3813.8845	0.6	26212.547 ^A		3.634	6.884	-0.80°	
1359	$a^{1}I-^{2}H4p^{1}H^{0}$	6-5	2.98	3760.2231	3759.1548	0.0	26594.167 ^B	0	3.634	6.931	-0.97 ^a	
1360	$b~^3D-z~^3F^{\circ}$	2-3	2.60	40844.217	40833.081	0	2448.327 ^A		3.640	3.943		
		$\begin{array}{c} 2-2 \\ 1-2 \end{array}$	2.07 2.39	36006.867 35537.044	35997.049 35527.355	-26 0	2777.248 ^A 2813.965 ^A		3.640 3.635	3.984 3.984	• • •	
261	130 300						2329.609^{B}				• • •	
361	$b^3D-z^3D^{\circ}$	$\frac{2-2}{1-1}$	2.29 2.26	42925.658 38207.312	42913.955 38196.895	-37 -15	2529.609 ⁻ 2617.300 ^D		3.640 3.635	3.928 3.960		
362	$b^3D-z^3P^{\circ}$	3-2	1.78	21857.340	21851.376	-5	4575.122 ^A		3.642	4.209		
302	0 10 2 1	$\frac{3}{2-1}$	1.66	19975.514	19970.062	0	5006.129 ^A		3.640	4.260		
		1 - 1	1.38	19830.072	19824.660	4	5042.846 ^A	-1	3.635	4.260		
		1-0	1.41	19100.117	19094.903	0	5235.570 ^A	0	3.635	4.284	• • •	
363	$b~^3D-z~^3G^{ m o}$	3-4	1.04	15635.378	15631.106	0	6395.752^{A}	0	3.642	4.434		
364	$b~^3D-y~^3F^{ m o}$	3-4	2.77	13671.726	13667.989	-2	7314.365 ^A	1	3.642	4.548	-2.28^a	
	Ť	2 - 3	2.55	12810.653	12807.150	-3	7806.003^{A}	2	3.640	4.607		
		2-2	1.34	12248.273	12244.922	0	8164.416 ^A		3.640	4.652		
		1-2	2.46	12193.435	12190.099	-1	8201.134 ^A	1	3.635	4.652	-2.33^a	
365	$b~^3D-y~^3D$ °	3-3	2.38	11359.064	11355.955	0	8803.542 ^A	0	3.642	4.733		
	(858)	2-2	1.97	10728.124	10725.186	0	9321.294^{D}		3.640	4.795		
		2 1	0.00	10274 520	10271 (07	Λ	9638.991 ^B		2 (40	4.005		
		2-1 1-1	0.90	10374.529	10371.687 10332.329	0	9638.991~ 9675.708 ^A		3.640 3.635	4.835 4.835		

:				IAI	BLE 2—Com	тиеи						
No	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
$\frac{13\epsilon}{4}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3-2	2.30	6605.0203	6603.1965	-0.4	15139.999 ^B	1	3.642	5.519	• • •	
136	$b^{3}D - x^{3}D^{\circ}$ (863)	3-3	2.26	6309.5993	6307.8549	0.4	15848.867 ^B	-1	3.642	5.606	•••	
136	$b^3D-y^3G^{\circ}$	3-4	1.85	6227.9728	6226.2503	-0.4	16056.589 ^C	1	3.642	5.632	• • •	
136	$b^3D-w^5P^0$	3-3	0.30	5964.7176	5963.0657	10.7	16765.253 ^C	-30	3.642	5.720		
137	$b^3D-z^3S^{\circ}$	1-1	0.00	5786.7755	5785.1712	3.0	17280.781^{B}	-9	3.635	5.778	• • •	
137	•	1-0	1.00	5762.8537	5761.2559	-0.3	17352.514 ^A	_	3.635	5.786		
	(867)	3-2	1.92	5761.9422	5760.3446	0.3	17355.259 ^A		3.642	5.793	-2.49 ^b	
		2-2	0.60	5756.9443	5755.3481	1.0	17370.326 ^B		3.640	5.793		
		2-1	1.59	5699.6009	5698.0200	-0.3	17545.088 ^A		3.640	5.815	-2.68^{b}	
		1-1	1.00	5687.6982	5686.1204	-0.3	17581.805 ^A		3.635	5.815	• • •	
137		3-4	2.00	5764.0117	5762.4135	0.0	17349.028 ^A		3.642	5.792	-2.28^{b}	
	(866)	3 - 3	1.54	5755.9986	5754.4026	-0.3	17373.180 ^A		3.642	5.795	-2.70^{b}	
		2-3	0.60	5751.0041	5749.4094	-6.9	17388.268 ^B		3.640	5.795	•••	
		3-2	1.11	5708.8313	5707.2479	-5.5	17516.720 ^B		3.642	5.813	-3.40^{b}	
		2-2	1.41	5703.9300	5702.3479	0.0	17531.772 ^A		3.640	5.813	-2.87 ^b	
137		3-4	1.94	5708.6329	5707.0495	0.0	17517.329 ^A	-	3.642	5.813	-2.40^{b}	
	(868)	3-3	1.43	5643.0571	5641.4913	2.5	17720.891 ^A		3.642	5.839	• • • •	
		2-3	2.04	5638.2607	5636.6962	0.3	17735.966 ^A		3.640	5.839	-2.61 ^b	
		2-2	1.71	5605.3017	5603.7459	3.5	17840.253^{B}		3.640	5.851	• • •	
		1-2	1.43	5593.7872	5592.2346	1.9	17876.976 ^C	-6	3.635	5.851	• • •	
137		3-4	1.97	5638.6727	5637.1081	0.3	17734.670 ^A		3.642	5.840	• • •	
137		3-3	1.04	5667.2061	5665.6338	-1.6	17645.379 ^B		3.642	5.829	• • •	
	(869)	2-3	1.61	5662.3721	5660.8011	0.0	17660.443 ^A		3.640	5.829	• • •	
		3-2	1.04	5629.2788	5627.7166	1.6	17764.265 ^B		3.642	5.844		
		$^{2-2}$	1.38	5624.5070	5622.9461	0.6	17779.336 ^B		3.640	5.844	• • •	
		1-2	1.73	5612.9177	5611.3599	3.5	17816.046 ^B		3.635	5.844	•••	
137		3-4	1.85	5489.0065	5487.4819	0.3	18218.233 ^C		3.642	5.900		
	(870)	2 - 3	2.25	5453.6035	5452.0882	-1.8	18336.500 ^B		3.640	5.913	-2.86^{b}	
		1-2	2.24	5402.1574	5400.6559	0.9	18511.123 ^B	-3	3.635	5.930	• • •	
137	$b^3D-Psp3^1D^0$	3-2	2.18	5540.8185	5539.2800	-0.3	18047.875^{B}		3.642	5.879	-2.66^{b}	
	(871)	2-2	2.04	5536.2007	5534.6634	4.0	18062.929 ^B		3.640	5.879	• • •	
137	$b^{3}D-z^{1}G^{0}$ (872)	3-4	2.31	5530.6960	5529.1602	-0.9	18080.907 ^B	3	3.642	5.883	-2.73 ^b	
137	9 $b^{3}D-v^{5}F^{0}$	3-4	1.90	5388.4574	5386.9596	-0.9	18558.187^{D}		3.642	5.942	• • •	
	(875)	3-2	2.56	5300.2502	5298.7758	-0.3	18867.034 ^A		3.642	5.981	-2.02°	
		2-2	1.95	5296.0214	5294.5482	0.8	18882.099 ^B	-3	3.640	5.981	-2.86 ^b	
138	$b^{3}D - v^{5}P^{0}$	3-2	2.28	5321.5156	5320.0356	-2.0	18791.639^{C}	7	3.642	5.971	-2.54^{b}	
	(877)	$^{2-2}$	2.15	5317.2503	5315.7714	-3.7	18806.713^{D}		3.640	5.971		
		1-2	2.79	5306.8988	5305.4227	5.9	18843.397 ^A	-21	3.635	5.971	• • •	
138	$b^{3}D - x^{3}P^{0}$	3-2	2.73	5281.8314	5280.3620	0.6	18932.827 ^A	-2	3.642	5.989	-1.82^a	
	(880)	1 - 0	2.74	5224.6397	5223.1855	2.5	19140.076 ^A		3.635	6.008	-1.78 ^a	
		2 - 1	2.68	5219.3720	5217.9193	0.0	19159.393 ^B		3.640	6.015	-1.72°	
		1-1	2.32	5209.3877	5207.9376	-0.8	19196.114 ^B		3.635	6.015	-2.45^{b}	
138	$b^3D-y^1G^0$	3-4	2.85	5173.1136	5171.6731	0.8	19330.718 ^A	-3	3.642	6.038	• • • •	
138	$b^3D-w^3F^{\circ}$	3-4	3.31	5066.6048	5065.1927	0.0	19737.083 ^A		3.642	6.089	-1.51 ^a	
	(883)	3-3	2.22	5032.4394	5031.0363	-1.5	19871.079 ^B		3.642	6.105		
		2 - 3	2.92	5028.6275	5027.2255	-0.3	19886.142 ^D		3.640	6.105	-1.89 ^a	II
		2-2	2.26	4980.9754	4979.5861	-1.0	20076.389 ^B		3.640	6.129	-2.58^{b}	
		1-2	3.04	4971.8828	4970.4958	-0.2	20113.105 ^A	1	3.635	6.129	-1.74ª	
138	$b^{3}D - v^{3}D^{\circ}$	3-3	1.65	5059.9078	5058.4975	0.8	19763.206 ^B		3.642	6.092	-2.83^{b}	
	(884)	2 - 3	2.74	5056.0519	5054.6426	-0.3	19778.278 ^A	1	3.640	6.092	-1.92ª	

TABLE 2—Continued

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{} \ (A)$	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
1385	b ³ D-Fsp3 ¹ F° (887*)	2-3	3.18	4970.0843	4968.6979	-0.5	20120.383 ^A	2	3.640	6.134	-1.78 ^b	
1386	$b^3D-w^3P^{\circ}$	1-0	2.77	4847.0020	4845.6482	1.4	20631.310 ^A		3.635	6.193		
	(888)	2 - 1	2.87	4834.0780	4832.7276	0.0	20686.468 ^A		3.640	6.204	-1.73^a	
		1 - 1	2.63	4825.5140	4824.1659	0.9	20723.181^{B}		3.635	6.204	• • •	
		3-2	3.20	4804.2222	4802.8797	-0.7	20815.024 ^A		3.642	6.222	-1.51^{a}	
		$^{2-2}$	2.58	4800.7476	4799.4061	-0.2	20830.089^{A}	1	3.640	6.222	-2.23 ^b	
1387	$b^{3}D-z^{1}F^{\circ}$ (889)	2-3	2.89	4710.2861	4708.9685	0.0	21230.133 ^A	0	3.640	6.272	-2.03ª	
1388	$b^{3}D-x^{1}G^{0}$ (890)	3-4	1.81	4707.6161	4706.2992	-0.9	21242.174 ^B	4	3.642	6.275	-2.95 ^b	
1389	$b^3D-x^3H^{\circ}$	3-4	1.85	4537.7585	4536.4866	-0.4	22037.312^{C}	2	3.642	6.374	• • • •	
1390	$b~^3D{-}v~^3F^{f o}$	2-2	1.90	4577.8000	4576.5175	-2.1	21844.554 ^C	10	3.640	6.348		
	(894)	1-2	2.44	4570.1197	4568.8392	-0.8	21881.265^{B}_{-}		3.635	6.348		
		3-4	2.32	4559.3830	4558.1054	-0.4	21932.792^{B}		3.642	6.361	•••	
		2-3	2.47	4543.6856	4542.4121	0.2	22008.565^{B}	-1	3.640	6.368	-2.05^{b}	
1391	$b {}^{3}D - u {}^{3}G^{\circ}$ (898)	3-4	2.04	4485.0350	4483.7770	0.4	22296.370 ^C	-2	3.642	6.406	-2.47 ^b	
1392	$b^{3}D-y^{1}D^{\circ}$ (900)	2-2	2.89	4473.9665	4472.7113	6.0	22351.531 ^B	-30	3.640	6.411	• • •	
1393	$b^{3}D-x^{1}D^{\circ}$	2-2	3.16	4463.2221	4461.9698	-1.6	22405.338^{D}	8	3.640	6.417		I
1373	(902)	1-2	2.32	4455.9215	4454.6712	0.2	22442.047 ^B		3.635	6.417		•
	` '											
1394	b ³ D-u ³ D° (903)	3-3 $3-2$	2.08 2.22	4425.3106 4362.0289	4424.0683 4360.8032	0.8 -1.1	22597.284^{D} 22925.112^{B}		3.642 3.642	6.443 6.484	-1.87 ^b	
1395	$b^{3}D-t^{3}D^{\circ}$	3-3	2.69	4378.0040	4376.7742	-7.9	22841.459^{D}	41	3.642	6.473		I
	(904)	2-2	2.51	4287.0284	4285.8225	-1.3	23326.181 ^C		3.640	6.532	-1.78^{b}	
	(22,7)	2-1	2.28	4255.1278	4253.9303	0.0	23501.057^{C}		3.640	6.553		
1396	$b~^3D-^4F5p~^3G^{ m o}$	3-4	2.15	4057.4906	4056.3449	-1.5	24645.775 ^C	9	3.642	6.697		
1397	$b{}^{3}D{-}v{}^{3}P^{\circ}$	3-2	3.10	4247.2804	4246.0850	0.4	23544.478 ^A	-2	3.642	6.561	-1.10^{a}	
	(906)	$^{2-2}$	2.78	4244.5632	4243.3685	-0.4	23559.550^{B}	2	3.640	6.561		
		1-1	1.85	4182.3652	4181.1868	-0.7	23909.916^{D}	4	3.635	6.599		
1398	$b~^3D-Gsp3~^3F^{\circ}$	3-4	2.71	4240.5550	4239.3613	-0.7	23581.819^{B}	4	3.642	6.565	-1.52^{b}	
1370	v D-Gap,s 1	2-3	2.30	4166.5323	4165.3580	-1.0	24000.774^{C}		3.640	6.615		
		$\frac{1}{1-2}$	2.73	4093.4321	4092.2770	-0.3	24429.378^{B}		3.635	6.664		
	135 457 550											
1399	$b^3D-^4F5p^5D^\circ$	3-4 2-3	2.00 2.49	4125.6508 4093.6612	4124.4873 4092.5060	-0.5 -1.3	24238.600^{D} 24428.011^{B}		3.642 3.640	6.647 6.668	-2.24 ^b	
1400	$b~^3D-Dsp3~^5F^{ m o}$	1-2	2.00	4097.8466	4096.6903	-1.8	24403.061 ^C	11	3.635	6.661		
1401	$b^{3}D-x^{1}F^{0}$ (911)	2-3	2.88	4097.2633	4096.1072	-0.3	24406.535 ^B	2	3.640	6.666	•••	
1402	$b^{3}D-x^{3}S^{\circ}$	2-1	2.75	4089.7109	4088.5568	0.7	24451.606 ^B	-4	3.640	6.671	-1.53 ^b	
1402	0 10 11 15	1-1	2.54	4083.5771	4082.4246	-1.2	24488.334 ^B		3.635	6.671	-1.55^{b}	
1403	b ³ D-Dsp3 ⁵ D°	3-4	2.08	4011.3100	4010.1763	2.3	24929.512^{C}		3.642	6.732	-1.55	
1404	$b^3D-t^3G^{\circ}$	3-4	2.56	4021.6199	4020.4836	-0.2	24865.602 ^D	1	3.642	6.724	-1.77 ^b	
1404	(913)	2-3	3.00	3961.3998	3960.2792	0.2	25243.602^{B}		3.640	6.769	-1.17^a	
1405	$b {}^{3}D - s {}^{3}G^{\circ}$ (918)	2-3	3.13	3783.0140	3781.9399	0.1	26433.949 ^B	-1	3.640	6.917	-1.26 ^b	
1406	$b^{3}D-w^{1}D^{\circ}$ (916)	2-2	3.20	3788.2388	3787.1633	-0.6	26397.491 ^B	4	3.640	6.912	-0.96 ^b	
1407	$b^3D-Gsp3$ $^1F^{\circ}$	2-3	2.74	3739.5633	3738.5004	0.0	26741.090 ^D	0	3.640	6.955	•••	II
1408	$b~^3D-t~^3F$ °	2-3	3.06	3535.5359	3534.5257	-0.1	28284.255^{D}	1	3.640	7.146		I
1409	b 3D-s 4D5p 5P°	1-2	3.14	3357.3660	3356.4015	1.5	29785.254 ^D	-13	3.635	7.328	•••	I
1410	$b^{1}G-y^{3}F^{\circ}$	4-4	1.20	14519.602	14515.634	-4	6887.241 ^A	2	3.694	4.548		

•					ABLE 2—Cor	mmeu						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
1411	$b {}^1G - x {}^5D$ °	4-4	1.48	10176.192	10173.404	9	9826.858 ^A	-9	3.694	4.913	•••	
1412	$b~^1G-u~^5D^{\circ}$	4-4	1.20	5909.5005	5907.8634	0.3	16921.904 ^A	-1	3.694	5.792		
1413	$b {}^{1}G - x {}^{3}F^{\circ}$ (922)	4-4	1.28	5851.3056	5849.6840	0.7	17090.203 ^A	-2	3.694	5.813	-2.99 ^b	
1414	$b^{1}G-z^{3}H^{\circ}$	4-5	1.28	5810.7660	5809.1553	-0.3	17209.435 ^A		3.694	5.828		
		4-4	0.85	5777.8263	5776.2244	0.0	17307.547 ^A		3.694	5.840	•••	
1415	$b {}^{1}G - w {}^{5}G^{\circ}$ (923)	4-5 4-4	0.30 0.78	5674.9512 5620.7848	5673.3768 5619.2249	-2.3 0.3	17621.297 ^B 17791.110 ^B		3.694 3.694	5.879 5.900	-3.27 ^b	
1416	$b {}^{1}G - z {}^{1}G^{\circ}$ (924)	4-4	2.54	5664.5096	5662.9380	0.0	17653.779 ^A	0	3.694	5.883	-1.97ª	
1417	$b^{1}G - x^{3}G^{\circ}$ (926)	4-4	2.04	5551.4940	5549.9527	3.4	18013.169 ^C	-11	3.694	5.928	-2.91 ^b	
1418	$b^{1}G-y^{5}H^{\circ}$	4-5	2.28	5425.2460	5423.7383	-0.3	18432.344 ^C		3.694	5.980		
		4-4	2.00	5387.0728	5385.5753	-3.8	18562.957 ^C		3.694	5.996	-2.97 ^b	
1419	$b {}^{1}G - z {}^{1}H^{\circ}$ (928)	4-5	3.27	5381.0699	5379.5740	0.0	18583.665 ^A		3.694	5.998	-1.51 ^a	
1420	$b\ ^{1}G-y\ ^{1}G^{o}$ (929)	4-4	3.34	5289.9963	5288.5247	-2.2	18903.605 ^A		3.694	6.038	-1.51ª	
1421	$b {}^{1}G - w {}^{3}F^{\circ}$ (930)	4-4	2.55	5178.6760	5177.2340	1.1	19309.955 ^B	-4	3.694	6.089	-2.42 ^b	
1422	$b {}^{1}G - v {}^{3}G^{\circ}$ (932)	4-5	1.88	5085.9629	5084.5457	1.0	19661.960 ^C	-4	3.694	6.132	• • •	
1423	$b {}^{1}G-Fsp3 {}^{1}F^{\circ}$	4-3	2.62	5081.7679	5080.3518	-0.3	19678.191 ^A	1	3.694	6.134	• • •	
1424	$b {}^{1}G - z {}^{1}F^{0}$ (933)	4-3	2.11	4810.4822	4809.1380	0.9	20787.937 ^B	-4	3.694	6.272	•••	
1425	$b {}^{1}G - x {}^{1}G^{\circ}$ (934)	4-4	3.20	4804.2222	4802.8797	5.1	20815.024 ^A	-22	3.694	6.275	• • •	
1426	$b {}^{1}G-Gsp3 {}^{3}F^{\circ}$	4-3	2.35	4244.7358	4243.5411	-2.7	23558.592 ^C	15	3.694	6.615	• • •	
1427	$b {}^1G-{}^4F5p {}^5F^{\circ}$	4-3	2.68	4190.7372	4189.5566	-1.8	23862.150 ^B	10	3.694	6.653	-1.33 ^b	
1428	b ^1G-y 1H $^{\circ}$	4-5	1.95	4252.6946	4251.4977	-0.5	23514.503^{D}	3	3.694	6.610		II
1429	$b~^1G-^4F5p~^5D^{\circ}$	4-3	2.81	4169.1301	4167.9552	-1.4	23985.819^{B}	8	3.694	6.668		
1430	$b {}^{1}G - x {}^{1}F^{\circ}$ (941)	4-3	2.97	4172.8667	4171.6908	0.2	23964.341 ^A	-1	3.694	6.666	-1.44ª	
1431	$b {}^{1}G - t {}^{3}G^{\circ}$ (943)	4-3	2.68	4032.0295	4030.8904	0.8	24801.406 ^B	-5	3.694	6.769	-1.07ª	
1432	b ¹ G-w ¹ G° (945)	4-4	3.35	3998.0940	3996.9639	-0.2	25011.918 ^A	1	3.694	6.795	-0.77ª	
1433	$b {}^{1}G - s {}^{3}G^{0}$ (948)	4-3	2.70	3847.3744	3846.2835	0.7	25991.752 ^C	-5	3.694	6.917	•••	
1434	b 1G-v 3H°	4-5	2.68	3887.0217	3885.9205	-2.1	25726.638 ^C	14	3.694	6.884	• • •	
1435	z $^3F^{\circ}-c$ 3F	4-3	3.16	47495.175	47482.228	-135	2105.477^{A}	6	3.881	4.143	• • •	
1436	z $^3F^{\circ}-b$ 1D	2-2	2.61	39955.250	39944.356	16	2502.800^{A}	-1	3.984	4.294	• • •	
1437	z 3F $^{\circ}-d$ 3F	2-2	2.12	20804.731	20799.053	-4	4806.599 ^A	1	3.984	4.580	• • •	
		2-3	1.26 1.23	20654.341 19472.228	20648.705 19466.913	0	4841.597 ^B 5135.519 ^A	0	3.984	4.584	• • •	
		3-2 $3-3$	2.15	19472.228	19466.913	0 7	5135.519 ⁻¹ 5170.515 ^A	0 -2	3.943 3.943	4.580 4.584		
		4-3	1.04	17641.849	17637.032	9	5668.340 ^A	-3	3.881	4.584		
		4-4	2.22	17425.594	17420.836	9	5738.685 ^A	-3	3.881	4.593		
1438	z $^3F^{\circ}-d^8$ 3P	2-2	1.82	11445.023	11441.890	-4	8737.422 ^A	3	3.984	5.067		
		2-1	1.78	11056.543	11053.516	2	9044.418 ^A	-2	3.984	5.105		
	_							-1			• • •	
1439	$z^3F^0-e^5D$	3-3 4-4	1.23 1.46	7543.6081 7479.5675	7541.5316 7477.5083	0.6 1.7	13256.256 ^B 13369.757 ^B	-1 -3	3.943 3.881	5.587 5.539	-3.12 ^b	
	$z^{3}F^{\circ}-d^{8}^{3}P$ $z^{3}F^{\circ}-e^{5}D$	4-4 2-2 2-1 3-2 3-3	2.22 1.82 1.78 2.37 1.23	17425.594 11445.023 11056.543 11029.810 7543.6081	17420.836 11441.890 11053.516 11026.790 7541.5316	9 -4 2 1 0.6	5738.685 ^A 8737.422 ^A 9044.418 ^A 9066.339 ^A 13256.256 ^B	-3 3 -2 -1	3.881 3.984 3.984 3.943 3.943	4.593 5.067 5.105 5.067 5.587	 -3.12 ^b	

No.	Multiplet	J-J	I ²	λ_{vac}^{3}	$\frac{\lambda_{air}^{3}}{\lambda_{air}^{3}}$	o-R ⁴	σ 5	o-R ⁶	E(1)	E(u)	log(gf) ⁷	B1.8
	(MT) ¹			(Å)	λ _{qir} (A)	(mÅ)	(cm ⁻¹)	(mK)	(eV)	(eV)		
1440	z 3F $^{\circ}-e$ 5F	3-4	3.09	6421.4198	6419.6454	1.2	15572.880	3	3.943	5.874	•••	
		2-3	2.18	6401.4183	6399.6493	2.5	15621.538 ^C		3.984	5.921	• • •	
		4-5	1.85	6370.1396	6368.3790	6.9	15698.243 ^L		3.881	5.828		
		4-4	1.79	6222.5047	6220.7837	3.5	16070.699 ^C	' -9	3.881	5.874	-2.46 ^b	
1441	$z{}^3F^{\circ}\!-\!e{}^3F$	3-4	2.28	6189.7026	6187.9904	1.1	16155.865 ^A		3.943	5.946	-1.72 ^b	
		2 - 3	2.15	6098.3530	6096.6653	0.7	16397.870		3.984	6.017	-1.93^{b}	
		4-4	2.99	6004.6749	6003.0123	0.7	16653.691 ^A		3.881	5.946	-1.12^{b}	
		3-3	2.69	5978.4327	5976.7771	0.4	16726.792 ^A		3.943	6.017	•••	
		$^{2-2}$	2.54	5954.3675	5952.7184	0.0	16794.395 ^A		3.984	6.066	-1.44 ^b	
		3-2	1.64	5839.9903	5838.3718	0.0	17123.316 ^A		3.943	6.066	-2.34^{b}	
		4-3	1.95	5805.6443	5804.0350	0.7	17224.617 ^A		3.881	6.017	-2.29^{b}	
1442	z $^3F^{\circ}-e$ 3D	3-3	2.62	5131.0601	5129.6308	-0.8	19489.150 ^A	3	3.943	6.359	-1.85^{b}	
		2-2	2.89	5100.4984	5099.0773	0.0	19605.927 ^A	0	3.984	6.415	-1.26a	
		2 - 1	3.85	5023.6362	5022.2355	0.0	19905.900 ^A	0	3.984	6.452	-0.53^{b}	
		3-2	4.11	5016.3412	5014.9425	0.0	19934.848 ^A		3.943	6.415	-0.30^a	
		4-3	4.32	5003.2589	5001.8636	0.3	19986.973 ^A	-1	3.881	6.359	0.01^{b}	
1443	$z^3F^{\circ}-g^5D$	2-2	2.09	5021.1307	5019.7307	-0.5	19915.833 ^E	3 2	3.984	6.453		
1773	~ 1 -y D	2-2 $2-1$	3.32	4979.9924	4978.6033	0.2	20080.352 ^A	_	3.984	6.474	-0.93 ^b	
		3-2	3.30	4939.5522	4938.1739	0.0	20080.332 20244.750 ^A	_	3.943	6.453	-0.93	
		4-3	3.30	4886.7950	4885.4306	0.2	20463.310		3.881	6.419		
	$z^{3}F^{0}-e^{5}P$						19703.225 ^L					**
1444	$z^{3}F^{0}-e^{3}P$	2-3	2.66	5075.3113	5073.8968	5.2			3.984	6.427	•••	II
		2-1	2.30	5028.7446	5027.3425	-0.8	19885.679 ^E		3.984	6.449	• • •	
		3-2	2.65	4935.2503	4933.8730	0.0	20262.397 ^A		3.943	6.455	• • •	
1445	z $^3F^{\circ}-g$ 5F	2 - 3	3.43	4608.9376	4607.6469	1.5	21696.974^{L}		3.984	6.674		I
		3-3	2.25	4540.1092	4538.8366	-0.2	22025.902^{E}		3.943	6.674	• • •	
		4-4	2.81	4527.6682	4526.3989	0.2	22086.424 ^A		3.881	6.620	• • • • •	
		2-1	2.03	4493.9387	4492.6783	-0.4	22252.195 ^E		3.984	6.743	-1.65 ^b	
		3-2	2.34	4453.8593	4452.6095	-0.8	22452.438^{L}	4	3.943	6.727	-1.93 ^b	Ne
1446	$z{}^3F^{o}\!-\!h{}^5D$	3-3	1.70	4599.6552	4598.3669	0.0	21740.760 ^C		3.943	6.639	• • •	
1447	z $^3F^{o} - f$ 5P	3-2	2.08	4594.8122	4593.5252	0.4	21763.675^{L}		3.943	6.641	-2.06^{b}	II
		2 - 1	1.95	4589.0059	4587.7204	-1.1	21791.212 ^C	5	3.984	6.686	-2.15^{b}	
1448	$z^3F^{\circ}-f^5G$	3-4	2.31	4552.9230	4551.6470	-1.2	21963.912 ^E	8 6	3.943	6.666	-2.06^{b}	
1440	z r – j G	4-5	2.92	4550.7423	4549.4669	0.8	21974.437 ^A		3.881	6.606	-2.00	
		4-4	1.85	4452.0162	4450.7669	-0.2	22461.733^{L}		3.881	6.666	-2.24 ^b	
1449	$z^{3}F^{0}-e^{3}G$	2-3	2.28	4495.3162	4494.0555	2.8	22245.376 ^E	³ -14	3.984	6.742	-1.81 ^b	
1449	z - Fe - G	3-4	2.22	4492.0706	4490.8107	-0.8	22243.370 22261.449 ^E		3.943	6.703		
		3-4 4-5	2.34	4457.8811	4456.6302	1.6	22432.182 ^E		3.881	6.663	-1.68 ^b	
		3-3	2.04	4429.8105	4428.5670	-3.5	22574.329 ^L	18	3.943	6.742		
		4-4	2.22	4393.8137	4392.5797	-0.4	22759.272 ^C	2	3.881	6.703	-2.00^{b}	
1.450	3.000 (3.0)											
1450	$z^3F^{\circ}-f^3D$	3-2	2.90	4492.0199 4481.2199	4490.7601 4479.9629	-0.2	22261.700 ^A 22315.352 ^E		3.943 3.984	6.703	-1.52 ^b	
		$\begin{array}{c} 2-1 \\ 4-3 \end{array}$	2.65		4479.9629	0.4	22313.332 ⁻ 22440.253 ^A		3.881	6.751 6.664	-1.52° -1.09 ^b	
1451	$z^3F^{\circ}-e^3H$	4-3 4-4	2.87 2.06	4456.2777 4301.4162	4300.2066	-0.2 2.4	23248.157 ^L		3.881	6.764	-1.09°	
											-1.01	
1452	$z^3F^{\circ}-f^3F$	3-3 4-4	2.77 2.68	4288.1899 4277.8796	4286.9837 4276.6761	0.2 1.3	23319.863 ^E 23376.067 ^E		3.943 3.881	6.834 6.780	 -1.21 ^b	
1453	$z^{3}F^{\circ}-s^{6}D5d^{5}D$	4-4	2.34	4016.0130	4014.8781	-2.3	24900.318 ^L		3.881	6.969		II
1454	z 3F $^{\circ}$ $-s$ 6D $5d$ 5G	4-4	2.75	3942.2991	3941.1835	-1.9	25365.909 ¹		3.881	7.026		
1455	$z^3F^0-q^5G$	3-4	2.61	3743.2044	3742.1405	1.5	26715.079 ^C	; -11	3.943	7.255		
1433	2 - 1y - G	3-4 4-5	2.96	3743.2044	3742.1403	-2.5	26964.233 ^E		3.881	7.233		
1.457	3770 - 404130			3681.8576	3680.8096	-0.3	27160.203 ^E		3.943	7.311		
1456	$z^3F^0-s^4D4d^3G$	3-4 4-5	3.16 3.22	3681.8576 3678.5009	3680.8096 3677.4538	-0.3 0.1	27180.203 ² 27184.987 ^E		3.943	7.252	•••	
		4-5 4-4	3.22	3678.5009	3614.5557	-0.3	27184.987~ 27658.030 ^E		3.881	7.232	•••	
											•••	
1457	$z^{3}F^{0}-{}^{4}F5d^{3}G$	4-5	3.58	3635.7330	3634.6970	-0.4	27504.770	1 3	3.881	7.292		

<u>:</u>					ABLE 2—C01	шишец						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
1458	$z^3D^{\circ}-c^3F$	2-2	2.76	48101.089	48087.976	0	2078.955 ^A	0	3.928	4.186		
1459	$z^{3}D^{\circ}-b^{1}D$	1-2	2.29	37044.391	37034.290	41	2699.464 ^A		3.960	4.294		
1460	$z^3D^{\circ}-d^3F$	1-2	1.53	19986.948	19981.493	0	5003.265 ^A		3.960			
1460	$z \cdot D \cdot -a \cdot F$	$\frac{1-2}{2-3}$	1.60	18906.322	18901.493	4	5289.236 ^A		3.928	4.580 4.584		
		3-3	0.60	17689.784	17684.955	-19	5652.980 ^D		3.883	4.584		II
		3-4	1.76	17472.385	17467.614	12	5723.317 ^A		3.883	4.593		
1461	$z^{3}D^{\circ}-d^{8}{}^{3}P$	1-2	1.83	11193.085	11190.021	-1	8934.087 ^A	1	3.960	5.067		
		2-2	2.90	10887.246	10884.265	1	9185.059 ^A		3.928	5.067		
		1 - 1	2.78	10821.240	10818.276	2	9241.085 ^A		3.960	5.105	• • •	
		1-0	2.84	10755.953	10753.007	2	9297.177 ^A		3.960	5.112		
		$\begin{array}{c} 2-1 \\ 3-2 \end{array}$	3.48	10535.122	10532.236	1	9492.059 ^A		3.928	5.105	• • •	
	2		3.83	10472.523	10469.654	1	9548.797 ^A		3.883	5.067	• • •	
1462	z 3D ° $-e$ 5D	3-4	1.23	7488.1721	7486.1105	-1.1	13354.394 ^B	2	3.883	5.539		
1463	$z~^3D^{\circ}-e~^5F$	3-4	1.81	6228.4589	6226.7363	1.9	16055.336 ^C		3.883	5.874	-2.22^{b}	
		3-3	0.60	6085.3476	6083.6634	3.0	16432.915^{B}	-8	3.883	5.921		
1464	z 3D $^{\circ}-e$ 3F	3-4	3.06	6010.2207	6008.5566	0.4	16638.324 ^A	-1	3.883	5.946		
		2-3	2.87	5936.2992	5934.6549	0.4	16845.512 ^A		3.928	6.017	-1.17^{b}	
		1-2	2.72	5885.4476	5883.8170		16991.061 ^A		3.960	6.066	-1.36 ^b	
		3-3	2.34	5810.8288 5799.7791	5809.2181	0.3	17209.249 ^A 17242.036 ^A		3.883	6.017	-1.84^{b}	
		$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	2.23 1.11	5679.9544	5798.1714 5678.3788	0.0 -0.3	17242.036 ⁻² 17605.775 ^A		3.928 3.883	6.066 6.066	-1.89 ^b -3.02 ^b	
4.46	$z^{3}D^{0}-e^{3}D$											
1465	$z^{3}D^{0}-e^{3}D$	$\frac{2-3}{1-2}$	3.36 3.26	5099.9933 5049.8437	5098.5723 5048.4361	-0.3 0.0	19607.869 ^A 19802.593 ^D		3.928 3.960	6.359 6.415	-1.03 ^a	II
		3-3	4.20	5007.1086	5005.7123	-0.3	19802.393 ⁻¹		3.883	6.359	-1.03	11
		$^{3}_{2-2}$	3.86	4986.6438	4985.2529	0.0	20053.568 ^A		3.928	6.415	-0.56 ^a	
		1 - 1	3.51	4974.4896	4973.1019	0.0	20102.565 ^A	0	3.960	6.452	-0.95^{b}	
		2-1	2.61	4913.1507	4911.7794	0.2	20353.538 ^A		3.928	6.452	-1.79 ^b	
		3-2	2.44	4897.8058	4896.4385	-0.2	20417.306 ^B	1	3.883	6.415	-2.05^{b}	
1466	z 3D $^{\circ}-g$ 5D	2 - 3	2.27	4979.0375	4977.6487	0.5	20084.203^{B}		3.928	6.419		
		1-2	2.41	4972.0331	4970.6461	-0.2	20112.497 ^B		3.960	6.453	٠٠٠,	
		1-1	3.02	4931.6916	4930.3154	0.2	20277.018^{A}		3.960	6.474	-1.35 ^b	
		$\frac{2-2}{3-3}$	3.04 3.07	4910.7542 4890.4675	4909.3835 4889.1021	0.0 0.0	20363.471 ^A 20447.943 ^A		3.928 3.883	6.453 6.419	• • •	
		2-1	1.99	4871.3971	4870.0368	0.0	20527.992 ^C		3.928	6.474	-2.34 ^b	
1467	$z^{3}D^{\circ}-e^{5}P$	1-1	2.00	4979.5009	4978.1119	2.2	20082.334^{C}		3.960	6.449		
1407	$z \cdot D \cdot = e \cdot P$	1-1	1.60	4979.5009	4966.2895	0.5	20082.334 ⁻² 20130.140 ^D		3.960	6.455	•••	
		$\frac{1-2}{2-2}$	2.39	4906.5024	4905.1328	0.0	20381.117 ^B		3.928	6.455	-2.05 ^b	
		3-3	2.08	4874.5717	4873.2106	0.0	20514.623^{D}		3.883	6.427	•••	
1468	$z^3D^{\circ}-g^5F$	3-4	2.83	4530.8212	4529.5511	0.6	22071.054 ^A	-3	3.883	6.620		
1100	~ 2 g 1	2-3	2.41	4515.7661	4514.4999	-3.3	22144.637^{D}		3.928	6.674		
		3-3	1.85	4442.7925	4441.5456	-1.2	22508.366^{D}		3.883	6.674		
		2-2	2.29	4430.4305	4429.1869	-4.1	22571.170^{C}	21	3.928	6.727	• • •	
1469	$z^3D^{\circ}-h^5D$	3-3	1.79	4499.7951	4498.5332	-3.0	22223.234 ^C	15	3.883	6.639		
		3-2	2.18	4416.1707	4414.9309	-1.2	22644.052 ^C	6	3.883	6.691	• • •	
1470	$z^3D^{\circ}-f^5P$	2-2	1.60	4569.8831	4568.6026	-0.2	21882.398^{C}	1	3.928	6.641	-2.42^{b}	
1471	z 3D $^{\circ}-f$ 3D	2-2	2.71	4468.1922	4466.9386	0.8	22380.416 ^B		3.928	6.703	-1.35^{b}	
		3-3	2.92	4459.3315	4458.0802	-0.4	22424.886 ^A		3.883	6.664		
		1-1	2.01	4442.0706	4440.8239	-0.8	22512.024^{B}		3.960	6.751	-1.60 ^b	
		3-2 2-1	2.32 2.56	4396.7321 4393.0971	4395.4973 4391.8633	-1.5 1.9	22744.165 C 22762.984 D		3.883 3.928	6.703 6.751	-2.04 ^b	
1 450	300 435											
1472	$z^3D^{\circ}-f^3F$	3-4 2-3	2.60 2.64	4280.6929 4266.4686	4279.4887 4265.2681	0.5 -0.7	23360.704 ^C 23438.588 ^B		3.883 3.928	6.780 6.834	-1.46 ^b	
	3.00 3.0											
1473	z 3D $^{\circ}-e$ 3P	2-2 1-1	2.51 2.23	4311.5865 4266.4366	4310.3741 4265.2361	1.9 -0.4	23193.319 ^C 23438.764 ^C		3.928 3.960	6.804 6.866	-1.50 ^b	
		3-2	2.23	4245.0110	4243.8162	0.5	23438.764 ⁵ 23557.065 ^B		3.883	6.804	-1.50 ^b	
		- -	,		.3.0.0102	0.0		,	2.000	5.504	1.50	

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{} \ (A)$	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷ Bl. ⁶
		2-1	2.24	4221.2381	4220.0495	0.7	23689.732^{C}	-4	3.928	6.866	-1.66 ^b
1474	$z^{3}D^{\circ}-{}^{4}F6s^{5}F$	3-3	2.77	3818.5342	3817.4508	-1.3	26188.059^{D}	9	3.883	7.130	
1475	$z^{3}D^{\circ}-s^{6}D5d^{5}G$	3-4	2.71	3944.6916	3943.5754	0.8	25350.524^{C}	-5	3.883	7.026	
1476	z^3D° – i^5D	3-4	2.56	3791.4886	3790.4122	1.9	26374.865^{C}	-13	3.883	7.153	
1477	$z^{3}D^{\circ}-s^{4}D4d^{5}P$	3-3	2.68	3681.9872	3680.9392	-0.9	27159.247^{C}	7	3.883	7.251	
1478	z 3D $^{\circ}$ $-s$ 4D 4 d 3G	3-4	3.24	3617.5966	3616.5652	-0.3	27642.662^{B}	2	3.883	7.311	•••
1479	$z^{3}D^{\circ}-s^{4}D4d^{3}D$	2-2	3.01	3663.8808	3662.8375	0.8	27293.464^{B}	-6	3.928	7.312	
		3-3	2.71	3655.0076	3653.9666	-2.3	27359.724 ^C	17	3.883	7.275	•••
1480	$z^{3}D^{\circ}-58831^{e}$	3-3	3.18	3635.2240	3634.1881	-0.8	27508.621 ^B	6	3.883	7.294	•••
1481	$z^{3}D^{\circ}-s^{4}D4d^{3}S$	1-1	2.88	3674.1282	3673.0822	-0.8	27217.341 ^B	6	3.960	7.334	•••
1482	z 3D $^{\circ}$ $-s$ 4D4d 3F	1-2	2.68	3587.0277	3586.0042	-0.6	27878.235 ^C	5	3.960	7.416	•••
1483	c 3F-z 3G°	2-3	3.25	43213.997	43202.216	19	2314.065^{A}	-1	4.186	4.473	
		3-4	2.58	42465.603	42454.026	-18	2354.847 ^A	1	4.143	4.434	• • •
		4-5	3.20	39910.982	39900.101	-16	2505.576 ^A	1	4.076	4.386	•••
		4-4	2.08	34555.074	34545.652	12	2893.931 ^A	-1	4.076	4.434	•••
1484	$c~^3F-y~^3F^{o}$	3-4	2.75	30548.734	30540.404	0	3273.458 ^A	0	4.143	4.548	• • •
		2-3	2.76	29433.935	29425.908	0	3397.439 ^A	0	4.186	4.607	
		3-3	3.63	26666.460	26659.187	0	3750.029 ^A 3755.853 ^A	0 0	4.143 4.186	4.607 4.652	-0.80 ^a -0.69 ^a
		$\begin{array}{c} 2-2 \\ 4-4 \end{array}$	3.80 4.24	26625.110 26229.205	26617.848 26222.051	0 -7	3812.544 ^A	1	4.186	4.548	-0.55^a
		3-2	2.50	24340.121	24333.481	0	4108.443 ^A	0	4.143	4.652	-0.55
		3-2 4-3	2.21	23314.833	23308.472	-5	4289.115^{A}	1	4.076	4.607	
	2- 2-0						4762.636 ^A		4.143	4.733	
1485	c ^3F-y 3D $^{\circ}$	3-3	1.62	20996.775	20991.046	4 0	4762.636 ⁻¹ 4912.731 ^A		4.143	4.795	•••
		2-2	1.92	20355.276 19118.897	20349.721 19113.679	7	5230.427 ^A		4.186	4.835	 -1.24 ^a
		2-1	3.24 3.53	18992.194	18987.010	0	5265.321 ^A		4.143	4.795	-1.10^a
		3-2 $4-3$	3.79	18861.796	18856.647	0	5203.321 5301.722^{A}	0	4.076	4.733	-0.90^a
1486	$c~^3F$ – $x~^5D$ °	4-4	1.32	14810.055	14806.009	2	6752.169 ^A		4.076	4.913	•••
1487		4-5	0.78	13543.395	13539.692	13	7383.673 ^A		4.076	4.991	
1488		2-3	2.20	11405.840	11402.718	-5	8767.438 ^A		4.186	5.273	•••
				8484.3124	8481.9818		11786.459 ^A		4.186	5.648	•••
1489	$c {}^{\circ}F - x {}^{\circ}D^{\circ}$	$\begin{array}{c} 2-1 \\ 3-3 \end{array}$	2.05 1.73	8468.8576	8466.5313		11780.439 11807.968 ^C		4.143	5.606	
		3-3 $3-2$	2.25	8425.2287	8422.9141	0.0	11869.114 ^A		4.143	5.614	
		4-3	2.31	8099.1019	8096.8755		12347.048 ^A		4.076	5.606	•••
1490	$c^3F-x^5G^{\circ}$	3-4	0.85	8051.2063	8048.9928	3.9	12420.499^{B}	-6	4.143	5.682	
1470		3-3	1.00	7999.5021	7997.3026		12500.778^{B}	0	4.143	5.692	
1491	$c~^3F-z~^3S^{ m o}$	2-1	0.90	7790.8882	7788.7450	1.8	12835.507 ^B	-3	4.186	5.778	•••
1492	$c^3F-y^3P^0$	2-1	1.49	7612.3632	7610.2682		13136.525 ^A		4.186	5.815	•••
	-	3-2	0.70	7510.6855	7508.6178	-5.1	13314.364 ^C	9	4.143	5.793	•••
1493	$c~^3F-u~^5D^{\circ}$	2-2	1.68	7620.0869	7617.9897		13123.210 ^A		4.186	5.813	•••
	(1001)	3-4	1.20	7514.2071	7512.1385		13308.124 ^B		4.143	5.792	
		3-3	1.96	7500.5954	7498.5304		13332.275 ^A		4.143	5.795	
		2-1	1.80	7456.0507	7453.9978		13411.926 ^E		4.186	5.849	
		3-2	2.72	7420.7108	7418.6674		13475.798 ^A		4.143	5.813	
		4-4	1.70	7221.6750	7219.6853		13847.203 ^E		4.076 4.076	5.792 5.795	
		4-3	1.95	7209.0979	7207.1116		13871.361 ^A				_
1494	$c^3F-x^3F^{\circ}$	2-3	1.28	7503.3424	7501.2767		13327.394 ^E		4.186	5.839	
	(1002)	2-2	2.61	7445.0723	7443.0224		13431.703 ^A		4.186	5.851	
		3-3	1.85	7309.9453	7307.9318		13679.993 ^A		4.143	5.839	
		4-4	1.60	7134.9526	7132.9863	-1.0	14015.510 ^A	2	4.076	5.813	-1.63ª

				IAB	LE 2—Cont	inuea 						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
1495	$c^3F-w^3D^{\circ}$	2-1	2.52	7403.7236	7401.6849	1.6	13506.717 ^A	-3	4.186	5.861	-1.35^a	
1473	(1004)	3-2	1.48	7286.8425	7284.8353	0.5	13723.365^{B}	-1	4.143	5.844	• • •	
· ·	(1001)	4-3	1.90	7070.3587	7068.4097	0.0	14143.554^{D}	0	4.076	5.829	-1.38^{b}	II
1406	$c^3F-w^5G^0$	2-2	1.48	7109.4205	7107.4610	1.0	14065.844^{D}	-2	4.186	5.930	-1.34ª	
1496		4-4	3.31	6795.1341	6793.2592	0.9	14716.413 ^A	-2	4.076	5.900	-2.47^{b}	
	(1005)	4-4	3.18	6747.8186	6745.9565	0.5	14819.604 ^A	-1	4.076	5.913	-2.77^{b}	
											-2.15^{b}	
1497	$c {}^{3}F - z {}^{1}G^{0}$ (1006)	4-4	2.59	6859.1424	6857.2503	0.9	14579.082 ^A	-2	4.076	5.883		
1498	$c^3F-v^5F^\circ$	3 - 3	2.93	6798.0009	6796.1252	0.9	14710.207 ^A	-2	4.143	5.966	-2.53^{b}	
	(1007)	4-5	2.54	6787.7235	6785.8506	0.0	14732.480 ^B	0	4.076	5.902 5.942	-2.46 ^b	
		4-4	3.18	6641.7120	6639.8784	2.2	15056.359 ^A	-5	4.076			
		4-3	2.34	6557.6806	6555.8696	0.0	15249.294 ^B	0	4.076	5.966	• • •	
1499	$c\ ^3F{-}x\ ^3G^{ m o}$	4-4	2.89	6694.1201	6692.2724	0.9	14938.483 ^A	-2	4.076	5.928		
	(1008)	4-5	2.40	6684.0818	6682.2368	-0.9	14960.918 ^B	2	4.076	5.931		
1500	$c^3F-v^5P^0$	4-3	2.34	6625.6205	6623.7912	11.0	15092.926 ^C	-25	4.076	5.947	• • •	
4 701	(1009)	2-3	2.81	6797.9232	6796.0476	1.8	14710.375 ^A	-4	4.186	6.010		
1501	$c^3F-y^5H^{\circ}$	3-4	3.23	6689.3386	6687.4922	0.9	14949.161 ^A		4.143	5.996		
		3-4	2.26	6638.7974	6636.9646	-0.9	15062.969 ^B		4.143	6.010		
		3-3 4-5	3.26	6511.4154	6509.6168		15357.644 ^A		4.076	5.980	-2.97^{b}	
							14539.324 ^C		4.186	5.989		
1502	$c {}^3F$ – $x {}^3P$ °	2-2	1.70	6877.8989	6876.0017		14539.324° 14750.829 ^A		4.186	6.015	• • •	
	(1013)	2-1	2.85	6779.2800	6777.4094 6713.1962		14730.829 ⁻¹		4.143	5.989		
1503	$c^3F-z^1H^0$	3-2 4-5	3.19 2.34	6715.0495 6447.8819	6446.1003		15508.969 ^B		4.076	5.998		
				6540.3002	6538.4939	-0.4	15289.818 ^A	1	4.143	6.038		
1504	$c {}^{3}F - y {}^{1}G^{\circ}$ (1014)	3-4 4-4	2.97 3.70	6317.5580	6315.8115	0.0	15828.901 ^A	0	4.076	6.038	-1.71 ^b	
1505	$c^{3}F-w^{3}F^{0}$	$^{2-2}$	4.20	6382.5072	6380.7433		15667.824 ^A		4.186	6.129	-1.38 ^a	
	(1015)	3-3	3.87	6317.0532	6315.3068		15830.166 ^A		4.143	6.105	-1.23ª	
	, ,	3 - 2	1.61	6242.0367	6240.3105		16020.412^{C}		4.143	6.129		
		4-4	2.74	6159.4325	6157.7284		16235.262 ^A		4.076	6.089	-1.26 ^b	
		4-3	1.41	6109.0202	6107.3296	5.6	16369.237 ^D	-15	4.076	6.105	• • •	
1506	$c~^3F-v~^3D^{\circ}$	2-3	2.11	6506.3062	6504.5089	5.1	15369.704 ^C	-12	4.186	, 6.092		
1300	(1016)	$\frac{2}{2-2}$	1.85	6461.0711	6459.2860	1.3	15477.310^{D}	' -3	4.186	6.105	• • •	
	(1010)	2-1	3.31	6438.1862	6436.4072	1.2	15532.325 ^A		4.186	6.112	-2.46 ^b	
		3-3	3.89	6360.3918	6358.6337	0.8	15722.302 ^A		4.143	6.092	-1.66ª	
		3-2	3.18	6317.1589	6315.4125	0.4	15829.901 ^A		4.143	6.105		
		4-3	2.32	6149.5362	6147.8347	0.4	16261.389 ^A	-1	4.076	6.092	-1.67ª	
1507	3173110	3-4	2.41	6129.6027	6127.9066	0.4	16314.271 ^A	-1	4.143	6.165	-1.40^a	
1507	$c {}^{3}F - y {}^{3}H^{\circ}$ (1017)	4-5	2.41	5977.0016	5975.3464		16730.797 ^L		4.076	6.150		I
	(1017)	4-4	0.48	5933.5342	5931.8907		16853.362 ^E		4.076	6.165		
	2 2 2				6215.1438		16085.282 ^A		4.186	6.180	-1.32 ^a	
1508	$c {}^{3}F - v {}^{3}G^{\circ}$	2-3	2.34	6216.8633	6165.3603		16215.165 ^A		4.143	6.153		
	(1018)	3-4	2.31	6167.0664 6083.5118	6081.8280		16437.874 ^E		4.143	6.180		
		3-3	0.30 2.78	6028.7200	6027.0509		16587.269		4.076	6.132		
		4-5 4-4	0.30	5968.6338	5966.9808		16754.253 ^E		4.076	6.153		
		4-4										
1509	$c {}^{3}F - F sp3 {}^{1}F^{0}$ (1091*)	2-3	3.82	6364.6354	6362.8763		15711.819		4.186	6.134		
1510	$c {}^{3}F - w {}^{3}P^{\circ}$ (1020)	$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	0.30 0.85	6089.5640 5961.5657	6087.8786 5959.9146		16421.537 ¹ 16774.117 ²		4.186 4.143	6.222 6.222		II
1511	$c^3F-n^7P^0$	4-4	1.00	5776.3064	5774.7049	9 2.7	17312.101	8- ¹	4.076	6.222		
				5944.7473	5943.100	7 -1.1	16821.573	4 3	4.186	6.272	-2.05^{b}	•
1512	$c {}^{3}F - z {}^{1}F^{\circ}$ (1021)	2-3 4-3	1.23 1.71	5645.4926	5643.926	2 -0.3	17713.246	4 1	4.076	6.272	· · · ·	
1513	$c {}^3F - x {}^1G^{\circ}$ (1022)	3-4	1.75	5813.5259	5811.914	5 -0.3	17201.265	4 1	4.143	6.275	i -2.43 ^t	,

•				IAI	SLE 2—Con	inuea						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
1514 1515	c ³ F-x ³ H° (1024)	4-5	2.29	5495.9891	5494.4626	-0.9	18195.087 ^L		4.076	6.331	-2.09 ^b	II
1515	$c {}^{3}F - t {}^{5}D^{\circ}$ (1025)	2-3 4-4	1.53 3.21	5683.0830 5493.6045	5681.5065 5492.0786	0.3 3.0	17596.083 ^A 18202.985 ^A	-1 -10	4.186 4.076	6.368 6.332	•••	
1516	$c\ ^{3}F-v\ ^{3}F^{o}$	2 - 3	1.74	5681.8166	5680.2404	-0.3	17600.005^{A}	1	4.186	6.368	-2.58^{b}	
	(1026)	3-2	1.85	5621.5870	5620.0269	-0.3	17788.571 ^B		4.143	6.348		
		3-4	2.42	5589.1254	5587.5740	-0.6	17891.887 ^A	2	4.143	6.361	-1.85 ^b	
1517	$c~^3F-u~^3G^{o}$	2 - 3	3.10	5536.9554	5535.4179	-0.3	18060.467 ^A	1	4.186	6.425	-1.16 ^a	
	(1029)	3-4	3.28	5477.8102	5476.2885	-0.6	18255.470 ^A		4.143	6.406	-0.94^a	
		4-5	3.32	5405.3239	5403.8215	-0.6	18500.279 ^A		4.076	6.369	-1.03ª	
		4-3	2.19	5276.4493	5274.9813	0.3	18952.139 ^C	-1	4.076	6.425	• • •	
1518	$c^{3}F - Hsp3^{1}H^{\circ}$ (1028)	4-5	3.31	5331.4717	5329.9891	-0.6	18756.547 ^A	2	4.076	6.401	-1.22ª	
1519	$c^{3}F-y^{1}D^{0}$ (1030)	3-2	2.62	5465.7980	5464.2796	-0.3	18295.590 ^A		4.143	6.411	-1.40ª	
1520	$c^3F-u^3D^{\circ}$	2-3	2.28	5493.3573	5491.8315	-3.0	18203.804 ^E		4.186	6.443	-2.40 ^b	
	(1031)	3-3	2.30	5388.9783	5387.4804	-2.9	18556.393 ^C		4.143	6.443	-2.14^{b}	
		2-1	2.63	5334.1436	5332.6602	-0.9	18747.152 ^E		4.186	6.510	-2.09^{b}	
		3-2	2.39	5295.4319	5293.9588	-0.3	18884.201 ^E		4.143	6.484	-1.87 ^b	
		4-3	3.36	5236.8441	5235.3867	-0.8	19095.470 ^A		4.076	6.443	-0.97ª	
1521	$c~^3F$ – $t~^3D$ o	2-2	2.33	5286.0792	5284.6086	-0.3	18917.613 ^E		4.186	6.532	-2.11^{b}	
	(1032)	2-1	2.59	5237.6618	5236.2041	1.9	19092.489 ^E		4.186	6.553	-1.50 ^a	
		3-2	2.96	5189.3589	5187.9142	-0.5	19270.203 ^A		4.143	6.532	-1.37ª	
		4-3	2.20	5170.7386	5169.2987	0.0	19339.597 ^C		4.076	6.473	• • •	
1522	$c~^3F-w~^3H$ °	3-4	2.53	5166.3492	5164.9106	-1.1	19356.028 ^E		4.143	6.542		
	(1033)	4-5	1.70	5066.0024	5064.5905	6.4	19739.430^{L}	-25	4.076	6.523		
1523	$c^{3}F^{-4}F^{5}p^{3}G^{0}$	3-3	1.93	4774.4805	4773.1459	-0.2	20944.687 ^C	1	4.143	6.739		
	•	4-4	2.19	4729.4866	4728.1640	0.4	21143.944 ^C	-2	4.076	6.697		
1524	$c^{3}F-v^{3}P^{0}$	2-1	2.18	5137.5241	5136.0931	1.1	19464.629 ^C	· -4	4.186	6.599	-2.12^{b}	
1324		3-2	2.30	5127.2628	5125.8345	-2.1	19503.584 ^C		4.143	6.561		
1525	$c~^3F-Gsp3~^3F^{\circ}$	2-2	1.90	5003.9764	5002.5809	-2.8	19984.107 ^L	11	4.186	6.664		I
1323	C F -Gsp3 F	4-4	1.92	4980.0809	4978.6918	0.0	20079.995 ^C		4.076	6.565		•
		4-3	1.95	4881.8905	4880.5274	2.9	20483.868 ^C		4.076	6.615		
1526	$c{}^3F-{}^4F5p{}^5G^{ m o}$	3-4	1.78	4892.5103	4891.1445	-2.6	20439.405 ^C		4.143	6.677	•••	
1527	$c\ ^3F-^4F5p\ ^5F^{ m o}$	2-3	2.48	5026.1950	5024.7936		19895.766 ^E		4.186	6.653		
		3-3	1.90	4938.6769	4937.2988	5.4	20248.338 ^C	-22	4.143	6.653	• • •	
1528	$c^3F-y^1H^{\circ}$	4-5	2.29	4892.4141	4891.0483		20439.807 ^L		4.076	6.610		II
1529	$c{}^3F-{}^4F5p{}^3F^{0}$	4-4	1.95	4888.7305	4887.3657		20455.208 ^C	7	4.076		-2.28^{b}	
		2-2	2.15	4775.3070	4773.9722		20941.062 ^L 21293.663 ^C		4.186	6.782	• • •	
		3-2	2.00	4696.2329	4694.9190			_	4.143	6.782	•••	
1530	c 3F $ ^4F$ 5p 5D $^{\circ}$	2-3 $2-2$	2.28 1.85	4995.1445 4815.7170	4993.7514 4814.3715		20019.441 ^E 20765.340 ^C		4.186 4.186	6.668 6.761	• • • • • • • • • • • • • • • • • • • •	
1531	$c~^3F-Dsp3~^5F^{ m o}$	4-3	2.23	4793.8724	4792.5327	-0.9	20859.963 ^C	4	4.076	6.662		
1331	o I Bopt I	4-5	2.89	4730.3421	4729.0192		21140.120 ^A		4.076	6.697	-1.61ª	
1522	c^3F – x^1F °	2-3	2.50	5000.5071	4999.1125	-0.3	19997.972 ^A	1	4.186	6.666	-1.74 ^b	
1532	(1040)	3-3	1.70	4913.8699	4912.4984		20350.559 ^C		4.143	6.666	-2.42^{b}	
4.500	$c^{3}F^{-4}F^{5}p^{3}D^{\circ}$				4980.5394		20072.546 ^C		4.186	6.675		
1533	$c^{3}F - F^{3}p^{3}D^{3}$	$\begin{array}{c} 2-3 \\ 3-2 \end{array}$	1.60 1.57	4981.9290 4777.8172	4980.3394		20072.346 ⁻²		4.143	6.737		II
		4-3	2.15	4777.0322	4768.6988		20950.000 20964.219 ^E		4.076	6.675	•••	11
		$\frac{4-3}{2-1}$	2.14	4752.4131	4751.0843		21041.942 ^L		4.186	6.795		
1534		3-4	2.42	4787.2945	4785.9566		20888.625 ^L		4.143	6.732	_	
1505	(1044) $c^{3}F-t^{3}G^{\circ}$	3-4	2.99	4801.9909	4800.6490	-0.2	20824.696 ^A	4 1	4.143	6.724	-1.03 ^a	
1535	$c^{3}F - t^{3}G^{3}$ (1042)	$\frac{3-4}{2-3}$	2.68	4801.9909 4799.6061	4800.6490		20824.696 ⁻ 20835.043 ⁻		4.143	6.769		
	(1044)	2-3	۵.00	7777.0001	7170.2047	-0.2	20033,043	1	7.100	0.709	-1.17	

TABLE 2—Continued

					1	ABLE 2—Co	ontinuea	ı					
:	No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
 			4-5	1.80	4737.1686	4735.8439	0.4	21109.656 ^A	-2	4.076	6.693	-1.32ª	
.— 1	536	$c^{3}F-t^{5}P^{\circ}$ (1038)	4-3	2.11	4732.3644	4731.0410	-0.4	21131.086 ^D	2	4.076	6.696	•••	
	537	$y^{5}D^{\circ}-d^{8}{}^{3}P$	1-2	1.28	14589.369	14585.382	4	6854.306 ^A	-2	4.217	5.067		
		3 —	$^{2-2}$	2.33	14144.597	14140.731	4	7069.837^{A}		4.191	5.067		
			1 - 1	1.28	13963.931	13960.114	2	7161.307 ^A		4.217	5.105		
			3-2	2.15	13579.047	13575.335	2	7364.287 ^A	-1	4.154	5.067		
1	538	$y^{5}D^{\circ} - e^{5}D$	3-4	1.81	8952.6461	8950.1888	-0.8	11169.882 ^A	1	4.154	5.539		
		(1050)	2-3	1.60	8881.1887	8878.7508	0.8	11259.754^{D}		4.191	5.587		II
			4-4	1.83	8634.7859	8632.4147	0.0	11581.063 ^C	0	4.103	5.539	• • •	
1	539	$y{}^5D^{\circ}{-}e{}^5F$	3-4	2.83	7209.3744	7207.3880	1.0	13870.829^{A}		4.154	5.874		
		(1051)	4-5	3.00	7189.2990	7187.3180	1.0	13909.562 ^A		4.103	5.828	-0.15^a	
			2 - 3	2.51	7166.4234	7164.4486	1.0	13953.962 ^A		4.191	5.921	٠٠٠,	
			1-2	2.28	7132.8879	7130.9221	0.5	14019.567 ^A		4.217	5.956	-0.79^{b}	
			0-1	1.95	7092.3384	7090.3835	-1.0	14099.722 ^A		4.230	5.978	-1.21^{b}	
			$1-1 \\ 2-2$	1.85	7040.1643 7024.8907	7038.2234 7022.9539	2.5 1.5	14204.214 ^A 14235.097 ^A		4.217 4.191	5.978 5.956	-1.30 ^b -1.25 ^b	
			3-3	1.90 1.90	7024.8907	7022.9539	1.5	14235.097-14248.410 ^A		4.191	5.936	-1.25° -1.26 ^b	
			3-3 4-4	1.85	7018.3270	6999.8841	0.5	14248.410 14282.012^{A}		4.103	5.874	-1.26 ^b	
			3-2	2.00	6882.5289	6880.6305	2.4	14529.543 ^B		4.154	5.956	-2.37^{b}	
			4-3	2.34	6821.4722	6819.5903	0.9	14659.592 ^B		4.103	5.921	2.5,	
1	540	$y^5D^{\circ}-e^3F$	3-4	2.27	6918.5896	6916.6815	1.0	14453.813 ^A		4.154	5.946	-1.45 ^b	
1	.340	$y \cdot D^{1} = e^{-1}F$ (1052)	$\frac{3-4}{2-3}$	3.58	6788.7335	6786.8604	1.8	14433.813 14730.288^{A}		4.191	6.017	-2.07^{b}	
		(1032)	4-4	3.60	6727.2138	6725.3572	1.4	14864.995 ^A		4.103	5.946	-2.30^{b}	
			1-2	3.04	6706.3319	6704.4809	0.9	14911.281 ^A		4.217	6.066	-2.66^{b}	
			3-3	3.27	6655.6901	6653.8527	1.3	15024.738 ^A		4.154	6.017	-2.52^{b}	
			2-2	2.70	6610.7778	6608.9525	0.4	15126.813 ^A		4.191	6.066		
			4-3	1.85	6478.3992	6476.6095	4.2	15435.912^{D}	-10	4.103	6.017		
1	541	$y^{5}D^{\circ}-e^{7}F$ (1053)	4-5	0.85	5637.7759	5636.2115	1.3	17737.491 ^B	-4	4.103	6.302	• • • •	
1	542	$y^5D^{\circ}-f^7D$	0-1	0.00	5907.8924	5906.2557	-2.4	16926.510^{C}		4.230	6.329		
		(1054)	2 - 3	0.30	5861.5792	5859.9549	-2.1	17060.249^{B}		4.191	6.306		
			2-2	0.00	5814.9417	5813.3299	-1.7	17197.077 ^B		4.191	6.323	• • •	
			2-1	0.48	5798.2668	5796.6595	0.0	17246.533 ^B		4.191	6.329	• • •	
			3-4	1.76	5780.0558	5778.4533 5760.5318	0.3 -1.3	17300.871^D 17354.695^B		4.154 4.154	6.299	• • •	I
			3-3 $3-2$	0.70 0.60	5762.1295 5717.0551	5715.4694	-1.3 -0.7	17334.693 ⁻ 17491.523 ^B		4.154	6.306 6.323	-2.98^{b}	
	.	5D0 (5D											
1	543	$y^{5}D^{\circ} - f^{5}D$	1-2	0.30	5994.6586	5992.9987	-0.4	16681.517 ^B 16758.491 ^B		4.217	6.286	• • •	
		(1055)	0-1 $2-2$	0.30	5967.1244	5965.4718 5916.5506	2.1 -3.9	16738.491 ⁻¹ 16897.058 ^B		4.230	6.308	• • •	
			1-0	0.00	5918.1900 5894.8681	5916.5506 5893.2349	-0.3	16963.908 ^A		4.191 4.217	6.286	•••	
			3-3	0.85	5872.9310	5871.3037	-0.3	17027.273 ^A		4.154	6.265		
			2-1	0.90	5855.3052	5853.6826	0.0	17078.529 ^A		4.191	6.308		
			3-2	1.30	5816.8301	5815.2178	0.3	17191.494^{D}	-1	4.154	6.286	-2.62^{b}	I
			4-4	0.30	5771.2726	5769.6725	-2.3	17327.201^{B}		4.103	6.251		
			4-3	0.70	5734.4533	5732.8630	0.3	17438.454 ^B	-1	4.103	6.265	-3.04 ^b	
1	544	$y^{5}D^{0}-e^{7}P$	3-3	0.70	5846.5391	5844.9188	0.3	17104.136 ^A	-1	4.154	6.275	-2.94^{b}	
		(1056)	3-2	0.70	5762.2912	5760.6935	-1.7	17354.208^{D}		4.154	6.306		I
			4-3	0.48	5709.2876	5707.7041	-0.3	17515.320 ^B	1	4.103	6.275		
1	545	$y^5D^{\circ}-e^5G$	1-2	0.30	5762.6797	5761.0819	0.7	17353.038^{B}	-2	4.217	6.369		
•		(1057)	2-3	0.30	5741.3725	5739.7804	1.0	17417.438 ^B		4.191	6.350	•••	
			3-4	1.04	5723.2942	5721.7069	-0.3	17472.455 ^D	1	4.154	6.320		I
			4-5	1.15	5679.2603	5677.6848	0.3	17607.927 ^A		4.103	6.286	-2.70^{b}	
			3-3	0.60	5645.9239	5644.3573	-0.6	17711.893 ^B	2	4.154	6.350	-3.04 ^b	
1	546	y 5D $^{\circ}-e$ 7G	3-4	1.65	5609.2205	5607.6637	-0.6	17827.789^{B}		4.154	6.365	-2.27^{b}	
		(1058)	4-4	2.65	5482.7660	5481.2430	-0.3	18238.969 ^A	1	4.103	6.365	-1.24^a	

•				17	DLE 2—C01	шпиеа						
No.	Multiplet (MT) 1	J-J	I ²	λ _{vac} (Å)	λ _{qir} (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
7 1547 PA 1548	y ⁵ D°-f ⁵ F (1059)	0-1 1-1	0.60 0.85	5671.2211 5637.8106	5669.6477 5636.2462	1.9 3.5	17632.887 ^B 17737.382 ^C	-6 -11	4.230 4.217	6.417 6.417		
1548	$y^{5}D^{\circ}-e^{5}S$ (1060)	3-2	0.60	5668.3635	5666.7910	3.2	17641.776 ^C	-10	4.154	6.341	•••	
1549	$y^5D^{\circ}-e^3D$	2-3	2.34	5716.6841	5715.0986	-3.9	17492.658^{D}	12	4.191	6.359		I
	(1061)	1 - 2	1.11	5642.4423	5640.8766	-1.9	17722.822^{B}	6	4.217	6.415		
		3-3	2.15	5622.0526	5620.4924	-0.6	17787.098 ^A		4.154	6.359	-1.79^{b}	
		$^{2-2}$	2.57	5574.6500	5573.1024	0.3	17938.346 ^A		4.191	6.415	-1.32 ^a	
		1-1	2.00	5548.5330	5546.9924	1.5	18022.782^{B}		4.217	6.452	-1.91 ^b	
		4-3	2.43	5495.0251	5493.4988	-0.3	18198.279 ^A		4.103	6.359	-1.84^{b}	
		3-2	2.64	5484.6223	5483.0988	0.0	18232.796 ^A		4.154	6.415	-1.41^{a}	
		2-1	2.55	5482.9618	5481.4387	0.0	18238.318 ^A	0	4.191	6.452	-1.45 ^b	
1550	y 5D $^{\circ}-g$ 5D	3-4	2.84	5604.3228	5602.7673	-0.6	17843.369 ^A		4.154	6.366	-1.14^a	
	(1062)	2 - 3	3.05	5565.1452	5563.6002	0.0	17968.983 ^A		4.191	6.419	-0.99^{b}	
		1-2	2.84	5545.4754	5543.9357	-0.3	18032.719 ^A		4.217	6.453	-1.14 ^b	
		0 - 1	2.72	5527.0791	5525.5443	0.3	18092.739 ^A		4.230	6.474	-1.33^{b}	
		1-0	2.79	5482.3837	5480.8608	-0.3	18240.241 ^A		4.217	6.479	-1.26 ^b	
		2-2	2.39	5479.9778	5478.4556	0.0	18248.249 ^B		4.191	6.453	-1.85^{b}	
		4-4	3.70	5478.0860	5476.5642	-0.3	18254.551 ^A		4.103	6.366	-0.45^a	
		3-3	3.28 2.92	5475.4215 5431.0137	5473.9005 5429.5045	-0.3	18263.434 ^A 18412.769 ^A		4.154	6.419	-0.76 ^b	
		$\begin{array}{c} 2-1 \\ 3-2 \end{array}$	3.07	5392.9576	5391.4585	0.6 -0.6	18412.769 ⁻¹		4.191 4.154	6.474 6.453	• • • •	
		4-3	3.28	5354.8625	5353.3736	-0.3	18674.616 ^A		4.134	6.419	-0.84 ^b	
											-0.04	
1551	$y^{5}D^{\circ}-e^{5}P$	2-3	2.20	5544.5687	5543.0292	-1.2	18035.668 ^C		4.191	6.427	• • •	
	(1064)	1-2	2.41	5540.0545	5538.5162	0.3	18050.364 ^D		4.217	6.455	• • •	I
		2-1	1.78	5489.0460	5487.5213	-1.8	18218.102 ^C		4.191	6.449	2.14	
		$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	2.06 2.42	5474.6850 5387.8318	5473.1642 5386.3341	1.5 0.6	18265.891 ^C 18560.342 ^B		4.191 4.154	6.455 6.455	-2.14 ^b -1.77 ^b	
											-1.//	
1552	y 5D $^{\circ}-g$ 5F	3-4	3.65	5028.5251	5027.1231	0.0	19886.547 ^A		4.154	6.620	• • •	
	(1065)	4-5	3.73	5008.6720	5007.2753	0.8	19965.372 ^A		4.103	6.579		
		2-3	3.44	4992.6608	4991.2683	0.2	20029.400 ^A		4.191	6.674	-0.67 ^b	
		$1-2 \\ 0-1$	3.35 3.19	4940.6177 4934.7184	4939.2391 4933.3413	3.2 -0.2	20240.384 ^A 20264.581 ^A		4.217 4.230	6.727 6.743	• • •	
		0-1 4-4	2.11	4934.7184	4925.2834	-0.2	20204.381 20297.734 ^B		4.230	6.620	-2.12 ^b	
		3-3	3.09	4920.3271	4918.9539	-0.7	20277.754 20323.852^{A}		4.154	6.674	-2.12	
		1-1	2.44	4909.4005	4908.0301	-1.4	20369.086 ^B		4.217	6.743		
		$^{2}-^{2}$	3.00	4888.5587	4887.1939	0.2	20455.927 ^A		4.191	6.727		
1550	$y^5D^{\circ}-h^5D$						19648.020 ^B				-1.78 ^b	
1553	$y ^{\circ}D^{\circ} - h ^{\circ}D$ (1066)	3-4 $3-3$	2.36 3.46	5089.5714 4990.3419	5088.1531 4988.9501	0.0	20038.707 ^A		4.154 4.154	6.590 6.639	-1.78° -0.89 ^b	
	(1000)	3-3 4-4	3.95	4985.2434	4983.8529	0.0	20059.201 ^A		4.103	6.590		
		1-1	3.26	4971.3044	4969.9176	0.0	20115.445 ^A		4.217	6.711	-0.71 ^b	
		2-2	3.33	4959.0632	4957.6796	-2.7	20165.099 ^A		4.191	6.691		
		2-1	2.98	4918.6028	4917.2300	0.0	20330.977 ^A		4.191	6.711	-1.18 ^b	
		4-3	3.25	4890.0021	4888.6369	0.2	20449.889 ^A		4.103	6.639		
		3 - 2	3.30	4887.6964	4886.3318	0.0	20459.536 ^A	0	4.154	6.691		
1554	$y^{5}D^{\circ}-f^{5}P$	2-2	2.12	5058.8936	5057.4836	2.3	19767.168 ^L	9-9	4.191	6.641		I
1334	(1067)	1-1	2.12	5023.0841	5021.6835	1.8	19908.088 ^E		4.217	6.686		1
	(1007)	3-2	3.81	4984.6411	4983.2507	0.0	20061.625 ^A		4.154	6.641		
		4-3	4.09	4983.8901	4982.4999	0.2	20064.648 ^A		4.103	6.591		
		2 - 1	3.36	4969.2836	4967.8974	0.2	20123.625 ^A	-1	4.191	6.686		
1555	$u^5D^{\circ}-f^5G$	3-4	3.26	4935.3825	4934.0053	-0.2	20261.854 ^A		4.154	6.666		
1333	$y \cdot D^2 = f \cdot G$ (1068)	1-2	3.18	4933.3823	4934.0033	0.0	20261.834 ⁻⁴ 20358.572 ^A		4.134	6.741		
	(1000)	$\frac{1-2}{2-3}$	3.24	4911.6968	4910.3258	0.5	20359.563 ^A		4.191	6.715		
		$\frac{2}{2-2}$	2.47	4860.4792	4859.1218	0.0	20574.103 ^E		4.191	6.741	-1.73 ^b	
		3-3	2.66	4841.6741	4840.3217	0.0	20654.013 ^A		4.154	6.715	-1.39 ^b	
		4-4	2.74	4837.2191	4835.8679	0.2	20673.035 ^A		4.103	6.666	-1.50^{b}	
1556	$y^5D^{\circ}-e^3G$	3-4	2.32	4863.9552	4862.5969	-1.7	20559.400 ^E	3 7	4.154	6.703		
1330	(1069)	2-3	1.90	4859.6010	4858.2439	-2.8	20577.821 ^L		4.191	6.742		
	(1007)	- 3	2.70	.027.0010	.000.2107	~.0	205,7.021	12	1.171	J. / 42	•••	

					LE 2—Conti							
No.	Multiplet (MT) 1	J-J	I ²	$\lambda_{vac}^{}$ (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
		4-5	2.58	4844.1414	4842.7884	0.5	20643.493 ^B	-2	4.103	6.663	-1.56 ^b	
1557	$y^{5}D^{0}-f^{3}D$	2-3	2.87	5013.5559	5012.1579	0.8	19945.923 ^A	-3	4.191	6.664		
	(1070)	1-2	2.70	4987.6138	4986.2226	0.0	20049.668^{A}	0	4.217	6.703	-1.39 ^b	
	` '	3-3	3.35	4940.6177	4939.2391	-2.2	20240.384^{D}		4.154	6.664		I
		$^{2-2}$	2.55	4934.5679	4933.1908	0.0	20265.199^{D}		4.191	6.703		Ar
		0 - 1	2.79	4919.3855	4918.0125	-0.2	20327.742^{A}	1	4.230	6.751	-1.36^{b}	
		1 - 1	2.80	4894.2253	4892.8589	-0.2	20432.243^{A}	1	4.217	6.751	-1.29^{b}	
		2 - 1	2.27	4843.1378	4841.7850	0.5	20647.771^{B}	-2	4.191	6.751	-1.88^{b}	
		4-3	1.98	4842.2487	4840.8962	-1.2	20651.562^{C}	5	4.103	6.664	• • •	
1558	$y\ ^5D$ ° $-s\ ^6\!D6s\ ^5D$	4-4	2.16	4676.4047	4675.0961	2.0	21383.949 ^C	-9	4.103	6.754		
1559	y 5D 0 $-e$ 3P	2 - 2	1.70	4744.2647	4742.9381	6.1	21078.082^{D}	-27	4.191	6.804		
	(1072)	3-2	1.90	4678.8989	4677.5896	1.8	21372.550^{C}	-8	4.154	6.804	-2.28^{b}	
1560	$y^{5}D^{\circ}-{}^{4}F6s^{5}F$	3-4	2.26	4346.1116	4344.8902	3.8	23009.073^{D}	-20	4.154	7.007		
1000	y = 1 00 1	4-5	2.50	4344.4374	4343.2164	0.6	23017.940^{B}		4.103	6.957		
1561	$y^{5}D^{\circ}-s^{4}D4d^{5}F$	1-2	2.18	4082.4198	4081.2676	0.8	24495.276 ^C	-5	4.217	7.254		
1501	g D o D au 1	3-4	2.39	4063.1018	4061.9546	1.8	24611.739^{B}		4.154	7.206	• • •	
		4-4	2.52	3996.3344	3995.2047	0.2	25022.931 ^C	-1	4.103	7.206		
1562	$y^5D^{\circ}-i^5D$	1-2	2.32	4174.1382	4172.9620	-1.7	23957.041 ^C	10	4.217	7.188		
1302	$y \cdot D = i \cdot D$ (1073*)	3-3	2.08	4114.0724	4112.9119	0.2	24306.816 ^C	-1	4.217	7.168	• • •	
	(1075)	3-3	2.52	4087.1376	4085.9842	1.8	24300.810 24467.001 ^C	-11	4.154	7.188	-1.20 ^b	
		4-3	2.22	4045.6335	4044.4909	-1.6	24718.008^{C}	10	4.103	7.168	-1.20	
1563	y^5D° – s^4D4d^5P	2-3	2.36	4051.8184	4050.6742	0.7	24680.277 ^C	-4	4.191	7.251		
1564	y ⁵ D°−58661 ^e	3-4	2.34	3975.3806	3974.2564	4.6	25154.824^{D}	-29	4.154	7.273		
1565	$y^{5}D^{\circ}-s^{4}D4d^{5}S$	3-2	3.63	3934.7133	3933.5997	4.0	25414.812^{D}	-26	4.154	7.305		I
1566	y ⁵ F°−e ⁵ D	3-4	0.78	9663.4743	9660.8247	6.5	10348.245^{B}	-7	4.256	5.539		
	(1076)	1 - 1	0.78	9244.7117	9242.1754	6.0	10816.995^{B}	-7	4.301	5.642		
		1 - 0	1.00	9171.8397	9169.3232	-0.8	10902.938^{B}	1	4.301	5.653		
		2 - 1	1.36	9122.4737	9119.9705	0.0	10961.939 ^A	0	4.283	5.642		
		5-4	2.01	9106.1362	9103.6375	1.7	10981.606 ^A	-2	4.178	5.539	• • •	
		3-2	1.63	9086.6788	9084.1854	0.8	11005.121^{A}	-1	4.256	5.620	• • •	
1567	y 5F $^{\circ}-e$ 5F	4-5	2.96	7712.4865	7710.3645	1.2	12965.987 ^A	-2	4.220	5.828	-1.11^a	
	(1077)	3-4	3.11	7663.3062	7661.1974	1.8	13049.198 ^A	-3	4.256	5.874		
		2 - 3	3.09	7570.9838	7568.8999	0.6	13208.323^{A}	-1	4.283	5.921	-0.60 ^c	
		5-5	3.89	7513.0887	7511.0205	1.1	13310.105^{A}	-2	4.178	5.828	0.10^{a}	
		4-4	3.70	7497.1314	7495.0674	1.1	13338.435 ^A	-2	4.220	5.874	0.36°	
		1-2	2.92	7493.7117	7491.6486	0.6	13344.522 ^A	-1	4.301	5.956	-0.80^{c}	
		3-3	3.76	7447.8015	7445.7508	1.1	13426.781 ^A	-2	4.256	5.921	• • •	
		$\begin{array}{c} 2-2 \\ 1-1 \end{array}$	3.51 3.29	7413.1957 7391.4342	7411.1544 7389.3988	0.5 0.5	13489.459 ^A 13529.174 ^A	-1	4.283	5.956	• • •	
		$\frac{1-1}{2-1}$	1.90	7391.4342	7311.0759	1.1	13674.110 ^A	-1 -2	4.301 4.283	5.978 5.978	• • • •	
		5-4	1.48	7313.0302	7311.0739	-0.5	13682.557 ^B	-2 1	4.283	5.874	 -1.74 ^b	
		3-4	2.00	7295.0549	7293.0454	1.6	13082.337 13707.916 ^A	-3	4.176	5.956		
		4-3	1.90	7290.7468	7288.7385	2.1	13716.016 ^A	-4	4.220	5.921		
1568	$y^{5}F^{\circ}-e^{3}F$	4-4	1.95	7183.1753	7181.1959	1.5	13921.420 ^A	-3	4.220	5.946		
1300	(1078)	5-4	1.48	7009.9028	7007.9701	3.9	14265.533 ^B	-8	4.178	5.946		
	(10.0)	3-2	1.85	6849.4849	6847.5954	-1.4	14599.638 ^C	3	4.256	6.066		
1569	$y^{5}F^{\circ}-e^{7}F$	2-2	0.00	5958.1107	5956.4605	-1.4	16783.844 ^B	4	4.283	6.364		
1507	(1079)	4-5	0.30	5954.5342	5952.8850	-1.8	16793.925^B	5	4.220	6.302		
	(20,7)	3-3	0.60	5945.2707	5943.6240	1.1	16820.092^{D}	-3	4.256	6.341		II
		4-3	0.00	5844.7721	5843.1523	7.9	17109.307 ^C	-23	4.220	6.341		**
		5-5	0.00	5834.9770	5833.3599	4.1	17138.028^{C}	-12	4.178	6.302		
1570	$y^{5}F^{0}-f^{7}D$	5-5	0.00	5994.3011	5992.6413	-0.7	16682.512^{B}	2	4.178	6.246		
1570	$y^{5}F^{0}-f^{7}D$ (1080)		0.00 0.30	5994.3011 5963.5697 5843.6470	5992.6413 5961.9181 5842.0275	-0.7 -0.4 -1.0	16682.512 ^B 16768.480 ^B 17112.601 ^D	2 1	4.178 4.220	6.246 6.299	 -3.16 ^b	

TABLE 2—Continued

					T	ABLE 2—C	ontinued	1					
	No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
) -	1571	$y^{5}F^{0}-f^{5}D$ (1081)	4-3 5-4	0.30 0.85	6062.4862 5978.0946	6060.8081 5976.4391	-1.5 0.0	16494.883 ^B 16727.738 ^A	4	4.220 4.178	6.265 6.251	-3.14 ^b	
1	1572	$y^{5}F^{0}-e^{7}P$ (1082)	3-4 3-3	3.78 0.60	6193.2716 6141.5664	6191.5584 6139.8671	-8.1 6.4	16146.555^{D} 16282.491^{C}	21 -17	4.256 4.256	6.258 6.275		I
	1573	$y^{5}F^{0}-e^{5}G$	5-4 5-6	0.30 1.58	5959.5150 5942.6375	5957.8645 5940.9915	0.0	16779.889 ^B 16827.545 ^A	0 -1	4.178 4.178	6.258 6.264	-2.15^{b}	
	1373	(1083)	3-3	0.60	5920.5720	5918.9319	0.4	16890.260^{B}	-1	4.256	6.350	2.13	
			4-4	1.15	5903.1668	5901.5314	0.7	16940.060 ^A	-2	4.220	6.320		
			5-5	2.02	5879.4170	5877.7880	-5.9	17008.489 ^D	17	4.178	6.286	-2.23^{b}	II
			3-2 $4-3$	0.00	5868.0711 5820.8936	5866.4451 5819.2802	5.5 1.7	17041.375 ^B 17179.493 ^C	-16 -5	4.256 4.220	6.369 6.350	• • •	
			5-4	0.30	5785.6382	5784.0342	1.0	17179.493 17284.178^B	-3	4.178	6.320	•••	
	1574	$y^{5}F^{0}-e^{7}G$	3-3	1.08	5837.1139	5835.4962	3.4	17131.754^{D}	-10	4.256	6.380		II
			5-6	0.48	5789.5676	5787.9626	-4.7	17272.447 ^D	14	4.178	6.319		II
			4-4	1.11	5781.8859	5780.2829	-0.3	17295.395 ^A	1	4.220	6.365	• • •	
			5-5 5-4	0.60 2.25	5703.4807 5669.0908	5701.8987 5667.5180	0.7 0.0	17533.153 ^B 17639.513 ^A	-2 0	4.178 4.178	6.351 6.365	-1.58 ^a	
	1575	$y^{5}F^{\circ}-f^{5}F$	1-2	1.00	5877.9068	5876.2782	1.7	17039.819 17012.859^A	-5	4.301	6.410	-2.65 ^b	
	13/3	$y \cdot F - f \cdot F$ (1084)	$\frac{1-2}{2-3}$	1.20	5862.7342	5861.1096	1.0	17012.839 17056.888 ^A	-3	4.283	6.398	-2.45^{b}	
		(1001)	1-1	0.85	5860.8584	5859.2343	0.3	17062.347 ^A	-1	4.301	6.417		
			4-5	1.40	5860.4019	5858.7780	-0.7	17063.676 ^A	2	4.220	6.336	-2.26^{b}	
			3-4	1.45	5836.7184	5835.1008	0.7	17132.915 ^A	-2	4.256	6.380	-2.37^{b}	
			$2-2 \\ 2-1$	0.60 0.30	5828.2534 5811.4934	5826.6380 5809.8825	1.0 1.4	17157.799 ^B 17207.281 ^B	-3 -4	4.283 4.283	6.410 6.417	-2.94 ^b	
			3-3	0.30	5788.5957	5786.9910	1.0	17207.281 17275.347 ^B	-3	4.256	6.398		
			3-2	0.85	5754.9793	5753.3836	1.0	17376.257 ^A	-3	4.256	6.410		
			5-5	1.40	5744.5529	5742.9600	-1.0	17407.795 ^A	3	4.178	6.336	-2.51^{b}	
			4-4	1.40	5739.8194	5738.2277	0.3	17422.151 ^A	-1	4.220	6.380	-2.34 ^b	
		5 770 3 70	5-4	0.60	5628.6479	5627.0860	5.1	17766.256 ^C	-16	4.178	6.380	-2.73 ^b	
	1576	$y^{5}F^{0}-e^{3}D$ (1086)	$\begin{array}{c} 2-3 \\ 3-3 \end{array}$	0.85 1.60	5971.2159 5894.3267	5969.5622 5892.6937	0.0	16747.008 ^A 16965.466 ^A	0	4.283 4.256	6.359 6.359	-2.73	
		(1000)	1-2	1.15	5865.8698	5864.2444	0.0	17047.770 ^A	0	4.301	6.415	-2.52^{b}	
			2-2	1.80	5816.4197	5814.8075	0.0	17192.707 ^A	0	4.283	6.415	-1.97 ^b	
			4-3	2.04	5795.5214	5793.9148	-0.3	17254.703 ^A	1	4.220	6.359	-1.70^{b}	
			1-1	1.78	5764.4366	5762.8384	-2.0	17347.749 ^A	6	4.301	6.452	1.054	
			$3-2 \\ 2-1$	2.05 2.34	5743.4411 5716.6841	5741.8484 5715.0986	0.3 6.9	17411.165 ^A 17492.658 ^D	-1 -21	4.256 4.283	6.415 6.452	-1.85 ^a	I
	1577	$y^{5}F^{\circ}-g^{5}D$	3-4	1.57	5874.8407	5873.2129	0.0	17021.738 ^A	0	4.256	6.366	-2.14 ^b	_
		(1087)	2-3	1.40	5806.0721	5804.4627	-1.3	17223.348 ^A	4	4.283	6.419	-2.04^{b}	
			4-4		5776.6821	5775.0806		17310.975 ^A	1	4.220		-1.30 ^a	
			1-2	1.49	5761.1386	5759.5412	-2.3	17357.680 ^A	7	4.301 4.256	6.453	-1.30 ^b	
			$3-3 \\ 2-2$	2.54 2.34	5733.3522 5713.4333	5731.7623 5711.8486	0.3 0.0	17441.803 ^A 17502.611 ^A	-1 0	4.283	6.419 6.453	-1.30 ^a	
			1-1	2.26	5707.0475	5705.4646	0.3	17522.195 ^A	-1	4.301	6.474	-1.60^{b}	
			1 - 0	2.26	5693.0762	5691.4970	0.0	17565.196 ^A	0	4.301	6.479	-1.52^{b}	
			5-4	3.32	5664.0877	5662.5162	-0.3	17655.094 ^A	1	4.178	6.366	-0.57^a	
			2-1	2.47	5660.2283	5658.6579	0.0	17667.132 ^A	0	4.283	6.474	-1.18 ^b	
			3-2 $4-3$	2.66 3.00	5642.9998 5639.8271	5641.4340 5638.2621	-0.6 -0.3	17721.071 ^A 17731.040 ^A	2 1	4.256 4.220	6.453 6.419	-0.87^{b}	
	1578	$y^{5}F^{0}-e^{5}P$	1-1	0.00	5771.1693	5769.5692	3.0	17327.511 ^C	-9	4.301	6.449		
		(1088)	1-2	0.95	5755.2894	5753.6935	-0.7	17375.321 ^A	2	4.301	6.455		
			2 - 1	1.04	5723.2942	5721.7069	0.3	17472.455 ^D	-1	4.283	6.449		I
			3-3	1.38	5711.5164 5707.6702	5709.9323 5706.0061	0.0	17508.485 ^A 17520.256 ^A	0	4.256	6.427	-2.34 ^b	
			$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	1.91 2.20	5707.6792 5637.3869	5706.0961 5635.8226	0.0 0.3	17520.256 ² 17738.715 ^A	0 -1	4.283 4.256	6.455 6.455	 -1.89 ^b	
			4-3	1.80	5618.6960	5617.1366		17797.724 ^B	4	4.220	6.427	-1.07	
	1579	$y^{5}F^{\circ}-g^{5}F$	4-5	2.04	5257.1282	5255.6654	1.9	19021.792^{B}	-7	4.220	6.579		
		(1089)	3-4	2.98	5245.2366	5243.7769	0.6	19064.917 ^A	-2	4.256	6.620	-1.15 ^b	

No.	Multiplet (MT) ¹	J-J	I ²	$\lambda_{vac}^{\ 3}$ (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		2-3	3.06	5185.7099	5184.2661	-0.3	19283.763 ^A		4.283	6.674	-1.00 ^b	
		4-4	3.51	5166.8495	5165.4107	0.0	19354.154 ^A		4.220	6.620		
		5-5	3.99	5163.7108	5162.2729	0.3	19365.918 ^A		4.178	6.579	0.02^{b}	
		3-3	3.11	5127.6214	5126.1930	0.3	19502.220 ^D		4.256	6.674	-1.08^{b}	II
		1-2	3.20	5111.0759	5109.6520	0.0	19565.352 ^A		4.301	6.727	-0.98^{b}	
		1-1	3.12	5077.6796	5076.2646	0.0	19694.035 ^A		4.301	6.743	• • •	
		$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	3.34 1.90	5073.4923 5017.8782	5072.0784 5016.4790	0.0 1.3	19710.289 ^A 19928.742 ^B		4.283 4.256	6.727 6.727	-1.69 ^b	
1580	$y^{5}F^{\circ}-h^{5}D$	4-4	3.10	5231.3302	5229.8743	7.9	19115.597 ^A		4.220	6.590		
	(1090)	3-3	3.18	5203.7050	5202.2564	0.5	19217.077 ^A	-2	4.256	6.639		
		$^{2-2}$	3.31	5149.4770	5148.0428	0.3	19419.448 ^A	-1	4.283	6.691		
		1 - 1	3.00	5143.9268	5142.4941	0.0	19440.401 ^A	0	4.301	6.711		
		5-4	3.84	5138.8135	5137.3822	0.3	19459.745 ^A	-1	4.178	6.590	-0.40^{b}	
		4-3	3.92	5126.5452	5125.1171	0.0	19506.314 ^A	0	4.220	6.639	-0.14^{b}	
		2 - 1	2.44	5105.8601	5104.4375	-0.3	19585.339 ^B	1	4.283	6.711	-1.69 ^b	
		3-2	3.55	5092.1929	5090.7740	0.5	19637.905 ^A	-2	4.256	6.691	-0.40^{b}	
1581	y 5F $^{\circ}-f$ 5P	2-2	2.15	5257.1984	5255.7356	0.0	19021.538 ^B		4.283	6.641	•••	
	(1091)	4-3	2.94	5229.8323	5228.3767	0.5	19121.072 ^A		4.220	6.591	-1.29^{b}	
		1 - 1	2.45	5199.3847	5197.9373	1.4	19233.045 ^B		4.301	6.686	-1.64 ^b	
		3-2	3.25	5197.5065	5196.0596	0.3	19239.995 ^A		4.256	6.641	•••	
		2-1	3.20	5160.4947	5159.0576	0.0	19377.987 ^A		4.283	6.686	-0.82^{b}	
1582	y 5F ${}^{\circ}-f$ 5G	4-5	3.81	5196.9191	5195.4723	0.0	19242.170 ^A		4.220	6.606	• • •	
	(1092)	3-4	3.59	5143.9739	5142.5412	0.3	19440.223 ^A		4.256	6.666	•••	
		5-6	4.32	5135.1188	5133.6885	0.3	19473.746 ^A		4.178	6.592	0.14^{b}	
		5-5	2.35	5105.6137	5104.1912	1.3	19586.284 ^B		4.178	6.606	-1.97^{b}	
		2 - 3	3.65	5098.4186	5096.9980	0.3	19613.925 ^A		4.283	6.715	• • •	
		1-2	3.68	5080.3906	5078.9748	0.0	19683.526 ^A		4.301	6.741	• • • • • • • • • • • • • • • • • • • •	
		4-4	3.19	5068.5622	5067.1496	0.0	19729.461 ^A		4.220	6.666	-0.97^{b}	
		$^{2-2}$	1.83	5043.2545	5041.8486	-0.8	19828.466 ^B		4.283	6.741	• • •	
		3-3	2.93	5042.2582	5040.8525	0.0	19832.384 ^A		4.256	6.715	• • • •	
		3-2	1.72	4988.2947	4986.9034	-2.0	20046.931 ^C		4.256	6.741	-2.09^{b}	
		5-4 4-3	2.04 2.10	4981.6729 4969.7790	4980.2834 4968.3926	0.5 0.2	20073.578 ^B 20121.619 ^B		4.178 4.220	6.666 6.715	• • • •	
1583	$y^{5}F^{\circ}-e^{5}H$	4-5	1.90	5041.6455	5040.2400		19834.794^{D}		4.220	6.679	•••	II
1505	(1093)	3-4	3.05	5022.9917	5021.5912	1.0	19908.454^{D}		4.256	6.724	-0.68^a	II
	(10,5)	2-3	2.44	5014.0929	5012.6947	-0.3	19943.787 ^B		4.283	6.756	-1.79^{b}	
		4-3	2.94	4889.6274	4888.2623	6.0	20451.456^{D}		4.220	6.756	•••	Ar
1584	$y^{5}F^{\circ}-e^{3}G$	4-5	4.01	5076.1630	5074.7483	0.0	19699.919 ^A	0	4.220	6.663	-0.20^{b}	
100.	(1094)	3-4	3.84	5066.4305	5065.0185	0.3	19737.762 ^A	-1	4.256	6.703	•••	
	(/	2-3	3.45	5042.3118	5040.9061	-0.5	19832.173 ^A		4.283	6.742		
		4-4	1.54	4993.2601	4991.8675	1.0	20026.996 ^C	-4	4.220	6.703	-1.91^{b}	
		3-3	2.07	4987.3752	4985.9842	0.5	20050.627^{B}		4.256	6.742	-1.90^{b}	
1585	$y^{5}F^{\circ}-f^{3}D$	3-3	3.54	5149.6634	5148.2292	0.0	19418.745 ^A		4.256	6.664	•••	
	(1095)	$^{2-2}$	3.23	5123.0663	5121.6392	0.0	19519.560 ^A		4.283	6.703	-0.81^{b}	
		4-3	3.04	5074.0862	5072.6721	0.0	19707.982 ^A		4.220	6.664		
		3-2	2.71	5066.3648	5064.9528	0.3	19738.018 ^A		4.256	6.703		
		1 - 1	1.30	5061.4452	5060.0344	-1.5	19757.203 ^B		4.301	6.751	• • • •	
		2-1	2.50	5024.5876	5023.1866	0.8	19902.131 ^A		4.283	6.751	-1.60 ^b	
1586	$y^{5}F^{\circ}-e^{3}H$	5-6	2.83	4963.9567	4962.5719	0.0	20145.220 ^A		4.178	6.675	-1.18^a	
	(1097)	3-4	1.99	4943.9700	4942.5905	0.7	20226.660^{B}		4.256	6.764	• • •	
		4-5	2.80	4943.8387	4942.4592	0.0	20227.197 ^A		4.220	6.728	-1.41^a	
		4-4	1.95	4874.2683	4872.9072	0.0	20515.900 ^C		4.220	6.764	-2.30^{b}	
1587	y 5F o $-f$ 3F	3-4	2.03	4912.9007	4911.5294	-1.4	20354.574 ^B		4.256	6.780	-2.24^{b}	
1307		4-4	1.78	4844.0671	4842.7140	-1.4	20643.810 ^C	6	4.220	6.780		
1367	(1098)	4-4	1.70									
1588	$y^{5}F^{\circ}-{}^{4}F6s^{5}F$	5-5	2.74	4460.6043	4459.3527	0.2	22418.487 ^B		4.178	6.957	•••	

. 2					TAB	SLE 2—Conti	nued						
94.	No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
ST.	1589	$y^{5}F^{\circ}-s^{6}D5d^{5}D$	4-4	2.21	4510.9991	4509.7342	-0.8	22168.038 ^B	4	4.220	6.969		
4Ap	1590	$y^{5}F^{\circ}-s^{6}D5d^{7}D$	5-4	2.15	4394.3242	4393.0900	-1.9	22756.628^{L}		4.178	6.999		
1994ApJS.	1591	$y^{5}F^{\circ}-s^{6}D5d^{5}F$	3-3	2.23	4464.6598	4463.4072	3.0	22398.123^{L}		4.256	7.033		
	1592	$y^{5}F^{\circ} - {}^{4}F6s^{3}F$	4-4	2.18	4391.9862	4390.7527	1.2	22768.742^{D}		4.220	7.043		
		=										•••	
	1593	$y^{5}F^{\circ}-s^{4}D4d^{5}F$	4-4	1.90	4152.9314	4151.7607	-3.4	24079.377 ^D		4.220	7.206	•••	
	1594	$y^{5}F^{0}-i^{5}D$	$\frac{2-2}{3-3}$	2.08 1.85	4268.5905 4258.0053	4267.3894 4256.8071	-2.4 2.4	23426.937^{L} 23485.175^{L}		4.283 4.256	7.188 7.168	-1.56 ^b	
		(1102*)	3-3 4-4	2.36	4226.9030	4225.7129	-1.4	23657.983 ^C		4.220	7.153	-1.50	
	1595	$y^{5}F^{\circ}-s^{6}D7s^{7}D$	3-4	2.26	4189.5073	4188.3271	0.9	23869.155 ^D		4.256	7.215	•••	
	1596	y ${}^5F^{\circ}-g$ 5G	1-2	2.45	4143.7572	4142.5889	1.2	24132.688 ^C	-7	4.301	7.293	-1.02^{b}	
		(1103)	3-4	2.63	4133.6985	4132.5329	-0.3	24191.411 ^B		4.256	7.255		
			4-5	2.56	4126.7813	4125.6175	-2.7	24231.960^{D}		4.220	7.224	•••	I
			5-6	3.05	4114.1194	4112.9589	0.2	24306.538 ^A		4.178	7.191	-0.33^{b}	
			3-3	2.38	4101.5042	4100.3470	-1.0	24381.299^{D}		4.256	7.279	• • •	
	1597	y 5F ${}^{\circ}$ $-s$ 4D4d 5P	2-3	2.38	4178.0417	4176.8645	-2.8	23934.658 ^D		4.283	7.251	• • •	
	1598	$y^{5}F^{0}-{}^{4}F5d^{5}F$	5-5	2.79	4016.7410	4015.6059	0.3	24895.805^{D}	-2	4.178	7.264		II
	1599	$y^5F^{\circ}-{}^4F5d^3G$	4-5	2.28	4036.7346	4035.5943	-0.2	24772.498 ^C	1	4.220	7.292	•••	
	1600	$z^{3}P^{0}-d^{8}^{3}P$	1-2	2.38	15364.436	15360.238	0	6508.537^{A}	0	4.260	5.067		
			0 - 1	2.40	15099.321	15095.196	0	6622.814 ^A		4.284	5.105		
			1 - 1	2.04	14672.358	14668.348	0	6815.537 ^A		4.260	5.105		
			1 - 0	2.50	14552.594	14548.617	6	6871.627 ^A		4.260	5.112	• • •	
			2-2	2.75	14441.523	14437.577	0	6924.477 ^A		4.209	5.067	• • •	
			2-1	2.54	13828.433	13824.653	0	7231.477 ^A	0	4.209	5.105	• • •	
	1601	$z^{3}P^{0}-e^{5}F$ (1105)	2-3	1.78	7241.8627	7239.8676	0.0	13808.602 ^B	0	4.209	5.921	•••	
	1602	$z^3P^0-e^3D$	2 - 3	3.31	5764.5905	5762.9922	0.0	17347.286 ^A		4.209	6.359	-0.45^{b}	
		(1107)	1 - 2	3.01	5754.7184	5753.1227	0.3	17377.045 ^A		4.260	6.415	-0.69^a	
			0 - 1	2.70	5719.4191	5717.8329	0.3	17484.293 ^A		4.284	6.452	-1.13^{b}	
			1 - 1	2.73	5657.0595	5655.4900	-3.2	17677.028^{D}		4.260	6.452	• • •	II
			2-2	2.55	5620.1925	5618.6327	0.0	17792.985 ^A	0	4.209	6.415	-1.28 ^a	
	1603	$z^3P^{\circ}-g^5D$	0 - 1	1.76	5662.9166	5661.3455	0.6	17658.745 ^A		4.284	6.474	-2.02^{b}	
		(1108)	1 - 2	2.03	5653.8867	5652.3180	0.0	17686.948 ^A		4.260	6.453	-1.95^{b}	
			2 - 3	1.90	5610.5294	5608.9723	-2.2	17823.630 ^C		4.209	6.419	-2.40^{b}	
			1-1	2.23	5601.7789	5600.2242	-0.3	17851.472 ^A		4.260	6.474	,	
			2-2	2.54	5523.9805	5522.4465	0.3	18102.888 ^A		4.209	6.453	-1.55^{b}	
			2-1	2.44	5474.2298	5472.7091	0.3	18267.410 ^A	-1	4.209	6.474	-1.72 ^b	
	1604	$z^{3}P^{0}-e^{5}P$	0 - 1	1.00	5726.0428	5724.4547	0.7	17464.068 ^A		4.284	6.449	-2.64^{b}	
		(1109)	1 - 1	1.00	5663.5420	5661.9707	0.0	17656.795 ^B		4.260	6.449	-2.73^{b}	
			1 - 2	1.30	5648.2515	5646.6843	0.3	17704.594 ^B		4.260	6.455	-2.50^{b}	
			2-2	1.78	5518.5981	5517.0655	-3.0	18120.544 ^C	10	4.209	6.455	-2.37 ^b	
	1605	z 3P $^{\circ}-g$ 5F	2 - 3	2.84	5029.1588	5027.7567	-0.5	19884.041 ^A		4.209	6.674	-1.25^{b}	
		(1110)	1 - 2	1.23	5026.4858	5025.0844	2.8	19894.615 ^C		4.260	6.727	-1.99^{b}	
			1 - 1	1.30	4994.1783	4992.7854	-0.7	20023.314 ^C	3	4.260	6.743	-2.35^{b}	
	1606	$z^{3}P^{\circ}-h^{5}D$ (1111)	$1-1 \\ 2-2$	2.20 2.48	5058.2511 4995.0736	5056.8412 4993.6805	-0.8 0.5	19769.679 ^E 20019.725 ^E		4.260 4.209	6.711 6.691	-1.96 ^b -1.47 ^b	
	1607	$z^3P^0-f^5P$	0-1	2.18	5162.7354	5161.2977	6.4	19369.577 ^C	-24	4.284	6.686		
		(1112)	2-1	2.67	5005.4402	5004.0443	0.3	19978.263 ^A	-1	4.209	6.686	-1.40 ^b	
	1608	$z^{3}P^{0}-f^{5}G$ (1113)	$1-2 \\ 2-3$	2.05 2.62	4996.8033 4947.0177	4995.4097 4945.6374	1.5 1.2	20012.795 ^E 20214.199 ^A		4.260 4.209	6.741 6.715	-1.89 ^b -1.51 ^b	
	1609	$z^3P^{\circ}-f^3D$	0-1	1.99	5026.7041	5025.3026	-0.8	19893.751 ^E	3	4.284	6.751	-2.04^{b}	
	1610	$z^3P^{\circ}-s^4D4d^3D$	1-1	2.30	4064.5645	4063.4169	-0.8	24602.882 ^C		4.260	7.311		
			1-2	2.28	4062.2435	4061.0965	1.5	24616.939 ^C	· -9	4.260	7.312	•••	

TABLE 2—Continued

ν.		_			TAE	BLE 2—Conti	nued						
ν. 4.	No.	Multiplet (MT) 1	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
YY4APUS			2-3 2-1 2-2	2.29 2.41 2.83	4042.7910 3996.9909 3994.7461	4041.6492 3995.8610 3993.6168	0.0 -0.8 1.1	$24735.387^{C} \\ 25018.821^{D} \\ 25032.880^{D}$	5	4.209 4.209 4.209	7.275 7.311 7.312		
7	1611	z ³ P°-58831 ^e	2-3	2.59	4018.5974	4017.4619	-1.5	24884.304 ^B	9	4.209	7.294		
	1612	$z^{3}P^{\circ}-59077^{e}$	1-1	2.71	4046.2547	4045.1119	-0.7	24714.213 ^C	4	4.260	7.324		
	1613	z^3P° – s^4D4d^3S	$1-1 \\ 2-1$	2.65 2.51	4033.5953 3967.0373	4032.4559 3965.9152	1.5 -0.3	24791.778^{C} 25207.729^{D}		4.260 4.209	7.334 7.334		
	1614	z 3P $^{\circ}$ $-s$ 4D4d 3F	1-2 2-3 2-2	2.61 2.96 2.57	3928.8618 3909.9498 3865.6893	3927.7497 3908.8426 3864.5936	2.9 0.3 2.1	25452.664 ^C 25575.776 ^C 25868.608 ^D	-2	4.260 4.209 4.209	7.416 7.380 7.416		
	1615	z 3P $^{\circ}$ $-s$ 4D4d 3P	$1-1 \\ 2-1$	2.85 2.36	3868.1158 3806.8694	3867.0195 3805.7891	-1.9 0.7	$25852.380^{D} \\ 26268.303^{D}$	13	4.260 4.209	7.465 7.465	•••	
•	1616	$b^{1}D-y^{3}F^{0}$	2-2	2.22	34669.639	34660.186	0	2884.368 ^A	0	4.294	4.652		
	1617	$b~^1D-y~^3D^{\circ}$	2-1	1.56	22941.331	22935.071	-16	4358.945^{B}	3	4.294	4.835	•••	
	1618	$b~^1D-y~^3P^{\circ}$	2-2	1.36	8271.1070	8268.8341	0.7	12090.280^{B}	-1	4.294	5.793		
	1619	$b^{-1}D-w^{-3}D^{\circ}$	2-2	1.04	8000.4525	7998.2527	-1.9	12499.293 ^C	3	4.294	5.844		
	1620	$b~^{1}D-Psp3~^{1}D^{\circ}$	2-2	1.68	7822.9553	7820.8034	0.6	12782.893 ^A	-1	4.294	5.879	-2.64 ^b	
	1621	$b {}^{1}D - v {}^{3}G^{\circ}$ (1121)	2-3	2.62	6572.9828	6571.1677	1.3	15213.793 ^B	-3	4.294	6.180	•••	
	1622	b ¹ D-Fsp3 ¹ F° (1122*)	2-3	2.85	6738.3910	6736.5314	-2.3	14840.338 ^A		4.294	6.134	-2.98 ^b	
	1623	$b~^1D-u~^5F^{\circ}$	2-2	0.00	5817.1265	5815.5141	0.7	17190.618 ^B		4.294	6.426	• • • •	
	1624	$b {}^{1}D - t {}^{5}D^{\circ}$ (1124)	2-2	0.30	5884.7058	5883.0753	1.4	16993.203 ^B		4.294	6.401		
	1625	$b {}^{1}D - v {}^{3}F^{\circ}$ (1125)	$2-2 \\ 2-3$	1.34 0.60	6037.0090 5977.8158	6035.3378 5976.1604	0.7 0.0	16564.494 ^D 16728.518 ^A		4.294 4.294	6.348 6.368	-2.59 ^b -3.06 ^c	I
	1626	$b {}^{1}D - u {}^{3}G^{\circ}$ (1127)	2-3	1.41	5817.6734	5816.0609	-7.4	17189.002 ^A	22	4.294	6.425	-2.30^{b}	
	1627	$b {}^{1}D - y {}^{1}D^{\circ}$ (1128)	2-2	2.06	5857.7113	5856.0880	-0.3	17071.514 ^A	1	4.294	6.411	-1.33 ^a	
	1628	$b^{-1}D - x^{-1}D^{\circ}$ (1129)	2-2	1.62	5839.3196	5837.7012	0.0	17125.283 ^A		4.294	6.417	-2.34 ^b	
	1629	$b^{1}D-u^{3}D^{\circ}$	2-3	0.30	5769.5724	5767.9727	0.0	17332.307 ^B	0	4.294	6.443	• • •	
	1630	$b {}^{1}D - {}^{2}P4p {}^{1}P^{\circ}$	2-1	1.56	5699.9460	5698.3649	0.0	17544.026 ^A		4.294	6.469	-2.15 ^b	
	1631	$b {}^{1}D - {}^{4}F5p {}^{3}G^{\circ}$	2-3	2.00	5070.8365	5069.4233	-0.3	19720.612 ^C		4.294	6.739	• • • •	
	1632	$b^{1}D-v^{3}P^{0}$	2-1	2.12	5378.3286	5376.8334	2.9	18593.137 ^C	-10	4.294	6.599	-2.31 ^b	
	1633	$b^{1}D-{}^{4}F5p^{5}D^{\circ}$	2-3	2.57	5222.4917	5221.0381	1.9	19147.948 ^B	-7	4.294	6.668		
	1634	$b {}^{1}D - x {}^{3}S^{\circ}$	2-1	2.15	5216.0599	5214.6080	0.5	19171.559^{C}	-2	4.294	6.671		
	1635	$b~^1D$ – $s~^3G$ °	2 - 3	1.70	4727.2564	4725.9344	-4.0	21153.919^{D}	18	4.294	6.917		
	1636	b ¹ D-w ¹ D° (1133)	2-2	2.48	4735.4223	4734.0980	-0.7	21117.441 ^B	3	4.294	6.912	-1.58 ^b	
	1637	z $^5G^{\circ}-e$ 5F	4-4	2.91	8250.3983	8248.1309	2.0	12120.627 ^A		4.371	5.874		
		(1136)	3-3 6-5	2.99 4.27	8234.5808 8222.6388	8232.3178 8220.3790	0.7	12143.909 ^A 12161.546 ^A		4.415	5.921	0.779	
			6-5 2-2	4.27 2.89	8222.6388 8209.9993	8220.3790 8207.7429	1.4 0.7	12161.546 ^A 12180.269 ^A		4.320 4.445	5.828 5.956	0.27^a	
			5-5	1.90	8181.2427	8178.9940	1.3	12180.209 12223.082^{A}		4.312	5.828		
			2-1	3.47	8087.3956	8085.1723	0.7	12364.920^{A}	-1	4.445	5.978	•••	
			3-2	3.56	8048.2606	8046.0479	0.6	12425.045 ^A		4.415	5.956		
			4-3 5-4	3.63	8001.1458	7998.9458	1.3	12498.210 ^A		4.371	5.921	•••	
			4—4	3.72	7939.3239	7937.1406	1.3	12595.531 ^A	-2	4.312	5.874	•••	

N					17	ABLE 2—Co	ntinuea						
94	No.	Multiplet (MT) 1	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
I994ApJS	1638	$z {}^{5}G^{0} - e {}^{3}F$ (1137)	2-3 4-4 3-3	1.04 2.28 1.30	7889.2569 7871.7757 7739.7955	7887.0871 7869.6106 7737.6661	-1.9 0.6 0.6	12675.465 ^L 12703.614 ^L 12920.238 ^L	-1	4.445 4.371 4.415	6.017 5.946 6.017	-1.88 ^b -2.75 ^b	
.⊣ √			2-2	1.71	7649.9470	7647.8418	-1.2	13071.986	2	4.445	6.066		
			5-4 4-3	3.78 3.37	7588.1072 7533.2189	7586.0187 7531.1451	0.6 1.1	13178.517 ² 13274.538 ²	-2	4.312 4.371	5.946 6.017	0.15^{c}	
			3-2	2.87	7509.3335	7507.2663	0.0	13316.761		4.415	6.066	-0.84 ^c	
	1639	$z {}^{5}G^{\circ} - e {}^{5}G$ (1140)	4-5 6-6	2.00 2.18	6473.9380 6377.9627	6472.1494 6376.1999	-2.1 -0.8	15446.549 ^C 15678.988 ^C		4.371 4.320	6.286 6.264	-3.02 ^c	
			5-6	2.18	6353.0287	6351.2726	-1.2	15740.524 ^E		4.312	6.264	• • • •	
	1640	$z {}^{5}G^{\circ} - g {}^{5}D$ (1142)	3-2 $4-3$	0.60 1.18	6083.3945 6055.7504	6081.7107 6054.0741	1.9 0.4	16438.191 ¹ 16513.230 ²		4.415 4.371	6.453 6.419	-2.31 ^b	
		•	5-4	1.28	6035.7064	6034.0355	0.0	16568.069	0	4.312	6.366	-2.42 ^b	
	1641	$z {}^{5}G^{0} - g {}^{5}F$ (1143)	4-4 6-5	2.36 3.32	5513.7880 5489.2708	5512.2567 5487.7460	-1.8 0.6	18136.352 ¹ 18217.356 ²		4.371 4.320	6.620 6.579	-1.42^{b}	
		(1143)	3-3	2.39	5488.6697	5487.1451	-0.9	18219.351 ^H		4.415	6.674	-1.53 ^b	
			2-2	2.92	5434.4580	5432.9479	-0.3	18401.099		4.445	6.727	-1.04 ^b	
			$\begin{array}{c} 2-1 \\ 3-2 \end{array}$	2.11 2.53	5396.7184 5363.1162	5395.2184 5361.6251	0.9 -0.3	18529.779 ⁰ 18645.876 ¹		4.445 4.415	6.743 6.727	-2.17 ^b -1.43 ^b	
	1642	z ${}^5G^{\circ}-h$ 5D	2-3	2.46	5653.0928	5651.5243	-1.0	17689.432 ¹	3	4.445	6.639		
		(1144)	2 - 1	2.09	5471.6140	5470.0940	0.9	18276.143 ^I		4.445	6.711	-1.81 ^b	
			4-3	3.26	5467.9152	5466.3962	0.0	18288.506 ² 18355.034 ²		4.371 4.415	6.639 6.691	-0.63 ^b	
			3-2 5-4	3.18 2.23	5448.0967 5442.8510	5446.5829 5441.3387	0.3 -0.6	18372.724 ¹		4.312	6.590	-1.73 ^b	
	1643	z $^5G^{\circ}-f$ 5P	3-2 2-1	1.93 2.20	5568.8242 5534.4055	5567.2782 5532.8687	3.7 2.5	17957.112 ⁰ 18068.788 ¹	-8	4.415 4.445	6.641 6.686		II
	1644	z $^5G^{\circ}-f$ 5G	4-5	2.62	5548.0463	5546.5058	0.0	18024.363		4.371	6.606	-1.31 ^b	
		(1145)	3-4	2.37	5507.4113	5505.8817	0.0 0.3	18157.351 ¹ 18304.734 ¹		4.415 4.445	6.666 6.715	-1.90 ^b	
			2-3 6-6	2.09 3.99	5463.0676 5456.9705	5461.5499 5455.4544	0.3	18304.734 ⁻¹		4.443	6.592	-1.90	
			5-6	1.90	5438.7041	5437.1928	-3.3	18386.733 ^C		4.312	6.592		
			5-5	3.98	5405.6196	5404.1172	-0.6	18499.267		4.312	6.606		
			4-4	3.67	5402.0036	5400.5022 5398.2794	0.6	18511.650 ² 18519.272 ²		4.371 4.445	6.666	-0.16 ^b -0.67 ^b	
			$\begin{array}{c} 2-2 \\ 3-3 \end{array}$	3.14 3.39	5399.7803 5390.9777	5389.4792	0.0 0.3	18549.511		4.443	6.741 6.715	-0.67°	
	1645	z $^5G^{\circ}-e$ 5H	6-7	4.46	5425.5759	5424.0682	0.3	18431.223		4.320	6.605	0.52^{b}	
		(1146)	6-6 5-6	2.18 4.49	5402.7706 5384.8661	5401.2689 5383.3692	2.0 0.3	18509.022 ¹ 18570.564 ²		4.320 4.312	6.615 6.615	-1.92 ^b 0.64 ^a	
			3-0 4-5	4.31	5371.4552	5369.9619	0.6	18616.929		4.371	6.679	0.54^{a}	
			3-4	4.17	5368.9595	5367.4668	0.9	18625.583 ¹		4.415	6.724	0.44^{a}	II
			2-3	4.00	5366.3632	5364.8713	0.0	18634.594	-	4.445	6.756	0.23^a	
			3-3 $4-4$	2.37 2.32	5296.7855 5268.7358	5295.3121 5267.2699	-1.1 0.3	18879.375 ¹ 18979.885 ⁰		4.415 4.371	6.756 6.724	-1.69 ^b -1.77 ^b	
	1646	z 5G $^{\circ}-e$ 3G	4-5	2.70	5410.6373	5409.1336	0.3	18482.1114	_	4.371	6.663	-1.30 ^b	
		(1147)	2-3	2.11	5398.7028	5397.2023	3.5	18522.968		4.445	6.742	• • •	
		5 2	5-4	2.23	5185.6198	5184.1760	-0.8	19284.098		4.312	6.703	•••	
	1647	$z^{5}G^{\circ} - f^{3}D$ (1148)	3-3 $3-2$	2.10 2.23	5513.9339 5418.5391	5512.4026 5417.0332	0.3 -3.8	18135.872 ⁰ 18455.159 ¹		4.415 4.415	6.664 6.703	-1.68 ^b	
		(1140)	4-3	2.55	5408.2782	5406.7751	0.3	18490.173 ¹		4.371	6.664	-1.72 ^b	
	1648	$z.^{5}G^{\circ}-e^{3}H$ (1149)	5-4	1.90	5057.4013	5055.9916	-1.8	19773.001 ³	7	4.312	6.764	-2.01 ^b	
	1649	$z^{5}G^{\circ}-f^{3}F$	4-4	2.18	5147.7401	5146.3064	-1.1	19426.000 ⁰		4.371	6.780	-2.03^{b}	
		(1150)	3-3	1.95	5124.7080	5123.2804	0.8	19513.307 ⁶ 19767.168 ³		4.415	6.834		T
			3-2 $4-3$	2.12 2.23	5058.8936 5033.3178	5057.4836 5031.9145	4.1 0.3	19767.168 ²		4.415 4.371	6.866 6.834	-1.67 ^b	I
			5-4	2.37	5024.8989	5023.4978	0.0	19900.898		4.312	6.780		

7				TAB	LE 2—Conti	inued						
 6	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
SPAV 1650	z ⁵ G° – ⁴ F6s ⁵ F	4-4 6-5 5-4	1.48 2.73 2.64	4703.9169 4701.4731 4601.1312	4702.6010 4700.1579 4599.8425	2.9 -0.2 1.7	$21258.879^{C} \\ 21269.929^{D} \\ 21733.786^{A}$	1	4.371 4.320 4.312	7.007 6.957 7.007		Ne
H		$\begin{array}{c} 2-1 \\ 3-2 \end{array}$	2.00 2.08	4566.6911 4562.6928	4565.4115 4561.4143	0.2 0.4	21897.693^{B} 21916.882^{B}		4.445 4.415	7.160 7.132		
1651	$z^{5}G^{\circ}-s^{6}D5d^{5}D$	5-4	2.00	4667.4180	4666.1118	1.5	21425.122 ^C		4.312	6.969		
1652	z 5G ° $-s$ 6D5d 5G	6-5 4-3 5-4	2.31 2.26 2.11	4606.8781 4587.5164 4568.1468	4605.5878 4586.2313 4566.8668	0.2 0.4 1.3	21706.674^{B} 21798.287^{B} 21890.715^{B}	-2	4.320 4.371 4.312	7.011 7.074 7.026		
1653	z $^5G^{\circ}$ $-s$ 6D5d 7D	3-4 2-1 4-4	1.85 1.30 1.78	4798.3788 4728.5860 4718.1587	4797.0379 4727.2636 4716.8390	4.4 -3.6 -3.8	20840.372^{C} 21147.971^{D} 21194.709^{C}	-19 16 17	4.415 4.445 4.371	6.999 7.067 6.999		
1654	z 5G ° $-s$ 6D 5 d 5F	3-2 4-3	1.78 2.23	4685.9083 4657.7610	4684.5971 4656.4573	1.1 5.0	21340.580 ^C 21469.543 ^B	-5	4.415 4.371	7.061 7.033	•••	
1655	z $^5G^{\circ}$ $ ^4F5d$ 5F	4-5 6-5	2.73 1.70	4285.6109 4211.0153	4284.4054 4209.8294	-2.9 0.9	23333.896^{B} 23747.242^{D}	16	4.371 4.320	7.264 7.264		
1656	z $^5G^{\circ}$ $ ^4F5d$ 5H	6-7	3.20	4189.9119	4188.7316	0.4	23866.850 ^B	-2	4.320	7.279	•••	
1657	$z^{5}G^{\circ}-{}^{4}F5d^{3}G$	6-5	3.19	4172.2164	4171.0407	-3.5	23968.076 ^A	20	4.320	7.292	•••	
1658	$z^{3}G^{\circ}-e^{5}F$ (1153)	4-4 5-5 3-3	2.30 2.69 1.86	8612.9773 8601.1924 8564.4588	8610.6120 8598.8302 8562.1066	1.5 0.7 1.5	11610.387 ^A 11626.295 ^A 11676.161 ^B	-2 -1 -2	4.434 4.386 4.473	5.874 5.828 5.921	-1.09 ^a	
		3-2 4-3	2.68 3.27	8363.0934 8341.6959	8360.7956 8339.4039	0.7 1.4	11957.298 ^A 11987.970 ^A	-1 -2	4.473 4.434	5.956 5.921	• • •	
1659	$z^{3}G^{\circ}-e^{3}F$ (1154)	5-4 3-4 4-4	3.67 1.61 3.22	8334.2056 8416.4004 8201.1762	8331.9157 8414.0882 8198.9221	1.4 1.4 1.3	11998.744 ^A 11881.564 ^B 12193.373 ^A	-2 -2 -2	4.386 4.473 4.434	5.874 5.946 5.946	•••	
	(1131)	3-3 5-4 4-3	2.85 3.71 3.54	8030.5224 7948.0326 7834.3517	8028.3145 7945.8469 7832.1968	1.3 0.6 0.6	12452.490 ^A 12581.730 ^A 12764.298 ^A	-2 -1 -1	4.473 4.386 4.434	6.017 5.946 6.017	• • •	
		3-2	3.46	7782.6983	7780.5573	0.6	12849.014 ^A	-1	4.473	6.066	• • • •	
1660 1661	$z {}^{3}G^{0}-e {}^{7}F$ (1155) $z {}^{3}G^{0}-f {}^{5}D$	4-3 5-4	2.30	6501.4120 6647.2028	6499.6161 6645.3677	3.8 2.7	15381.274 ^C 15043.922 ^C	-9 -6	4.434 4.386	6.341 6.251	•••	
1662	(1156) $z^{3}G^{\circ}-e^{7}P$	4-3	1.85	6736.8653	6735.0060	-1.4	14843.699 ^D	3	4.434	6.275		
1662	(1157) $z^{3}G^{0}-e^{5}G$	5-4 5-4	2.18 2.34	6624.2362	6622.4073	-0.9	15096.080^{C} 15600.365^{B}	2	4.386	6.258	•••	
1663 1664	$z^3G^{\circ}-f^5F$	3-3 3-2 4-3	1.70 2.11	6410.1064 6441.3421 6399.7375	6408.3350 6439.5623 6397.9689	1.6 6.2 -0.4	15524.715 ^D 15625.641 ^C	1	4.386 4.473 4.473	6.320 6.398 6.410	•••	
1665	z $^3G^{\circ}-e$ 3D	4-3	1.85 2.83	6314.5162 6440.5377	6312.7705 6438.7581	4.8 0.4	15836.526 ^C 15526.654 ^A	-12 -1	4.434 4.434	6.398 6.359		
1666	(1158) $z^{3}G^{\circ}-g^{5}F$ (1159)	4-4 5-5	0.60 2.13	5673.4041 5655.4359	5671.8302 5653.8668	1.6 1.3	17626.102 ^B 17682.103 ^A	-5 -4	4.434 4.386	6.620 6.579	 -1.64 ^b	
1667	z ³ G°-h ⁵ D (1160)	3-4 4-4 3-3 5-4	0.30 0.30 1.00 2.45	5856.2533 5751.2313 5725.2602 5625.5831	5854.6305 5749.6365 5723.6724 5624.0220	2.1 -0.7 1.3 0.0	17075.764 ^C 17387.581 ^B 17466.455 ^A 17775.935 ^A	-6 2 -4 0	4.473 4.434 4.473 4.386	6.590 6.590 6.639 6.590	 -2.94 ^b -1.48 ^b	
1668	z $^3G^{\circ}-f$ 5P	4-3 3-2	0.90 0.30	5749.4325 5717.7579	5747.8382 5716.1721	2.0 1.3	$17393.021^A \\ 17489.373^C$	-6 -4	4.434 4.473	6.591 6.641	• • •	
1669	$z^{3}G^{0}-f^{5}G$ (1161)	4-5 3-4 5-6 4-4	2.18 1.74 2.02 2.36	5709.6782 5653.0375 5621.1554 5555.1201	5708.0945 5651.4690 5619.5954 5553.5778	0.3 0.0 -0.6 0.3	17514.122 ^A 17689.605 ^A 17789.937 ^A 18001.411 ^B	-1 0 2 -1	4.434 4.473 4.386 4.434	6.606 6.666 6.592 6.666	-1.57^b -2.00^b -1.70^b -1.41^b	

·				1 A J	BLE 2—Conti	пиеа						
No.	Multiplet (MT) ¹	J-J	I ²	$\lambda_{vac}^{}$ (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
SC4AP69 1640		3-3 5-4	2.04 2.43	5530.4348 5437.8068	5528.8990 5436.2958	0.9 0.3	18081.761 ^C 18389.767 ^B		4.473 4.386	6.715 6.666	-2.02 ^b	
1670	$z^{3}G^{\circ}-e^{5}H$	3-3	2.61	5431.3488	5429.8395	-2.4	18411.633 ^A	8	4.473	6.756		
٦٠,٥	(1162)	4-4	1.88	5414.2904	5412.7857	1.8	18469.641 ^C		4.434	6.724	-1.89 ^b	
	()	5-5	2.54	5406.8527	5405.3499	-0.3	18495.048^{B}		4.386	6.679	-1.39°a	
1671	$z^{3}G^{0}-e^{3}G$	4-5	2.75	5564.2512	5562.7065	0.6	17971.870 ^A	-2	4.434	6.663		
10/1	(1163)	3-4	2.26	5559.5257	5557.9822	-0.9	17987.146 ^B		4.473	6.703	-1.28 ^b	
	(2200)	4-4	3.70	5464.7944	5463.2762	0.3	18298.950 ^A		4.434	6.703	0.11^{b}	
		3-3	3.50	5464.4776	5462.9595	-0.3	18300.011^{A}	1	4.473	6.742		
		5-5	3.85	5446.5558	5445.0424	0.0	18360.227 ^A		4.386	6.663	-0.02^{b}	
		5-4	2.68	5351.2255	5349.7376	-0.3	18687.308 ^A	1	4.386	6.703	-1.30 ^b	
1672	$z^3G^{\circ}-f^3D$	4-3	2.62	5561.7557	5560.2116	0.0	17979.934 ^A	0	4.434	6.664	-1.19^{b}	
	(1164)	3-2	2.19	5559.4462	5557.9028	-1.5	17987.403^{D}	5	4.473	6.703		I
1673	$z^{3}G^{0}-e^{3}H$	5-6	4.35	5416.7047	5415.1993	0.0	18461.409 ^A	0	4.386	6.675	0.64^{a}	
	(1165)	3-4	4.05	5412.4140	5410.9098	0.0	18476.044 ^A		4.473	6.764	0.40^{a}	
		4-5	4.23	5405.6541	5404.1516	0.0	18499.149 ^A		4.434	6.728	0.52^{a}	
		4-4	2.55	5322.5882	5321.1080	0.0	18787.852 ^B		4.434	6.764	-0.95^a	
		5-5	1.95	5294.5022	5293.0294	-3.1	18887.517 ^C	11	4.386	6.728	-2.35^{b}	
1674	-	3-4	3.07	5375.2029	5373.7086	-0.6	18603.949 ^A	2	4.473	6.780	-0.86^{b}	
	(1166)	4-4	2.33	5286.5992	5285.1286	0.8	18915.752 ^B	-	4.434	6.780	-1.64 ^b	
		3-3	2.42	5250.5665	5249.1054	0.0	19045.564 ^B		4.473	6.834	-1.48 ^b	
		5-4 4-3	2.37 2.58	5180.2429 5165.9892	5178.8006 5164.5506	-0.5 -1.3	19304.114 ^B 19357.377 ^B		4.386 4.434	6.780 6.834	-1.84 ^b -1.36 ^b	
	100 100 50											
1675		4-3	2.28	4599.1596	4597.8714	-0.6	21743.103 ^B		4.434	7.130	;	
1676		5-4	2.02	4696.1731	4694.8593	0.2	21293.934 ^B		4.386	7.026	• • •	
1677		4-5	2.49	4839.2320	4837.8803	4.4	20664.436 ^D		4.434	6.996	• • •	
1678		4-4	2.20	4744.5244	4743.1978	-4.5	21076.928 ^D		4.434	7.048	• • •	
1679		5-4	2.19	4592.0760	4590.7897	0.6	21776.643 ^C		4.386	7.086	• • •	
1680		5-4	1.70	4598.5392	4597.2512	0.6	21746.036 ^C	-3	4.386	7.082	• • •	
1681	$z{}^3G^{\circ}-{}^4F6s{}^3F$	4-3	2.04	4661.7363	4660.4315	5.7	21451.235^{D}		4.434	7.094	• • •	
		3-2	2.44	4605.8475	4604.5575	0.6	21711.531^{B}		4.473	7.165	• • • •	
1682	$z^{3}G^{\circ} - ^{5}D4p^{2} ^{7}F$	3-2	1.48	4089.3585	4088.2045	4.3	24453.713 ^C	-26	4.473	7.505	•••	
1683	$y^{3}F^{\circ}-d^{8}^{3}P$	2-2	1.86	29848.554	29840.414	36	3350.246 ^B		4.652	5.067		
		2-1	2.02	27342.948	27335.491	0	3657.250 ^A		4.652	5.105	• • •	
		3-2	2.44	26963.895	26956.540	15	3708.663 ^A		4.607	5.067	• • •	
1684	v	3-4	2.24	9789.3288	9786.6450	1.9	10215.205 ^A	-2	4.607	5.874		
	(1171)	2-3	1.73	9770.9943	9768.3155	1.9	10234.373 ^A 10319.323 ^B		4.652	5.921	• • •	
		4-5 $2-2$	1.04 1.92	9690.5582 9509.7632	9687.9012 9507.1551	4.7 1.8	10319.323^{2} 10515.509^{A}	_	4.548 4.652	5.828 5.956	• • •	
		3-3	2.42	9440.3853	9437.7961	1.8	10515.309 10592.788 ^A		4.607	5.921		
		4-4	2.80	9352.9831	9350.4175	2.6	10691.776 ^A		4.548	5.874		
1685	$y^3F^{\circ}-e^3F$	3-4	2.99	9260.8104	9258.2698	0.9	10798.191 ^A	-1	4.607	5.946		
1003	(1172)	2-3	2.91	9082.0731	9079.5808	0.8	11010.702^{A}		4.652	6.017		
	` '	4-4	3.73	8869.3676	8866.9329	0.8	11274.761 ^A	-1	4.548	5.946		
		3-3	3.58	8795.7586	8793.3438	1.5	11369.116 ^A		4.607	6.017		
		2-2	3.48	8766.3732	8763.9664	0.0	11407.226 ^A		4.652	6.066	• • •	
		3-2	2.88	8499.3252	8496.9905	0.7	11765.640 ^A		4.607	6.066	• • •	
	3770 37	4-3	3.07	8441.8911	8439.5721	0.7	11845.687 ^A		4.548	6.017		
1686	•	$\frac{2-1}{2}$	2.45	6887.6562	6885.7564	1.4	14518.727 ^B 14577.170 ^A		4.652	6.452	-1.38 ^b -0.93 ^a	
	(1173)	3-2 $4-3$	2.75 3.11	6860.0421 6845.5444	6858.1498 6843.6560	1.4 0.5	145//.1/0 ^A 14608.042 ^A		4.607 4.548	6.415 6.359	-0.93 ^b	
1/07	$y^3F^{\circ}-g^5D$						14693.180 ^A				-0.55	
1687	$y ^{3}F^{3} - g ^{3}D$ (1174)	$\begin{array}{c} 2-1 \\ 3-2 \end{array}$	3.11 3.60	6805.8786 6717.2372	6804.0009 6715.3832	1.9 1.4	14693.180 ⁻¹ 14887.073 ^A		4.652 4.607	6.474 6.453	-1.67° -1.64 ^b	
	(11/7)	J 2	5.00	0111.2312	0715.5052	1.7	1-1007.073	.5	4.007	0.733	1.07	

TABLE 2—Continued

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{} \ (A)$	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7 Bl.8
		4-3	3.67	6629.3751	6627.5448	0.4	15084.378 ^A	-1	4.548	6.419	-1.68 ^b
1688	y $^3F^{o} - e$ 5P	3-2	2.83	6709.2849	6707.4332	1.4	14904.718 ^A	-3	4.607	6.455	
1689	y 3F $^{\circ}-g$ 5F	3-4	1.54	6161.0821	6159.3776	3.4	16230.915^{B}	-9	4.607	6.620	-1.97 ^b
	(1175)	4-5	1.40	6106.8214	6105.1314	3.4	16375.131 ^A	-9	4.548	6.579	-2.05^{b}
	, ,	3-3	2.11	5999.4391	5997.7778	0.4	16668.225^{A}		4.607	6.674	
		4-4	2.64	5985.3384	5983.6810	0.4	16707.493 ^A		4.548	6.620	•••
		2 - 1	2.11	5929.4316	5927.7891	0.4	16865.023 ^A	-1	4.652	6.743	-1.09 ^b
		3-2	1.90	5849.7506	5848.1294	2.4	17094.746 ^A	-7	4.607	6.727	
1690	$y^3F^{\circ}-h^5D$	3-3	2.77	6103.8669	6102.1777	10.1	16383.057 ^A	-27	4.607	6.639	
	(1176)	$^{2-2}$	2.17	6080.6922	6079.0093	1.1	16445.496 ^A	-3	4.652	6.691	-1.12^{b}
	` '	2 - 1	1.11	6019.9662	6018.2995	0.0	16611.389 ^A	0	4.652	6.711	•••
		3-2	1.91	5950.9952	5949.3470	0.7	16803.912^{A}	-2	4.607	6.691	•••
		4-3	2.09	5931.3202	5929.6772	0.7	16859.653^{A}	-2	4.548	6.639	-1.41 ^b
1691	$y^{3}F^{0}-f^{5}P$	2-1	1.52	6096.0607	6094.3736	0.7	16404.036 ^A	-2	4.652	6.686	-1.94 ^b
1071	(1177)	3-2	1.83	6095.3313	6093.6444	1.5	16405.999 ^A	-4	4.607	6.641	-1.50^{b}
1692	$y^3F^{\circ}-f^5G$	4-5	3.36	6025.7262	6024.0580	0.0	16595.510 ^A	0	4.548	6.606	-0.12^{b}
	(1178)	3-4	2.97	6021.8364	6020.1692	0.0	16606.230^{A}	0	4.607	6.666	-0.27 ^b
	(1170)	2-3	2.47	6009.6241	6007.9601	0.4	16639.976 ^A	-1	4.652	6.715	• • • •
		3-3	1.45	5882.9101	5881.2801	0.3	16998.390 ^A	-1	4.607	6.715	-1.84 ^b
		4-4	2.11	5853.8409	5852.2187	0.0	17082.801 ^A	Ô	4.548	6.666	-1.33^{b}
		3-2	0.78	5809.5858	5807.9755	-0.7	17212.931 ^A	2	4.607	6.741	-2.47 ^b
		4-3	1.63	5722.4852	5720.8982	11.1	17474.925 ^A	-34	4.548	6.715	
1693	$y^{3}F^{\circ}-e^{5}H$	2-3	1.54	5892.8085	5891.1759	-0.3	16969.837 ^A	1	4.652	6.756	
	(1179)	3-4	1.88	5856.6996	5855.0766	0.7	17074.463 ^A	-2	4.607	6.724	-1.76 ^b
	(11/2)	4-5	2.65	5817.9862	5816.3735	0.3	17188.078 ^A	-1	4.548	6.679	-0.60^a
		3-3	1.11	5770.9229	5769.3228	-0.3	17328.251 ^A	1	4.607	6.756	• • •
		4-4	1.48	5697.6700	5696.0896	0.3	17551.034 ^A	-1	4.548	6.724	-1.99 ^b
1694	$y^3F^{\circ}-e^3G$	2-3	3.03	5931.8229	5930.1799	-0.7	16858.224 ^A	2	4.652	6.742	-0.23^{b}
	(1180)	3-4	2.87	5915.8401	5914.2013	0.0	16903.770 ^A	0	4.607	6.703	•••
		4-5	2.95	5863.9814	5862.3565	0.0	17053.260 ^A	0	4.548	6.663	
		3 - 3	2.31	5808.3349	5806.7249	-0.7	17216.638 ^A	2	4.607	6.742	-1.05^{b}
		4-4	2.46	5753.6274	5752.0320	0.0	17380.340^{A}	0	4.548	6.703	-0.66^{c}
1695	y 3F $^{\circ}-f$ 3D	2-2	0.30	6043.8985	6042.2254	-0.7	16545.612^{B}	2	4.652	6.703	• • •
	(1181)	3-3	0.30	6029.6353	6027.9660	0.0	16584.751^{B}	0	4.607	6.664	
		3-2	2.74	5915.7508	5914.1120	0.0	16904.025 ^A	0	4.607	6.703	
		2 - 1	2.46	5907.3085	5905.6720	0.3	16928.183 ^A	-1	4.652	6.751	-0.73^{b}
		4-3	2.73	5861.2109	5859.5867	0.3	17061.321 ^A	-1	4.548	6.664	-0.30^{c}
1696	$y^3F^{\circ}-e^3H$	3-4	1.99	5749.5485	5747.9542	-0.3	17392.670 ^A	1	4.607	6.764	-1.43 ^b
	(1182)	4-5	2.86	5688.1081	5686.5302	0.0	17580.538 ^A	0	4.548	6.728	-0.45^a
		4-4	2.66	5596.2086	5594.6553	-0.3	17869.241 ^A	1	4.548	6.764	-0.66^a
1697	$y^3F^{o} - f^3F$	3-4	2.89	5707.5752	5705.9922	-0.3	17520.575^{A}	1	4.607	6.780	-0.53^{b}
	(1183)	2 - 3	2.59	5680.5988	5679.0229	-1.0	17603.778 ^A	3	4.652	6.834	-0.92^{b}
		3 - 3	3.22	5567.2496	5565.7040	-0.3	17962.191 ^A	1	4.607	6.834	
		4-4	3.24	5556.4378	5554.8951	0.6	17997.142 ^A	-2	4.548	6.780	-0.44^{b}
1698	$y^3F^{\circ}-e^3P$	$^{2-2}$	1.23	5760.8595	5759.2621	-0.3	17358.521 ^A	1	4.652	6.804	-2.07 ^b
	(1184)	3-2	1.41	5644.3175	5642.7513	0.3	17716.934 ^A	-1	4.607	6.804	-2.12^{b}
1699	$y^{3}F^{\circ}-{}^{4}F6s^{5}F$	4-4	1.96	5042.8534	5041.4476	-1.0	19830.043 ^B	4	4.548	7.007	•••
		3-3	1.88	4914.5147	4913.1430	6.8	20347.889^{C}	-28	4.607	7.130	•••
1700	$y^{3}F^{\circ}-s^{6}D5d^{5}D$	3-3	2.64	5215.2930	5213.8414	-0.3	19174.378 ^C	1	4.607	6.985	
1701	$y^{3}F^{\circ}-i^{5}D$	3-4	1.85	4869.7901	4868.4303	-5.0	20534.766 ^C	21	4.607	7.153	
1701	$y^{3}F^{\circ}-y^{5}G$		2.34								•••
		3-3		4640.9594	4639.6602	6.5	21547.269 ^B	-30	4.607	7.279	•••
1703	$y^{3}F^{\circ}-s^{6}D7s^{5}D$	4-3	2.13	4529.7489	4528.4790	-0.2	22076.279 ^D	1	4.548	7.285	•••
1704	y 3F $^{\circ}$ $-s$ 4D4d 3G	3-4	1.48	4586.6247	4585.3399	0.4	21802.525^{C}	-2	4.607	7.311	•••

•					IAI	SLE 2—Comi	пиеи						
94	No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
94ApJS.	1705	$y^3F^{\circ}-s^4D4d^3D$	2-1	2.18	4663.1819	4661.8768	1.1	21444.585 ^C	-5	4.652	7.311		
34A <u>1</u>	1706	$y^{3}F^{\circ}-{}^{4}F5d^{3}G$	4-4	2.34	4440.8805	4439.6341	-0.4	22518.057 ^D	2	4.548	7.340		I
19	1707	$y^{3}F^{o}-58831^{e}$	4-3	2.11	4515.6824	4514.4163	1.0	22145.047 ^C	-5	4.548	7.294		
	1708	$y^{3}F^{o}-58906^{e}$	3-4	2.04	4599.0335	4597.7454	-2.3	21743.699 ^B	11	4.607	7.303		
			4-4	2.04	4500.3986	4499.1365	0.6	22220.254 ^C	-3	4.548	7.303	•••	
	1709	y 3F $^{\circ}$ $-s$ 4D4d 5S	2-2	1.78	4672.7223	4671.4147	-0.2	21400.801 ^C	1	4.652	7.305		
	1710	$y^{3}F^{\circ}-59390^{e}$	4-3	2.21	4404.4117	4403.1749	-0.6	22704.508^{D}	3	4.548	7.363		
	1711	$y^5P^{\circ}-e^7D$	2-3	0.90	15931.025	15926.673	0	6277.060 ^A	0	4.607	5.385		
			3-4	1.51	15633.896	15629.626	2	6396.358 ^A		4.558	5.351		
			2-1	1.08	15136.827	15132.692	18	6606.404^{D}	-8	4.607	5.426		I
	1712	$y^{5}P^{0}-e^{5}D$	2-3	3.09	12652.202	12648.742	-2	7903.762 ^A		4.607	5.587	-1.14^a	
			3-4	3.46	12642.164	12638.706	0	7910.038 ^A	0	4.558	5.539		
			1 - 2	2.61	12619.377	12615.926	-2	7924.321 ^A	1	4.638	5.620		
			1 - 1	2.67	12346.291	12342.914	-2	8099.598 ^A		4.638	5.642		
			$^{2-2}$	2.80	12230.459	12227.113	-1	8176.308 ^A	1	4.607	5.620		
			1 - 0	2.29	12216.675	12213.333	-4	8185.533 ^A		4.638	5.653		
			3 - 3	2.75	12056.382	12053.083	0	8294.362 ^A	0	4.558	5.587	-1.54 ^a	
			2 - 1	2.10	11973.776	11970.500	1	8351.584 ^A		4.607	5.642		
			3-2	2.24	11672.836	11669.642	14	8566.898 ^A	-10	4.558	5.620		
	1713	y 5P $^{\circ}-e$ 5F	2-2	0.95	9191.9301	9189.4081	-1.7	10879.108 ^B	2	4.607	5.956		
	1714	y 5P $^{\circ}-e$ 3F	2-2	2.33	8495.5899	8493.2563	5.8	11770.813 ^B	-8	4.607	6.066		
	1715	$y^{5}P^{0}-f^{5}D$	2-3	1.69	7475.6121	7473.5539	-0.6	13376.831 ^A	1	4.607	6.265	-1.87^{b}	
	1713	(1188)	1-1	1.74	7423.6030	7421.5588	-1.1	13470.548 ^B		4.638	6.308	-1.80^{b}	
		(1100)	3-4	1.60	7322.6995	7320:6826	1.6	13656.166 ^B		4.558	6.251	-1.16^a	
			3-3	1.48	7263.5150	7261.5140	-4.7	13767.439 ^B		4.558	6.265		
	1716	5 no. 7 n											
	1716	$y^{5}P^{0}-e^{7}P$ (1189)	$\frac{2-3}{3-4}$	2.43 1.60	7432.9034 7294.8389	7430.8567 7292.8294	0.0 -0.5	13453.693 ^A 13708.322 ^B		4.607 4.558	6.275 6.258	-1.10 ^a	
	1717	$y^{5}P^{0}-e^{7}G$	3-3	2.26	6805.7096	6803.8319	2.3	13708.522 14693.545^{B}		4.558	6.380		
	1/1/	(1191)	3-3	2.20	0603.7090	0003.0317	2.3	14073.343	-3	4.336	0.360	•••	
	1718	$y^5P^0-f^5F$	3-3	3.48	6739.8470	6737.9870	1.8	14837.132 ^A	-4	4.558	6.398	-1.75^{b}	
		(1192)	3-2	2.00	6694.3173	6692.4696	1.8	14938.043 ^D	-4	4.558	6.410		
	1719	$y^{5}P^{\circ}-e^{5}S$ (1193)	3-2	1.70	6953.1629	6951.2455	-0.5	14381.944 ^B	1	4.558	6.341	•••	
	1720	$y^5P^0-e^3D$	2-2	2.30	6857.6048	6855.7131	0.5	14582.351 ^B	-1	4.607	6.415	-1.82^{b}	
		(1194)	1-1	2.26	6835.1111	6833.2255	-1.9	14630.340^{B}	4	4.638	6.452	-2.08^{b}	
		(22)	2-1	3.43	6719.3816	6717.5271	0.9	14882.322^{A}		4.607	6.452	•••	
			3-2	2.30	6678.7093	6676.8657	0.0	14972.953 ^B	0	4.558	6.415	-2.88^{c}	
	1721	$y^{5}P^{0}-g^{5}D$		3.16	6857.0537	6855.1621	0.9	14583.523 ^A		4.558	6.366	-0.74ª	
	1721		3-4					14585.525 ⁻¹				-0.75 ^b	TT
		(1195)	2-3	3.17	6843.2269	6841.3391 6828.5912	0.5	14612.989 ⁻¹		4.607	6.419	-0.73 ^b	II
			1-2	3.21 3.86	6830.4756 6754.5711	6752.7071	-0.5 0.5	14804.789 ^A		4.638 4.638	6.453 6.474	-0.92°	
			1-1 1-0	3.67	6735.0100	6733.1513	0.5	14847.788 ^A		4.638	6.479	-1.58^{b}	
			2-2	3.61	6714.9002	6713.0469	0.9	14892.254 ^A		4.607	6.453		
			3-3	3.78	6665.0724	6663.2325	0.9	15003.588 ^A		4.558	6.419	•••	
			3-3		7		0.9			4.336		•••	
	1722	$y {}^{5}P^{\circ} - e {}^{7}S$ (1196)	3-3	2.81	6755.3281	6753.4639	-0.5	14803.130 ^A		4.558	6.394	-2.29 ^b	
	1723	$y^{5}P^{0}-e^{5}P$	1-1	2.59	6844.5740	6842.6858	0.0	14610.113 ^A		4.638	6.449	-1.32^{b}	
		(1197)	1-2	2.94	6822.2541	6820.3719	0.5	14657.912 ^A		4.638	6.455	-1.32^{b}	
			2-3	3.30	6812.1422	6810.2628	0.5	14679.670 ^A		4.607	6.427	-0.99^a	
			2-1	3.75	6728.5238	6726.6668	0.0	14862.101 ^A		4.607	6.449	-1.00^{c}	
			2-2	3.68	6706.9535	6705.1024	1.3	14909.899 ^A		4.607	6.455		
			3-3	4.08	6635.5816	6633.7497	0.4	15070.269 ^A		4.558	6.427	-0.80^{a}	
			3-2	3.82	6535.7346	6533.9294	0.9	15300.499 ^A	-2	4.558	6.455	-1.46 ^b	

No. Multiplet J.J. J. J. J. J. J. J.						LE 2—Contin							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	No.		J-J	I 2	$\lambda_{vac}^{}$ (Å)	λ_{air}^{3} (A)						log(gf) ⁷	B1.8
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	1724												
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		(1198)											
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$ \begin{bmatrix} (1199) & 3-3 & 1.20 & 5959.8790 & 5958.2795 & 5954.5715 & 1.8 & 16890.9934 & 5 & 4607 & 6.691 & \\ 2-2 & 1.03 & 5891.0218 & 5889.3896 & 0.7 & 16974.9846 & 2 & 4.607 & 6.711 & \\ 3-2 & 0.48 & 5814.0566 & 5812.4450 & 0.7 & 1719.6958 & 2 & 4.558 & 6.691 & \\ (1200) & 2-2 & 0.78 & 6093.4071 & 6091.7207 & 0.7 & 1641.118.06 & 2 & 4.607 & 6.691 & \\ (1200) & 2-2 & 0.78 & 6093.4071 & 6091.7207 & 0.7 & 1641.118.06 & 2 & 4.607 & 6.681 & \\ (1200) & 2-2 & 0.78 & 6093.4071 & 6091.7207 & 0.7 & 1641.118.06 & 2 & 4.607 & 6.684 & \\ (1201) & 3-4 & 1.36 & 5881.6658 & 5890.0272 & 0.7 & 1696.1244 & 4 & 46.38 & 6.741 & \\ (1201) & 3-4 & 1.36 & 5881.6568 & 5880.0272 & 0.7 & 17002.0124 & 2 & 45.58 & 6.666 & 1.949 & \\ (1201) & 3-4 & 1.36 & 5881.6568 & 5880.0272 & 0.7 & 17002.0124 & 2 & 45.58 & 6.666 & 1.949 & \\ (1201) & 3-3 & 0.70 & 5749.0474 & 5747.4532 & 5.0 & 17994.1869 & 15 & 4.538 & 6.715 & \\ (1203) & 1-1 & 0.30 & 5868.6162 & 5866.991 & 0.7 & 1698.05344 & 2 & 4558 & 6.666 & 1.949 & \\ (1203) & 1-1 & 0.30 & 5868.6162 & 5866.991 & 0.7 & 17092.0729 & 2 & 46.38 & 6.751 & \\ (1203) & 1-1 & 0.30 & 5868.6162 & 5866.991 & 0.7 & 17092.0729 & 2 & 46.38 & 6.751 & \\ (1203) & 2-1 & 0.30 & 5780.076 & 5781.9474 & 5781.4944 & 2.7 & 17291.7179 & 8. & 4607 & 6.651 & \\ (1204) & 9^3P^9-g^7D & 2-3 & 0.30 & 5780.4116 & 5778.8091 & 0.3 & 17299.806^9 & 1 & 4.558 & 6.703 & \\ (1204) & y^3P^9-g^9D & 2-3 & 0.30 & 5780.4116 & 5778.8091 & 0.3 & 17299.806^9 & 1 & 4.558 & 6.703 & \\ (1204) & y^3P^9-g^9D & 2-3 & 0.30 & 5780.4116 & 5778.8091 & 0.3 & 17712.9347 & 1 & 4607 & 6.801 & \\ (1205) & y^3P^9-g^9D & 2-3 & 0.30 & 5780.4116 & 5778.8091 & 0.3 & 17712.9347 & 1 & 4568 & 6.754 & \\ (1206) & y^3P^9-g^9D & 2-3 & 0.30 & 5780.4116 & 5778.8091 & 0.3 & 17712.9469 & 9 & 46.38 & 6.754 & \\ (1207) & y^3P^9-g^9D & 2-3 & 0.30 & 5780.4116 & 5778.8091 & 0.3 & 17712.4602^9 & 9 & 46.08 & \\ (1208) & y^3P^9-g^9D & y^3P^9-g^9$			1-1	0.30	5890.4495	5888.8175	-1.4	16976.6332	4	4.638	6.743	•••	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1725	y 5P $^{\circ}-h$ 5D	3-4	1.34	6101.9603	6100.2716	0.0			4.558	6.590		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		(1199)											I
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$												• • •	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			3-2	0.48	5814.0566	5812.4450	-0.7	17199.695	2	4.558	6.691	• • •	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1726	$y^{5}P^{0}-f^{5}P$	3-3		6099.9329	6098.2447						-1.88^{b}	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		(1200)			6093.4071						6.641		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			2-1	0.00	5963.8713	5962.2197	0.0	16767.632 ^C	0	4.607	6.686		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1727	$u^{5}P^{0}-f^{5}G$	1-2	0.85	5894.0981	5892.4652	-1.4	16966.124 ^A	4	4.638	6.741		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		•					-0.7						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$, ,	2 - 3	1.26	5881.1165	5879.4870	-1.0	17003.574^{D}	3	4.607	6.715	-2.14^{b}	I
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			3-3	0.70	5749.0474	5747.4532	-5.0	17394.186 ^B	15	4.558	6.715		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1728	$_{31}5P0-f^{3}D$	3_3	0.78	5889 0963	5887 4646	-0.7	16980 534 ^A	. 2	4 558	6 664		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	1720	•											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		(1203)											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1729		2-3	0.30		5796.4306	-1.0	17247.214 ^B	3	4.607			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1730		2-3	1.46	5647.4008	5645.8338	0.3	17707.261 ^A	-1	4.607	6.802		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1730	g 1 0 D00 D											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			2-2	1.48	5562.7872	5561.2428	0.0	17976.600 ^C	0	4.607	6.836		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1731	y 5P $^{\circ}$ $-e$ 3P	2-1	2.38	5488.9198	5487.3951	0.0	18218.521 ^B	0	4.607	6.866		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1732	$y\ ^5P^{\circ} - s\ ^6D5d\ ^5D$	3-3	2.11	5109.8270	5108.4034	6.3	19570.134^{L}	-24	4.558	6.985		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			3-2	2.02	5072.9251	5071.5113	0.5	19712.493 ^D	-2	4.558	7.002	• • •	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1733	•	3-3	1.78	4928.8656	4927.4901	1.0			4.558	7.074	• • •	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1734	$y^{5}P^{\circ}-s^{6}D5d^{5}F$	3-3	2.02	5010.0361	5008.6390	-3.3	19959.936 ^L	13	4.558	7.033	• • •	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1735	•	2-3	1.85	4984.7315	4983.3412	-0.5			4.607	7.094	•••	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1736	$y^{5}P^{0}-s^{6}D5d^{5}P$	1 - 2	1.81	5001.6055	5000.2107	-0.5			4.638	7.117		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			2 - 3	1.70	4999.3541	4997.9598	-2.7	20002.584^{L}	11	4.607	7.087		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1737	u 5 Po _s 4D4d 5 F	1-2	1 30	4738 6985	4737.3734	-2.2	21102.841 ^C	10	4.638	7.254		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1737	g i o D io i											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			3-3	2.48	4680.5343	4679.2247	6.6			4.558	7.207		I
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				2.11	4598.6682		-1.5	21745.426 ^E	7	4.558	7.254		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1729	, 5po_;5p	2_3	2 15	4841 1205	4839 7682	-0.2	20656 375 ^L) 1	4 607	7 168		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1736	v							_				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		(1200)											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$												_	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1720	500 404150											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1739	$y ^{3}P^{3}-s ^{4}D4d ^{3}P$											
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$												-1.27	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1740	$y^{5}P^{\circ}-s^{4}D4d^{3}D$										•••	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$												• • •	
			3-2	2.15	4501.8926	4500.6301	-5.1			4.558	7.312	• • •	
	1741	•	1-2		4648.4803						7.305	• • •	
1743 $d^3F - w^5F^{\circ}$ 4-5 0.60 13893.234 13889.436 2 7197.748 ^B -1 4.593 5.485	1742	$y^{5}P^{0}-59077^{e}$	1-1	1.90	4615.1960	4613.9036	-5.3	21667.552 ^C	25	4.638	7.324		
	1743	d 3F-w 5F°	4-5	0.60	13893.234	13889.436	2	7197.748 ^E	3 -1	4.593	5.485	•••	

7				1 A J	BLE 2—Cont	inued						
No.	Multiplet (MT) ¹	J-J	I ²	$\lambda_{vac}^{}$ (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
1744	$d^3F-x^3D^{\circ}$	3-2 2-1	1.26 1.32	12039.140 11612.802	12035.846 11609.624	3 -15	8306.241 ^A 8611.186 ^A		4.584 4.580	5.614 5.648		
1745	$d{}^3F-y{}^3G^{o}$	4-5 4-4	2.97 1.82	12122.812 11929.663	12119.495 11926.399	-1 1	8248.911 ^D 8382.466 ^A		4.593 4.593	5.616 5.632		II
		3-4	2.87	11830.382	11827.145	0	8452.812 ^A		4.584	5.632		
		3-3	1.69	11644.988	11641.801	ő	8587.385 ^A		4.584	5.649		
		2-3	2.71	11597.724	11594.550	1	8622.381 ^A		4.580	5.649		
1746	$d{}^3F-u{}^5D{}^{o}$	4-4	1.93	10336.014	10333.182	-2	9674.909^{D}	2	4.593	5.792		I
	(1208)	4-3	1.58	10310.279	10307.454	-1	9699.058 ^A	1	4.593	5.795		
	` ,	3-4	1.36	10261.410	10258.598	4	9745.249 ^A	-4	4.584	5.792		
		3 - 2	1.85	10087.840	10085.076	3	9912.924 ^A	-3	4.584	5.813		
		2-1	0.60	9768.8314	9766.1532	2.9	10236.639 ^B		4.580	5.849	• • •	
1747	$d^3F-x^3F^{\circ}$	4-4	1.89	10159.290	10156.506	-1	9843.207 ^A		4.593	5.813		
	(1209)	3-4	1.11	10087.201	10084.437	1	9913.552 ^B	-1	4.584	5.813		
		3 - 3	2.12	9884.2339	9881.5244	1.0	10117.122 ^A	-1	4.584	5.839		
		2 - 3	1.51	9850.1603	9847.4601	1.0	10152.119 ^A		4.580	5.839		
		$^{2-2}$	2.10	9749.9926	9747.3196	0.0	10256.418 ^A	0	4.580	5.851	• • •	
1748	$d^{3}F-z^{3}H^{\circ}$ (1210)	4-4	1.81	9939.8174	9937.0929	2.0	10060.547 ^A	-2	4.593	5.840	•••	
1749	$d^{3}F-w^{3}D^{\circ}$	4-3	1.56	10028.829	10026.081	-1	9971.253 ^A	1	4.593	5.829		
17.17	(1211)	3-3	1.34	9958.5753	9955.8457	2.0	10041.597 ^A		4.584	5.829		
	(1211)	2-3	0.78	9923.9902	9921.2700	4.9	10076.592^{B}		4.580	5.829		
		3-2	1.87	9841.8184	9839.1204		10160.724^{D}		4.584	5.844		II
		2-2	0.90	9808.2535	9805.5647	-2.9	10195.495 ^B		4.580	5.844		
		2 - 1	1.56	9679.1985	9676.5446	1.9	10331.434 ^A	-2	4.580	5.861		
1750	$d~^3F-w~^5G^{\circ}$	4-4	0.90	9483.9651	9481.3641	0.0	10544.113 ^B	. 0	4.593	5.900	•	
1750		3-3	2.60	9330.3984	9327.8389	-6.1	10344.113		4.584	5.913	• • •	
	(1212)	3-3	0.90	9211.8685	9209.3411	2.5	10717.030 10855.561^{B}		4.584	5.930	• • •	
		$\frac{3-2}{2-2}$	1.71	9182.2626	9179.7432	0.0	10890.562^{A}		4.580	5.930	• • • •	
											•••	
1751	$d\ ^3F-z\ ^1G^{o}$	4-4	1.63	9609.1184	9606.4834	-0.9	10406.782 ^A		4.593	5.883	• • •	
		3-4	1.43	9544.5995	9541.9820	-0.9	10477.129 ^A	1	4.584	5.883	• • •	
1752	$d^{3}F - v^{5}F^{\circ}$ (1214)	4-4	1.11	9187.7463	9185.2254	0.0	10884.062 ^B	0	4.593	5.942	•••	
1753	$d^{3}F - y^{1}G^{\circ}$ (1215)	3-4	1.40	8527.3715	8525.0294	2.2	11726.943 ^C	-3	4.584	6.038	•••	
1754	$d^3F-w^3F^o$	4-3	1.63	8198.7703	8196.5170	-0.7	12196.951 ^A	1	4.593	6.105		
	(1217)	3 - 3	1.85	8151.7564	8149.5157	0.7	12267.295 ^A	-1	4.584	6.105		
		2-3	1.38	8128.5580	8126.3236	-6.6	12302.305 ^B	10	4.580	6.105		
		2-2	1.74	8004.7773	8002.5763	0.0	12492.540 ^A	0	4.580	6.129	• • •	
1755	$d~^3F-v~^3D^{\circ}$	4-3	2.04	8271.9219	8269.6488	-0.7	12089.089 ^A	1	4.593	6.092		
	(1218)	3 - 2	2.17	8151.9305	8149.6897	-0.7	12267.033 ^A	1	4.584	6.105		
		2-2	1.45	8128.7410	8126.5066	0.7	12302.028 ^A		4.580	6.105		
		2-1	1.95	8092.5516	8090.3269	0.0	12357.042 ^A		4.580	6.112	• • •	
1756	$d^3F - v^3G^{\circ}$	4-5	1.11	8054.7965	8052.5820		12414.963 ^B		4.593	6.132	• • •	
1757	$d\ ^3F-Fsp3\ ^1F^{ extsf{o}}$	3-3	1.45	7999.0158	7996.8164		12501.538 ^A		4.584	6.134	• • •	
		2 - 3	0.60	7976.6845	7974.4911	-1.3	12536.537 ^C	2	4.580	6.134	• • •	
1758	$d {}^{3}F - v {}^{3}F^{\circ}$ (1221)	4-4	1.30	7013.2773	7011.3437	-0.5	14258.669 ^E	1	4.593	6.361	•••	
1759	$d^3F-u^3G^{\circ}$	4-4	2.80	6838.8928	6837.0061	0.0	14622.250 ^A	0	4.593	6.406	-1.81 ^b	
	(1225)	3-4	3.17	6806.1492	6804.2713	0.0	14692.596 ^A	0	4.584	6.406	-1.92^{b}	
	. ,	4-3	2.67	6765.9749	6764.1079	0.5	14779.836 ^A	-1	4.593	6.425		
		3-3	3.29	6733.9233	6732.0649	-0.5	14850.184 ^A	1	4.584	6.425	-2.21^{b}	
		2 - 3	3.59	6718.0914	6716.2373	0.5	14885.180 ^A	-1	4.580	6.425	-1.92 ^b	
1760	$d^3F-Hsp3^1H^o$	4-5	2.51	6856.7142	6854.8228		14584.245 ^E		4.593	6.401	-1.98 ^b	
1761	$d\ ^3F-y\ ^1D$ °	3-2	2.72	6787.6133	6785.7405		14732.719 ^A		4.584	6.411		
	(1226)	2-2	2.51	6771.5278	6769.6593	-0.5	14767.716 ^E	1	4.580	6.411	-2.66 ^b	

					TBLE 2—Con	шиса						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{} \ (\mathring{A})$	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
1762	$d^{3}F - x^{1}D^{\circ}$ (1227)	2-2	3.48	6746.9632	6745.1013	0.9	14821.483 ^A	-2	4.580	6.417	-2.16 ^b	
1763	$d~^3F-u~^3D$ °	4-3	3.04	6700.9914	6699.1418	0.0	14923.165 ^A		4.593	6.443	-2.19^{b}	
	(1228)	3-3	2.99	6669.5524	6667.7113	0.4	14993.510 ^A		4.584	6.443	-2.15^{b}	
		2-1	2.26	6421.8400	6420.0655	1.6	15571.861 ^B		4.580	6.510	• • •	
1764	d^3F $-^2P4p^1P^0$	2-1	2.45	6561.5833	6559.7713	1.7	15240.224 ^B		4.580	6.469	• • •	
1765	$d^3F-t^3D^{\circ}$	4-3	3.20	6593.1334	6591.3129	0.0	15167.295 ^A		4.593	6.473	-2.07^{b}	
	(1229)	3-2 2-2	3.09	6366.4548 6352.3006	6364.6951 6350,5448	0.4	15707.329 ^A 15742.328 ^C		4.584	6.532	• • •	
		2-2 $2-1$	2.11 1.70	6282.5112	6280.7741	-0.4 3.9	15742.328° 15917.202 ^C		4.580 4.580	6.532 6.553		
1766	$d^{3}F-^{4}F5p^{3}G^{0}$	3-4	0.60	5867.8593	5866.2334	0.0	17041.990 ^A		4.584	6.697		
1767	$d^{3}F - v^{3}P^{\circ}$ (1231)	2-1	0.70	6138.9845	6137.2859	3.4	16289.339 ^C		4.580	6.599		
1768	$d^{3}F^{-4}F^{5}p^{5}G^{0}$	3-4	0.48	5925.3908	5923.7494	-0.4	16876.524 ^B	1	4.584	6.677		
1769	$d^{3}F^{-4}F^{5}p^{3}F^{0}$	2-3	0.30	5764.2041	5762.6058	-2.7	17348.449 ^B	8	4.580	6.731		
1770	$d^{3}F^{-4}F^{5}p^{5}D^{\circ}$	4-4	1.34	6037.0090	6035.3378	-6.6	16564.494 ^D	18	4.593	6.647		I
2,,,0	w 1 1 0 _F 2	3-4	0.48	6011.4907	6009.8263	4.3	16634.809 ^D		4.584	6.647		Ĩ
		2-3	0.30	5936.7740	5935.1295	-2.8	16844.165^{B}		4.580	6.668		
1771	$d~^3F-Dsp3~^5F^{ m o}$	4-5	1.23	5893.5114	5891.8786	0.7	16967.813 ^A	-2	4.593	6.697		
1772	$d\ ^3F-x\ ^3S^{\circ}$	2-1	0.00	5928.4659	5926.8237	-2.1	16867.770^{C}	6	4.580	6.671		
1773	$d{}^3F-{}^4F5p{}^3D^{\circ}$	4-3	0.00	5955.2469	5953.5975	0.0	16791.915^{B}	0	4.593	6.675		
1774	$d{}^3F-Dsp3{}^5D^{ m o}$	2-3	0.00	5899.3869	5897.7525	6.6	16950.914^{C}	-19	4.580	6.681		
		4-4	0.30	5795.2853	5793.6787	-0.7	17255.406 ^B		4.593	6.732		
		3-4	0.48	5771.7566	5770.1563	0.7	17325.748 ^B	-2	4.584	6.732	• • •	
1775	$d^3F-t^3G^{\circ}$	4-5	1.60	5904.1092	5902.4736	0.3	16937.356 ^A		4.593	6.693	-1.81 ^b	_
	(1234)	4-4 3-4	1.30 1.28	5816.8301 5793.1299	5815.2178 5791.5239	-5.4 -0.7	17191.494 ^D 17261.826 ^A		4.593 4.584	6.724 6.724	• • •	I
		3-3	0.30	5673.8381	5672.2640	1.9	17201.820 17624.754 ^B		4.584	6.769	-2.80 ^b	
		2-3	0.85	5662.5927	5661.0217	0.6	17659.755^{B}		4.580	6.769	-2.43^{b}	
1776	$d\ ^3F-t\ ^5P^{ m o}$	4-3	0.00	5896.6509	5895.0173	0.7	16958.779 ^B	-2	4.593	6.696		
1777	$d\ ^3F-Hsp1\ ^3G^{ m o}$	4-5	2.08	4768.1197	4766.7868	-0.7	20972.628^{C}		4.593	7.193		
		3-4	2.10	4681.8603	4680.5503	-1.8	21359.031^{D}		4.584	7.232		
		2-3	2.14	4616.8555	4615.5626	-2.6	21659.764 ^B	12	4.580	7.265		
1778	$y^{3}D^{\circ}-d^{8}^{3}P$	1-1	3.38	45815.320	45802.830	0	2182.676 ^A		4.835	5.105		
		2-2	3.45	45591.922	45579.493	21	2193.371 ^A		4.795	5.067	• • •	
		1-0 2-1	3.55 4.01	44667.404 39994.064	44655.227 39983.161	0 16	2238.769 ^A 2500.371 ^A		4.835 4.795	5.112 5.105	• • •	
		3-2	4.34	37091.217	37081.104	0	2696.056 ^D		4.733	5.067		II
1779	$y^{3}D^{\circ}-e^{5}D$	2-2	1.08	15024.415	15020.310	7	6655.833 ^A		4.795	5.620		
1///	y D C D	2-1	0.30	14638.911	14634.911	6	6831.109 ^B		4.795	5.642		
		3-3	0.90	14522.275	14518.307	2	6885.973^{D}	-1	4.733	5.587		II
		3-2	0.85	13969.352	13965.534	-18	7158.528^{B}	9	4.733	5.620	• • •	
1780	$y~^3D$ o $-e~^5F$	1-2	1.75	11060.802	11057.774	1	9040.935 ^A		4.835	5.956		
	(1246)	2-3	2.29	11016.253	11013.237	2	9077.496 ^A		4.795	5.921		
		3-4 2-2	2.83 1.32	10866.496 10685.320	10863.520 10682.393	2 0	9202.598 ^A 9358.634 ^A		4.733 4.795	5.874 5.956	• • • •	
		3-3	1.98	10083.320	10082.393	1	9580.181 ^A		4.733	5.921	• • • •	
1781	$y^{3}D^{0}-e^{3}F$	3-4	3.88	10219.114	10216.314	1	9785.584 ^A		4.733	5.946		
	(1247)	2-3	3.68	10148.344	10145.563	2	9853.824 ^A		4.795	6.017		
		1-2	3.54	10067.804	10065.045	-1	9932.652 ^A		4.835	6.066		
		2-2	3.05	9755.7663	9753.0917	1.0	10250.348 ^A		4.795	6.066		
		3-3 3-2	3.21 1.94	9655.7633 9299.7018	9653.1158 9297.1506	0.9 -0.9	10356.509 ^A 10753.033 ^A		4.733	6.017	• • •	
		3-2	1.74	7277./018	7277.1300	-0.9	10/33.033**	1	4.733	6.066	•••	

TABLE 2—Continued

No.	Multiplet	J-J	I 2	λ_{vac}^{3}	λ 3	o-R ⁴	σ 5	o-R ⁶	E(1)	E(u)	log(gf) 7	P 18
	(MT) ¹			(Å)	$\begin{array}{c} \lambda_{qir}^{} \\ \text{(A)} \end{array}$	(mÅ)	(cm ⁻¹)	(mK)	(eV)	(eV)	log(gr)	DI."
1782	$y~^3D$ o $-e~^3D$	2-3	1.87	7926.3302	7924.1504	0.6	12616.179 ^A	-1	4.795	6.359		
	(1250)	1 - 2	1.85	7846.7172	7844.5589	0.0	12744.183 ^A	0	4.835	6.415	-1.81^{b}	
		1 - 1	2.19	7666.2683	7664.1587	0.0	13044.156 ^A		4.835	6.452		
		2-2	2.60	7655.8664	7653.7596	0.6	13061.879 ^A	-	4.795	6.415	-0.89^a	
		3-3	2.95	7622.6106	7620.5128	0.0	13118.865 ^A		4.733	6.359	• • • •	
		2-1	1.83	7483.9930	7481.9326	1.1	13361.851 ^A		4.795	6.452	-1.80 ^b	
1783	$y^3D^{\circ}-g^5D$	1-2	1.36	7660.4379	7658.3299	1.2	13054.084 ^B		4.835	6.453		
	(1251)	2-3	1.41	7637.9502	7635.8482	0.0	13092.518 ^B		4.795	6.419		
		1-1	1.83	7565.0931	7563.0108	0.6	13218.608 ^A		4.835	6.474	•••	
	2 5-	2-2	1.90	7478.4348	7476.3759	1.1	13371.782 ^A		4.795	6.453	-1.68 ^b	
1784	$y {}^{3}D^{\circ} - e {}^{5}P$ (1252)	$1-1 \\ 2-2$	0.90 1.18	7678.1787 7468.5762	7676.0658 7466.5199	6.5 -1.7	13023.922 ^B 13389.433 ^B		4.835 4.795	6.449 6.455	•••	
1785	$y^3D^{\circ}-g^5F$	2-3	3.94	6599.3833	6597.5611	1.3	15152.931 ^A		4.795	6.674	-1.07 ^b	
1705	(1253)	3-4	4.66	6571.0301	6569.2155	1.3	15132.931 15218.314 ^A		4.733	6.620	-0.42^{b}	
	(1233)	1-1	3.76	6497.5371	6495.7422	0.4	15216.514 15390.447 ^A		4.733	6.743	-0.42 ^b	
		2-2	3.01	6418.7044	6416.9307	-2.5	15579.468 ^D		4.833	6.727		77
		3-3	2.90	6387.4838	6385.7185	0.8	15655.617 ^A		4.733	6.674	 -1.91 ^b	II
		2-1	3.38	6366.1253	6364.3657	1.2	15033.017 15708.142^{A}	-2 -3	4.795	6.743	-1.91° -1.43 ^b	
1786	$y^{3}D^{\circ}-h^{5}D$	3-4	2.00	6675.6570	6673.8143	-4.5	14979.799 ^C	10	4.733			
1760	(1254)	1-1	3.09	6606.4131	6604.5890	3.1	14979.799 ⁻¹ 15136.807 ^A	10		6.590	•••	
	(1254)	3-3	2.76	6505.9807	6504.1835	1.3	15130.807 ⁻¹ 15370.473 ^A	-7	4.835	6.711		
		3-3	3.30	6332.6001	6330.8495	1.6	15791.302 ^A	-3 -4	4.733 4.733	6.639 6.691	-1.74 ^b	
1787	$y^3D^{\circ}-f^5P$	2-2	3.45	6715.5983	6713.7448	1.8	14890.706 ^A	-4	4.795	6.641	-1.60 ^b	
1.0,	(1255)	$\frac{2}{2-1}$	3.23	6558.5993	6556.7880	0.4	15247.158 ^A	-1	4.795	6.686	-1.00	
	(1200)	3-2	3.54	6496.2944	6494.4999	1.3	15393.391 ^A		4.733	6.641	•••	
1788	y 3D ° $-f$ 5G	3-4	2.62	6412.8799	6411.1078	1.6	15593.618 ^B	-4	4.733	6.666		
	(1256)	2-2	1.70	6370.3953	6368.6346	9.3	15697.613^{D}	-23	4.795	6.741		
		3-3	1.70	6255.5608	6253.8309	2.3	15985.777^{D}	-6	4.733	6.715	-1.66^{b}	
1789	y 3D $^{\circ}-e$ 3G	2-3	2.26	6368.8807	6367.1204	-1.2	15701.346^{B}	3	4.795	6.742	-2.33 ^c	
		3-4	2.00	6292.8100	6291.0701	4.0	15891.152^{C}	-10	4.733	6.703		
		3-3	1.43	6171.3051	6169.5978	0.0	16204.028 ^B	0	4.733	6.742	•••	
1790	y 3D ° $-f$ 3D	2 - 3	3.60	6635.9392	6634.1071	1.3	15069.457 ^A	-3	4.795	6.664	-1.43 ^b	
	(1258)	1-2	3.54	6635.2444	6633.4125	0.4	15071.035 ^A	-1	4.835	6.703	-1.49^{b}	
		2-2	4.27	6498.2616	6496.4666	0.4	15388.731 ^A	-1	4.795	6.703	-0.57^{b}	
		1 - 1	4.01	6470.9808	6469.1930	0.8	15453.608 ^A	-2	4.835	6.751	-0.77^{b}	
		3 - 3	4.56	6421.7241	6419.9496	0.8	15572.142 ^A	-2	4.733	6.664	-0.24^{b}	
		2-1	3.58	6340.6302	6338.8775	1.2	15771.303 ^A	-3	4.795	6.751	-1.06 ^b	
		3-2	3.25	6292.7054	6290.9656	0.4	15891.416 ^A	-1	4.733	6.703	•••	
1791	$y^3D^{\circ}-e^3H$	3-4	1.85	6104.9834	6103.2939	0.4	16380.061 ^A	-1	4.733	6.764	-1.12ª	
1792	$y^3D^{\circ}-s^6D6s^5D$	2-1	0.70	6014.1028	6012.4377	0.7	16627.584 ^A	-2	4.795	6.857	•••	
1793	y 3D $^{\circ}-f$ 3F	1 - 2	2.77	6103.8669	6102.1777	6.0	16383.057 ^D	-16	4.835	6.866		II
	(1259)	2 - 3	2.75	6080.1739	6078.4911	-0.4	16446.898 ^A	1	4.795	6.834		
		3-4	2.74	6057.6815	6056.0047	-0.4	16507.966 ^A	1	4.733	6.780	-0.46 ^b	
		3-3	1.36	5899.8498	5898.2153	-0.7	16949.584 ^A	2	4.733	6.834	-1.83 ^b	
1794	y 3D ° $-e$ 3P	1 - 2	2.30	6295.6664	6293.9257	1.2	15883.942^{B}	-3	4.835	6.804		
	(1260)	2-2	2.61	6172.2147	6170.5071	0.8	16201.640 ^A	-2	4.795	6.804	-0.44^{b}	
		1-1	2.41	6104.8745	6103.1851	0.0	16380.353 ^A	0	4.835	6.866		
		2-1	2.56	5988.7232	5987.0649	-0.4	16698.050 ^A	1	4.795	6.866	-0.15^{c}	
		3-2	2.84	5986.4728	5984.8151	-0.4	16704.327 ^A	1	4.733	6.804	0.17^{c}	
		1-0	2.41	5977.0016	5975.3464	-3.6	16730.797 ^D	10	4.835	6.909	•••	I
1795	$y^3D^{\circ}-s^4D4d^3G$	3-4	2.24	4810.0240	4808.6800	0.5	20789.917^{B}	-2	4.733	7.311	• • •	
1796	$y {}^{3}D^{\circ} - s {}^{4}\!D4d {}^{3}D$	1 - 2	1.90	5003.9764	5002.5809	-5.5	19984.107 D	22	4.835	7.312		I
		2-2	2.00	4925.6731	4924.2984	-2.9	20301.794^{D}	12	4.795	7.312	• • • •	I
		3-3	2.18	4876.3918	4875.0302	-0.2	20506.966^{B}	1	4.733	7.275	•••	

۲.					TAE	LE 2—Contil	nued						
94.	No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
STS -	1797	$y^{3}D^{\circ}-{}^{4}F5d^{3}G$	3-4	2.38	4755.3688	4754.0393	2.9	21028.863 ^C	-13	4.733	7.340		
4Ağ	1798	$y^{3}D^{\circ}-59077^{e}$	2-1	1.30	4902.1912	4900.8228	0.5	20399.041 ^D	-2	4.795	7.324		
1994ApJS	1799	$y^{3}D^{\circ} - s^{4}D4d^{3}S$	1-1	1.48	4960.5817	4959.1978	-0.2	20158.926 ^D		4.835	7.334		
-		$x^5D^{\circ}-e^5D$	2.4	2.70	21244.262	21229 466		4707.153 ^A		1055			
	1800	$x ^{3}D^{3} - e ^{3}D$	3-4 2-3	2.70 2.78	21244.263 20703.963	21238.466 20698.313	0 0	4707.133 4829.993 ^A		4.955 4.988	5.539 5.587	-1.05 ^a	
			1-2	2.71	20286.621	20281.085	0	4929.357 ^A		5.009	5.620	-1.03	
			0-1	2.61	19928.782	19923.343	-4	5017.868 ^A	_	5.020	5.642		
			4-4	3.50	19797.268	19791.864	-4	5051.202 ^A		4.913	5.539		
			3-3	3.14	19640.670	19635.309	-4	5091.476 ^A		4.955	5.587	-0.68^a	
			2-2	2.74	19598.086	19592.737	-4	5102.539 ^A		4.988	5.620		
			1-1	2.00	19590.043	19584.696	-4	5104.634 ^A		5.009	5.642		
			1 - 0	2.49	19265.706	19260.448	-7	5190.570 ^A	2	5.009	5.653		
			2 - 1	2.78	18947.231	18942.059	-4	5277.816 ^A	1	4.988	5.642		
			3-2	2.64	18642.727	18637.638	-3	5364.022 ^A	1	4.955	5.620		
			4-3	2.65	18397.483	18392.461	-3	5435.526 ^A		4.913	5.587	-1.09 ^a	
	1801	x 5D ° $-e$ 5F	4-5	3.07	13550.682	13546.978	0	7379.702^{A}		4.913	5.828		
			3-4	2.79	13498.736	13495.045	0	7408.101 ^A		4.955	5.874		
			2-3	2.56	13290.447	13286.814	-2	7524.201 ^A		4.988	5.921	• • •	
			1 - 2	2.33	13102.459	13098.876	0	7632.155 ^A		5.009	5.956		
			0-1	2.04	12936.543	12933.006	0	7730.040 ^A		5.020	5.978	• • •	
			4-4	2.43	12899.647	12896.119	0	7752.150 ^A		4.913	5.874	• • •	
			3-3	2.36	12844.086	12840.574	-2	7785.684 ^A		4.955	5.921	• • •	
			2-2	2.31	12811.748	12808.244	0	7805.336 ^A		4.988	5.956	• • •	
			1-1	2.09	12792.948	12789.450	0	7816.806 ^A		5.009	5.978	• • •	
			2-1 4-3	1.23 1.93	12515.671 12300.522	12512.247 12297.157	6 -6	7989.983 ^A 8129.736 ^A		4.988 4.913	5.978 5.921	• • •	
	1000	x 5D $^{\circ}-e$ 3F		2.20	12513.942	12510.519	-2	7991.087 ^A		4.955	5.946	•••	
	1802	$x \circ D \circ -e \circ F$	3-4 2-3	1.72	12313.942	12010.319	-2 -1	8300.530 ^A		4.933	6.017	• • •	
			1-2	2.05	11731.774	11728.563	14	8523.860 ^A		5.009	6.066	• • •	
			3-3	1.04	11679.492	11676.296	-5	8562.016 ^A		4.955	6.017		
	1803	x 5D o $-e$ 7F	2-3	2.31	9159.5952	9157.0820	-1.7	10917.513 ^A	2	4.988	6.341		
		(1261)	1 - 2	1.26	9152.0355	9149.5244	1.7	10926.531 ^A		5.009	6.364		
			2-2	2.19	9009.2363	9006.7637	-3.2	11099.720^{D}		4.988	6.364		I
			3-3	1.78	8945.3512	8942.8959	2.4	11178.991 ^B		4.955	6.341		
	1804	x 5D $^{\circ}-f$ 7D	0 - 1	1.00	9472.5477	9469.9498	0.0	10556.822^{A}		5.020	6.329		
		(1262)	2 - 3	1.97	9406.9112	9404.3310	-2.7	10630.482 ^A		4.988	6.306		
			4-5	1.18	9300.5070	9297.9557	0.9	10752.102^{B}		4.913	6.246		
			2-2	1.15	9287.3742	9284.8264	2.6	10767.306 ^A		4.988	6.323	• • •	
				1.93	9244.9040	9242.3677	0.9	10816.770 ^A		4.988	6.329	•••	
			3-4	1.60	9226.6729	9224.1415	0.9	10838.143 ^A		4.955	6.299	• • •	
			3-3	2.12	9181.0798	9178.5608	-1.7	10891.965 ^A		4.955	6.306	• • •	
			3-2 4-4	0.70 3.10	9067.1778 8942.7857	9064.6896 8940.3311	1.6 -4.0	11028.790 ^B 11182.198 ^B		4.955 4.913	6.323 6.299		
	1805	x 5D ° $-f$ 5D	1-2	1.30	9714.3014	9711.6380	0.0	10294.101 ^A		5.009	6.286		
	1000	(1263)	0-1	1.62	9625.7351	9623.0956	0.9	10388.817^{A}		5.020	6.308		
		(====,	$^{2-2}$	1.92	9553.5766	9550.9568	-0.9	10467.284 ^A	1	4.988	6.286		
			1 - 1	1.34	9546.0090	9543.3912	0.9	10475.582 ^A	-1	5.009	6.308		
			3-3	2.40	9465.6248	9463.0287	0.9	10564.543 ^A	-1	4.955	6.265		
			1 - 0	2.05	9454.9290	9452.3359	0.0	10576.494 ^A		5.009	6.321	•••	
			2 - 1	2.37	9390.7595	9388.1837	0.0	10648.766 ^A		4.988	6.308	• • •	
			3-2	2.29	9320.7356	9318.1787	-0.9	10728.767 ^A		4.955	6.286		
			4-4	2.60	9261.5463	9259.0055	0.0	10797.333 ^A		4.913	6.251	-0.75^a	
		_	4-3	2.11	9167.0867	9164.5715	8.0	10908.591 ^A		4.913	6.265	•••	
	1806	x 5D $^{\circ}-e$ 7P	2-2	0.85	9407.3501	9404.7698	4.4	10629.986 ^E		4.988	6.306	• • • •	
		(1264)	3-3	2.43	9397.2536	9394.6760	0.0	10641.407 ^A		4.955	6.275	• • •	
			4-4	2.53	9217.0265	9214.4977	-1.7	10849.486 ^L		4.913	6.258	• • •	II
			3-2	1.20	9181.4912	9178.9720	-3.4	10891.477 ^A	4	4.955	6.306	• • •	

·					ABLE 2—C							
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
2		4-3	2.20	9102.9440	9100.4461	0.0	10985.457 ^A	0	4.913	6.275		
1807	$x^{5}D^{0}-e^{5}G$	1-2	1.74	9119.4072	9116.9049	0.8	10965.625 ^A	-1	5.009	6.369		
1007	(1265)	2-3	1.83	9101.1023	9098.6049	-0.8	10987.680 ^A		4.988	6.350		
4	(1203)	3-4	2.58	9082.8798	9080.3874	1.6	11009.724^{D}		4.955	6.320		II
		4-5	3.05	9026.8464	9024.3691	0.0	11078.066 ^A		4.913	6.286		••
1808	$x^5D^{\circ}-e^{7}G$	0-1	1.46	9028.9198	9026.4420	-4.1	11075.522^{D}	5	5.020	6.393		Ne
	(1266)	2 - 3	1.45	8905.3690	8902.9245	0.0	11229.181 ^B		4.988	6.380		
	(/	3-4	1.98	8798.8992	8796.4836	-0.8	11365.058 ^A	1	4.955	6.365		
		4-5	2.42	8618.6464	8616.2796	-1.5	11602.750 ^A		4.913	6.351		
		4-4	2.09	8540.3609	8538.0152	0.0	11709.107 ^A	0	4.913	6.365		
1809	$x^5D^{\circ}-f^5F$	0-1	2.23	8878.4612	8876.0241	0.0	11263.213 ^A	0	5.020	6.417		
	(1267)	1 - 2	2.54	8849.1699	8846.7407	0.8	11300.495 ^A	-1	5.009	6.410		
		1 - 1	2.23	8810.5898	8808.1710	0.8	11349.978 ^A	-1	5.009	6.417		
		2 - 3	2.63	8792.9357	8790.5217	0.8	11372.766 ^A	-1	4.988	6.398	-0.59^a	
		2-2	2.52	8715.5965	8713.2034	-5.3	11473.684 ^A	7	4.988	6.410		
		4-5	3.09	8712.7838	8710.3915	0.0	11477.388 ^A	0	4.913	6.336		
		3-4	2.95	8701.8433	8699.4540	-0.8	11491.818 ^A	1	4.955	6.380	-0.38^a	
		3-3	2.40	8595.3113	8592.9507	-0.7	11634.250 ^A		4.955	6.398		
		4-4	1.72	8448.8895	8446.5685	-6.4	11835.875 ^B	9	4.913	6.380	• • •	
1810	$x {}^{5}D^{\circ} - e {}^{5}S$ (1268)	1-2	1.15	9307.1809	9304.6277	-0.9	10744.392 ^A	1	5.009	6.341	•••	
1811	$x^{5}D^{\circ}-e^{3}D$	2 - 3	1.66	9039.2359	9036.7552	0.8	11062.882 ^A		4.988	6.359		
	(1269)	3-3	1.48	8830.5117	8828.0876	-3.9	11324.372 ^B		4.955	6.359		
		1 - 2	1.96	8821.9106	8819.4888	-8.6	11335.413 ^B		5.009	6.415	• • •	
		0 - 1	1.34	8659.0560	8656.6782	3.7	11548.603 ^C		5.020	6.452		
		4-3	1.20	8570.1443	8567.7905	0.7	11668.415 ^C		4.913	6.359		
		3-2	1.65	8496.1298	8493.7961	1.4	11770.065^{L}		4.955	6.415	• • •	II
		2-1	1.26	8468.4388	8466.1126	2.9	11808.552 ^C		4.988	6.452	• • •	
1812	x 5D $^{\circ}-g$ 5D	3-4	2.16	8786.8528	8784.4405	0.0	11380.639 ^A		4.955	6.366	• • •	
	(1270)	2-3	2.02	8666.0948	8663.7151	-1.5	11539.223 ^E		4.988	6.419	• • •	
		1-2	1.43	8587.1539	8584.7955	1.5	11645.302 ^C		5.009	6.453	• • •	
		0-1	1.78	8530.1960	8527.8531	0.7	11723.060 ^E		5.020	6.474		
		4-4	2.70	8529.0116	8526.6690	-0.7	11724.688 ^A		4.913	6.366	-0.76^a	
		3-3	2.32	8474.0721	8471.7444	1.4	11800.702 ^A		4.955	6.419	• • •	
		1-1	1.40	8467.5245	8465.1985	0.0	11809.827 ^C 11852.820 ^E		5.009 5.009	6.474	• • •	
		1-0	1.74	8436.8108	8434.4931	4.3 0.0	11832.820 ⁻¹ 11983.008 ^A		4.988	6.479 6.474	• • •	
		2-1	1.78	8345.1501	8342.8571 8275.8921	0.0	12079.969 ^A		4.988	6.453	• • •	
		3-2 4-3	2.24 2.00	8278.1669 8234.0085	8273.8921	0.0	12079.969 ⁻¹		4.933	6.419	• • •	
1012	$x^5D^{\circ}-e^{7}S$	2-3	1.51	8819.3081	8816.8869	2.3	12144.753 11338.758 ^E		4.913	6.394		
1813	(1271)										•••	
1814	x $^5D^{\circ}-e$ 5P	0-1	1.38	8674.2411	8671.8592		11528.386 ^E		5.020	6.449	• • •	
	(1272)	2 - 3	2.26	8616.3072	8613.9410		11605.900 ^A		4.988	6.427	• • •	
		1 - 1	1.91	8609.4454	8607.0810		11615.150 ^E		5.009	6.449	• • •	
		1-2	2.21	8574.1601	8571.8052		11662.950 ^A		5.009	6.455	• • •	
		2-1	1.94	8482.9615	8480.6313	-2.2	11788.336 ^E		4.988	6.449	• • •	
		2-2	2.27	8448.7053	8446.3844		11836.133 ^A		4.988	6.455	• • •	
		3-3	2.29	8426.4555	8424.1406		11867.386 ^A		4.955	6.427	• • •	
		3-2 4-3	1.66 2.50	8266.0983 8189.0464	8263.8267 8186.7957		12097.606 ^A 12211.434 ^A		4.955 4.913	6.455 6.427	• • •	
											• • •	
1815	$x {}^{5}D^{\circ} - g {}^{5}F$ (1273)	3-4 4-5	2.28 2.70	7449.4449 7442.9616	7447.3938 7440.9122		13423.819 ^A 13435.512 ^A		4.955 4.913	6.620 6.579	-0.53 ^c	
1816	$x^5D^{\circ}-h^5D$	3-4	1.79	7584.2094	7582.1219	0.6	13185.290	-1	4.955	6.590	-1.75^{b}	
-010	(1274)	4-4	2.69	7391.3441	7389.3086		13529.339 ^E		4.913	6.590		
1817	x 5D ° $-f$ 5P	1-2	0.70	7596.3414	7594.2506	-0.6	13164.232 ^E	3 1	5.009	6.641		
	(1275)	4-3	3.03	7388.3679	7386.3332	-0.5	13534.789		4.913	6.591	•••	

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ_{qir}^{3} (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
1818	$x^{5}D^{\circ}-f^{3}D$ (1278)	2-3	2.24	7398.5445	7396.5071	-4.9	13516.172 ^C		4.988	6.664	-1.64 ^b	
1819	$x^{5}D^{\circ}-s^{6}D6s^{5}D$	1-2	1.85	6789.0354	6787.1622	7.4	14729.633^{D}	-16	5.009	6.836		II
ì		4-4	2.74	6732.1503	6730.2924	0.9	14854.095 ^A		4.913	6.754	•••	
		3-3	2.40	6713.6740	6711.8211	0.9	14894.974 ^B		4.955	6.802		
		2-1	2.11	6633.8112	6631.9797	-0.9	15074.291^{B}		4.988	6.857		
		3-2	2.11	6594.4304	6592.6095	0.9	15164.312^{D}	-2	4.955	6.836	• • •	II
1820	x 5D $^{\circ}-f$ 3F	3-4	2.34	6796.4937	6794.6185	-0.5	14713.469 ^B		4.955	6.780	-2.11^{b}	
	(1279)	2-3	2.45	6714.2911	6712.4380	-1.8	14893.605^{B}	4	4.988	6.834	-2.16^{b}	
1821	x 5D $^{\circ}-e$ 3P	$^{2-2}$	1.85	6826.7065	6824.8231	-3.3	14648.352^{C}	7	4.988	6.804	-2.13^{b}	
	(1280)	2 - 1	1.85	6602.9452	6601.1220	-1.7	15144.757^{D}	4	4.988	6.866		
1822	$x{}^5D^{\circ}-{}^4F6s{}^5F$	1-2	0.85	5839.7598	5838.1413	0.3	17123.992 ^A	-1	5.009	7.132		
1022		0-1	0.70	5792.8000	5791.1941	1.3	17262.809 ^A	-4	5.020	7.160		
		2 - 3	1.15	5787.2624	5785.6580	0.3	17279.327 ^A	-1	4.988	7.130		
		2-2	0.60	5781.2909	5779.6881	0.0	17297.175^{B}		4.988	7.132		
		1 - 1	0.78	5763.8296	5762.2315	1.3	17349.576 ^A	-4	5.009	7.160		
		3-3	0.90	5700.9913	5699.4100	0.7	17540.809 ^B	-2	4.955	7.130		
1823	$x^{5}D^{\circ} - s^{6}D5d^{5}D$	3-2	0.60	6057.0783	6055.4016	-0.4	16509.610^{C}	1	4.955	7.002		
		4-3	0.60	5983.9692	5982.3121	1.4	16711.316 ^B	-4	4.913	6.985		
1824	$x^{5}D^{\circ}-s^{6}D5d^{5}G$	3-4	0.60	5986.8463	5985.1885	1.8	16703.285^{B}	-5	4.955	7.026		
102.	. 2 0 20. 0	4-5	1.38	5908.4799	5906.8430	0.3	16924.827 ^A		4.913	7.011		
		4-4	0.30	5866.0219	5864.3965	4.1	17047.328^{B}		4.913	7.026	• • • •	
		3-3	0.70	5852.8271	5851.2052	0.3	17085.760 ^A	-1	4.955	7.074		
		4-3	1.00	5737.2998	5735.7088	3.0	17429.802^{B}	-9	4.913	7.074		
1825	$x^5D^{\circ}-s^6D5d^7F$	0-1	0.30	5979.9793	5978.3233	-2.5	16722.466^{C}	7	5.020	7.093		
		2-1	0.30	5888.4482	5886.8167	1.4	16982.403^{B}	-4	4.988	7.093		
		4-5	0.60	5808.2368	5806.6268	-0.7	17216.929^{B}	2	4.913	7.047		
1826	$x^{5}D^{\circ}-s^{6}D5d^{7}D$	3-4	3.68	6067.1615	6065.4822	-2.9	16482.172^{D}	8	4.955	6.999		I
1020	. 5 0 50 5	2-3	0.00	5938.5826	5936.9377	-0.4	16839.035^{C}	1	4.988	7.076		•
		4-3	1.11	5732.4468	5730.8570	2.3	17444.558^{D}	-7	4.913	7.076		II
1827	$x^{5}D^{\circ}-s^{6}D5d^{7}G$	0-1	0.00	5942.0979	5940.4521	-4.2	16829.073 ^C	12	5.020	7.107		
1027	# D 0 D 3 # G	2-1	0.30	5851.7123	5850.0907	-2.1	17089.015^B	6	4.988	7.107		
		3-4	1.26	5818.6893	5817.0765	0.7	17186.001 ^A	-2	4.955	7.086		
		4-4	0.90	5704.4890	5702.9067	-1.0	17530.054^{B}	3	4.913	7.086		
1828	$x^{5}D^{\circ}-s^{6}D5d^{5}S$	2-2	0.30	6064.6234	6062.9447	0.7	16489.070 ^B	-2	4.988	7.032		
	$x^{5}D^{\circ} - s^{6}D5d^{5}F$	2-2	0.30	5980.5508	5978.8946	2.9	16720.868^{B}	-8				
1829	$x \cdot D \cdot -s \cdot D \cdot a \cdot F$	3-3	0.30	5967.6436	5965.9909	1.4	16720.868 ⁻ 16757.033 ^A	-8 -4	4.988 4.955	7.061 7.033	• • •	
		4-3	0.70	5847.5825	5845.9620	0.7	17101.084 ^B	-2	4.913	7.033	•••	
		4-5	1.45	5835.6472	5834.0298	4.4	17136.060 ^A		4.913	7.037		
		3-4	0.78	5829.0698	5827.4542	0.0	17155.396^{B}	0	4.955	7.082		
		4-4	0.30	5714.4735	5712.8886	6.2	17499.425^{C}	-19	4.913	7.082		
1830	$x^{5}D^{\circ}-{}^{4}F6s^{3}F$	1-2	0.70	5751.6279	5750.0331	2.6	17386.382^{B}	-8	5.009	7.165		
1050	w D 1001	2-2	0.60	5694.8980	5693.3183	-1.9	17559.577 ^B	6	4.988	7.165		
		4-3	0.78	5684.0757	5682.4989	3.6	17593.010^{B}		4.913	7.094		
1831	$x^{5}D^{9}-s^{6}D5d^{5}P$	2-2	0.85	5823.5037	5821.8896	1.0	17171.793 ^B	-3	4.988	7.117		
1051	# D 0 D 3 # 1	3-3	0.60	5817.2406	5815.6282	2.4	17190.281^{B}	-7	4.955	7.087		
		3-2	0.95	5736.1559	5734.5652	0.3	17433.278 ^A	-1	4.955	7.117		
1832	x 5D $^{\circ}-s$ 4D4d 5F	4-5	2.96	5544.7292	5543.1896	0.3	18035.146 ^A	1				
1034	⊥ D −s D4a - f	4-3 3-4	2.90 1.70	5509.9391	5508.4088	-0.3	18033.146 ⁻¹	-1 1	4.913 4.955	7.149 7.206	•••	
1000	500 .50										•••	
1833	$x^{5}D^{0}-i^{5}D$	$\frac{2-3}{3}$	0.30	5687.4410	5685.8633	1.6	17582.600^B	-5 2	4.988	7.168	• • •	
	(1281)	3-4 3-2	0.78 1.60	5640.9097 5554.2358	5639.3445 5552.6937	0.6 1.9	17727.637 ^C 18004.277 ^C	-2 -6	4.955 4.955	7.153 7.188	 -1.99 ^b	
		3-2 4-4	1.60	5533.5205	5531.9839	3.1	18004.277 ⁻ 18071.678 ^C	-0 -10	4.933	7.188	-1.99° -1.61 ^b	
1024	500 50											
1834	x 5D $^{\circ}-g$ 5G	2-2	2.32	5378.2244	5376.7293	3.2	18593.497 ^D	-11	4.988	7.293	•••	

TABLE 2—Continued

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	No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} o-R (cm ⁻¹) (m		E(u) (eV)	log(gf) 7	BI.8
	1835	$x^{5}D^{\circ}-s^{4}D4d^{3}G$	4-5	2.30	5300.4241	5298.9497	3.9	18866.415 ^D -1	4 4.913	7.252		
7.5	1836	$x^{5}D^{\circ}-s^{4}D4d^{5}S$	1-2	2.08	5400.3166	5398.8156	3.2	18517.433 ^C -1		7.305		
17744700	1837	$x^{5}D^{\circ}-59077^{e}$	2-1	2.57	5306.2373	5304.7614	0.3		1 4.988	7.324		NI_
7											• • • •	Ne
	1838	x 5D $^{\circ}$ $-s$ 4D4d 3F	$\begin{array}{c} 2-3 \\ 3-4 \end{array}$	1.70 2.15	5183.6664 5172.7547	5182.2231 5171.3144	3.2 -2.4	19291.365 ^D -1 19332.059 ^C		7.380	• • •	
			3-3	2.02	5114.3419	5112.9170	0.5	~	9 4.955 2 4.955	7.352 7.380		
	1839	$x^{5}D^{\circ}-^{5}D4p^{2}$	2-2	2.00	4925.6731	4924.2984	-4.6		9 4.988	7.505		I
	1840	$x^5D^{\circ}-s^4D4d^3P$	1-1	2.11	5047.7703	5046.3632	-1.0		4 5.009	7.465		
-	1841	$y^{7}P^{\circ}-e^{7}D$	4-5	3.23	41772.542	41761.154	0	2393.917 ^A	0 5.012	5.308		
		<i>y</i>	4-4	2.79	36477.885	36467.939	ő		0 5.012	5.351		
			3-4	2.81	33826.833	33817.609	11		1 4.985	5.351		
			3-3	2.37	30983.387	30974.938	0	3227.536^{A}	0 4.985	5.385		
			2 - 3	2.18	29563.127	29555.065	-9		1 4.966	5.385		
			3-2	1.88	29184.792	29176.833	-9		1 4.985	5.410		
			2-2	2.31	27921.285	27913.670	8	3581.497 ^A -	1 4.966	5.410	• • •	
	1842	$y^{7}P^{9}-e^{5}D$	4-4	1.64	23501.381	23494.970	-6	4255.069^{A}	1 5.012	5.539		
		v	3-4	1.38	22371.790	22365.686	0		0 4.985	5.539		
			3-3	1.28	20600.555	20594.933	-4		1 4.985	5.587		II
			2-2	0.95	18932.785	18927.617	-11		3 4.966	5.620	• • •	
	1843	$y^{7}P^{0}-e^{5}F$	4-4	0.85	14376.038	14372.110	-6	6956.019^{B}	3 5.012	5.874		
		v	3-4	0.90	13945.321	13941.509	0		0 4.985	5.874	•••	
			3-3	1.18	13247.744	13244.122	-16	7548.455 ^A	9 4.985	5.921		
	1844	$y^7 P^{\circ} - e^3 F$	4-4	2.60	13264.356	13260.730	0	7539.001^{D}	0 5.012	5.946		I
	1845	$y^7 P^{\circ} - e^7 F$	4-5	1.89	9604.7640	9602.1302	-0.9		1 5.012	6.302		
		(1283)	4-3	1.32	9322.3500	9319.7927	0.9		1 5.012	6.341	• • •	
			4-4	1.65	9284.7614	9282.2143	-1.7		2 5.012	6.347	• • •	
			3-3	1.88	9139.3009	9136.7931	0.8		1 4.985	6.341	• • •	
			3-4	2.17	9103.1727	9100.6748	0.0		0 4.985	6.347	• • •	
			3-2	1.58	8989.6044	8987.1372	0.8		1 4.985	6.364	• • •	
			$2-1 \\ 2-2$	1.54 1.67	8963.8192 8866.0224	8961.3590	3.2		4 4.966 2 4.966	6.349	• • •	
	1046	$y^7P^{\circ}-f^7D$				8863.5887	1.6			6.364	• • • •	
	1846	$y \cdot P = f \cdot D$ (1284)	4-5 4-4	1.83 2.22	10044.224 9628.2902	10041.471 9625.6501	0 -0.9		0 5.012	6.246	•••	
		(1204)	3-4	1.28	9433.1569	9430.5696	0.9	10600.905 ^D -	1 5.012 1 4.985	6.299 6.299	• • •	ŢŢ
			3-3	2.11	9385.5056	9382.9312	-1.8		2 4.985	6.306	• • •	II
			3-3	1.69	9266.5043	9263.9621	-1.7		2 4.985	6.323	• • •	
			$\frac{3}{2}$	1.23	9135.2483	9132.7416	0.0	_	0 4.966	6.323		II
			$\frac{2}{2-1}$	0.78	9094.1598	9091.6643	2.5	10996.068 ^B -:		6.329		11
	1847	$y^{7}P^{0}-f^{5}D$	4-4	1.51	9998.8031	9996.0627	2.0		2 5.012	6.251		
	1017	g I J D	4-3	1.72	9888.7926	9886.0819	0.0		0 5.012	6.265	• • • •	
			3-4	1.00	9788.5305	9785.8470	7.7	_	8 4.985	6.251		
			3-3	0.70	9683.0683	9680.4134	0.0	-	0 4.985	6.265		
	1848	$y^{7}P^{0}-e^{7}P$	4-4	2.41	9946.9321	9944.2057	-1.0	10053.351 ^A	1 5.012	6.258		
		(1285)	3-3	1.45	9611.5317	9608.8961	0.9	10404.169 ^A -		6.275		
		(/	2-3	0.90	9470.3893	9467.7920	-1.8	-	2 4.966	6.275		
			3-2	0.95	9385.9337	9383.3593	-4.4	_	5 4.985	6.306	•••	
			2-2	1.36	9251.2989	9248.7608	-1.7		2 4.966	6.306		
	1849	$y^{7}P^{0}-e^{5}G$	4-5	1.89	9725.7986	9723.1321	-0.9	10281.932 ^A	1 5.012	6.286		
		-	3-4	1.79	9282.9092	9280.3626	1.7	10772.485 ^A -2		6.320		
			4-3	1.00	9261.7711	9259.2302	5.1	_	6 5.012	6.350	•••	
			3-3	1.43	9081.0636	9078.5716	-1.6	11011.926 ^A	2 4.985	6.350		
			2 - 2	1.45	8835.3935	8832.9680	-3.9	11318.115^{C}	5 4.966	6.369		
	1850	$y^7P^0-e^5S$	3-2	1.53	9139.2474	9136.7397	-1.7	10941.820 ^A	2 4.985	6.341		

. 22					TABI	LE 2—Contin	ued						
. 94	No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
JS.	1851	$y^7P^0-g^5D$	3-4	1.38	8973.9266	8971.4636	5.6	11143.394 ^B	-7	4.985	6.366		
94ApJS.	1852	$y^{7}P^{\circ}-e^{7}S$	2-3	1.79	8682.0199	8679.6359	3.0	11518.057 ^B		4.966	6.394	•••	
-1	1052	(1286) $y^{7}P^{\circ}-s^{6}D5d^{5}G$	3-4	0.70	6073.1012	6071.4202	0.0	16466.052^{D}	0	4.985	7.026		II
	1853	y'P'-s'D3a'G	$\frac{3-4}{2-3}$	1.26	5881.1165	5879.4870	2.1	17003.574^{D}		4.966	7.074		Ĩ
	1854	$y^7 P^{\circ} - s^6 D5 d^7 F$	3-3	0.30	5925.1563	5923.5150	-1.4	16877.192 ^C		4.985	7.077		
	1855	$y^{7}P^{\circ}-s^{6}D5d^{7}G$	4-3	0.30	5903.3783	5901.7429	-9.4	16939.453 ^C	27	5.012	7.112		
	1055	g 1 0 25 a G	3-4	0.00	5900.1454	5898.5107	10.1	16948.735^{D}	-29	4.985	7.086		I
			2 - 3	0.70	5777.2318	5775.6301	0.3	17309.328^{D}	-1	4.966	7.112		II
						24525 ((5		40.42.077.A	1	£ 00£	£ 507		
	1856	x 5F ${}^{\circ}-e$ 5D	2-3	1.94	24732.413	24725.667 24487.669	6 0	4043.277 ^A 4082.574 ^A		5.085 5.033	5.587 5.539	• • •	
			4-4	2.80	24494.350 23790.966	23784.476	0	4082.374 4203.276^{A}		5.099	5.620		
			1-2 3-3	1.90 2.89	23790.966	23694.850	-6	4203.276 4219.175 ^A		5.064	5.587		
			$\frac{3-3}{2-2}$	2.82	23170.546	23164.224	0	4315.824 ^A		5.085	5.620		
			1-1	2.63	22838.595	22832.364	-5	4378.553 ^A		5.099	5.642	•••	
			5-4	3.66	22626.011	22619.837	-5	4419.692 ^A		4.991	5.539		
			1-0	2.62	22398.980	22392.868	-10	4464.489 ^A		5.099	5.653		
			4-3	3.42	22386.905	22380.797	0	4466.897 ^A	0	5.033	5.587	-0.46^a	
			2-1	2.91	22266.255	22260.179	0	4491.101 ^A	. 0	5.085	5.642		
			3-2	3.18	22263.181	22257.107	0	4491.721 ^A		5.064	5.620	•••	
	1857	x 5F ${}^{\circ}-e$ 5F	4-5	2.14	15598.013	15593.752	0	6411.073 ^A		5.033	5.828	• • •	
			3-4	2.26	15300.345	15296.165	0	6535.800 ^A		5.064	5.874	• • •	
			2-3	2.17	14842.331	14838.275	0	6737.486 ^A		5.085 4.991	5.921 5.828	-1.03 ^a	
			5-5	2.93	14818.784	14814.735 14737.576	-2 0	6748.192 ^A 6783.522 ^A		5.033	5.874		
			4-4	2.56	14741.604 14480.007	14737.376	0	6906.074 ^A		5.099	5.956		
			1-2 3-3	1.95 2.28	14464.698	14460.745	-2	6913.383 ^A		5.064	5.921		
			$\frac{3-3}{2-2}$	2.28	14247.813	14243.919	2	7018.621 ^A		5.085	5.956		
			1-1	2.10	14102.930	14099.075	-2	7090.725^{A}		5.099	5.978		
			5-4	2.07	14043.679	14039.841	-2	7120.641 ^A		4.991	5.874		
			4-3	2.02	13964.325	13960.508	0	7161.105^{A}	0	5.033	5.921		
			3-2	1.94	13899.469	13895.670	-2	7194.519 ^A		5.064	5.956		
			2-1	1.80	13882.578	13878.783	-2	7203.273 ^A		5.085	5.978	•••	**
	1858	$x^{5}F^{0}-e^{3}F$	3-4	1.15	14047.344	14043.505	6	7118.783^{L}		5.064	5.946	•••	II
			4-4	1.78	13574.953	13571.242	-2	7366.508 ^A		5.033	5.946	•••	
			3-3	1.40	13004.388	13000.832 12977.357	-2	7689.712 ^A 7703.622 ^E		5.064 4.991	6.017 5.946	•••	
			5-4	0.90	12980.906 12824.143	12977.337	7 -5	7797.792 ^A		5.099	6.066	•••	
	1050	$x^{5}F^{\circ}-e^{7}F$	1-2 5-6	0.95 1.95	9915.8973	9913.1793		10084.816		4.991	6.241		
	1859	(1292)	2-3	2.36	9870.8927	9868.1868		10130.796		5.085	6.341		
		(1292)	1-2	2.24	9803.4871	9800.7996		10200.452		5.099	6.364		
			4-5	2.91	9766.5750	9763.8974		10239.004		5.033	6.302		
			3-3	2.59	9702.4341	9699.7739	1.9	10306.692	4 -2	5.064	6.341		
			2-2	2.16	9696.4996	9693.8410	0.0	10313.000		5.085	6.364		
			3-4	2.37	9661.7256	9659.0764		10350.118		5.064	6.347		
			3-2	1.45	9533.8900	9531.2755		10488.898		5.064	6.364	• • •	
			4-3	1.67	9474.7089	9472.1104		10554.414		5.033	6.341	•••	
			5-5	2.06	9455.2607	9452.6674		10576.123		4.991	6.302		
	1000	5770 475	4-4	1.36	9435.8815 9980.3766	9433.2935 9977.6411		10597.844 ² 10019.662 ²		5.033 5.064	6.347 6.306		
	1860	$x^{5}F^{0}-f^{7}D$	3-3	1.80	9980.3766	9977.6411		10019.002		5.085	6.329		
		(1293)	2-1 4-4	1.53 1.41	9790.8997	9788.2155		10030.034		5.033	6.299		
			5-4	1.41	9478.0576	9475.4582		10213.500 10550.685 ¹	_	4.991	6.299		
	1861	$x^{5}F^{\circ}-f^{5}D$	1-0	1.40	10151.860	10149.078	2	9850.4114	^A -2	5.099	6.321		
	1001	(1294)	3-2	2.04	10145.624	10142.843	-1	9856.466		5.064	6.286		
		,	2-1	1.79	10139.880	10137.102	1	9862.049		5.085	6.308		
			4-3	2.11	10060.400	10057.643	2	9939.962	A -2	5.033	6.265	• • • •	

•					ABLE 2—C	ontinue	a				
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷ Bl. ⁸
3		5-4	2.53	9836.8809	9834.1843	-1.9	10165.824 ^A	2	4.991	6.251	
1862	$x^{5}F^{\circ}-e^{7}P$	4-3	2.16	9983.2003	9980.4640	1.0	10016.828 ^A		5.033	6.275	
1002	(1295)	5-4	2.37	9786.6740	9783.9910	-2.9	10217.976 ^A		4.991	6.258	
1863	$x^{5}F^{\circ}-e^{5}G$	4-5	3.20	9891.7477	9889.0362	1.0	10109.437 ^A	-1	5.033	6.286	-0.45^a
1003	(1296)	3-4	3.23	9864.4409	9861.7368	1.9	10137.422 ^A		5.064	6.320	-0.14^a
	, ,	2 - 3	2.89	9802.9961	9800.3086	0.0	10200.963 ^A	0	5.085	6.350	
		1-2	2.88	9766.0570	9763.3796	-1.0	10239.547 ^A		5.099	6.369	-0.41ª
		5-6	3.75	9741.2434	9738.5726	-0.9	10265.630 ^A		4.991	6.264	0.15^{a}
		$\frac{2-2}{3-3}$	2.59 2.86	9659.8823 9636.8321	9657.2336 9634.1897	0.0 5.6	10352.093 ^A 10376.854 ^A		5.085 5.064	6.369	• • •
		3-3 4-4	3.10	9629.1376	9626.4973	0.9	10376.834 ^A		5.033	6.350 6.320	-0.25^{a}
		5-5	3.14	9572.5328	9569.9078	0.0	10446.556 ^A		4.991	6.286	-0.23
		3-2	1.48	9498.4902	9495.8852	0.9	10527.989 ^A		5.064	6.369	
		4-3	1.53	9412.1332	9409.5516	-1.8	10624.584 ^A		5.033	6.350	
		5-4	1.45	9326.3885	9323.8302	0.9	10722.264 ^A	-1	4.991	6.320	
1864	x $^5F^{\circ}-e$ 7G	1 - 2	2.00	9606.9601	9604.3257	0.9	10409.120 ^A	-1	5.099	6.390	
	(1297)	1 - 1	0.78	9582.0281	9579.4005	-0.9	10436.204 ^B		5.099	6.393	
		2-3	1.32	9576.2812	9573.6551	-0.9	10442.467 ^A		5.085	6.380	•••
		3-4	1.79	9530.3855	9527.7719	0.9	10492.755 ^A		5.064	6.365	•••
		$\frac{2-2}{3-3}$	1.54 1.94	9504.1956 9417.6466	9501.5891 9415.0636	-0.9 0.0	10521.669 ^A 10618.364 ^A		5.085 5.064	6.390 6.380	• • •
		3-3 4-5	2.97	9403.6930	9401.1137	0.0	10618.304 10634.120 ^A		5.033	6.351	-0.41 ^a
		5-6	2.40	9336.6175	9334.0563	0.0	10710.517 ^A		4.991	6.319	-0.41
		4-4	2.49	9310.5735	9308.0194	0.9	10740.477 ^A		5.033	6.365	
		5-5	1.88	9114.7433	9112.2422	2.5	10971.236 ^A		4.991	6.351	
		5-4	1.97	9027.2294	9024.7520	0.0	11077.596 ^A	. 0	4.991	6.365	• • •
1865	x 5F $^{\circ}-f$ 5F	4-5	2.93	9515.8724	9513.2627	0.0	10508.758 ^A	0	5.033	6.336	
	(1298)	1 - 2	2.76	9456.7888	9454.1951	0.9	10574.414 ^A		5.099	6.410	
		2-3	3.02	9446.3932	9443.8023	0.9	10586.051 ^A		5.085	6.398	-0.22^a
		3-4 $1-1$	3.13 2.57	9416.6250 9412.7401	9414.0422 9410.1583	0.0 -1.8	10619.516 ^A 10623.899 ^A		5.064 5.099	6.380 6.417	-0.32^a
		$\frac{1-1}{2-2}$	2.23	9357.1971	9354.6304	0.9	10623.899 ⁻¹		5.085	6.417	•••
		$\frac{2}{2-1}$	2.08	9314.0700	9311.5149	0.0	10736.445 ^A		5.085	6.417	
		3-3	2.09	9291.9972	9289.4482	0.0	10761.949 ^A		5.064	6.398	•••
		5-5	2.52	9220.0926	9217.5631	-0.9	10845.878 ^A		4.991	6.336	
		4-4	1.97	9201.9702	9199.4455	-0.8	10867.238 ^A		5.033	6.380	•••
		5-4	1.74	8925.1018	8922.6520	1.6	11204.354 ^B	-2	4.991	6.380	•••
1866	$x^{5}F^{\circ}-e^{3}D$	3 - 3	1.79	9567.4865	9564.8628	-0.9	10452.066 ^A		5.064	6.359	
	(1300)	4-3	2.27	9345.9804	9343.4168	0.0	10699.787 ^A		5.033	6.359	•••
		2-2	1.97	9326.7330	9324.1745	0.0	10721.868 ^A		5.085	6.415	• • •
		$3-2 \\ 1-1$	2.12 1.89	9176.1935 9166.4977	9173.6758 9163.9826	0.8 0.8	10897.765 ^A 10909.292 ^A		5.064 5.099	6.415 6.452	• • •
		$\frac{1-1}{2-1}$	2.07	9072.8928	9070.4031	-1.6	11021.843 ^A		5.085	6.452	
1867	$x^{5}F^{\circ}-q^{5}D$	3-4	1.36	9516.2563	9513.6466	2.7	10508.334 ^A		5.064	6.366	
1807	(1301)	$\frac{3-4}{2-3}$	1.26	9310.2303	9297.6063	0.0	10308.334 10752.506 ^A		5.085	6.419	
	(1501)	4-4	2.10	9297.0855	9294.5351	0.0	10756.059 ^A		5.033	6.366	
		1-2	1.46	9158.1600	9155.6471	-0.8	10919.224 ^A		5.099	6.453	
		3-3	2.29	9150.4687	9147.9579	0.0	10928.402 ^A		5.064	6.419	• • •
		$^{2-2}$	2.27	9064.7277	9062.2401	0.0	11031.771 ^A		5.085	6.453	• • •
		1-1	2.17	9022.2229	9019.7469	1.6	11083.743 ^A		5.099	6.474	0.214
		5-4 $1-0$	3.20 2.37	9014.5485 8987.3552	9012.0745 8984.8886	-0.8 1.6	11093.179 ^A 11126.744 ^A		4.991 5.099	6.366 6.479	-0.31 ^a
		4-3	3.07	8947.6459	8945.1900	0.8	11176.744		5.033	6.419	• • • •
		2-1	2.57	8931.5292	8929.0777	2.4	11176.124 11196.291 ^A	_	5.085	6.474	• • •
		3-2	2.75	8922.4627	8920.0137	0.8	11207.668 ^A		5.064	6.453	•••
1868	$x^{5}F^{\circ}-e^{7}S$	2-3	1.48	9476.8378	9474.2387	2.7	10552.043 ^A	-3	5.085	6.394	
1500	w 1 0 0	3-3	0.90	9321.4497	9318.8927	-2.6	10727.945 ^E		5.064	6.394	• • • •
								-	/		-

TABLE 2—Continued

					LE 2—Conti							
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
1869	$x^{5}F^{0}-e^{5}P$	2-3	1.45	9242.8412	9240.3055	1.7	10819.184 ^A	-2	5.085	6.427		
	(1302)	3 - 3	1.20	9094.9737	9092.4780	0.0	10995.084^{B}	0	5.064	6.427		
	(/	$^{2-2}$	1.49	9050.2512	9047.7676	0.0	11049.417^{B}	0	5.085	6.455		
		3-2	2.06	8908.4399	8905.9947	4.0	11225.310^{B}	-5	5.064	6.455		
1070	5 E0 . 5 E	2 1	1 77	7967.1638	7964.9730	0.0	12551.518 ^A	0	5.064	6.620		
1870	$x^{5}F^{\circ}-g^{5}F$	3-4	1.77		7810.8147	0.0	12331.316 ⁻¹	0	5.033	6.620	• • •	
	(1303)	4-4	1.98	7812.9639 7810.0575	7807.9091	-0.6	12799.240 12804.003 ^A		4.991	6.579	-0.31 ^c	
		5-5	2.72				12804.003 ¹² 12812.924 ^A				-0.31° -1.40°	
		2-3	1.81	7804.6198	7802.4728 7696.8127	-1.2 2.4	12812.924 ⁻¹ 12988.816 ^A	-4	5.085 5.064	6.674 6.674		
		3-3	1.48	7698.9311		1.2	13126.900^B		5.099	6.727	• • •	
		1-2	1.40	7617.9448	7615.8483		13120.900 ⁻ 13239.443 ^B		5.085	6.727	-1.63 ^b	
		2-2	1.82	7553.1878	7551.1088	3.4 0.0	13255.586 ^A		5.099	6.743	-1.63°	
		1-1	1.58	7543.9894	7541.9128			U	3.099		-1.02	
1871	x 5F ${}^{\circ}-h$ 5D	4-4	2.02	7961.3328	7959.1435	0.6	12560.711 ^A	-1	5.033	6.590		
	(1304)	3 - 3	2.28	7871.7757	7869.6106	39.0	12703.614^{D}	-63	5.064	6.639		I
		5 - 4	2.50	7753.2422	7751.1091	-0.6	12897.830 ^A	1	4.991	6.590	-0.72^{c}	
		$^{2-2}$	1.52	7722.8379	7720.7130	0.6	12948.608 ^A	-1	5.085	6.691		
		4-3	2.16	7721.1730	7719.0486	0.0	12951.400 ^A	0	5.033	6.639		
		1 - 1	1.78	7691.1528	7689.0365	-0.6	13001.952 ^A	1	5.099	6.711		
		2 - 1	1.15	7625.1477	7623.0492	-1.2	13114.500^{C}	2	5.085	6.711		
		3 - 2	1.73	7619.3350	7617.2380	1.2	13124.505 ^A	-2	5.064	6.691		
1072	$x^{5}F^{\circ}-f^{5}P$	4-3	2.06	7957.8805	7955.6922	0.0	12566.160 ^A	0	5.033	6.591	-1.19 ^c	
1872		3-2	2.00	7857.5600	7855.3988	-0.6	12726.597 ^A	_	5.064	6.641		
	(1305)	$\frac{3-2}{1-1}$	1.04	7815.7967	7813.6467	-1.2	12720.597 12794.601^B		5.099	6.686	-2.00^{c}	
		$\frac{1-1}{2-1}$	2.06	7747.6455	7745.5140	0.6	12794.001 12907.147^{A}		5.085	6.686		
		2-1										
1873	$x^{5}F^{0}-f^{5}G$	4-5	1.76	7881.9262	7879.7584	0.6	12687.254 ^A		5.033	6.606	-1.65 ^b	
	(1306)	5-6	2.41	7744.8356	7742.7047	0.6	12911.830 ^A		4.991	6.592	·	
		3-4	1.72	7735.8516	7733.7232	-0.6	12926.825 ^A		5.064	6.666		
		2 - 3	1.87	7608.5637	7606.4697	1.2	13143.085 ^A		5.085	6.715	• • • •	
		4 - 4	2.12	7590.3944	7588.3053	0.0	13174.546 ^A		5.033	6.666	-2.06^{b}	
		1-2	1.91	7549.9750	7547.8968	0.0	13245.077 ^A		5.099	6.741		
		3 - 3	1.94	7508.0813	7506.0144	0.6	13318.982 ^A		5.064	6.715	• • • •	
		2-2	1.54	7486.3585	7484.2975	-2.2	13357.629^{D}	4	5.085	6.741	-1.70 ^b	I
1874	$x^{5}F^{\circ}-e^{5}H$	5-6	1.52	7636.1077	7634.0062	-2.3	13095.677^{B}	4	4.991	6.615		
1074	(1307)	4-5	1.15	7530.2180	7528.1451	-2.3	13279.828 ^B		5.033	6.679		
	(1307)	3-4	1.57	7465.4376	7463.3822	-2.2	13395.062^{B}		5.064	6.724	-1.72 ^b	
	5 70 3 0											
1875	$x^{5}F^{\circ}-e^{3}G$	4-5	2.27	7607.4530	7605.3593	0.6	13145.004 ^A		5.033	6.663	• • •	
	(1308)	3-4	2.09	7561.8015	7559.7200	0.0	13224.362 ^A		5.064	6.703	• • • •	
		2-3	1.67	7484.2838	7482.2232	-0.6	13361.332 ^A	1	5.085	6.742	• • •	
1876	$x^{5}F^{0}-f^{3}D$	2 - 3	1.11	7855.7983	7853.6376	-2.5	12729.451^{D}	4	5.085	6.664		II
	(1309)	3 - 3	1.96	7748.7262	7746.5943	-1.8	12905.347 ^A	3	5.064	6.664	-1.33c	
		2 - 2	1.65	7663.5858	7661.4769	-0.6	13048.722 ^A		5.085	6.703		
		4 - 3	1.64	7602.7884	7600.6959	-1.7	13153.069 ^A	3	5.033	6.664		
		3 - 2	1.30	7561.6545	7559.5731	-0.6	13224.619^{B}	1	5.064	6.703		
		1-1	0.60	7508.2132	7506.1463	-1.1	13318.748 ^C	2	5.099	6.751		
1077	$x^{5}F^{\circ}-{}^{4}F6s^{5}F$	2-2	0.30	6056.7683	6055.0917	1.8	16510.455 ^D	-5	5.085	7.132		II
1877	$x \circ F \circ - F \circ S \circ F$		0.30	6015.5804	6013.9148	-0.7	16623.500^{B}	_	5.099	7.132	• • •	1,1
		$1-1 \\ 3-3$	0.48	5999.3361	5997.6749	0.0	16668.511 ^A		5.064	7.130	• • •	
		3-3 $3-2$	0.30	5992.9206	5991.2611	0.7	16686.355 ^B		5.064	7.130	• • •	
		$\frac{3-2}{2-1}$		5975.1256	5973.4709	-1.4	16736.050^{B}		5.085	7.132	• • •	
			0.30		5909.8439		16736.030 16916.233 ^B		5.033	7.130	• • •	
		4-3	0.30	5911.4816		0.0					• • •	
1878	$x {}^{5}F^{\circ} - s {}^{6}D5d {}^{5}G$	5-5	1.40	6137.4883	6135.7901	3.4	16293.310 ^B	-9	4.991	7.011		
1879	$x^{5}F^{\circ}-s^{6}D5d^{7}F$	5-5	0.30	6029.3928	6027.7236	-0.4	16585.418^{B}	1	4.991	7.047		
	•	4-4	0.95	5983.4114	5981.7544	4.7	16712.874^{D}		5.033	7.105		II
1000	5E0 .6D5170						16561.422^{D}			7.086		
1880	x $^5F^{\circ}$ $-s$ 6D5d 7G	4-4	0.90 0.00	6038.1289 6017.7136	6036.4573 6016.0475	0.7 -2.5	16561.422 ^D 16617.607 ^D		5.033 4.991	7.086	• • • •	I
				DIII / / 1.40	DILLO 114/3	-/ 7		1	4.771	7.001		
		5-6 5-4	0.30	5917.6794	5916.0401	9.1	16898.516 ^C		4.991	7.086		

					DLE 2—Com							
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
1881	x 5F $^{\circ}$ $-s$ 6D5d 5F	5-5	1.11	6058.9356	6057.2585	5.1	16504.549 ^A	-14	4.991	7.037		
1882	$x^{5}F^{0}-{}^{4}F6s^{3}F$	1-2	0.00	6002.2925	6000.6305	2.9	16660.301 ^C	-8	5.099	7.165		
		$^{2-2}$	0.00	5962.0121	5960.3609	-1.8	16772.861^{B}		5.085	7.165		
		3-2	0.00	5900.1454	5898.5107	6.3	16948.735^{D}	-18	5.064	7.165		I
1883	x 5F $^{\circ}$ $-s$ 4D4d 5F	1-1	0.60	5802.8774	5801.2688	-2.4	17232.830 ^A	7	5.099	7.236		
		3-3	1.56	5783.7131	5782.1096	-2.0	17289.931 ^A	6	5.064	7.207		
		$^{2-2}$	0.95	5716.1345	5714.5491	-1.6	17494.340 ^A		5.085	7.254		
		4-4	1.53	5706.3164	5704.7337	0.3	17524.440 ^A	-1	5.033	7.206	• • •	
1884	x 5F ${}^{\circ}$ $-i$ 5D	3-3	0.30	5892.1287	5890.4962	-2.8	16971.795^{B}	8	5.064	7.168		
	(1313)	4-4	0.90	5846.9073	5845.2869	0.0	17103.059 ^A		5.033	7.153	-1.82^{b}	
		3-2	0.85	5837.0356	5835.4179	-0.7	17131.984 ^A		5.064	7.188		
		1-1	1.74	5830.0203	5828.4044	1.7	17152.599 ^A		5.099	7.226		
		4-3	1.18	5807.3669	5805.7571	0.0	17219.508 ^A 17265.157 ^B		5.033	7.168	-1.59 ^b	
		2-1 5-4	1.15 1.36	5792.0122 5733.8861	5790.4065 5732.2960	-1.7 -0.7	17265.157 ² 17440.179 ^A		5.085 4.991	7.226 7.153	-1.56 ^b	
	5 5										-1.50	
1885	$x^{5}F^{6}-g^{5}G$	4-5	2.73	5657.0595	5655.4900	0.3	17677.028 ^A		5.033	7.224		
	(1314)	3-4 2-3	2.19 2.88	5656.7459 5652.2738	5655.1765 5650.7055	-0.3	17678.008 ^A 17691.995 ^D		5.064 5.085	7.255	-0.64 ^b -0.96 ^b	A
		1-2	2.04	5651.5554	5649.9873	0.0 0.3	17691.993 ⁻ 17694.244 ^A		5.099	7.279 7.293	-0.96° -0.92 ^b	Ar
		5-6	2.62	5635.5103	5633.9465	0.3	17744.622 ^A		4.991	7.191	-0.92	
		2-2	1.61	5615.8303	5614.2717	-4.4	17806.806 ^B		5.085	7.293		
1886	$x^{5}F^{\circ}-s^{4}D4d^{5}P$	2-2	0.78	5815.6201	5814.0081	0.0	17195.071 ^A		5.085	7.217		
1880	$x \cdot F \cdot -s \cdot D4a \cdot F$	3-2	0.78	5756.7289	5755.1327	-2.3	17193.071 17370.976 ^B		5.064	7.217		
		3-3	1.26	5669.0335	5667.4608	2.9	17639.691 ^D		5.064	7.251		Ar
1887	x 5F $^{\circ}$ $-s$ 4D4d 3G	5-5	1.48	5483.9850	5482.4616	1.2	18234.915 ^C	-4	4.991	7.252		
1888	x $^5F^{\circ}$ $-s$ 4D4d 3D	2-3	1.49	5661.1454	5659.5747	-0.3	17664.270 ^A	1	5.085	7.275		
1889	$x^{5}F^{0}-58831^{e}$	4-3	1.90	5483.4221	5481.8989	2.7	18236.787^{C}	-9	5.033	7.294		
1890	$x^{5}F^{\circ}-s^{4}D4d^{3}F$	4-3	2.93	5283.1005	5281.6307	0.6	18928.279^{D}	-2	5.033	7.380		Ar
		3-2	2.51	5270.5272	5269.0608	-8.6	18973.434 ^C	31	5.064	7.416	•••	
1891	$d^{8} {}^{3}P - x {}^{3}D^{\circ}$	2-3	1.48	22992.380	22986.107	5	4349.267 ^A	-1	5.067	5.606		
		1 - 1	1.08	22865.750	22859.512	5	4373.353^{B}	-1	5.105	5.648		
1892	$d^{8} {}^{3}P - z {}^{3}S^{\circ}$	2-1	1.04	17453.816	17449.050	0	5729.406 ^A	0	5.067	5.778		
1893	$d^{8} {}^{3}P - y {}^{3}P^{\circ}$	1-2	1.69	18022.340	18017.419	-23	5548.669^{B}	7	5.105	5.793		
	Ü	0 - 1	1.40	17645.002	17640.185	0	5667.327 ^A		5.112	5.815		
		1 - 1	1.98	17472.073	17467.303	0	5723.419 ^A		5.105	5.815		
		2-2	1.88	17077.497	17072.833	9	5855.659 ^A		5.067	5.793		
		2-1	1.20	16582.592	16578.064	0	6030.420^{A}	0	5.067	5.815	. • • •	
1894	d^{8} ^3P-u 5D $^{\circ}$	1-2	1.62	17512.815	17508.034	3	5710.104 ^D		5.105	5.813		I
		2-3	1.64	17025.391	17020.742	0	5873.580 ^A		5.067	5.795		
		0-1	1.75	16827.285	16822.690	0	5942.729 ^D		5.112	5.849	• • •	I
		2-1	1.34	15858.360	15854.029	0	6305.822^{A}		5.067	5.849	• • •	
1895	d^8 ^3P-w 3D $^{\circ}$	1-2	1.23	16785.085	16780.501	6	5957.670 ^A		5.105	5.844		
		0-1	1.26	16563.086	16558.563	-3	6037.522^{A}		5.112	5.861	• • •	_
		1-1	1.00	16410.633	16406.151	13	6093.610 ^D		5.105	5.861	• • •	. I
		2-3	1.04	16271.343	16266.899	5	6145.774 ^A		5.067	5.829	• • •	
1896	$d^{8} {}^{3}P - Psp3 {}^{1}D^{\circ}$	$1-2 \\ 2-2$	2.24 1.93	16022.380 15271.202	16018.003 15267.030	13 5	6241.270 ^A 6548.273 ^A		5.105 5.067	5.879 5.879		
1007	$d^{8} {}^{3}P - y {}^{3}S^{\circ}$		1.71	15820.021	15815.700		6321.104^{A}					
1897	$a^{\circ} P - y \circ S^{\circ}$	$0-1 \\ 1-1$	2.40	15820.021	15815.700	3 5	6321.104^{A} 6377.196^{A}		5.112 5.105	5.896 5.896	•••	
		$\frac{1-1}{2-1}$	2.66	14960.662	14956.574	2	6684.196 ^A		5.067	5.896	-1.68ª	
1000	$d^{8} {}^{3}P - v {}^{5}F^{\circ}$						7060.434 ^A					
1898	$a^{\circ} \circ F - v \circ F \circ$	$1-2 \\ 2-2$	1.43 1.70	14163.435 13573.248	14159.564 13569.538	2 2	7060.434 ^A 7367.433 ^A		5.105 5.067	5.981 5.981	• • •	
		$\frac{2-2}{2-1}$	0.48	13373.246	13366.771	2	7307.433 7479.193 ^B		5.067	5.995	• • •	
		2-1	J.70	15570.420	15500.771	2	1-717.173	-1	5.007	3.373	•••	

TABLE 2—Continued

					LE 2—Contin	<u></u>					
No. 1899	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7 Bl.8
1899	$d^{8} {}^{3}P - v {}^{5}P^{\circ}$	1-2	1.04	14316.324	14312.412	0	6985.033 ^A	0	5.105	5.971	
		0 - 1	1.30	14173.611	14169.737	2	7055.365 ^A		5.112	5.987	•••
		1 - 1	1.20	14061.816	14057.972	2	7111.457 ^A	-1	5.105	5.987	
		$^{2-2}$	1.89	13713.596	13709.848	2	7292.033 ^A	-1	5.067	5.971	
1900	$d^{8} {}^{3}P - x {}^{3}P^{\circ}$	1 - 2	1.30	14032.671	14028.835	8	7126.227 ^A	-4	5.105	5.989	
		0 - 1	1.30	13733.185	13729.431	2	7281.632 ^A		5.112	6.015	
		1-0	1.83	13733.058	13729.304	2	7281.699 ^A		5.105	6.008	
		$1-1 \\ 2-2$	1.15 1.98	13628.202 13453.105	13624.476 13449.427	2 4	7337.725 ^A 7433.228 ^A		5.105 5.067	6.015 5.989	• • •
		$\frac{2-2}{2-1}$	2.13	13080.915	13077.338	2	7644.725 ^A		5.067	6.015	
1901	d^{8} ^3P-v 3D $^{\circ}$	1-2	1.32	12400.473	12397.081	2	8064.208 ^A		5.105	6.105	
1902	d^{8} $^3P-Fsp3$ $^1F^{\circ}$	2-3	1.74	11620.193	11617.012	8	8605.709 ^A	-6	5.067	6.134	
1903	$d^{8} {}^{3}P - w {}^{3}P^{\circ}$	1-0	1.11	11398.689	11395.569	-8	8772.938 ^B	6	5.105	6.193	
		1 - 1	1.11	11280.572	11277.484	3	8864.798 ^A		5.105	6.204	
		2-2	1.45	10734.889	10731.949	1	9315.420 ^A	-1	5.067	6.222	• • •
1904	d^{8} ^3P-y 1D $^{\circ}$	1-2	0.78	9496.7664	9494.1619	-5.4	10529.900^{B}	6	5.105	6.411	
1905	$d^{8} {}^{3}P - u {}^{3}D^{\circ}$ (1329*)	2-3	2.05	9010.8851	9008.4121	0.0	11097.689 ^A		5.067	6.443	•••
1906	$d^{8} {}^{3}P - {}^{2}P4p {}^{1}P^{\circ}$	1-1	2.11	9088.9285	9086.4344	9.1	11002.397 ^B		5.105	6.469	•••
1907	$d^{8} {}^{3}P - t {}^{3}D^{\circ}$	2-3	3.02	8816.9395	8814.5190	7.8	11341.804 ^A		5.067	6.473	• • •
	(1330*)	$1-2 \\ 1-1$	1.68 1.38	8692.2509 8562.0932	8689.8641 8559.7416	4.5 2.9	11504.500 ^B 11679.387 ^C	_	5.105 5.105	6.532 6.553	• • •
		2-1	1.68	8342.7955	8340.5032	0.7	11079.387 11986.390 ^B		5.067	6.553	
1908	$d^{8} {}^{3}P - v {}^{3}P^{\circ}$	2-2	1.46	8302.2814	8300.0001	0.0	12044.882 ^A				
1908	$a^{v} F = v^{v} F^{v}$ (1331*)	2-2 $2-1$	1.53	8091.5779	8089.3535	-1.3	12358.529 ^A		5.067 5.067	6.561 6.599	
1909	d^{8} $^3P-Dsp3$ $^5F^{\circ}$	$0-1 \\ 1-1$	1.00 1.08	8024.1649 7988.2088	8021.9587 7986.0123	2.6 1.3	$12462.356^{B} \\ 12518.451^{D}$		5.112 5.105	6.657 6.657	• • •
1910	$d^{8} {}^{3}P - x {}^{3}S^{6}$	0-1	1.11	7953.0136	7950.8266	-0.6	12573.850 ^B	1	5.112	6.671	
.,		1-1	1.51	7917.6915	7915.5140	-0.6	12629.944 ^A		5.105	6.671	•••
1911	$d^{8} {}^{3}P - {}^{4}F5p {}^{3}D^{\circ}$	2-3	0.95	7712.2189	7710.0969	0.6	12966.437 ^B	-1	5.067	6.675	
1912	d^{8} ^3P-w 1D $^{\circ}$	2-2	2.18	6719.1558	6717.3014	-1.4	14882.822^{C}	3	5.067	6.912	
1913	d^8 ^3P-t $^3F^{ m o}$	2-3	0.00	5963.1761	5961.5246	0.0	16769.587 ^B	0	5.067	7.146	
1914	d^{8} $^3P-Psp1$ $^3D^{\circ}$	2-3	0.30	5990.2152	5988.5565	0.0	16693.891 ^B	0	5.067	7.137	
1915	$d^{8} {}^{3}P - s {}^{4}D5p {}^{3}P^{o}$	2-2	0.00	5838.3732	5836.7551	-3.7	17128.059^{C}	11	5.067	7.191	•••
1916	$d^{8} {}^{3}P - s {}^{4}\!D5p {}^{3}D^{\circ}$	1-2	0.00	5898.3774	5896.7433	7.3	16953.815^{D}	-21	5.105	7.207	II
		2-2	0.30	5793.4571	5791.8511	-5.0	17260.851 ^C	15	5.067	7.207	• • •
		2-3	0.85	5745.5223	5743.9291	-4.0	17404.858 ^B	12	5.067	7.225	• • •
1917	$d^{8} {}^{3}P - s {}^{4}\!D5p {}^{5}P^{o}$	1-1	1.70	5500.0064	5498.4788	-3.6	18181.797 ^C		5.105	7.359	•••
1918	$d^{8} {}^{3}P - {}^{4}F_{4.5}4f [2.5]^{\circ}$	$^{2-2}$	1.60	5601.6541	5600.0993	1.9	17851.870^{D}	-6	5.067	7.281	• • •
1919	$d^{8} {}^{3}P - {}^{4}F_{3.5}4f [1.5]^{\circ}$	1-2	1.90	5525.5277	5523.9933	1.8	18097.819 ^C	-6	5.105	7.349	
1920	z $^5S^{\circ}-e$ 7F	2-1	2.16	9696.4996	9693.8410	6.6	10313.000^{D}	-7	5.070	6.349	I
1921	$z^{5}S^{0}-f^{5}F$ (1338)	2-2	0.95	9250.6673	9248.1294	-6.8	10810.031 ^B	8	5.070	6.410	
1922	$z^{5}S^{0}-g^{5}G$	2-3	1.69	5613.2369	5611.6790	7.2	17815.033^{D}	-23	5.070	7.279	
1923	z 5S ° $-s$ 4D4d 5P	2-3	0.60	5686.0614	5684.4841	-1.0	17586.866 ^B	3	5.070	7.251	
1924	z $^5S^{\circ}$ $-s$ 4D4d 3D	2-3	1.34	5621.9805	5620.4203	1.6	17787.326 ^B	-5	5.070	7.275	
1925	$x^5P^{\circ}-e^5D$	3-3 3-2	2.65 2.28	39547.747 35699.814	39536.965 35690.080	-31 -13	$2528.589^{A} 2801.135^{A}$		5.273 5.273	5.587 5.620	
1925	x ⁵ P°−e ⁵ D										

					BLE 2—Conti							
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
1926 1927	$x^5P^{\circ}-e^5F$	3-4 3-3	1.30 1.15	20638.919 19146.825	20633.286 19141.598	-9 -7	4845.215 ^A 5222.798 ^B	2 2	5.273 5.273	5.874 5.921	• • •	
1927	$x^5P^{\circ}-e^3F$	3-4	0.90	18422.313	18417.284	-3	5428.200^{A}	1	5.273	5.946		
1928	$x^5P^0-f^7D$	3-4 3-2	1.04 1.15	12084.228 11812.098	12080.922 11808.866	9 10	8275.249 ^A 8465.896 ^D	-6 -7	5.273 5.273	6.299 6.323		I
1929	x 5P $^{\circ}-f$ 5D	1-2 3-4	0.78 1.43	13124.055 12673.633	13120.466 12670.167	2 -2	7619.596 ^A 7890.397 ^D	-1 1	5.341 5.273	6.286 6.251		II
1930	$x^5P^{\circ}-e^7P$	2-3	1.11	12900.750	12897.222	-7	7751.487 ^A	4	5.314	6.275		
1931	x 5P ° $-e$ 5G	3-4	1.57	11838.744	11835.504	-6	8446.842^{D}	4	5.273	6.320		I
1932	x 5P $^{\circ}-e$ 7G	3-4	1.79	11360.845	11357.735	9	8802.162^{A}	-7	5.273	6.365		
1933	x $^5P^{0}-f$ 5F	1-2 2-3 3-4 3-3	1.30 1.64 1.91 1.45	11592.876 11435.983 11199.551 11023.706	11589.703 11432.853 11196.485 11020.688	4 -7 0 2	8625.987 ^A 8744.329 ^A 8928.929 ^A 9071.359 ^A	0	5.341 5.314 5.273 5.273	6.410 6.398 6.380 6.398		
1934	x $^5P^{\circ}-e$ 5S	2-2 3-2	1.51 1.76	12064.006 11606.088	12060.706 11602.912	16 1	8289.120 ^B 8616.167 ^D	-11	5.314 5.273	6.341 6.341		Ne
1935	x ⁵ P°-e ⁵ P	2-3 1-2 3-3	1.64 1.66 1.87	11139.011 11125.383 10747.491	11135.962 11122.337 10744.547	4 -10 0	8977.457 ^A 8988.454 ^A 9304.497 ^A	8	5.314 5.341 5.273	6.427 6.455 6.427		
1936	x 5P $^{\circ}-g$ 5F	3-4	1.30	9207.3121	9204.7860	-1.7	10860.933^{B}	2	5.273	6.620	• • •	
1937	x 5P $^{\circ}-h$ 5D	3-4	0.70	9414.0657	9411.4836	-0.9	10622.403^{B}	1	5.273	6.590		
1938	$x^{5}P^{\circ}-f^{5}P$	2-3 3-3	1.28 2.62	9707.9669 9409.2328	9705.3052 9406.6521	-3.8 -8.0	10300.818^{B} 10627.859^{D}	9	5.314 5.273	6.591 6.591	•••	II
		3-2 2-1	3.62 1.00	9061.2467 9037.1594	9058.7601 9034.6793	-0.8 -3.3	11036.009 ^B 11065.424 ^B		5.273 5.314	6.641 6.686		
1939	x 5P $^{\circ}-f$ 5G	$1-2 \\ 2-2$	1.41 3.06	8852.1803 8683.6446	8849.7502 8681.2601	0.8 -3.0	11296.652 ^C 11515.902 ^C	-1	5.341 5.314	6.741 6.741		
1940	$x^{5}P^{\circ}-s^{6}D6s^{5}D$	3-3	1.04	8108.9236	8106.6945	-2.6	12332.093^{B}		5.273	6.802		
1941	y $^5G^{\circ}-e$ 5F	5-5	1.84	24428.441	24421.777	0	4093.589 ^D		5.320	5.828		II
		6-5 4-4 5-4	2.68 1.63 2.23	23690.204 22962.270 22391.216	23683.741 22956.005 22385.106	-6 -5 0	4221.154 ^A 4354.970 ^A 4466.037 ^A	1	5.304 5.334 5.320	5.828 5.874 5.874		
		3-3	1.73	21654.161	21648.252	-5 0	4618.050 ^A 4732.554 ^A		5.348	5.921		
		4-3 2-2	2.01 1.54	21130.239 20718.307	21124.473 20712.653	-9 -9	4826.649 ^A	2	5.334 5.357	5.921 5.956		
		3-2 $2-1$	1.99 1.86	20411.558 19954.905	20405.987 19949.459	0 -4	4899.185 ^A 5011.299 ^A		5.348 5.357	5.956 5.978		
1942	y $^5G^{\circ}-e$ 3F	5-4 4-3	1.64 1.46	19805.808 18152.503	19800.402 18147.547	-4 -10	5049.024 ^A 5508.882 ^A	1	5.320 5.334	5.946 6.017		
		3-2	0.60	17268.470	17263.754	-3	5790.901 ^A		5.348	6.066		
1943	y $^5G^{\circ}-e$ 5G	5-6	1.08	13138.826	13135.233	-5	7611.030 ^A	3	5.320	6.264		
1944	y $^5G^{\circ}-g$ 5F	5-5 6-5	1.32 1.52	9852.7972 9730.4973	9850.0963 9727.8295	-2.9 -2.8	10149.402 ^A 10276.967 ^A		5.320 5.304	6.579 6.579		
		3-3 $2-2$	0.78 1.54	9351.4822 9051.8340	9348.9170 9049.3499	-4.4 -8.2	10693.492^{B} 11047.485^{B}	5	5.348 5.357	6.674 6.727	• • • •	
1945	y ⁵ G°-h ⁵ D	5-4 4-3 3-2	1.34 1.72 1.49	9762.5532 9503.1343 9234.3146	9759.8767 9500.5281 9231.7812	4.8 1.8 0.0	10243.222^{B} 10522.844^{A} 10829.174^{A}	-2	5.320 5.334 5.348	6.590 6.639 6.691		
1946	y $^5G^{\circ}-f$ 5G	5-6 4-5	1.23 0.95	9749.2236 9747.8124	9746.5508 9745.1399	0.0 -9.5	$10257.227^B \\ 10258.712^B$	0	5.320 5.334	6.592 6.606		
		5-5 6-6	1.61 2.31	9643.4145 9629.4659	9640.7703 9626.8254	0.0	10369.771 ^A 10384.792 ^A		5.320 5.304	6.606 6.592		

No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl.
		3-4	0.70	9406.0166	9403.4367	-1.8	10631.493 ^B		5.348	6.666	• • • •	
		4-4	1.18	9305.7969	9303.2441	1.7	10745.990^{B}		5.334	6.666		
		3-3	1.04	9071.4064	9068.9170	1.6	11023.649^{B}		5.348	6.715		
10.15	500 511											
1947	$y {}^5G^{\circ} - e {}^5H$	5-6	1.94	9577.5643	9574.9379	1.8	10441.068 ^A		5.320	6.615		
		6-7	2.65	9532.1343	9529.5202	0.0	10490.830 ^A		5.304	6.605		
		4-5	1.97 2.19	9215.5095 9009.2363	9212.9811 9006.7637	-0.8	10851.272^{A}		5.334	6.679		
		3-4 2-3	1.84			4.1	$11099.720^{D} 11280.971^{B}$		5.348	6.724		I
				8864.4852	8862.0518	1.6			5.357	6.756	• • •	
1948	$y {}^5G^{\circ} - e {}^3G$	4-5	0.70	9331.4475	9328.8878	0.0	10716.451 ^B		5.334	6.663		
	(1342)	5-5	1.85	9235.7253	9233.1914	0.0	10827.520 ^A		5.320	6.663		
		4-4	1.74	9055.0790	9052.5940	4.9	11043.526 ^A		5.334	6.703		
		2-3	1.83	8953.0733	8950.6159	6.4	11169.349 ^B	-8	5.357	6.742	• • •	
1949	$y^{5}G^{0}-f^{3}D$	3-3	0.78	9425.0618	9422.4767	1.8	10610.010^{B}	-2	5.348	6.664		
	•	3 - 2	1.00	9149.7294	9147.2188	0.0	10929.285^{B}	0	5.348	6.703		
1950	$y^{5}G^{\circ}-e^{3}H$	5-6	2.03	9150.2175	9147.7068	0.0	10928.702 ^A		5.320	6.675		
1930	$y \cdot G \cdot -e \cdot H$	3-6 4-5	1.51	8893.8457	8891.4044	0.0	10928.702 ⁻¹ 11243.730 ^D		5.334			11
		4-3								6.728		II
1951	$y^{5}G^{0}-61724^{e}$	3-4	2.00	5380.0068	5378.5112	0.9	18587.337 ^C		5.348	7.653		
		5-4	2.46	5315.5033	5314.0249	4.5	18812.894 ^B	-16	5.320	7.653	• • •	
1952	$e^{7}D{-}w^{5}G^{0}$	3-2	1.59	22745.189	22738.984	-41	4396.534^{B}	8	5.385	5.930		
1953	$e^{7}D-v^{5}F^{\circ}$	4-5	1.18	22508.388	22502.247	0	4442.788^{B}	0	5.351	5.902		
		3-4	0.90	22245.114	22239.045	0	4495.369 ^B		5.385	5.942		
		5-4	1.69	19553.629	19548.292	4	5114.140^{D}		5.308	5.942		I
1954	$e^7D-v^5P^{\circ}$	4-3	1.18	20819.189	20813.507	-13	4803.261 ^A	3	5.351	5.947		
1955	$e^7D-x^3P^{o}$	3-2	1.89	20533.775	20528.171	-42	4870.025 ^A	10	5.385	5.989	• • •	
1956	$e^{7}D-n^{7}D^{\circ}$	3-4	3.19	16328.919	16324.459	5	6124.104^{A}	-2	5.385	6.144		
1750	c D n D	2-3	3.22	16202.930	16198.505	3	6171.723^{A}	-1	5.410	6.175		
		4-5	3.05	16157.662	16153.249	3	6189.014 ^A		5.351	6.119		
		1-2	3.15	16013.989	16009.615	5	6244.540 ^A		5.426	6.200		
		3-3	3.17	15697.039	15692.751	2	6370.628^{A}	-1	5.385	6.175		
		2-2	1.60	15686.306	15682.021	2	6374.987 ^A	-1	5.410	6.200		
		1 - 1	2.99	15652.791	15648.515	5	6388.637 ^A	-2	5.426	6.218		
		4-4	3.76	15636.221	15631.950	2	6395.407 ^A	-1	5.351	6.144		
		2-1	3.58	15339.578	15335.387	2	6519.084 ^A	-1	5.410	6.218		
		5-5	4.32	15298.742	15294.562	2	6536.485 ^A	-1	5.308	6.119		
		3-2	3.84	15211.686	15207.530	5	6573.893 ^A	-2	5.385	6.200		
		4-3	3.96	15055.862	15051.749	0	6641.931 ^A	0	5.351	6.175		
		5-4	3.99	14830.464	14826.412	2	6742.877 ^A	-1	5.308	6.144		
1957	$e^{7}D{-}n^{7}F^{o}$	1-2	3.29	14723.682	14719.659	7	6791.779 ^A	-3	5.426	6.268		
		2 - 3	3.62	14706.987	14702.968	4	6799.489 ^A		5.410	6.253		
		1-1	3.49	14569.919	14565.937	-2	6863.456 ^A	1	5.426	6.277		
		3-4	4.08	14559.018	14555.039	4	6868.595 ^A	-2	5.385	6.237		
		4-5	4.22	14516.175	14512.208	2	6888.867 ^A	-1	5.351	6.205		
		1-0	3.10	14501.786	14497.823	2	6895.702^{A}	-1	5.426	6.281		
		$^{2-2}$	3.65	14446.220	14442.272	4	6922.226^{A}	-2	5.410	6.268		
		5-6	4.34	14404.479	14400.542	2	6942,285 ^A	-1	5.308	6.169		
		2-1	2.89	14298.165	14294.258	-2	6993.904 ^A	1	5.410	6.277		
		3-3	3.75	14288.992	14285.087	6	6998.394 ^A		5.385	6.253		
		3-2	2.48	14042.711	14038.873	6	7121.132 ^A		5.385	6.268		
		4-4	1.72	14005.804	14001.976	2	7139.897 ^A		5.351	6.237		
		5-5	2.96	13819.146	13815.369	4	7236.337 ^A		5.308	6.205		
	_	5-4	3.14	13355.828	13352.176	4	7487.368 ^A		5.308	6.237		
1958	$e^{7}D-n^{7}P^{\circ}$	3-4	2.41	14812.372	14808.325	7	6751.113 ^A		5.385	6.222		
		2 - 3	3.57	14296.256	14292.349	2	6994.838 ^A		5.410	6.277		
		4-4	3.92	14240.115	14236.223	4	7022.415 ^A		5.351	6.222		
		1 - 2	3.45	14011.118	14007.288	6	7137.189 ^A		5.426	6.311		
		3-3	3.39	13900.969	13897.169	4	7193.743^{D}	-2	5.385	6.277		

TABLE 2—Continued

No. Multiplet J. J. J. J. J. J. J. J				x ?		Z—Commue		-					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	No.	Multiplet (MT) ¹	J-J	I ²	$\begin{array}{c} \lambda_{vac}^{3} \\ \text{(Å)} \end{array}$	λ_{qir}^{3} (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)		log(gf) [/]	Bl. ³
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $													
$ \begin{array}{c} 1959 \\ \text{p} \\ \text$													
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1959	$e^{7}D - u^{5}F^{\circ}$	4-5	1.67	12733.442	12729.959	-3	7853.336 ^A	2	5.351	6.325		
$ \begin{array}{c} 1960 \\ e^{7}D^{-4}F5p^{5}D^{\circ} \\ 2-2 \\ 165 \\ 2-2 \\ 165 \\ 2-2 \\ 165 \\ 2-165 \\ 2-1675 \\ 2-165 \\ 2-1675 \\ 2-1675 \\ 2-167366 \\ 2-167366 \\ 2-167366 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-16736 \\ 2-1$				1.80			10				6.370		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			5-5	0.85	12193.929	12190.593	4	8200.802 ^A	-3	5.308	6.325	• • •	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1960	$e^{7}D-{}^{4}F5p^{5}D^{0}$											I
$ \begin{array}{c} 1962 & e^7D - e^9D6p^7D^o \\ e^7D - e^9D6p^7D^o \\ + + - + - + - + - + - + - + - + + - + - + - + - + + - + + - + + - + + - + + - + + - + + - + + + - + + + + - + + + - + + + + + + + + + + + + + + + + + + + +$			2-2							5.410	6.761	• • •	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$												•••	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1962										6.917	•••	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1963	$e^{7}D$ – $s^{6}D6p^{7}D^{\circ}$											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$												•••	
$ \begin{array}{c} 1966 \\ e^{7}D - s^{6}D_{3,5}4f \left[3.5 \right]^{\circ} \\ e^{7}D - s^{6}D_{3,5}4f \left[1.5 $												•••	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$												•••	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1966												
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1067	· · · · · · · · · · · · · · · · · · ·											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c} 1970 e^{7}D-Fsp1^{3}F^{\circ} \qquad \qquad 5-4 0.30 5787.1244 5785.5201 1.3 17279.739^{C} 4 5.308 7.451 \dots \\ 1971 z^{5}H^{\circ}-e^{5}F \qquad \qquad 4-4 1.34 23424.497 23418.107 11 4269.035^{B} -2 5.345 5.874 \dots \\ 5-4 1.85 22798.476 22792.256 0 4386.258^{A} 0 5.330 5.874 \dots \\ 4-3 1.69 21521.019 21515.147 -5 4646.620^{A} 1 5.345 5.921 \dots \\ 1972 z^{5}H^{\circ}-e^{3}F \qquad 5-4 1.08 20123.777 20118.285 -12 4969.246^{B} 3 5.330 5.946 \dots \\ 1973 z^{5}H^{\circ}-f^{5}G \qquad 5-5 0.70 9718.1777 9715.5132 -4.7 10289.995^{B} 5 5.330 6.606 \dots \\ 1974 z^{5}H^{\circ}-e^{5}H \qquad 5-6 1.28 9651.3060 9648.6597 -1.9 10361.292^{A} 2 5.330 6.615 \dots \\ 4-5 1.71 9289.0729 9286.5246 0.9 10765.337^{A} -1 5.345 6.679 \dots \\ 4-5 1.71 9289.0729 9286.5246 0.9 10765.337^{A} -1 5.345 6.679 \dots \\ 4-6 1.20 9126.0843 9123.5802 -2.5 10957.602^{B} 3 5.345 6.673 \dots \\ 4-7 1.20 9126.0843 9123.5802 -2.5 10957.602^{B} 3 5.345 6.703 \dots \\ 1976 z^{5}H^{\circ}-e^{3}H \qquad 5-6 1.77 9217.5048 9214.9759 -1.7 10848.923^{A} 2 5.330 6.665 \dots \\ 1978 z^{5}I^{\circ}-e^{7}P \qquad 4-4 0.70 14219.530 14215.644 2 7032.581^{B} -1 5.386 6.258 \dots \\ 1979 z^{5}I^{\circ}-e^{5}H \qquad 5-6 1.64 10108.288 10105.517 -5 9892.872^{A} 5 5.388 6.615 \dots \\ 1979 z^{5}I^{\circ}-e^{5}F \qquad 3-4 2.40 28941.156 28933.263 -8 3455.287^{A} 1 5.346 5.874 \dots \\ 1980 w^{5}D^{\circ}-e^{5}F \qquad 1-2 1.00 14451.086 14447.137 -6 6919.895^{A} 3 5.506 6.364 \dots \\ 1981 w^{5}D^{\circ}-e^{7}F \qquad 1-2 1.00 14451.086 14447.137 -6 6919.895^{A} 3 5.506 6.364 \dots \\ 1981 w^{5}D^{\circ}-e^{7}F \qquad 1-2 1.00 14451.086 14447.137 -6 6919.895^{A} 3 5.506 6.364 \dots \\ 1982 w^{5}D^{\circ}-e^{7}F \qquad 1-2 1.00 14451.086 14447.137 -6 6919.895^{A} 3 5.506 6.364 \dots \\ 1981 w^{5}D^{\circ}-e^{7}F \qquad 1-2 1.00 14451.086 14447.137 -6 6919.895^{A} 3 5.506 6.364 \dots \\ 1982 w^{$													
$ \begin{array}{c} 1971 z^5H^{\circ} - e^{S}F \\ = -4 1.34 \\ = -4 1.34 \\ = -23424.497 \\ = -4 1.85 \\ = -2798.476 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.256 \\ = -2792.$												• • •	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1970	$e'D-Fsp1 \ ^3F^0$	5-4	0.30	5787.1244	5785.5201	1.3	17279.739 ^C	-4 	5.308	7.451	•••	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1971	z 5H $^{\circ}-e$ 5F											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c} 1973 z ^5H^{\circ} - f ^5G \\ 1974 z ^5H^{\circ} - e ^5H \\ 2 $		5 2											
$\begin{array}{c} 1974 z ^5H^{\circ} - e ^5H \\ & 4-5 1.71 \\ & 289.0729 \\ & 289.0729 \\ & 286.5246 \\ & 0.9 \\ & 10765.337^A \\ & -1 \\ & 5.345 \\ & 6.679 \\ & \\ & 1975 z ^5H^{\circ} - e ^3G \\ & 5-5 1.04 \\ & 4-4 1.20 \\ & 9126.0843 \\ & 9123.5802 -2.5 \\ & 10957.602^B \\ & 3 5.345 \\ & 6.679 \\ & \\ & 1976 z ^5H^{\circ} - e ^3H \\ & 5-6 1.77 \\ & 4-5 1.71 \\ & 8962.3419 \\ & 8959.8820 \\ & 0.0 \\ & 11157.798^B \\ & 0 5.345 \\ & 6.675 \\ & \\ & 1977 z ^5I^{\circ} - e ^7P \\ & 4-4 0.70 14219.530 \\ & 4-5 1.71 8962.3419 \\ & 8959.8820 \\ & 0.0 11157.798^B \\ & 0 5.345 6.723 \\ & \\ & 1978 z ^5I^{\circ} - e ^5H \\ & 5-6 1.64 10108.288 \\ & 10105.517 -5 9892.872^A \\ & 5 5.388 6.615 \\ & \\ & 1979 z ^5I^{\circ} - e ^5F \\ & 3-4 2.40 28941.156 \\ & 28933.263 -8 3455.287^A \\ & 4-5 2.57 28522.524 \\ & 28514.745 0 3506.001^A \\ & 0 5.393 5.828 \\ & \\ & 0-1 1.74 26578.836 26571.586 \\ & -14 3762.392^B 2 5.512 5.978 \\ & \\ & 0-1 1.74 26578.836 25776.463 \\ & 0 3878.450^A 0 5.393 5.874 \\ & \\ & 1981 w ^5D^{\circ} - e ^7F \\ & 1-2 1.00 14451.086 14447.137 -6 6919.895^A 3 5.506 6.364 \\ & \\ & 2-3 1.36 14357.050 14353.126 2 6965.219^A -1 5.478 6.341 \\ & \\ & 2-2 0.95 13991.054 13987.230 0 7147.424^A 0 5.478 6.341 \\ & \\ & 2-2 0.95 13991.054 13987.230 0 7147.424^A 0 5.478 6.341 \\ & \\ & 1982 w ^5D^{\circ} - f ^7D \\ & 0-1 0.78 15176.416 15172.269 5 689.171^A -2 5.512 6.329 \\ & \\ & 1982 w ^5D^{\circ} - f ^7D \\ & 0-1 0.78 15176.416 15172.269 5 6689.171^A -2 5.512 6.329 \\ & \\ & 1982 w ^5D^{\circ} - f ^7D \\ & 0-1 0.78 15176.416 15172.269 5 6689.171^A -2 5.512 6.329 \\ & \\ & 1982 w ^5D^{\circ} - f ^7D \\ & 0-1 0.78 15176.416 15172.269 5 6689.171^A -2 5.512 6.329 \\ & \\ & 1982 w ^5D^{\circ} - f ^7D \\ & 0-1 0.78 15176.416 15172.269 5 6689.171^A -2 5.512 6.329 \\ & \\ & 1982 w $													
$\begin{array}{c} 1975 z^5 I^{\circ} - e^3 G \\ 1975 z^5 I^{\circ} - e^3 G \\ 1976 z^5 I^{\circ} - e^3 G \\ 1976 z^5 I^{\circ} - e^3 H \\ 1976 z^5 I^{\circ} - e^5 H \\ 1977 z^5 I^{\circ} - e^7 P \\ 1977 z^5 I^{\circ} - e^5 H \\ 1978 z^5 I^{\circ} - e^5 H \\ 1978 z^5 I^{\circ} - e^5 H \\ 1979 z^5 I^{\circ} - e^5 H \\ 1979 z^5 I^{\circ} - e^5 H \\ 1979 z^5 I^{\circ} - e^5 H \\ 1970 z^5 I^{$		•											
$\begin{array}{c} 1975 z^5H^\circ - e^3G \\ 1976 z^5H^\circ - e^3G \\ 1976 z^5H^\circ - e^3H \\ 1977 z^5I^\circ - e^7P \\ 1978 z^5I^\circ - e^7P \\ 1978 z^5I^\circ - e^5H \\ 1979 z^5I^\circ - e^5H \\ 1979 z^5I^\circ - e^5H \\ 1979 z^5I^\circ - e^5H \\ 1970 z^5I^\circ -$	1974	$z^{5}H^{6}-e^{5}H$											
$\begin{array}{c} 4-4 & 1.20 & 9126.0843 & 9123.5802 & -2.5 & 10957.602^B & 3 & 5.345 & 6.703 & \dots \\ 1976 & z^5H^\circ-e^3H & 5-6 & 1.77 & 9217.5048 & 9214.9759 & -1.7 & 10848.923^A & 2 & 5.330 & 6.675 & \dots \\ 4-5 & 1.71 & 8962.3419 & 8959.8820 & 0.0 & 11157.798^B & 0 & 5.345 & 6.728 & \dots \\ 1977 & z^5I^\circ-e^7P & 4-4 & 0.70 & 14219.530 & 14215.644 & 2 & 7032.581^B & -1 & 5.386 & 6.258 & \dots \\ 1978 & z^5I^\circ-e^5H & 5-6 & 1.64 & 10108.288 & 10105.517 & -5 & 9892.872^A & 5 & 5.388 & 6.615 & \dots \\ 1979 & z^5I^\circ-s^6D5d^5G & 4-3 & 1.70 & 7345.9701 & 7343.9468 & 2.2 & 13612.906^B & -4 & 5.386 & 7.074 & \dots \\ 1980 & w^5D^\circ-e^5F & 3-4 & 2.40 & 28941.156 & 28933.263 & -8 & 3455.287^A & 1 & 5.446 & 5.874 & \dots \\ 4-5 & 2.57 & 28522.524 & 28514.745 & 0 & 3506.001^A & 0 & 5.393 & 5.828 & \dots \\ 2-3 & 2.17 & 27996.218 & 27988.582 & -16 & 3571.911^A & 2 & 5.478 & 5.921 & \dots \\ 0-1 & 1.74 & 26578.836 & 26571.586 & -14 & 3762.392^B & 2 & 5.512 & 5.978 & \dots \\ 3-3 & 1.71 & 26090.110 & 26082.993 & -7 & 3832.870^A & 1 & 5.446 & 5.921 & \dots \\ 4-4 & 1.90 & 25783.496 & 25776.463 & 0 & 3878.450^A & 0 & 5.393 & 5.874 & \dots \\ 2-3 & 1.36 & 14357.050 & 14353.126 & 2 & 6965.219^A & -1 & 5.478 & 6.341 & \dots \\ 2-2 & 0.95 & 13991.054 & 13987.230 & 0 & 7147.424^A & 0 & 5.478 & 6.341 & \dots \\ 2-2 & 0.95 & 13991.054 & 13987.230 & 0 & 7147.424^A & 0 & 5.478 & 6.341 & \dots \\ 2-2 & 0.95 & 13991.054 & 13987.230 & 0 & 7147.424^A & 0 & 5.478 & 6.341 & \dots \\ 2-2 & 0.95 & 13991.054 & 13987.230 & 0 & 7147.424^A & 0 & 5.478 & 6.341 & \dots \\ 4-4 & 0.85 & 12999.222 & 12995.667 & -2 & 7692.768^A & 1 & 5.393 & 6.347 & \dots \\ 1982 & w^5D^\circ-f^7D & 0-1 & 0.78 & 15176.416 & 15172.269 & 5 & 6589.171^A & -2 & 5.512 & 6.329 & \dots \\ 1-1 & 0.48 & 15067.182 & 15063.065 & 14 & 6636.941^D & -6 & 5.506 & 6.329 & \dots \\ \end{array}$	1075	5770 30											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1975	$z \cdot H \cdot -e \cdot G$											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1976	25H0_e3H											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1770	2 11 6 11											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1977	$z^{5}I^{\circ}-e^{7}P$	4-4	0.70	14219.530	14215.644	2	7032.581 ^E	-1	5.386	6.258		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1978	z ⁵ I°−e ⁵ H	5-6	1.64	10108.288	10105.517	-5	9892.872 ^A	5	5.388	6.615		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1979	z 5I $^{\circ}-s$ 6D 5G	4-3	1.70	7345.9701	7343.9468	2.2	13612.906 ^B	-4	5.386	7.074		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1980	w 5D° _e 5F	3_4	2 40	28941 156	28933 263	-8	3455 287 ^A	1	5 446	5 874		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1700	w <i>B</i> c i											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				2.17	27996.218	27988.582	-16					•••	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1981	$w {}^{o}D^{o} - e {}^{\prime}F$											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$													
1982 $w^5D^{\circ} - f^7D$ 0-1 0.78 15176.416 15172.269 5 6589.171 ^A -2 5.512 6.329 1-1 0.48 15067.182 15063.065 14 6636.941 ^D -6 5.506 6.329													
$1-1$ 0.48 15067.182 15063.065 14 6636.941^D -6 5.506 6.329	1002	500 (70											
	1982	$w^{\circ}D^{\circ}-f^{\circ}D$											IJ
2-3 1.01 147/4.121 147/0.030 0 00/0.100 0 3.4/0 0.300													11
			2-3	1.01	149/4.121	14970.030	U	00/8.188	U	3.4/8	0.306	•••	

·					TABLE 2—	Commu	еи 					
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
2		2-2	1.20	14673.482	14669.472	2	6815.015 ^B	-1	5.478	6.323		
4		2 - 1	1.51	14567.752	14563.771	4	6864.477 ^A		5.478	6.329		
)		3-4	0.85	14523.642	14519.673	8	6885.325 ^A	-4	5.446	6.299		
i		3-3	1.83	14410.991	14407.052	-2	6939.148 ^A	1	5.446	6.306		
		3-2	0.85	14132.324	14128.461	0	7075.977 ^A	0	5.446	6.323		
		4-4	1.38	13682.707	13678.967	-6	7308.495^{B}	3	5.393	6.299		
1983	$w^5D^{\circ}-f^5D$	1-2	1.40	15904.678	15900.334	3	6287.458 ^A	-1	5.506	6.286		
1903	w D - J D	0-1	1.18	15573.490	15569.236	Ö	6421.168 ^A		5.512	6.308	• • •	
		1-1	1.08	15458.478	15454.255	ő	6468.942 ^A		5.506	6.308		
		2-2	1.68	15349.213	15345.019	0	6514.992^{A}		5.478	6.286		
		1-0	1.74	15221.043	15216.884	-2	6569.852 ^A		5.506	6.321		
		3-3	2.12	15124.641	15120.509	2	6611.727 ^A		5.446	6.265	-0.80^a	
		2-1	1.92	14933.232	14929.151	-2	6696,474 ^A		5.478	6.308		
		3-2	2.13	14758.076	14754.043	0	6775.951 ^A		5.446	6.286		
		4-4	2.56	14443.288	14439.341	Ö	6923.631 ^A		5.393	6.251	-1.14 ^a	
		4-3	1.94	14214.861	14210.976	0	7034.891 ^A		5.393	6.265		
1001	$w^5D^{\circ}-e^7P$											
1984	$w^{3}D^{0}-e^{7}P$	2-3	1.00	15557.833	15553.583	5	6427.630 ^A		5.478	6.275	• • •	
		3-3	2.28	14950.829	14946.744	2	6688.592 ^A		5.446	6.275	• • •	
		3-2	1.20	14412.004	14408.066	-2	6938.660 ^A 6975.783 ^A		5.446	6.306	0.046	
		4-4 4-3	2.54 1.92	14335.308 14061.226	14331.390 14057.383	-2 2	7111.755 ^A		5.393 5.393	6.258	-0.94^a	
										6.275	• • •	
1985	$w~^5D^{\circ}\!-\!e~^5G$	1 - 2	1.34	14369.911	14365.984	0	6958.985 ^A		5.506	6.369		
		2 - 3	1.52	14213.855	14209.970	-4	7035.389 ^A		5.478	6.350	• • •	
		3-4	2.08	14170.508	14166.635	2	7056.910 ^A		5.446	6.320	• • •	
		4-5	2.50	13880.462	13876.668	-13	7204.371 ^A	7	5.393	6.286	• • •	
1986	$w^5D^{\circ}-e^7G$	2-3	2.44	13742.155	13738.398	21	7276.879 ^A	-11	5.478	6.380		
1,00		3-4	1.91	13491.196	13487.508	2	7412.241 ^A		5.446	6.365		
		4-5	2.31	12938.205	12934.667	0	7729.047 ^A	0	5.393	6.351		
1007	$w^{5}D^{\circ} - f^{5}F$				13706.427	0	7293.853 ^A		5.506			
1987	$w \circ D^* - f \circ F$	$1-2 \\ 0-1$	2.10 2.00	13710.174 13706.961	13703.214	-2	7295.563 ^A		5.512	6.410 6.417	• • •	
		1-1	1.86	13617.787	13614.064	0	7293.303 7343.337 ^A		5.506	6.417	• • •	
		$\frac{1-1}{2-3}$	2.35	13476.226	13472.542	0	7343.337 7420.475^{A}		5.478	6.398	• • •	
		$\frac{2-3}{2-2}$	1.96	13295.421	13291.786	0	7521.386^{A}		5.478	6.410	• • •	
		3-4	2.60	13264.356	13260.730	0	7521.500 7539.001^{D}		5.446	6.380	-0.64 ^a	I
		4-5	2.77	13151.518	13147.922	0	7603.685 ^A		5.393	6.336	• • • •	
		3-3	1.92	13018.402	13014.842	2	7681.434 ^A		5.446	6.398		
		4-4	1.18	12559.398	12555.962	-2	7962.165 ^A		5.393	6.380		
	5 5										•••	
1988	w $^5D^{\circ}-e$ 5S	1-2		14841.752	14837.696	2	6737.749 ^A		5.506	6.341	• • •	
		2-2	1.04	14356.920	14352.997	-2	6965.282 ^A		5.478	6.341	• • •	
1989	w 5D $^{\circ}$ $-e$ 3D	0 - 1	0.60	13190.939	13187.333	-5	7580.961 ^A	3	5.512	6.452		
1990	$w^{5}D^{\circ}-g^{5}D$	3-4	1.45	13462.893	13459.212	0	7427.824 ^A		5.446	6.366		
1990	$w \cdot D \cdot -g \cdot D$	$\frac{3-4}{2-3}$	1.43	13402.893	13439.212	-5	7586.931 ^A		5.478	6.419	• • •	
		0-1	0.70	12894.219	12890.693	-3	7755.413 ^A		5.512	6.474	• • •	
		3-3	0.70	12742.281	12738.796	2	7847.888 ^A		5.446	6.419	• • •	
		$\frac{3-3}{2-1}$	0.70	12452.194	12448.788	6	8030.713 ^A		5.478	6.474	• • • •	
		3-2	1.34	12304.433	12301.067	5	8127.152 ^A		5.446	6.453		
		4-3	1.26	12090.367	12087.059	7	8271.047 ^A		5.393	6.419		
4004	500 70										• • • •	
1991	w $^5D^{\circ}-e$ 7S	2-3	1.04	13538.275	13534.574	5	7386.465 ^A	-3	5.478	6.394	• • •	
1992	w $^5D^{\circ}-e$ 5P	0 - 1	1.32	13226.236	13222.619	9	7560.730 ^A	-5	5.512	6.449		
		1 - 1	1.46	13143.183	13139.589	3	7608.507^{A}	-2	5.506	6.449		
		2 - 3	1.56	13065.729	13062.157	-2	7653.610 ^A	1	5.478	6.427		
		1-2	1.85	13061.132	13057.560		7656.304 ^A	-5	5.506	6.455		
		2-2	1.79	12684.171	12680.701	-2	7883.842 ^A	1	5.478	6.455		
		3-3	1.89	12634.923	12631.467	-2	7914.571 ^A	1	5.446	6.427		
		3-2	1.59	12277.773	12274.415	2	8144.799 ^A		5.446	6.455		
		4-3	1.94	11993.667	11990.386	0	8337.733 ^A	. 0	5.393	6.427		

				IAB	SLE 2—Contil	nued						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
1993	$w^{5}D^{\circ}-g^{5}F$	3-4	1.98	10558.543	10555.651	1	9471.003 ^A	-1	5.446	6.620		
4	J	2 - 3	1.97	10365.544	10362.704	-2	9647.347 ^A		5.478	6.674		
		4-4	1.00	10106.965	10104.195	0	9894.167^{B}	0	5.393	6.620		
! 		3-3	1.65	10092.541	10089.775	-1	9908.307 ^A		5.446	6.674		
		0 - 1	1.63	10073.280	10070.519	-2	9927.253^{A}		5.512	6.743		
		1-1	1.46	10025.035	10022.287	-2	9975.027 ^A		5.506	6.743		
		2-2	1.45	9926.6727	9923.9517	3.0	10073.869^{B}		5.478	6.727		
1994	$w^5D^{\circ}-h^5D$	3-3	1.74	10391.591	10388.744	-1	9623.165^{A}	1	5.446	6.639		
	(1346)	4-4	2.26	10356.644	10353.807	1	9655.637 ^A	-1	5.393	6.590		
		1 - 1	1.60	10286.596	10283.778	1	9721.388 ^A	-1	5.506	6.711		
		2-2	1.38	10221.777	10218.976	-1	9783.034^{B}		5.478	6.691		
		2 - 1	1.49	10051.337	10048.582	-3	9948.925^{D}		5.478	6.711		Ne
		3-2	1.86	9956.2017	9953.4727	1.0	10043.991 ^A		5.446	6.691		
		4-3	1.70	9953.8866	9951.1583	-1.0	10046.327 ^A	1	5.393	6.639	• • •	
1995	w $^5D^{\circ} - f$ 5P	3-2	2.09	10366.902	10364.062	-1	9646.083 ^A	1	5.446	6.641		
	(1347)	4-3	2.54	10350.802	10347.966	-1	9661.087 ^A	1	5.393	6.591		
		2-1	1.74	10265.276	10262.463	-8	9741.579 ^A	8	5.478	6.686		
1996	$w\ ^5D$ 0 $-f\ ^5G$	3-4	2.00	10156.088	10153.305	-1	9846.310 ^A		5.446	6.666		
	(1348)	1 - 2	1.87	10035.609	10032.858	-1	9964.517 ^A		5.506	6.741		
		2 - 3	1.86	10022.539	10019.792	-1	9977.511 ^A	1	5.478	6.715		
		3-3	0.90	9767.0824	9764.4047	-1.9	10238.472 ^B	2	5.446	6.715	• • •	
1997	w 5D $^{\circ}-e$ 3G	3-4	0.90	9858.1929	9855.4905	1.0	10143.847 ^D		5.446	6.703		II
		4-5	1.26	9765.6879	9763.0106	-2.9	10239.934 ^A		5.393	6.663	• • •	
1998	$w^5D^{\circ}-f^3D$	2 - 3	1.00	10456.018	10453.153	1	9563.870 ^A		5.478	6.664		
		3 - 3	1.18	10178.290	10175.500	-3	9824.833^{B}		5.446	6.664		
		0 - 1	1.70	10009.602	10006.858	5	9990.407 ^B		5.512	6.751		
		1 - 1	0.78	9961.9612	9959.2307	2.0	10038.184^{B}	-2	5.506	6.751		
1999	$w^5D^{\circ}-g^7D$	2-3	2.14	9783.6234	9780.9412	-11.5	10221.162^{D}	12	5.478	6.745		II
2000	w^5D° – s^6D5d^7F	3-4	1.08	7471.2484	7469.1914	3.3	13384.644^{C}	-6	5.446	7.105		
2001	w 5D $^{\circ}$ $-s$ 4D 4 d 5P	4-3	2.26	6674.5226	6672.6801	1.8	14982.345^{B}	-4	5.393	7.251		
2002	w 5D $^{\circ}$ $-s$ 6D $7s$ 5D	3-2	1.85	6616.7766	6614.9497	-3.1	15113.099 ^C	7	5.446	7.319		
2003	w^5D° – s^4D4d^3D	4-3	2.34	6586.3987	6584.5799	4.8	15182.804^{B}	-11	5.393	7.275		
2004	w^5D° – s^4D4d^3F	3-4	2.11	6502.2749	6500.4787	0.4	15379.233^{D}	-1	5.446	7.352		II
2005	$v^5D^{\circ}-e^5F$	4-5	2.28	33523.512	33514.371	0	2982.981 ^A	0	5.458	5.828		
2003	<i>v</i>	3-4	2.04	31135.683	31127.192	-10	3211.749^{B}		5.476	5.874		
2006	$v{}^5D^{\circ}{-}e{}^7F$	4-5	0.30	14682.319	14678.307	-2	6810.913^{B}	1	5.458	6.302		
2007	$v^5D^{\circ}-f^7D$	2-3	1.81	16134.924	16130.517	10	6197.736 ^A	-4	5.537	6.306		
2007	v D - j D	0-1	1.00	16074.035	16069.645	-16	6221.213^{B}		5.558	6.329		
		1-1	1.28	15904.941	15900.597	15	6287.354^{B}		5.549	6.329		
		2-1	0.48	15664.069	15659.790	-12	6384.037 ^A		5.537	6.329		
2008	$v^{5}D^{\circ} - f^{5}D$	1-2	0.60	16841.053	16836.454	6	5937.871 ^D		5.549	6.286		II
2000	, .	2-2	1.00	16571.257	16566.732	-3	6034.545 ^A	1	5.537	6.286		
		0-1	1.08	16520.184	16515.673	0	6053.201 ^A		5.558	6.308		
		1-1	0.85	16341.596	16337.133	5	6119.353^{A}		5.549	6.308		
		2-1	1.26	16087.443	16083.049	-5	6216.028^{A}		5.537	6.308		
		1-0	1.15	16076.485	16072.094	3	6220.265^{A}		5.549	6.321		
2009	$v^5D^{\circ}-e^7P$	4-4	0.30	15497.244	15493.011	5	6452.760 ^B		5.458	6.258		
2010	$v^5D^{\circ}-e^5G$	4-5	0.90	14967.050	14962.961	2	6681.343 ^A		5.458	6.286		
2010	$v \cdot D = e^{-\epsilon}G$	4-3 3-4	1.23	14967.030	14962.961	-2	6813.374 ^A		5.438 5.476	6.320	• • •	
		3-4 4-4	0.85	14677.016	14369.970	-2 -4	6957.055 ^B		5.458	6.320		
		3-3	0.83	14373.898	14309.970	0	7052.809^{A}		5.476	6.350		
2011	$v^5D^{\circ}-f^5F$											
2011	$v \cdot D \cdot - j \cdot F$	0-1 $2-3$	1.77 2.04	14435.019 14409.163	14431.075 14405.226	0 0	6927.597 ^A 6940.028 ^A		5.558 5.537	6.417 6.398	• • •	
		2-3	2.07	17707.103	17703.220	U	U27U.U20°°	U	ו כנ.נ	0.378	• • •	

				T.	ABLE 2—Co	ntinued						_
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
		1-2	2.11	14400.368	14396.432	2	6944.267 ^L	-1	5.549	6.410		II
		1 - 1	1.38	14298.476	14294.569	-2	6993.752 ^A		5.549	6.417		
,		3-4	1.32	13707.153	13703.406	6	7295.461 ^A		5.476	6.380	• • •	
2012	$v~^5D^{\circ}{-}e~^5S$	1-2	0.30	15653.942	15649.666	-7	6388.167 ^E		5.549	6.341		
		2-2	0.70	15420.595	15416.382	2	6484.834 ^A	· -1	5.537	6.341	• • •	
2013	$v {}^5D^{\circ} - e {}^3D$	2-3	1.00	15082.612	15078.492	-14	6630.151 ^A	6	5.537	6.359		
2014	v 5D $^{\circ}-g$ 5D	2-2	0.78	13539.590	13535.888	-2	7385.748 ^A	1	5.537	6.453		
2015	$v\ ^5D^{\mathrm{o}}{-}e\ ^7S$	3-3	0.30	13506.395	13502.702	-18	7403.900^{L}	10	5.476	6.394		II
2016	v 5D ° $-e$ 5P	2-3	0.85	13940.851	13937.041	-2	7173.163 ^A	1	5.537	6.427		
		0 - 1	1.20	13902.857	13899.057	6	7192.766 ^A		5.558	6.449		
		1-1	1.26	13776.152	13772.386	2	7258.921 ^A		5.549	6.449	• • •	
		$1-2 \\ 2-1$	1.04 1.67	13686.033 13595.109	13682.292 13591.393	6 13	7306.719 ^A 7355.586 ^A		5.549 5.537	6.455 6.449	•••	
		$\frac{2-1}{2-2}$	0.85	13507.316	13503.623	-2	7403.395^{L}		5.537	6.455		II
2017	$v^5D^{\circ}-q^5F$	3-4	1.45	10837.210	10834.242	-2	9227.467 ^A		5.476	6.620		
2017	v D - g 1	1-2	2.10	10529.912	10527.028	-1	9496.755 ^L		5.549	6.727		Ne
2018	$v^5D^{\circ}-h^5D$	4-4	1.68	10949.759	10946.760	-2	9132.621 ^A	2	5.458	6.590		
2010		3-3	0.95	10661.402	10658.482	-5	9379.629 ^E		5.476	6.639		
2019	$v^5D^{\circ}-f^5P$	4-3	1.69	10943.237	10940.240	2	9138.064 ^A	-2	5.458	6.591		
2017	· - , -	3-2	1.30	10635.413	10632.500	-7	9402.549 ^A		5.476	6.641		
2020	v 5D $^{\circ}$ $ ^4F$ $6s$ 5F	3-4	1.08	8097.1581	8094.9322	-1.3	12350.012^{E}	2	5.476	7.007	•••	
2021	$w^{5}F^{0}-e^{5}F$	5-5	2.58	36207.981	36198.109	-13	2761.822 ^A	1	5.485	5.828		
		4-4	2.01	33750.933	33741.730	-11	2962.881 ^E	1	5.507	5.874		
		2-3	1.87	28817.713	28809.853	-42	3470.088 ^E		5.491	5.921		
		1-2	1.65	27334.876	27327.421	0	3658.330 ^E		5.502	5.956	•••	
2022	w ${}^5F^{o} - e$ 7F	4-5	1.30	15580.294	15576.038	0	6418.364 ^L		5.507	6.302		II
		$3-3 \\ 3-2$	0.00 0.60	15157.219 14749.904	15153.078 14745.874	-7 26	6597.516 ^E 6779.705 ^D		5.523 5.523	6.341 6.364		II
2022	$w^{5}F^{\circ}-f^{7}D$	5-5	1.04	16301.961	16297.509	-21	6134.231 ^B		5.485			- 11
2023	$w \circ F \circ -j \circ D$	3-3	0.90	15846.650	15842.321	-21 -5	6310.482 ^B		5.523	6.246 6.306		
2024	w $^5F^{\circ}-f$ 5D	3-3	0.90	16713.858	16709.293	6	5983.059 ^A		5.523	6.265		
2025	$w^5F^0-e^7P$	3-3	0.78	16501.862	16497.355	8	6059.922^{A}	-3	5.523	6.275		
		2-2	1.34	15207.115	15202.961	7	6575.869 ^A	-3	5.491	6.306		
2026	w $^5F^{\circ}-e$ 5G	5-6	2.08	15925.446	15921.096	0	6279.259 ^A	0	5.485	6.264	-0.92^a	
		4-5	1.08	15901.297	15896.954	0	6288.795 ^A		5.507	6.286	• • •	
		3-4	0.85	15556.355	15552.105	7	6428.241 ^A		5.523	6.320	• • •	
		5-5 4-4	2.08 1.52	15479.423 15233.445	15475.194 15229.283	-12 5	6460.189 ^D 6564.503 ^A		5.485 5.507	6.286 6.320	•••	I
		3-3	1.41	14997.738	14993.640	18	6667.672 ^A		5.523	6.350		
		2-3	1.11	14422.605	14418.664	2	6933.560 ^A		5.491	6.350		
		1-2	0.78	14302.464	14298.555	0	6991.802 ^D		5.502	6.369	• • •	I
		2-2	0.70	14114.941	14111.083	-2	7084.691 ^A	1	5.491	6.369	• • •	
2027	w ${}^5F^{\circ}$ $-e$ 7G	4-5	1.45	14676.789	14672.779	-2	6813.479 ^A		5.507	6.351		
		4-4	0.70	14451.211	14447.262	4	6919.835 ^A		5.507	6.365	• • •	
2028	w $^5F^{o} - f$ 5F	4-5	1.58	14951.891	14947.806	0	6688.117 ^A		5.507	6.336		
		5-5 3-4	1.38 1.80	14578.307 14471.082	14574.323 14467.128	-2 2	6859.507 ^A 6910.333 ^A		5.485 5.523	6.336	• • •	
		$\frac{3-4}{2-3}$	1.08	13663.729	13659.994	4	7318.646 ^A		5.491	6.380 6.398		
		1-2	1.46	13648.761	13645.030	-2	7326.672 ^A		5.502	6.410		
		2-2	0.70	13477.890	13474.205	0	7419.559 ^B	0	5.491	6.410		
2029	$w^{5}F^{\circ}-g^{5}D$	4-4	1.43	14418.743	14414.803	0	6935.417 ^D		5.507	6.366		II
		5-4	1.00	14071.022	14067.176	4	7106.804 ^A		5.485	6.366		
		3-3	1.18	13851.913	13848.127	6	7219.219 ^B	-3	5.523	6.419	•••	

				IAB	LE 2—Contir	пиеа						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
2030		3-2 2-1	1.04 0.60	13336.011 12612.109	13332.365 12608.659	-12 5	7498.494 ^B 7928.888 ^A		5.523 5.491	6.453 6.474		
2030	$w^{5}F^{\circ}-e^{5}P$	3-3	0.78	13725.136	13721.384	2	7285.902 ^B		5.523	6.427		
2031	$w^{5}F^{\circ}-g^{5}F$	5-5	1.86	11340.912	11337.807	-1	8817.633 ^A		5.485	6.579		
2032	$w^{5}F^{\circ}-h^{5}D$	5-4	1.36	11221.504	11218.432	-4	8911.461 ^A		5.485	6.590		
	(1350)	4-3	1.40	10951.993	10948.994	-1	9130.758 ^A	1	5.507	6.639		
		3-2	1.04	10620.986	10618.077	5	9415.321 ^C	-	5.523	6.691		
2022	$w^{5}F^{\circ}-f^{5}P$	1-1	1.30	10251.983	10249.174	-3	9754.210 ^D		5.502	6.711	• • •	II
2033	•	2-1	1.20	10373.719	10370.877	0	9639.744 ^B		5.491	6.686		
2034	$w^{5}F^{\circ}-f^{5}G$	5-6 3-4	1.49 1.49	11203.903 10848.749	11200.835 10845.778	-1 -12	8925.461 ^A 9217.652 ^B		5.485 5.523	6.592 6.666		
		4-4	1.20	10690.723	10687.795	0	9353.904 ^B		5.507	6.666		
		3-3	0.90	10406.050	10403.199	9	9609.794^{B}		5.523	6.715		
2035	$w^{5}F^{\circ}\!-\!e^{3}G$	4-5	1.52	10724.594	10721.657	0	9324.362 ^A	0	5.507	6.663		
2036	w 5F $^{\circ}-s$ 6D5d 5G	5-6	1.32	8265.7068	8263.4353	-3.4	12098.179 ^B	5	5.485	6.985	• • •	
2037	w $^5F^{\circ}$ $-s$ 6D5d 7G	5-6	1.93	7916.8898	7914.7125	3.8	12631.223^{A}		5.485	7.051		
		1-2	2.70	7649.7539	7647.6487	2.9	13072.316 ^A	-5	5.502	7.123	•••	
2038	y $^5S^{\circ}-e$ 7F	2-3	0.30	15066.971	15062.854	5	6637.034 ^A	-2	5.519	6.341		
2039	y $^5S^{\circ}-f$ 7D	2-3	0.90	15748.019	15743.717	-5	6350.005^{A}	2	5.519	6.306		
2040	y 5S ° $-f$ 5D	$\begin{array}{c} 2-2 \\ 2-1 \end{array}$	1.18 1.34	16163.421 15702.802	16159.006 15698.513	-5 -2	$6186.809^{D} 6368.290^{A}$		5.519 5.519	6.286 6.308		II
2041	y 5S 0 $-f$ 5F	2-3	1.23	14099.816	14095.962	0	7092.291 ^A	0	5.519	6.398		
2042	y 5S ° $-e$ 5S	2-2	1.04	15066.832	15062.716	5	6637.095^{A}	-2	5.519	6.341		
2043	y 5S 0 $-g$ 5D	2-3	0.48	13776.482	13772.716	-4	7258.747^{A}	2	5.519	6.419		
2044	y 5S 0 $-e$ 5P	2-1	1.18	13319.380	13315.738	-2	7507.857^{A}	1	5.519	6.449		
2045	y 5S 0 $-f$ 5G	2-3	1.23	10363.420	10360.581	2	9649.324^{B}	-2	5.519	6.715		
2046	$y^{5}S^{\circ} - s^{6}D5d^{7}D$	2-1	1.74	8004.7773	8002.5763	3.8	12492.540^{D}	-6	5.519	7.067		I
2047	y $^5S^{\circ}$ $-s$ 6D5d 5P	2-2	1.30	7757.1587	7755.0246	1.2	12891.318^{D}	-2	5.519	7.117	• • •	
2048	e ⁵ D-u ⁵ D°	4-4	2.98	48927.604	48914.267	0	2043.836 ^A	0	5.539	5.792		
2049	$e{}^5D{-}x{}^3F^{\circ}$	4-4	3.12	45205.177	45192.853	0	2212.136^{A}	0	5.539	5.813		
2050	$e~^5D{-}w~^5G^{o}$	3-4	3.20	39545.824	39535.042	94	2528.712^{D}		5.587	5.900		I
		3-3	2.01	37995.249	37984.889	29	2631.908 ^B		5.587	5.913		
		4-5 4-4	3.27 2.21	36453.497 34328.399	36443.558 34319.038	0 12	2743.221 ^A 2913.040 ^A	0 -1	5.539 5.539	5.879 5.900	• • •	
2051	5.5. 5.00										• • •	
2051	$e~^5D-v~^5F^{ m o}$	2-3 $1-1$	2.90 2.84	35854.489 35193.274	35844.713 35183.678	13 25	2789.051 ^A 2841.452 ^A	-1	5.620	5.966	• • •	
		3-4	3.09	34859.408	34849.903	23 24	2841.452 ⁻¹ 2868.666 ^A	-2 -2	5.642 5.587	5.995 5.942		
		2-2	2.89	34423.751	34414.365	12	2904.971 ^A	-2 -1	5.620	5.981		
		3-3	2.71	32662.681	32653.774	11	3061.598^{A}		5.587	5.966		
		3-2	2.17	31471.104	31462.522	0	3177.518^{B}	0	5.587	5.981		
		4-4	2.71	30740.958	30732.575	9	3252.989^{A}	-1	5.539	5.942		
	_	4–3	1.91	29019.784	29011.870	-34	3445.925 ^B	4	5.539	5.966	• • •	
2052	$e~^5D{-}x~^3G^{o}$	3-4	2.61	36353.232	36343.320	13	2750.787 ^A	-1	5.587	5.928	• • •	
		4-4 4-5	2.48 2.55	31896.776 31670.184	31888.079 31661.548	-10 0	3135.113 ^A 3157.544 ^A	1 0	5.539 5.539	5.928 5.931		
2052	$e~^5D-v~^5P^{\circ}$		2.21	37983.616			2632.714^{B}					
2053	$e^{-}D-v^{-}P^{-}$	$\begin{array}{c} 2-3 \\ 1-2 \end{array}$	2.21	37983.616	37973.260 37664.558	-72 14	2632.714 ^D 2654.292 ^A	5 -1	5.620 5.642	5.947 5.971	• • •	
		0-1	2.67	37108.739	37004.558	28	2694.783 ^A		5.653	5.987		
		1-1	2.77	35961.947	35952.142	26	2780.717 ^A		5.642	5.987		
							,	-	- · - · -	2.701	- • •	

7					TABLE 2–	-Contini	ued					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
<u></u>		2-2	2.91	35341.058	35331.422	12	2829.570 ^A	-1	5.620	5.971		
		3-3	2.90	34420.386	34411.001	0	2905.255 ^A		5.587	5.947	•••	
ν 1,		2-1	2.83	33829.545	33820.320	0	2955.996 ^A		5.620	5.987		
⊣		3-2	3.12	32236.060	32227.270	10	3102.116 ^A	-1	5.587	5.971		
		4-3	3.28	30399.026	30390.736	0	3289.579 ^A	0	5.539	5.947		
2054	$e^{5}D-x^{3}P^{\circ}$	1-2	2.45	35771.929	35762.176	38	2795.488 ^A	-3	5.642	5.989		
2054	$e^{\circ}D-x^{\circ}F^{\circ}$	0-1	1.96	34234.253	34224.918	12	2921.051^{B}		5.653	6.015		
		2-1	2.26	31424.178	31415.609	-10	3182.263 ^A		5.620	6.015		
		3-2	2.48	30832.689	30824.281	19	3243.311 ^A		5.587	5.989		
	5 2											
2055	$e~^5D{-}w~^3F^{ m o}$	3-3	1.32	23914.542	23908.018	6	4181.556 ^B		5.587	6.105	• • •	
		4-3	1.43	21901.587	21895.611	0	4565.879 ^A		5.539	6.105	• • •	
2056	$e~^5D{-}v~^3D^{\circ}$	2-2	1.56	25583.691	25576.713	39	3908.740 ^B		5.620	6.105		
		4-3	1.64	22431.508	22425.387	5	4458.015 ^A	-1	5.539	6.092	• • •	
2057	$e^{5}D$ – $n^{7}D^{\circ}$	2-2	2.00	21392.003	21386.166	14	4674.644^{D}	-3	5.620	6.200		I
				21898.302	21892.327	-43	4566.564^{L}	9	5.587	6.153		I
2058	$e^{s}D-v^{s}G^{s}$	3-4	1.26 1.18	21898.302	20897.773	-4 3	4783.893 ^E		5.539	6.132	• • •	1
		4-5	1.18								•••	
2059	$e^{5}D\!-\!n^{7}F^{\circ}$	2-3	0.48	19611.127	19605.774		5099.146 ^A		5.620	6.253	• • •	
		3-4	0.60	19077.055	19071.848	-11	5241.899 ^E		5.587	6.237	• • •	
		2-1	1.40	18890.907	18885.750	29	5293.552 ^A	-8	5.620	6.277	• • •	
2060	$e^{5}D - w^{3}P^{0}$	1-0	1.76	22511.373	22505.231	-35	4442.199^{L}	7	5.642	6.193		Ne
		2 - 2	1.30	20605.989	20600.365	0	4852.958 ^A		5.620	6.222		
		3-2	1.04	19510.272	19504.947	-4	5125.505 ^A	1	5.587	6.222		
2061	$e^{5}D\!-\!u^{5}F^{\circ}$	2-3	3.35	15910.390	15906.044	0	6285.201 ^A	0	5.620	6.400		
2001	C D-u I	1-2	3.42	15827.144	15822.821	3	6318.259 ^A		5.642	6.426		
		3-4	3.94	15822.464	15818.142	0	6320.128^{A}	0	5.587	6.370		
		4-5	4.09	15773.736	15769.427	2	6339.652 ^A	-1	5.539	6.325		
		0 - 1	3.20	15746.231	15741.930	10	6350.726 ^A	-4	5.653	6.440		
		1 - 1	2.98	15536.003	15531.758	7	6436.662 ^A		5.642	6.440		
		2-2	3.22	15399.930	15395.723	2	6493.536 ^L		5.620	6.426		I
		3 - 3	3.46	15249.139	15244.973	-2	6557.747 ^A		5.587	6.400	• • •	
		2-1	1.45	15124.158	15120.026		6611.938 ^A		5.620	6.440	• • •	
		4-4	2.37	14915.464	14911.389	0	6704.451 ^A		5.539	6.370	• • •	
		3-2	2.04	14779.600	14775.561	2	6766.083 ^A		5.587	6.426	• • •	
		4-3	2.77	14404.925	14400.988	-2	6942.070 ^A		5.539	6.400	• • •	
2062	_	3-4	2.59	15753.506	15749.203	2	6347.793 ^A 6015.296 ^A		5.587 5.587	6.374 6.332	• • •	
2063	$e~^5D-t~^5D$ °	3-4	2.05 2.12	16624.285 16590.585	16619.745 16586.054		6013.296 6027.515 ^A		5.620	6.368	• • •	
		$\frac{2-3}{1-2}$	2.12	16390.363	16333.146		6120.847 ^A		5.642	6.401	• • •	
		0-1	1.93	16044.241	16039.858		6232.766 ^A		5.653	6.426		
		2-2	3.04	15882.787	15878.449		6296.124 ^A		5.620	6.401	-1.02^a	
		3-3	3.40	15872.862	15868.526		6300.061		5.587	6.368		
		1-1	2.63	15826.035	15821.712		6318.702 ^A		5.642	6.426		
		4-4	3.94	15625.927	15621.659		6399.620		5.539	6.332		
		1-0	2.96	15546.330	15542.083		6432.386 ^A	-1	5.642	6.440		
		2 - 1	3.39	15398.879	15394.672	0	6493.979^{I}	0	5.620	6.426		I
		3-2	3.48	15223.782	15219.622	2	6568.670		5.587	6.401	-0.82^a	
		4-3	3.51	14960.239	14956.151	0	6684.385	0	5.539	6.368	• • •	
2064	$e^{5}D-v^{3}F^{\circ}$	2-3	1.57	16579.805	16575.277	5	6031.434	· -2	5.620	6.368		
200-		3-4	2.05	16017.237	16012.862		6243.274		5.587	6.361		
		3-3	2.46	15862.994	15858.661	3	6303.980		5.587	6.368	• • •	
		4-4	2.06	15088.425	15084.302	0	6627.597		5.539	6.361	• • •	
		4-3	2.58	14951.475	14947.390	2	6688.303	⁴ -1	5.539	6.368		
2065	$e^{5}D-u^{3}G^{\circ}$	4-5	0.48	14932.279	14928.200	7	6696.901 ¹	3 -3	5.539	6.369		
200.		3-3	0.48	14783.181	14779.141		6764.444		5.587	6.425	•••	
206	$6 e^{5}D-u^{5}P^{\circ}$	2-3	3.59	15727.889	15723.593		6358.132		5.620	6.409		
2066	$e^{z}D-u^{z}P^{z}$	1-2	3.39	15727.889	15725.393		6435.631		5.642	6.440		
		1-2	5.17	1,0,0,0,471	13334.44/	2	0 100,001	1	5.042	5.440	•••	

,				1A	BLE 2—Co	пипиеа						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\lambda_{qir}^{}$ (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
<u></u>		0-1	2.81	15347.995	15343.802	12	6515.509 ^A	-5	5.653	6.461		
1994Ap02		1-1	2.88	15148.198	15144.060	7	6601.445 ^D		5.642	6.461		II
ν 1.		$\frac{1}{2-2}$	3.05	15126.515	15122.382	2	6610.908^{A}		5.620	6.440		**
J		3-3	3.02	15081.411	15077.291	2	6630.679^{D}		5.587	6.409		I
		2-1	2.26	14756.397	14752.364	7	6776.722^{A}		5.620	6.461		•
		3-2	2.66	14527.590	14523.620	2	6883.454 ^A		5.587	6.440	• • • •	
		$\frac{3-2}{4-3}$	2.89	14255.163	14323.020	4	7015.002^{A}		5.539	6.409	• • •	
											• • •	
2067	$e~^5D{-}y~^1D$ °	1 - 2	1.20	16131.230	16126.824	0	6199.155^{A}	0	5.642	6.411		
		$^{2-2}$	1.89	15687.677	15683.391	2	6374.430 ^A		5.620	6.411		
		3-2	2.11	15044.433	15040.322	2	6646.977 ^A	-1	5.587	6.411		
2068	$e^{5}D$ – $x^{1}D^{\circ}$	1-2	1.60	15992.525	15988.157	5	6252.921 ^A	-2	5.642	6.417		
2069	$e~^5D-u~^3D^{ m o}$	2 - 3	1.72	15071.079	15066.961	0	6635.225^{A}	0	5.620	6.443		
		3-3	1.23	14476.449	14472.493	0	6907.771 ^A		5.587	6.443		
		3-2	0.85	13820.574	13816.797	0	7235.589 ^A	0	5.587	6.484		
		4-3	1.18	13713.480	13709.731	-2	7292.095^{A}		5.539	6.443		
	5- 1-, 1-0											
2070	$e^{5}D-^2P4p^{1}P^{0}$	0-1	0.90	15184.345	15180.197	7	6585.730 ^A	-3	5.653	6.469	• • •	
		1 - 1	1.28	14988.759	14984.664	2	6671.666 ^A	-1	5.642	6.469	• • •	
2071	$e~^5D{-}t~^3D^{ m o}$	2 - 3	1.28	14536.248	14532.276	2	6879.354^{D}	-1	5.620	6.473		II
		1 - 2	1.00	13939.677	13935.867	-2	7173.767 ^A	1	5.642	6.532		
		0 - 1	0.90	13768.953	13765.189	2	7262.716 ^A		5.653	6.553		
2072	5D 4EE 300											
2072	$e^{5}D-^{4}F5p^{3}G^{\circ}$	3-3	1.66	10757.229	10754.283	0	9296.074 ^A		5.587	6.739		
		4-4	1.26	10705.976	10703.044	-5	9340.577 ^A	4	5.539	6.697		
		4-3	1.18	10330.144	10327.313	-11	9680.407 ^B	10	5.539	6.739	• • •	
2073	$e~^5D{-}Gsp3~^3F^{ m o}$	3-4	1.71	12670.580	12667.115	2	7892.298 ^A	-1	5.587	6.565		
	•	2 - 3	1.36	12463.174	12459.765	2	8023.638 ^A	-1	5.620	6.615		
		1 - 2	1.46	12135.558	12132.238	6	8240.247 ^A	-4	5.642	6.664		
		4-4	1.00	12082.215	12078.909	-9	8276.628^{A}	6	5.539	6.565		
2074	5 p. 4 m = 5 cm						0740 5218		5 (40			
2074	$e^{5}D-^{4}F5p^{5}G^{0}$	1-2	1.62	11430.490	11427.361	-8	8748.531 ^B		5.642	6.727	• • •	
		2-3	1.28	11362.646	11359.535	14	8800.767 ^B		5.620	6.712		
		4-5	1.30	11223.969	11220.896	-3	8909.504 ^A	2	5.539	6.644	• • •	
2075	$e^{5}D-{}^4F5p^{5}F^{\circ}$	2 - 3	2.45	12008.834	12005.548	0	8327.203 ^A	0	5.620	6.653		
	•	3-4	2.68	12008.685	12005.400	1	8327.306 ^A	-1	5.587	6.619		
		4-5	2.80	11893.744	11890.490	0	8407.781 ^A	0	5.539	6.581		
		1 - 2	2.33	11718.692	11715.485	-1	8533.375 ^A	1	5.642	6.700		
		3-3	1.34	11628.259	11625.077	14	8599.739^{B}	-10	5.587	6.653		
		0 - 1	2.30	11588.389	11585.217	8	8629.327 ^A	-6	5.653	6.723		
		4-4	2.25	11478.909	11475.767	0	8711.629 ^A	0	5.539	6.619		
		1 - 1	1.23	11474.119	11470.978	0	8715.266 ^B	0	5.642	6.723		
		3 - 2	1.63	11134.375	11131.327	2	8981.195 ^A	-2	5.587	6.700		
		4-3	1.43	11130.811	11127.764	0	8984.071 ^A	0	5.539	6.653		
2076	$e^{5}D-{}^{4}F5p^{3}F^{0}$	3-4	1.96	12095.549	12092.239	0	8267.504 ^A		5.587	6.612		
2076	e D- FSp F	3-4 4-4	1.40	12095.549	12092.239	-1	8651.828 ^A		5.539	6.612		
							8955.156 ^A					
		2-3	1.61	11166.751 10836.933	11163.694 10833.965	1	9227.703 ^A		5.620 5.587	6.731 6.731	• • •	
		3-3 4-3	1.90	10403.629	10400.779	0	9612.030 ^A		5.539	6.731	• • •	
			1.56			-3	9645.052 ^B				• • •	
		3-2	1.08	10368.010	10365.169	4			5.587	6.782	• • •	
2077	$e~^5D-^4F5p~^5D^{oldownormal{o}}$	2 - 3	1.83	11833.090	11829.852	-7	8450.878 ^A		5.620	6.668		
	-	3-4	3.14	11697.152	11693.951	-10	8549.089 ^D		5.587	6.647		II
		4-4	2.45	11193.940	11190.875	0	8933.405 ^A		5.539	6.647		
		0 - 1	1.41	11101.175	11098.136	-2	9008.055 ^A		5.653	6.770		
		1-2	1.51	11084.629	11081.595	-1	9021.501^{D}		5.642	6.761		II
		1 - 1	1.18	10996.273	10993.262	-4	9093.990 ^E	3	5.642	6.770		
		4-3	1.63	10979.669	10976.663	1	9107.742 ^A	-1	5.539	6.668		
		2-2	1.59	10873.369	10870.392	-5	9196.781 ^A	4	5.620	6.761		
		2-1	1.71	10788.340	10785.386		9269.266 ^A		5.620	6.770		
		3-2	1.54	10560.418	10557.525		9469.322 ^A		5.587	6.761		
		_										

TABLE 2—Continued

7					TAB	BLE 2—Conti	nued						
94.	No.	Multiplet (MT) 1	J-J	I ²	$\lambda_{vac}^{\ 3}$ (Å)	λ _{air} (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
4ApJS	2078	e ⁵ D-Dsp3 ⁵ F°	2-3	1.73	11905.163	11901.905	0	8399.717 ^B	0	5.620	6.662		
4AI		•	3-3	1.34	11531.019	11527.863	3	8672.260 ^A	-2	5.587	6.662		
99			3-4	1.38	11337.247	11334.144	-10	8820.483 ^A	8	5.587	6.680		
-			4-3	1.48	11041.690	11038.667	1	9056.584 ^A	-1	5.539	6.662		
	2079	$e^{5}D-{}^{4}F5p^{3}D^{0}$	2-3	1.46	11759.212	11755.994	4	8503.971 ^A	-3	5.620	6.675		
	2077	0 2 107 2	3-3	2.01	11394.046	11390.928	9	8776.513 ^B		5.587	6.675		
			2-2	1.46	11100.123	11097.084	-9	9008.909^{A}		5.620	6.737		
			4-3	1.69	10916.026	10913.036	1	9160.843 ^A	-1	5.539	6.675		
			3 - 2	1.58	10774.182	10771.231	2	9281.447 ^A	-2	5.587	6.737		
			2 - 1	1.26	10555.902	10553.010	0	9473.373 ^B	0	5.620	6.795		
	2080	$e~^5D{-}Dsp3~^5D$ °	1-2	1.80	11899.284	11896.028	0	8403.867 ^A	0	5.642	6.684		
	2000	o B Bope B	2-3	1.94	11685.453	11682.255	3	8557.648 ^A		5.620	6.681		
			2-2	1.30	11656.174	11652.984	-1	8579.144 ^A		5.620	6.684		
			3 - 3	1.41	11324.779	11321.679	1	8830.194 ^A	-1	5.587	6.681		
			3-2	1.99	11297.279	11294.186	1	8851.689 ^A	-1	5.587	6.684		
			4-3	2.32	10852.439	10849.467	0	9214.518 ^A		5.539	6.681		
			4-4	1.45	10390.330	10387.483	0	9624.333^{D}	0	5.539	6.732		II
	2081	$e~^5D-t~^3G^{ m o}$	4-4	1.08	10459.806	10456.941	1	9560.406 ^B	-1	5.539	6.724		
	2082	$e~^5D{-}t~^5P^{ m o}$	2 - 3	1.38	11532.909	11529.752	3	8670.839 ^A	-2	5.620	6.696		
			1 - 1	2.19	11413.044	11409.920	5	8761.904 ^A		5.642	6.729		
			2-2	2.37	11391.658	11388.540	1	8778.353 ^A		5.620	6.709		
			2-1	1.80	11189.209	11186.146	5	8937.182 ^A		5.620	6.729		
			3-2	2.05	11048.627	11045.602	1	9050.898 ^A		5.587	6.709	• • •	
	2002	5p 6pc 7en	4-3	1.60	10720.746	10717.809	1	9327.709 ^A 11665.271 ^B		5.539	6.696	• • •	
	2083 2084	$e^{5}D-s^{6}D6p^{7}F^{\circ}$ $e^{5}D-s^{6}D6p^{7}P^{\circ}$	1-1 3-2	1.85 1.56	8572.4541 8244.7830	8570.0997 8242.5172	3.7 0.0	12128.882^{B}		5.642 5.587	7.088 7.090		
												• • •	
	2085	$e~^5D$ – $s~^6D$ 6 $p~^5F$ °	3-4	1.32	8331.2366	8328.9475	-3.5	12003.020^{B}		5.587	7.075		
			2-3	0.95	8326.4363	8324.1484	8.3	12009.940 ^C		5.620	7.109	• • •	
			4-5	2.29	8312.3543	8310.0703	-6.9	12030.286^{A}		5.539	7.031	• • •	
			1-2	1.23	8289.5576	8287.2797	-7.6 2.0	12063.370 ^C	11	5.642	7.138	• • •	
			2-2	1.23	8170.8425	8168.5967	-2.0	12238.640 ^C	3	5.620	7.138	• • •	
	2086	$e~^5D{-}s~^6D6p~^5D$ °	4-4	1.66	8295.0888	8292.8094	1.4	12055.326 ^B		5.539	7.034		
			$^{2-2}$	1.63	8276.8562	8274.5817	-0.7	12081.882 ^C		5.620	7.118		
			3-3	1.28	8259.5508	8257.2810	3.4	12107.196 ^B	-5	5.587	7.088	• • •	
	2087	$e~^5D{-}s~^6\!D6p~^5P$ °	0 - 1	1.26	8232.9022	8230.6396	-0.7	12146.385^{B}	1	5.653	7.159		
			4-3	1.52	8200.5258	8198.2720	-2.0	12194.340 ^B		5.539	7.051		
			1-1	1.18	8175.0674	8172.8205	2.0	12232.315 ^B	-3	5.642	7.159	•••	
	2088	$x^3D^{\circ}-e^{7}F$	1 - 1	0.70	17679.633	17674.806	16	5656.226 ^A	-5	5.648	6.349		
			2 - 3	0.78	17044.457	17039.802	12	5867.010 ^A		5.614	6.341		
	2089	$x^3D^{\circ}-f^7D$	1-2	1.52	18359.181	18354.169	37	5446.866 ^D	-11	5.648	6.323		II
	2009	x^*D – j^*D	1-2	2.26	18193.925	18188.958	-3	5496.340 ^A		5.648	6.329		11
	2000	3 D.O. 45 D.											
	2090	$x^3D^{\circ}-f^5D$	3-3	1.15	18819.228	18814.091 18250.057	7	5313.714 ^D 5477.939 ^A		5.606	6.265	• • •	I
			$3-2 \\ 2-1$	0.90 0.78	18255.040 17862.667	18230.037	-3 0	5598.268 ^A		5.606 5.614	6.286	• • •	
											6.308	• • •	
	2091	$x^{3}D^{\circ}-e^{7}P$	3-3	2.70	18550.869	18545.805	-7	5390.583 ^A		5.606	6.275	•••	
	2092	x 3D $^{\circ}-e$ 5G	3-4	1.23	17364.430	17359.688	-3	5758.899 ^A	1	5.606	6.320	•••	
	2093	x 3D $^{\circ}-e$ 7G	1 - 1	0.70	16625.023	16620.483	17	6015.029^{B}		5.648	6.393		
			3-4	0.70	16355.294	16350.827	5	6114.228^{B}		5.606	6.365		
			3-3	1.36	16026.087	16021.710	26	6239.826 ^A	-10	5.606	6.380		
	2094	$x^3D^{\circ}-f^5F$	3-4	1.41	16023.104	16018.727	3	6240.988^{A}	-1	5.606	6.380		
		•	2 - 3	1.38	15817.108	15812.788	3	6322.268^{A}		5.614	6.398		
			3-3	0.60	15665.564	15661.284	-17	6383.428 ^A		5.606	6.398		
			$^{2-2}$	0.85	15568.612	15564.359	2	6423.180 ^A	-1	5.614	6.410		

7					TAI	BLE 2— <i>Conti</i>	nued						
	No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	7 Bl. ⁸
L994Apus -	2095	$x^3D^{\circ}-e^3D$	2-3 3-3 1-2 2-2 1-1 2-1	0.60 1.66 0.70 1.38 2.22 0.60	16632.320 16464.865 16159.913 15484.464 15412.768 14797.154	16627.778 16460.368 16155.499 15480.234 15408.558 14793.111	-8 0 3 0 -5 4	6012.390 ^A 6073.539 ^A 6188.152 ^A 6458.086 ^A 6488.127 ^B 6758.056 ^B	0 -1 0 2	5.614 5.606 5.648 5.614 5.648 5.614	6.359 6.359 6.415 6.415 6.452 6.452		
	2096	$x^3D^{\circ}-g^5D$	3-4 1-1 2-2	0.60 0.48 1.00	16313.724 15009.211 14775.444	16309.269 15005.111 14771.407	8 5 7	6129.808^{B} 6662.575^{A} 6767.986^{D}	-3 -2	5.606 5.648 5.614	6.366 6.474 6.453		II
	2097	$x^3D^{\circ}-e^5P$	1-1 2-3 3-3 3-2	0.30 0.60 1.08 0.90	15460.978 15254.599 15113.612 14605.395	15456.754 15250.431 15109.482 14601.404	14 9 9 4	6467.896 ^D 6555.400 ^A 6616.552 ^D 6846.785 ^B	-4 -4	5.648 5.614 5.606 5.606	6.449 6.427 6.427 6.455		I
	2098	$x^3D^{\circ}-f^3D$	3-3	0.95	11727.697	11724.488	-7	8526.823 ^A		5.606	6.664		
	2099	$x{}^3D^{o}\!-\!f{}^3F$	2-3	1.08	10159.398	10156.614	2	9843.102^{B}	-2	5.614	6.834		
	2100	x 3D $^{\circ}$ $-s$ 6D $5d$ 5G	3-2	1.85	8324.2031	8321.9158	-0.7	12013.162^{B}	1	5.606	7.096	•••	
	2101	x 3D $^{\circ}$ $-s$ 4D4d 5F	2-3	1.15	7781.9528	7779.8120	0.6	12850.245^{B}	-1	5.614	7.207		
_	2102	$x^{3}D^{\circ} - s^{4}D4d^{3}D$	2-3	1.23	7462.4148	7460.3602	0.0	13400.488 ^C	0	5.614	7.275	•••	
	2103	y $^3G^{\circ}-f$ 7D	5-4	2.01	18138.444	18133.492	-3	5513.152^{A}	1	5.616	6.299		
	2104	y $^3G^{\circ}-e$ 5G	5-6	0.85	19127.418	19122.197	0	5228.097^{A}	0	5.616	6.264		
	2105	$y~^3G^{\circ}\!-\!s~^6\!D5d~^5G$	3-3	1.49	8701.2157	8698.8265	-4.5	11492.647^{D}	6	5.649	7.074		
	2106	$y^3G^{\circ}-s^6D5d^7D$	3-4 4-5	2.17 2.19	9183.5410 9087.9142	9181.0213 9085.4204	-2.5 -6.6	10889.046 ^A 11003.625 ^A	3 8	5.649 5.632	6.999 6.996		
	2107	$y^{3}G^{\circ}-s^{6}D7s^{5}D$	4-4	1.34	7756.1606	7754.0267	1.8	12892.977^{B}	-3	5.632	7.231		
	2108	$y^{3}G^{\circ}-61724^{e}$	3-4	1.53	6187.4086	6185.6970	-0.4	16161.855 ^B	1	5.649	7.653		
_	2109	x $^5G^{\circ}-f$ 5D	4-4 5-4	1.34 1.51	21786.886 21290.167	21780.941 21284.357	-14 14	4589.917 ^D 4697.004 ^D	_	5.682 5.669	6.251 6.251		I I
	2110	x $^5G^{\circ}-e$ 5G	5-6 5-5 3-4	0.95 2.00 0.30	20847.196 20089.397 19739.139	20841.507 20083.915 19733.751	22 -44 16	4796.808 ^B 4977.750 ^A 5066.077 ^D	-5 11 -4	5.669 5.669 5.692	6.264 6.286 6.320		II
	2111	x $^5G^{\circ}-f$ 5F	3-2	0.30	17266.642	17261.927	9	5791.514 ^B	-3	5.692	6.410		
	2112	x $^5G^{\circ}-g$ 5F	5-5 6-5 4-4	1.04 1.26 0.90	13632.915 13417.496 13226.720	13629.189 13413.828 13223.104	-4 0 -7	7335.188 ^A 7452.955 ^A 7560.453 ^A	2 0 4	5.669 5.655 5.682	6.579 6.579 6.620	•••	
	2113	x ⁵ G° – h ⁵ D	4-4 5-4 4-3 3-2	1.76 1.18 1.20 1.26	13657.638 13460.736 12965.771 12417.484	13653.905 13457.056 12962.225 12414.087	19 -2 -10 5	7321.910 ^A 7429.014 ^A 7712.615 ^A 8053.161 ^A	-10 1 6 -3	5.682 5.669 5.682 5.692	6.590 6.590 6.639 6.691		
	2114	x $^5G^{\circ}-f$ 5P	4-3 3-2	0.60 1.15	13647.459 13062.939	13643.728 13059.367	-4 12	7327.371^{B} 7655.245^{B}	2 -7	5.682 5.692	6.591 6.641		
	2115	x ⁵ G° - f ⁵ G	5-6 4-5 5-5 6-6	1.18 1.34 0.60 1.46	13435.419 13425.585 13235.293 13226.143	13431.746 13421.914 13231.674 13222.527	2 -2 4 0	7443.013 ^A 7448.465 ^A 7555.556 ^A 7560.783 ^A	-1 1 -2 0	5.669 5.682 5.669 5.655	6.592 6.606 6.606 6.592		
	2116	x ${}^5G^{\circ}-e$ 5H	5-6 6-7 4-5 3-4 2-3	1.41 2.05 1.74 1.75 1.72	13111.564 13043.219 12436.213 12013.875 11728.774	13107.979 13039.652 12432.811 12010.588 11725.564	3 2 -2 7 0	7626.855 ^A 7666.819 ^A 8041.033 ^A 8323.709 ^A 8526.040 ^A	-2 -1 1 -5 0	5.669 5.655 5.682 5.692 5.699	6.615 6.605 6.679 6.724 6.756		

•				TAD	LE Z—Comm	шеи						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
2117	$x^{5}G^{\circ}-e^{3}G$	5-5	1.20	12479.240	12475.827	-3	8013.308 ^A	2	5.669	6.663		
4		4-4	1.30	12145.812	12142.490	6	8233.290 ^A		5.682	6.703		
		3-3	1.15	11812.098	11808.866	-15	8465.896 ^L	11	5.692	6.742		I
2118	x $^5G^{\circ}-f$ 3D	4-3	1.26	12635.399	12631.943	3	7914.273 ^A	-2	5.682	6.664		
2119	x $^5G^{\circ}-g$ 7D	3-3	2.02	11776.775	11773.552	-11	8491.289 ^A	8	5.692	6.745		
2120	$x^{5}G^{\circ} - e^{3}H$	5-6	1.76	12323.636	12320.265	2	8114.488 ^A	-1	5.669	6.675		
-1-0		4-5	1.63	11857.487	11854.242	1	8433.490 ^A	-1	5.682	6.728		
		3-4	1.28	11571.505	11568.338	1	8641.918 ^A		5.692	6.764		
		6-5	1.20	11549.539	11546.378	0	8658.354 ^L	, 0	5.655	6.728		II
2121	x $^5G^{\circ}-f$ 3F	5-4	1.74	11164.205	11161.149	-10	8957.198 ^L		5.669	6.780		I
		2-3	1.15	10917.059	10914.069	5	9159.976 ^E	-4	5.699	6.834	• • •	
2122	$x^{5}G^{\circ} - s^{6}D5d^{7}F$	6-6	1.76	9242.4739	9239.9383	0.9	10819.614 ^L		5.655	6.996		II
		4-4	1.93	8715.2782	8712.8852	-5.3	11474.103 ^C	7	5.682	7.105	• • •	
2123	$x^{5}G^{\circ}-62192^{e}$	6-5	0.90	6029.7760	6028.1067	3.3	16584.364 ^A	-9	5.655	7.711		
2124	$z^3I^{\circ}-e^7F$	6-5	2.70	20805.311	20799.633	4	4806.465 ^A	-1	5.706	6.302		
		5-4	3.19	19776.689	19771.291	-20	5056.458 ^A	5	5.720	6.347		
2125	z $^3I^{\circ}-e$ 5G	6-6	1.28	22242.136	22236.067	5	4495.971 ^E	-1	5.706	6.264		
2126	$z^{3}I^{\circ}-s^{6}D5d^{5}D$	5-4	3.13	9928.7838	9926.0623	3.9	10071.727^{A}	-4	5.720	6.969		
2127	$z^3I^{\circ}-g^5G$	7-6	0.95	8316.7511	8314.4659	1.4	12023.926^{L}	-2	5.700	7.191		
2128	$w^{5}P^{\circ}-e^{7}F$	3-3	0.60	19953.090	19947.644	-16	5011.755 ^L	9 4	5.720	6.341		I
							4548.280 ^E					•
2129	$w^5P^{\circ}-f^7D$	2-3	1.30 1.64	21986.333 21344.179	21980.334 21338.355	-5 -46	4548.280 ⁻² 4685.118 ^C		5.742 5.742	6.306 6.323		
		$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	1.75	20569.575	20563.962	-40 -4	4861.549 ^A		5.720	6.323		
2120	$w^{5}P^{0}-f^{5}D$	3-4	1.90	23331.554	23325.189	-5	4286.041		5.720	6.251		
2130	$w^{s}P^{s}-f^{s}D$	$\frac{3-4}{2-2}$	1.18	23331.334	22798.363	-5 -5	4385.083 ^E		5.742	6.286		
		3-3	1.69	22741.232	22735.028	5	4397.299		5.720	6.265		
		3-2	1.59	21922.502	21916.520	-5	4561.523 ^A	1	5.720	6.286		
		2 - 1	1.26	21898.302	21892.327	5	4566.564^{L}		5.742	6.308		I
		1-0	1.51	21878.778	21872.809	-38	4570.639 ^{<i>I</i>}	8	5.754	6.321	• • •	
2131	$w^{5}P^{\circ} - e^{7}P$	3-4	1.85	23051.077	23044.788	-11	4338.192 ^A	2	5.720	6.258		
		3-3	1.67	22350.544	22344.445	0	4474.164 ^A	0	5.720	6.275		
2132	w 5P $^{\circ}-e$ 5G	3-2	0.70	19109.344	19104.128	22	5233.042^{E}	³ -6	5.720	6.369		
2133	$w^5P^{\circ}-e^7G$	1-2	2.16	19495.666	19490.345	-27	5129.345	1 7	5.754	6.390		
		3-4	1.49	19238.864	19233.613	7	5197.812	-2	5.720	6.365	• • •	
2134	w 5P $^{\circ}-f$ 5F	2-2	1.53	18547.755	18542.692	-41	5391.488 ^I	12	5.742	6.410		I
2135	w 5P $^{\circ}-e$ 5S	2-2	1.60	20680.927	20675.284	0	4835.373		5.742	6.341		
		3-2	1.86	19952.859	19947.413	0	5011.813	0	5.720	6.341	• • •	
2136	$w^{5}P^{0}-e^{3}D$	2-3	1.18	20077.579	20072.100	12	4980.680 ^E		5.742	6.359		
		3-3	1.00	19390.667	19385.375	8	5157.120 ^I		5.720	6.359		II
		1-2	1.34	18763.363	18758.241	11	5329.535 ^H		5.754	6.415		
		1-1	1.08	17763.544	17758.695	13	5629.507 ¹ 5726.354 ²		5.754 5.742	6.452 6.452		
	5	2-1	1.30	17463.118	17458.350	3						
2137	$w^{5}P^{0}-g^{5}D$	3-4	2.38	19181.358	19176.123	0	5213.395 ² 5457.022 ²		5.720	6.366		
		2-3	2.23	18325.013 17751.083	18320.010 17746.236	-10 0	5457.022 ² 5633.459 ²		5.742 5.720	6.419 6.419		
		3-3 $1-2$	1.56 2.05	17731.083	17746.236	3	5639.4404		5.754	6.453		
		2-2	1.34	17432.885	17428.125	0	5736.285		5.742	6.453		
		1-1	1.99	17229.597	17224.893	-6	5803.966	-	5.754	6.474		
		1-0	1.52	17102.898	17098.228	3	5846.962	⁴ -1	5.754	6.479		
		2-1	1.32	16946.837	16942.209	3	5900.806	⁴ -1	5.742	6.474		

N.				LABI	LE 2—Contin	ued						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	Bl.8
2138	$w^{5}P^{\circ}-e^{5}P$	2-3	1.95	18103.807	18098.864	0	5523.700 ^A	0	5.742	6.427		
2138 2138		1 - 1	1.67	17827.580	17822.713	3	5609.286 ^A	-1	5.754	6.449		
y 2		1 - 2	1.92	17676.948	17672.122	6	5657.085 ^A	-2	5.754	6.455		
7		3-3	2.41	17543.425	17538.635	0	5700.141^{L}	0	5.720	6.427		I
		2 - 1	1.92	17525.012	17520.227	3	5706.130 ^A		5.742	6.449		
		2-2	1.97	17379.422	17374.677	0	5753.931 ^A		5.742	6.455		
		3-2	1.76	16862.348	16857.743	-3	5930.372 ^A	1	5.720	6.455		
2139	$w^{5}P^{0}-h^{5}D$	3-4	0.70	14248.980	14245.086	2	7018.046 ^A	-1	5.720	6.590		
		2-2	1.26	13066.550	13062.978	-9	7653.129 ^B		5.742	6.691		
2140	$w^5P^{\circ}-f^5P$	3-3	0.85	14237.915	14234.024	-10	7023.500 ^A	5	5.720	6.591		
2141	w $^5P^{\circ}$ $-s$ 6D5d 7P	2-3	1.56	9853.7001	9850.9990	4.9	10148.472 ^B	-5	5.742	7.000		
2142	$w^{5}P^{\circ}\!-\!s^{4}\!D4d^{5}F$	3-4	1.28	8346.0005	8343.7073	-7.0	11981.787 ^C	10	5.720	7.206		
		3-3	1.04	8336.8223	8334.5316	2.8	11994.978 ^B		5.720	7.207		
		2-2	0.95	8197.5007	8195.2477	6.0	12198.840 ^C		5.742	7.254		
		3-2	0.78	8080.6200	8078.3986	0.0	12375.288 ^B	, 0	5.720	7.254		
2143	$w^{5}P^{\circ}-s^{4}D4d^{5}P$	3-2	1.23	8280.8692	8278.5936	-0.7	12076.027 ^B	1	5.720	7.217		
		2-3	1.20	8218.0634	8215.8048	0.0	12168.317 ^A		5.742	7.251		
		3-3	1.63	8100.6122	8098.3853	6.6	12344.746 ^L	-10	5.720	7.251		II
2144	w ⁵ P°-58661 ^e	3-4	2.11	7984.1072	7981.9118	-1.3	12524.882 ^A	2	5.720	7.273		
2145	$w^{5}P^{\circ}-s^{4}D4d^{3}D$	1-2	1.26	7955.8046	7953.6168	0.6	12569.439 ^B	-1	5.754	7.312		
2143	w 1 -3 D+a D	2-2	1.08	7894.9697	7892.7984	-5.6	12666.293 ^L		5.742	7.312		
2146	$w^{5}P^{\circ}-59077^{e}$	1-1	1.15	7894.7173	7892.5461	2.5	12666.698 ^B	-4	5.754	7.324		
		2 - 1	1.20	7834.8164	7832.6613	3.1	12763.541 ^B	-5	5.742	7.324	•••	
2147	$z^{3}S^{0}-g^{5}D$	1-2	1.74	18351.981	18346.971	3	5449.003 ^E	-1	5.778	6.453		
2147	~ 5 g E	1-1	0.85	17814.118	17809.254	3	5613.525^{L}		5.778	6.474		I
2148	$z^{3}S^{\circ}-59077^{e}$	1-1	1.54	8015.2199	8013.0161	0.6	12476.264 ^{<i>D</i>}	-1	5.778	7.324		
2149	$y^{3}P^{\circ}-f^{5}F$	1-2	1.46	20819.536	20813.854	0	4803.181 ^A	0	5.815	6.410		
217)	<i>y</i> 1 <i>j</i> 1	1-1	1.26	20607.233	20601.609	0	4852.665 ^E		5.815	6.417		
		$\frac{1}{2-3}$	1.23	20504.278	20498.682	-8	4877.031 ^A		5.793	6.398		
		$\frac{2}{2-2}$	1.18	20088.643	20083.160	12	4977.937 ^E		5.793	6.410		
2150	$y^{3}P^{\circ}-e^{3}D$			21895.507	21889.532	-5	4567.147 ^C		5.793	6.359		
2150	$y ^{3}P^{3}-e ^{3}D$	2-3 $2-2$	1.41 0.48	19948.791	19943.347	-3 44	5012.835 ^E		5.793	6.415		
	3 DO 5 D						5110.168 ^L		5.793	6.427		T
2151	$y^3P^0-e^5P$	$\begin{array}{c} 2-3 \\ 1-2 \end{array}$	1.00 1.43	19568.828 19358.700	19563.487 19353.416	-19 4	5110.168 ² 5165.636 ^A		5.793	6.427		I
2152	$y^3P^{\circ}-h^5D$	1-1	0.78	13829.883	13826.103	-2	7230.719 ^A	1	5.815	6.711		
2153	$y^{3}P^{0}-f^{5}P$	2-1	0.30	13892.506	13888.709	0	7198.125^{E}	0	5.793	6.686		
	$y^{3}P^{\circ}-f^{5}G$		0.85	13451.598	13447.920	5	7434.061 ^E		5.793	6.715		
2154	$y \circ P \circ -f \circ G$	$\begin{array}{c} 2-3 \\ 1-2 \end{array}$	0.83	13431.398	13447.920	13	7434.001 ⁻²		5.815	6.741	• • •	
2155	y 3P $^{\circ}-g$ 5G	2-2	1.20	8265.9910	8263.7195	4.8	12097.763^{E}	³ -7	5.793	7.293		
2156	$y^{3}P^{\circ}-s^{4}D4d^{5}P$	1-2	2.52	8840.7262	8838.2993	1.6	11311.288 ^A	-2	5.815	7.217		
2157	$y^{3}P^{\circ}-59077^{e}$	2-1	1.08	8097.1581	8094.9322	-2.6	12350.012^{E}	³ 4	5.793	7.324		
2137	g 1 350,,	0-1	2.02	8061.5672	8059.3508	4.5	12404.536 ^A		5.786	7.324		
2158	$u^5D^{\circ}-f^5D$	4-4	1.99	27010.287	27002.920	7	3702.293	-1	5.792	6.251		
2159	$u^5D^{\circ}-e^{7}P$	4-4	1.94	26635.095	26627.830	0	3754.445 ^A	0	5.792	6.258		
2133		4-3	1.52	25704.165	25697.154	-7	3890.420		5.792	6.275		
2162	5no .5a		1.81	25106.539	25099.691	13	3983.026 ²		5.792	6.286		
2160	$u~^5D$ ° $-e~^5G$	4-5 3-4	1.64	23615.076	23608.633	17	4234.583 ²		5.795	6.320		
2	500 70						4507.709					
2161	u 5D ° $-e$ 7G	4-5	1.56	22184.218	22178.165	5 5	4507.709 ² 4589.917 ¹		5.792 5.795	6.351		T
		3-4	1.34	21786.886	21780.941	3	4389.91/	-1	3.193	6.365	• • •	I

				IAB	LE 2—Contin	шеа						
No.	Multiplet (MT) 1	J-J	I ²	λ _{vac} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
	5D0 45E	4 5	1.07	22010 017	22812.592	0	4382.348 ^A	0	5.792	6.336		
2162	$u~^5D^{ \mathrm{o}} \! - \! f~^5F$	4-5	1.97	22818.817	22079.867	10	4502.346 4527.777 ^A		5.849	6.410		
· ·		1-2	1.66	22085.893		5	4527.777 4577.262 ^A		5.849	6.417		
i		1-1	1.23	21847.121	21841.160 21813.981	0	4577.202 4582.965 ^A		5.848	6.417	• • •	
		0-1	1.61	21819.935			4715.586 ^A		5.813	6.398	• • •	
		2-3	1.67	21206.272	21200.485	0	4715.586 ⁻⁴		5.795	6.380	• • •	
		3-4	1.88	21201.371	21195.586	0	4816.496 ^A		5.813	6.410	• • •	
		2-2	1.38	20761.981	20756.315	4					• • •	
		3-3	1.38	20579.904	20574.288	0	4859.109 ^E		5.795	6.398	• • •	
2163	u 5D 0 $-e$ 5P	1 - 2	1.56	20448.906	20443.326	-8	4890.237 ^L		5.849	6.455	• • •	II
		2-3	1.52	20207.233	20201.718	-8	4948.723 ^A		5.813	6.427	• • •	
		3 - 3	1.28	19637.707	19632.348	0	5092.244 ^A		5.795	6.427	• • •	
		2-2	0.95	19308.925	19303.655	-4	5178.952 ^A		5.813	6.455	• • •	
2164	$u~^5D^{\circ}\!-\!g~^5F$	4-5	1.46	15771.699	15767.390	7	6340.471		5.792	6.579		
		3-4	1.34	15040.584	15036.474	2	6648.678 ²		5.795	6.620		
		4-4	1.26	14986.147	14982.053	0	6672.829		5.792	6.620		
		1 - 2	2.08	14123.761	14119.901	-2	7080.267^{L}		5.849	6.727		
		3 - 3	1.11	14112.368	14108.511	-4	7085.983		5.795	6.674	• • •	
		0 - 1	1.20	13860.680	13856.891	2	7214.653 ^A		5.848	6.743	• • •	
		2-2	1.00	13570.390	13566.680	-2	7368.985	1	5.813	6.727	• • •	
2165	$u^5D^{\circ}-h^5D$	4-4	1.74	15541.698	15537.453	-2	6434.303	1	5.792	6.590		
2103	u D n D	3-3	0.90	14704.074	14700.056	6	6800.836^{I}	3 -3	5.795	6.639		
		4-3	1.59	14652.036	14648.032	0	6824.990	<i>i</i> 0	5.792	6.639		
		2-2	2.10	14128.015	14124.154	18	7078.135 ^E	3 ₋ 9	5.813	6.691		
		$\frac{2}{3-2}$	1.08	13847.218	13843.433	0	7221.667		5.795	6.691		
		$\frac{3}{2-1}$	0.48	13804.472	13800.699	6	7244.029^{I}	-3	5.813	6.711		I
2166	u 5D $^{\circ}-f$ 5P	4-3	1.91	15528.553	15524.311	-2	6439.750	4 1	5.792	6.591		
2166	$u \circ D \circ - f \circ P$	1-1	1.64	14819.291	14815.242	7	6747.961 ¹		5.849	6.686		I
		3-2	1.49	14654.683	14650.679	-2	6823.757		5.795	6.641		
		2-1	0.95	14211.251	14207.367	8	7036.678	4 -4	5.813	6.686		
21/5	$u^{5}D^{\circ}-f^{5}G$			15241.939	15237.775	2	6560.845		5.792	6.606		
2167	$u ^{3}D^{0} - f ^{3}G$	4-5	1.86		13237.773	6	7023.982		5.795	6.666		
		3-4	1.11	14236.938		-2	7198.442		5.849	6.741		
		1-2	0.95	13891.894 13750.204	13888.097 13746.446	2	7272.619		5.813	6.715		
		$\begin{array}{c} 2-3 \\ 3-3 \end{array}$	1.04 1.04	13730.204	13480.393	-15	7416.153 ¹		5.795	6.715		
2168	$u~^5D^{o} - e~^3G$	3-4	0.85	13658.369	13654.636	9	7321.518		5.795	6.703	• • •	
		4-4	1.23	13613.465	13609.744	13	7345.668 ¹		5.792	6.703		
2169	$u^5D^{\circ}-f^3D$	3-3	1.11	14280.583	14276.680	-20	7002.515 ⁰		5.795	6.664		
	•	4-3	0.85	14231.508	14227.619	-10	7026.662		5.792	6.664		
		1 - 1	0.60	13751.169	13747.410	4	7272.109		5.849	6.751		
		0 - 1	0.95	13740.387	13736.631	-2	7277.815	4 1	5.848	6.751	• • •	
2170	$u^5D^{\circ}-g^7D$	4-4	0.30	13506.395	13502.702	0	7403.900 ³	B 0	5.792	6.710		
2171	$u^{5}D^{\circ}-s^{6}D6s^{5}D$	4-4	1.18	12888.162	12884.638	2	7759.058	4 -1	5.792	6.754		
2171	$u \cdot D \cdot -s \cdot Dos \cdot D$	3-3	1.20	12315.522	12312.153	3	8119.834		5.795	6.802		
		0-1	1.36	12313.322	12290.570	3	8134.093		5.848	6.857		I
		3-2	1.28	11920.137	11916.875	11	8389.165		5.795	6.836		-
	5 2											
2172	$u~^5D^{\circ}{-}f~^3F$	4-4	1.04	12558.899	12555.464	-3	7962.481		5.792	6.780		
2173	$u~^5D^{o} - e~^3P$	1 - 1	1.53	12196.839	12193.503	13	8198.845		5.849	6.866		
		2-1	1.79	11781.926	11778.702	-7	8487.576	B 5	5.813	6.866		
2174	$u~^5D^{ \mathrm{o}} \! - \! s~^6\!D5d~^5G$	2-3	2.67	9835.6502	9832.9539	1.0	10167.096	A -1	5.813	7.074	•	
2175	u 5D $^{\circ}$ $-s$ 6D $5d$ 7G	1-1	2.29	9858.8955	9856.1930	-11.7	10143.124	D 12	5.849	7.107	• • • •	II
2176	$u^{5}D^{\circ}-{}^{4}F6s^{3}F$	2-2	1.32	9172.2965	9169.7799	-4.2	10902.395	B 5	5.813	7.165		
2177	$u^{5}D^{\circ}-58661^{e}$	4-4	2.48	8374.4147	8372.1139	1.4	11941.133	A -2	5.792	7.273		
					8268.1345		12091.303		5.813	7.312		
2178	u 5D ° $-s$ 4D4d 3D	$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	1.18 1.32	8270.4073 8173.3883	8268.1343 8171.1418		12091.303		5.795	7.312		
		3-2	1.32	6113.365	01/1.1710	0.0	12257.020	v	5.175			

					SLE 2—Contii							
No.	Multiplet (MT) ¹	J-J	I ²	$\lambda_{vac}^{\ 3}$ (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
2179	u ⁵ D°-59077 ^e	0-1 2-1	1.71 0.78	8399.4418 8204.4099	8397.1342 8202.1550	-1.4 -0.7	11905.553 ^C 12188.567 ^B		5.848 5.813	7.324 7.324		
2180	$x^3F^{\circ}-f^5D$	4-4	2.10	28296.595	28288.878	0	3533.994 ^A	0	5.813	6.251		
2100	w r -j B	3-2	1.79	27732.250	27724.687	-15	3605.910^{B}		5.839	6.286		
2181	$x^3F^{\circ}-e^7P$	4-4	2.03	27885.088	27877.483	-8	3586.146^{D}	1	5.813	6.258		I
2182	$x^3F^0-f^5F$	4-5	2.24	23730.146	23723.672	0	4214.049 ^A		5.813	6.336		_
2102	w 1	3-4	1.58	22888.752	22882.508	-5	4368.958 ^A	-	5.839	6.380		
		2-3	1.36	22690.709	22684.518	10	4407.090^{B}		5.851	6.398		
2183	$x^3F^0-g^5D$	2-1	1.70	19930.867	19925.428	-32	5017.343^{D}	8	5.851	6.474		Ne
2184	$x^3F^0-g^5F$	4-5	1.23	16201.741	16197.316	-3	6172.176 ^A		5.813	6.579		
2101	<i>w</i> 1 <i>y</i> 1	3-4	1.18	15870.595	15866.260	-5	6300.961 ^A		5.839	6.620		
		2-3	0.95	15073.930	15069.811	-14	6633.970^{B}		5.851	6.674	•••	
2185	$x^3F^{\circ}-h^5D$	4-4	1.82	15959.142	15954.782	0	6266.001 ^A	0	5.813	6.590		
		3-3	1.43	15496.377	15492.144	-2	6453.121 ^A		5.839	6.639		
		2-2	1.23	14771.808	14767.771	-2	6769.652^{A}		5.851	6.691	•••	
2186	$x^{3}F^{0}-f^{5}P$	4-3	1.98	15945.278	15940.923	0	6271.449 ^A	0	5.813	6.591		
	, -	3-2	1.51	15441.540	15437.321	Ō	6476.038 ^A	_	5.839	6.641		
		2-1	1.04	14862.836	14858.775	-4	6728.191 ^A		5.851	6.686		
2187	$x^3F^{\circ}-f^5G$	4-5	1.69	15643.221	15638.948	2	6392.545 ^A	-1	5.813	6.606		
	•	3-4	1.30	14978.437	14974.344	4	6676.264 ^A		5.839	6.666		
		4-4	1.23	14535.228	14531.256	-2	6879.837 ^A	1	5.813	6.666	• • •	
2188	$x^3F^{\circ}-e^5H$	4-5	0.78	14316.160	14312.248	2	6985.113^{B}	-1	5.813	6.679		
2189	$x{}^3F^{\mathfrak{o}}{-}e{}^3G$	4-5	1.45	14597.911	14593.922	0	6850.295^{D}	0	5.813	6.663		I
		3-4	1.32	14339.376	14335.457	0	6973.804 ^A		5.839	6.703		-
		2-3	1.30	13922.975	13919.169	-2	7182.373^{A}		5.851	6.742		
		3-3	1.11	13723.703	13719.951	13	7286.663^{B}	-7	5.839	6.742	• • •	
2190	$x^3F^{\circ}-f^3D$	3-3	0.78	15026.772	15022.666	-7	6654.789^{B}	3	5.839	6.664		
		4-3	1.23	14580.747	14576.763	-4	6858.359 ^A	2	5.813	6.664		
		3-2	1.08	14338.856	14334.937	6	6974.057 ^A	-3	5.839	6.703	•••	
2191	$x^{3}F^{0}-s^{6}D6s^{5}D$	4-4	1.41	13173.913	13170.311	-2	7590.759 ^A	1	5.813	6.754	• • •	
2192	$x^{3}F^{0}-f^{3}F$	3-4	1.40	13174.175	13170.573	0	7590.608^{A}	0	5.839	6.780		
		4-4	1.08	12830.094	12826.585	5	7794.175 ^A	-3	5.813	6.780		
		2-3	1.46	12613.653	12610.203	14	7927.917 ^B		5.851	6.834		
		3-3	1.60	12449.855	12446.449	5	8032.222 ^A	-3	5.839	6.834	• • •	
		4-3	1.83	12142.112	12138.790	-6	8235.799 ^A	4	5.813	6.834	•••	
2193	z $^3H^{\circ}-g$ 5F	4-4	0.30	15905.336	15900.992	-25	6287.198^{D}	10	5.840	6.620		I
2194	$z^3H^{\circ}-f^5P$	4-3	2.08	16517.731	16513.220	22	6054.100^{D}	-8	5.840	6.591		II
2195	$z^3H^{\circ}-f^5G$	4-5	1.26	16193.797	16189.374	0	6175.204 ^A	0	5.840	6.606		
		5-5	0.78	15940.558	15936.204	25	6273.306^{A}		5.828	6.606		
		5-4	1.81	14791.590	14787.549	20	6760.598^{A}		5.828	6.666		
2196	$z^3H^{\circ}-e^5H$	6-7	0.60	15891.023	15886.682	3	6292.861^{B}	-1	5.825	6.605		
		5-6	0.30	15761.390	15757.084	-2	6344.618^{A}	1	5.828	6.615	•••	
		4-5	0.60	14775.913	14771.876	0	6767.771 ^A	0	5.840	6.679		
2197	$z^3H_{\cdot}^{\circ}-f^3F$	4-4	0.90	13198.119	13194.510	-2	7576.837^{B}	1	5.840	6.780		
2198	$z^{3}H^{\circ}-61724^{e}$	4-4	2.40	6840.7197	6838.8325	-0.9	14618.345 ^B	2	5.840	7.653		
2199	e ⁵ F-u ⁵ F°	2-3	1.96	27914.208	27906.595	-16	3582.405 ^A	2	5.956	6.400		
		1-2	1.89	27730.904	27723.341	23	3606.085^B		5.978	6.426		
		3-4	1.83	27579.207	27571.685	-8	3625.920^A		5.921	6.370		
			2.17	27482.319			3638.703 ^A		5.874			
		4-5	2.17	21402.319	27474.824	8	3036.703	-1	3.074	6.325		

·					BLE 2—Co.						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷ Bl. ⁸
		2-2	2.20	26380.073	26372.878	-7	3790.740 ^A	1	5.956	6.426	
4		3-3	2.36	25883.005	25875.945	-7	3863.539 ^A		5.921	6.400	
)		2-1	2.45	25581.061	25574.083	13	3909.142 ^A		5.956	6.440	
i		4-4	2.57	24978.125	24971.311	-6	4003.503 ^A		5.874	6.370	•••
		5-5	3.02	24930.487	24923.686	0	4011.153 ^A		5.828	6.325	• • •
		3-2	2.41	24558.710	24552.011	6	4071.875 ^A		5.921	6.426	• • •
		4-3	1.97	23578.666	23572.233	-6	4241.122 ^A		5.874	6.400	• • •
		5-4	2.63	22852.170	22845.935	-5	4375.952 ^A	1	5.828	6.370	• • •
2200	$e^{5}F-x^{3}H^{\circ}$	5-4	1.65	22708.605	22702.409	0	4403.617 ^A		5.828	6.374	
2201	$e~^5F-t~^5D^{ m o}$	2-2	2.31	27829.370	27821.780		3593.326 ^A		5.956	6.401	•••
		3-3	2.62	27732.681	27725.117	0	3605.854 ^A		5.921	6.368	• • •
		1-1	2.42	27727.490	27719.928	0	3606.529 ^A 3698.672 ^A		5.978	6.426	• • •
		4-4	2.68	27036.731	27029.356				5.874	6.332	• • •
		1-0	2.34	26880.174	26872.842		3720.214 ^A		5.978	6.440	• • • •
		2-1	2.32	26376.998	26369.803	-7	3791.182 ^A 3983.437 ^A		5.956 5.874	6.426	• • •
		4-3	2.72	25103.949	25097.101	-6 .6	4071.120 ^A		5.828	6.368	• • •
		5-4	3.11	24563.265	24556.564	0				6.332	• • •
2202	$e^{5}F^{-}v^{3}F^{\circ}$	4-3 5-4	1.86 1.53	25079.269 23260.752	25072.428 23254.406	-13 60	3987.357 ^A 4299.087 ^A		5.874 5.828	6.368 6.361	
	5 5-00										
2203	$e~^5F-u~^5P^{ m o}$	3-2 $4-3$	2.19 2.60	23870.644 23180.052	23864.131 23173.728	0 5	4189.246 ^A 4314.054 ^A		5.921 5.874	6.440 6.409	
2204	$e~^5F-t~^3D^{\circ}$	4-3	1.83	20681.342	20675.698	-4	4835.276 ^A	1	5.874	6.473	
220.	0 1 0 2	3-2	1.41	20294.757	20289.218	0	4927.381 ^A		5.921	6.532	
2205	$e~^5F-w~^3H^{ { m o}}$	4-5	1.20	19101.715	19096.501	4	5235.132 ^A	-1	5.874	6.523	
2206	$e^{5}F^{-4}F^{5}p^{3}G^{0}$	4-5	3.45	18419.456	18414.427	7	5429.042 ^A	-2	5.874	6.547	
		5-5	2.31	17236.939	17232.232	0	5801.494 ^A	0	5.828	6.547	
		3-4	3.17	15969.231	15964.869	3	6262.042^{D}	-1	5.921	6.697	I
		2 - 3	2.59	15820.957	15816.635	0	6320.730 ^A	0	5.956	6.739	
		3-3	1.96	15147.234	15143.096	2	6601.865 ^A	-1	5.921	6.739	
		4-3	1.65	14327.780	14323.865		6979.448 ^A		5.874	6.739	
2207	$e~^5F-Gsp3~^3F^{ m o}$	3-4	0.48	19237.835	19232.584		5198.090 ^A		5.921	6.565	• • •
		4-4	3.16	17935.054	17930.158		5575.673 ^A		5.874	6.565	•••
		3-3	2.88	17850.840	17845.967		5601.977 ^D		5.921	6.615	I
		2-2	2.26	17504.762	17499.983		5712.731 ^A		5.956	6.664	• • •
		5-4	1.85	16812.029	16807.438		5948.122 ^A		5.828	6.565	• • •
		4-3	2.67	16723.644	16719.077		5979.558 ^A		5.874	6.615	• • •
		3-2	2.40	16683.720	16679.164	-3	5993.867 ^A		5.921	6.664	• • •
2208	$e~^5F-^4F5p~^5G^{ m o}$	1 - 2	3.25	16566.294	16561.770		6036.353 ^A		5.978	6.727	• • •
		5-6	3.93	16491.173	16486.669	-3	6063.850 ^A		5.828	6.580	• • •
		3-4	3.25	16402.649	16398.169		6096.576 ^A		5.921	6.677	
		2 - 3	3.39	16398.870	16394.391		6097.981 ^A		5.956	6.712	• • •
		4-5	3.62	16106.807	16102.408		6208.555^{L}		5.874	6.644	
		2-2	2.26	16074.575	16070.185		6221.004 ^A		5.956	6.727	• • •
		3-3	1.90	15676.153	15671.871		6379.116 ^A		5.921	6.712	• • •
		4-4	1.61	15446.021	15441.802		6474.159 ^A		5.874	6.677	
		3-2	2.15	15379.554	15375.352		6502.139 ^A		5.921	6.727	
		4-3	0.90	14800.119	14796.076		6756.702 ^E		5.874	6.712	
		5-4	0.60	14605.770	14601.779	-4	6846.609 ^A	2	5.828	6.677	• • •
2209	$e^{5}F-^4F5p^{5}F^{\circ}$	2-3	1.64	17779.655	17774.801	-3	5624.406 ^A	1	5.956	6.653	
	•	3-4	2.54	17752.224	17747.377	3	5633.097 ^A		5.921	6.619	
		1-2	1.26	17178.553	17173.862	-30	5821.212^{L}		5.978	6.700	I
		3-3	2.33	16933.252	16928.628		5905.540 ^A		5.921	6.653	
		1 - 1	2.82	16658.082	16653.533		6003.092 ^A		5.978	6.723	
		2-2	3.00	16650.424	16645.877		6005.853 ^A		5.956	6.700	
		4-4	2.23	16637.052	16632.509		6010.680		5.874	6.619	
		5-5	3.79	16449.311	16444.818		6079.282 ^A		5.828	6.581	
		2-1	2.72	16160.978	16156.564	. 5	6187.744 ^A	-2	5.956	6.723	• • •

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) 7	Bl.8
	(/	4-3	3.23	15915.652	15911.304	-3	6283.123 ^A	1	5.874	6.653		
		3-2	2.72	15905.865	15901.520	-3	6286.989 ^A		5.921	6.700		
		5-4	3.46	15666.297	15662.018	0	6383.129 ^A	0	5.828	6.619	• • •	
2210	$e^{5}F-z^{1}I^{0}$	5-6	0.85	16425.698	16421.213	3	6088.021^{A}	-1	5.828	6.583		
2211	$e^{5}F-y^{1}H^{0}$	4-5	2.50	16847.837	16843.236	6	5935.480 ^A	-2	5.874	6.610		
	5 - 3	5-5	1.38	15853.048	15848.718	-10	6307.935^{A}		5.828	6.610	• • •	
2212	$e^{5}F-^4F5p^{3}F^{0}$	3-4	2.96	17942.703	17937.805	0	5573.296 ^A	0	5.921	6.612		
	x	4-4	2.72	16804.240	16799.651	0	5950.879 ^A	0	5.874	6.612		
		2-3	1.51	15993.963	15989.594	0	6252.359 ^A	0	5.956	6.731		
		5-4	2.73	15814.457	15810.137	0	6323.328 ^A		5.828	6.612	• • •	
		1-2	1.18	15420.062	15415.850	7	6485.058 ^A		5.978	6.782	• • •	
		3-3	2.52	15305.743	15301.562	2	6533.495 ^A		5.921	6.731	• • • •	
		$^{2-2}$	1.38	14993.155	14989.059	7	6669.710 ^A		5.956	6.782	• • •	
		4-3	2.61	14469.524	14465.570	0	6911.077 ^D	0	5.874	6.731	• • •	II
		3-2	1.66	14386.717	14382.785	-17	6950.856 ^A		5.921	6.782	• • • •	
2213	$e~^5F-^4F5p~^5D^{\circ}$	3-4	2.26	17079.816	17075.152	26	5854.864 ^A	-	5.921	6.647	• • •	
		4-4	3.41	16045.039	16040.656	-3	6232.456 ^A		5.874	6.647	• • •	
		1-2	1.98	15849.548	15845.219	0	6309.328 ^A		5.978	6.761	• • •	
		1-1	2.68	15669.525	15665.245	0	6381.814 ^A		5.978	6.770		
		2-2	3.39	15398.879	15394.672	0	6493.979 ^D		5.956	6.761	• • •	I
		2-1	2.71	15228.891	15224.731	-2	6566.466 ^A 6604.905 ^A		5.956 5.828	6.770 6.647		
		5-4	2.68	15140.263	15136.126	0 -2	6775.115 ^A		5.921	6.761		
	5 D 05 E0	3-2	2.45	14759.897	14755.864		5686.405 ^A		5.956	6.661	• • •	
2214	$e~^5F-Dsp3~^5F^{ m o}$	2-2	1.93	17585.803 17553.344	17581.001 17548.551	0 -3	5696.920 ^A		5.956	6.662	• • •	
		2-3	2.61 1.90	17333.344	16752.744	-3 -3	5967.541 ^A		5.921	6.661		
		3-2 3-3	2.82	16727.848	16723.280	0	5978.055 ^A		5.921	6.662		
		3-4	2.82	16323.159	16318.701	5	6126.265^{A}		5.921	6.680		
		4-3	2.53	15734.061	15729.763	-5	6355.638 ^A		5.874	6.662		
		4-4	0.95	15375.517	15371.317	7	6503.846 ^A		5.874	6.680		
2215	$e^{5}F - x^{1}F^{0}$	2-3	1.85	17462.356	17457.588	3	5726.604 ^A	-1	5.956	6.666		
		3-3	1.32	16645.191	16640.645	0	6007.741 ^B		5.921	6.666		
		4-3	2.14	15660.919	15656.641	5	6385.321 ^A	-2	5.874	6.666		
2216	$e~^5F-x~^3S^{f o}$	2-1	1.62	17325.977	17321.247	3	5771.680 ^A	-1	5.956	6.671	• • • •	
2217	$e^{5}F-{}^4F5p^{3}D^{0}$	2-3	2.28	17237.881	17233.174	0	5801.177 ^A	0	5.956	6.675		
	•	3-3	2.82	16441.116	16436.626	0	6082.312 ^A		5.921	6.675		
		1-2	2.63	16335.990	16331.529		6121.453 ^A		5.978	6.737		
		$^{2-2}$	2.52	15857.651	15853.320		6306.104 ^A		5.956	6.737		
		1-1	1.94	15183.898	15179.750		6585.924 ^A		5.978	6.795		
		3-2	2.39	15180.864	15176.717		6587.240 ^A		5.921	6.737		
		2-1	1.46	14769.789	14765.754		6770.577 ^A		5.956	6.795		
2218	$e~^5F-Dsp3~^5D^{ m o}$	3-3	2.66	16297.299	16292.848		6135.986 ^A		5.921	6.681		
		3-2	2.88	16240.404	16235.969		6157.482 ^A		5.921	6.684		
		3-4	0.48	15276.964	15272.790		6545.803 ^E		5.921	6.732		
		4-4	1.81	14443.803	14439.856		6923.384 ^A		5.874	6.732		
		5–4	2.32	13706.454	13702.707		7295.833		5.828	6.732		
2219	$e~^5F-t~^3G^{ m o}$	3-4	0.60	15427.634	15423.420		6481.875		5.921	6.724		
		5-5	0.90	14331.199	14327.282		6977.783		5.828	6.693		
		5-4	1.34	13827.613	13823.833		7231.906		5.828	6.724		
2220	$e{}^5F-t{}^5P^{o}$	2-3	1.68	16755.911	16751.335		5968.043		5.956	6.696		
		1-1	1.11	16529.646	16525.132		6049.736		5.978	6.729		
		2-2	2.41	16459.401	16454.906		6075.555		5.956	6.709		
		3-3	2.74	16002.099	15997.728		6249.180		5.921	6.696		
		4-3	2.33	15090.319	15086.196	-9	6626.7654	4 4	5.874	6.696		
	$e^{5}F-w^{1}G^{\circ}$		1.23	13453.695	13450.017	-4	7432.902	4 2	5.874	6.795		

No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
2222	e ⁵ F-s ⁶ D6p ⁷ D°	3-4	1.79	11413.942	11410.817	-13	8761.215 ^A	10	5.921	7.007		
2223	$e^{5}F - s^{6}D_{4.5}4f[6.5]^{\circ}$	5-6	1.63	10255.364	10252.554	1	9750.994 ^A	-1	5.828	7.037		
2224	$e^{5}F - s^{6}D_{3.5}4f$ [3.5]°	3-4	0.90	10645.579	10642.664	6	9393.570 ^B	-5	5.921	7.085		
	$e^{5}F$ - $s^{6}D_{3.5}4f$ [5.5]°	4-5	1.04	10235.607	10232.802	12	9769.816 ^B		5.874	7.085		
	$e^{5}F - s^{6}D_{3.5}4f$ [3.5]°	4-3	1.62	10233.592	10230.787	6	9771.740 ^B		5.874	7.085	• • •	
2225	$e^{5}F$ - $s^{6}D_{2.5}4f$ [3.5]°	2-3	1.28	10635.128	10632.215	12	9402.801^{B}	-11	5.956	7.121	• • •	
2226	$e^{5}F$ $-s^{6}\!D_{1.5}4f[4.5]^{0}$	3-4	0.78	10135.418	10132.640	-2	9866.391 ^B	2	5.921	7.144	• • •	
2227	$e~^5F$ – $s~^4\!D5p~^5F$ $^{\circ}$	3-4	1.20	9323.3495	9320.7920	3.5	10725.759 ^B	-4	5.921	7.251		
2228	$e^{5}F-{}^{4}F_{1.5}4f$ [4.5]°	3-4	1.53	8193.0808	8190.8289	-2.0	12205.421 ^B	3	5.921	7.434	•••	
2229	$w^3D^{\circ}-f^5D$	3-3	1.93	28431.658	28423.904	16	3517.206 ^B		5.829	6.265		
	·	3-2	1.96	27163.350	27155.941	0	3681.431^{D}	0	5.829	6.286		I
2230	$w^3D^{\circ}-e^7G$	3-4	1.32	23160.366	23154.047	5	4317.721^{D}		5.829	6.365		II
		3-2	2.29	22111.536	22105.503	24	4522.526 ^A	-5	5.829	6.390	• • •	
2231	$w~^3D^{\circ}\!-\!f~^5F$	1 - 2	1.49	22558.148	22551.993	-5	4432.988 ^A	_	5.861	6.410		
		3-4	1.87	22499.809	22493.671	-5	4444.482 ^A		5.829	6.380	• • •	
		2-3	1.71	22381.288	22375.181	5	4468.018 ^D 4568.928 ^C		5.844	6.398	• • •	II
	2 . 5 -	2-2	1.67	21886.972	21881.000	10			5.844	6.410	• • •	
2232	$w^3D^{\circ}-e^5P$	$\frac{2-3}{3-3}$	1.43 1.11	21271.377 20746.668	21265.573 20741.006	0 -9	4701.153 ^D 4820.051 ^B		5.844 5.829	6.427 6.427	• • •	II
	2 5-										• • •	
2233	$w\ ^3D$ ° $-g\ ^5F$	3-4 2-3	1.28 1.34	15682.623 14936.763	15678.339 14932.681	0 -2	6376.484 ^A 6694.891 ^A		5.829 5.844	6.620 6.674	• • •	
		3-3	1.18	14676.128	14672.118	-2 -2	6813.786 ^A		5.829	6.674		
		2-2	0.70	14042.157	14038.319	6	7121.413 ^B		5.844	6.727		
2234	$w^3D^{\circ}-h^5D$	1-1	1.04	14576.146	14572.163	-2	6860.524 ^A	1	5.861	6.711		
223 .	w 2	3-2	1.34	14389.582	14385.650	2	6949.472 ^A	-1	5.829	6.691		
		2-1	0.90	14292.932	14289.026	0	6996.465 ^A	0	5.844	6.711	• • •	
2235	$w^3D^{\circ} - f^5P$	3-2	1.54	15263.535	15259.365	0	6551.562^{A}		5.829	6.641		
		2-1	1.38	14729.462	14725.437	2	6789.114 ^A	-1	5.844	6.686	• • •	
2236	$w~^3D^{\mathrm{o}}\!-\!f~^5G$	3-4	1.66	14810.889	14806.842	2	6751.789 ^A		5.829	6.666	• • •	
		2-3	1.36	14234.770	14230.879	2	7025.052 ^A		5.844	6.715	• • •	
2237	$w^3D^{\circ} - f^3D$	2-1	0.70	13673.783	13670.045	-7	7313.265 ^A		5.844	6.751	• • •	
2238	$w^3D^{\circ}-g^7D$	2-1	1.43	13137.990	13134.398	-2	7611.514 ^A	1	5.844	6.788	• • •	
2239	$w\ ^3D^{\circ} - s\ ^6D6s\ ^5D$	3-3	0.95	12742.689	12739.204	8	7847.637 ^A	-5	5.829	6.802	• • •	
2240	$w^3D^{\circ}-f^3F$	3-3	1.20	12333.879	12330.505	0	8107.749 ^A	0	5.829	6.834	•••	
2241	$w^{5}G^{\circ}-e^{5}G$	5-6	2.60	32229,837	32221.048	10	3102.715 ^A		5.879	6.264		
		4-5	1.97	32114.873	32106.116	-10	3113.822 ^B	1	5.900	6.286	• • • •	
2242	w $^5G^{\circ}\!-\!f$ 5F	5-5	1.70	27152.043	27144.638	-15	3682.964^{B}	2	5.879	6.336		
2243	w $^5G^{\circ}-g$ 5F	5-5	1.64	17727.073	17722.233	-3	5641.089 ^A		5.879	6.579		
		3-4	0.30	17542.551	17537.761	25	5700.425 ^A	-8	5.913	6.620	• • •	
2244	$w\ ^5G^{o} - h\ ^5D$	5-4	1.32	17437.047	17432.286	0	5734.916 ^A		5.879	6.590		
		3-3	1.08	17086.466	17081.801	23	5852.585 ^B		5.913	6.639		
		$\begin{array}{c} 4-3 \\ 2-2 \end{array}$	0.78 0.30	16790.395 16298.561	16785.809 16294.109	-8 -11	5955.786 ^A 6135.511 ^B		5.900 5.930	6.639 6.691		
22.45	500 450						5691.640 ^A		5.900			
2245	w ${}^5G^{\circ} - f$ 5G	4-5 5-6	1.30 1.94	17569.628 17394.580	17564.831 17389.831	0 -3	5748.917 ^D		5.879	6.606 6.592		II
		5-6 6-6	1.94	17394.380	17369.651	-3 9	5805.766 ^A		5.872	6.592		11
		3-4	0.95	16458.897	16454.402	-8	6075.741 ^A		5.913	6.666		
		4-4	2.66	16184.005	16179.585	-29	6178.940^{D}	11	5.900	6.666		I
		2-3	0.60	15797.830	15793.515	5	6329.983 ^A		5.930	6.715		
		3-3	0.00	15460.978	13773.313		6467.896 ^D		5.913	0.713		

TABLE 2—Continued

				TABL	E 2—Comini	<i>.</i>						
No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
		3-2	1.38	14964.575	14960.487	-27	6682.448 ^B	12	5.913	6.741		
2246	w $^5G^{\circ}$ $-e$ 5H	6-7	1.41	16915.307	16910.688	3	5911.805 ^A		5.872	6.605		
22.0	w G 0 11	5-6	1.54	16855.527	16850.924	-34	5932.772 ^D		5.879	6.615		II
		4-5	1.41	15912.909	15908.562	5	6284.206^{A}		5.900	6.679		11
		3-4	1.46	15281.243	15277.068	7	6543.970^{A}		5.913	6.724		
		4-4	1.43	15043.991	15039.881	-18	6647.172^{D}		5.900	6.724		I
		2-3	1.41	15015.366	15011.264	0	6659.844 ^A		5.930	6.756	• • • •	1
2247	$w^{5}G^{0}-e^{3}G$	5-5	0.90	15824.757								
2247	$w \cdot G \cdot -e \cdot G$	3-3 4-4	1.00	15440.512	15820.435 15436.294	-8 0	6319.212 ^A 6476.469 ^A		5.879	6.663	• • •	
		3-3	0.70	14956.301	14952.215	-4	6686.145 ^A	_	5.900 5.913	6.703 6.742	• • •	
	5 ~ 2 2 7 7										• • •	
2248	w $^5G^{\circ}-e$ 3H	5-6	1.72	15575.375	15571.120	-2	6420.391 ^A		5.879	6.675	• • •	
		4-5	1.28	14977.533	14973.440	0	6676.667 ^A		5.900	6.728	• • •	
		3-4	0.78	14572.637	14568.654	4	6862.176 ^A	-2	5.913	6.764	• • •	
2249	w $^5G^{\circ}$ $-s$ 6D6s 5D	5-4	1.45	14164.966	14161.094	2	7059.671 ^A	-1	5.879	6.754		
		4-3	0.70	13746.120	13742.362	2	7274.780 ^A	-1	5.900	6.802	• • •	
2250	w $^5G^{o} - f$ 3F	3-3	0.60	13455.867	13452.189	-7	7431.702^{B}	4	5.913	6.834		
2251	$w^{5}G^{\circ} - s^{4}D4d^{5}P$	3-2	1.58	9505.8073	9503.2004	-1.8	10519.885 ^A	2	5.913	7.217		
2231	w G 5 D + u 1	2-3	1.46	9389.0534	9386.4780	0.0	10650.701 ^D	0	5.930	7.251		II
					700011700				3.750	7.231		
2252	v $^5F^{\circ}-e$ 7F	4-5	2.23	34441.891	34432.500	-12	2903.441 ^A	1	5.942	6.302		
		2 - 3	2.04	34364.308	34354.938	47	2909.996^{B}	-4	5.981	6.341		
		1-2	2.02	33552.047	33542.899	11	2980.444 ^B	-1	5.995	6.364	• • •	
2253	v 5F $^{\circ}-e$ 5G	4-5	2.65	36050.690	36040.860	13	2773.872^{A}	-1	5.942	6.286		
		3-4	2.72	35006.050	34996.505	12	2856.649 ^A		5.966	6.320		
		5-6	2.75	34283.794	34274.446	0	2916.830 ^A	0	5.902	6.264		
		2 - 3	1.99	33555.155	33546.005	-11	2980.168^{B}	1	5.981	6.350		
		1 - 2	3.10	33117.704	33108.673	55	3019.533^{A}	-5	5.995	6.369		
		4-4	2.45	32791.379	32782.437	0	3049.582^{A}	0	5.942	6.320		
		5-5	2.01	32281.442	32272.639	10	3097.755^{D}	-1	5.902	6.286		II
2254	$v^{5}F^{\circ}-f^{5}F$	4-5	1.73	31513.968	31505.375	-20	3173.196^{B}	2	5.942	6.336		
	•	2 - 3	1.86	29715.456	29707.352	26	3365.252^{B}	-3	5.981	6.398		
2255	$v^{5}F^{0}-e^{5}S$	2-2	1.93	34363.564	34354.194	35	2910.059^{B}	-3	5.981	6.341		
2256	$v^{5}F^{0}-e^{5}P$	2-3	1.85	27790.183	27782.603	-15	3598.393^{D}	2	5.981	6.427		I
2230	<i>v</i>	1-2	1.60	26904.415	26897.077	0	3716.862 ^B	0	5.995	6.455		1
		2-1	1.38	26449.302	26442.088	28	3780.818^{B}	-4	5.981	6.449	• • • •	
2257	5.00 5.00											
2257	$v~^5F^{o}\!-\!g~^5F$	3-4	0.00	18972.642	18967.463	-11	5270.747 ^B	3	5.966	6.620	• • •	
		5-5	1.58	18331.120	18326.115	-7	5455.204 ^A	2	5.902	6.579	• • •	
		2-3	0.78 0.85	17882.289	17877.407	6	5592.125 ^B	-2	5.981	6.674	• • •	
		$1-1 \\ 3-2$	0.83	16568.416 16301.045	16563.891 16296.593	-3 -11	6035.580 ^A 6134.576 ^B	1 4	5.995 5.966	6.743 6.727	• • •	
	5										•••	
2258	$v {}^5F^{\circ} - h {}^5D$	4-4	0.48	19138.221	19132.997	0	5225.146 ^B	0	5.942	6.590	• • •	
		5-4	1.15	18021.170	18016.250	3	5549.029 ^A	-1	5.902	6.590	• • •	
		4-3	1.54	17806.803	17801.942	13	5615.831 ^A	-4	5.942	6.639	• • •	
		3-2	1.00	17112.343	17107.670	-6	5843.735 ^A	2	5.966	6.691	• • •	
2259	$v~^5F^{o}\!-\!f~^5G$	5-6	1.63	17975.815	17970.907	3	5563.030 ^A	-1	5.902	6.592		
		3-4	2.69	17711.466	17706.630	-35	5646.060 ^D	11	5.966	6.666		I
		5-5	1.38	17619.338	17614.527	-25	5675.582 ^D	8	5.902	6.606		I
		4-4	1.28	17126.276	17121.599	0	5838.981 ^A	0	5.942	6.666	• • •	
		2-3	1.23	16885.380	16880.769	20	5922.283 ^B	-7	5.981	6.715	• • •	
		1-2	1.46	16597.314	16592.782	-6	6025.071 ^A	2	5.995	6.741	• • •	
		3-3	1.00	16561.207	16556.684	5	6038.207 ^A	-2	5.966	6.715	• • •	
2260	$v^{5}F^{\circ}-e^{5}H$	4-5	0.60	16822.934	16818.340	-23	5944.266 ^D	8	5.942	6.679		I
		3-4	0.70	16355.152	16350.686	5	6114.281 ^A	-2	5.966	6.724		
2261	v $^5F^{\circ}-e$ 3G	4-5	1.81	17213.366	17208.665	0	5809.439 ^A	0	5.942	6.663		
		3-4	1.75	16824.853	16820.259	0	5943.588 ^A	0	5.966	6.703		

				1A	BLE 2—Cont	inued						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
		2-3	1.04	16285.223	16280.775	-3	6140.536 ^A	1	5.981	6.742		
2262	$v^5F^0-f^3D$	3-3	1.15	17779.127	17774.273	-6	5624.573 ^A	2	5.966	6.664		
2202	v i j b	2-2	0.70	17158.765	17154.080	-3	5827.925 ^A		5.981	6.703		
		3-2	0.70	16824.126	16819.532	-3	5943.845 ^A		5.966	6.703		
2263	$v^5F^{\circ}-g^7D$	5-5	0.30	16142.738	16138.328	21	6194.736^{D}		5.902	6.670		I
2203	v = -g D	4-4	0.30	16142.738	16138.328	26	6194.736 ^D		5.942	6.710		Ī
2264	$v^5F^{\circ}-e^3H$	4-5	0.78	15781.044	15776.734	2	6336.716 ^A		5.942	6.728		•
2265	$v^{5}F^{\circ}-s^{6}D6s^{5}D$	4-4	1.28	15267.406	15263.235	5	6549.901 ^A		5.942	6.754		
2203	v - F s - Dos - D	2-3	0.78	15092.095	15087.972	-5	6625.985 ^A		5.942	6.802		
		3-3	1.52	14832.622	14828.569	13	6741.896 ^A		5.966	6.802		
		5-4	1.51	14548.019	14544.043	-2	6873.788 ^A		5.902	6.754		
		2-2	1.51	14502.586	14498.622	-6	6895.322^{D}		5.981	6.836		II
		4-3	1.45	14419.957	14416.017	-2	6934.833 ^A		5.942	6.802	•••	
		1 - 1	1.15	14378.099	14374.170	-4	6955.022 ^A		5.995	6.857		
		3-2	1.20	14262.812	14258.914	-4	7011.240 ^A	2	5.966	6.836		
2266	$v^5F^0-f^3F$	3-4	0.60	15242.982	15238.817	-7	6560.396 ^A	3	5.966	6.780		
2200	0 1 -j 1	4-4	0.30	14807.518	14803.472	-4	6753.326 ^A		5.942	6.780		
2267	$x {}^3G^{\circ} - e {}^5G$	5-6	2.49	37196.956	37186.814	14	2688.392 ^A	-1	5.931	6.264	•••	
2207	1 G -ε G	4-5	2.17	34581.136	34571.706	24	2891.750 ^B		5.928	6.286		
2268	x ${}^3G^{\circ}-g$ 5F	5-5	0.30	19132.274	19127.052	-15	5226.770 ^A		5.931	6.579		
2269	x G - y P $x^3G^{\circ} - h^5D$	4-3	0.78	17440.702	17435.940	0	5733.714 ^A		5.928	6.639		
	x G - h D x G - f G	5-6	0.78	18745.565	18740.448	-4	5334.595 ^A		5.931	6.592	• • •	
2270	$x^3G^0-e^3G$	3-6 4-5	1.00	16871.036	16866.429	0	5927.318 ^A		5.928	6.663	• • •	
2271	$x^{3}G^{3}-e^{3}G$	3-3	1.00	15278.486	15274.312	23	6545.151^B		5.930	6.742		
2272	x $^3G^{\circ}-e$ 3H	5-6	0.60	16649.828	16645.281	0	6006.068^{B}	0	5.931	6.675		
2273	$x^{3}G^{\circ} - s^{6}D6s^{5}D$	5-4	1.15	15048.105	15043.993	-11	6645.355 ^A	5	5.931	6.754		
2275		4-3	0.90	14178.934	14175.059	-10	7052.716^{D}		5.928	6.802		II
2274	x $^3G^{\circ}$ $-s$ 6D5d 7G	5-4	1.97	10728.124	10725.186	14	9321.294^{D}	-12	5.931	7.086		I
2275	x $^3G^{\circ}-g$ 5G	5-5	1.36	9581.3836	9578.7562	4.6	10436.906 ^D		5.931	7.224		II
		4–3	3.64	9176.0613	9173.5436	4.2	10897.922 ^C		5.928	7.279	• • •	
2276	$x {}^3G^{\circ} - s {}^4D4d {}^5P$	3-2	2.01	9634.9352	9632.2933	3.7	10378.897 ^A		5.930	7.217	• • •	
2277	$x {}^3G^{\circ} - s {}^6D7s {}^5D$	3-4.	2.46	9535.4637	9532.8487	-6.4	10487.167 ^A		5.930	7.231	• • •	
2278	$x^{3}G^{\circ}-{}^{4}F5d^{3}G$	4-5	1.97	9091.0025	9088.5078	6.6	10999.887 ^B	-8	5.928	7.292	•••	
2279	$y^{5}H^{\circ}-61724^{e}$	3-4	1.15	7547.6603	7545.5827	1.7	13249.139 ^B	-3	6.010	7.653		
	3	4-4	1.48	7483.3798	7481.3195	-0.6	13362.946 ^B		5.996	7.653		
2280	$e^{3}F-u^{5}P^{\circ}$	4-3	2.02	26801.977	26794.667	7	3731.068 ^B	-1	5.946	6.409		
2281	$e^{3}F-u^{3}D^{\circ}$	4-3	2.71	24949.097	24942.291	0	4008.161 ^A		5.946	6.443		
2282	$e^{3}F-t^{3}D^{\circ}$	2-1	1.85	25449.080	25442.139	0	3929.415 ^A		6.066	6.553		
		3-2	2.70	24090.267	24083.695	0	4151.054 ^A		6.017	6.532		
		4-3	2.56	23516.745	23510.330	6	4252.289 ^A		5.946	6.473		
2283	$e^{~3}F-w^{~3}H^{\circ}$	4-5	1.60	21495.456	21489.590	9	4652.146 ^A		5.946	6.523		
2284	$e^{3}F^{-4}F5p^{3}G^{0}$	4-5	3.42	20635.328	20629.697	4	4846.058 ^A	-1	5.946	6.547		
2204	e I - I'Jp G	3-4	3.42	18229.170	18224.194	3	5485.713 ^A		6.017	6.697		
		3-3	2.97	17165.796	17161.109	3	5825.538 ^A		6.017	6.739		
		4-4	2.76	16510.807	16506.298	0	6056.639 ^A		5.946	6.697		
		4-3	1.59	15633.642	15629.371	2	6396.462 ^A	-1	5.946	6.739		
2285	$e~^3F-v~^3P^{ m o}$	2-1	1.83	23247.428	23241.086	5	4301.551 ^A	-1	6.066	6.599		

No.	Multiplet (MT) 1	J-J	I ²	λ _{vac} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
2286	$e^{3}F$ - $Gsp3^{3}F^{\circ}$	2-2	2.61	20742.520	20736.859	4	4821.015 ^A	-1	6.066	6.664		
		3-3	2.78	20722.609	20716.954	9	4825.647 ^A		6.017	6.615		
		4-4	3.17	20029.294	20023.828	4	4992.687 ^A	-1	5.946	6.565		
		3-2	1.79	19166.124	19160.892	0	5217.539 ^A		6.017	6.664		
		4-3	2.29	18530.281	18525.223	3	5396.572 ^A	-1	5.946	6.615		
2287	$e~^3F-^4F5p~^5G^{ m o}$	2 - 3	2.14	19207.627	19202.384	4	5206.265 ^A	-1	6.066	6.712		
		3-4	1.88	18796.116	18790.985	0	5320.248 ^A	0	6.017	6.677		
		3-3	2.67	17848.253	17843.380	3	5602.789 ^A		6.017	6.712	• • •	
		4-5	3.31	17775.979	17771.126	0	5625.569 ^A		5.946	6.644	• • •	
		3-2	1.60	17464.781	17460.012	9	5725.809 ^A		6.017	6.727	• • •	
		4-4 4-3	3.00 1.00	16974.548	16969.912	-3	5891.173 ^A		5.946	6.677	• • •	
	2 - 4 - 5 -			16197.718	16193.294	13	6173.709 ^A		5.946	6.712	• • •	
2288	$e^{3}F$ $ ^{4}F$ $^{5}p^{5}F$ $^{\circ}$	2-3	2.06	21129.636	21123.871	0	4732.689 ^A		6.066	6.653	• • •	
		3-4	2.56	20589.815	20584.196	4	4856.770 ^D		6.017	6.619	• • •	II
		2-2 4-5	1.69	19553.629	19548.292	-11	5114.140 ^D		6.066	6.700	• • •	I
		3-3	1.94 1.94	19516.585 19496.172	19511.259 19490.850	4 0	5123.847 ^A 5129.212 ^A		5.946 6.017	6.581 6.653	• • •	
		2-1	1.85	18882.054	18876.899	-11	5296.034 ^A		6.066	6.723	• • •	
		4-4	2.36	18424.030	18419.001	3	5427.694 ^A		5.946	6.619		
		4-3	2.41	17543.425	17538.635	-9	5700.141 ^D		5.946	6.653		I
2289	$e^{~3}F-y^{~1}H^{\rm o}$	4-5	1.57	18682.879	18677.779	10	5352.494 ^A		5.946	6.610	•••	-
2290	$e^{3}F^{-4}F^{5}p^{3}F^{0}$	3-4	3.08	20846.501	20840.812	4	4796.968 ^A	-1	6.017	6.612		
	•	2 - 3	1.98	18654.478	18649.386	3	5360.643 ^A		6.066	6.731		
		4-4	1.81	18629.279	18624.194	0	5367.894^{D}	0	5.946	6.612		I
		3-3	1.46	17369.657	17364.914	3	5757.166 ^A	-1	6.017	6.731		
		$^{2-2}$	3.16	17307.044	17302.318	9	5777.994 ^A		6.066	6.782		
		3-2	1.23	16195.593	16191.170	5	6174.519 ^A		6.017	6.782	• • •	
		4-3	2.47	15802.551	15798.235	2	6328.092 ^A	-1	5.946	6.731	• • •	
2291	$e~^3F-^4F5p~^5D$ °	3-4	2.27	19690.679	19685.304	0	5078.545 ^A		6.017	6.647	• • •	
		3-3	1.59	19037.157	19031.961	-4	5252.885 ^A		6.017	6.668	• • •	
		4-4	2.59	17700.775	17695.942	0	5649.470 ^A		5.946	6.647	• • •	
		2-1	2.05	17621.924	17617.113	3	5674.749 ^A		6.066	6.770	• • •	
		4-3 3-2	2.59 2.98	17170.886 16670.036	17166.198 16665.484	-6 -3	5823.811 ^A 5998.787 ^A		5.946 6.017	6.668 6.761	• • •	
2292	$e~^3F-Dsp3~^5F^{ m o}$	2-1	1.23	20971.047	20965.324	-4	4768.479 ^B		6.066	6.657		
22,2	O I Dops I	2-2	1.93	20856.410	20850.718	4	4794.689 ^A		6.066	6.661		
		2-3	2.84	20810.775	20805.096	0	4805.203 ^A		6.066	6.662		
		3-2	2.11	19263.331	19258.073	11	5191.210 ^A	-3	6.017	6.661		
		3-3	2.49	19224.380	19219.133	-7	5201.728 ^A	2	6.017	6.662		
		3-4	1.41	18691.808	18686.706	10	5349.937 ^A		6.017	6.680	• • •	
		4-3	2.48	17323.069	17318.339	9	5772.649 ^D		5.946	6.662		II
		4-4	2.26	16889.432	16884.820	6	5920.862 ^A		5.946	6.680	• • •	
	2- 1	4-5	1.20	16521.257	16516.745	8	6052.808 ^A		5.946	6.697	• • •	
2293	$e^{\ 3}F-x^{\ 1}F^{\ o}$	2-3	2.08	20683.002	20677.358	9	4834.888 ^A		6.066	6.666	• • • •	
		3-3 4-3	1.86 0.60	19115.272 17234.420	19110.054 17229.714	-18 -12	5231.419 ^D 5802.342 ^B		6.017	6.666 6.666	• • •	II
2294	$e^3F-x^3S^{o}$	2-1	1.38	20491.954	20486.362	-12	4879.964 ^B		5.946 6.066	6.671		
2295	$e^{3}F^{-4}F^{5}p^{3}D^{\circ}$	2-3	2.39	20368.834	20363.276	4	4909.461 ^D					TT
2293	$e \cdot I - I \cdot Sp \cdot D$	2-3	1.38	18469.301	18464.259	0	5414.390 ^A		6.066 6.066	6.675 6.737	• • •	II
		3-2	2.97	17209.002	17204.303	3	5810.912 ^A		6.017	6.737	• • • •	
		4-3	3.12	17015.747	17011.101	ő	5876.909 ^A		5.946	6.675		
		2-1	2.96	17010.094	17005.449	-3	5878.862 ^A		6.066	6.795		
2296	$e^{~3}F-Dsp3~^5D^{\circ}$	2-3	1.98	20148.559	20143.060	8	4963.134 ^A		6.066	6.681		
2290	C I Daps D	2-3	1.52	20061.673	20056.198	8	4984.629 ^A		6.066	6.684		
		3-3	2.06	18657.906	18652.813	3	5359.658 ^A		6.017	6.681		
		3-2	2.03	18583.374	18578.301	-3	5381.154^{D}		6.017	6.684		Ne
		4-3	1.23	16861.748	16857.144	6	5930.583 ^A		5.946	6.681	• • •	

N.				1 F	ABLE 2—Con	uinuea						
: ===== 5 No. :	Multiplet (MT) 1	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
S C		4-4	2.21	15771.880	15767.572	2	6340.398 ^A	-1	5.946	6.732		_
SCOV 2297	$e^{3}F$ – $t^{3}G^{\circ}$	2-3	0.78	17630.580	17625.766	-6	5671.963 ^A	2	6.066	6.769		
υ υ		4-5	1.86	16604.824	16600.290	14	6022.346 ^A		5.946	6.693		
-		3-3	2.75	16478.585	16474.085	3	6068.482^{A}		6.017	6.769	-0.96^a	
		4-4	2.51	15932.520	15928.168	5	6276.471 ^A		5.946	6.724		
		4-3	1.15	15061.586	15057.471	2	6639.407 ^A	-1	5.946	6.769		
2298	$e~^3F-t~^5P$ °	2 - 3	1.91	19699.278	19693.902	4	5076.328 ^A	-1	6.066	6.696		
		3-3	2.05	18272.012	18267.023	0	5472.851 ^A		6.017	6.696		
		3-2	1.04	17919.978	17915.085	-3	5580.364 ^A		6.017	6.709	• • •	
		4-3	2.86	16545.944	16541.426	0	6043.777 ^L		5.946	6.696	• • •	II
2299	$e{}^3F$ – $s{}^3G^{o}$	2 - 3	1.82	14572.371	14568.389	11	6862.301 ^L		6.066	6.917		II
		3-4	2.05	13561.776	13558.069	9	7373.665 ^A		6.017	6.931	• • •	
		4-5	1.79	13388.899	13385.238	7	7468.874 ^A		5.946	6.872	• • •	
2300	$e{}^3F$ – $v{}^3H{}^{\circ}$	3-4	1.57	14463.123	14459.170	10	6914.136 ^A	-5	6.017	6.874		
2301	$e^{3}F-^{2}H4p^{1}H^{0}$	4-5	1.94	12584.576	12581.134	2	7946.235 ^A	-1	5.946	6.931		
2302	$e{}^3F-Gsp3{}^1F^{ { m o}}$	2-3	1.85	13948.084	13944.272	8	7169.443 ^A	-4	6.066	6.955		
2303	$e^{3}F - u^{3}H^{\circ}$	4-4	0.70	11817.066	11813.833	6	8462.337 ^B	-4	5.946	6.995		
2304	$e^{3}F$ – $u^{3}F^{\circ}$	2-2	1.68	12609.925	12606.476	5	7930.261 ^A	-3	6.066	7.049		
2301	0 1 00 1	3-3	1.57	12119.076	12115.760	3	8251.454 ^A		6.017	7.040		
2305	$e^{3}F$ – $Dsp1^{3}D^{\circ}$	2-2	1.26	12275.174	12271.816	3	8146.524 ^{<i>D</i>}	-2	6.066	7.076		Ne
2303	c I Dopi D	3-2	1.08	11705.424	11702.220	1	8543.048 ^B		6.017	7.076		110
2306	$e^{3}F$ – $t^{3}F^{\circ}$	2-2	0.90	11389.066	11385.948	1	8780.351 ^A	-1	6.066	7.155		
2307	$e^{3}F$ – $Hsp1{}^3G^{ m o}$	2-3	0.78	10339.175	10336.342	3	9671.951 ^B	-3	6.066	7.265		
2308	$e~^3F-Fsp1~^3F^{ m o}$	4-4	0.95	8240.8565	8238.5918	-2.0	12134.661 ^C	3	5.946	7.451		
	5 DO 7 D		2.12	24268.521	24050 177	25	2010 120A		5.007	6 2 4 0		
2309	$v^5P^{\circ}-e^{7}F$	$1-1 \\ 3-3$	3.13 2.26	34268.521 31424.178	34259.177 31415.609	-35 -10	2918.130 ^A 3182.263 ^D		5.987 5.947	6.349 6.341	• • •	II
	57-										• • •	11
2310	$v^5P^{o} - f^7D$	$\begin{array}{c} 2-3 \\ 2-2 \end{array}$	2.44	37059.409	37049.305	0 -12	2698.370 ^A 2835.199 ^A		5.971 5.971	6.306	• • •	
		3-2	2.20 2.78	35270.892 32980.888	35261.275 32971.895	-12 0	2835.199 ²³ 3032.059 ^A		5.947	6.323 6.323	• • •	
	500 450										•••	
2311	$v^5P^{o}-f^5D$	3-4	2.88	40707.479	40696.381	17	2456.551 ^A		5.947 5.987	6.251	• • •	
		$1-0 \\ 2-1$	2.16 2.24	37158.959 36809.987	37148.828 36799.951	0 14	2691.141 ^A 2716.654 ^A		5.987	6.321 6.308	• • • •	
		3-2	2.63	36602.765	36592.785	13	2710.034 2732.034^{A}		5.947	6.286		
2212	$v^5P^{\circ}-e^7P$		2.59				2447.815 ^A		5.971			
2312	v P - e P	$\frac{2-3}{3-4}$	3.14	40852.760 39861.219	40841.622 39850.351	-17 -16	2508.704 ^A	_	5.947	6.275 6.258	• • •	
		3-3	2.63	37811.843	37801.534	29	2644.674 ^A		5.947	6.275		
2313	$v^{5}P^{\circ}-f^{5}F$	3-3	1.94	27491.288	27483.790	15	3637.516 ^A		5.947	6.398		
2314	$v^{5}P^{\circ}-e^{5}S$	2-2	2.62	33495.642	33486.508	11	2985.463 ^A		5.971	6.341		
2314	<i>0</i> 1 −е Б	3-2	2.61	31423.576	31415.007	0	3182.324^{D}		5.947	6.341		II
2315	$v^5P^{\circ}-e^3D$	3-2	1.52	26501.762	26494.533	0	3773.334 ^B		5.947	6.415		
2316	$v^5P^{\circ}-g^5D$	2-3	1.57	27723.032	27715.471	15	3607.109 ^B	-2	5.971	6.419		
2310	0 1 9 2	3-2	1.80	24490.349	24483.668	-18	4083.241 ^B		5.947	6.453		
2317	$v^5P^{\circ}-e^5P$	2-3	2.52	27219.831	27212.407	0	3673.792 ^A		5.971	6.427		
2311		1-1	2.09	26811.117	26803.805	7	3729.796 ^A		5.987	6.449		
		1-2	2.56	26471.848	26464.627	0	3777.598 ^A		5.987	6.455		
		2 - 1	2.35	25932.117	25925.043	7	3856.222^{A}		5.971	6.449		
		3 - 3	2.40	25835.434	25828.386	0	3870.653 ^A		5.947	6.427	• • •	
		3-2	1.79	24384.992	24378.340	0	4100.883 ^A	0	5.947	6.455	• • •	
2318	$v^5P^{\circ}{-}e^5H$	3-4	0.00	15947.361	15943.005	-8	6270.630^{B}	3	5.947	6.724		

TABLE 2—Continued

No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{} \ (A)$	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.5
2319	$v^5P^0-e^3G$	3-4	0.78	16393.644	16389.166	16	6099.925^{B}	-6	5.947	6.703		
2320	$v^5P^0-g^7D$	3-4	1.41	16238.627	16234.192	5	6158.156 ^A	-2	5.947	6.710		
2321	$v^{5}P^{\circ}-s^{6}D6s^{5}D$	3-4	2.61	15353.162	15348.968	0	6513.316 ^A	0	5.947	6.754		
		2-3	1.91	14922.290	14918.213	-2	6701.384^{A}	1	5.971	6.802		
		1-2	1.45	14610.706	14606.714	-2	6844.296 ^A	1	5.987	6.836	• • •	
		3-3	1.56	14496.440	14492.479	0	6898.245 ^A	-	5.947	6.802	• • •	
		$2-2 \\ 1-1$	1.18 1.34	14345.720 14253.631	14341.799 14249.736	0 -4	6970.720 ^A 7015.756 ^A	0 2	5.971 5.987	6.836 6.857	•••	
		2-1	1.52	14001.323	13997.496	-4	7013.730 7142.182^{A}	2	5.971	6.857		
2322	$v^{5}P^{\circ}-{}^{4}F6s^{5}F$	3-4	1.26	11696.407	11693.206	-4	8549.634 ^A	3	5.947	7.007		
2323	$v^{5}P^{\circ}-s^{6}D5d^{5}D$	3-4	1.51	12134.495	12131.175	-4	8240.969 ^A	3	5.947	6.969		
		3-3	1.73	11946.659	11943.390	-3	8370.541 ^A	2	5.947	6.985		
2324	$v\ ^5P^{\circ}\!-\!s\ ^6\!D5d\ ^5F$	2-3	1.81	11677.546	11674.350	3	8563.443^{D}	-2	5.971	7.033		H
		3-3	1.36	11415.119	11411.995	-8	8760.311 ^A	6	5.947	7.033	•••	
2325	$v^5P^0-s^6D5d^5P$	1-2	1.23	10973.021	10970.017	1	9113.260 ^B	-1	5.987	7.117	•••	
2326	$v^5P^0-s^4D4d^5P$	2-2	3.59	9950.5696	9947.8421	0.0	10049.676 ^D	0	5.971	7.217		II
		3-3	1.15	9509.9802	9507.3721	0.0	10515.269 ^B	0	5.947	7.251	• • •	
2327	$v^5P^0-s^6D7s^5D$	2-2	3.75	9197.6681	9195.1446	-5.1	10872.321 ^D	6	5.971	7.319	•••	
2328	$v^{5}P^{\circ}-{}^{4}F5d^{5}F$	3-4	1.32	9411.3369	9408.7555	4.4	10625.483 ^B	-5	5.947	7.264	• • •	
2329	$v {}^{5}P^{\circ} - s {}^{4}\!D4d {}^{3}D$	2-3	0.60	9506.7183	9504.1111	-1.8	10518.877^{B}		5.971	7.275		
		3-3	1.30	9332.0710	9329.5111	0.0	10715.735 ^B	0	5.947	7.275	• • •	
2000	5.00 500006	2-2	0.90	9245.2330	9242.6967	-7.7	10816.385 ^B		5.971	7.312	•••	
2330	v ⁵ P° – 59390°	3-3	1.93	8753.4294	8751.0261	3.1	11424.094 ^B	-4	5.947	7.363	•••	
2331	$x^{3}P^{\circ}-e^{5}P$	2-3	1.91	28307.778	28300.057	-24	3532.598 ^B		5.989	6.427		
		1-2	1.92	28158.464	28150.784	8	3551.330^{B}	-1	6.015	6.455	•••	
2332	$x^3P^{o}-f^5G$	2-3	0.95	17075.053	17070.391	-9	5856.497 ^A	3	5.989	6.715	•••	
2333	$x^3P^0-e^3G$	2-3	1.26	16461.604	16457.108	-8	6074.742 ^A	3	5.989	6.742	• • •	
2334	$x^{3}P^{\circ}-s^{6}D6s^{5}D$	2-3	1.04	15243.460	15239.296	-7	6560.190 ^A	3	5.989	6.802		
		1-2	2.22	15110.259	15106.131	18	6618.020 ^D		6.015	6.836	• • •]
	0 - 0	2-1	0.95	14283.714	14279.811	6	7000.980 ^A	-3	5.989	6.857	•••	
2335	$x^3P^{\circ}-f^3F$	1-2	1.11	14571.577	14567.595	-6	6862.675 ^A	3	6.015	6.866		
2336	$w^3F^{\circ}-e^5P$	2-1	2.79	38661.582	38651.041	-135	2586.547 ^A	9	6.129	6.449	•••	
2337	$w^3F^{\circ}-e^5H$	4-3	1.20	18580.077	18575.005	-24	5382.109 ^B	7	6.089	6.756		
2338	$w^3F^{\circ}{-}e^3G$	2-3	1.11	20217.336	20211.818	4	4946.250 ^B	-1	6.129	6.742		
2339	$w^3F^{\circ}-e^3H$	4-4	0.48	18360.361	18355.348	13	5446.516 ^B	-4	6.089	6.764	•••	
2340	$w^{3}F^{0}\!-\!f^{3}F$	4-4	1.54	17939.066	17934.169	-3	5574.426^{B}	1	6.089	6.780		
		2-3	0.70	17569.122	17564.325	6	5691.804 ^A		6.129	6.834		
		3-3	1.18	17000.881	16996.238	6	5882.048 ^A	-2	6.105	6.834	•••	
2341	$v^3D^{\circ}-g^5F$	2-3	1.38	21794.288	21788.342	-28	4588.358 ^A	6	6.105	6.674		
2342	$v~^3D^{\circ}-f~^5P$	2-3	2.48	25523.428	25516.466	7	3917.969 ^A	-1	6.105	6.591		
2343	$v~^3D$ ° $-f~^3F$	3-4	1.11	18023.522	18018.601	-23	5548.305 ^A		6.092	6.780		
		3-3	1.20	16694.750	16690.190	17	5989.907 ^B	-6	6.092	6.834		
2344	$n^7 D^{\circ} - g^7 D$	4-5	2.97	23573.102	23566.671	6	4242.123 ^A		6.144	6.670	0.31^{a}	
		3-4	2.92	23150.913	23144.597	11	4319.484 ^A		6.175	6.710	-0.07^a	
		2-3	2.77	22746.643	22740.437	10	4396.253 ^A		6.200	6.745		_
		5-5	3.20	22479.411	22473.278	5	4448.515^{D}	-1	6.119	6.670	0.44^{a}	I
		1 - 2	2.47	22426.100	22419.981	-5	4459.090 ^A	1	6.218	6.771		

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{} \ (A)$	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
		4-4	2.60	21900.973	21894.998	5	4566.007 ^A		6.144	6.710	-0.35ª	
		1 - 1	1.93	21762.889	21756.951	0	4594.978 ^A	0	6.218	6.788		
		3-3	2.08	21741.408	21735.476	14	4599.518 ^A	-3	6.175	6.745		
		2 - 1	2.00	21101.164	21095.406	0	4739.075 ^A	0	6.200	6.788		
		5-4	1.90	20953.817	20948.099	4	4772.400 ^A	-1	6.119	6.710	• • • •	
2345	$n~^7D^{ m o}$ – $s~^6\!D6s~^5D$	3-4	2.00	21392.003	21386.166	0	4674.644 ^D		6.175	6.754		I
		2-3	1.46	20591.770	20586.150	-4	4856.309 ^A		6.200	6.802		
		4-4	1.40	20320.383	20314.837	-4	4921.167 ^A		6.144	6.754		
		2-2	3.45	19509.766	19504.441	27	5125.638^{D}		6.200	6.836		II
		5-4	0.90	19502.457	19497.134	4	5127.559 ^A		6.119	6.754	• • •	
		4-3	0.70	18846.269	18841.124	21	5306.090 ^B	-6	6.144	6.802	•••	
2346	n 7D 0 $-$ 4 F 6 s 5F	4-5	1.08	15255.176	15251.008	0	6555.152 ^A	0	6.144	6.957	• • •	
2347	n 7D $^{\circ}-s$ 6D 5D	3-4	0.85	15619.384	15615.117	-17	6402.301 ^A	7	6.175	6.969	• • •	
		3-3	1.32	15309.563	15305.380	5	6531.865 ^A		6.175	6.985	• • •	
		4-4	1.23	15040.276	15036.167	5	6648.814 ^A		6.144	6.969		
		3-2	1.59	14983.055	14978.962	-2	6674.206 ^A		6.175	7.002		
		2-1	1.30	14866.278	14862.216	2	6726.633 ^A		6.200	7.034		
		4-3	1.32	14752.763	14748.732	0	6778.391 ^A	0	6.144	6.985	• • •	
2348	$n~^7D^{\circ}\!-\!s~^6\!D5d~^5G$	5-6	1.56	14307.138	14303.228	0	6989.518 ^A		6.119	6.985		
		4-5	0.60	14302.255	14298.347	-12	6991.904 ^B		6.144	7.011		
		2 - 3	1.54	14190.248	14186.370	-2	7047.093 ^A		6.200	7.074		
		5-5	1.76	13892.182	13888.385	-4	7198.293 ^A	2	6.119	7.011	• • •	
2349	n 7D $^{\circ}-s$ 6D5d 7F	1-1	2.05	14162.053	14158.182	2	7061.123 ^A		6.218	7.093	• • •	
		5-6	2.84	14133.007	14129.144	-2	7075.635 ^A		6.119	6.996	• • •	
		2-3	2.45	14132.759	14128.896	-2	7075.759 ^A		6.200	7.077	• • •	
		4-5	2.21	13728.726	13724.973	0	7283.997 ^A		6.144	7.047		
		5-5	1.28	13350.437	13346.787	0	7490.391 ^A	0	6.119	7.047	• • •	
		3-4	1.65	13329.673	13326.029	4	7502.059 ^A	-2	6.175	7.105	• • •	
2350	n 7D $^{\circ}$ $-s$ 6D5d 7D	2-2	0.90	14632.112	14628.114	11	6834.283^{B}	-5	6.200	7.047	• • •	
		4-5	2.30	14549.088	14545.112	4	6873.283 ^A		6.144	6.996	• • •	
		4-4	2.39	14506.882	14502.917	6	6893.280 ^A		6.144	6.999		
		2-1	1.28	14294.223	14290.317	4	6995.833 ^A		6.200	7.067	• • •	
		3-2	2.49	14209.486	14205.603	2	7037.552 ^A		6.175	7.047	• • •	
		2 - 3	0.78	14160.585	14156.715	-16	7061.855^{B}	8	6.200	7.076		
		5-5	2.80	14124.938	14121.077	2	7079.677 ^A	-1	6.119	6.996	• • •	
		5-4	2.47	14085.157	14081.308	10	7099.672 ^A	-5	6.119	6.999	• • •	
2351	n 7D ° $-s$ 6D5d 7P	3-4	2.45	14206.125	14202.243	0	7039.217 ^A	0	6.175	7.048		
		1 - 2	2.07	14008.311	14004.482	-2	7138.619 ^A	1	6.218	7.103		
		4-4	1.45	13725.438	13721.686	-4	7285.742 ^A	2	6.144	7.048		
2352	$n~^7D^{\circ} - s~^6\!D5d~^7G$	1-1	1.76	13951.422	13947.609	-4	7167.728^{D}	2	6.218	7.107		II
		1 - 2	1.32	13702.305	13698.559	2	7298.042 ^A		6.218	7.123		
		5-6	1.08	13293.320	13289.685	-2	7522.575 ^A		6.119	7.051		
		3-3	1.32	13234.330	13230.711	2	7556.106^{B}		6.175	7.112		
		4-5	1.56	13213.378	13209.766	2	7568.087 ^A	-1	6.144	7.083	• • •	
2353	$n\ ^7D$ ° $-s\ ^6\!D$ 5 $d\ ^5S$	$^{2-2}$	1.15	14898.939	14894.868	-2	6711.887^{D}	1	6.200	7.032		II
		3-2	1.48	14461.004	14457.052	2	6915.149 ^A	-1	6.175	7.032		
2354	$n^{7}D^{\circ}-s^{6}D5d^{5}F$	2-3	1.00	14884.562	14880.495	-2	6718.370 ^A	1	6.200	7.033		
		2 - 1	2.14	14145.638	14141.772	2	7069.317 ^A		6.200	7.077		
		4-3	0.90	13950.591	13946.778	2	7168.155^{B}		6.144	7.033		
		4-5	1.20	13882.832	13879.037	4	7203.141 ^A		6.144	7.037		
		3-4	2.14	13661.220	13657.486	2	7319.990^{D}		6.175	7.082		I
		4-4	1.45	13216.141	13212.527	17	7566.505^{D}		6.144	7.082	•••	II
	$n^{7}D^{\circ}-{}^{4}F6s^{3}F$	3-4	2.26	14279.580	14275.677	2	7003.007^{A}	-1	6.175	7.043		
2355												
2355	,, <u>D</u> 100 1	4-4	2.33	13793.995	13790.225	2	7249.531 ^A	-1	6.144	7.043		

·				1A	BLE 2—Cont	inued						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
2356	$n^{7}D^{\circ}-s^{6}D5d^{5}P$	2-3	2.06	13982.849	13979.027	2	7151.618 ^A	-1	6.200	7.087		
2356		1-2	1.11	13792.125	13788.355	-2	7250.514 ^A		6.218	7.117		
j		3-3	0.70	13596.407	13592.690	0	7354.884^{B}	0	6.175	7.087		
2357	$n~^7D^{ m o}\!-\!s~^6\!D5d~^7S$	2-3	1.54	13459.421	13455.741	5	7429.740 ^A	-3	6.200	7.121		
		3-3	1.15	13100.986	13097.404	-7	7633.013^{B}	4	6.175	7.121	• • •	
2358	n 7D 0 $-s$ 4D4d 5F	3-4	0.90	12028.448	12025.157	-12	8313.624^{B}	8	6.175	7.206		
2359	$n^7D^{\circ}-i^5D$	4-4	1.58	12286.878	12283.516	-9	8138.764 ^D	6	6.144	7.153		II
2360	$n~^7D^{\circ}$ – $s~^6D7s~^7D$	4-5	1.66	11992.829	11989.547	0	8338.316 ^A	0	6.144	7.178		
		2-3	1.81	11803.887	11800.657	-1	8471.785^{C}	1	6.200	7.250		
		5-5	1.85	11703.148	11699.946	0	8544.709 ^A	0	6.119	7.178		
		2-1	1.18	11427.196	11424.068	4	8751.053 ^B	-3	6.200	7.285	• • •	
2361	n 7D $^{\circ}-g$ 5G	4-5	1.58	11477.461	11474.320	-3	8712.728 ^A	2	6.144	7.224		
		4-4	2.18	11158.948	11155.893	12	8961.418 ^D	-10	6.144	7.255		II
2362	n 7D $^{\circ}$ $-s$ 6D 7s 5D	3-4	1.56	11742.438	11739.224	7	8516.119 ^A	-5	6.175	7.231		
		3-3	1.74	11164.205	11161.149	-1	8957.198 ^D	1	6.175	7.285	• • •	I
2363	$y^3H^{\circ}-e^3H$	4-5	1.18	22027.766	22021.755	0	4539.725 ^B	0	6.165	6.728		
2364	$y^{3}H^{\circ}-s^{6}D5d^{5}D$	4-4	2.61	15430.739	15426.523	-24	6480.571^{C}	10	6.165	6.969		
		5-4	3.51	15144.330	15140.193	-16	6603.131^{D}	7	6.150	6.969		Ne
2365	$y^{3}H^{\circ}-59390^{e}$	4-3	1.91	10348.019	10345.184	7	9663.685 ^A	-7	6.165	7.363		
2366	$y^{3}H^{\circ}-61724^{e}$	4-4	1.57	8334.8315	8332.5414	-3.5	11997.843 ^B	5	6.165	7.653	•••	
2367	$v^{3}G^{0}-e^{5}H$	5-6	1.79	25693.163	25686.154	0	3892.086^{A}	0	6.132	6.615		
2368	$v\ ^3G^{0}-e\ ^3G$	3-3	0.90	22080.938	22074.913	0	4528.793^{B}	0	6.180	6.742		
2369	$v^{3}G^{0}-e^{3}H$	3-4	1.32	21254.757	21248.957	-9	4704.829 ^A	2	6.180	6.764		
		4-4	1.20	20294.131	20288.592	-4	4927.533^{D}	1	6.153	6.764	•••	I
2370	$v^{3}G^{\circ}-{}^{4}F6s^{5}F$	3-4	1.45	15002.346	14998.247	5	6665.624 ^A	-2	6.180	7.007		
2371	$v^3G^0-61724^e$	3-4	1.98	8421.5923	8419.2787	-0.7	11874.239 ^B	1	6.180	7.653		
		4-4	2.02	8266.5506	8264.2789	0.0	12096.944 ^A	0	6.153	7.653	• • •	
		5-4	1.04	8154.0017	8151.7604	5.3	12263.917 ^B	-8	6.132	7.653	•••	
2372	$n\ ^7F^{ extsf{o}}\!-\!g\ ^7D$	4-5	2.49	28590.772	28582.974	8	3497.632^{A}	-1	6.237	6.670		
		5-5	2.00	26676.170	26668.894	0	3748.664 ^A	0	6.205	6.670		
		2-3	1.45	25980.679	25973.593	7	3849.014 ^B	-1	6.268	6.745	• • •	
		3-3 $1-2$	2.93 2.12	25177.805 25098.694	25170.937 25091.847	6 13	3971.752 ^A 3984.271 ^A	-1 -2	6.253 6.277	6.745 6.771	• • •	
		6-5	3.46	24735.852	24729.104	6	4042.715 ^A	-2 -1	6.169	6.670	0.71 ^a	
		2-2	2.76	24655.148	24648.422	-12	4055.948 ^A	2	6.268	6.771		
		5-4	3.33	24554.652	24547.953	6	4072.548 ^A	-1	6.205	6.710	0.48^{a}	
		0-1	2.20	24462.360	24455.686	6	4087.913 ^A	-1	6.281	6.788	• • •	
		4-3	3.20	24381.020	24374.369	12	4101.551 ^A	-2	6.237	6.745	• • •	
		$1-1 \\ 3-2$	2.58 2.71	24270.908 23930.973	24264.286 23924.445	12 -11	4120.159 ^A 4178.685 ^A	-2 2	6.277 6.253	6.788 6.771	• • •	
		2-1	2.38	23855.895	23849.387	-6	4191.836 ^A	1	6.268	6.788		
2373	$n^{7}F^{\circ}-s^{6}D6s^{5}D$	5-4	1.85	22585.053	22578.891	0	4427.707 ^A	0	6.205	6.754		
2010	1 0 1000 10	3-3	1.49	22564.179	22558.023	10	4431.803 ^B	-2	6.253	6.802		
		4-3	1.41	21922.113	21916.131	0	4561.604 ^B	0	6.237	6.802		
		3-2	1.43	21271.377	21265.573	-54	4701.153^{D}	12	6.253	6.836	• • •	II
2374	n $^7F^{\circ}-^4F6s$ 5F	5-5	1.48	16497.044	16492.538	-3	6061.692^{A}	1	6.205	6.957		
		4-4	0.90	16095.307	16090.911	3	6212.991 ^B	-1	6.237	7.007	• • •	
		3-3	1.69	14129.017	14125.155	12	7077.633 ^D	-6	6.253	7.130	•••	II
2375	$n^{7}F^{\circ}-s^{6}D5d^{5}D$	5-4	0.70	16246.011	16241.574	0	6155.357 ^B	0	6.205	6.969	•••	

					ole 2—Coni							
No.	Multiplet	J-J	I ²	λ_{vac}^{3}	λ _{air} (Å)	o-R ⁴	σ 5	o-R ⁶	E(1)		log(gf) 7	Bl. ⁸
	(MT) ¹			(Å)	(Å)	(mÅ)	(cm ⁻¹)	(mK)	(eV)	(eV)		
2376	n $^7F^{\circ}$ $-s$ 6D5d 5G	3-4	0.85	16025.330	16020.953	-5	6240.121 ^A		6.253	7.026		
		4-5	0.95	16006.640	16002.268	0	6247.407 ^A		6.237	7.011		
		5-6	2.14	15899.100	15894.757	5	6289.664 ^A		6.205	6.985		
		4-4	1.15	15698.784	15694.496	-2	6369.920 ^A		6.237	7.026		
		5-5	1.23	15388.313	15384.109	2	6498.438 ^A		6.205	7.011		
		6–6	1.11	15188.990	15184.840	0	6583.716 ^A		6.169	6.985		
		1-2	1.08	15136.827	15132.692	2	6606.404 ^D		6.277	7.096		I
		4-3	1.26	14809.564	14805.518	-7	6752.393 ^A	3	6.237	7.074	• • •	
2377	$n^{7}F^{\circ}-s^{6}D5d^{7}F$	5-6	0.30	15684.365	15680.080	12	6375.776^{B}	-5	6.205	6.996		
2377	,, 1 0 250 1	2-3	1.00	15317.419	15313.234	5	6528.515^{A}		6.268	7.077		
		4-5	1.15	15291.670	15287.492	-5	6539.508^{A}		6.237	7.047		
		0-1	0.85	15257.725	15253.556	7	6554.057^{A}		6.281	7.093		
		1-1	0.70	15183.015	15178.867	-2	6586.307^{B}		6.277	7.093		
		3-3	1.98	15034.761	15030.653	5	6651.253^{A}		6.253	7.077		
		2-1	1.38	15019.570	15015.466	0	6657.980 ^A		6.268	7.093		
		6-6	2.76	14992.876	14988.780	-2	6669.834 ^A		6.169	6.996		
		4-3	1.18	14746.972	14742.942	4	6781.053 ^D		6.237	7.077		I
		5-5	2.53	14726.375	14722.351	2	6790.537 ^A		6.205	7.047		•
		3-4	2.54	14546.948	14542.973	-2	6874.294^{D}		6.253	7.105		II
		4-4	0.85	14277.368	14273.466	4	7004.092^{A}		6.237	7.105		
2378	$n {}^7F^{\circ} - s {}^6\!D5d {}^7D$	4-5	1.18	16316.421	16311.964	-3	6128.795 ^A		6.237	6.996		
		4-4	1.88	16263.367	16258.925	11	6148.788 ^A		6.237	6.999		
		5-5	1.69	15674.413	15670.131	5	6379.824 ^A		6.205	6.996		
		5-4	1.36	15625.427	15621.158	-7	6399.825 ^A		6.205	6.999		
		2 - 3	1.58	15350.122	15345.929	5	6514.606 ^A		6.268	7.076		
		6-5	2.29	14983.801	14979.707	9	6673.874 ^A	-4	6.169	6.996	• • •	
2379	$n^{7}F^{\circ}$ – $s^{6}D5d^{7}P$	2-3	1.62	16931.234	16926.610	26	5906.244 ^D	-9	6.268	7.000		Ne
2319	$n \cdot r - s D J a I$	2-2	1.89	14846.760	14842.704	-4	6735.476 ^A		6.268	7.103		1,0
		3-2	0.60	14581.074	14577.090	15	6858.205^{B}		6.253	7.103		
2380	$n {}^7F^{\circ} - s {}^6\!D5d {}^7G$	1-1	0.95	14941.206	14937.124	22	6692.900 ^B		6.277	7.107		
		3-4	2.17	14874.686	14870.621	-2	6722.831 ^A		6.253	7.086		
		2 - 1	1.04	14782.864	14778.824	-13	6764.589 ^A		6.268	7.107		
		6-7	3.13	14753.823	14749.792	0	6777.904 ^A		6.169	7.009		
		2 - 3	2.40	14693.777	14689.762	0	6805.602^{A}		6.268	7.112		
		5-6	3.03	14656.906	14652.901	-4	6822.722 ^A		6.205	7.051		
		1 - 2	2.32	14655.813	14651.808	-15	6823.231 ^A		6.277	7.123	• • •	
		4-5	2.89	14655.029	14651.024	2	6823.596 ^A		6.237	7.083		
		4-4	2.11	14592.937	14588.949	2	6852.630 ^A		6.237	7.086		
		2 - 2	1.67	14503.479	14499.516	6	6894.897 ^A	-3	6.268	7.123		
		3-3	1.90	14433.473	14429.529	0	6928.339 ^A		6.253	7.112		
		5-5	1.00	14135.024	14131.161	6	7074.625^{B}	-3	6.205	7.083		
2201	n $^7F^{\circ}$ $-s$ 6D5d 5F	2 2	1.04	15888.488	15884.148	0	6293.865 ^A	0	6.253	7.033		
2381	$n \cdot F \circ -s \circ D \circ a \circ F$	3-3 4-5	1.04 2.12	15483.111	15478.882	5	6458.650 ^A		6.237	7.033		
					15328.343	-2	6522.080^{A}		6.268	7.077		
		2-1	1.28	15332.532		0	6692.223^{A}		6.253	7.082		
		3-4	1.60	14942.717	14938.635 14899.759		6709.684 ^B		6.205	7.082		
		5-5	0.90	14903.831	14654.405	-2 4	6822.022 ^A		6.237	7.037		
		4–4	2.23	14658.410	14034.403	4			0.237	7.062	• • •	
2382	$n^{7}F^{\circ}-{}^{4}F6s^{3}F$	3-4	0.85	15685.691	15681.406	7	6375.237 ^B	-3	6.253	7.043		
		2 - 3	1.20	15008.117	15004.016	5	6663.061 ^A		6.268	7.094		
		5-4	1.92	14801.504	14797.460	2	6756.070 ^A	-1	6.205	7.043		
0202	7 ma . 60 e 15 n			14865.211	14861.149	0	6727.116 ^A		6.253	7.087		
2383	$n^{7}F^{\circ}-s^{6}D5d^{5}P$	3-3	2.26				6775.695 ^A		6.277	7.117		
		1-2	1.59	14758.633	14754.600	2			6.268	7.117		
		2-2	1.71	14604.140	14600.150	-6	6847.373 ^A 6856.916 ^A			7.117		
		4-3	1.56	14583.815	14579.830	0			6.237			
2384	$n\ ^7F^{ extsf{o}}\!-\!s\ ^6\!D5d\ ^7S$	2-3	2.07	14529.597	14525.627	2	6882.503 ^A	-1	6.268	7.121		
2385	$n^{7}F^{\circ}-s^{6}D7s^{7}D$	4-4	2.47	12666.749	12663.285	5	7894.685^{L}	-3	6.237	7.215		Ne
2363	n·r·-s·Dis·D		1.26	12303.087	12003.283		8128.041 ^A		6.268	7.213		140
		2-2 1-1	1.48	12303.087	12293.722		8128.041 8132.140 ^A		6.277	7.285		
								-/				

No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{qir}^{} \ (A)$	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
		6-5	1.84	12286.657	12283.296	-3	8138.910 ^A		6.169	7.178	••••	
		5-4	1.64	12276.382	12273.024	-5	8145.722 ^A		6.205	7.215	• • •	
		4-3	1.28	12229.308	12225.963	7	8177.077 ^E		6.237	7.250	• • •	
		3-2	1.48	12120.072	12116.756	3	8250.776 ^E	-2	6.253	7.276	• • •	
2386	$n^{7}F^{\circ}-s^{6}D7s^{5}D$	5-4	1.68	12093.081	12089.772	-6	8269.191 ^A	4	6.205	7.231	•••	
2387	$n^{7}P^{\circ}-g^{7}D$	3-4	2.76	28601.100	28593.299	8	3496.369 ^A	-1	6.277	6.710		
		2-3	2.28	28542.038	28534.254	16	3503.604 ^A	-2	6.311	6.745		
		4-5	2.74	27661.637	27654.092	0	3615.115^{L}	, 0	6.222	6.670		II
		2-2	2.60	26950.262	26942.911	-22	3710.539 ^A	3	6.311	6.771		
		3-3	2.76	26480.224	26473.002	14	3776.403 ^A	-2	6.277	6.745		
		2 - 1	2.69	25998.153	25991.062	-14	3846.427 ^A	2	6.311	6.788		
		4-4	3.13	25387.154	25380.229	0	3939.000 ^A	0	6.222	6.710	-0.23^a	
		3-2	2.76	25104.579	25097.731	-6	3983.337 ^A	1	6.277	6.771		
		4-3	1.75	23702.085	23695.619	-17	4219.038 ^A	3	6.222	6.745	•••	
2388	$n^7 P^{\circ} - s^6 D6s^5 D$	4-4	1.87	23287.441	23281.088	-11	4294.160 ^A	2	6.222	6.754		
2389	$n{}^{7}P^{\circ}-{}^{4}F6s{}^{5}F$	3-4	1.38	16984.137	16979.499	-9	5887.847^{D}	3	6.277	7.007		I
		4-5	1.75	16868.663	16864.056	-28	5928.152 ^A	10	6.222	6.957		
		2-3	1.36	15129.778	15125.645	23	6609.482^{B}		6.311	7.130	• • •	
2390	$n^{7}P^{\circ}-s^{6}D5d^{5}D$	3-4	0.30	17923.800	17918.906	13	5579.174 ^B	-4	6.277	6.969		
		3-3	1.38	17516.981	17512.199	21	5708.746 ^D		6.277	6.985	•••	I
		3-2	1.32	17090.823	17086.157	-12	5851.093 ^B		6.277	7.002	•••	_
		4-4	1.56	16606.333	16601.798	25	6021.799 ^A		6.222	6.969		
2391	n $^7P^{\circ}$ $-s$ 6D5d 5G	2-3	0.48	16248.432	16243.994	5	6154.440 ^B	-2	6.311	7.074		
		4-5	1.67	15711.193	15706.901	2	6364.889 ^A	-1	6.222	7.011		
		3-3	1.72	15558.773	15554.522	2	6427.242^{D}	-1	6.277	7.074	• • •	I
2392	$n^{7}P^{\circ}$ – $s^{6}D5d^{7}F$	2-3	1.45	16173.104	16168.686	5	6183.105^{A}	-2	6.311	7.077		
		2-1	1.30	15841.408	15837.081	0	6312.570 ^A	0	6.311	7.093		
		3-3	1.87	15489.692	15485.461	2	6455.906 ^A	-1	6.277	7.077		
		4-5	2.53	15021.806	15017.702	-2	6656.989 ^A	1	6.222	7.047		
		3-4	2.43	14972.424	14968.333	2	6678.945 ^A	-1	6.277	7.105	•••	
2393	$n^{7}P^{\circ}-s^{6}D5d^{7}D$	3-2	2.05	16091.564	16087.169	3	6214.436 ^A	-1	6.277	7.047		
		4-5	2.10	16009.541	16005.168	3	6246.275 ^A	-1	6.222	6.996		
		4-4	2.29	15958.454	15954.095	5	6266.271 ^A	-2	6.222	6.999		
		3-3	1.26	15523.136	15518.896	0	6441.997 ^A		6.277	7.076	•••	
2394	$n^{7}P^{\circ}-s^{6}D5d^{7}P$	2-3	1.95	17982.878	17977.968	-6	5560.845 ^A		6.311	7.000		
		3-3	1.73	17141.917	17137.237	-29	5833.653 ^A		6.277	7.000	• • •	
		3-4	1.66	16087.246	16082.853	-8	6216.104 ^A		6.277	7.048	• • •	
		4-3	1.30	15933.030	15928.678	3	6276.270^{D}	-1	6.222	7.000		Ne
		2-2	2.26	15649.295	15645.020	0	6390.064 ^A		6.311	7.103	• • •	
		4-4	2.34	15017.872	15013.768	-5	6658.733 ^A		6.222	7.048	• • •	
		3-2	1.26	15008.576	15004.476	16	6662.857 ^D		6.277	7.103	•••	II
2395	$n^{7}P^{\circ}-s^{6}D5d^{7}G$	2-1	1.15	15578.318	15574.063	-12	6419.178 ^A		6.311	7.107	• • •	_
		2-3	2.08	15479.423	15475.194	7	6460.189 ^D	_	6.311	7.112	• • •	I
		3-4	1.65	15319.840	15315.655	2	6527.483 ^A		6.277	7.086	• • •	
		2-2	1.45	15268.371	15264.200	7	6549.487 ^A		6.311	7.123	• • •	
		3-3	1.96	14852.240	14848.182	4	6732.991 ^A		6.277	7.112	• • • •	
2206	7 DO 6 D 5 15 G	4-5	1.67	14406.977	14403.040	-4	6941.081 ^A		6.222	7.083	• • •	
2396	$n^{7}P^{\circ}-s^{6}D5d^{5}S$	3-2	1.64	16414.876	16410.393	3	6092.035 ^A		6.277	7.032	•••	
2397	n $^7P^{\circ}$ – s 6D5d 5F	3-2	0.30	15813.171	15808.852	-5	6323.842 ^A	_	6.277	7.061	•••	
		3-4	2.49	15392.015	15387.810	2	6496.875 ^A		6.277	7.082	•••	
		4–3	1.62	15287.831	15283.655	-7	6541.150^{D}		6.222	7.033	•••	I
2398	$n^{7}P^{\circ}-{}^{4}F6s^{3}F$	3-4	1.58	16181.512	16177.093	5	6179.892 ^A		6.277	7.043	•••	
		2 - 3	0.90	15828.657	15824.334	-3	6317.655 ^A	1	6.311	7.094		
		$^{2-2}$	1.38	14514.363	14510.396	17	6889.727 ^A	-8	6.311	7.165		

				TABLE	: 2—Contini	ıed					
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) 1 (eV)	log(gf) ⁷	Bl. ⁸
2399	$n^{7}P^{\circ}-s^{6}D5d^{5}P$	2-2 3-3	0.95 2.06	15379.963 15309.790	15375.761 15305.608	-14 2	6501.966^B 6 6531.768^A -1	6.311 6.277	7.117 7.087		
2400	$n^{7}P^{\circ}-s^{6}D5d^{7}S$	2-3 3-3	2.53 0.90	15297.319 14684.494	15293.140 14680.482	2 -24	6537.093 ^A -1 6809.904 ^B 11	6.311 6.277	7.121 7.121		
2401	$n^7 P^{\circ} - s^6 D7 s^7 D$	4-5 3-2	1.15 1.18	12967.968 12413.986	12964.422 12410.590	-2 0	7711.308^{A} 1 8055.430^{A} 0	6.222 6.277	7.178 7.276		
2402	$n^{7}P^{\circ} - s^{6}D7s^{5}D$	3-3	1.36	12293.933	12290.570	-15	8134.093 ^D 10	6.277	7.285		I
		4-4	1.04	12291.603	12288.241	6	8135.635 ^A -4	6.222	7.231		
		2 - 1	1.63	12177.059	12173.728	3	8212.163 ^D -2	6.311	7.329		Ne
		3-2	1.98	11894.297	11891.043	-1	8407.390 ^C 1	6.277	7.319		
		4-3	2.31	11659.482	11656.291	3	8576.710 ^A -2	6.222	7.285	•••	
2403	$e^{ 7}F$ $-s^{ 6}D$ 6 $p^{ 7}D$ °	3-4	1.81	18629.279	18624.194	3	5367.894 ^D -1	6.341	7.007		I
		3-3	1.52	18497.243	18492.193	17	5406.211 ^D -5	6.341	7.012	• • •	I
		1-2	1.20	17466.080	17461.311	0	5725.383 ^A 0	6.349	7.059	• • •	
		6-5	1.85	17306.421	17301.696	-3	5778.202 ^A 1	6.241	6.958	• • •	
		2-1	0.90	17143.569	17138.888	0	5833.091 ^D 0	6.364	7.087	•••	I
2404	$e~^7F$ – $s~^6D6p~^7F$ $^{\circ}$	4-4	1.94	17971.305	17966.399	10	5564.426 ^A -3	6.347	7.037		
		3-4	1.28	17832.123	17827.255	-10	5607.857 ^B 3	6.341	7.037	• • •	
		5-5	0.30	17638.202	17633.386	16	5669.512 ^B -5	6.302	7.005	• • •	
		2-2	1.15	17213.564	17208.864	-3	5809.372 ^A 1	6.364	7.084	• • •	
	7- (7	3-2	2.20	16690.099	16685.541	-6	5991.576 ^A 2	6.341	7.084	•••	
2405	$e^{7}F$ – $s^{6}D6p^{7}P^{\circ}$	5-4 3-3	1.23 0.60	17518.783 17422.923	17513.999 17418.165	-9 24	5708.159 ^B 3 5739.565 ^B -8	6.302 6.341	7.010 7.053	• • • •	
2406	$e^{7}F$ – $s^{6}D6p^{5}F^{0}$	4-5	1.57	18132.372	18127.422	39	5514.998 ^D -12	6.347	7.031		II
	-	5-5	1.08	17024.643	17019.995	20	5873.838 ^B -7	6.302	7.031	•••	
2407	$e^{7}F$ – $s^{6}\!D6p^{5}D^{\circ}$	5-4	1.23	16952.316	16947.686	-11	5898.899 ^A 4	6.302	7.034		
		4-3	1.53	16732.881	16728.311	-3	5976.257 ^D 1	6.347	7.088		I
		3-3	2.16	16612.173	16607.636	-3	6019.682^{A} 1	6.341	7.088	• • •	
		2-2	1.08	16434.653	16430.164	0	6084.704^{D} 0	6.364	7.118	• • •	II
		1-1	0.85	16146.869	16142.459	-18	6193.151 ^A 7	6.349	7.117	• • •	
		1-0	2.18	15618.367	15614.100	5	6402.718 ^A -2	6.349	7.143	• • •	
2408	$e^{7}F - s^{6}D_{4.5}4f[1.5]^{\circ}$	2-2	2.17	18319.547	18314.546	-17	5458.650 ^D 5	6.364	7.041		Ne
	$e^{7}F - s^{6}D_{4.5}4f[1.5]^{\circ}$	1-1	1.52	17909.537	17904.648	22	5583.617 ^A -7	6.349	7.041	• • •	
	$e^{7}F - s^{6}D_{4.5}4f$ [2.5]°	3-3	1.20	17766.994	17762.143	-6	5628.414 ^D 2	6.341	7.039	• • •	П
	$e^{7}F - s^{6}D_{4.5}4f$ [2.5]° $e^{7}F - s^{6}D_{4.5}4f$ [1.5]°	$3-2 \\ 3-2$	1.36 1.26	17759.812 17727.827	17754.963 17722.987	-6 3	5630.690 ^B 2 5640.849 ^A -1	6.341 6.341	7.040 7.041	•••	
	$e^{7}F - s^{6}D_{4.5}4f$ [5.5]°	5-6	1.46	16904.850	16900.234	-3	5915.462 ^A 1	6.302	7.041	• • • •	
	$e^{7}F - s^{6}D_{4.5}4f$ [5.5]°	5-5	1.18	16898.568	16893.954	-3	5917.661 ^A 1	6.302	7.036		
	$e^{7}F - s^{6}D_{4.5}4f$ [4.5]°	5-5	0.70	16888.237	16883.625	17	5921.281 ^D -6	6.302	7.036		II
	$e^{7}F - s^{6}D_{4.5}4f$ [4.5]°	5-4	0.90	16887.652	16883.041	20	5921.486 ^A -7	6.302	7.036		
	$e^{7}F-s^{6}D_{4.5}4f$ [3.5]°	5-4	0.85	16859.636	16855.032	3	5931.326 ^B -1	6.302	7.038		
	$e^{7}F - s^{6}D_{4.5}4f$ [5.5]°	6-6	3.28	15608.489	15604.225	0	6406.770^D 0	6.241	7.036		Ne
	$e^{7}F - s^{6}D_{4.5}4f$ [5.5]°	6-5	1.90	15603.138	15598.876	2	6408.967 ^A -1	6.241	7.036		
	$e^{7}F - s^{6}D_{4.5}4f$ [6.5]°	6–7	3.39	15595.758	15591.497	2	6412.000 ^D -1	6.241	7.036		I
	$e^{7}F - s^{6}D_{4.5}4f$ [4.5]°	6-5	2.25	15594.310	15590.051	0	6412.595 ^A 0	6.241	7.036	• • •	
2409	$e^{7}F$ – $s^{6}D6p^{5}P^{\circ}$	$\begin{array}{c} 2-2 \\ 1-2 \end{array}$	1.30 1.68	16376.958 16053.436	16372.485 16049.051	3 -5	6106.140^{A} -1 6229.196^{A} 2	6.364 6.349	7.121 7.121		
2410	$e^{7}F - s^{6}D_{3.5}4f$ [2.5]°	2-3	1.28	17185.685	17180.993	-12	5818.796 ^A 4	6.364	7.085		
441U	$e^{7}F - s^{6}D_{3.5}4f$ [2.3] $e^{7}F - s^{6}D_{3.5}4f$ [1.5]°	2-3	1.26	17178.553	17173.862	-12 6	5821.212 ^D -2	6.364	7.085		I
	$e^{7}F - s^{6}D_{3.5}4f$ [1.5]°	1-1	0.60	16822.934	16818.340	3	5944.266 ^D -1	6.349	7.086		I
	$e^{7}F - s^{6}D_{3.5}4f$ [1.5]°	1-2	1.28	16817.273	16812.681	8	5946.267 ^A -3	6.349	7.086		•
	$e^{7}F-s^{6}D_{3.5}4f[0.5]^{\circ}$	1 - 1	1.11	16815.212	16810.620	3	5946.996 ^A -1	6.349	7.086		
	$e^{7}F - s^{6}D_{3.5}4f[0.5]^{\circ}$	1 - 0	0.85	16812.201	16807.610	-3	5948.061 ^A 1	6.349	7.086		
	$e^{7}F - s^{6}D_{3.5}4f$ [4.5]°	4-5	1.59	16796.811	16792.224	-3	5953.511 ^A 1	6.347	7.085		
	$e^{7}F - s^{6}D_{3.5}4f$ [4.5]°	4-4	0.70	16792.890	16788.304	-11	5954.901 ^A 4	6.347	7.085		
	$e^{7}F - s^{6}D_{3.5}4f$ [5.5]°	4-5	1.62	16791.170	16786.585	-3	5955.511 ^A 1	6.347	7.085	• • •	

	Multiplet	J-J	I ²	λ_{vac}^{3}	$\frac{2-Continu}{\lambda_{qir}^3}$	o-R ⁴		o-R ⁶	E(1)	E(u)	log(gf)	7 Bl. ⁸
	(MT) ¹			(Å)	(A)	(mÅ)	(cm ⁻¹)	(mK)	(eV)	(eV)		
1	$e^{7}F - s^{6}D_{3.5}4f$ [3.5]°	4-4	1.48	16787.427	16782.842	-3	5956.839 ^A 5957.428 ^A		6.347	7.085	• • •	
	$e^{7}F - s^{6}D_{3.5}4f$ [3.5]° $e^{7}F - s^{6}D_{3.5}4f$ [4.5]°	4-3 3-4	0.78 1.57	16785.767 16671.343	16781.183 16666.790	0 14	5998.317 ^A		6.347 6.341	7.085 7.085		
	$e^{7}F - s^{6}D_{3.5}4f$ [3.5]°	3-4	2.68	16665.927	16661.376	-8	6000.266^{A}		6.341	7.085		
	$e^{7}F - s^{6}D_{3.5}4f$ [3.5]°	3-3	1.96	16664.297	16659.746	-3	6000.853^{A}		6.341	7.085		
	$e^{7}F - s^{6}D_{3.5}4f$ [2.5]°	3-2	2.20	16656.761	16652.212	-8	6003.568^{A}	3	6.341	7.086		
	$e^{7}F$ - $s^{6}D_{3.5}4f$ [4.5]°	5-5	2.85	15841.970	15837.643	-5	6312.346^{D}		6.302	7.085		II
	$e^{7}F - s^{6}D_{3.5}4f$ [5.5]°	5-6	3.24	15839.491	15835.164	-3	6313.334 ^A		6.302	7.085		
	$e^{7}F - s^{6}D_{3.5}4f$ [4.5]°	5-4	1.92	15838.490	15834.164	-3	6313.733 ^A		6.302	7.085	• • •	
	$e^{7}F - s^{6}D_{3.5}4f$ [5.5]°	5-5 5-4	1.86 1.59	15836.950 15833.620	15832.624 15829.295	-5 -5	6314.347 ^A 6315.675 ^A		6.302 6.302	7.085 7.085	• • •	
	$e^{7}F - s^{6}D_{3.5}4f$ [3.5]° $e^{7}F - s^{6}D_{3.5}4f$ [6.5]°	5-6	2.66	15823.460	15819.138	3	6319.730^{A}		6.302	7.085		
	$e^{7}F - s^{6}D_{3.5}4f$ [4.5]°	6-5	1.15	14697.999	14693.983	13	6803.647 ^B		6.241	7.085		
	$e^{7}F - s^{6}D_{3.5}4f$ [5.5]°	6-6	1.57	14695.854	14691.839	2	6804.640 ^A		6.241	7.085		
	$e^{7}F - s^{6}D_{3.5}4f$ [6.5]°	6-7	2.42	14683.856	14679.844	9	6810.200 ^A	-4	6.241	7.086		
2411	$e^{7}F$ – $s^{6}D_{2.5}4f$ [0.5]°	2-1	1.56	16419.250	16414.766	8	6090.412^{D}		6.364	7.119		II
	$e^{7}F - s^{6}D_{2.5}4f$ [1.5]°	2-1	2.05	16405.876	16401.395	16	6095.377 ^A		6.364	7.120		
	$e^{7}F - s^{6}D_{2.5}4f$ [1.5]°	2-2	2.14	16402.794	16398.315	0	6096.522^{A}		6.364	7.120	• • •	
	$e^{7}F - s^{6}D_{2.5}4f$ [2.5]°	2-3	2.26	16388.620	16384.144	-3	6101.795 ^A		6.364	7.121	• • •	
	$e^{7}F - s^{6}D_{2.5}4f$ [3.5]°	2-3	2.27	16370.818	16366.347	5	6108.430 ^A		6.364	7.121	• • •	
	$e^{7}F - s^{6}D_{2.5}4f$ [0.5]° $e^{7}F - s^{6}D_{2.5}4f$ [1.5]°	$1-1 \\ 1-2$	1.85 2.03	16094.071 16078.261	16089.676 16073.869	5 -3	6213.468 ^D 6219.578 ^A		6.349 6.349	7.119 7.120	• • •	I
	$e^{7}F - s^{6}D_{2.5}4f$ [2.5]°	1-2	1.18	16069.120	16064.731	0	6219.376 6223.116^{A}		6.349	7.120		
	$e^{7}F - s^{6}D_{2.5}4f$ [5.5]°	4-5	2.04	16033.801	16029.422	-5	6236.824 ^A		6.347	7.120		
	$e^{7}F - s^{6}D_{2.5}4f$ [2.5]°	4-3	1.89	16024.164	16019.787	-3	6240.575^{A}		6.347	7.121		
	$e^{7}F - s^{6}D_{2.5}4f$ [3.5]°	4-4	2.55	16011.456	16007.083	-3	6245.528^{A}	1	6.347	7.121		
	$e^{7}F-s^{6}D_{2.5}4f$ [4.5]°	4-5	3.13	16011.130	16006.757	-3	6245.655 ^A		6.347	7.121		
	$e^{7}F - s^{6}D_{2.5}4f$ [2.5]°	3-3	1.80	15913.428	15909.081	-8	6284.001^{D}		6.341	7.121	• • •	II
	$e^{7}F - s^{6}D_{2.5}4f$ [3.5]°	3-4	1.87	15900.895	15896.552	-5	6288.954 ^A		6.341	7.121	• • •	
	$e^{7}F - s^{6}D_{2.5}4f$ [4.5]°	3-4	2.66	15897.305	15892.963	-3 -8	6290.374 ^A 6290.640 ^A		6.341	7.121	• • •	
	$e^{7}F - s^{6}D_{2.5}4f$ [3.5]° $e^{7}F - s^{6}D_{2.5}4f$ [5.5]°	3-3 5-6	1.85 2.13	15896.633 15163.864	15892.291 15159.721	-8 -2	6594.625 ^A		6.341 6.302	7.121 7.120	• • •	
	$e^{7}F - s^{6}D_{2.5}4f$ [3.5]° $e^{7}F - s^{6}D_{2.5}4f$ [4.5]°	5-5	1.46	15141.216	15137.080	-2	6604.489 ^A		6.302	7.120	• • • •	
2412	$e^{7}F - s^{6}D_{1.5}4f$ [2.5]°	2-2	1.96	15868.985	15864.651	0	6301.600 ^A	0	6.364	7.145		
	$e^{7}F$ - $s^{6}D_{1.5}4f$ [3.5]°	2-3	2.26	15844.523	15840.195	0	6311.329 ^A	0	6.364	7.147		
	$e^{7}F - s^{6}D_{1.5}4f$ [2.5]°	1-2	2.06	15565.038	15560.786	-2	6424.655 ^A		6.349	7.145		
	$e^{7}F - s^{6}D_{1.5}4f$ [4.5]°	4-5	2.35	15555.684	15551.435	0	6428.518 ^A		6.347	7.144		
	$e^{7}F - s^{6}D_{1.5}4f$ [4.5]°	4-4	0.00	15552.926	15548.678	-10	6429.658 ^B 6448.945 ^A		6.347	7.144		
	$e^{7}F - s^{6}D_{1.5}4f$ [3.5]° $e^{7}F - s^{6}D_{1.5}4f$ [3.5]°	4-4 3-3	1.51 3.22	15506.412 15399.930	15502.176 15395.723	0 -7	6493.536 ^D	-	6.347 6.341	7.146 7.147		I
	$e^{7}F - s^{6}D_{1.5}4f$ [3.5] $e^{7}F - s^{6}D_{1.5}4f$ [4.5]°	5-5 6-5	0.90	13738.781	13735.025	-8	7278.666^{B}		6.241	7.147		1
2413	$e^{7}F - s^{6}D_{0.5}4f$ [2.5]°	2-3	3.39	15595.758	15591.497	-5	6412.000^{D}		6.364	7.159		I
2.15	$e^{7}F - s^{6}D_{0.5}4f$ [2.5]°	2-2	0.90	15594.987	15590.726	-2	6412.317 ^A		6.364	7.159		
	$e^{7}F - s^{6}D_{0.5}4f$ [2.5]°	1 - 2	1.57	15301.347	15297.167	-2	6535.372 ^A	1	6.349	7.159		
	$e^{7}F$ - $s^{6}D_{0.5}4f$ [2.5]°	3-3	1.58	15164.846	15160.703	11	6594.198 ^B	-5	6.341	7.159		
	$e^{7}F$ - $s^{6}D_{0.5}4f$ [3.5]°	3-4	2.18	15164.644	15160.501	-7	6594.286 ^A	3	6.341	7.159	• • •	
2414	$e^{7}F - s^{6}D_{4.5}5f$ [5.5]°	6-6	1.58	11195.168	11192.103	9	8932.425 ^B		6.241	7.349		
	$e^{7}F - s^{6}D_{4.5}5f$ [6.5]°	6–7	2.05	11191.523	11188.459	-8 	8935.334 ^A	6	6.241	7.349	•••	
2415	f $^7D-Dsp3$ $^5D^{ m o}$	2-3	2.07	34567.640	34558.214	0	2892.879 ^B	0	6.323	6.681	• • •	
2416	f 7D $-s$ 6D $6p$ 7D $^{\circ}$	3-4	1.79	17683.722	17678.894	25	5654.918 ^B		6.306	7.007		
		3-3	1.48	17564.672	17559.876	9	5693.246 ^A		6.306	7.012		
		4-4	1.38	17516.981	17512.199	-3	5708.746 ^D		6.299	7.007		I
		5-5	1.76	17414.248	17409.493	-9	5742.424 ^A		6.246	6.958	• • •	
2417	f 7D – s 6D6p 7F $^{\circ}$	5-6	0.60	16997.928	16993.286	9	5883.070 ^B		6.246	6.975		
		1-2	1.59	16414.116	16409.633	-3	6092.317 ^A		6.329	7.084		
								^	< aaa			
		1-1	1.51	16323.010	16318.552	0	6126.321 ^A		6.329	7.088		
		1-1 $2-2$ $3-2$	1.51 2.18 1.46	16323.010 16281.932 15927.099	16318.552 16277.485 15922.749	0 0 0	6126.321 ^A 6141.777 ^A 6278.607 ^A	0	6.329 6.323 6.306	7.088 7.084 7.084		

TABLE 2—Continued

	Multiplet	J-J	I 2	λ_{vac}^{3}	$\frac{\lambda_{qir}^{3}}{\lambda_{qir}}$	uea o-R ⁴	σ 5	o-R ⁶	E(1)	F(n)	log(gf) ⁷	B1 8
:	(MT) ¹			(Å)	(Å)	(mÅ)	(cm ⁻¹)	(mK)	(eV)	(eV)	-~6(61)	D 1.
2418	$f^{7}D$ – $s^{6}D6p^{7}P^{\circ}$	4-4	1.46	17441.037	17436.274	-18	5733.604 ^B		6.299	7.010		
7		2-3	0.85	16978.583	16973.946	12	5889.773 ^B 6191.563 ^B		6.323	7.053	• • •	
3410	(7p 6p 5m	2-2	0.78	16151.010	16146.599	5			6.323	7.090	• • • •	
2419	$f^{7}D - s^{6}D6p^{5}F^{6}$	2-3	2.04	15759.974	15755.669	-15	6345.188 ^A		6.323	7.109	• • •	
2420	f ^7D-s 6D6p 5D $^\circ$	4-4 2-3	1.00 2.01	16879.511 16207.762	16874.902 16203.336	-14 3	5924.342 ^A 6169.883 ^A		6.299 6.323	7.034 7.088	• • •	
		3-3	1.28	15856.125	15851.794	8	6306.711 ^A		6.306	7.088		
		1-2	1.49	15704.388	15700.098	2	6367.647 ^A		6.329	7.118		
		$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	1.74 1.59	15583.343	15579.086 15253.826	5	6417.108 ^A 6553.941 ^A		6.323	7.118	• • •	
		3-2 1-0	1.46	15257.995 15237.835	15233.672	-5 -5	6562.612 ^B		6.306 6.329	7.118 7.143		
2421	f ⁷ D-s ⁶ D _{4.5} 4f [3.5]°	2-3	1.70	17338.817	17334.083	3	5767.406 ^A		6.323	7.038		
2421	$f^{7}D - s^{6}D_{4.5}4f$ [2.5]°	2-2	2.04	17298.374	17293.651	6	5780.890 ^A		6.323	7.040		
	$f^{7}D-s^{6}D_{4.5}4f[1.5]^{\circ}$	2-2	1.38	17268.025	17263.310	6	5791.050 ^A		6.323	7.041		
	$f^{7}D-s^{6}D_{4.5}4f$ [1.5]° $f^{7}D-s^{6}D_{4.5}4f$ [4.5]°	$\frac{2-1}{3-4}$	2.17 1.04	17262.284 16968.942	17257.571 16964.309	0 -14	5792.976 ^A 5893.119 ^D		6.323 6.306	7.041 7.036	•••	T
	$f^{7}D-s^{6}D_{4.5}4f$ [4.5]°	3-4 4-5	1.81	16815.970	16811.377	-14	5946.728 ^A		6.299	7.036		I
	$f^{7}D-s^{6}D_{4.5}4f$ [3.5]°	4-4	1.84	16787.624	16783.039	-3	5956.769 ^A	1	6.299	7.038		
	$f^{7}D - s^{6}D_{4.5}4f$ [2.5]°	4-3	1.57	16752.484	16747.909	0	5969.264 ^A		6.299	7.039	• • •	
	$f^{7}D-s^{6}D_{4.5}4f[5.5]^{\circ}$ $f^{7}D-s^{6}D_{4.5}4f[5.5]^{\circ}$	5-6 5-5	3.11 2.78	15696.145 15690.731	15691.857 15686.445	0 0	6370.991 ^A 6373.189 ^A		6.246 6.246	7.036 7.036		
	$f^{7}D-s^{6}D_{4.5}4f$ [4.5]°	5-5	2.86	15681.807	15677.523	0	6376.816 ^A		6.246	7.036		
	$f^{7}D - s^{6}D_{4.5}4f$ [4.5]°	5-4	2.06	15681.300	15677.017	2	6377.022^{A}		6.246	7.036		
	$f^{7}D - s^{6}D_{4.5}4f$ [6.5]° $f^{7}D - s^{6}D_{4.5}4f$ [3.5]°	5-6 5-4	2.16 2.52	15677.443 15657.151	15673.161 15652.874	5 -2	6378.591 ^D 6386.858 ^A		6.246 6.246	7.037 7.038	• • •	II
2422	f ^7D-s 6D6p 5P $^{\circ}$	1-2	1.63	15651.686	15647.410	-5	6389.088^{A}		6.329	7.121		
		2-2	1.75	15531.454	15527.211	0	6438.547 ^A		6.323	7.121	• • •	
2423	$f^{7}D-s^{6}D_{3.5}4f$ [2.5]°	3-2 1-2	1.46 2.30	15208.255 16381.867	15204.100 16377.393	2 -11	6575.376 ^A 6104.310 ^A		6.306 6.329	7.121 7.086		
	$f^{7}D-s^{6}D_{3.5}4f[2.5]^{\circ}$	2-3	2.22	16256.995	16252.555	0	6151.198^{D}	0	6.323	7.085		Ne
	$f^{7}D - s^{6}D_{3.5}4f[1.5]^{\circ}$	2-1	1.30	16250.597	16246.158	0	6153.620 ^A		6.323	7.086	• • •	
	$f^{7}D-s^{6}D_{3.5}4f[2.5]^{\circ}$ $f^{7}D-s^{6}D_{3.5}4f[1.5]^{\circ}$	$\begin{array}{c} 2-2 \\ 2-2 \end{array}$	2.00 1.81	16250.201 16245.309	16245.762 16240.872	-3 0	6153.770 ^A 6155.623 ^A		6.323 6.323	7.086 7.086		
	$f^{7}D-s^{6}D_{3.5}4f[3.5]^{\circ}$	3-3	2.26	15903.603	15899.259	3	6287.883 ^A		6.306	7.085		
	$f^{7}D - s^{6}D_{3.5}4f$ [2.5]°	3-3	1.23	15903.242	15898.898	3	6288.026 ^A		6.306	7.085	• • •	
	$f^{7}D - s^{6}D_{3.5}4f$ [2.5]° $f^{7}D - s^{6}D_{3.5}4f$ [1.5]°	$3-2 \\ 3-2$	2.99 2.47	15896.755 15892.058	15892.412 15887.717	10 3	6290.592 ^A 6292.451 ^A		6.306 6.306	7.086 7.086		
	$f^{7}D-s^{6}D_{3.5}4f$ [4.5]°	4-5	2.95	15778.380	15774.070	-2	6337.786 ^A		6.299	7.085		
	$f^{7}D-s^{6}D_{3.5}4f$ [4.5]°	4-4	2.91	15774.928	15770.619	-2	6339.173 ^A		6.299	7.085		
	$f^{7}D-s^{6}D_{3.5}4f^{[5.5]}°$ $f^{7}D-s^{6}D_{3.5}4f^{[3.5]}°$	4-5 4-4	2.28 1.04	15773.405 15770.092	15769.097 15765.784	0 -5	6339.785 ^A 6341.117 ^A	0 2	6.299 6.299	7.085 7.085	• • •	
	$f^{7}D - s^{6}D_{3.5}4f[3.5]^{\circ}$	4-3	2.40	15768.635	15764.327	2	6341.703 ^A		6.299	7.085		
	$f^{7}D-s^{6}D_{3.5}4f$ [5.5]°	5-6	1.23	14773.529	14769.493	0	6768.863 ^A	0	6.246	7.085		
2424	$f^{7}D - s^{6}D_{3.5}4f$ [6.5]° $f^{7}D - s^{6}D_{2.5}4f$ [0.5]°	5-6	1.11	14759.576 15690.310	14755.543 15686.024	0	6775.262 ^A 6373.360 ^A		6.246	7.086	•••	
2424	$f^{7}D - s^{6}D_{2.5}4f[0.5]^{\circ}$ $f^{7}D - s^{6}D_{2.5}4f[1.5]^{\circ}$	$1-1 \\ 1-1$	2.39 0.78	15678.089	15673.807	2 2	6378.328 ^A		6.329 6.329	7.119 7.120		
	$f^{7}D-s^{6}D_{2.5}4f[1.5]^{\circ}$	1-2	2.13	15675.280	15670.999	-7	6379.471 ^A		6.329	7.120		
	$f^{7}D - s^{6}D_{2.5}4f[2.5]^{\circ}$	1-2	1.60	15666.602	15662.322	5	6383.005 ^A		6.329	7.120	• • •	
	$f^{7}D-s^{6}D_{2.5}4f$ [0.5]° $f^{7}D-s^{6}D_{2.5}4f$ [1.5]°	$\begin{array}{c} 2-1 \\ 2-2 \end{array}$	1.75 2.34	15569.485 15554.707	15565.231 15550.458	7 17	$6422.820^{A} 6428.922^{D}$		6.323 6.323	7.119 7.120		I
	$f^{7}D-s^{6}D_{2.5}4f[2.5]^{\circ}$	2-2 $2-3$	2.34	15541.942	15537.697	-2	6434.202^{A}		6.323	7.120		
	$f^{7}D-s^{6}D_{2.5}4f[3.5]^{\circ}$	2-3	1.00	15525.932	15521.691	7	6440.837 ^A	-3	6.323	7.121		
	$f^{7}D-s^{6}D_{2.5}4f$ [1.5]° $f^{7}D-s^{6}D_{2.5}4f$ [2.5]°	3-2 $3-3$	1.00 1.45	15230.513 15218.314	15226.352 15214.156	-19 2	6565.767 ^B 6571.030 ^A		6.306 6.306	7.120 7.121	• • •	
	$f^{7}D - s^{6}D_{2.5}4f[2.3]^{\circ}$ $f^{7}D - s^{6}D_{2.5}4f[3.5]^{\circ}$	3-3	1.43	15202.961	15198.807	7	6577.666 ^A	-1 -3	6.306	7.121		
	$f^{7}D-s^{6}D_{2.5}4f$ [5.5]°	4-5	1.62	15103.232	15099.106	0	6621.099 ^A	0	6.299	7.120	•••	
	$f^{7}D - s^{6}D_{2.5}4f$ [5.5]°	5-6	1.56	14184.087	14180.210	2	7050.154 ^D		6.246	7.120	•••	II
	$f^{7}D - s^{6}D_{2.5}4f$ [4.5]°	5-5	0.70	14164.267	14160.396	-2	7060.019 ^B	1	6.246	7.121	•••	

TABLE 2—Continued

•				- INDEE	z—Cominu	icu						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
2425	$f^7D-t^3F^0$	1-2	0.85	15013.588	15009.486	-2	6660.633 ^A	1	6.329	7.155	•••	
2425	$f^7 D - s^6 D_{1.5} 4f [2.5]^{\circ}$	1-2	1.91	15187.071	15182.922	-5	6584.548 ^A	2	6.329	7.145		
7	$f^{7}D-s^{6}D_{1.5}4f$ [2.5]°	2 - 3	1.49	15077.389	15073.269	2	6632.448^{D}		6.323	7.145		II
	$f^{7}D - s^{6}D_{1.5}4f$ [2.5]°	3-3	1.67	14772.615	14768.579	-11	6769.282^{D}		6.306	7.145		II
	$f^{7}D - s^{6}D_{1.5}4f [4.5]^{\circ}$	4-5	1.91	14678.265	14674.254	-2	6812.794 ^D		6.299	7.144		II
	$f^{7}D-s^{6}D_{1.5}4f$ [3.5]° $f^{7}D-s^{6}D_{1.5}4f$ [4.5]°	4-4 5-4	0.78 0.48	14634.391 13804.472	14630.392 13800.699	2 -21	6833.219 ^B 7244.029 ^D		6.299 6.246	7.146 7.144	• • •	I
											• • •	
2427	$f^{7}D - s^{6}D_{0.5}4f$ [2.5]° $f^{7}D - s^{6}D_{0.5}4f$ [2.5]°	$1-2 \\ 2-3$	1.56 1.58	14935.935 14827.100	14931.854 14823.049	0 -2	6695.262 ^D 6744.407 ^A		6.329 6.323	7.159		I
	$f^{7}D-s^{6}D_{0.5}4f[2.5]^{\circ}$ $f^{7}D-s^{6}D_{0.5}4f[2.5]^{\circ}$	$\frac{2-3}{2-2}$	0.78	14827.100	14822.359	-2 7	6744.721 ^B	_	6.323	7.159 7.159		
	$f^{7}D - s^{6}D_{0.5}4f[3.5]^{\circ}$	$\frac{2}{2-3}$	1.40	14822.968	14818.918	-2	6746.287 ^A		6.323	7.159		
	$f^{7}D-s^{6}D_{0.5}4f[3.5]^{\circ}$	3-3	1.72	14528.310	14524.340	2	6883.113^{A}		6.306	7.159		
2428	$f^{7}D-s^{6}D_{4.5}5f[5.5]^{\circ}$	5-6	1.81	11240.179	11237.102	-4	8896.655 ^B	3	6.246	7.349		
2429	$f^{7}D-s^{6}D_{3.5}5f$ [5.5]°	4-5	1.81	11291.820	11288.729	-4	8855.968 ^B	3	6.299	7.397		
2430	f ⁵ D-Gsp3 ³ F°	3-3	2.54	35421.865	35412.207	13	2823.115 ^C	-1	6.265	6.615		
2431	$f^{5}D-Dsp3^{5}D^{\circ}$	4-3	2.08	28831.812	28823.949	-25	3468.391 ^B	3	6.251	6.681		
2432	$f^{5}D-Gsp3^{1}F^{\circ}$	4-3	1.28	17622.086	17617.274	3	5674.697 ^A		6.251	6.955		
2433	$f^{5}D-s^{6}D6p^{7}D^{\circ}$	4-5	1.00	17552.497	17547.704	-9	5697.195^{B}		6.251	6.958		
2433	j D-s Dop D	2-3	1.23	17075.211	17070.548	6	5856.443 ^D	_	6.286	7.012		I
		3-4	0.70	16715.872	16711.307	20	5982.338^{B}		6.265	7.007		-
		4-4	1.00	16410.633	16406.151	-11	6093.610^{D}		6.251	7.007		I
		2 - 1	1.40	15466.643	15462.418	-10	6465.527 ^A	4	6.286	7.087	• • •	
2434	$f~^5D$ – $s~^6D$ 6 $p~^7F$ °	1-0	0.70	16021.787	16017.410	0	6241.501^{B}	0	6.308	7.082		
		2-2	2.12	15523.606	15519.365	0	6441.802 ^A	0	6.286	7.084		
		3-2	1.52	15137.703	15133.567	7	6606.022^{A}	-3	6.265	7.084	• • •	
2435	$f^{5}D$ – $s^{6}D6p^{7}P^{0}$	1-2	1.00	15847.606	15843.278	20	6310.101^{B}	-8	6.308	7.090		
2436	$f^{5}D-u^{3}F^{0}$	2 - 3	1.08	16434.653	16430.164	-8	6084.704 ^D		6.286	7.040		II
		3-3	0.30	16002.760	15998.389	3	6248.922 ^A	-1	6.265	7.040	• • •	
2437	$f{}^5D\!-\!s{}^6\!D6p{}^5F^{o}$	4-5	1.28	15913.068	15908.722	5	6284.143 ^A	-2	6.251	7.031		
		4-4	1.38	15057.492	15053.378	-9	6641.212^{D}		6.251	7.075	••• .	I
		1-1	1.11	15000.645	14996.546	-7	6666.380 ^A 7038.111 ^B	3	6.308	7.135	•••	
		3-2	0.85	14208.357	14204.474	8			6.265	7.138	• • •	
2438	f 5D – s 6D 6 p 5D 0	0-1	1.82	15575.996	15571.741	-10	6420.135^{A}		6.321	7.117	• • •	
		2-3 $1-1$	1.58 1.26	15456.175 15334.981	15451.952 15330.792	10 7	6469.906^{D} 6521.038^{D}		6.286 6.308	7.088 7.117	• • •	I II
		1-1	1.20	15300.680	15296.500	-9	6535.657 ^A	-3 4	6.308	7.117		11
2439	$f^{5}D-s^{6}D_{4.5}4f[3.5]^{\circ}$	2-3	2.14	16481.437	16476.936	0	6067.432^{A}	0	6.286	7.038		
	$f^{5}D-s^{6}D_{4.5}4f[2.5]^{\circ}$	2 - 3	2.10	16451.034	16446.541	-11	6078.645^{D}		6.286	7.039		II
	$f^{5}D - s^{6}D_{4.5}4f$ [2.5]°	2-2	2.45	16444.893	16440.402	3	6080.915 ^A		6.286	7.040		
	$f^{5}D - s^{6}D_{4.5}4f[1.5]^{\circ}$	2-2	1.81	16417.463	16412.979	8	6091.075 ^A		6.286	7.041	• • •	
	$f^{5}D - s^{6}D_{4.5}4f[1.5]^{\circ}$	2-1	2.57	16412.273	16407.791	0	6093.001 ^A		6.286	7.041	• • •	
	$f^{5}D-s^{6}D_{4.5}4f$ [4.5]° $f^{5}D-s^{6}D_{4.5}4f$ [3.5]°	3-4 3-3	2.68 2.81	16075.792 16047.098	16071.402 16042.715	0 -3	6220.533 ^A 6231.656 ^A	0 1	6.265 6.265	7.036 7.038	• • •	
	$f^{5}D-s^{6}D_{4.5}4f[2.5]^{\circ}$	3-3	1.69	16018.286	16013.911	-3	6242.865^{A}	1	6.265	7.039		
	$f ^5D - s ^6D_{4.5}4f [2.5]^{\circ}$	3-2	2.68	16012.453	16008.080	0	6245.139 ^A	0	6.265	7.040		
	$f^{5}D-s^{6}D_{4.5}4f[1.5]^{\circ}$	3-2	2.14	15986.446	15982.079	3	6255.299^{A}	-1	6.265	7.041		
	$f^{5}D - s^{6}D_{4.5}4f[5.5]^{\circ}$	4-5	2.97	15802.881	15798.564	0	6327.960 ^A	0	6.251	7.036		
	$f^{5}D - s^{6}D_{4.5}4f[4.5]^{\circ}$	4-5	0.90	15793.828	15789.514	0	6331.587 ^A		6.251	7.036	• • •	
	$f^{5}D-s^{6}D_{4.5}4f[4.5]^{\circ}$ $f^{5}D-s^{6}D_{4.5}4f[3.5]^{\circ}$	4-4 4-4	2.95 2.04	15793.314 15768.819	15789.000 15764.511	2 -2	6331.793 ^A 6341.629 ^A	-1 1	6.251 6.251	7.036 7.038	• • •	
	$f^{5}D - s^{6}D_{4.5}4f[3.5]^{\circ}$ $f^{5}D - s^{6}D_{4.5}4f[3.5]^{\circ}$	4-4	2.58	15765.622	15761.315	0	6342.915 ^A	0	6.251	7.038		
	$f ^5D - s ^6D_{4.5}4f [2.5]^{\circ}$	4-3	2.07	15737.810	15733.511	-2	6354.124 ^A	1	6.251	7.039		
2440	$f^{5}D-s^{6}D6p^{5}P^{0}$	4-3	1.62	15508.170	15503.933	-19	6448.214 ^A	8	6.251	7.051		
2110	, 2 0 2 op 1	1-2	1.93	15250.665	15246.498	0	6557.091^{A}	0	6.308	7.121		

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl
2441	f ⁵ D-s ⁶ D _{3.5} 4f [0.5]°	0-1	1.28	16196.994	16192.570	5	6173.985 ^A	2	6.321	7.086		
	$f ^5D - s ^6D_{3.5}4f [1.5]^{\circ}$	1-1	1.86	15943.465	15939.110	3	6272.162^{A}		6.308	7.086		
	$f ^5D - s ^6D_{3.5}4f [2.5]^{\circ}$	1-2	1.73	15943.087	15938.732	ő	6272.311 ^A		6.308	7.086		
	$f^{5}D-s^{6}D_{3.5}4f[1.5]^{\circ}$	1-2	2.31	15938.375	15934.022	ő	6274.165^{A}		6.308	7.086		
	$f ^5D - s ^6D_{3.5}4f [0.5]^{\circ}$	1-0	2.16	15933.830	15929.477	3	6275.955^{A}		6.308	7.086		
	$f ^5D - s ^6D_{3.5}4f [3.5]^{\circ}$	$\frac{1}{2} - \frac{3}{3}$	1.20	15501.278	15497.043	ő	6451.081 ^A		6.286	7.085		
	$f^{5}D-s^{6}D_{3.5}4f$ [2.5]°	2-3	2.38	15500.934	15496.699	ő	6451.224^{D}		6.286	7.085		J
	$f ^5D - s ^6D_{3.5}4f [1.5]^{\circ}$	$\frac{2}{2-1}$	2.12	15495.119	15490.886	ő	6453.645 ^D		6.286	7.086]
	$f ^5D - s ^6D_{3.5}4f [4.5]^{\circ}$	3-4	1.88	15122.249	15118.117	-5	6612.773 ^A		6.265	7.085		
	$f^{5}D-s^{6}D_{3.5}4f$ [3.5]°	3-4	0.70	15117.809	15113.679	-2	6614.715 ^A		6.265	7.085		
	$f ^5D - s ^6D_{3.5}4f [3.5]^{\circ}$	3-3	1.83	15116.463	15112.333	0	6615.304 ^A		6.265	7.085		
	$f ^5D - s ^6D_{3.5}4f [2.5]^{\circ}$	3-3	1.36	15116.134	15112.004	-2	6615.448 ^A		6.265	7.085		
	$f ^5D - s ^6D_{3.5}4f [2.5]^{\circ}$	3-2	2.22	15110.259	15106.131	-9	6618.020^{A}		6.265	7.086		
	$f ^5D - s ^6D_{3.5}4f [4.5]^{\circ}$	4-5	1.64	14875.099	14871.035	4	6722.644^{D}		6.251	7.085		
	$f ^5D - s ^6D_{3.5}4f [5.5]^{\circ}$	4-5	2.04	14870.671	14866.608	-2	6724.646^{D}		6.251	7.085		
	$f ^5D - s ^6D_{3.5} 4f [3.5]^{\circ}$	4-4	1.81	14867.730	14863.668	-2 -2	6725.976 ^A		6.251	7.085		
											• • •	
2442	$f^{5}D-s^{6}D_{2.5}4f[0.5]^{\circ}$	0 - 1	1.64	15526.855	15522.614	2	6440.454 ^A		6.321	7.119		
	$f^{5}D-s^{6}D_{2.5}4f[1.5]^{\circ}$	1-2	1.28	15273.067	15268.895	0	6547.473^{D}		6.308	7.120		
	$f^{5}D-s^{6}D_{2.5}4f$ [2.5]°	1-2	2.28	15264.805	15260.635	-12	6551.017^{D}		6.308	7.120	• • •	N
	$f^{5}D-s^{6}D_{2.5}4f[2.5]^{\circ}$	2-3	0.60	14849.523	14845.465	7	6734.223^{B}		6.286	7.121		
	$f^{5}D-s^{6}D_{2.5}4f$ [4.5]°	3-4	1.76	14482.628	14478.670	0	6904.824 ^A		6.265	7.121		
	$f^{5}D-s^{6}D_{2.5}4f$ [3.5]°	3-3	1.08	14482.081	14478.123	4	6905.085 ^A	-2	6.265	7.121		
	$f^{5}D-s^{6}D_{2.5}4f$ [5.5]°	4-5	0.90	14273.559	14269.658	-4	7005.961 ^A	2	6.251	7.120		
443	$f^{5}D-s^{6}D_{1.5}4f$ [2.5]°	1-2	1.75	14809.218	14805.171	0	6752.551 ^A	0	6.308	7.145		
	$f^{5}D-s^{6}D_{1.5}4f$ [3.5]°	2-3	1.48	14401.415	14397.479	0	6943.762^{A}	0	6.286	7.147		
	$f ^5D - s ^6D_{1.5}4f [4.5]^{\circ}$	3-4	1.30	14109.287	14105.431	ő	7087.530^{A}	0	6.265	7.144		
	$f^{5}D-s^{6}D_{1.5}4f$ [4.5]°	4-5	1.11	13893.421	13889.624	6	7197.651 ^A	-3	6.251	7.144		
											•••	
2444	$f^{5}D-s^{6}D_{0.5}4f[3.5]^{\circ}$	2-3	1.67	14191.825	14187.946	0	7046.310 ^A	0	6.286	7.159		
	$f^{5}D-s^{6}D_{0.5}4f$ [2.5]°	3-3	0.48	13872.236	13868.444	21	7208.643 ^B		6.265	7.159		
	$f^{5}D-s^{6}D_{0.5}4f[3.5]^{\circ}$	3-4	1.20	13872.061	13868.269	0	7208.734 ^A	0	6.265	7.159		
	$f^{5}D-s^{6}D_{0.5}4f$ [3.5]°	4–4	2.14	13661.220	13657.486	7	7319.990 ^D	-4	6.251	7.159	•••	
2445	$e^{7}P\!-\!s^{6}\!D6p^{7}D^{\circ}$	4-5	1.23	17714.675	17709.839	13	5645.037 ^A	-4	6.258	6.958		
		3-3	0.90	16824.276	16819.682	31	5943.792^{B}		6.275	7.012		
		4-3	2.22	16447.955	16443.463	-16	6079.783 ^A	6	6.258	7.012		
446	$e^{7}P - s^{6}D6p^{7}F^{\circ}$	4-5	1.48	16590.139	16585.608	-25	6027.677^{A}	9	6.258	7.005		
	0 1 0 2 0p 1	2-2	1.65	15925.864	15921.514	5	6279.094 ^A	-2	6.306	7.084		
		3-2	1.00	15315.908	15311.724	5	6529.159^{A}	-2	6.275	7.084		
	7- (-, 7-)										•••	
447	$e^{7}P$ – $s^{6}D6p^{7}P^{\circ}$	2-3	0.95	16591.741	16587.210	0	6027.095^{A}	0	6.306	7.053	• • •	
		3-3	0.70	15930.771	15926.419	3	6277.160 ^A	-1	6.275	7.053	• • •	
448	$e~^7P-u~^3F^{\circ}$	3-3	1.56	16202.048	16197.623	0	6172.059 ^A	0	6.275	7.040		
		4-3	1.40	15852.809	15848.479	5	6308.030^{A}	-2	6.258	7.040		
440	7 D . 6DC 5E0	4 5		16046 220	16041 056	10						
449	$e^{7}P$ – $s^{6}D6p^{5}F^{\circ}$	4-5	1.41	16046.238	16041.856	10	6231.990 ^A	-4	6.258	7.031	• • •	
		3-2	1.54	14365.240	14361.314	4	6961.248 ^A	-2	6.275	7.138	• • •	
2450	$e^{7}P$ – $s^{6}D6p^{5}D^{\circ}$	2-3	1.08	15854.901	15850.570	10	6307.198^{B}	-4	6.306	7.088	• • •	
451	$e^{7}P - s^{6}D_{4.5}4f$ [3.5]°	2-3	1.28	16935.592	16930.967	0	5904.724 ^A	0	6.306	7.038		
	$e^{7}P - s^{6}D_{4.5}4f$ [2.5]°	2 - 3	1.86	16903.498	16898.882	-3	5915.935 ^A		6.306	7.039		
	$e^{7}P - s^{6}D_{4.5}4f$ [2.5]°	2-2	2.08	16896.989	16892.375	-14	5918.214^{D}	5	6.306	7.040		N
	$e^{7}P - s^{6}D_{4.5}4f[1.5]^{\circ}$	2-2	2.26	16868.028	16863.422	-23	5928.375 ^A	8	6.306	7.041		
	$e^{7}P - s^{6}D_{4.5}4f$ [4.5]°	3-4	1.88	16276.918	16272.473	3	6143.669 ^A	-1	6.275	7.036		
	$e^{7}P - s^{6}D_{4.5}4f$ [3.5]°	3-4	2.39	16250.900	16246.462	-3	6153.505^{A}	1	6.275	7.038	•••	
	$e^{7}P - s^{6}D_{4.5}4f$ [3.5]°	3-3	1.70	16247.505	16243.067	-3	6154.791 ^A	1	6.275	7.038		
	$e^{7}P - s^{6}D_{4.5}4f$ [2.5]°	3-3	2.75	16217.969	16213.540	-3	6166.000^{A}	1	6.275	7.039		
	$e^{7}P - s^{6}D_{4.5}4f$ [1.5]°	3-2	2.77	16185.331	16180.910	5	6178.434 ^A	-2	6.275	7.041		
		_				3	6279.435^{D}		6.258			
	$e^{7}P - s^{6}D_{4.5}4f$ [4.5]°	4-5	2.90	15924.999	13920.049	,	04/7.433	- 1	U.Z.JO	7,050		
	$e^{7}P - s^{6}D_{4.5}4f$ [4.5]° $e^{7}P - s^{6}D_{4.5}4f$ [4.5]°	4-5 4-4	2.90 1.56	15924.999 15924.464	15920.649 15920.114	-8	6279.646 ^A	3	6.258	7.036 7.036	• • • •	

TABLE 2—Continued

					z—Contini						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{5} o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	B1.8
	$e^{7}P - s^{6}D_{4.5}4f$ [2.5]°	4-3	2.69	15868.048	15863.714	3	6301.972 ^A -1	6.258	7.039	•••	
2452	$e^{7}P - s^{6}D_{3.5}4f$ [3.5]°	2-3	2.70	15902.369	15898.026	8	6288.371 ^A -3	6.306	7.085		
	$e^{7}P - s^{6}D_{3.5}4f$ [2.5]°	2-3	2.21	15902.003	15897.659	3	6288.516 ^A -1	6.306	7.085	• • •	
	$e^{7}P - s^{6}D_{3.5}4f$ [2.5]°	$^{2-2}$	2.25	15895.509	15891.167	3	6291.085^{A} -1	6.306	7.086	• • •	
	$e^{7}P$ – $s^{6}D_{3.5}4f$ [4.5]°	3-4	1.36	15300.090	15295.910	-2	6535.909^{D} 1	6.275	7.085	• • •	IJ
	$e^{7}P - s^{6}D_{3.5}4f$ [3.5]°	3-4	2.31	15295.543	15291.364	-2	6537.852^{D} 1	6.275	7.085	• • •	I
	$e^{7}P - s^{6}D_{3.5}4f$ [3.5]°	3-3	1.79	15294.170	15289.992	0	6538.439^{A} 0	6.275	7.085	• • •	
	$e^{7}P - s^{6}D_{3.5}4f$ [2.5]°	3-2	1.62	15287.831	15283.655	5	6541.150^{D} -2	6.275	7.086	• • •]
	$e^{7}P - s^{6}D_{3.5}4f$ [4.5]°	4-5	2.14	14991.391	14987.295	-2	6670.495 ^A 1	6.258	7.085	• • •	
	$e^{7}P - s^{6}D_{3.5}4f$ [4.5]°	4-4	1.65	14988.276	14984.181	0	6671.881 ^A 0	6.258	7.085 7.085	• • •	
	$e^{7}P - s^{6}D_{3.5}4f[5.5]^{\circ}$	4-5	2.09	14986.900	14982.805 14978.510	0 11	6672.494^{A} 0 6674.407^{B} -5	6.258 6.258	7.085	• • •	
	$e^{7}P - s^{6}D_{3.5}4f$ [3.5]°	4-3	0.48	14982.604						• • •	
2453	$e^{7}P - s^{6}D_{2.5}4f$ [2.5]°	2 - 3	1.82	15217.184	15213.026	2	6571.518 ^A -1	6.306	7.121	• • •	
	$e^{7}P - s^{6}D_{2.5}4f$ [3.5]°	2 - 3	1.18	15201.833	15197.680	9	6578.154^{D} -4	6.306	7.121	• • •	IJ
	$e^{7}P - s^{6}D_{2.5}4f$ [3.5]°	3-4	1.28	14648.724	14644.721	11	6826.533 ^A -5	6.275	7.121	• • •	
	$e^{7}P - s^{6}D_{2.5}4f$ [4.5]°	3-4	1.87	14645.665	14641.663	2	6827.959^{A} -1	6.275	7.121	• • •	
	$e^{7}P - s^{6}D_{2.5}4f[3.5]^{\circ}$	3-3	1.08	14645.100	14641.099	2	6828.222^{A} -1	6.275	7.121	• • •	
	$e^{7}P - s^{6}D_{2.5}4f$ [5.5]°	4-5	1.66	14380.614	14376.684	2	6953.806 ^A -1	6.258	7.120	• • • •	
	$e^{7}P - s^{6}D_{2.5}4f$ [4.5]°	4-4	0.95	14359.705	14355.781	4	6963.931 ^A -2	6.258	7.121	• • •	
2454	$e^{\ 7}P\!-\!s^{\ 6}\!D_{2.5}4f\ [0.5]^{\circ}$	2 - 1	2.96	14802.367	14798.323	9	6755.676^{B} -4	6.306	7.143	• • •	
	$e^{7}P - s^{6}D_{1.5}4f$ [1.5]°	$^{2-2}$	1.38	14798.437	14794.394	15	6757.470^{D} -7	6.306	7.144	• • •	Il
	$e^{7}P - s^{6}D_{1.5}4f$ [2.5]°	2-3	0.78	14771.561	14767.525	2	6769.765 ^A -1	6.306	7.145	• • •	
	$e^{7}P - s^{6}D_{1.5}4f$ [3.5]°	2-3	1.18	14746.972	14742.942	4	6781.053^{D} -2	6.306	7.147	• • •]
	$e^{7}P - s^{6}D_{1.5}4f$ [4.5]°	3-4	1.70	14263.980	14260.081	0	7010.666 ^A 0	6.275	7.144	• • •	
	$e^{7}P - s^{6}D_{1.5}4f[3.5]^{\circ}$	3-3	0.95	14222.483	14218.596	-2	7031.121 ^A 1	6.275	7.147	• • • •	
	$e^{7}P - s^{6}D_{1.5}4f$ [3.5]°	4-3	2.65	13952.664	13948.850	8	7167.090 ^B -4	6.258	7.147	• • •	
2455	$e^{7}P\!-\!s^{6}\!D_{0.5}4f[3.5]^{\circ}$	3-4	1.11	14021.579	14017.747	14	7131.864 ^A -7	6.275	7.159	• • •	
	$e^{7}P - s^{6}D_{0.5}4f$ [2.5]°	3-2	2.25	14021.080	14017.248	-22	7132.118 ^B 11	6.275	7.159	•••	
2456	$e^{5}G^{-4}F5p^{5}F^{0}$	5-5	2.92	42000.571	41989.120	-53	2380.920 ^B 3	6.286	6.581	• • •	
/		6-5	2.84	39034.383	39023.740	-15	2561.844 ^A 1	6.264	6.581	• • •	
2457	$e\ ^5G-^4F5p\ ^5D$ °	3-3	2.95	38975.353	38964.727	152	2565.724^{D} -10	6.350	6.668]
2-137		4-4	2.35	38010.803	38000.440	14	2630.831 ^B -1	6.320	6.647		
		5-4	2.50	34405.157	34395.776	0	2906.541 ^A 0	6.286	6.647		
2450	50 6DC 7E0		0.90	17244.090	17239.382	-9	5799.088 ^A 3	6.286	7.005		
2458	$e~^5G-s~^6D6p~^7F^{ m o}$	5-5 3-2	0.90	16887.881	16883.269	-9	5921.406 ^B -2	6.350	7.084		
		6-5	1.43	16722.371	16717.805	-3	5980.013 ^A 1	6.264	7.005		
	5 (3										
2459	$e~^5G-s~^6D6p~^7P^{ m o}$	5-4	1.40	17129.940	17125.262		5837.732 ^D 8	6.286	7.010		I
2460	$e~^5G-u~^3F^{f o}$	3-4	2.99	18609.200	18604.120		5373.686^D 0	6.350	7.016		Ne
		4-4	2.63	17815.423	17810.559	29	5613.114 ^D -9	6.320	7.016	• • •	I
2461	$e~^5G-s~^6D6p~^5F^{ m o}$	5-5	1.20	16657.188	16652.639	-3	6003.414 ^A 1	6.286	7.031	• • •	
2462	$e~^5G$ – $s~^6D$ 6 $p~^5D$ 0	3-3	1.26	16808.092	16803.502	0	5949.515 ^A 0	6.350	7.088		
	•	2-1	0.48	16581.011	16576.483	8	6030.995 ^A -3	6.369	7.117	• • •	
		2-2	1.34	16540.925	16536.408	0	6045.611 ^A 0	6.369	7.118	• • • •	
2463	$e^{5}G - s^{6}D_{4.5}4f[2.5]^{0}$	2-3	2.41	18494.154	18489.105	7	5407.114 ^A -2	6.369	7.039		
2.00	$e^{5}G-s^{6}D_{4.5}4f$ [1.5]°	2-1	1.00	18445.124	18440.088		5421.487 ^B 11	6.369	7.041		
	$e^{5}G-s^{6}D_{4.5}4f$ [4.5]°	3-4	2.42	18063.835	18058.903		5535.923 ^A 7	6.350	7.036		
	$e^{5}G - s^{6}D_{4.5}4f$ [2.5]°	3-3	0.85	17991.293	17986.381	3	5558.244 ^A -1	6.350	7.039		
	$e^{5}G - s^{6}D_{4.5}4f$ [1.5]°	3-2	1.20	17951.136	17946.235		5570.678 ^A -5	6.350	7.041		
	$e^{5}G - s^{6}D_{4.5}4f$ [5.5]°	4-5	1.76	17326.464	17321.733		5771.518 ^A -1	6.320	7.036		
	$e^{5}G - s^{6}D_{4.5}4f$ [4.5]°	4-5	1.75	17315.582	17310.854		5775.145 ^A -1	6.320	7.036		
	$e^{5}G-s^{6}D_{4.5}4f$ [4.5]°	4-4	1.89	17314.964	17310.237		5775.351 ^A -1	6.320	7.036		
	6 G-8 DA (4) 14.31		1.51	17285.534	17280.815		5785.184 ^A -2	6.320	7.038		
	$e^{5}G - s^{6}D_{4.5}4f$ [4.5] $e^{5}G - s^{6}D_{4.5}4f$ [3.5]°	4-4	1.51	17200.00.							
	$e~^5G-s~^6D_{4.5}4f~[3.5]^{\circ}$	4-4 4-3	1.43	17281.687	17276.968	3	5786.472 ^A -1	6.320	7.038		
	$e^{5}G - s^{6}D_{4.5}4f$ [3.5]° $e^{5}G - s^{6}D_{4.5}4f$ [3.5]°				17276.968 16538.000		5786.472 ^A -1 6045.029 ^A 0	6.320 6.286	7.038 7.036		
	$e~^5G-s~^6D_{4.5}4f~[3.5]^{\circ}$	4-3	1.43	17281.687		0					

TABLE 2—Continued

				TABLE	2—Continu	ed						
No.	Multiplet (MT) 1	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
	$e^{5}G - s^{6}D_{4.5}4f$ [4.5]°	5-4	2.12	16526.032	16521.519	5	6051.059 ^A	-2	6.286	7.036		
	$e^{5}G-s^{6}D_{4.5}4f$ [6.5]°	5-6	3.21	16521.740	16517.228	3	6052.631 ^A		6.286	7.037		
	$e^{5}G$ – $s^{6}D_{4.5}4f$ [3.5]°	5-4	1.56	16499.210	16494.704	0	6060.896 ^A		6.286	7.038		
	$e^{5}G$ – $s^{6}D_{4.5}4f$ [5.5]°	6-5	1.86	16056.127	16051.741	3	6228.152^{A}	-1	6.264	7.036		
	$e^{5}G - s^{6}D_{4.5}4f[6.5]^{0}$	6-6	2.78	16042.207	16037.826	3	6233.556^{A}		6.264	7.037		
	$e^{5}G - s^{6}D_{4.5}4f$ [7.5]°	6-7	3.51	15985.094	15980.728	0	6255.828^{A}	0	6.264	7.039	• • •	
2464	$e^{5}G - s^{6}D6p^{5}P^{0}$	4-3	0.30	16972.848	16968.213	3	5891.763 ^A	-1	6.320	7.051		
2.0.	o d o zop i	2-2	1.43	16482.480	16477.979	0	6067.048 ^A		6.369	7.121		
2465	50 60 4110 510											
2465	$e^{5}G - s^{6}D_{3.5}4f$ [2.5]°	$\frac{2-2}{3-4}$	1.00 1.75	17294.261	17289.538 16864.056	12	5782.265 ^B 5928.152 ^A		6.369	7.086	• • •	
	$e^{5}G - s^{6}D_{3.5}4f$ [4.5]°	3-4	0.85	16868.663	16858.531	6	5928.152 5930.095 ^B		6.350 6.350	7.085	• • •	
	$e^{5}G - s^{6}D_{3.5}4f$ [3.5]°		1.54	16863.136		3 6	5930.684 ^A			7.085	• • •	
	$e^{5}G - s^{6}D_{3.5}4f$ [3.5]° $e^{5}G - s^{6}D_{3.5}4f$ [2.5]°	3-3 $3-3$	1.23	16861.461	16856.857 16856.444	-3	5930.884 ⁻¹		6.350 6.350	7.085 7.085	• • •	
	$e^{5}G - s^{6}D_{3.5}4f[2.5]^{\circ}$ $e^{5}G - s^{6}D_{3.5}4f[2.5]^{\circ}$	3-3 $3-2$	0.78	16861.049 16853.757	16849.155	-3 11	5933.395 ^A		6.350	7.085	• • •	
	$e^{5}G - s^{6}D_{3.5}4f$ [2.5] $e^{5}G - s^{6}D_{3.5}4f$ [4.5]°	3-2 4-5	2.18	16217.433	16213.003	-3	6166.204^{D}		6.320	7.085	• • •	II
	$e^{5}G - s^{6}D_{3.5}4f$ [5.5]°	4-5	3.08	16217.433	16213.003	0	6168.204^{A}		6.320	7.085		11
	$e^{5}G - s^{6}D_{3.5}4f$ [3.5]°	4-4	2.72	16208.682	16204.255	-3	6169.533 ^A		6.320	7.085		
	$e^{5}G - s^{6}D_{3.5}4f$ [3.5]°	4-3	1.30	16207.140	16202.713	5	6170.120^{A}		6.320	7.085		
	$e^{5}G - s^{6}D_{3.5}4f$ [4.5]°	5-5	1.65	15523.339	15519.098	0	6441.913 ^A	0	6.286	7.085		
	$e^{5}G - s^{6}D_{3.5}4f$ [5.5]°	5-6	1.40	15520.961	15516.721	Ö	6442.900^{A}	0	6.286	7.085		
	$e^{5}G - s^{6}D_{3.5}4f$ [4.5]°	5-4	0.70	15519.997	15515.757	-2	6443.300^{A}		6.286	7.085		
	$e^{5}G - s^{6}D_{3.5}4f$ [5.5]°	5-5	1.92	15518.521	15514.281	-2	6443.913 ^A	1	6.286	7.085		
	$e^{5}G - s^{6}D_{3.5}4f$ [6.5]°	5-6	2.67	15505.561	15501.325	2	6449.299 ^A	-1	6.286	7.086		
	$e^{5}G - s^{6}D_{3.5}4f$ [5.5]°	6-6	0.70	15097.014	15092.890	2	6623.826^{A}	-1	6.264	7.085		
	$e^{.5}G - s ^6D_{3.5}4f [6.5]^{\circ}$	6-7	1.58	15084.346	15080.225	2	6629.389 ^A	-1	6.264	7.086		
466	$e^{5}G-Dsp1^{3}D^{\circ}$	3-2	2.48	17076.791	17072.128	-9	5855.901 ^A	3	6.350	7.076	• • •	
467	$e^{5}G - s^{6}D_{2.5}4f$ [1.5]°	2-2	0.48	16508.651	16504.142	0	6057.430^{B}	0	6.369	7.120		
407	$e^{5}G - s^{6}D_{2.5}4f$ [3.5]°	$\frac{2-2}{2-3}$	1.96	16476.264	16471.764	8	6069.337 ^A	-3	6.369	7.121		
	$e^{5}G - s^{6}D_{2.5}4f$ [1.5]°	3-2	3.62	16106.807	16102.408	13	6208.555^{D}		6.350	7.120		I
	$e^{5}G - s^{6}D_{2.5}4f$ [2.5]°	3-3	2.52	16093.131	16088.736	0	6213.831 ^A	0	6.350	7.121		•
	$e^{5}G - s^{6}D_{2.5}4f$ [3.5]°	3-4	2.75	16080.314	16075.922	3	6218.784 ^A	-1	6.350	7.121		
	$e^{5}G - s^{6}D_{2.5}4f$ [4.5]°	3-4	2.30	16076.643	16072.252	5	6220.204^{A}	-2	6.350	7.121		
	$e^{5}G - s^{6}D_{2.5}4f$ [5.5]°	4-5	2.57	15505.041	15500.806	0	6449.515^{D}	0	6.320	7.120		Ne
	$e^{5}G - s^{6}D_{2.5}4f$ [3.5]°	4-4	0.48	15484.130	15479.900	-12	6458.225^{B}	5	6.320	7.121		
	$e^{5}G - s^{6}D_{2.5}4f$ [4.5]°	4-5	1.59	15483.833	15479.603	-2	6458.349^{A}	1	6.320	7.121		
	$e^{5}G - s^{6}D_{2.5}4f$ [4.5]°	4-4	1.61	15480.736	15476.507	2	6459.641^{D}	-1	6.320	7.121		II
	$e^{5}G - s^{6}D_{2.5}4f$ [5.5]°	5-6	1.98	14871.677	14867.614	2	6724.191 ^A	-1	6.286	7.120		
	$e^{5}G-s^{6}D_{2.5}4f$ [4.5]°	5-5	1.28	14849.891	14845.833	2	6734.056 ^A	-1	6.286	7.121		
468	$e^{5}G-t^{3}F^{\circ}$	4-3	1.56	15011.798	15007.697	-14	6661.427 ^A	6	6.320	7.146		
469	$e^{5}G$ - $s^{6}D_{1.5}4f$ [2.5]°	2-3	2.71	15972.022	15967.659	3	6260.948^{A}	-1	6.369	7.145		
, , , ,	$e^{5}G - s^{6}D_{1.5}4f$ [3.5]°	2-3	2.21	15943.277	15938.922	0	6272.236^{A}	0	6.369	7.147		
	$e^{5}G - s^{6}D_{1.5}4f$ [4.5]°	3-4	2.40	15617.898	15613.632	0	6402.910^{A}	0	6.350	7.144		
	$e^{5}G-s^{6}D_{1.5}4f$ [3.5]°	3-4	2.18	15570.983	15566.729	2	6422.202^{A}	-1	6.350	7.146		
	$e^{5}G - s^{6}D_{1.5}4f$ [3.5]°	3-3	0.60	15568.164	15563.911	2	6423.365^{A}	-1	6.350	7.147		
	$e^{5}G - s^{6}D_{1.5}4f$ [4.5]°	4-5	1.38	15057.492	15053.378	0	6641.212^{D}	0	6.320	7.144		I
	$e^{5}G-s^{6}D_{1.5}4f$ [3.5]°	4-4	0.70	15011.323	15007.221	2	6661.638^{B}	-1	6.320	7.146		
470	$e^{5}G - s^{6}D_{0.5}4f$ [2.5]°	2-3	0.60	15691.443	15687.157	12	6372.900^{B}	-5	6.369	7.159		
470	$e^{5}G - s^{6}D_{0.5}4f$ [2.5] $e^{5}G - s^{6}D_{0.5}4f$ [3.5]°	2-3	2.24	15686.803	15682.518	2	6374.785 ^A	-J	6.369	7.159		
	$e^{5}G - s^{6}D_{0.5}4f$ [3.5]° $e^{5}G - s^{6}D_{0.5}4f$ [3.5]°	3-4	1.71	15327.744	15323.557	0	6524.117 ^A	0	6.350	7.159	• • •	
2471	$e^{5}G - s^{6}D_{4.5}5f$ [7.5]°	5- 7 6-7	2.20	11405.840	11402.718	-12	8767.438 ^D	9	6.264	7.351	• • • •	т
											•••	I
472	$e^{7}G^{-4}F5p^{5}F^{\circ}$	5-4	2.87	46294.517	46281.897	-21	2160.083^B	1	6.351	6.619	•••	
2473	$e^{7}G-{}^{4}F5p^{3}F^{0}$	4-3	1.69	33851.074	33841.844	57	2954.116 ^B	-5	6.365	6.731	• • •	
2474	$e^{7}G-^4F5p^{5}D^{\circ}$	4-3	3.23	40818.892	40807.763	-133	2449.846 ^D	8	6.365	6.668	• • •	Ne
		1-2	3.46	33739.796	33730.596	-114	2963.859^{D}	10	6.393	6.761	• • •	II
			1.50	10066 455	10061 533	12	5535.120^{A}	-4	6.319	7.005		
2475	$e^{7}G - s^{6}D6p^{7}F^{\circ}$	6-5	1.79	18066.455	18061.523	13	3333.120	-4	0.319	7.005		

TABLE 2—Continued

					IADL	E 2—Contin	шеи					
 4.	No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ ⁵ o-R ⁶ (cm ⁻¹) (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
			7–6	2.04	17827.371	17822.503	-10	5609.352 ^A 3	6.280	6.975		
yy4Apus	2476	$e^{7}G - s^{6}D6p^{5}F^{0}$	5-5	2.98	18252.415	18247.432	7	5478.727 ^D -2	6.351	7.031		Ne
y y	2470	e G-3 Dop 1	6-5	1.67	17423.269	17418.511	ó	5739.451 ^A 0	6.319	7.031		110
-			5-4	1.84	17135.640	17130.961	6	5835.790 ^A -2	6.351	7.075		
	2477	$e^{7}G-s^{6}D6p^{5}D^{\circ}$	3-3	0.70	17519.240	17514.457	3	5708.010 ^A -1	6.380	7.088		
	2411	e G-s Dop D	3-3	0.70	16791.934	16787.348	-8	5955.240 ^B 3	6.380	7.118		
			1-0	0.90	16545.569	16541.051	3	6043.914 ^A -1	6.393	7.143		
	2478	$e^{7}G-s^{6}D_{4.5}4f$ [1.5]°	2-2	1.67	19047.691	19042.492	-7	5249.980 ^D 2	6.390	7.041		I
	2476	$e^{7}G-s^{6}D_{4.5}4f$ [3.5]°	4-4	0.78	18416.694	18411.667	-3	5429.856 ^A 1	6.365	7.038		•
		$e^{7}G - s^{6}D_{4.5}4f$ [5.5]°	5-5	1.70	18107.593	18102.650	-3	5522.545 ^A 1	6.351	7.036		
		$e^{7}G - s^{6}D_{4.5}4f$ [4.5]°	5-5	1.36	18095.725	18090.785	13	5526.167 ^B -4	6.351	7.036		
		$e^{7}G - s^{6}D_{4.5}4f$ [6.5]°	5-6	2.02	18089.895	18084.956	0	5527.948 ^A 0	6.351	7.037		
		$e^{7}G-s^{6}D_{4.5}4f$ [5.5]°	6-6	1.89	17297.835	17293.112	-3	5781.070 ^A 1	6.319	7.036		
		$e^{7}G - s^{6}D_{4.5}4f$ [5.5]°	6-5	1.99	17291.264	17286.543	-3	5783.267 ^D 1	6.319	7.036		II
		$e^{7}G - s^{6}D_{4.5}4f$ [6.5]°	6–7	2.04	17282.201	17277.482	0	5786.300 ^A 0	6.319	7.036	• • •	
		$e^{7}G - s^{6}D_{4.5}4f$ [4.5]°	6-5	1.49	17280.418	17275.699	-9	5786.897 ^C 3	6.319	7.036	• • •	TT
		$e^{7}G - s^{6}D_{4.5}4f$ [5.5]°	7-6	2.00	16400.790 16386.732	16396.311	0	6097.267^D 0 6102.498^A -1	6.280 6.280	7.036 7.036	• • •	II
		$e^{7}G - s^{6}D_{4.5}4f$ [6.5]° $e^{7}G - s^{6}D_{4.5}4f$ [6.5]°	7–7 7–6	2.85 0.78	16380.732	16382.256 16375.862	3 -30	6102.498 ^A -1 6104.881 ^D 11	6.280	7.030		I
		$e^{7}G-s^{6}D_{4.5}4f$ [0.5] $e^{7}G-s^{6}D_{4.5}4f$ [7.5]°	7-8	3.54	16320.783	16316.325	0	6127.157^{A} 0	6.280	7.037		•
	2479	$e^{7}G-s^{6}D6p^{5}P^{0}$	4-3	2.06	18062.207 17034.643	18057.275	36	5536.422 ^A -11 5870.390 ^A -1	6.365 6.393	7.051 7.121	• • •	
			$1-2 \\ 2-2$	1.26 1.34	17034.643	17029.991 16951.787	3 0	5870.390 ^A -1 5897.472 ^A 0	6.393	7.121		
			3-2	1.34	16731.716	16727.147	6	5976.673 ^A -2	6.380	7.121		
	2490	$e^{7}G-x^{3}I^{\circ}$	7 – 7	0.70	15684.109	15679.825	0	6375.880^{A} 0	6.280	7.070		
	2480			0.70	17903.612	17898.724	-3	5585.465 ^A 1	6.393	7.086	• • •	
	2481	$e^{7}G - s^{6}D_{3.5}4f$ [1.5]° $e^{7}G - s^{6}D_{3.5}4f$ [3.5]°	$1-1 \\ 3-4$	1.28	17579.033	17574.233	-6	5688.595 ^A 2	6.380	7.085		
		$e^{7}G-s^{6}D_{3.5}4f$ [3.5]°	3-3	1.34	17577.216	17572.417	0	5689.183 ^A 0	6.380	7.085		
		$e^{7}G - s^{6}D_{3.5}4f$ [2.5]°	3-2	0.70	17568.844	17564.047	6	5691.894 ^A -2	6.380	7.086		
		$e^{7}G - s^{6}D_{3.5}4f$ [4.5]°	4-4	1.74	17205.011	17200.313	-3	5812.260 ^A 1	6.365	7.085		
		$e^{7}G-s^{6}D_{3.5}4f$ [3.5]°	4-4	1.89	17199.285	17194.589	18	5814.195 ^A -6	6.365	7.085		
		$e^{7}G - s^{6}D_{3.5}4f$ [3.5]°	4-3	1.41	17197.528	17192.832	3	5814.789 ^A -1	6.365	7.085	• • •	
		$e^{7}G-s^{6}D_{3.5}4f$ [4.5]°	5-5	1.58	16899.799	16895.184	0	5917.230 ^A 0	6.351	7.085	• • •	
		$e^{7}G - s^{6}D_{3.5}4f$ [5.5]°	5-6	2.08	16896.989	16892.375	9	5918.214 ^D -3	6.351	7.085	• • •	Ne
		$e^{7}G - s^{6}D_{3.5}4f [3.5]^{\circ}$	5-4	0.70	16890.297	16885.684 16874.119	0	5920.559 ^B 0 5924.617 ^A 0	6.351 6.351	7.085 7.086	• • •	
		$e^{7}G - s^{6}D_{3.5}4f$ [6.5]° $e^{7}G - s^{6}D_{3.5}4f$ [4.5]°	5-6 6-5	1.77 1.81	16878.728 16186.593	16182.172	0 -3	6177.952^{A} 1	6.319	7.085		
		$e^{7}G-s^{6}D_{3.5}4f$ [5.5]°	6-6	2.66	16184.005	16179.585	-3	6177.932 1 6178.940^D 1	6.319	7.085		I
		$e^{7}G - s^{6}D_{3.5}4f$ [6.5]°	6-7	3.44	16169.448	16165.031	-3	6184.503 ^A 1	6.319	7.086		_
		$e^{7}G - s^{6}D_{3.5}4f$ [6.5]°	6-6	1.68	16167.262	16162.846	0	6185.339^{A} 0	6.319	7.086		
	2482	$e^{7}G-s^{6}D_{2.5}4f$ [2.5]°	1-2	1.23	17052.298	17047.642	3	5864.312 ^D -1	6.393	7.120		II
	2402	$e^{7}G-s^{6}D_{2.5}4f$ [1.5]°	$^{2}-^{2}$	1.38	16984.137	16979.499	20	5887.847 ^D -7	6.390	7.120		I
		$e^{7}G-s^{6}D_{2.5}4f$ [2.5]°	2-3	1.04	16968.942	16964.309	20	5893.119 ^D -7	6.390	7.121		I
		$e^{7}G-s^{6}D_{2.5}4f$ [3.5]°	2-3	1.87	16949.801	16945.173	-29	5899.774 ^A 10	6.390	7.121		
		$e^{7}G$ – $s^{6}D_{2.5}4f$ [2.5]°	3-3	1.69	16743.883	16739.311	-3	5972.330 ^A 1	6.380	7.121	• • •	
		$e^{7}G-s^{6}D_{2.5}4f$ [3.5]°	3-4	1.75	16730.012	16725.443		5977.282 ^A 1	6.380	7.121	•••	
		$e^{7}G-s^{6}D_{2.5}4f$ [4.5]°	3-4	2.13	16726.038	16721.470		5978.702 ^A -1	6.380	7.121	• • •	
		$e^{7}G - s^{6}D_{2.5}4f[3.5]^{\circ}$	3-3	1.83	16725.302	16720.735 16404.600		5978.965 ^A -2 6094.186 ^A 2	6.380 6.365	7.121 7.120	• • •	
		$e^{7}G - s^{6}D_{2.5}4f$ [5.5]°	4-5	2.97 2.03	16409.082 16385.682	16381.207		6102.889^D 1	6.365	7.120		II
		$e^{7}G - s^{6}D_{2.5}4f$ [3.5]° $e^{7}G - s^{6}D_{2.5}4f$ [4.5]°	4-4 4-5	2.27	16385.335	16380.860		6103.018^{A} 2	6.365	7.121		**
		$e^{7}G-s^{6}D_{2.5}4f^{[4.5]}$ $e^{7}G-s^{6}D_{2.5}4f^{[4.5]}$	4-4	2.30	16381.867	16377.393		6104.310^{A} 0	6.365	7.121		
		$e^{7}G-s^{6}D_{2.5}4f$ [3.5]°	4-3	1.18	16381.162	16376.688		6104.573 ^A 0	6.365	7.121		
		$e^{7}G-s^{6}D_{2.5}4f$ [5.5]°	5-6	3.29	16130.312	16125.906		6199.508 ^A -1	6.351	7.120		
		$e^{7}G$ – $s^{6}D_{2.5}4f$ [5.5]°	5-5	1.57	16127.617	16123.212		6200.544 ^A 1	6.351	7.120		
		$e^{7}G - s^{6}D_{2.5}4f$ [3.5]°	5-4	1.40	16105.007	16100.608		6209.249 ^A 3	6.351	7.121	• • •	
		$e^{7}G - s^{6}D_{2.5}4f$ [4.5]°	5-5	2.49	16104.683	16100.284	-3	6209.374 ^A 1	6.351	7.121	• • •	

No.	Multiplet (MT) ¹					o-R ⁴	σ^{-5}	o-R ⁶	E(1)	LX u)	$\log(gf)^7$	Bl.°
				$\begin{array}{c} \lambda_{vac}^{\ 3} \\ \text{(Å)} \end{array}$	$\lambda_{air}^{}$ (A)	(mÅ)	(cm ⁻¹)	(mK)	(eV)	(eV)		
2483	$e^{7}G - s^{6}D_{1.5}4f$ [2.5]°	1-2	2.22	16485.730	16481.228	-3	6065.852 ^A	1	6.393	7.145	• • •	
	$e^{7}G-s^{6}D_{1.5}4f$ [2.5]° $e^{7}G-s^{6}D_{1.5}4f$ [2.5]°	2-3 $2-2$	1.65 1.88	16416.660 16412.459	16412.176 16407.977	3 0	6091.373 ^A 6092.932 ^A		6.390 6.390	7.145 7.145	• • •	
	$e^{7}G-s^{6}D_{1.5}4f$ [2.5]° $e^{7}G-s^{6}D_{1.5}4f$ [3.5]°	2-2 $2-3$	2.35	16386.294	16381.819	3	6102.661 ^A		6.390	7.143		
	$e^{7}G - s^{6}D_{1.5}4f$ [4.5]°	3-4	2.66	16230.056	16225.623	3	6161.408 ^A		6.380	7.144		
	$e^{7}G - s^{6}D_{1.5}4f$ [2.5]°	3-3	2.08	16205.945	16201.518	Ő	6170.575 ^A		6.380	7.145		
	$e^{7}G-s^{6}D_{1.5}4f$ [2.5]°	3-2	1.20	16201.843	16197.418	-5	6172.137^{D}		6.380	7.145		I
	$e^{7}G-s^{6}D_{1.5}4f[3.5]^{\circ}$	3-4	2.73	16179.397	16174.978	0	6180.700^{A}	0	6.380	7.146		
	$e^{7}G - s^{6}D_{1.5}4f$ [3.5]°	3-3	2.13	16176.350	16171.932	-3	6181.864 ^A	1	6.380	7.147		
	$e^{7}G-s^{6}D_{1.5}4f$ [4.5]°	4-5	2.55	15908.663	15904.318	-8	6285.883 ^A	3	6.365	7.144		
	$e^{7}G - s^{6}D_{1.5}4f$ [3.5]°	4–4	1.72	15857.138	15852.807	-5	6306.308 ^A	2	6.365	7.146	• • •	
2484	$e^{7}G - s^{6}D_{0.5}4f$ [2.5]°	1-2	2.63	16190.223	16185.801	-3	6176.567 ^D	1	6.393	7.159	• • •	II
	$e^{7}G - s^{6}D_{0.5}4f[2.5]^{\circ}$	2-3	2.79	16120.368	16115.965	-3	6203.332^{A}	1	6.390	7.159	• • •	
	$e^{7}G - s^{6}D_{0.5}4f$ [2.5]° $e^{7}G - s^{6}D_{0.5}4f$ [3.5]°	2-2 $2-3$	2.01 0.60	16119.550 16115.487	16115.147 16111.085	3 0	6203.647 ^A 6205.211 ^B		6.390 6.390	7.159	• • •	
	$e^{7}G-s^{6}D_{0.5}4f$ [3.5]° $e^{7}G-s^{6}D_{0.5}4f$ [2.5]°	3-3	1.38	15917.136	15912.789	-13	6203.211^{-1} 6282.537^{A}	0 5	6.380	7.159 7.159	• • •	
	$e^{7}G-s^{6}D_{0.5}4f$ [2.5]° $e^{7}G-s^{6}D_{0.5}4f$ [3.5]°	3-4	2.31	15917.130	15912.789	-13	6282.537 6282.614^{A}	1	6.380	7.159		
2485	$e^{7}G-s^{4}D5p^{5}D^{\circ}$	4-4	2.34	15554.707	15550.458	-27	6428.922^{D}	11	6.365	7.162		I
5-103	c d v Dsp D	4-3	1.36	14928.503	14924.424	-2	6698.595 ^A	1	6.365	7.195		1
2486	$e^{7}G$ – $s^{4}D$ 5 $p^{5}F^{0}$	4-5	1.92	14679.769	14675.758	-4	6812.096 ^A	2	6.365	7.209		
	0 0 0 D 0 p 1	4-4	0.60	13993.084	13989.260	4	7146.387^{B}	-2	6.365	7.251		
		5-4	1.15	13787.894	13784.125	13	7252.739^{A}	-7	6.351	7.251		
2487	$e^{7}G-s^{4}D5p^{5}P^{0}$	4-3	1.32	13624.817	13621.092	-4	7339.548 ^A	2	6.365	7.274		
2407	c G-3 D3p 1	2-1	1.32	12786.943	12783.446	-2	7820.477^{D}	1	6.390	7.359		I
2488	$e^{7}G - s^{6}D_{4.5}5f$ [6.5]°	7-7	1.79	11593.095	11589.922	1	8625.824^{B}	-1	6.280	7.349		
2100	$e^{7}G - s^{6}D_{4.5}5f$ [7.5]°	7-8	2.56	11575.685	11572.517	-8	8638.797 ^A	6	6.280	7.351		
2489	$e^{7}G - s^{6}D_{3.5}5f$ [6.5]°	6-7	2.16	11492.699	11489.553	-5	8701.176 ^A	4	6.319	7.398		
2490	$u^{5}F^{\circ}-g^{5}F$	5-5	2.82	48907.958	48894.626	0	2044.657 ^B	0	6.325	6.579		
2491	$u^{5}F^{\circ}-h^{5}D$	5-4	2.52	46762.033	46749.285	-87	2138.487^{D}	4	6.325	6.590		II
		4-3	2.14	46202.842	46190.247	128	2164.369^{B}	-6	6.370	6.639		
2492	u ${}^5F^{\circ}-f$ 5G	5-6	2.97	46457.974	46445.309	43	2152.483^{A}	-2	6.325	6.592		
2493	$u~^5F^{o}-e~^5H$	5-5	2.57	34994.486	34984.944	37	2857.593^{C}	-3	6.325	6.679		
2494	$u^{5}F^{\circ}-e^{3}G$	4-5	2.05	42409.180	42397.619	0	2357.980^{B}	0	6.370	6.663		
		3-4	2.41	40859.070	40847.930	67	2447.437 ^B	-4	6.400	6.703		
2495	$u^{5}F^{\circ}-f^{3}D$	1-2	2.04	47148.505	47135.652	-89	2120.958^{D}	4	6.440	6.703		Ne
2496	$u^{5}F^{\circ}-g^{7}D$	5-4	2.13	32174.193	32165.420	10	3108.081 ^A	-1	6.325	6.710		
2497	$u\ ^{5}F^{\circ}-s\ ^{6}D6s\ ^{5}D$	3-4	2.59	34954.976	34945.445	24	2860.823^{A}	-2	6.400	6.754		
		3-3	2.86	30809.501	30801.099	19	3245.752^{A}	-2	6.400	6.802		
		$^{2-2}$	2.63	30241.145	30232.899	0	3306.753^{A}	0	6.426	6.836		
		1 - 1	2.40	29763.587	29755.471	-9	3359.810 ^A	1	6.440	6.857		
		1 - 0	2.65	29030.087	29022.170	0	3444.702 ^A	0	6.440	6.867		
		5-4	3.48	28874.687	28866.812	0	3463.241 ^A	0	6.325	6.754		
		2-1	2.84	28750.395	28742.554	0	3478.213 ^A	0	6.426	6.857	• • •	
		4-3 3-2	3.34 2.78	28707.823 28448.781	28699.994 28441.023	8 8	3483.371 ^A 3515.089 ^A	-1 -1	6.370 6.400	6.802 6.836		
	5E0 4EC 5E											
2498	$u^{5}F^{0}-{}^{4}F6s^{5}F$	4-5 5 5	1.49	21130.802	21125.036	4	4732.428 ^A	-1 0	6.370	6.957	• • •	
		5-5 1-2	2.70 1.30	19618.514 17912.524	19613.159 17907.634	0 26	5097.226 ^A 5582.686 ^A	0 -8	6.325 6.440	6.957 7.132	• • •	
		$\frac{1-2}{2-3}$	0.60	17912.324	17907.034	-9	5683.255^{B}	-8 3	6.426	7.132		
2499	$u^{5}F^{\circ}-s^{6}D5d^{5}D$	3-4	1.65	21793.752	21787.805	14	4588.471 ^A	-3	6.400	6.969		
- 1//	. 1 0 2500 2	4-4	1.28	20720.690	20715.035	0	4826.094^{B}	0	6.370	6.969		
						-	. 5 = 5.05	•	2.270	0.707		
		4-3	1.54	20178.922	20173.415	4	4955.666^{B}	-1	6.370	6.985		

•				IAB	LE 2—Cont	inuea						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\lambda_{air}^{}$ (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
2500	$u^{5}F^{\circ}-s^{6}D5d^{5}G$	3-4	2.09	19786.049	19780.649	4	5054.066 ^A	-1	6.400	7.026		
<u>,</u> 2 500	u 1 0 25u 3	4-5	2.65	19345.450	19340.170	4	5169.174 ^A		6.370	7.011		
2500		2 - 3	1.77	19127.030	19121.810	-7	5228.203^{A}	2	6.426	7.074		
Ä		1-2	2.61	18910.644	18905.482	-4	5288.027^{A}	1	6.440	7.096		
		4-4	2.37	18897.568	18892.410	4	5291.686 ^D		6.370	7.026		II
		5-6	3.17	18778.640	18773.514	-4	5325.199 ^A		6.325	6.985		
		2-2	1.59	18496.500	18491.451	0	5406.428 ^A		6.426	7.096		
	570 (777	5-5	2.00	18070.223	18065.289	23	5533.966 ^A		6.325	7.011		
2501	u 5F $^{\circ}$ $-s$ 6D $5d$ 7F	$1-2 \\ 1-1$	2.29	19670.333 18982.813	19664.964 18977.631	-8 11	5083.798 ^A 5267.923 ^B		6.440 6.440	7.071		
		1-1 5-6	0.60 1.78	18479.793	18474.748	11 0	5411.316 ^A		6.325	7.093 6.996		
		3-4	1.78	17580.127	17575.327	3	5688.241 ^A		6.400	7.105		
		5-5	1.56	17164.229	17159.542	6	5826.070 ^A		6.325	7.047		
		4-4	1.49	16875.213	16870.605	31	5925.851 ^D		6.370	7.105		II
2502	$u^{5}F^{\circ}$ – $s^{6}D5d^{7}D$	1-1	1.32	19768.542	19763.146	-8	5058.542 ^A	2	6.440	7.067		
		2 - 1	1.36	19316.411	19311.139	0	5176.945 ^A		6.426	7.067		
		3-2	0.60	19143.401	19138.176	4	5223.732 ^A		6.400	7.047		
		2-3	2.50	19073.209	19068.003	4	5242.956 ^A		6.426	7.076		
		3-3	1.43	18344.275	18339.267	3	5451.292 ^B		6.400	7.076		
2503	$u^{5}F^{\circ}-s^{6}D5d^{7}P$	$\begin{array}{c} 2-3 \\ 1-2 \end{array}$	2.15 1.75	21576.788 18707.579	21570.900 18702.472	-42 -28	4634.610 ^B 5345.427 ^D		6.426 6.440	7.000 7.103		I
2504	$u^{5}F^{\circ}\!-\!s^{6}\!D5d^{7}G$	1-2	0.60	18165.812	18160.853	-3	5504.846^{B}	1	6.440	7.123		
		3-3	0.48	17414.643	17409.888	-18	5742.294 ^B		6.400	7.112		
		4-5	2.08	17405.337	17400.585	3	5745.364 ^A		6.370	7.083	• • • •	
		4-4	0.60	17317.813	17313.084	-6	5774.401 ^B		6.370	7.086		
		5-6	2.08	17069.920	17065.259	-9	5858.258 ^A		6.325	7.051		
2505	u 5F $^{\circ}$ $-s$ 6D $5d$ 5S	4-3 3-2	1.18 2.05	16722.682 19602.723	16718.115 19597.373	14 -4	5979.902 ^A 5101.332 ^A		6.370 6.400	7.112 7.032		
	$u ^{5}F ^{6}-s ^{6}D5d ^{5}F$						5006.396 ^A					
2506	$u \circ F \circ -s \circ D \circ d \circ F$	1-2 3-3	1.34 2.46	19974.448 19577.846	19968.997 19572.503	-8 8	5107.814 ^A	2 -2	6.440 6.400	7.061 7.033		
		2-2	2.40	19577.840	19507.634	0	5107.814 5124.799 ^A		6.426	7.061		
		4-3	1.75	18707.579	18702.472	21	5345.427 ^D		6.370	7.033		I
		4-5	2.85	18585.916	18580.842	7	5380.418 ^A		6.370	7.037		•
		3-4	2.02	18161.414	18156.456	-20	5506.179 ^A		6.400	7.082		
		4-4	1.18	17410.110	17405.356	9	5743.789 ^A	-3	6.370	7.082	• • •	
2507	u $^5F^{\circ}$ $ ^4F$ $6s$ 3F	2-3	2.20	18548.013	18542.950	-3 12	5391.413 ^A 5791.602 ^B		6.426	7.094		
2500	$u^{5}F^{\circ}$ – $s^{6}D5d^{5}P$	5-4 3-3	0.48 1.59	17266.379 18047.062	17261.665	12 -10	5541.068 ^B		6.325 6.400	7.043 7.087		
2508					18042.135		6536.015 ^D					**
2509	$u^{5}F^{\circ}-s^{4}D4d^{5}F$ $u^{5}F^{\circ}-i^{5}D$	2-1	1.43	15299.842	15295.662	-14	5986.526 ^A		6.426	7.236		II
2510	$u \circ F \circ -i \circ D$	$\begin{array}{c} 2-3 \\ 3-3 \end{array}$	0.60 0.48	16704.178 16142.412	16699.617 16138.003	3 10	6194.861 ^A		6.426 6.400	7.168 7.168		
2511	$u^{5}F^{\circ}-s^{6}D7s^{7}D$	4-4	1.28	14670.377	14666.369	-2	6816.457 ^A	1	6.370	7.215		
		3-3	2.28	14574.639	14570.657	-4	6861.233^{A}		6.400	7.250		
		5-5	1.36	14534.072	14530.100	13	6880.384 ^A	-6	6.325	7.178		
2512	$u{}^5F^{o}\!-\!g{}^5G$	5-6	0.85	14315.822	14311.910	-4	6985.278 ^A	2	6.325	7.191	• • •	
2513	u 5F $^{\circ}$ $-s$ 4D4d 5P	1-2	1.32	15955.821	15951.463	0	6267.305^{A}	0	6.440	7.217	• • •	
2514	$u~^5F^{\circ}\!-\!s~^6\!D7s~^5D$	2-1	0.70	13725.102	13721.350	9	7285.920^{D}		6.426	7.329		I
		5-4	1.34	13689.782	13686.040	6	7304.718 ^A		6.325	7.231		••
		4-3	1.20	13548.307	13544.603	4	7380.996 ^D		6.370	7.285		II
2515	u 5F $^{\circ}$ $ ^4F5d$ 5F	4-5	1.78	13870.123	13866.332	13	7209.741 ^D		6.370	7.264		Ne
		5-5	1.15	13202.114	13198.505	0	7574.544 ^B	0	6.325	7.264	• • • •	
2516	$x^3H^\circ-s^6D5d^7G$	5-6	2.17	17222.986	17218.283	9	5806.194 ^D	-3	6.331	7.051	•••	

					TAE	BLE 2—Coni	inued						
94	No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\lambda_{qir}^{}$ (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
S	2517	$x^{3}H^{\circ}-s^{6}D5d^{5}F$	4-5	0.60	18681.989	18676.889	14	5352.749 ^A	-4	6.374	7.037		
ıyy4Ap∪s	2518	$x^{3}H^{\circ}-s^{6}D5d^{5}P$	4-3	1.75	17388.213	17383.466	-18	5751.022^{D}		6.374	7.087		I
20		$x^3H^\circ - s^4D4d^5F$			14184.087							• • •	
_	2519	x 3H 3-8 D4a 3F	5-4	1.56	14184.087	14180.210	4	7050.154 ^D	-2	6.331	7.206	•••	II
	2520	$t{}^5D^{\circ} - g{}^5F$	3-4	2.53	49205.818	49192.404	0	2032.280^{B}	0	6.368	6.620		
			2-3	2.33	45434.513	45422.126	41	2200.970^{B}		6.401	6.674		
			0-1	1.97	40905.734	40894.582	-17	2444.645 ^C		6.440	6.743	• • •	
		F F	2-2	2.37	38058.919	38048.542	-87	2627.505^{B}		6.401	6.727	• • •	
	2521	t 5D $^{\circ}-h$ 5D	4-4	2.75	48111.225	48098.110 43378.011	-23	2078.517 ^B 2304.687 ^A		6.332	6.590		
			1-1 $4-3$	2.52 2.73	43389.839 40498.865	40487.823	169 -16	2304.687 ¹¹ 2469.205 ^D		6.426 6.332	6.711 6.639	• • •	T
			3-2	2.73	38383.767	38373.302	29	2409.203 2605.268^{B}		6.368	6.691		I
	2522	t 5D°-f 5P	4-3	2.94	47985.473	47972.392	0	2083.964 ^A		6.332			
	2522	t*D*=j*F	3-2	2.46	45303.068	45290.718	41	2083.964 ⁻¹ 2207.356 ^B		6.368	6.591 6.641		
	2522	$t^{5}D^{\circ}-f^{5}G$											
	2523	$t^*D^*-f^*G$	4-5 $2-3$	2.77 2.65	45350.322 39507.952	45337.959 39497.180	82 0	2205.056^{D} 2531.136^{A}		6.332 6.401	6.606 6.715	• • •	Ne
			1-2	2.35	39249.255	39238.555	31	2531.130 2547.819^{B}	-	6.426	6.741		
			$\frac{1}{2}$	2.32	36420.929	36410.999	0	2745.674^{B}		6.401	6.741		
	2524	$t{}^5D^{\circ}{-}e{}^5H$	2-3	2.63	34952.923	34943.393	73	2860.991 ^A		6.401	6.756		
	2525	t 5D $^{\circ}-e$ 3G	4-5	2.02	37554.270	37544.031	-56	2662.813^{C}	4	6.332	6.663		
			3-4	2.31	36966.909	36956.830	41	2705.122 ^B		6.368	6.703	• • •	
	2526	$t^5D^{\circ}-g^7D$	3-4	2.22	36187.947	36178.080	0	2763.351 ^B	0	6.368	6.710	• • •	
			4-4	2.97	32807.225	32798.279	54	3048.109 ^A	-5	6.332	6.710	• • •	
	2527	$t{}^5D^{\circ} - s{}^6D6s{}^5D$	3-4	3.12	32066.606	32057.862	10	3118.509 ^A	-1	6.368	6.754		
			2-3	2.97	30913.525	30905.095	-10	3234.830 ^A	1	6.401	6.802		
			1-2	2.71	30245.188	30236.940	9	3306.311 ^A		6.426	6.836	• • •	
			$0-1 \\ 4-4$	2.32 3.34	29725.765 29383.478	29717.658 29375.465	0 -9	3364.085 ^A 3403.273 ^A	0 1	6.440 6.332	6.857 6.754	• • •	
			1-1	2.18	28754.057	28746.216	-9 8	3403.273 ^A	-1	6.426	6.857	• • •	
			3-3	2.69	28543.390	28535.606	8	3503.438^{A}		6.368	6.802		
			2-2	2.14	28537.420	28529.637	-41	3504.171 ^A	5	6.401	6.836		
			3-2	1.67	26505.695	26498.466	7	3772.774^{B}		6.368	6.836		
			4-3	1.80	26397.726	26390.526	-28	3788.205^{B}	4	6.332	6.802		
	2528	$t{}^{5}D^{\circ}-{}^{4}F6s{}^{5}F$	4-5	2.81	19852.070	19846.652	0	5037.258^{A}	0	6.332	6.957		
			3-4	1.94	19399.300	19394.005	0	5154.825 ^A	0	6.368	7.007		
			2-1	3.19	16328.919	16324.459	-21	6124.104^{D}	8	6.401	7.160		I
	2529	t 5D $^{\circ}-s$ 6D 5D 5D	3-4	2.10	20634.902	20629.271	9	4846.158 ^A	-2	6.368	6.969		
			2-2	1.67	20620.839	20615.212	-13	4849.463 ^B	3	6.401	7.002		
			1-1	1.63	20377.808	20372.247	17	4907.299^{D}	-4	6.426	7.034		II
			3-3	2.48	20097.545	20092.060	8	4975.732 ^A		6.368	6.985		
			$\begin{array}{c} 2-1 \\ 3-2 \end{array}$	2.18 2.39	19588.040 19538.611	19582.693 19533.278	-4 4	5105.156 ^A 5118.071 ^A	1	6.401	7.034	• • •	
			3-2 4-4	2.72	19338.611	19333.278	0	5118.071 ²⁴ 5130.923 ^A	-1 0	6.368 6.332	7.002 6.969	• • •	
			4-3	2.26	19009.610	19004.421	0	5260.497 ^A	0	6.332	6.985		
	2530	t ⁵ D°-s ⁶ D5d ⁵ G	3-4	2.06	18826.183	18821.044	4	5311.751 ^D	-1	6.368	7.026		I
	2330	<i>t D =3 D3a G</i>	1-2	1.11	18498.006	18492.956	0	5405.988 ^A	0	6.426	7.026		1
			4-5	1.86	18268.160	18263.173	Ö	5474.005 ^A	0	6.332	7.011		
	2531	t $^5D^{\circ}$ $-s$ 6D5d 7F	1-2	2.00	19224.258	19219.011	-11	5201.761 ^A	3	6.426	7.071		
			0-1	1.23	18967.403	18962.225	0	5272.203 ^A	0	6.440	7.093		
			2-2	2.35	18519.859	18514.803	10	5399.609 ^A	-3	6.401	7.071		
			3-2	1.48	17642.191	17637.374	-28	5668.230 ^B	9	6.368	7.071		
			4-5	1.53	17342.726	17337.991	-6	5766.106 ^A	2	6.332	7.047		
	2532	$t{}^5D^{\circ}{-}s{}^6D5d{}^7D$	1-2	1.74	19940.338	19934.896	-16	5014.960^{D}	4	6.426	7.047		Ne
			0 - 1	1.83	19751.849	19746.458	4	5062.817^{A}	-1	6.440	7.067		
			1-1	2.00	19318.060	19312.788	0	5176.503 ^A	0	6.426	7.067		

TABLE 2—Continued

								_				
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
2533		3-2	1.28	18243.457	18238.477	3	5481.417 ^A	-1	6.368	7.047		
2533	$t{}^5D^{\circ} - s{}^6D5d{}^7G$	0-1	1.36	18591.497	18586.421	10	5378.803 ^D	-3	6.440	7.107		II
2000		1-1	1.20	18206.652	18201.681	-20	5492.498 ^B	_	6.426	7.107		**
		3-4	0.85	17257.833	17253.121	-15	5794.470 ^B		6.368	7.086		
2534	t 5D $^{\circ}-s$ 6D 5S	2-2	2.26	19644.786	19639.425	-8	5090.409 ^A	2	6.401	7.032		
2535	$t{}^5D^{\circ}{-}s{}^6\!D5d{}^5F$	2-3	2.31	19619.807	19614.452	0	5096.890 ^A	0	6.401	7.033		
		1-2	2.23	19514.643	19509.317	4	5124.357 ^A		6.426	7.061	•••	
		0 - 1	1.20	19469.264	19463.950	4	5136.301 ^A		6.440	7.077	•••	
		1 - 1	1.67	19047.691	19042.492	29	5249.980^{D}	-8	6.426	7.077		I
		2-2	1.36	18789.176	18784.047	-7	5322.213 ^A	2	6.401	7.061		
		3-3	1.75	18637.588	18632.500	-3	5365.501 ^A		6.368	7.033	• • •	
		2-1	1.11	18355.882	18350.871	-17	5447.845 ^B		6.401	7.077		
		4-3	0.95	17698.303	17693.471	13	5650.259 ^A		6.332	7.033	• • •	
2536	t 5D $^{\circ}$ $ ^4F6s$ 3F	3-4	1.52	18359.181	18354.169	27	5446.866 ^D		6.368	7.043	• • •	II
	<i>5</i>	4-4	1.36	17447.019	17442.255	-3	5731.638 ^A		6.332	7.043	• • •	
2537	$t^5D^{\circ}-s^6D5d^5P$	2-2	1.11	17321.620	17316.890	0	5773.132 ^B		6.401	7.117	• • •	
2538	t 5D $^{\mathrm{o}}-s$ 6D 7s 5D	3-4	0.70	14367.845	14363.918	8	6959.986 ^B		6.368	7.231	• • •	
		0-1	1.08	13943.499	13939.687	-6	7171.801 ^A		6.440	7.329	• • •	
		4-4	1.26	13803.112	13799.339	19	7244.743 ^A		6.332	7.231	• • • •	
		2-2	1.28	13503.010	13499.318	5	7405.756 ^A	-	6.401	7.319	• • •	
2520	(5D) 4E(15E	3-2	1.04	13030.378	13026.815	-8	7674.374 ^B		6.368	7.319	• • •	
2539	t ⁵ D°- ⁴ F5d ⁵ F	4-4	1.28	13305.930	13302.292	-2	7515.446 ^A	1	6.332	7.264	•••	
2540	$f^{5}F-^{4}F5p^{3}G^{\circ}$	3-3	2.03	36319.973	36310.070	-66	2753.306 ^B	5	6.398	6.739	• • •	
2541	$f{}^{5}F-{}^{4}F5p{}^{5}F^{\circ}$	4-3	2.67	45466.780	45454.385	-21	2199.408 ^A		6.380	6.653		
		5-4	2.97	43755.154	43743.226	-19	2285.445 ^A		6.336	6.619	• • •	
	5-4-2-	3-2	2.66	41010.061	40998.880	-50	2438.426 ^B		6.398	6.700	• • •	
2542	$f^{5}F-{}^{4}F5p^{3}F^{\circ}$	4-3	2.61	35368.670	35359.027	13	2827.361 ^A		6.380	6.731	• • •	
2543	$f{}^{5}F-{}^{4}F5p{}^{5}D^{\circ}$	4-4	2.40	46538.793	46526.106	-87	2148.745^{B}		6.380	6.647	• • •	
		1-1	2.21	35104.458	35094.886	12	2848.641 ^B		6.417	6.770	• • •	
		2-1	2.09	34505.056	34495.647	-24	2898.126 ^B		6.410	6.770	• • •	
	.5- 6- 7-0	3-2	2.27	34169.927	34160.609	-23	2926.550 ^D		6.398	6.761	• • •	II
2544	$f^{5}F$ – $s^{6}D6p^{7}F^{\circ}$	1-0	1.90	18631.994	18626.908	-24	5367.112 ^B	•	6.417	7.082	• • •	
		1-1	1.56	18450.426	18445.389	10	5419.929 ^A		6.417	7.088	• • •	**
		3-3 $3-2$	1.91 1.84	18440.467 18062.539	18435.433 18057.608	0 -3	5422.856 ^D 5536.320 ^A	0 1	6.398 6.398	7,070 7.084		II
2545	$f^{5}F - s^{6}D6p^{5}F^{0}$	2-1	2.06	17119.022	17114.348	32	5841.455 ^A		6.410			
2545	$\int d\mathbf{r} - \mathbf{s} d\mathbf{p} d\mathbf{r}$	4-3	0.90	17119.022	16995.941	32 14	5882.151 ^A		6.380	7.135 7.109		
2546	(50 60 500											
2546	$f{}^5F$ – $s{}^6D$ 6 $p{}^5D$ 0	2-3	1.28	18303.248	18298.251	17	5463.511 ^B		6.410	7.088	• • •	
		3-3 1-0	1.94 1.54	17971.305 17075.864	17966.399 17071.201	0 3	5564.426 ^D 5856.219 ^A		6.398 6.417	7.088 7.143		I
2547	$f^{5}F - s^{6}D_{4.5}4f[5.5]^{0}$	4-5	1.58	18905.643	18900.482	4	5289.426 ^A		6.380	7.036		
2347	$f^{5}F - s^{6}D_{4.5}4f$ [4.5]°	4-5	1.48	18892.688	18887.531	4	5293.053 ^A		6.380	7.036		
	$f^{5}F - s^{6}D_{4.5}4f$ [4.5]°	4-4	1.63	18891.956	18886.799	7	5293.258 ^A		6.380	7.036		
	$f^{5}F - s^{6}D_{4.5}4f$ [3.5]°	4-4	1.49	18856.898	18851.751	-11	5303.099 ^A		6.380	7.038		
	$f^{5}F - s^{6}D_{4.5}4f$ [3.5]°	4-3	1.28	18852.341	18847.195	0	5304.381 ^B		6.380	7.038		
	$f^{5}F-s^{6}D_{4.5}4f[5.5]^{\circ}$	5-6	1.49	17712.570	17707.734	3	5645.708 ^A		6.336	7.036		
	$f^{5}F-s^{6}D_{4.5}4f[5.5]^{\circ}$	5-5	1.70	17705.677	17700.843	0	5647.906 ^A		6.336	7.036		
	$f^{5}F - s^{6}D_{4.5}4f$ [4.5]°	5-5	1.97	17694.314	17689.483	3	5651.533 ^A		6.336	7.036		
	$f^{5}F - s^{6}D_{4.5}4f$ [4.5]°	5-4	0.60	17693.662	17688.832	-3	5651.741 ^A		6.336	7.036		
	$f^{5}F - s^{6}D_{4.5}4f$ [6.5]°	5-6	2.75	17688.739	17683.910	-13	5653.314 ^A		6.336	7.037		
	$f^{5}F - s^{6}D_{4.5}4f$ [3.5]°	5-4	0.85	17662.923	17658.100	-9	5661.577 ^A		6.336	7.038	• • •	
2548	$f{}^{5}F\!-\!s{}^{6}\!D6p{}^{5}P^{o}$	1-2	1.77	17597.284	17592.479	3	5682.695 ^A		6.417	7.121		
		2-2	1.18	17445.372	17440.609	0	5732.179 ^A		6.410	7.121	• • •	
		3-2	0.90	17143.569	17138.888	-3	5833.091 ^D	1	6.398	7.121	• • •	I

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					TABLE	2—Continu	ed						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			J-J	I 2		λ _{qir} (Å)		σ ⁵ (cm ⁻¹)				log(gf)	⁷ Bl. ⁸
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5 7	$F = s^{6}D_{2} \cdot 54f [2.5]^{\circ}$	1-2	2.04	18525.695	18520.638	27	5397.908 ^D	-8	6417	7.086		II
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$								_					Ï
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5 1	$F = 6D_0 \cdot 4f [2.5]$											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 1	$F = 8^{6}D_{3.5} + f[2.5]^{\circ}$						4					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5 7	$F = {}^{6}D_{2} \cdot 4f [1.5]^{\circ}$											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5 <u>r</u>	$F = 8^{6}D_{3.5} + f[2.5]^{\circ}$											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c} f^3F - 6 - 9 \cdot 0_{3.34} f [4.5]^6 & 5-5 & 2.29 & 16549.192 & 16544.672 & 0 & 6042.591^4 & 0 & 6.336 & 7.085 \\ f^3F - 6 \cdot 9 \cdot 0_{3.44} f [5.5]^6 & 5-6 & 2.31 & 16546.486 & 16541.898 & 0 & 6043.579^4 & 0 & 6.336 & 7.085 \\ f^3F - 6 \cdot 9 \cdot 0_{3.44} f [6.5]^6 & 5-6 & 3.22 & 16528.985 & 16524.471 & 0 & 6044.992^4 & 0 & 6.336 & 7.085 \\ f^3F - 6 \cdot 9 \cdot 0_{3.44} f [6.5]^6 & 5-6 & 3.22 & 16528.985 & 16524.471 & 0 & 6049.978^4 & 0 & 6.336 & 7.085 \\ f^3F - 6 \cdot 9 \cdot 0_{3.44} f [6.5]^6 & 1-1 & 0.95 & 17646.123 & 17641.305 & 9 & 5666.967^4 & 3 & 6.417 & 7.120 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [1.5]^6 & 1-2 & 1.81 & 17627.115 & 17622.20 & 3 & 5673.078^4 & 1 & 6.417 & 7.120 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [1.5]^6 & 1-2 & 1.89 & 17616.125 & 17611.316 & 3 & 5676.617^4 & 1 & 6.417 & 7.120 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [1.5]^5 & 2-1 & 1.15 & 17478.169 & 17473.397 & -6 & 5721.423^8 & 2 & 6.410 & 7.120 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [1.5]^5 & 2-2 & 1.93 & 17474.690 & 17469.919 & 3 & 5722.562^4 & 1 & 6.410 & 7.120 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [1.5]^5 & 2-3 & 2.20 & 17438.406 & 17433.644 & 6 & 5734.469^0 -2 & 6.410 & 7.121 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [3.5]^5 & 3-3 & 1.84 & 17137.616 & 17132.937 & 6 & 5821.47^4 & 2 & 6.398 & 7.121 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [3.5]^5 & 3-4 & 1.59 & 17141.785 & 17137.014 & -6 & 5833.698^4 & 2 & 6.398 & 7.121 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [3.5]^5 & 3-4 & 1.59 & 17141.785 & 17137.014 & -6 & 5833.698^4 & 2 & 6.398 & 7.121 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [3.5]^5 & 3-3 & 1.45 & 17136.844 & 17132.165 & 3 & 5835.804^4 & -1 & 6.398 & 7.121 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [3.5]^5 & 3-3 & 1.45 & 17136.844 & 17132.165 & 3 & 5835.804^4 & -1 & 6.398 & 7.121 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [3.5]^5 & 4-4 & 8.5 & 16733.251 & 1672.6861 & 11 & 5976.125^9 & 4 & 6.398 & 7.121 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [3.5]^5 & 4-6 & 8.5 & 16733.251 & 1672.6861 & 11 & 5976.125^9 & 4 & 6.398 & 7.121 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [3.5]^5 & 3-6 & 1.59 & 16873.831 & 1672.866 & 6 & 5977.849^4 & 2 & 6.398 & 7.121 \\ f^3F - 6 \cdot 9 \cdot 0_{2.34} f [3.5]^5 & 2-5 & 2.75 & 16757.646$	5 <u>r</u>	$F = 6D_{0.5}4f[3.5]$							-				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$								_					
$\begin{array}{c} f^3F - s - 9 D_{3.5} 4f [5.5]^s & 5-5 & 2.49 & 16534.713 & 16539.195 & 0 & 6044.592^k & 0 & 6.336 & 7.086 \\ f^3F - s P_{0.2} 4f [6.5]^s & 5-6 & 3.22 & 16528.985 & 16524.471 & 0 & 6049.978^k & 0 & 6.336 & 7.086 \\ \hline 2550 & f^3F - s P_{0.2} 4f [1.5]^s & 1-2 & 1.81 & 17627.115 & 17622.302 & -3 & 5673.078^k & 1 & 6.417 & 7.119 \\ f^3F - s P_{0.2} 4f [1.5]^s & 1-2 & 1.81 & 17627.115 & 17622.302 & -3 & 5673.078^k & 1 & 6.417 & 7.120 \\ f^3F - s P_{0.2} 4f [1.5]^s & 2-2 & 1.97 & 17478.169 & 1746.913 & 3 & 576.617^k & -1 & 6.417 & 7.120 \\ f^3F - s P_{0.2} 4f [1.5]^s & 2-2 & 1.93 & 17474.690 & 17469.919 & -3 & 5722.562^k & 1 & 6.410 & 7.120 \\ f^3F - s P_{0.2} 4f [1.5]^s & 2-2 & 1.93 & 17474.690 & 17469.919 & -3 & 5722.562^k & 1 & 6.410 & 7.120 \\ f^3F - s P_{0.2} 4f [1.5]^s & 2-2 & 1.93 & 17474.690 & 17469.919 & -3 & 5722.562^k & 1 & 6.410 & 7.120 \\ f^3F - s P_{0.2} 4f [1.5]^s & 2-2 & 1.93 & 17474.690 & 17469.919 & -3 & 5722.562^k & 1 & 6.410 & 7.120 \\ f^3F - s P_{0.2} 4f [1.5]^s & 2-2 & 1.93 & 17474.690 & 17469.919 & -3 & 5722.562^k & 1 & 6.410 & 7.120 \\ f^3F - s P_{0.2} 4f [1.5]^s & 3-3 & 1.38 & 17156.351 & 17151.667 & 6 & 5823.768^k & 2 & 6.398 & 7.121 \\ f^3F - s P_{0.2} 4f [1.5]^s & 3-4 & 1.59 & 17141.783 & 17137.104 & -6 & 5833.698^k & 2 & 6.398 & 7.121 \\ f^3F - s P_{0.2} 4f [1.5]^s & 3-4 & 1.34 & 17137.616 & 17132.937 & 6 & 5835.117^k & -2 & 6.398 & 7.121 \\ f^3F - s P_{0.2} 4f [1.5]^s & 4-5 & 2.75 & 16757.646 & 16733.070 & -3 & 5967.425^k & 1 & 6.398 & 7.121 \\ f^3F - s P_{0.2} 4f [1.5]^s & 4-5 & 2.75 & 16757.646 & 16733.070 & -3 & 5967.425^k & 1 & 6.380 & 7.121 \\ f^3F - s P_{0.2} 4f [1.5]^s & 4-5 & 2.75 & 16757.646 & 16733.070 & -3 & 5967.425^k & 1 & 6.380 & 7.121 \\ f^3F - s P_{0.2} 4f [1.5]^s & 4-5 & 2.75 & 16757.646 & 16733.070 & -3 & 5967.425^k & 1 & 6.380 & 7.121 \\ f^3F - s P_{0.2} 4f [1.5]^s & 4-5 & 2.75 & 16757.646 & 1673.070 & -3 & 5967.425^k & 1 & 6.380 & 7.121 \\ f^3F - s P_{0.2} 4f [1.5]^s & 4-5 & 2.75 & 16757.646 & 1673.070 & -3 & 5967.425^k & 1 & 6.380 & 7.121 \\ f^3F - s P_{0.2} 4f [1.5]^s & 4-5 & 2.$													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 <u>j</u>	$F = 8^{6}D_{2.5}4f[5.5]^{\circ}$						_					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5 _F	$F-s ^6D_{2.5}4f [0.5]^{\circ}$	1-1	0.95	17646.123	17641.305	9	5666.967 ^A	-3	6.417	7.119		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 F	$F-s^6D_{2.5}4f[1.5]^\circ$	1 - 2	1.81	17627.115	17622.302	-3	5673.078 ^A	1	6.417	7.120		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5 J	$F-s ^6D_{2.5}4f [2.5]^{\circ}$	1-2	1.69	17616.125	17611.316	3	5676.617 ^A	-1	6.417	7.120		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 I	$F-s^{6}D_{2.5}4f[0.5]^{\circ}$	2 - 1	2.01	17493.343	17488.567	-18			6.410	7.119		I
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 _F	$F-s^{6}D_{2.5}4f[1.5]^{\circ}$			17478.169	17473.397							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			$^{2-2}$	1.93	17474.690	17469.919	-3	5722.562^{A}	1	6.410			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				1.97	17458.609	17453.842	0						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			2-3		17438.406	17433.644	6	5734.469^{D}	-2	6.410	7.121		II
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 F	$F-s^{6}D_{2.5}4f[2.5]^{\circ}$	3-3	1.38	17156.351	17151.667	-6	5828.745 ^A	2	6.398	7.121		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			3-4	1.59	17141.785	17137.104	-6	5833.698 ^A	2	6.398	7.121		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			3-4	1.34	17137.616	17132.937	6	5835.117 ^A	-2	6.398		.:.	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			3-3	1.45	17136.844	17132.165	3	5835.380 ^A	-1	6.398	7.121		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5 Į	$F-s ^6D_{2.5}4f [5.5]^{\circ}$	4-5	2.75	16757.646	16753.070	-3	5967.425 ^A	1	6.380	7.120		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5 F	$F-s^{6}D_{2.5}4f[3.5]^{\circ}$	4-4	0.85	16733.251	16728.681	11	5976.125^{B}	-4	6.380	7.121		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			4-5	1.53	16732.881	16728.311	-3	5976.257^{D}	1	6.380	7.121		I
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			4-4	1.93	16729.264	16724.696	6	5977.549 ^A	-2	6.380	7.121		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5 F	$F-s^{6}D_{2.5}4f[3.5]^{\circ}$	4-3	0.70	16728.534	16723.966	14	5977.810^{A}	-5	6.380	7.121		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			5-6	1.90	15810.601	15806.282	2	6324.870 ^A	-1	6.336	7.120		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	⁵ F	$F-s ^6D_{2.5}4f [4.5]^{\circ}$	5-5	0.95	15785.980	15781.668	0	6334.735 ^A	0	6.336	7.121		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 F	$F-s {}^{6}D_{1.5}4f [1.5]^{\circ}$								6.417			II
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	⁵ F	$F-s ^6D_{1.5}4f [2.5]^{\circ}$					-3				7.145		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							0			6.410	7.145		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			2-2		16870.126	16865.519	3			6.410	7.145		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$										6.410			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	٦Į	$F-s ^{6}D_{1.5}4f [4.5]^{\circ}$											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	٦F	$F-s ^{6}D_{1.5}4f [2.5]^{\circ}$											II
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	٦F	$F-s ^{\circ}D_{1.5}4f [3.5]^{\circ}$									7.146		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 F	$F-s {}^{\circ}D_{1.5}4f [3.5]^{\circ}$											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$												• • •	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			4-4	2.12	16182.418	16177.998	3			6.380	7.146	• • •	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 F	$F-s {}^{6}D_{0.5}4f [2.5]^{\circ}$											
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5 F	$F-s {}^{\circ}D_{0.5}4f [2.5]^{\circ}$										• • •	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	~ Г 5 т	$F - s ^{\circ}D_{0.5}4f [2.5]^{\circ}$										• • •	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$												• • •	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	³ F	$F-s ^4D5p ^3D^0$											
2554 $f^{5}F - Hsp1^{3}G^{\circ}$ 2-3 1.51 14502.586 14498.622 13 6895.322 D -6 6.410 7.265 5-4 1.15 13828.538 13824.758 -2 7231.422 A 1 6.336 7.232 2555 $f^{5}F - s^{4}D5p^{3}D^{\circ}$ 2-2 1.72 15558.773 15554.522 -19 6427.242 D 8 6.410 7.207												• • •	
			5-4	0.85	15013.588	15009.486	-5	6660.633 ^A	2	6.336	7.162	• • •	
	5 Į	$F\!-\!Hsp1~^3G^{o}$	2-3	1.51	14502.586	14498.622	13	6895.322^{D}	-6	6.410	7.265		II
· · · · · · · · · · · · · · · · · · ·		**	5-4			13824.758							
· · · · · · · · · · · · · · · · · · ·	5 _J	$F = s^4 D 5 n^3 D^0$	2-2	1 72	15558 773	15554 522	-19	6427 242 ^D	Q	6410	7 207		I
4-3 1.60 14674.418 14670.408 17 6814.580 ^A -8 6.380 7.225	-	. J 25p D			14674.418								•
. 5 100 1.0710 17070.700 17 0017.000 -0 0.500 7.225			, 3	1.00	1107-1.710	1,0,0,400	1,	0017.500	U	0.500	1.223	•••	

Multiplet (MT) 1 $^{5}F-s$ $^{4}D5p$ $^{5}F^{\circ}$ $^{5}F-s$ $^{6}D_{4.5}5f$ [6.5] $^{\circ}$ $^{5}F-s$ $^{6}D_{3.5}5f$ [5.5] $^{\circ}$ $^{5}F-s$ $^{6}D_{3.5}5f$ [6.5] $^{\circ}$ $^{5}F-s$ $^{6}D_{3.5}5f$ [6.5] $^{\circ}$ $^{5}S-s$ $^{6}D6p$ $^{7}F^{\circ}$ $^{5}S-s$ $^{6}D6p$ $^{5}D^{\circ}$ $^{5}S-s$ $^{6}D_{4.5}4f$ [3.5] $^{\circ}$ $^{5}S-s$ $^{6}D_{4.5}4f$ [2.5] $^{\circ}$ $^{5}S-s$ $^{6}D_{4.5}4f$ [1.5] $^{\circ}$ $^{5}S-s$ $^{6}D_{4.5}4f$ [1.5] $^{\circ}$ $^{5}S-s$ $^{6}D_{4.5}4f$ [1.5] $^{\circ}$ $^{5}S-s$ $^{6}D_{4.5}4f$ [1.5] $^{\circ}$ $^{5}S-s$ $^{6}D_{6}p$ $^{5}P^{\circ}$	J-J 4-5 5-5 5-6 4-5 5-6 2-2 2-2 2-3 2-3 2-2 2-2	0.85 0.48 2.20 1.04 1.87 2.24 1.92 1.90	λ _{vac} (Å) 14958.118 14196.850 12235.879 12191.729 11681.196 11672.836	λ _{qir} (Å) 14954.031 14192.970 12232.532 12188.393 11677.999 11669.642	o-R ⁴ (mÅ) 4 -2 9 15 7 -8	σ 5 (cm ⁻¹) 6685.333 ^A 7043.816 ^B 8172.686 ^A 8202.282 ^B 8560.767 ^A 8566.898 ^D	1 -6 -10 -5	E(l) (eV) 6.380 6.336 6.336 6.380 6.336	E(u) (eV) 7.209 7.209 7.349 7.397 7.397	log(gf) ⁷	Bl. ⁸
$^{5}F-s$ $^{6}D_{4.5}5f$ [6.5]° $^{5}F-s$ $^{6}D_{3.5}5f$ [5.5]° $^{5}F-s$ $^{6}D_{3.5}5f$ [6.5]° $^{5}F-s$ $^{6}D_{3.5}5f$ [6.5]° $^{5}S-s$ $^{6}D_{6p}$ ^{7}F ° $^{5}S-s$ $^{6}D_{6p}$ ^{5}D ° $^{5}S-s$ $^{6}D_{4.5}4f$ [3.5]° $^{5}S-s$ $^{6}D_{4.5}4f$ [2.5]° $^{5}S-s$ $^{6}D_{4.5}4f$ [1.5]° $^{5}S-s$ $^{6}D_{4.5}4f$ [1.5]° $^{5}S-s$ $^{6}D_{4.5}4f$ [1.5]°	5-5 5-6 4-5 5-5 5-6 2-2 2-2 2-3 2-3 2-2	0.48 2.20 1.04 1.87 2.24 1.92 1.90	14196.850 12235.879 12191.729 11681.196 11672.836	14192.970 12232.532 12188.393 11677.999 11669.642	-2 9 15 7	7043.816 ^B 8172.686 ^A 8202.282 ^B 8560.767 ^A	1 -6 -10 -5	6.3366.3366.380	7.209 7.349 7.397	•••	
${}^{5}F - s {}^{6}D_{3.5}5f [5.5]^{\circ}$ ${}^{5}F - s {}^{6}D_{3.5}5f [5.5]^{\circ}$ ${}^{5}F - s {}^{6}D_{3.5}5f [5.5]^{\circ}$ ${}^{5}F - s {}^{6}D_{3.5}5f [6.5]^{\circ}$ ${}^{5}S - s {}^{6}D6p {}^{7}F^{\circ}$ ${}^{5}S - s {}^{6}D6p {}^{5}D^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [3.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$	4-5 5-5 5-6 2-2 2-2 2-3 2-3 2-2	1.04 1.87 2.24 1.92 1.90	12191.729 11681.196 11672.836 16690.277	12188.393 11677.999 11669.642	15 7	8202.282 ^B 8560.767 ^A	-10 -5	6.380	7.397		
${}^{5}F - s {}^{6}D_{3.5}5f [5.5]^{\circ}$ ${}^{5}F - s {}^{6}D_{3.5}5f [6.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{6p} {}^{5}F \circ$ ${}^{5}S - s {}^{6}D_{6p} {}^{5}D^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [3.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$	5-5 5-6 2-2 2-2 2-3 2-3 2-2	1.87 2.24 1.92 1.90	11681.196 11672.836 16690.277	11677.999 11669.642	7	8560.767^{A}	-5			• • •	
${}^{5}F - s {}^{6}D_{3.5}5f [6.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{6p} {}^{7}F^{\circ}$ ${}^{5}S - s {}^{6}D_{6p} {}^{5}D^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [3.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$	5-6 2-2 2-2 2-3 2-3 2-2	1.92 1.90	11672.836 16690.277	11669.642				6.336	7.397		
$^{5}S - s ^{6}D6p ^{5}D^{\circ}$ $^{5}S - s ^{6}D_{4.5}4f [3.5]^{\circ}$ $^{5}S - s ^{6}D_{4.5}4f [2.5]^{\circ}$ $^{5}S - s ^{6}D_{4.5}4f [2.5]^{\circ}$ $^{5}S - s ^{6}D_{4.5}4f [1.5]^{\circ}$ $^{5}S - s ^{6}D_{4.5}4f [1.5]^{\circ}$	2-2 2-3 2-3 2-2	1.90		16605 710			6	6.336	7.398	• • •	I
${}^{5}S - s {}^{6}D_{4.5}4f [3.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$	2-3 2-3 2-2			16685.719	0	5991.512 ^A	0	6.341	7.084		
${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$	$2-3 \\ 2-2$	1 40	15956.995	15952.636	3	6266.844 ^A	-1	6.341	7.118	• • •	
${}^{5}S - s {}^{6}D_{4.5}4f [2.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$	2-2		17802.644	17797.784	-3	5617.143 ^A	1	6.341	7.038	• • •	
${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$ ${}^{5}S - s {}^{6}D_{4.5}4f [1.5]^{\circ}$		1.11	17767.187	17762.336	-9	5628.353 ^B	3	6.341	7.039	• • •	
$^{5}S - s ^{6}D_{4.5}4f [1.5]^{\circ}$	2-2	1.85	17760.017	17755.168	6	5630.625 ^A		6.341	7.040	• • •	
		1.20	17728.013	17723.173	-6	5640.790 ^A	2	6.341	7.041	• • •	
$S=s^*D0p^*F$	2-1 $2-2$	1.99 2.26	17721.978 15902.594	17717.139 15898.251	0	5642.711 ^A	0	6.341	7.041	•••	
$^{5}S - s ^{6}D_{3.5}4f [3.5]^{\circ}$	2-2	1.51	16664.464	16659.913	0 -6	6288.282 ^A 6000.793 ^A	0 2	6.341 6.341	7.121 7.085	• • •	
$^{5}S-s$ $^{6}D_{3.5}4f$ [3.5] $^{6}S-s$ $^{6}D_{3.5}4f$ [2.5] $^{\circ}$	2-3 $2-3$	2.28	16664.069	16659.519	-0 -3	6000.793^{-1} 6000.935^{A}	1	6.341	7.085	• • •	
$^{5}S - s ^{6}D_{3.5}4f [2.5]^{\circ}$	2-3 $2-1$	2.08	16657.352	16652.803	0	6000.935 6003.355^{A}	0	6.341	7.085	• • •	
$^{5}S-s$ $^{6}D_{2.5}4f$ [0.5] $^{\circ}$	2-1	1.68	15942.466	15938.112	8	6272.555^{A}	-3	6.341	7.119		
${}^{5}S - s {}^{6}D_{2.5}4f [1.5]^{\circ}$	$\frac{2}{2-2}$	1.46	15926.957	15922.607	3	6278.663^{A}	-1	6.341	7.120		
${}^{5}S - s {}^{6}D_{2.5}4f [2.5]^{\circ}$	2-2	1.58	15917.977	15913.629	0	6282.205^{A}	0	6.341	7.120		
${}^{5}S - s {}^{6}D_{2.5}4f [2.5]^{\circ}$	2 - 3	1.93	15913.590	15909.243	0	6283.937^{D}	0	6.341	7.121		II
$^{5}S - s ^{6}D_{2.5}4f [3.5]^{\circ}$	2-3	1.78	15896.810	15892.468	13	6290.570^{A}	-5	6.341	7.121		
^{5}S - s $^{6}D_{2.5}4f$ $[0.5]^{\circ}$	2 - 1	1.08	15460.493	15456.269	-5	6468.099 ^A	2	6.341	7.143		
${}^{5}S - s {}^{6}D_{1.5}4f [1.5]^{\circ}$	$^{2-2}$	1.58	15456.175	15451.952	-26	6469.906^{D}	11	6.341	7.144		I
$^{5}S-s$ $^{6}D_{1.5}4f$ [2.5]°	2-3	1.59	15426.899	15422.685	-2	6482.184 ^A	1	6.341	7.145	• • •	
$^{5}S - s ^{6}D_{0.5}4f [2.5]^{\circ}$	2-3	1.40	15164.970	15160.827	-7	6594.144 ^D	3	6.341	7.159	•••	I
3D – s 6D 6 p 7F 0	2-2	3.03	18516.780	18511.725	-17	5400.507^{D}	5	6.415	7.084		I
										• • •	I
					0		0	6.359	7.084	• • •	
					3		-1	6.359	7.090	• • •	
^3D-u $^3F^{\circ}$										• • •	
										• • •	I
3D_ e 6D6m 5F0											II
D-8 D0p 1											11
											II
	3-3	1.68	16530.010	16525.496	8	6049.603 ^A	-3	6.359	7.109	• • • •	**
3D – s 6D 6 p 5D 0	1-1	2.87	18652.380	18647.288	17	5361.246 ^D	-5	6.452	7.117		Ne
	3-3	1.46	17023.275	17018.627	0	5874.310^{B}	0	6.359	7.088	• • • •	
$^3D-Dsp1$ $^3D^{\circ}$	1-2	1.77 1.52	19860.882 16523.662	19855.461 16519.150	-8 -3	5035.023 ^A 6051.927 ^A	2	6.452 6.359	7.076 7.110	• • •	
$^{3}D_{-}t^{3}F^{0}$						*					
<i>D</i> • 1											
	3-2	0.48	15589.645	15585.387	12	6414.514 ^A	-5	6.359	7.155		
	1-1	1.65	15431.836	15427.621	-2	6480.110 ^A	1	6.452	7.255		
³ D-s ⁴ D5p ⁵ D°		0.90								•	
$^{3}D-s$ $^{4}D5p$ $^{5}D^{\circ}$	$^{2-2}$		131/3.014	15168.869	-2	6590.648 ^A	1	6.415	7.232		
$^{3}D-s$ $^{4}D5p$ $^{5}D^{\circ}$	$\begin{array}{c} 2-2 \\ 3-3 \end{array}$	1.08	14838.369	15168.869 14834.315	-2 0	6590.648 ^A 6739.285 ^A	1 0	6.415 6.359	7.232 7.195	• • • •	
	3-3	1.08	14838.369	14834.315	0	6739.285 ^A	0	6.359	7.195	•••	
$^{3}D - s ^{4}D5p ^{5}D^{\circ}$ $^{3}D - s ^{4}D5p ^{3}F^{\circ}$											
3 3 3	$D-s$ 6D6p $^7P^\circ$ $D-u$ $^3F^\circ$ $D-s$ 6D6p $^5F^\circ$ $D-s$ 6D6p $^5D^\circ$ $D-Dsp1$ $^3D^\circ$ $D-t$ $^3F^\circ$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

No	Multiplat	J-J	I 2	λ 3	\ 3	o-R ⁴	σ 5	o-R ⁶	E(I)	E/>	log(gf) 7 Pl
No.	Multiplet (MT) 1	J-J	1-	λ_{vac}^{3} (Å)	$\begin{array}{c} \lambda_{qir}^{3} \\ \text{(A)} \end{array}$	(mÅ)	(cm ⁻¹)	(mK)	E(1) (eV)	(eV)	log(gf) ⁷ Bl.
2576	$e\ ^3D\!-\!s\ ^4\!D5p\ ^3P^{\circ}$	1-2	1.32	16779.742	16775.160	3	5959.567 ^A		6.452	7.191	
		$^{2-2}$	2.29	15975.617	15971.253	3	6259.539 ^A		6.415	7.191	
		3-2	2.08	14913.711	14909.636	2	6705.239 ^A		6.359	7.191	• • •
2577	$e~^3D$ – $Hsp1~^3G^{\circ}$	3-3	0.60	13687.164	13683.423	13	7306.115 ^A	-7	6.359	7.265	
2578	$e~^3D\!-\!s~^4\!D5p~^3D^{\circ}$	1 - 2	0.90	16413.984	16409.501	-30	6092.366^{B}	11	6.452	7.207	
		1 - 1	1.94	15735.713	15731.414	0	6354.971 ^A		6.452	7.240	
		2-2	1.76	15643.755	15639.482	2	6392.327 ^A		6.415	7.207	• • •
		2-3	2.52	15299.077	15294.897	-5	6536.342 ^A		6.415	7.225	• • •
		2-1	2.07	15026.427	15022.321	0	6654.942 ^A		6.415	7.240	• • •
		$3-2 \\ 3-3$	2.18 2.26	14624.101 14322.463	14620.105 14318.549	0 0	6838.027 ^A 6982.039 ^A		6.359 6.359	7.207	• • •
										7.225	• • •
2579	$e^{3}D - s^{4}D5p^{5}F^{0}$	1-1	1.26	14414.187	14410.248	-2	6937.609 ^A		6.452	7.312	• • •
		2-2	0.90	13954.408	13950.594	0	7166.194 ^A	0	6.415	7.303	• • •
2580	$e~^3D$ – $s~^4\!D$ 5 $p~^5P$ °	1-2	1.18	14153.470	14149.602	-4	7065.405^{B}		6.452	7.328	
		$^{2-2}$	1.11	13577.056	13573.344	13	7365.367 ^B		6.415	7.328	
		3-3	0.85	13549.693	13545.988	-7	7380.241 ^B	4	6.359	7.274	• • •
2581	$g^{5}D-s^{6}D6p^{7}F^{\circ}$	4-5	1.82	19408.189	19402.892	0	5152.464 ^D	0	6.366	7.005	I
2361	g D-3 D0p F	3-2	1.65	18622.442	18617.358	3	5369.865 ^A		6.419	7.084	1
		4-4	1.52	18497.243	18492.193	-3	5406.211 ^D		6.366	7.037	I
2592	$g^{5}D-s^{6}D6p^{7}P^{\circ}$	3-2	1.78	18451.369	18446.332	7	5419.652 ^A		6.419		
2582	$g \cdot D - s \cdot Dop \cdot P$	3-2 4-3	1.82	18057.288	18052.358	-3	5537.930 ^A		6.366	7.090 7.053	• • •
	5- 4-4 5-0										• • •
2583	$g^5D-s^6D6p^5F^0$	0-1	1.28	18906.690	18901.529	4	5289.133 ^A		6.479	7.135	• • •
		3-4	2.00 1.56	18890.068	18884.912	4	5293.787 ^A		6.419	7.075	• • •
		2-3 4-5	1.94	18889.305 18667.899	18884.148 18662.803	11 7	5294.001 ^A 5356.789 ^A	-3 -2	6.453 6.366	7.109 7.031	• • •
		1-2	1.86	18663.095	18658.000	-3	5358.168 ^A		6.474	7.138	
2504	5p 6pc 5p0										
2584	g ^5D-s 6D6p 5D $^\circ$	$1-2 \\ 2-1$	0.70 1.60	19225.552 18686.971	19220.304 18681.870	0 -7	5201.411 ^B 5351.322 ^A	0 2	6.474 6.453	7.118	• • •
		$\frac{2-1}{2-2}$	0.90	18636.095	18631.007	-, 7	5365.931 ^A		6.453	7.117 7.118	• • •
		4-4	2.11	18580.995	18575.923	-3	5381.843 ^A		6.366	7.034	
2585	$g^{5}D-s^{6}D6p^{5}P^{0}$	3-3	1.38	19604.817	19599.467	-4	5100.787 ^B	1	6.419	7.051	
2363	g D-s Dop F	0-1	1.15	18234.449	18229.471	0	5484.125 ^A	0	6.479	7.051	• • •
		4-3	1.72	18113.146	18108.201	-3	5520.852^{A}	1	6.366	7.139	• • • •
2506	5p p +3p0										_
2586	g $^5D-Dsp1$ 3D $^{\mathbf{o}}$	$\begin{array}{c} 2-2 \\ 2-3 \end{array}$	0.30 1.46	19900.168 18881.020	19894.737 18875.866	28 -4	5025.083 ^D 5296.324 ^A	-7 1	6.453 6.453	7.076	I
										7.110	• • •
2587	$g^{5}D-s^{6}D_{2.5}4f[0.5]^{\circ}$	1 - 1	2.40	19204.429	19199.187	-37	5207.132^{A}	10	6.474	7.119	• • •
	$g^{5}D - s^{6}D_{2.5}4f [3.5]^{\circ}$	2-3	1.54	18554.042	18548.977	3	5389.661 ^A	-1	6.453	7.121	
	$g^{5}D - s^{6}D_{2.5}4f$ [5.5]°	4-5	1.86	16451.140	16446.647	-5 -	6078.606 ^D	2	6.366	7.120	II
	$g ^5D - s ^6D_{2.5}4f [3.5]^{\circ}$	4-4	1.20	16427.617	16423.131	-5	6087.310 ^A	2	6.366	7.121	• • •
	$g^{5}D - s^{6}D_{2.5}4f[4.5]^{\circ}$	4-5	1.59	16427.280	16422.793 16419.276	0	6087.435 ^A	0	6.366	7.121	• • •
	$g^{5}D-s^{6}D_{2.5}4f$ [4.5]°	4–4	1.43	16423.762		-27	6088.739 ^A	10	6.366	7.121	•••
2588	g ^5D-Psp 1 3D 0	3-3	1.00	17257.005	17252.293	-3	5794.748 ^A	1	6.419	7.137	
		4-3	0.85	16090.588	16086.193	-3	6214.813 ^A	1	6.366	7.137	• • •
2589	$g^{5}D-s^{6}D_{1.5}4f$ [2.5]°	$^{2-2}$	1.08	17912.068	17907.178	3	5582.828 ^A	-1	6.453	7.145	
	$g^{5}D-s^{6}D_{1.5}4f$ [3.5]°	2 - 3	1.73	17880.905	17876.023	0	5592.558 ^A	0	6.453	7.147	
	$g^{5}D-s^{6}D_{1.5}4f[1.5]^{\circ}$	3-2	1.45	17099.120	17094.451	-20	5848.254 ^D	7	6.419	7.144	I
	$g ^5D - s ^6D_{1.5}4f [4.5]^{\circ}$	4-5	1.78	15948.207	15943.851	3	6270.297 ^A	-1	6.366	7.144	
2590	$g~^5D - s~^6D_{0.5}4f~[3.5]^{\circ}$	2-3	1.97	17558.929	17554.135	0	5695.108^{A}	0	6.453	7.159	
2591	$g^{5}D-s^{4}D5p^{5}D^{0}$	2-3	1.60	16712.120	16707.557	0	5983.681 ^A	0	6.453	7.195	
20/1	3 2 0 23p D	3-4	1.59	16685.393	16680.836	ő	5993.266 ^A	0	6.419	7.162	
		1-2	1.72	16349.959	16345.494	-3	6116.223^{A}	1	6.474	7.232	• • •
											· · ·
		0 - 1	1.52	15967.663	15963.302	-3	6262.657 ^A	1	6.479	7.255	
		$0-1 \\ 3-3$	2.43	15967.663	15963.302	-3 0	6262.657 ^A 6262.948 ^A	0	6.419	7.255 7.195	• • •

•				TABL	E 2—Contin	iued						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{qir} (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
		1-1	1.73	15858.770	15854.438	-5	6305.659 ^A	2	6.474	7.255		
Š		4-4	2.89	15592.523	15588.264	0	6413.330 ^A		6.366	7.162		
,		2-1	3.05	15455.530	15451.308	2	6470.176^{D}		6.453	7.255		Ne
4		3-2	2.40	15243.879	15239.714	0	6560.010 ^A		6.419	7.232		
		4-3	2.47	14963.312	14959.224	2	6683.012 ^A		6.366	7.195		
2592	$g^{5}D-s^{4}D5p^{3}F^{\circ}$	2-2	1.23	14467.234	14463.281	0	6912.171 ^A		6 152			
2392	$g \cdot D - s \cdot D \cdot p \cdot F$	$\frac{2-2}{2-3}$	1.75	14204.945	14201.062	0 2	7039.802 ^A		6.453 6.453	7.310 7.326		
	5- 4 2										•••	
2593	$g^{5}D - s^{4}D5p^{3}P^{\circ}$	2-2	1.28	16807.756	16803.166	6	5949.634 ^B	-2	6.453	7.191	• • •	
2594	$g~^5D - s~^4\!D5p~^3D$ °	1 - 2	0.78	16897.903	16893.288	23	5917.894 ^B	-8	6.474	7.207		
		0 - 1	1.38	16293.231	16288.781	-3	6137.518 ^A	1	6.479	7.240		
		2 - 3	0.00	16060.554	16056.168	0	6226.435^{B}	0	6.453	7.225		
		2-1	1.34	15760.344	15756.039	0	6345.039^{D}		6.453	7.240		II
		3-2	1.00	15719.103	15714.809	10	6361.686 ^A	-4	6.419	7.207		
		3-3	0.60	15371.126	15366.927	-7	6505.704^{A}_{-}		6.419	7.225		
		4-3	0.90	14438.846	14434.900	10	6925.761^{B}	-5	6.366	7.225	• • •	
2595	$g^{5}D\!-\!s^{4}\!D5p^{5}F^{0}$	1 - 2	2.29	14943.727	14939.644	-4	6691.771 ^A	2	6.474	7.303		
	5 = 5 2 5 _F 1	$\frac{1}{2}$	2.36	14908.008	14903.935	0	6707.804 ^A		6.453	7.285		
		3-4	2.64	14901.481	14897.410	0	6710.742 ^A		6.419	7.251		
		0-1	2.10	14880.609	14876.543	2	6720.155^{A}		6.479	7.312		
		1-1	1.98	14785.996	14781.956	-2	6763.156^{A}		6.474	7.312		
		4-5	2.94	14713.427	14709.406	0	6796.513 ^A		6.366	7.209		
		$^{2-2}$	1.91	14585.143	14581.157	0	6856.292^{A}		6.453	7.303		
		3-3	1.15	14312.155	14308.243	4	6987.068 ^A		6.419	7.285		
		4-4	1.61	14023.660	14019.827	2	7130.806^{A}	-1	6.366	7.251		
		4-3	1.32	13500.498	13496.807	2	7407.134 ^A	-1	6.366	7.285		
2596	g ⁵ D-s ⁴ D5p ⁵ P°	1-2	1.68	14511.783	14507.817	-4	6890.952^{A}	2	6.474	7.328	···	
2390	y D-s DSp 1	3-3	2.33	14484.560	14480.602	-4	6903.903^{A}	2	6.419	7.274		
		$\frac{3}{2-2}$	1.93	14173.394	14169.520	-2	7055.473 ^A	1	6.453	7.328	• • •	
		0-1	1.53	14078.849	14075.001	-4	7102.853^{A}	2	6.479	7.359	•••	
		1-1	1.71	13994.126	13990.301	-6	7145.855 ^A	3	6.474	7.359		
		$^{2}-1$	1.41	13679.190	13675.451	Ő	7310.374 ^A	0	6.453	7.359		
		4-3	2.06	13653.798	13650.066	-6	7323.969^{A}	3	6.366	7.274		
		3-2	2.14	13633.752	13630.025	0	7334.738 ^A	Ö	6.419	7.328		
2507	5D 4E 4650 510						6669.219^{B}					
2597	$g^{5}D-{}^{4}F_{4.5}4f$ [2.5]° $g^{5}D-{}^{4}F_{4.5}4f$ [3.5]°	$\frac{2-3}{3-4}$	1.45 1.88	14994.259 14407.795	14990.162	-7 4	6940.687 ^B	3	6.453	7.280 7.279	• • •	
	$g^{5}D = F_{4.5}4f[3.5]^{\circ}$ $g^{5}D = F_{4.5}4f[2.5]^{\circ}$	3-4	2.25	14407.793	14403.858 14387.691	4	6948.486 ^D	-2	6.419		• • •	ΥT
	$g^{5}D - {}^{4}F_{4.5}4f[2.3]^{\circ}$ $g^{5}D - {}^{4}F_{4.5}4f[4.5]^{\circ}$	3-3 4-5	0.60			-8 10	7356.900 ^A		6.419	7.280	• • •	II
	$g ^5D - ^4F_{4.5}4f [4.5]^\circ$ $g ^5D - ^4F_{4.5}4f [3.5]^\circ$	4-3 4-4	0.60	13592.681 13585.566	13588.965 13581.852	-18 2	7356.900 ⁻¹ 7360.753 ^B	10 -1	6.366	7.279	• • •	
	$g \cdot D = F_{4.54} [5.3]$	4-4	—————	13383.300	13301.032		7300.733	-1 	6.366	7.279	•••	
2598	$e^{7}S - s^{6}D_{3.5}4f$ [3.5]°	3-4	1.67	17924.301	17919.407	-13	5579.018^{A}	4	6.394	7.085		
	$e^{7}S - s^{6}D_{3.5}4f$ [3.5]°	3-3	1.15	17922.428	17917.535	10	5579.601 ^A	-3	6.394	7.085		
	$e^{7}S - s^{6}D_{3.5}4f$ [2.5]°	3-2	0.95	17913.705	17908.814	-6	5582.318^{A}	2	6.394	7.086		
2599	$e^{7}S - s^{6}D_{2.5}4f$ [2.5]°	3-3	2.00	17056.841	17052.184	0	5862.750 ^A	0	6 204	7 121		
2399	$e^{7}S - s^{6}D_{2.5}4f$ [2.3] $e^{7}S - s^{6}D_{2.5}4f$ [3.5]°	3-3	2.24	17030.841	17032.184	0	5867.702 ^A	0 0	6.394 6.394	7.121 7.121	• • •	
	$e^{7}S - s^{6}D_{2.5}4f$ [3.5]° $e^{7}S - s^{6}D_{2.5}4f$ [4.5]°	3-4	1.79	17042.440	17037.793	0 3	5869.124 ^A		6.394	7.121	• • •	
											•••	
2600	$e^{7}S - s^{6}D_{1.5}4f$ [4.5]°	3-4	2.24	16523.930	16519.417	3	6051.829 ^A	-1	6.394	7.144		
	$e^{7}S - s^{6}D_{1.5}4f[2.5]^{\circ}$	3-3	2.13	16498.941	16494.435	3	6060.995 ^D		6.394	7.145	• • •	II
	$e^{7}S - s^{6}D_{1.5}4f$ [3.5]°	3-4	2.58	16471.425	16466.927	0	6071.120 ^A	0	6.394	7.146	• • •	
2601	$e^{7}S - s^{6}D_{0.5}4f[2.5]^{0}$	3-3	2.07	16199.678	16195.254	-21	6172.962^{D}	8	6.394	7.159		II
	$e^{7}S - s^{6}D_{0.5}4f[3.5]^{\circ}$	3-4	2.70	16199.487	16195.062	-3	6173.035^{A}	1	6.394	7.159		
	$e^{7}S - s^{6}D_{0.5}4f$ [2.5]°	3-2	0.30	16198.893	16194.469	26	6173.261^{B}	-10	6.394	7.159		
	$e^{7}S - s^{6}D_{0.5}4f[3.5]^{\circ}$	3-3	0.48	16194.746	16190.323	-21	6174.842^{B}	8	6.394	7.159		
	5 70 67 5 5			0.00.00								
2602	$u\ ^5P^{\circ} - s\ ^6D6s\ ^5D$	3-4	2.68	35869.421	35859.640	13	2787.890 ^A	-1	6.409	6.754	• • •	
		2-3	2.25	34246.047	34236.709	0	2920.045 ^A	0	6.440	6.802	• • •	
		3-3	2.25	31517.713	31509.118	10	3172.819 ^A		6.409	6.802	• • •	
		2-2	2.44	31354.026	31345.476	0	3189.383 ^A	0	6.440	6.836	• • •	
		1-1	2.27	31298.659	31290.124	0	3195.025^{B}	0	6.461	6.857	• • •	

TABLE 2—Continued

				IABLE	2—Contini	iea —						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
		1-0	2.30	30488.557	30480.243	-19	3279.919 ^A	2	6.461	6.867		
Ω, ⊈		2-1	2.59	29754.448	29746.334	0	3360.842^{A}		6.440	6.857		
a da Apo		3-2	2.95	29051.551	29043.628	-8	3442.157 ^A	1	6.409	6.836		
2603	$u{}^{5}P^{\circ}-{}^{4}F6s{}^{5}F$	3-4	2.26	20728.795	20723.138	-4	4824.207^{D}	1	6.409	7.007		II
2604	$u^{5}P^{\circ}-s^{6}D5d^{5}D$	3-2	1.69	20887.929	20882.229	-9	4787.454^{C}	2	6.409	7.002		
2605	$u^{5}P^{\circ} - s^{6}D5d^{5}G$	3-4	1.67	20075.749	20070.270	0	4981.134 ^B		6.409	7.026		
2003	<i>u 1 –3 D3u G</i>	2-3	2.03	19566.289	19560.949	-4	5110.831^{A}		6.440	7.074		
		3-3	1.71	18644.173	18639.083	-7	5363.606 ^A		6.409	7.074		
2606	$u^{5}P^{\circ}-s^{6}D5d^{7}F$	2-3	0.85	19457.157	19451.846	-4	5139.497 ^B	1	6.440	7.077		
2000	u 1 0 25 u 1	3-4	1.49	17808.455	17803.593	-6	5615.310 ^A		6.409	7.105		
2607	$u^{5}P^{\circ}-s^{6}D5d^{7}D$	3-2	0.70	19414.471	19409.172	8	5150.797 ^B	-2	6.409	7.047		
2007	u 1 -3 D3u D	3-3	2.25	18593.031	18587.956	3	5378.359 ^A		6.409	7.076		
2608	$u^{5}P^{\circ}-s^{6}D5d^{7}P$	3-3	2.39	20964.360	20958.639	22	4770.000^{A}		6.409	7.000		
2008	u F -s D3u I	3-4	1.82	19408.189	19402.892	0	5152.464 ^D		6.409	7.048		I
2600	$u^{5}P^{\circ}\!-\!s^{6}\!D5d^{7}G$	1-1	1.08	19194.771	19189.532	-29	5209.752^{D}		6.461	7.107		II
2609	$u \cdot P \cdot -s \cdot D \cdot a \cdot G$	1-1	1.08	18726.381	18721.269	-29 4	5340.060 ^A		6.461	7.107		11
		3-4	1.73	18302.133	18297.136	7	5463.844 ^A		6.409	7.086		
		3-3	1.00	17638.675	17633.859	-19	5669.360 ^B		6.409	7.112		
2610	$u^{5}P^{\circ} - s^{6}D5d^{5}S$	3-2	1.26	19887.053	19881.625	0	5028.397 ^A	0	6.409	7.032		
	$u^{5}P^{\circ} - s^{6}D5d^{5}F$	2-3	1.57	20911.288	20905.582	0	4782.106^{B}		6.440	7.033		
2611	$u \circ P \circ -s \circ D \circ a \circ F$	2-3 1-1	1.57	20111.288	20905.382	0	4782.100 4967.241 ^C		6.461	7.033	• • •	
		3-2	1.28	19010.676	19005.487	-4	5260.202 ^A	-	6.409	7.061		
2612	$u^{5}P^{\circ}-{}^{4}F6s^{3}F$	2-3	2.00	18960.793	18955.617	0	5274.041 ^A		6.440	7.094		
							5215.358 ^D					**
2613	u 5P ° $-s$ 6D5d 5P	$\begin{array}{c} 2-3 \\ 1-2 \end{array}$	1.57 2.15	19174.139 18894.523	19168.905 18889.365	-4 -25	5215.358 ² 5292.539 ^A		6.440 6.461	7.087 7.117		II
0614	$u^{5}P^{\circ} - s^{4}D4d^{5}F$		0.70		16157.732	-3	6187.297 ^B		6.440	7.207		
2614	$u ^{3}P ^{3}-s ^{4}D4a ^{3}F$	2-3 $1-1$	1.83	16162.146 15992.796	15988.428	-3 18	6252.815^{A}		6.461	7.236		
	5-00 - 5-0											
2615	u $^5P^{\circ}$ $-i$ 5D	1-2 3-4	1.08 1.28	17054.555 16651.455	17049.898 16646.908	-6 3	5863.536 ^B 6005.481 ^A	_	6.461 6.409	7.188 7.153	• • • •	
	5 6 7										• • •	
2616	$u^{5}P^{0}-s^{6}D7s^{7}D$	2-3	0.70	15300.994	15296.814	0 -7	6535.523 ^A 6648.980 ^A	-	6.440	7.250 7.285		
		$1-1 \\ 3-2$	1.34 0.78	15039.900 14302.464	15035.791 14298.555	-20	6991.802 ^D		6.461 6.409	7.285		I
2617	5 DO 4D4 15 D						6521.112^{A}					•
2617	$u^5P^\circ - s^4D4d^5P$	3-2	0.78	15334.807	15330.618	2			6.409	7.217	• • • •	
2618	$u^{5}P^{0}-s^{6}D7s^{5}D$	3-3	2.88	14143.381	14139.515	-2	7070.445 ^A		6.409	7.285	• • •	
2619	u ⁵ P°-58661 ^e	3-4	0.60	14347.257	14343.337	-12	6969.973 ^A	6	6.409	7.273		
2620	e ⁵ P-Dsp3 ⁵ D°	3-3	2.65	48678.737	48665.467	24	2054.285 ^A	-1	6.427	6.681		
2621	e ⁵ P-t ⁵ P°	2-1	2.57	45380.431	45368.059	-41	2203.593^{D}	2	6.455	6.729		II
2021		3-2	2.54	43956.275	43944.292	39	2274.988 ^A		6.427	6.709		
2622	$e^{5}P - s^{6}D6p^{7}F^{0}$	3-2	1.65	18856.596	18851.449	4	5303.184 ^A	-1	6.427	7.084		
2623	$e^{5}P - s^{6}D6p^{5}F^{\circ}$	2-3	0.30	18952.456	18947.282	-14	5276.361 ^B		6.455	7.109		
2023	e r-s Dop r	2-2	2.23	18165.145	18160.186	-20	5505.048 ^A		6.455	7.138		
2624	e ⁵ P-s ⁶ D6p ⁵ D°	3-3	2.04	18757.175	18752.055	-7	5331.293 ^A	2	6.427	7.088		
2024	e 1 - s Dop D	1-0	1.53	17885.728	17880.845	-3	5,591.050 ^A		6.449	7.143		
2625	$e^{5}P - s^{6}D_{4.5}4f$ [3.5]°	2-3	1.15	21283.007	21277.200	-5	4698.584 ^B		6.455	7.038		
2023	$e^{5}P - s^{6}D_{4.5}4f$ [3.5]° $e^{5}P - s^{6}D_{4.5}4f$ [2.5]°	2-2	1.62	21222.113	21216.322	9	4712.066 ^B		6.455	7.040		
	$e^{5}P - s^{6}D_{4.5}4f$ [1.5]°	$\frac{2}{2-1}$	1.68	21167.811	21162.034	-9	4724.154 ^A		6.455	7.041		
	$e^{5}P - s^{6}D_{4.5}4f$ [4.5]°	3-4	1.84	20334.746	20329.197	4	4917.691 ^A		6.427	7.036		
	$e^{5}P - s^{6}D_{4.5}4f$ [3.5]°	3-4	1.20	20294.131	20288.592	-25	4927.533 ^D		6.427	7.038		I
	$e^{5}P - s^{6}D_{4.5}4f$ [3.5]°	3-3	1.94	20288.856	20283.319	0	4928.814 ^A	0	6.427	7.038		
	$e^{5}P - s^{6}D_{4.5}4f$ [2.5]°	3-3	1.46	20242.804	20237.279	-20	4940.027 ^B		6.427	7.039		
	$e^{5}P - s^{6}D_{4.5}4f$ [2.5]°											

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{qir} (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl.
	e ⁵ P-s ⁶ D _{4.5} 4f [2.5]°	3-2	1.81	20233.502	20227.980	0	4942.298 ^A	0	6.427	7.040		
2626	$e~^5P-s~^6D6p~^5P^o$	1-2	1.92	18458.616	18453.577	0	5417.524 ^A		6.449	7.121		
		3-2	1.11	17857.295	17852.420	6	5599.952 ^A	-2	6.427	7.121		
2627	$e^{5}P - s^{6}D_{3.5}4f$ [2.5]°	2-2	0.60	19665.892	19660.524	-8	5084.946^{B}		6.455	7.086		
	$e^{5}P - s^{6}D_{3.5}4f[1.5]^{\circ}$	1-1	1.26	19483.306	19477.988	-8	5132.599 ^A		6.449	7.086		
	$e^{5}P - s^{6}D_{3.5}4f$ [2.5]° $e^{5}P - s^{6}D_{3.5}4f$ [1.5]°	$1-2 \\ 1-2$	1.28 1.81	19482.752 19475.717	19477.434	-4	5132.745 ^A	_	6.449	7.086	• • •	
	$e^{5}P - s^{6}D_{3.5}4f$ [1.5] $e^{5}P - s^{6}D_{3.5}4f$ [0.5]°	1-2 $1-0$	1.66	19473.717	19470.401 19463.616	-4 0	5134.599 ^A 5136.389 ^A		6.449 6.449	7.086 7.086	• • •	
	$e^{5}P - s^{6}D_{3.5}4f$ [4.5]°	3-4	1.77	18832.640	18827.499	4	5309.930 ^A		6.427	7.085		
	$e^{5}P - s^{6}D_{3.5}4f$ [3.5]°	3-4	2.04	18825.747	18820.608	0	5311.874 ^A		6.427	7.085		
	$e^{5}P - s^{6}D_{3.5}4f$ [3.5]°	3-3	1.26	18823.671	18818.532	11	5312.460 ^A		6.427	7.085		
	$e^{5}P - s^{6}D_{3.5}4f$ [2.5]°	3-3	1.56	18823.157	18818.019	4	5312.605 ^A	-1	6.427	7.085		
2628	$e^{5}P$ – $s^{6}D_{2.5}4f$ [1.5] $^{\circ}$	$^{2-2}$	1.00	18656.350	18651.258	0	5360.105^{A}	0	6.455	7.120		
	$e^{5}P - s^{6}D_{2.5}4f$ [3.5]°	2 - 3	2.51	18615.002	18609.921	14	5372.011^{A}	-4	6.455	7.121		
	$e^{5}P - s^{6}D_{2.5}4f[1.5]^{\circ}$	1-2	2.40	18491.462	18486.414	17	5407.901 ^A	-5	6.449	7.120		
	$e^{5}P - s^{6}D_{2.5}4f[2.5]^{\circ}$	1-2	2.26	18479.359	18474.314	7	5411.443 ^A	-2	6.449	7.120		
	$e^{5}P - s^{6}D_{2.5}4f$ [2.5]° $e^{5}P - s^{6}D_{2.5}4f$ [4.5]°	3-3 $3-4$	0.95 2.88	17871.165 17850.840	17866.286	6	5595.606 ^A		6.427	7.121	• • •	
	$e^{5}P - s^{6}D_{2.5}4f$ [4.5] $e^{5}P - s^{6}D_{2.5}4f$ [3.5] $e^{5}P - s^{6}D_{2.5}4f$ [3.5]	3-4	2.08	17849.986	17845.967 17845.113	19 6	5601.977 ^D 5602.245 ^A	-6 -2	6.427 6.427	7.121 7.121	• • •	I
2620											• • • •	
2629	$e^{5}P - s^{6}D_{1.5}4f$ [2.5]° $e^{5}P - s^{6}D_{1.5}4f$ [2.5]°	2-3 $2-2$	1.48 1.91	17973.899 17968.880	17968.992 17963.974	6	5563.623 ^A 5565.177 ^A	-2	6.455	7.145	• • •	
	$e^{5}P - s^{6}D_{1.5}4f$ [3.5]°	$\frac{2-2}{2-3}$	2.33	17908.880	17903.974	23 3	5574.912 ^A	-7 -1	6.455 6.455	7.145 7.147	• • •	
	$e^{5}P - s^{6}D_{1.5}4f$ [1.5]°	1-2	0.70	17859.885	17855.009	-13	5599.140 ^D	-1 4	6.449	7.147		II
	$e^{5}P - s^{6}D_{1.5}4f$ [2.5]°	1-2	2.16	17815.832	17810.968	-6	5612.985 ^A	2	6.449	7.145		11
	$e^{5}P - s^{6}D_{1.5}4f$ [4.5]°	3-4	2.42	17287.020	17282.299	3	5784.687^{D}	-1	6.427	7.144		II
	$e^{5}P - s^{6}D_{1.5}4f$ [2.5]°	3 - 3	1.46	17259.668	17254.955	6	5793.854 ^B	-2	6.427	7.145		
	$e^{5}P - s^{6}D_{1.5}4f$ [3.5]°	3-3	1.77	17226.104	17221.400	0	5805.143 ^A	0	6.427	7.147	• • •	
2630	$e^{5}P - s^{6}D_{0.5}4f$ [2.5]°	2 - 3	1.38	17619.338	17614.527	0	5675.582^{D}_{-}	0	6.455	7.159		I
	$e^{5}P - s^{6}D_{0.5}4f$ [2.5]°	2-2	0.78	17618.354	17613.544	3	5675.899 ^B	-1	6.455	7.159		
	$e^{5}P - s^{6}D_{0.5}4f[3.5]^{\circ}$	2-3	2.49	17613.507	17608.698	3	5677.461 ^A	-1	6.455	7.159	• • •	
	$e^{5}P - s^{6}D_{0.5}4f$ [2.5]° $e^{5}P - s^{6}D_{0.5}4f$ [2.5]°	$1-2 \\ 3-3$	2.24 1.46	17471.216 16932.469	17466.445 16927.845	0 -3	5723.700 ^A 5905.813 ^B	0	6.449	7.159	• • •	
	$e^{5}P - s^{6}D_{0.5}4f$ [2.5]° $e^{5}P - s^{6}D_{0.5}4f$ [3.5]°	3-3	2.14	16932.237	16927.643	-3 -3	5905.813 ⁻	1 1	6.427 6.427	7.159 7.159		
2631	$e^{5}P - s^{4}D5p^{5}D^{\circ}$	2-3	0.60	16761.548	16756.970	0	5966.036 ^A					
2031	e 1 – s D5p D	3-3	0.70	16138.746	16134.338	-3	6196.268 ^B	0 1	6.455 6.427	7.195 7.195	•••	
		2-2	1.53	15966.539	15962.178	ő	6263.098^{A}	0	6.455	7.232		
		2 - 1	1.61	15497.789	15493.556	0	6452.533^{A}	0	6.455	7.255		
		3-2	0.78	15400.432	15396.225	9	6493.324 ^A	-4	6.427	7.232		
2632	$e\ ^5P\!-\!s\ ^4\!D5p\ ^3D^{o}$	2-1	0.85	15804.302	15799.985	5	6327.391^{A}	-2	6.455	7.240		
2633	$e^{5}P\!-\!s^{4}\!D5p^{5}F^{0}$	3-4	1.18	15051.051	15046.939	16	6644.054^{D}	-7	6.427	7.251		II
	•	2 - 3	1.88	14947.330	14943.246	0	6690.158^{A}	0	6.455	7.285		
		2-2	1.52	14622.779	14618.784	2	6838.645^{D}	-1	6.455	7.303		II
2634	$e~^5P$ – $s~^4D5p~^5P$ $^{\circ}$	2-2	1.46	14208.931	14205.048	-2	7037.827^{A}	1	6.455	7.328		
2635	$e^{5}P-{}^{4}F_{4.5}4f$ [3.5]°	2-3	1.43	15043.991	15039.881	14	6647.172 ^A	-6	6.455	7.279		
	$e^{5}P - {}^{4}F_{4.5}4f[2.5]^{\circ}$	3-3	0.85	14531.075	14527.104	-4	6881.803^{B}	2	6.427	7.280		
	$e^{5}P - {}^{4}F_{4.5}4f$ [2.5]°	3-2	1.86	14522.115	14518.147	2	6886.049 ^A	-1	6.427	7.281	•••	
2636	$t^3D^{\circ}-f^3F$	2-3	1.79	40949.739	40938.575	0	2442.018^{B}	0	6.532	6.834		
											• • • •	
2637	$t^3D^{\circ}-e^3P$	$\begin{array}{c} 2-2 \\ 3-2 \end{array}$	2.29 2.35	45521.524 37503.033	45509.114	0	2196.763 ^B	0	6.532	6.804	• • •	
		$\frac{3-2}{2-1}$	2.33	37303.033	37492.808 37120.868	0 14	2666.451 ^A 2693.168 ^A	0 -1	6.473 6.532	6.804 6.866	• • •	
2620	43D0 4EC 5E										• • •	
2638	t 3D $^{\circ}$ $ ^4F6s$ 5F	3-4 2-3	1.58 0.90	23239.665 20713.574	23233.324	-5 26	4302.988 ^B	1	6.473	7.007	• • •	
0.625	.300 (07-5-				20707.921	-26	4827.752 ^B	6	6.532	7.130	•••	
2639	$t\ ^3D^{ m o}\!-\!s\ ^6\!D5d\ ^5\!G$	3-4	1.46	22421.952	22415.834	-5	4459.915 ^C	1	6.473	7.026		

No.	Multiplet (MT) ¹	J-J	I ²	$\begin{array}{c} \lambda_{vac}^{3} \\ \text{(Å)} \end{array}$	$\begin{array}{c} \lambda_{air}^{\ 3} \\ \text{(A)} \end{array}$	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl.
2640	t 3D $^{\circ}$ $ ^4F$ 6 s 3F	2-3 3-2	1.48 1.04	22046.287 17928.633	22040.272 17923.738	-24 23	4535.911 ^B 5577.670 ^B		6.532 6.473	7.094 7.165		
2641	$^{4}F5p\ ^{3}G^{\circ}-^{4}F6s\ ^{5}F$	3-3 4-3	2.38 2.70	31713.201 28627.981	31704.553 28620.173	-10 -16	3153.261 ^A 3493.086 ^A		6.739 6.697	7.130 7.130		
		5-4	1.67	26959.889	26952.536	15	3493.080 3709.214^B		6.547	7.130		
2642	$^{4}F5p~^{3}G^{\circ}-s~^{6}D5d~^{5}G$	5-4	2.15	25865.585	25858.530	20	3866.141 ^A		6.547	7.026		
2643	$^{4}F5p~^{3}G^{\circ}-^{4}F6s~^{3}F$	3-2	2.41	29124.740	29116.797	-25	3433.507^{A}	3	6.739	7.165		
2644	${}^4F5p {}^3G^{\circ} - {}^4F5d {}^3G$	5-5	1.95	16652.753	16648.205	0	6005.013^{A}	0	6.547	7.292		
2645	$^4F5p\ ^3G^{\circ}-58831^e$	4-3	1.75	20774.286	20768.617	26	4813.643 ^A	-6	6.697	7.294		
2646	$^4F5p\ ^3G^{\circ}-58906^e$	5-4	1.41	16394.966	16390.488	3	6099.433^{B}	-1	6.547	7.303		
2647	$Gsp3~^{3}F^{\circ}-^{4}F6s~^{5}F$	3-4	1.99	31658.533	31649.900	-30	3158.706 ^B	3	6.615	7.007		
		4-4	2.67	28069.474	28061.818	-8	3562.589 ^A		6.565	7.007		
		2-2	1.75	26461.270	26454.053	-14	3779.108 ^A		6.664	7.132	• • •	
2648	$Gsp3 ^3F^{\circ} - s ^6D5d ^5G$	3-3 $4-4$	2.05 2.52	27040.934 26885.225	27033.559 26877.892	22 7	3698.097 ^B 3719.515 ^A	-3 -1	6.615	7.074	• • •	
26.40	C 23E0 4EC 3E								6.565	7.026	•••	
2649	$Gsp3$ 3F $^{\circ}$ $ ^4F6s$ 3F	3-3 $2-2$	1.82 2.00	25897.926 24743.239	25890.862 24736.489	-7 -24	3861.313 ^B 4041.508 ^C	1 4	6.615 6.664	7.094 7.165		
2650	$Gsp3 {}^{3}F^{\circ} - s {}^{4}D4d {}^{3}D$	4-3	1.11	17455.994	17451.228	3	5728.691 ^A	-1	6.565	7.275		
2651	$Gsp3$ $^3F^{\circ}-^4F5d$ 3G	4-5	1.96	17069.550	17064.889	0	5858.385 ^A	0	6.565	7.292		
2652	$Gsp3 ^3F^{\circ} - 58831^{e}$	3-3	0.85	18269.121	18264.133	-10	5473.717 ^B	3	6.615	7.294		
2653	$Gsp3 ^3F^{\circ} - 58906^e$	3-4	1.54	18021.502	18016.582	-23	5548.927 ^A	7	6.615	7.303		
2033	G 0 1 30 00 00	4-4	2.02	16798.792	16794.204	-6	5952.809 ^A	2	6.565	7.303		
2654	$Gsp3~^3F^{0}-59390^{e}$	4-3	0.78	15535.047	15530.803	-7	6437.058^{B}	3	6.565	7.363	•••	
2655	g ⁵ F-s ⁴ D5p ⁵ F°	3-2	0.00	19703.886	19698.508	0	5075.141 ^B	0	6.674	7.303		
		5-5	0.90	19663.023	19657.656	0	5085.688^{A}	0	6.579	7.209		
		5-4	1.72	18450.208	18445.171	-37	5419.993 ^D	11	6.579	7.251	• • •	
2656	$g^{5}F - {}^{4}F_{4.5}4f$ [4.5]°	4-4	2.23	18827.995	18822.855	4	5311.240 ^A	-1	6.620	7.278	• • •	
	$g^{5}F - {}^{4}F_{4.5}4f$ [4.5]° $g^{5}F - {}^{4}F_{4.5}4f$ [3.5]°	4-5 4-3	1.15 1.69	18819.228 18793.541	18814.091 18788.411	-14 -7	5313.714 ^C 5320.977 ^A	4 2	6.620 6.620	7.279 7.279	• • •	
	$g^{5}F^{-4}F_{4.5}4f$ [2.5]°	4-3	2.35	18778.045	18772.919	-4	5325.368 ^A	1	6.620	7.280		
	$g^{5}F^{-4}F_{4.5}4f$ [5.5]°	5-6	2.60	17732.948	17728.107	6	5639.220^{A}	-2	6.579	7.278		
	$g^{5}F-{}^{4}F_{4.5}4f$ [5.5]°	5-5	1.51	17732.021	17727.180	3	5639.515 ^A	-1	6.579	7.278		
	$g^{5}F-^{4}F_{4.5}4f$ [6.5]°	5-6	2.68	17726.218	17721.379	3	5641.361 ^A	-1	6.579	7.278		
	$g^{5}F^{-4}F_{4.5}4f$ [4.5]°	5-4	1.56	17719.202	17714.364	0	5643.595 ^A	0	6.579	7.278		
	$g^{5}F^{-4}F_{4.5}4f$ [4.5]°	5-5	2.69	17711.466	17706.630	13	5646.060 ^D	-4	6.579	7.279	• • •	_
	$g^{5}F - {}^{4}F_{4.5}4f$ [3.5]°	5-4	1.18	17699.346	17694.514	9	5649.926 ^D	-3	6.579	7.279	• • •	N
2657	$g^{5}F^{-4}F_{3.5}4f$ [2.5]°	2-2	1.28	19949.523	19944.079	16	5012.651 ^A	-4	6.727	7.348		
	$g^{5}F - {}^{4}F_{3.5}4f [3.5]^{\circ}$	3-3	1.83	18400.956	18395.933	3	5434.500 ^D	-1	6.674	7.348	• • •	
	$g^{5}F - {}^{4}F_{3.5}4f$ [2.5]°	3-2	1.67	18385.127	18380.108	14	5439.179 ^A	-4	6.674	7.348	• • •	
	$g^{5}F - {}^{4}F_{3.5}4f$ [2.5]° $g^{5}F - {}^{4}F_{3.5}4f$ [4.5]°	3-3	2.06	18381.160 17032.272	18376.142	-34	5440.353 ^A 5871.207 ^A	10	6.674	7.348	• • •	
	$g^{5}F - {}^{4}F_{3.5}4f$ [4.5]° $g^{5}F - {}^{4}F_{3.5}4f$ [2.5]°	4-5 4-3	1.73 1.75	17032.272	17027.622 17008.999	9 26	5871.207 ⁻⁴ 5877.635 ^A	-3 -9	6.620 6.620	7.348 7.348		
2658	$g^{5}F - Psp1^{3}S^{\circ}$	1-1	1.15	19552.498	19547.161	19	5114.436 ^A	-5	6.743	7.377		
2659	$g^{5}F - s^{6}D_{3.5}5f$ [5.5]°	4-5	1.78	15948.207	15943.851	-18	6270.297^{A}	7	6.620	7.397		
2660	$g^{5}F^{-4}F_{2.5}4f$ [1.5]°	1-2	0.70	18863.550	18858.401	11	5301.229 ^A	-3	6.743	7.400		
2000	$g^{5}F - {}^{4}F_{2.5}4f$ [1.5] $g^{5}F - {}^{4}F_{2.5}4f$ [3.5]°	2-3	1.23	18469.079	18464.037	14	5414.455 ^B	-3 -4	6.727	7.398		
	$g^{5}F^{-4}F_{2.5}4f$ [2.5]°	2-3	1.51	18444.304	18439.269	17	5421.728 ^A	-5	6.727	7.399		
	$g^{5}F^{-4}F_{2.5}4f$ [3.5]°	3-3	0.90	17120.382	17115.707	-15	5840.991 ^B	5	6.674	7.398		
	$g^{5}F^{-4}F_{2.5}4f$ [4.5]°	3-4	1.52	17117.027	17112.353	6	5842.136 ^A	-2	6.674	7.398		
	$g^{5}F^{-4}F_{2.5}4f$ [2.5]°	3-3	1.45	17099.120	17094.451	15	5848.254^{D}	-5	6.674	7.399		

				171001	. 2—Contini							
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ ⁵ (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
	$g^{5}F^{-4}F_{2.5}4f$ [4.5]°	4-4	2.90	15924.999	15920.649	10	6279.435^{D}	-4	6.620	7.398		I
2661	$g^{5}F-^{4}F_{1.5}4f$ [2.5]°	1-2	1.00	17980.508	17975.599	6	5561.578^{B}	-2	6.743	7.432		
	$g^{5}F-{}^{4}F_{1.5}4f$ [3.5]°	2-3	1.82	17575.257	17570.459	15	5689.817 ^A	-5	6.727	7.432		
	$g^{5}F - {}^{4}F_{1.5}4f$ [2.5]°	$^{2-2}$	1.20	17573.880	17569.081	3	5690.263 ^B	-1	6.727	7.432		
	$g^{5}F-{}^{4}F_{1.5}4f$ [2.5]°	2-3	1.26	17559.191	17554.397	25	5695.023 ^A	-8	6.727	7.433	• • •	
2662	${}^4F5p {}^5G^{\circ} - {}^4F6s {}^5F$	5-5	4.52	39566.603	39555.816	-125	2527.384^{D}	8	6.644	6.957		Ne
		5-4	2.44	34133.106	34123.799	12	2929.707 ^A	-1	6.644	7.007		
		6-5	3.18	32845.803	32836.846	11	3044.529 ^A	-1	6.580	6.957	• • •	
		$\frac{2-3}{3-3}$	2.71 1.83	30740.958	30732.575	-28	3252.989 ^A	3	6.727	7.130	• • •	
		3-3 $3-2$	2.29	29620.747 29464.983	29612.669 29456.948	-9 -17	3376.012^B 3393.859^A	1 2	6.712 6.712	7.130 7.132	• • •	
		$\frac{3-2}{2-1}$	2.41	28600.699	28592.899	-17	3496.418 ^D	-1	6.727	7.132	•••	II
		4-3	2.16	27333.203	27325.748	-15	3658.554 ^B	2	6.677	7.130	• • • •	11
2663	${}^4F5p {}^5G^{\circ} - s {}^6D5d {}^5D$	3-3	2.44	45403.507	45391.130	-41	2202.473^{D}	2	6.712	6.985		Ne
2005	1 5p G G D D D D	5-4	2.52	38152.794	38142.392	15	2621.040^{A}	-1	6.644	6.969		
2664	${}^{4}F5p{}^{5}G^{\circ}-s{}^{6}D5d{}^{5}G$	5-4	1.81	32397.856	32389.021	115	3086.624^{D}	-11	6.644	7.026		II
200.	1 5 p G G D D D G G	6-5	2.90	28725.099	28717.265	8	3481.276 ^A	-1	6.580	7.011		11
2665	${}^4F5p {}^5G^{\circ} - s {}^6D5d {}^7G$	5-4	2.69	28016.352	28008.711	16	3569.344 ^A	-2	6.644	7.086		
2666	${}^4F5p {}^5G^{\circ} - s {}^6D5d {}^5F$	2-3	2.73	40498.865	40487.823	131	2469.205^{D}	-8	6.727	7.033		I
2000	1 5p G 0 D 50 1	5-4	2.65	28258.669	28250.962	16	3538.737 ^B	-2	6.644	7.082		
		6-5	2.32	27081.768	27074.382	-7	3692.521^{B}	1	6.580	7.037		
2667	$^4F5p\ ^5G^{\circ}-^4F6s\ ^3F$	3-3	2.99	32423.592	32414.750	-32	3084.174^{A}	3	6.712	7.094		
2668	4F5p $^5G^{\circ}$ $-s$ 6D5d 7S	4-3	2.03	27885.088	27877.483	47	3586.146^{D}	-6	6.677	7.121		I
2669	$^4F5p\ ^5G^{\circ}-^4F5d\ ^5F$	6-5	1.66	18109.882	18104.938	3	5521.847 ^A	-1	6.580	7.264	•••	
2670	$^4F5p\ ^5G^{\circ}-^4F5d\ ^5H$	6-7	2.85	17725.933	17721.093	-3	5641.452 ^A	1	6.580	7.279		
2671	$^4F5p\ ^5G^{\circ}-^4F5d\ ^3G$	3-4	2.85	19725.507	19720.124	0	5069.578 ^A	0	6.712	7.340		
		5-5	0.60	19136.913	19131.690	7	5225.503^{B}	-2	6.644	7.292	• • •	
		5-4	0.60	17800.797	17795.937	-10	5617.726^{B}	3	6.644	7.340	• • •	
2672	${}^{4}F5p{}^{5}G^{\circ}-59390^{e}$	4-3	1.99	18055.218	18050.289	16	5538.565 ^A	-5	6.677	7.363	•••	
2673	⁴ F5p ⁵ F° - ⁴ F6s ⁵ F	3-4	2.65	35024.576	35015.026	0	2855.138^{B}	0	6.653	7.007		
		5-5	2.70	33013.117	33004.115	-11	3029.099^{A}	1	6.581	6.957		
		1-2	2.26	30265.482	30257.229	-27	3304.094 ^B	3	6.723	7.132		
		2-3	2.02	28833.899	28826.035	-17	3468.140 ^B	2	6.700	7.130	• • •	
		2-2 1-1	2.13 2.27	28686.296 28331.204	28678.473 28323.477	0 16	3485.985 ^B 3529.677 ^A	0 -2	6.700 6.723	7.132	• • •	
2674	4 ms . 5 ms . 6 ms . 5 m						_			7.160	•••	
2674	${}^{4}F5p {}^{5}F^{\circ} - s {}^{6}D5d {}^{5}D$	4-4	2.58	35474.692	35465.019	38	2818.911 ^B	-3	6.619	6.969	•••	
2675	4F5p $^5F^{\circ}$ $-s$ 6D5d 5G	4-5 5-5	2.27 2.95	31625.573 28853.000	31616.949 28845.132	-20 0	3161.998 ^B 3465.844 ^A	2 0	6.619 6.581	7.011 7.011		
2676	$^{4}F5p^{5}F^{\circ}-s^{6}D5d^{7}G$	3-4	2.23	28614.120	28606.317	-8	3494.778 ^B	1	6.653	7.086		
2677	$^{4}F5p\ ^{5}F^{\circ}-s\ ^{6}D5d\ ^{5}F$	4-5	2.70	29645.089	29637.004	0	3373.240^{D}	0	6.619	7.037		IJ
2077	139 1 0 234 1	5-5	2.31	27195.425	27188.008	-7	3677.089 ^C	1	6.581	7.037		11
2678	${}^4F5p {}^5F^{\circ} - {}^4F6s {}^3F$	2-3	2.11	31483.152	31474.567	-20	3176.302^{D}	2	6.700	7.094		I
		$^{2-2}$	2.06	26678.141	26670.865	-43	3748.387 ^B	6	6.700	7.165		
		4-3	1.57	26108.338	26101.216	-34	3830.194^{B}	5	6.619	7.094	• • •	
2679	${}^4F5p {}^5F^{\circ} - {}^4F5d {}^5F$	3-4	1.91	20279.882	20274.348	0	4930.995^{A}	0	6.653	7.264		
		4-5	2.03	19221.280	19216.034	4	5202.567 ^B	-1	6.619	7.264	• • •	
		4-4	2.07	19218.074	19212.828	4	5203.435 ^A	-1	6.619	7.264	• • •	
		5-5	2.53	18160.629	18155.671	0	5506.417 ^A	0	6.581	7.264	• • •	
	${}^{4}F5p{}^{5}F^{\circ}-s{}^{4}D4d{}^{3}D$	3-3	0.78	19915.395	19909.960	8	5021.241 ^A	-2	6.653	7.275		
2680	1 3p 1 - 3 D + a D	3-2	0.00	18801.441	18796.309	7	5318.741 ^B	-2	6.653	7.312	• • • •	

					LE 2—Conii	meu						
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{}$ (A)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	B1.8
2681	${}^{4}F5p{}^{5}F^{\circ}-{}^{4}F5d{}^{3}G$	4-4	1.46	17195.151	17190.455	6	5815.593 ^B	-2	6.619	7.340		
2682	$^4F5p\ ^5F^{\circ}-58831^e$	3-3	1.65	19341.798	19336.519	0	5170.150 ^A	0	6.653	7.294		
2683	⁴ F5p ⁵ F°−58906 ^e	3-4	1.41	19064.486	19059.282	7	5245.355 ^A	-2	6.653	7.303		
2684	⁴ F5p ⁵ F°−59077 ^e	1-1	1.26	20607.233	20601.609	-4	4852.665 ^B	1	6.723	7.324		
2685	${}^{4}F5p{}^{5}F^{\circ}-59390^{e}$	2-3	1.48	18698.051	18692.946	17	5348.151 ^B		6.700	7.363		
2686	h^5D - $s^4D5p^3F^o$	3-2	2.47	18463.258	18458.218	0	5416.162 ^B		6.639	7.310	• • •	
2687	$h~^5D-Hsp1~^3G^{\circ}$	3-4	1.45	20882.136	20876.438	-9	4788.782 ^B		6.639	7.232	• • •	
2688	h 5D – s 4D 5F $^\circ$	4-4	0.95	18775.273	18770.148	4	5326.154 ^A 5602.483 ^A		6.590	7.251	• • •	
	. 5 - 4	4-3	1.76	17849.228	17844.355	0			6.590	7.285	•••	
2689	$h^{5}D - {}^{4}F_{4.5}4f$ [2.5]° $h^{5}D - {}^{4}F_{4.5}4f$ [4.5]°	2-2 3-4	1.65 1.98	21023.345 19383.300	21017.608 19378.010	40 0	4756.617 ^B 5159.080 ^A		6.691 6.639	7.281 7.278	• • •	
	$h^{5}D - {}^{4}F_{4.5}4f$ [4.5]° $h^{5}D - {}^{4}F_{4.5}4f$ [3.5]°	3-4	2.06	19346.794	19376.010	-4	5168.815 ^A		6.639	7.279		
	$h^{5}D-{}^{4}F_{4.5}4f$ [2.5]°	3-3	1.80	19330.365	19325.089	-4	5173.208 ^A		6.639	7.280		
	$h^{5}D-{}^{4}F_{4.5}4f[2.5]^{\circ}$	3-2	1.66	19314.464	19309.192	-45	5177.467 ^A		6.639	7.281		
	$h^{5}D-{}^{4}F_{4.5}4f[5.5]^{\circ}$	4-5	2.42	18032.031	18027.108	7	5545.687 ^A		6.590	7.278		
	$h^{5}D-{}^{4}F_{4.5}4f[4.5]^{\circ}$	4-4	2.25	18018.768	18013.848	-3	5549.769 ^A		6.590	7.278		
	$h^{5}D - {}^{4}F_{4.5}4f$ [4.5]°	4-5	2.44	18010.765	18005.847	6	5552.235 ^A		6:590	7.279	• • •	
	$h^{5}D - {}^{4}F_{4.5}4f[3.5]^{\circ}$	4-4	2.40	17998.220	17993.306	-13	5556.105 ^A		6.590	7.279	• • •	
	$h^{5}D - {}^{4}F_{4.5}4f [3.5]^{\circ}$	4-3 4-3	2.51 1.69	17987.212 17973.017	17982.302 17968.110	-10	5559.505 ^A 5563.896 ^A		6.590 6.590	7.279	• • •	
	$h^{5}D-{}^{4}F_{4.5}4f$ [2.5]°					-3				7.280	• • •	
2690	$h^{5}D-{}^{4}F_{3.5}4f[1.5]^{\circ}$	1-2	1.38	19441.341	19436.035	34	5143.678 ^D		6.711	7.349	• • •	II
	$h^{5}D - {}^{4}F_{3.5}4f[3.5]^{\circ}$	2-3	1.58	18872.147	18866.996	4	5298.814 ^A		6.691	7.348	• • •	
	$h^{5}D - {}^{4}F_{3.5}4f$ [2.5]°	2-2	0.95	18855.529	18850.382	43	5303.484 ^C		6.691	7.348	• • •	
	$h^{5}D - {}^{4}F_{3.5}4f[2.5]^{\circ}$	2-3	1.89	18851.363	18846.217	0	5304.656 ^A 5309.579 ^A		6.691	7.348	• • •	
	$h^{5}D-{}^{4}F_{3.5}4f$ [1.5]° $h^{5}D-{}^{4}F_{3.5}4f$ [4.5]°	$\frac{2-2}{3-4}$	1.30 2.01	18833.884 17493.343	18828.743 17488.567	-11 18	5716.460 ^D		6.691 6.639	7.349 7.347	• • •	I
	$h^{5}D^{-4}F_{3.5}4f$ [4.5]° $h^{5}D^{-4}F_{3.5}4f$ [3.5]°	3-4	2.20	17493.343	17488.307	6	5719.909 ^A		6.639	7.348		1
	$h^{5}D - {}^{4}F_{3.5}4f$ [3.5]° $h^{5}D - {}^{4}F_{3.5}4f$ [2.5]°	3-3	1.54	17465.772	17476.022	3	5725.484 ^A		6.639	7.348		
	$h^{5}D-{}^{4}F_{3.5}4f$ [4.5]°	4-4	1.00	16374.228	16369.756	-13	6107.158 ^A		6.590	7.347		
	$h^{5}D-{}^{4}F_{3.5}4f$ [4.5]°	4-5	1.23	16367.316	16362.846	3	6109.737 ^A		6.590	7.348	•••	
2691	$h^{5}D-{}^{4}F_{2.5}4f$ [1.5]°	1-2	1.67	18002.234	17997.319	0	5554.866 ^A	0	6.711	7.400		
2692	$h^{5}D-{}^{4}F_{1.5}4f$ [2.5]°	1-2	1.34	17196.262	17191.567	-9	5815.217 ^B	3	6.711	7.432		
2602	f ⁵ P-s ⁴ D5p ⁵ F°	2 2	0.20	10271 005	19266.725		5188.879 ^A		6 6 4 1	7.205		
2693	J P-s Dsp F	$\frac{2-3}{3-4}$	0.30 0.48	19271.985 18794.473	18789.343	-7 -21	5320.713 ^A		6.641 6.591	7.285 7.251		
		3-3	1.71	17866.605	17861.727	3	5597.034 ^A		6.591	7.285		
2694	f ⁵ P-s ⁴ D5p ⁵ P°	2-3	0.70	19585.922	19580.576	0	5105.708 ^D		6.641	7.274		II
2094	J - F - S D Sp - F	3-3	0.70	18136.092	18131.140	-7	5513.867 ^B		6.591	7.274	• • •	11
		2-1	1.08	17266.859	17262.145	15	5791.441 ^B		6.641	7.359		
		3-2	0.60	16821.686	16817.093	-11	5944.707 ^B		6.591	7.328		
2695	$f^{5}P - {}^{4}F_{4.5}4f$ [2.5]°	2-3	1.71	19416.389	19411.090	0	5150.288 ^A		6.641	7.280		
2093	$f^{5}P - {}^{4}F_{4.5}4f[2.5]^{\circ}$ $f^{5}P - {}^{4}F_{4.5}4f[2.5]^{\circ}$	$\frac{2-3}{2-2}$	1.71	19410.389	19395.085	0	5150.288 ^A		6.641	7.280		
	$f^{5}P - {}^{4}F_{4.5}4f$ [4.5]°	3-4	1.38	18036.477	18031.552	0	5544.320 ^A		6.591	7.278		
	$f^{5}P - {}^{4}F_{4.5}4f$ [3.5]°	3-4	2.42	18015.885	18010.966	-13	5550.657 ^A		6.591	7.279		
	$f^{5}P^{-4}F_{4.5}4f$ [3.5]°	3-3	1.94	18004.863	17999.947	0	5554.055 ^A		6.591	7.279		
	$f^{5}P-{}^{4}F_{4.5}4f[2.5]^{\circ}$	3-3	2.10	17990.649	17985.737	10-	5558.443 ^A		6.591	7.280		
	$f^{5}P - {}^{4}F_{4.5}4f$ [2.5]°	3-2	1.93	17976.891	17971.983	-6	5562.697 ^A	2	6.591	7.281		
2696	$f^{5}P - {}^{4}F_{3.5}4f$ [2.5]°	1-2	1.63	18709.217	18704.110	-7	5344.959 ^A	2	6.686	7.348		
/-	$f^{5}P - {}^{4}F_{3.5}4f [1.5]^{\circ}$	1-2	0.78	18687.959	18682.858	-3	5351.039 ^A		6.686	7.349		
	$f^{5}P - {}^{4}F_{3.5}4f [3.5]^{\circ}$	2-3	1.72	17553.933	17549.140	-9	5696.729 ^A		6.641	7.348		
	$f^{5}P-{}^{4}F_{3.5}4f$ [2.5]°	2-2	1.79	17539.533	17534.744	3	5701.406 ^A		6.641	7.348		
	$f^{5}P - {}^{4}F_{3.5}4f$ [2.5]°	2-3	1.38	17535.962	17531.174	0	5702.567^{D}		6.641	7.348		II
	$f^{5}P-{}^{4}F_{3.5}4f[1.5]^{\circ}$	2-2	2.15	17520.852	17516.068	6	5707.485 ^A		6.641	7.349		
	3 3.3 · 3 [- ·]											_
	$f^{5}P - {}^{4}F_{3.5}4f$ [3.5]° $f^{5}P - {}^{4}F_{3.5}4f$ [1.5]°	$3-3 \\ 3-2$	0.78 2.67	16380.335 16351.507	16375.862 16347.041	8 5	6104.881 ^D 6115.644 ^D		6.591 6.591	7.348		I

$\begin{array}{c} f^5G^{-4}F_{3,3}4f[4.5]^{\circ} & 4-4 & 1.89 & 1820.3931 & 18198.961 & 3 & 5493.319^{A} & -1 & 6.666 & 7.348 \\ f^5G^{-4}F_{3,3}4f[5.5]^{\circ} & 4-5 & 2.12 & 18195.372 & 18190.404 & 3 & 5495.903^{A} & -1 & 6.666 & 7.348 \\ f^5G^{-4}F_{3,3}4f[5.5]^{\circ} & 4-5 & 2.73 & 18194.908 & 18189.941 & 7 & 5496.043^{A} & -2 & 6.666 & 7.348 \\ f^5G^{-4}F_{3,3}4f[5.5]^{\circ} & 4-3 & 1.89 & 18174.092 & 18169.131 & 0 & 5502.338^{A} & 0 & 6.666 & 7.348 \\ f^5G^{-4}F_{3,3}4f[2.5]^{\circ} & 4-3 & 1.89 & 18174.092 & 18169.131 & 0 & 5502.338^{A} & 0 & 6.666 & 7.348 \\ \end{array}$					1 A I	SLE 2—Con	iinuea						
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	No.		J-J	I ²		λ _{qir} (Å)						log(gf) ⁷	B1.8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2697	$f^{5}P - {}^{4}F_{2} = 4f[2.5]^{\circ}$	1-2	1.26	17375.883	17371.139	9	5755.103 ^C	-3	6 686	7 399		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					16362.455	16357.987							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2698	$f^{5}G-{}^{4}F_{4.5}4f[5.5]^{\circ}$	4-5	1.51	20276.329	20270.796	-16	4931.859 ^B	4	6.666	7.278		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		$f^{5}G-{}^{4}F_{4.5}4f[4.5]^{\circ}$	4-4	1.41	20259.598	20254.069							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			5-6	2.63	18454.096	18449.058	0	5418.851 ^A	0	6.606			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			5-5	2.72	18453.095	18448.058	0	5419.145 ^A	0	6.606	7.278		
$\begin{array}{c} f^3G^{-4}F_{1,5}f^{-4}[5.5]^{\circ} & 6-6 & 2.48 & 18078.618 & 18025.87 & -3 & 5425.6954 & 1 & 6.606 & 7.279 & \\ f^3G^{-4}F_{1,5}f^{-4}[5.5]^{\circ} & 6-6 & 7.304 & 18060.575 & 18055.645 & 0 & 5536.0224 & 0 & 6.592 & 7.278 & \\ f^3G^{-4}F_{1,5}f^{-4}[4.5]^{\circ} & 6-7 & 3.04 & 18060.575 & 18055.645 & 0 & 5536.0224 & 0 & 6.592 & 7.278 & \\ f^3G^{-4}F_{1,5}f^{-4}[4.5]^{\circ} & 6-5 & 1.99 & 18056.290 & 18051.361 & 3 & 5538.2364 & -1 & 6.592 & 7.279 & \\ f^3G^{-4}F_{1,5}f^{-4}[4.5]^{\circ} & 4-5 & 1.11 & 18808.193 & 18803.005 & 0 & 5316.8474 & 0 & 6.606 & 7.308 & \\ f^3G^{-4}F_{1,5}f^{-4}[4.5]^{\circ} & 4-4 & 1.89 & 18203.931 & 18193.643 & 3 & 5495.9024 & -1 & 6.606 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[4.5]^{\circ} & 4-4 & 1.89 & 18203.931 & 18193.643 & 3 & 5495.9024 & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[2.5]^{\circ} & 4-5 & 2.12 & 18195.372 & 18190.404 & 3 & 5495.9024 & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[2.5]^{\circ} & 4-5 & 2.73 & 18194.092 & 18169.131 & 0 & 5502.3384 & 0 & 6.666 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[2.5]^{\circ} & 5-6 & 1.00 & 16716.174 & 16711.609 & 11 & 5982.2304 & -4 & 6.606 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[1.5]^{\circ} & 2-2 & 2.06 & 18826.183 & 18821.044 & -39 & 5311.751D & 11 & 6.741 & 7.400 & \\ f^3G^{-4}F_{1,5}f^{-4}[1.5]^{\circ} & 3-4 & 1.28 & 18147.740 & 18142.785 & -3 & 5510.2324 & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[1.5]^{\circ} & 3-4 & 1.28 & 18147.740 & 18142.785 & -3 & 5510.2324 & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[1.5]^{\circ} & 3-4 & 1.28 & 18147.740 & 18142.785 & -3 & 5510.2324 & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[1.5]^{\circ} & 3-4 & 1.28 & 18147.740 & 18142.785 & -3 & 5510.2324 & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[1.5]^{\circ} & 3-4 & 1.28 & 18147.740 & 18142.785 & -3 & 5510.7554 & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[1.5]^{\circ} & 3-4 & 1.28 & 18147.740 & 18142.317 & 18137.364 & -3 & 5510.7554 & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{1,5}f^{-4}[1.5]^{\circ} & 3-3 & 1.04 & 18142.317 & 18137.364 & -3 & 5510.755$					18446.808			5420.992 ^A	0	6.606	7.278		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$										6.606			
$\begin{array}{c} f^3G^{-4}F_{4,3}4f\left[6.5\right]^{\circ} & 6-7 & 3.04 & 18060.575 & 18055.645 & 0 & 5356.922^{\wedge} & 0 & 6.992 & 7.278 & \\ f^3G^{-4}F_{4,3}4f\left[4.5\right]^{\circ} & 6-5 & 1.99 & 18056.290 & 18051.361 & 3 & 5538.236^{\wedge} & -1 & 6.592 & 7.279 & \\ f^3G^{-4}F_{3,4}4f\left[4.5\right]^{\circ} & 4-5 & 1.11 & 18808.139 & 18803.005 & 0 & 5316.847^{\empty} & 0 & 6.666 & 7.308 & \\ f^3G^{-4}F_{3,4}4f\left[4.5\right]^{\circ} & 4-4 & 1.89 & 18203.931 & 18198.961 & 3 & 5493.319^{\empty} & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{3,4}4f\left[4.5\right]^{\circ} & 4-4 & 1.89 & 18203.931 & 18198.961 & 3 & 5493.319^{\empty} & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{3,4}4f\left[5.5\right]^{\circ} & 4-5 & 2.12 & 18194.993 & 18199.941 & 3 & 5495.902^{\empty} & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{3,4}4f\left[5.5\right]^{\circ} & 4-5 & 2.73 & 18194.990 & 3 & 5495.902^{\empty} & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{3,4}4f\left[5.5\right]^{\circ} & 4-5 & 2.73 & 18194.990 & 3 & 5495.902^{\empty} & -1 & 6.666 & 7.348 & \\ f^3G^{-4}F_{3,4}4f\left[5.5\right]^{\circ} & 5-6 & 1.00 & 1616.174 & 1616.174 & 1671.609 & 11 & 5882.230^{\empty} & 4 & 6.066 & 7.348 & \\ f^3G^{-4}F_{3,4}4f\left[5.5\right]^{\circ} & 2-3 & 0.48 & 18855.259 & 18850.112 & 7 & 5303.5604 & 2 & 6.741 & 7.399 & \\ f^3G^{-4}F_{3,4}4f\left[3.5\right]^{\circ} & 2-2 & 2.06 & 18826.183 & 1882.1044 & -39 & 5311.751^{D} & 11 & 6.741 & 7.400 & \\ f^3G^{-4}F_{3,4}4f\left[3.5\right]^{\circ} & 3-4 & 1.82 & 18147.740 & 18142.2785 & -3 & 5510.3284 & 1 & 6.715 & 7.398 & \\ f^3G^{-4}F_{3,4}4f\left[4.5\right]^{\circ} & 4-4 & 7.0 & 16942.011 & 16937.384 & -7 & 5518.098^{\empty} & 2 & 6.715 & 7.398 & \\ f^3G^{-4}F_{3,4}4f\left[3.5\right]^{\circ} & 4-4 & 7.0 & 16942.011 & 16937.384 & 7 & 5518.098^{\empty} & 1 & 6.715 & 7.398 & \\ f^3G^{-4}F_{3,4}4f\left[3.5\right]^{\circ} & 4-4 & 7.0 & 16942.011 & 16937.384 & 7 & 5518.098^{\empty} & 1 & 6.715 & 7.398 & \\ f^3G^{-4}F_{3,4}4f\left[3.5\right]^{\circ} & 4-4 & 7.0 & 16942.011 & 16937.384 & 7 & 5518.098^{\empty} & 1 & 6.715 & 7.398 & \\ f^3G^{-4}F_{3,4}4f\left[3.5\right]^{\circ} & 4-4 & 7.3 & 12.043.609 & 1.693.934 & -7 & 5518.098^{\empty} & 1 & 6.666 & 7.398 & \\ f^3G^{-4}F_{3,4}4f\left[3.5\right]^{\circ} & 4-4 & 0.70 & 16942.0$												• • •	
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$\begin{array}{c} f^5G-4F_{1,3}4f [5.5]^\circ & 4-5 & 273 & 18194,908 & 18189,941 & 7 & 5496,043^4 & -2 & 6.666 & 7.348 & \\ f^5G-4F_{3,3}4f [5.5]^\circ & 5-6 & 1.00 & 16716.174 & 16711.609 & 11 & 5982.2308^4 & 0 & 6.666 & 7.348 & \\ f^3G-4F_{3,3}4f [5.5]^\circ & 5-6 & 1.00 & 16716.174 & 16711.609 & 11 & 5982.2308^4 & 0 & 6.666 & 7.348 & \\ f^3G-4F_{3,3}4f [1.5]^\circ & 2-2 & 2.06 & 18826.183 & 18821.104 & -39 & 5311.751P & 11 & 6.741 & 7.400 & \\ f^3G-4F_{3,4}4f [1.5]^\circ & 2-2 & 2.06 & 18826.183 & 18821.044 & -39 & 5311.751P & 11 & 6.741 & 7.400 & \\ f^3G-4F_{3,4}4f [3.5]^\circ & 3-4 & 2.04 & 18142.718 & 18137.364 & -3 & 5510.3284 & 1 & 6.715 & 7.398 & \\ f^3G-4F_{3,4}4f [3.5]^\circ & 3-4 & 2.04 & 18142.317 & 18137.364 & -3 & 5511.975^A & 1 & 6.715 & 7.398 & \\ f^3G-4F_{3,4}4f [3.5]^\circ & 3-4 & 2.04 & 18142.2186 & 18117.238 & -7 & 5518.098^A & 2 & 6.715 & 7.399 & \\ f^3G-4F_{3,4}4f [3.5]^\circ & 4-5 & 1.11 & 16941.620 & 16936.994 & -6 & 5902.623^B & 2 & 6.666 & 7.398 & \\ f^3G-4F_{3,4}4f [2.5]^\circ & 2-3 & 2.20 & 17948.014 & 17943.114 & -3 & 5571.647^A & 1 & 6.666 & 7.398 & \\ f^3G-4F_{3,4}4f [2.5]^\circ & 2-3 & 2.20 & 17948.014 & 17943.114 & -3 & 5571.647^A & 1 & 6.674 & 7.432 & \\ f^3G-4F_{3,4}4f [2.5]^\circ & 2-3 & 2.17 & 17931.246 & 17926.351 & -6 & 5576.857^A & 2 & 6.741 & 7.432 & \\ f^3G-4F_{3,4}4f [2.5]^\circ & 5-4 & 1.34 & 1349.866 & 17278.727 & 0 & 5785.883^A & 0 & 6.715 & 7.332 & \\ 2703 & e^5H-e^5De^5D^\circ & 5-4 & 2.13 & 34988.572 & 34979.032 & 24 & 2858.076^B & -2 & 6.679 & 7.034 & \\ 2704 & e^5H-Hsp1^3G^\circ & 5-4 & 1.46 & 22419.760 & 22413.643 & 25 & 4460.351^B & -5 & 6.679 & 7.232 & \\ e^5H-4F_{4,3}4f [5.5]^\circ & 6-5 & 1.60 & 18699.117 & 18694.012 & -3 & 5347.846^A & 1 & 6.615 & 7.278 & \\ e^5H-4F_{4,3}4f [5.5]^\circ & 7-6 & 1.20 & 18431.966 & 18426.935 & 0 & 5425.357^B & 0 & 6.605 & 7.278 & \\ e^5H-4F_{4,3}4f [5.5]^\circ & 7-6 & 1.20 & 18431.966 & 18426.935 & 0 & 5425.357^B & 0 & 6.605 & 7.278 & \\ e^5H-4F_{4,3}4f [5.5]^\circ & 7-6 & 1.20 & 18431.966 & 18426.935 & 0 & 5425.357^B & 0 & 6.605 & 7.278 & \\ e^5H-4F_{$													
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$\begin{array}{c} f^5G-^4F_{2.5}4f\left[3.5\right]^{\circ} & 4-4 & 0.70 & 16942.011 & 16937.384 & 3 & 5902.487^{B} & -1 & 6.666 & 7.398 & \dots \\ f^5G-^4F_{2.5}4f\left[4.5\right]^{\circ} & 4-5 & 1.11 & 16941.620 & 16936.994 & -6 & 5902.623^{B} & 2 & 6.666 & 7.398 & \dots \\ f^5G-^4F_{1.5}4f\left[3.5\right]^{\circ} & 2-3 & 2.20 & 17948.014 & 17943.114 & -3 & 5571.647^{A} & 1 & 6.741 & 7.432 & \dots \\ f^5G-^4F_{1.5}4f\left[2.5\right]^{\circ} & 2-3 & 2.17 & 17931.246 & 17926.351 & -6 & 5576.857^{A} & 2 & 6.741 & 7.433 & \dots \\ f^5G-^4F_{1.5}4f\left[2.5\right]^{\circ} & 3-4 & 1.59 & 17283.446 & 17278.727 & 0 & 5785.883^{A} & 0 & 6.715 & 7.432 & \dots \\ \hline 2703 & e^3H-s^6Dep^5D^{\circ} & 5-4 & 2.13 & 34988.572 & 34979.032 & 24 & 2858.076^{B} & -2 & 6.679 & 7.034 & \dots \\ \hline 2704 & e^3H-Hsp1^3G^{\circ} & 5-4 & 1.46 & 22419.760 & 22413.643 & 25 & 4460.351^{B} & -5 & 6.679 & 7.232 & \dots \\ \hline 6-5 & 1.73 & 21433.608 & 21427.759 & 9 & 4665.570^{A} & -2 & 6.615 & 7.193 & \dots \\ \hline e^5H-^4F_{4.5}4f\left[5.5\right]^{\circ} & 6-5 & 1.60 & 18699.117 & 18694.012 & -3 & 5347.846^{A} & 1 & 6.615 & 7.278 & \dots \\ e^5H-^4F_{4.5}4f\left[5.5\right]^{\circ} & 6-6 & 2.25 & 18692.664 & 18687.562 & -3 & 5349.692^{A} & 1 & 6.615 & 7.278 & \dots \\ e^5H-^4F_{4.5}4f\left[5.5\right]^{\circ} & 7-6 & 1.20 & 188431.966 & 18426.935 & 0 & 5425.357^{B} & 0 & 6.605 & 7.278 & \dots \\ e^5H-^4F_{4.5}4f\left[6.5\right]^{\circ} & 7-6 & 1.32 & 18424.709 & 18419.679 & 14 & 5427.494^{A} & 4 & 6.605 & 7.278 & \dots \\ e^5H-^4F_{4.5}4f\left[6.5\right]^{\circ} & 7-8 & 2.76 & 18371.158 & 18366.142 & 0 & 5443.315^{A} & 0 & 6.605 & 7.280 & \dots \\ e^5H-^4F_{3.5}4f\left[6.5\right]^{\circ} & 7-8 & 2.76 & 18371.158 & 18366.142 & 0 & 5443.315^{A} & 0 & 6.605 & 7.280 & \dots \\ e^5H-^4F_{3.5}4f\left[5.5\right]^{\circ} & 5-4 & 0.90 & 18599.017 & 18534.855 & 10 & 5349.60^{A} & 0 & 6.605 & 7.280 & \dots \\ e^5H-^4F_{3.5}4f\left[5.5\right]^{\circ} & 5-6 & 1.54 & 18543.966 & 18426.935 & 0 & 5425.357^{B} & 0 & 6.605 & 7.278 & \dots \\ e^5H-^4F_{3.5}4f\left[5.5\right]^{\circ} & 7-6 & 1.32 & 18424.709 & 18419.679 & 14 & 5427.494^{A} & 4 & 6.605 & 7.278 & \dots \\ e^5H-^4F_{3.5}4f\left[5.5\right]^{\circ} & 5-6 & 1.54 & 18371.158 & 18366.142 & 0 & 5443.315^{A} & 0 & 6.605 & 7.280 & \dots \\ e^5H-^4F_{3.5}4f\left[5.5\right]^{\circ} & 5-5 & 2.07 & 18550.2029 & 18545.165 & -3 & $													
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2706	$e{}^5H\!-\!Hsp1{}^3I^{ m o}$	4-5	1.15	20624.416	20618.788	-38	4848.622^{D}	9	6.724	7.325		II
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$e^{5}H^{-4}F_{3.5}4f$ [6.5]° 6-7 2.04 16895.031 16890.417 0 5918.900 ^A 0 6.615 7.349													I
5 T AT 4 A C #10 C C 4 00 4 COO 4 CO C C #10 C #													INE
45.5 (1.00) 5 6 1.00 10001.001 6 3720.101 1.001 1.349													
		C 11 1 3.5 TJ [0.5]	0 -0	1.34	10071.103	10000.071	U	3740.143	-2	0.013	1.349	•••	

2709	Multiplet (MT) 1 $e^{5}H - s^{6}D_{4.5}5f$ [6.5] $^{\circ}$ $e^{5}H - {}^{4}F_{2.5}4f$ [2.5] $^{\circ}$ $e^{5}H - {}^{4}F_{2.5}4f$ [3.5] $^{\circ}$ $^{4}F5p^{3}F^{\circ} - {}^{4}F6s^{5}F$	J-J 6-6 3-3 5-4	I ²	λ _{vac} (Å)	$\lambda_{air}^{}$ (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
2709	$e^{5}H - {}^{4}F_{2.5}4f$ [2.5]° $e^{5}H - {}^{4}F_{2.5}4f$ [3.5]°	3-3		16002 626						` ,		
2710	$e^{5}H - {}^{4}F_{2.5}4f$ [3.5]°			16883.626	16879.016	-11	5922.898 ^A	4	6.615	7.349		-
	$^{4}F5v^{3}F^{\circ}-^{4}F6s^{5}F$	•	2.20 1.51	19274.366 17249.685	19269.105 17244.975	-7 6	5188.238 ^D 5797.207 ^A	2 -2	6.756 6.679	7.399 7.398		Ne
2711	1	2-2 4-3	3.09 1.48	35434.228 23912.970	35424.567 23906.446	-63 0	2822.130 ^B 4181.831 ^B	5 0	6.782 6.612	7.132 7.130		
	$^{4}F5p\ ^{3}F^{\circ}-s\ ^{6}D5d\ ^{5}G$	4-3	1.61	26832.822	26825.504	7	3726.779^{B}	-1	6.612	7.074		
2712	${}^4F5p {}^3F^{\circ} - s {}^6D5d {}^7G$	3-4	2.46	34881.843	34872.332	24	2866.821^{D}	-2	6.731	7.086		II
2713	$^{4}F5p\ ^{3}F^{\circ}-s\ ^{6}D5d\ ^{5}F$	4-5	2.00	29128.659	29120.715	-17	3433.045^{B}	2	6.612	7.037		
2714	$^4F5p\ ^3F^{\circ}-^4F6s\ ^3F$	3-3	2.16	34132.115	34122.809	12	2929.792^{D}	-1	6.731	7.094]
		2-2 $4-3$	2.77 2.35	32419.902 25707.000	32411.062 25699.988	-32 0	3084.525 ^A 3889.991 ^A	3 0	6.782 6.612	7.165 7.094	• • •	
2715	$^{4}F5p~^{3}F^{\circ}-^{4}F5d~^{5}F$	4-5	0.60	19002.833	18997.646	-11	5262.373^{B}	3	6.612	7.264		
2/13	1 3p 1 - 1 3u 1	4-4	1.15	18999.703	18994.517	-4	5263.240 ^A	1	6.612	7.264		
2716	${}^4F5p\ {}^3F^{\circ}-{}^4F5d\ {}^3G$	4-5	0.78	18237.578	18232.599	-13	5483.184 ^B	4	6.612	7.292		
		4-4	1.62	17020.123	17015.475	0	5875.398 ^A	0	6.612	7.340	• • •	
	${}^{4}F5p {}^{3}F^{\circ} - 58906^{e}$	4-4	1.78	17928.858	17923.963	3	5577.600 ^A	-1	6.612	7.303	• • •	
2718	⁴ F5p ³ F°-59390 ^e	4-3	1.34	16496.603	16492.097	-14	6061.854 ^B	5	6.612	7.363	•••	
2719	${}^4F5p\ {}^5D^{\circ} - {}^4F6s\ {}^5F$	4-5	4.23	39944.429	39933.539	-64	2503.478^{D}	4	6.647	6.957		Ne
		$4-4 \\ 1-2$	2.69 2.46	34413.859 34183.663	34404.476 34174.342	-12 -23	2905.806 ^A 2925.374 ^A	1 2	6.647 6.770	7.007 7.132	• • •	
		$\frac{1-2}{2-3}$	2.40	33556.911	33547.761	-23 11	2923.374^{-1} 2980.012^{A}	-1	6.761	7.132		
		1-1	2.30	31736.400	31727.745	30	3150.956^B	-3	6.770	7.160		
2720	${}^{4}F5p{}^{5}D^{\circ} - s{}^{6}D5d{}^{5}D$	4-3	2.03	36674.126	36664.126	-54	2726.718^{B}	4	6.647	6.985		
2721	${}^{4}F5p{}^{5}D^{\circ} - s{}^{6}D5d{}^{5}G$	4-5	2.74	34011.037	34001.763	-12	2940.222^{B}	1	6.647	7.011		
2722	$^4F5p\ ^5D^{\circ}-s\ ^6D5d\ ^7G$	4-4	2.41	28205.220	28197.527	8	3545.443^{B}	-1	6.647	7.086		
2723	${}^{4}F5p\ {}^{5}D^{\circ} - s\ {}^{6}D5d\ {}^{5}F$	4-4	2.33	28450.789	28443.029	-24	3514.841^{C}	3	6.647	7.082		
2724	${}^4F5p\ {}^5D^{\circ}-{}^4F6s\ {}^3F$	3-4	3.16	33074.000	33064.981	-66	3023.523^{A}	6	6.668	7.043		
2725	${}^{4}F5p {}^{5}D^{\circ} - s {}^{6}D7s {}^{5}D$	3-4	2.88	22042.813	22036.798	29	4536.626^{D}	-6	6.668	7.231		Ne
2726	4F5p 5D ° $-s$ 4D4d 3G	4-4	1.26	18674.631	18669.533	14	5354.858^{A}	-4	6.647	7.311		
2727	${}^{4}F5p\ {}^{5}D^{\circ}-{}^{4}F5d\ {}^{5}F$	4-4	1.64	20073.605	20068.127	-16	4981.666^{B}	4	6.647	7.264		
2728	${}^{4}F5p{}^{5}D^{\circ} - s{}^{4}D4d{}^{3}D$	4-3	0.48	19716.418	19711.037	-19	5071.915^{C}	5	6.647	7.275		
2729 '	${}^{4}F5p\ {}^{5}D^{\circ}-{}^{4}F5d\ {}^{3}G$	4-5	1.18	19224.853	19219.606	7	5201.600 ^B	-2	6.647	7.292		
	4	4-4	1.08	17876.832	17871.952	-38	5593.832 ^D	12	6.647	7.340	• • • •]
	${}^{4}F5p {}^{5}D^{\circ} - 58831^{e}$	4-3	0.95	19154.071	19148.843	-15	5220.822 ^A	4	6.647	7.294	•••	
	⁴ F5p ⁵ D°-58906 ^e	4–4	1.85	18882.054	18876.899	-36	5296.034 ^D	10	6.647	7.303	• • •]
2732 '	⁴ F5p ⁵ D° – 59390 ^e	4-3	1.00	17300.223	17295.500	-3	5780.272 ^B	1	6.647	7.363	•••	
2733	$Dsp3~^5F^{\circ}-^4F6s~^5F$	3-2	2.52	26350.995	26343.808	-28	3794.923 ^A	4	6.662	7.132		
		5-5	2.85	47616.054	47603.074	45	2100.132 ^B	-2	6.697	6.957	• • •	
2734	$Dsp3 {}^{5}F^{\circ} - {}^{4}F6s {}^{3}F$	3-2	2.02	24646.823	24640.099	0	4057.318 ^A	0	6.662	7.165	•••	
	$e^{3}G - {}^{4}F_{4.5}4f$ [5.5]°	4-5	1.80	21578.143	21572.255	-19	4634.319 ^B	4	6.703	7.278		
	$e^{3}G^{-4}F_{4.5}4f[4.5]^{\circ}$	4-4	1.57	21559.163	21553.280	-19	4638.399 ^B	4	6.703	7.278	• • •	
•	$e^{3}G - {}^{4}F_{4.5}4f[3.5]^{\circ}$	4-3	1.58	21514.060	21508.190	28	4648.123 ^B	-6 -	6.703	7.279	• • •	
	$e^{3}G-{}^{4}F_{4.5}4f[4.5]^{\circ}$ $e^{3}G-{}^{4}F_{4.5}4f[3.5]^{\circ}$	5-5 5-4	1.04 1.41	20129.023 20113.403	20123.529 20107.914	-24 -4	4967.951 ^B 4971.809 ^B	6 1	6.663 6.663	7.279 7.279	• • •	
											•••	
	$e^{3}G-^{4}F_{3.5}4f$ [4.5]° $e^{3}G-^{4}F_{3.5}4f$ [4.5]°	3-4 4-4	1.15 1.73	20479.561 19246.395	20473.972 19241.142	-8 7	4882.917 ^B 5195.778 ^A	2 -2	6.742 6.703	7.347 7.347		

					LE 2—Conti							
No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) 7	Bl. ⁸
	$e^{3}G-{}^{4}F_{3.5}4f$ [4.5]°	4-5	1.69	19236.821	19231.570	4	5198.364 ^A	-1	6.703	7.348		
	$e^{3}G-{}^{4}F_{3.5}4f[3.5]^{\circ}$	4-4	1.79	19233.639	19228.389	4	5199.224 ^A		6.703	7.348		
	$e^{3}G^{-4}F_{3.5}4f[2.5]^{\circ}$	4-3	0.78	19213.026	19207.782	-7	5204.802^{B}		6.703	7.348		
	$e^{3}G-{}^{4}F_{3.5}4f$ [5.5]°	5-6	2.97	18101.231	18096.289	-7	5524.486 ^A	2	6.663	7.348		
	$e^{3}G-{}^{4}F_{3.5}4f[4.5]^{\circ}$	5-5	1.73	18098.089	18093.148	0	5525.445 ^A		6.663	7.348		
	$e^{3}G-{}^{4}F_{3.5}4f[5.5]^{\circ}$	5-5	1.57	18097.628	18092.687	3	5525.586^{A}	-1	6.663	7.348		
	$e^{3}G^{-4}F_{3.5}4f[3.5]^{\circ}$	5-4	2.19	18095.263	18090.323	-10	5526.308 ^A	3	6.663	7.348		
2737	$e^{3}G-{}^{4}F_{2.5}4f$ [3.5]°	3-4	1.86	18896.154	18890.996	4	5292.082^{A}	-1	6.742	7.398		
	$e^{3}G-{}^{4}F_{2.5}4f$ [4.5]°	3-4	1.52	18890.307	18885.151	32	5293.720^{C}	-9	6.742	7.398		
	$e^{3}G-{}^{4}F_{2.5}4f$ [2.5]°	3-3	0.30	18868.476	18863.325	18	5299.845^{B}	-5	6.742	7.399		
	$e^{3}G-{}^{4}F_{2.5}4f$ [3.5]°	4-4	2.07	17841.375	17836.504	-3	5604.949 ^A	1	6.703	7.398		
	$e^{3}G-{}^{4}F_{2.5}4f$ [4.5]°	4-5	2.55	17840.955	17836.084	0	5605.081 ^A	0	6.703	7.398		
	$e^{3}G-{}^{4}F_{2.5}4f$ [5.5]°	5-5	1.75	16827.285	16822.690	17	5942.729^{D}	-6	6.663	7.399		I
2738	$e^{3}G-{}^{4}F_{1.5}4f$ [3.5]°	3-4	2.54	17960.937	17956.034	3	5567.638 ^A	-1	6.742	7.432		
	$e^{3}G-{}^{4}F_{1.5}4f$ [3.5]°	3-3	1.15	17959.960	17955.057	-3	5567.941 ^B	1	6.742	7.432		
	$e^{3}G-{}^{4}F_{1.5}4f$ [2.5]°	3-3	1.81	17943.180	17938.281	3	5573.148 ^A	-1	6.742	7.433		
2739	$f^{3}D-{}^{4}F_{4.5}4f$ [2.5]°	2-2	1.71	21475.274	21469.414	-14	4656.518 ^B	3	6.703	7.281		
2,37	$f^{3}D-{}^{4}F_{4.5}4f$ [4.5]°	3-4	1.26	20171.831	20166.326	16	4957.408 ^B	-4	6.664	7.278		
	$f^{3}D-{}^{4}F_{4.5}4f$ [2.5]°	3-3	1.64	20114.479	20108.990	-12	4971.543 ^B	3	6.664	7.280		
2740	$f^{3}D-{}^{4}F_{3.5}4f$ [2.5]°	2-3	1.69	19213.975	19208.731	-4	5204.545 ^B	1	6.703	7.348		
2710	$f^{3}D-{}^{4}F_{3.5}4f$ [1.5]°	$\frac{2}{2-2}$	1.53	19195.825	19190.585	-4	5209.466 ^A	1	6.703	7.349		
	$f^{3}D-{}^{4}F_{3.5}4f$ [4.5]°	3-4	2.53	18133.023	18128.073	-7	5514.800 ^A	2	6.664	7.347		
	$f^{3}D-{}^{4}F_{3.5}4f$ [3.5]°	3-3	2.23	18122.590	18117.642	3	5517.975 ^A	-1	6.664	7.348		
	$f^{3}D-{}^{4}F_{3.5}4f[3.5]^{\circ}$	3-4	1.93	18121.739	18116.792	30	5518.234 ^D	-9	6.664	7.348		Ne
	$f^{3}D-{}^{4}F_{3.5}4f[2.5]^{\circ}$	3-2	1.90	18107.226	18102.282	0	5522.657 ^A	0	6.664	7.348		140
	$f^{3}D-{}^{4}F_{3.5}4f$ [2.5]°	3-3	1.95	18103.430	18098.488	10	5523.815 ^A	-3	6.664	7.348		
2741	$f^{3}D-{}^{4}F_{2.5}4f$ [3.5]°	2-3	2.11	17840.595	17835.724	-16	5605.194 ^A	5	6.703	7.398		
	$f^{3}D-{}^{4}F_{2.5}4f$ [2.5]°	2-2	0.85	17814.118	17809.254	22	5613.525 ^D	-7	6.703	7.399		I
	$f^{3}D-{}^{4}F_{2.5}4f[1.5]^{\circ}$	2-2	1.20	17791.555	17786.698	0	5620.644 ^A	0	6.703	7.400		-
	$f^{3}D-{}^{4}F_{2.5}4f[3.5]^{\circ}$	3-4	0.70	16880.577	16875.967	-3	5923.968^{B}	1	6.664	7.398		
2742	$g^7D-s^6D6p^7D^{\circ}$	3-4	2.75	47349.269	47336.361		2111.965^{D}		6745	7.007		
2142	g D=s Dop D	5-5	3.56	43113.260	43101.506	-22 0	2319.472 ^A	1	6.745 6.670	7.007 6.958	• • •	
		$\frac{3-3}{2-2}$	2.54	43072.406	43060.664			0			•••	
		2-2 4-4	3.60	43072.406	41794.657	0 17	2321.672 ^A 2391.998 ^A	0 -1	6.771 6.710	7.059 7.007	•••	
27.42	7D 6D 6 7E0										•••	
2743	$g ^7D$ – $s ^6D6p ^7F$ $^{\circ}$	3-4	3.19	42518.380	42506.789	18	2351.924 ^A	-1	6.745	7.037	• • •	
		4-5	3.69	42048.360	42036.897	-18	2378.214 ^A	1	6.710	7.005	• • •	
		5-6	3.94	40648.374	40637.292	-17	2460.123 ^A	1	6.670	6.975	• • •	_
		2-2	3.20	39545.824	39535.042	16	2528.712^{D}	-1	6.771	7.084	• • •	I
		4–4	2.24	37994.498	37984.139	0	2631.960^{D}	0	6.710	7.037	•••	11
2744	$g ^7D - s ^6D6p ^7P^{\circ}$	4-4	3.70	41376.188	41364.908	51	2416.849 ^A	-3	6.710	7.010	• • •	
		3-3	3.45	40263.387	40252.409	-32	2483.646 ^A	2	6.745	7.053	• • •	
		5-4	2.68	36486.536	36476.588	-13	2740.737^{B}	1	6.670	7.010	• • •	
		4-3	2.44	36183.599	36173.734	-65	2763.683 ^C	5	6.710	7.053		
		3-2	3.88	35901.035	35891.246	-39	2785.435 ^A	3	6.745	7.090	•••	
2745	g 7D – s 6D6p 5F $^{\circ}$	4-5	3.05	38721.613	38711.056	45	2582.537^{A}	-3	6.710	7.031		
		3-4	2.33	37600.119	37589.868	0	2659.566^{D}	0	6.745	7.075	• • •	II
2746	$g^{7}D$ – $s^{6}\!D6p^{5}D^{0}$	4-4	2.19	38349.601	38339.146	29	2607.589^{B}	-2	6.710	7.034		
-	- · · · · -	1-0	1.63	34926.835	34917.312	-85	2863.128^{B}	7	6.788	7.143		
2747	$^{4}F5p\ ^{3}D^{\circ}-^{4}F6s\ ^{5}F$	2-1	2.09	29314.208	20206 214	24	3411.315 ^B		6727	7 160		
2141	r sp · D - ros · r	3-3	1.85	29314.208 27227.094	29306.214 27219.668	34 22	3411.315 ^D 3672.812 ^B	-4 -3	6.737 6.675	7.160 7.130	•••	
	${}^4F5p\ {}^3D$ ° $-s\ {}^6D5d\ {}^5G$	3-4	2.82	35269.723	35260.106	12	2835.293 ^A	-1	6.675	7.026		
2748	שטע פיי עעניב	J- - -	2.02	33203.123	33200.100	12	2033.273	-1	0.073	7.020	• • •	
			0.40	24760 000	24762 500	21	0076 044D	_	C ====	5 00 1		
2748 2749	${}^{4}F5p\ {}^{3}D^{\circ} - {}^{4}F6s\ {}^{3}F$	2-3 1-2	2.42 2.73	34769.982 33515.916	34760.502 33506.777	36 11	2876.044 ^B 2983.657 ^A	-3 -1	6.737 6.795	7.094 7.165		

TABLE 2—Continued

				1/ADLL	2—Commu	eu						
No.	Multiplet (MT) ¹	J-J	I ²	λ _{vac} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf)	⁷ Bl. ⁸
2750	⁴ F5p ³ D°-59390 ^e	3-3	1.71	18008.844	18003.928	19	5552.827 ^A	-6	6.675	7.363		
2750 2751	$e^3H-Hsp1^3G^{0}$	4-3	1.66	24722.306	24715.562	-31	4044.930 ^B	5	6.764	7.265		
2752	$e^3H-Hsp1^3I^{ m o}$	4-5 5-6	1.15 1.28	22073.062 21367.462	22067.039 21361.631	-5 9	$4530.409^{B} 4680.013^{D}$		6.764 6.728	7.325 7.308		II
07.52	377 477 44 [2 6]0											11
2753	$e^{3}H - {}^{4}F_{3.5}4f$ [3.5]° $e^{3}H - {}^{4}F_{3.5}4f$ [5.5]°	4-4 5-6	1.46 1.46	21229.948 20011.178	21224.155 20005.716	-5 0	4710.327 ^C 4997.207 ^D		6.764 6.728	7.348 7.348		II
	$e^{3}H^{-4}F_{3.5}4f$ [5.5]°	6-6	2.16	18438.947	18433.914	-3	5423.303 ^A		6.675	7.348		
2754	$e^{3}H - s^{6}D_{3.5}5f$ [6.5]°	6-7	2.19	17157.423	17152.738	6	5828.381 ^A	-2	6.675	7.398		
2755	$e^{3}H-{}^{4}F_{2.5}4f$ [3.5]°	4-4	1.20	19546.333	19540.998	0	5116.049 ^A		6.764	7.398		
	$e^{3}H - {}^{4}F_{2.5}4f$ [4.5]°	4-5	1.75	19545.840	19540.505	11	5116.178 ^A		6.764	7.398		
	$e^{3}H - {}^{4}F_{2.5}4f [3.5]^{\circ}$	5-4	1.48	18502.274	18497.223	34	5404.741 ^B		6.728	7.398		
	$e^{3}H - {}^{4}F_{2.5}4f$ [4.5]°	5-5	2.08	18501.795	18496.744	7	5404.881 ^A		6.728	7.398	• • • •	
2756	$e^{3}H-{}^{4}F_{1.5}4f$ [3.5]°	4-4	1.65	18547.356	18542.293	3	5391.604 ^A		6.764	7.432	•••	
2757	Dsp3 ⁵ D°-58906 ^e	3-4	1.00	19940.553	19935.111	16	5014.906 ^B		6.681	7.303	• • •	
2758	$Dsp3~^5D^{\circ}-59390^e$	4-3	0.85	19648.870	19643.507	-31	5089.351 ^C		6.732	7.363	• • •	
		3-3	0.70	18184.595	18179.631	-10	5499.160 ^B	3	6.681	7.363	•••	
2759	$s{}^6\!D6s{}^5\!D\!-\!s{}^6\!D6p{}^7\!F^{\circ}$	4-5	2.91	49430.046	49416.572	-171	2023.061^{B}	7	6.754	7.005		
		3-3	2.64	46250.623	46238.015	-107	2162.133 ^B		6.802	7.070		
		3-2	2.92	43944.589	43932.609	0	2275.593 ^A	0	6.802	7.084	• • •	
2760	$s^6D6s^5D-s^6D6p^7P^0$	3-2 4-3	2.90 2.98	43003.724	42992.000	18 -17	2325.380 ^A 2408.521 ^A		6.802	7.090	• • •	
	6- 4 5- 6- 4- 5-0			41519.256	41507.936				6.754	7.053	•••	
2761	s 6D6s ^5D-s 6D6p 5F $^\circ$	0-1 3-4	2.71 3.58	46383.028 45464.589	46370.383 45452.194	0 21	2155.961 ^B 2199.514 ^A		6.867 6.802	7.135 7.075	• • •	
		2-3	3.21	45255.892	45243.555	61	2199.514 2209.657 ^A		6.836	7.109		
		4-5	3.66	44895.817	44883.577	40	2227.379 ^D		6.754	7.031		II
		1 - 1	2.40	44625.982	44613.817	139	2240.847 ^B		6.857	7.135		
		1-2	3.07	44113.417	44101.391	39	2266.884 ^A		6.857	7.138	• • •	
		2-2	2.57	41011.507	41000.326	84	2438.340 ^B		6.836	7.138	• • •	
2762	$s^{6}D6s^{5}D-s^{6}D6p^{5}D^{0}$	1-2	2.46	47390.512	47377.593	67	2110.127 ^B		6.857	7.118	• • •	
		4-4 2-1	3.62 2.92	44396.456 44111.588	44384.353 44099.562	0 -39	2252.432 ^A 2266.978 ^A		6.754 6.836	7.034 7.117	• • • •	
		2-2	2.97	43829.141	43817.193	38	2281.587 ^B		6.836	7.117		
		3-3	2.98	43408.373	43396.539	-57	2303.703^{B}		6.802	7.088		
2763	$s^{6}D6s^{5}D-s^{6}D6p^{5}P^{0}$	4-3	3.19	41815.792	41804.392	17	2391.441 ^A	-1	6.754	7.051		
		1-1	2.68	41053.532	41042.339	0	2435.844^{B}		6.857	7.159		
2764	$s^{6}D6s^{5}D-s^{4}D5p^{5}D^{\circ}$	3-3	1.92	31558.912	31550.306	-20	3168.677 ^B	2	6.802	7.195		
	•	4-3	1.92	28140.445	28132.770	-8	3553.604^{B}		6.754	7.195		
2765	$s{}^6\!D6s{}^5D\!-\!s{}^4\!D5p{}^5F^{ m o}$	4-5	2.13	27269.474	27262.037	0	3667.104^{B}	0	6.754	7.209		
2766	$f^{3}F^{-4}F_{4.5}4f$ [5.5]°	4-5	2.24	24891.027	24884.237	-6	4017.512 ^A	1	6.780	7.278		
	$f^{3}F - {}^{4}F_{4.5}4f$ [4.5]°	4-4	1.94	24865.793	24859.010	12	4021.589^{B}	-2	6.780	7.278		
	$f^{3}F - {}^{4}F_{4.5}4f$ [3.5]°	4-3	1.98	24805.740	24798.973	6	4031.325 ^C		6.780	7.279	• • •	
	$f^{3}F^{-4}F_{4.5}4f$ [2.5]°	4-3	1.81	24778.750	24771.991	12	4035.716 ^A		6.780	7.280	• • •	
2767	$f^{3}F^{-4}F_{3.5}4f$ [3.5]°	3-3	1.62	24151.456	24144.868	12	4140.537 ^B	_	6.834	7.348	• • •	
	$f^{3}F-{}^{4}F_{3.5}4f$ [3.5]° $f^{3}F-{}^{4}F_{3.5}4f$ [4.5]°	3-4 4-4	1.84	24149.899 21838.948	24143.311 21832.989	12 10	4140.804 ^B 4578.975 ^D		6.834 6.780	7.348	• • •	ŢŢ
	$f^{3}F - {}^{4}F_{3.5}4f$ [4.5]° $f^{3}F - {}^{4}F_{3.5}4f$ [5.5]°	4-4	1.46 1.40	21825.936	21832.989	-14	4578.975 ² 4581.705 ^B		6.780	7.347 7.348		II
	$f^{3}F - {}^{4}F_{3.5}4f$ [3.5]°	4-4	1.72	21822.525	21816.571	0	4582.421 ^B		6.780	7.348		
2768	$f^{3}F^{-4}F_{2.5}4f$ [3.5]°	3-4	1.70	21994.805	21988.804	0	4546.528 ^B	0	6.834	7.398		
	$f^{3}F-{}^{4}F_{2.5}4f$ [3.5]°	3-3	1.77	21992.387	21986.386	-19	4547.028 ^C		6.834	7.398		
	$f^{3}F - {}^{4}F_{2.5}4f [3.5]^{\circ}$	4-4	1.20	20047.544	20042.073	8	4988.142 ^B		6.780	7.398	• • •	
	$f^{3}F-{}^{4}F_{2.5}4f$ [4.5]°	4–5	1.79	20047.006	20041.535	8	4988.276 ^B	-2	6.780	7.398	• • •	

TABLE 2—Continued

					TABLE 2-	—Continued	!						
94	No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	λ _{air} (Å)	o-R ⁴ (mÅ)	σ^{-5} (cm ⁻¹)	o-R ⁶ (mK)	E(l) (eV)	E(u) (eV)	log(gf) ⁷	Bl. ⁸
94ApJS	2769	$f^{3}F - {}^{4}F_{1.5}4f$ [3.5]° $f^{3}F - {}^{4}F_{1.5}4f$ [2.5]°	3-4 3-3	2.00 1.08	20737.921 20714.260	20732.262 20708.608	0 13	4822.084 ^A 4827.592 ^B		6.834 6.834	7.432 7.433		
19	2770	$e^{3}P^{-4}F_{3.5}4f$ [3.5]° $e^{3}P^{-4}F_{3.5}4f$ [2.5]°	2-3 2-2	1.68 1.86	22800.898 22776.558	22794.678 22770.343	10 -21	4385.792 ^A 4390.479 ^A		6.804 6.804	7.348 7.348		
	2771	$e^{3}P^{-4}F_{2.5}4f$ [3.5]° $e^{3}P^{-4}F_{2.5}4f$ [2.5]°	2-3 2-3	1.57 1.15	20866.863 20835.282	20861.169 20829.596	-35 0	4792.287 ^C 4799.551 ^B		6.804 6.804	7.398 7.399		
	2772	$e^{3}P^{-4}F_{1.5}4f$ [2.5]°	2-3	0.48	19712.800	19707.420	12	5072.846 ^B	-3	6.804	7.433	•••	
	2773	$s^{6}D5d^{5}F - s^{6}D_{3.5}5f$ [6.5]°	5-6	2.67	34385.459	34376.083	0	2908.206 ^C	0	7.037	7.398	•••	
	2774	s ⁶ D5d ⁷ D-s ⁶ D _{4.5} 5f [5.5]°	5-6	2.90	35179.804	35170.211	12	2842.540 ^B	-1	6.996	7.349	•••	
	2775	$s^{6}D5d^{7}F - s^{6}D_{4.5}5f$ [5.5]° $s^{6}D5d^{7}F - s^{6}D_{4.5}5f$ [6.5]°	6-6 6-7	2.71 3.07	35129.825 35094.110	35120.247 35084.541	12 0	2846.584 ^C 2849.481 ^B		6.996 6.996	7.349 7.349	• • • •	
	2776	$s^{6}D5d^{7}F - s^{6}D_{3.5}5f$ [6.5]°	5-6	2.61	35368.670	35359.027	-138	2827.361 ^D	11	7.047	7.398		I
	2777	$s ^6D5d ^7P - s ^6D_{3.5}5f [5.5]^{\circ}$	4-5	2.78	35467.495	35457.824	75	2819.483 ^A		7.048	7.397		
	2778 2779	s ⁶ D5d ⁷ G-s ⁶ D _{4.5} 5f [7.5]° s ⁶ D5d ⁷ G-s ⁶ D _{3.5} 5f [5.5]° s ⁶ D5d ⁷ G-s ⁶ D _{3.5} 5f [5.5]°	7-8 4-5 6-5	3.54 3.66 2.90	36305.969 39870.659 35854.489	36296.070 39859.789 35844.713	-64 -51	2754.368^{A} 2508.110^{D} 2789.051^{D}	4	7.009 7.086 7.051	7.351 7.397 7.397		II I
	2780	$s ^6D5d ^7G - s ^6D_{3.5}5f [6.5]^{\circ}$ $s ^6D5d ^5F - s ^6D_{3.5}5f [6.5]^{\circ}$	6-7 5-6	3.22 2.67	35789.840 34385.459	35780.082 34376.083	-26 0	2794.089 ^B 2908.206 ^C		7.051	7.398		
	2781	$\frac{s ^6D_{4.5}4f [1.5]^{\circ} - s ^6D_{4.5}5g [1.5]}{s ^6D_{4.5}4f [1.5]^{\circ} - s ^6D_{4.5}5g [1.5]}$	1-1	2.46	39285.707	39274.996	46	2545.455 ^D		7.041	7.357	0.11 ^d	
		$s ^6D_{4.5}4f [1.5]^{\circ} - s ^6D_{4.5}5g [1.5]$	1-2	2.46	39285.707	39274.996	93	2545.455^{D}	-6	7.041	7.357	-0.56^d	I
		$s ^6D_{4.5}4f [1.5]^{\circ} - s ^6D_{4.5}5g [0.5]$	1-0	2.46	39267.257	39256.551	-15	2546.651 ^C		7.041	7.357	•••	
		$s^{6}D_{4.5}4f$ [1.5]°- $s^{6}D_{4.5}5g$ [1.5]	$^{2-2}$	2.75	39255.835	39245.132	-92	2547.392^{D}		7.041	7.357	0.27^{d}	I
		$s ^6D_{4.5}4f [1.5]^{\circ} - s ^6D_{4.5}5g [1.5]$	2-1	2.75	39255.835	39245.132	-139	2547.392 ^D		7.041	7.357	-0.67^d	I
		$s {}^{6}D_{4.5}4f [1.5]^{\circ} - s {}^{6}D_{4.5}5g [0.5]$	2-1	2.85	39237.844	39227.146	0	2548.560 ^C		7.041	7.357		
		$s ^6D_{4.5}4f [7.5]^{\circ} - s ^6D_{4.5}5g [7.5]$	8-8	3.13	39177.461	39166.780	-107	2552.488 ^B		7.039	7.356	0.34^{d}	
		$s ^6D_{4.5}4f [7.5]^{\circ} - s ^6D_{4.5}5g [7.5]$	7-7	3.13	39177.461	39166.780	-107	2552.488 ^B		7.039	7.356	0.28^{d}	
		$s ^6D_{4.5}4f [2.5]^{\circ} - s ^6D_{4.5}5g [3.5]$	2-3	2.62	39158.514	39147.838	0	2553.723 ^B		7.040	7.356	0.21^{d}	
		$s ^6D_{4.5}4f [2.5]^{\circ} - s ^6D_{4.5}5g [2.5]$	2-2	2.83	39126.952	39116.285	0	2555.783 ^B		7.040	7.356	0.37^d	
		$s ^6D_{4.5}4f [2.5]^{\circ} - s ^6D_{4.5}5g [3.5]$	3-4	2.69	39123.707	39113.040	15	2555.995 ^B		7.039	7.356	0.37 ^d 1.04 ^d	
		$s ^6D_{4.5}4f [7.5]^{\circ} - s ^6D_{4.5}5g [8.5]$	8-9	4.03	39109.125 39109.125	39098.462	-76	$2556.948^{D} \\ 2556.948^{D}$		7.039 7.039	7.356	0.99^d	I I
		$s ^6D_{4.5}4f [7.5]^{\circ} - s ^6D_{4.5}5g [8.5]$ $s ^6D_{4.5}4f [2.5]^{\circ} - s ^6D_{4.5}5g [1.5]$	$7-8 \\ 2-2$	4.03 2.50	39109.123	39098.462 39089.305	46 0	2557.547 ^L		7.039	7.356 7.357	0.99	I
		$s D_{4.5}4f [2.5] - s D_{4.5}3g [1.5]$ $s ^6D_{4.5}4f [2.5]^{\circ} - s ^6D_{4.5}5g [1.5]$	2-2	2.50	39099.965	39089.305	-46	2557.547^{D}		7.040	7.357		Ī
		$s ^{6}D_{4.5}4f [2.5] ^{\circ} - s ^{6}D_{4.5}5g [2.5]$	3-3	2.97	39092.200	39081.542	31	2558.055^{B}		7.039	7.356		-
		$s ^{6}D_{4.5}4f [2.5]^{\circ} - s ^{6}D_{4.5}5g [1.5]$	3-2	2.52	39065.292	39054.641	76	2559.817 ^C		7.039	7.357		
		$s ^6D_{4.5}4f [3.5]^{\circ} - s ^6D_{4.5}5g [4.5]$	3-4	2.88	38982.752	38972.124	0	2565.237 ^B		7.038	7.356		
		$s^{6}D_{4.5}4f[3.5]^{\circ}-s^{6}D_{4.5}5g[4.5]$	4-5	2.97	38963.235	38952.612	15	2566.522 ^B	-1	7.038	7.356		
		$s ^6D_{4.5}4f [3.5]^{\circ} - s ^6D_{4.5}5g [3.5]$	3-3	2.93	38952.838	38942.218	15	2567.207 ^B		7.038	7.356	•••	
		$s ^6D_{4.5}4f [3.5]^{\circ} - s ^6D_{4.5}5g [3.5]$	4-4	2.82	38933.381	38922.766	15	2568.490^{L}		7.038	7.356	0.52^{d}	I
		$s {}^{6}D_{4.5}4f [3.5]^{\circ} - s {}^{6}D_{4.5}5g [3.5]$	4-3	2.82	38933.381	38922.766	45	2568.490^{L}		7.038	7.356	-0.12^{d}	I
		$s {}^{6}D_{4.5}4f [3.5]^{\circ} - s {}^{6}D_{4.5}5g [2.5]$	4-3	2.88	38902.195	38891.589	61	2570.549 ^B		7.038	7.356	0.24^{d}	
		$s ^6D_{4.5}4f [6.5]^{\circ} - s ^6D_{4.5}5g [6.5]$	6-6	3.05	38862.993	38852.397	15	2573.142 ^B		7.037	7.356		
		$s ^6D_{4.5}4f [6.5]^{\circ} - s ^6D_{4.5}5g [7.5]$	6–7	3.54	38838.420	38827.831	15	2574.770 ^A		7.037	7.356	0.99^d	
		$s ^6D_{4.5}4f [4.5]^{\circ} - s ^6D_{4.5}5g [5.5]$	4-5	3.21	38835.539 38832.417	38824.951	30	2574.961 ^B		7.036	7.356	0.72 ^d 0.71 ^d	
		$s ^{6}D_{4.5}4f [4.5]^{\circ} - s ^{6}D_{4.5}5g [5.5]$	5–6	3.36	38832.417 38827.095	38821.830	15 75	2575.168 ^E 2575.521 ^E		7.036	7.356	0.71^d 0.51^d	
		$s ^6D_{4.5}4f [6.5]^{\circ} - s ^6D_{4.5}5g [6.5]$ $s ^6D_{4.5}4f [4.5]^{\circ} - s ^6D_{4.5}5g [4.5]$	7-7 4-5	2.89 3.07	38827.095	38816.509 38803.838	-75 -75	2575.321 ² 2576.362 ^B		7.036 7.036	7.356 7.356	0.51^{d} 0.58^{d}	
		$s ^{6}D_{4.5}4f [4.5]^{\circ} - s ^{6}D_{4.5}3g [4.5]$ $s ^{6}D_{4.5}4f [4.5]^{\circ} - s ^{6}D_{4.5}5g [4.5]$	5-5	3.24	38811.438	38800.857	-73 45	2576.560 ^E		7.036	7.356		
		$s ^{6}D_{4.5}4f [4.5] ^{-}s ^{6}D_{4.5}3g [4.5]$ $s ^{6}D_{4.5}4f [6.5]^{\circ} - s ^{6}D_{4.5}5g [7.5]$	7 - 8	3.64	38802.658	38792.079	-30	2570.300 2577.143 ^A		7.036	7.356	1.06 ^d	
		$s D_{4.5}4f [6.5] - s D_{4.5}3g [7.5]$ $s ^{6}D_{4.5}4f [5.5]^{\circ} - s ^{6}D_{4.5}5g [6.5]$	5-6	3.45	38781.530	38770.957	-30	2578.547 ^A		7.036	7.356	0.84^{d}	
		$s ^{6}D_{4.5}4f [5.5] ^{\circ} - s ^{6}D_{4.5}5g [5.5]$	5-5	3.05	38777.786	38767.213	0	2578.796 ^E		7.036	7.356	0.61^{d}	
		$s ^{6}D_{4.5}4f [5.5]^{\circ} - s ^{6}D_{4.5}5g [6.5]$	6–7	3.49	38748.500	38737.936	45	2580.745 ^A		7.036	7.356	0.94^d	

No.	Multiplet (MT) ¹	J-J	I ²	λ_{vac}^{3} (Å)	$\lambda_{air}^{} \ (A)$	o-R ⁴ (mÅ)		o-R ⁶ (mK)	E(1) (eV)	E(u) (eV)	log(gf) ⁷	В
	$s ^6D_{4.5}4f [5.5]^{\circ} - s ^6D_{4.5}5g [5.5]$	6-6	3.15	38744.747	38734.184	-15	2580.995 ^B	1	7.036	7.356	0.68^{d}	
	$s ^6D_{4.5}4f [5.5]^{\circ} - s ^6D_{4.5}5g [4.5]$	6-5	2.24	38723.907	38713.350	60	2582.384 ^B	-4	7.036	7.356	•••	_
2782	$s^{6}D_{3.5}4f[0.5]^{\circ}-s^{6}D_{3.5}5g[1.5]$	0-1	2.93	39030.818	39020.176	-46	2562.078^{D}	3	7.086	7.404		
	$s ^6D_{3.5}4f [1.5]^{\circ} - s ^6D_{3.5}5g [1.5]$	2-2	2.50	39003.796	38993.162	167		-11	7.086	7.404	• • •	
	$s ^6D_{3.5}4f [6.5]^{\circ} - s ^6D_{3.5}5g [6.5]$	6-6	2.66	39002.777	38992.143	-122	2563.920 ^C	8	7.086	7.404		
	$s ^6D_{3.5}4f [6.5]^{\circ} - s ^6D_{3.5}5g [7.5]$ $s ^6D_{3.5}4f [2.5]^{\circ} - s ^6D_{3.5}5g [2.5]$	6-7 2-2	3.72 3.32	38989.850 38981.233	38979.220 38970.605	46 152	2564.770 ^A 2565.337 ^D	-3 -10	7.086 7.086	7.404	1.08^{d}	
	$s D_{3.5}4f [2.5] - s D_{3.5}3g [2.5]$ $s {}^{6}D_{3.5}4f [1.5] {}^{\circ} - s {}^{6}D_{3.5}5g [2.5]$	1-2	2.44	38978.847	38968.220	152	2565.494 ^C	-10 -1	7.086	7.404 7.404	• • • •	
	$s ^{6}D_{3.5}4f [6.5] ^{\circ} - s ^{6}D_{3.5}5g [7.5]$	7-8	3.57	38977.100	38966.473	15	2565.609^{A}	-1	7.086	7.404	1.10^{d}	
	$s ^6D_{3.5}4f [2.5]^{\circ} - s ^6D_{3.5}5g [1.5]$	2-1	2.95	38975.353	38964.727	-76	2565.724^{D}	5	7.086	7.404		
	$s ^6D_{3.5}4f [2.5]^{\circ} - s ^6D_{3.5}5g [1.5]$	2-2	2.95	38975.353	38964.727	-76	2565.724^{D}	5	7.086	7.404		
	$s {}^{6}D_{3.5}4f [3.5]^{\circ} - s {}^{6}D_{3.5}5g [4.5]$	3-4	2.76	38952.262	38941.642	0	2567.245^{B}	0	7.085	7.404		
	$s {}^{6}D_{3.5}4f [2.5]^{\circ} - s {}^{6}D_{3.5}5g [3.5]$	3-4	2.86	38948.620	38938.002	-15	2567.485^{B}_{-}	1	7.085	7.404		
	$s {}^{6}D_{3.5}4f [3.5]^{\circ} - s {}^{6}D_{3.5}5g [3.5]$	3-3	3.12	38946.588	38935.969	0	2567.619^{B}	0	7.085	7.404	0.49^{d}	
	$s ^6D_{3.5}4f [3.5]^{\circ} - s ^6D_{3.5}5g [5.5]$	4-5	2.94	38945.632	38935.014	15	2567.682^{B}	-1	7.085	7.404	0.58^{d}	
	$s ^6D_{3.5}4f [3.5]^{\circ} - s ^6D_{3.5}5g [4.5]$	4-5	3.63	38943.403	38932.785	-30	2567.829^{D}	2	7.085	7.404	• • •	
	$s ^6D_{3.5}4f [2.5]^{\circ} - s ^6D_{3.5}5g [2.5]$ $s ^6D_{3.5}4f [3.5]^{\circ} - s ^6D_{3.5}5g [2.5]$	3-3 $3-2$	3.02 3.03	38941.992 38940.036	38931.375 38929.420	15 136	2567.922^{C} 2568.051^{D}	-1 -9	7.085 7.085	7.404	0.45^{d}	
	$s ^6D_{3.5}4f [3.5]^{\circ} - s ^6D_{3.5}3g [2.5]$ $s ^6D_{3.5}4f [3.5]^{\circ} - s ^6D_{3.5}5g [2.5]$	3-2	3.03	38940.036	38929.420	212	2568.051^{-1}	-9 -14	7.085	7.404 7.404	0.45^{a} 0.00^{d}	
	$s ^{0}D_{3.5}4f [3.5] = s ^{0}D_{3.5}3g [2.5]$ $s ^{0}D_{3.5}4f [3.5] = s ^{0}D_{3.5}5g [3.5]$	4-4	2.42	38937.580	38926.964	30	2568.031 2568.213^{B}	-2	7.085	7.404		
	$s ^{6}D_{3.5}4f [5.5] ^{\circ} - s ^{6}D_{3.5}5g [5.5]$	5-5	2.88	38925.545	38914.933	76	2569.007^{B}	-5	7.085	7.404	0.40^{d}	
	$s ^6D_{3.5}4f [5.5]^{\circ} - s ^6D_{3.5}5g [6.5]$	5-6	3.43	38921.182	38910.571	45	2569.295^{A}	-3	7.085	7.404	1.00^{d}	
	$s ^6D_{3.5}4f [4.5]^{\circ} - s ^6D_{3.5}5g [5.5]$	4-5	2.84	38916.138	38905.528	-45	2569.628^{D}	3	7.085	7.404	0.35^{d}	
	$s {}^{6}D_{3.5}4f [4.5]^{\circ} - s {}^{6}D_{3.5}5g [4.5]$	4-5	3.37	38914.094	38903.484	76	2569.763 ^A	-5	7.085	7.404		
	$s {}^{6}D_{3.5}4f [5.5]^{\circ} - s {}^{6}D_{3.5}5g [5.5]$	6-6	2.77	38910.187	38899.579	61	2570.021^{B}	-4	7.085	7.404		
	$s {}^{6}D_{3.5}4f [5.5]^{\circ} - s {}^{6}D_{3.5}5g [6.5]$	6-7	3.56	38905.767	38895.160	45	2570.313 ^A	-3	7.085	7.404	1.00^{d}	
	$s ^6D_{3.5}4f [4.5]^{\circ} - s ^6D_{3.5}5g [5.5]$	5-6	3.40	38895.220	38884.615	30	2571.010^{A}	-2	7.085	7.404	• • •	
	$s ^6D_{3.5}4f [4.5]^{\circ} - s ^6D_{3.5}5g [4.5]$	5-5	3.68	38893.087	38882.483	61	2571.151 ^D	-4	7.085	7.404	•••	
2783	$s ^6D_{2.5}4f [3.5]^{\circ} - s ^6D_{2.5}5g [4.5]$	3-4	2.93	39030.818	39020.176	-15	2562.078^{D}	1	7.121	7.439		
	$s ^6D_{2.5}4f [4.5]^{\circ} - s ^6D_{2.5}5g [5.5]$	4-5	3.35	39030.239	39019.597	30	2562.116 ^A	-2	7.121	7.439	• • •	
	$s ^{6}D_{2.5}4f [4.5]^{\circ} - s ^{6}D_{2.5}5g [4.5]$	4-4	2.88	39026.583	39015.943	-228	2562.356^{D}	15	7.121	7.439	• • •	
	$s ^6D_{2.5}4f [4.5]^{\circ} - s ^6D_{2.5}5g [4.5]$ $s ^6D_{2.5}4f [4.5]^{\circ} - s ^6D_{2.5}5g [5.5]$	4-5 5-6	2.88 3.48	39026.583 39010.445	39015.943 38999.809	0 46	2562.356^{D} 2563.416^{A}	0 -3	7.121 7.121	7.439 7.439	1.05^{d}	
	$s D_{2.5}4f [4.5] - s D_{2.5}5g [5.5]$ $s ^{6}D_{2.5}4f [3.5]^{\circ} - s ^{6}D_{2.5}5g [5.5]$	4-5	3.46	39008.695	38998.060	137	2563.531 ^A	-9	7.121	7.439		
	$s ^{6}D_{2.5}4f [4.5] ^{\circ} - s ^{6}D_{2.5}5g [4.5]$	5-5	2.45	39006.869	38996.234	0	2563.651 ^C	0	7.121	7.439		
	$s ^{6}D_{2.5}4f [3.5]^{\circ} - s ^{6}D_{2.5}5g [4.5]$	4-5	3.36	39004.982	38994.348	46	2563.775^{D}	-3	7.121	7.439		
	$s ^6D_{2.5}4f [2.5]^{\circ} - s ^6D_{2.5}5g [2.5]$	3-3	3.36	38962.658	38952.035	-152	2566.560^{D}	10	7.121	7.439		
	$s ^6D_{2.5}4f [2.5]^{\circ} - s ^6D_{2.5}5g [3.5]$	3-4	2.46	38942.447	38931.830	61	2567.892^{C}	-4	7.121	7.439		
	$s ^6D_{2.5}4f [2.5]^{\circ} - s ^6D_{2.5}5g [2.5]$	2-2	2.67	38936.655	38926.039	61	2568.274^{D}	-4	7.120	7.439		
	$s ^6D_{2.5}4f [2.5]^{\circ} - s ^6D_{2.5}5g [2.5]$	2 - 3	2.67	38936.655	38926.039	121	2568.274^{D}	-8	7.120	7.439	•••.	
	$s ^6D_{2.5}4f [5.5]^{\circ} - s ^6D_{2.5}5g [6.5]$	5-6	3.52	38908.810	38898.202	0	2570.112^{A}	0	7.120	7.439	1.04^{d}	
	$s ^6D_{2.5}4f [1.5]^{\circ} - s ^6D_{2.5}5g [1.5]$	2-2	2.88	38902.195	38891.589	45	2570.549 ^B	-3	7.120	7.439	• • •	
	$s ^6D_{2.5}4f [5.5]^{\circ} - s ^6D_{2.5}5g [6.5]$	6-7	3.68	38893.087 38882.954	38882.483 38872.353	-15	2571.151^{A}	1	7.120	7.439	• • •	
	$s ^6D_{2.5}4f [1.5]^{\circ} - s ^6D_{2.5}5g [2.5]$ $s ^6D_{2.5}4f [5.5]^{\circ} - s ^6D_{2.5}5g [5.5]$	2-3 5-5	3.05 2.20	38876.515	38865.916	15 -60	2571.821 ^B 2572.247 ^B	-1 4	7.120 7.120	7.439 7.439	• • •	
	$s ^6D_{2.5}4f [5.5]^{\circ} - s ^6D_{2.5}5g [5.5]$	6-6	2.62	38860.833	38850.238	-30	2572.247 2573.285^{C}	2	7.120	7.439		
784	$s ^6D_{1.5}4f [3.5]^{\circ} - s ^6D_{1.5}5g [4.5]$	3-4	3.18	39130.382	39119.713	-31	2555.559^{B}	2	7.147	7.463		
., 57	$s ^{0}D_{1.5}4f [3.5] ^{\circ} - s ^{0}D_{1.5}5g [4.5]$	4-5	3.32	39112.536	39101.873	-15	2555.339 2556.725^{B}	1	7.146	7.463	 0.97 ^d	
	$s ^6D_{1.5}4f [2.5]^{\circ} - s ^6D_{1.5}5g [2.5]$	2-2	2.45	39070.390	39059.738	107	2559.483 ^C	-7	7.145	7.463		
	$s {}^{6}D_{1.5}4f [2.5]^{\circ} - s {}^{6}D_{1.5}5g [3.5]$	2-3	3.36	39004.982	38994.348	76	2563.775^{A}	-5	7.145	7.463		
	$s ^6D_{1.5}4f [2.5]^{\circ} - s ^6D_{1.5}5g [3.5]$	3-4	3.32	38981.233	38970.605	0	2565.337 ^A	0	7.145	7.463		
	$s ^6D_{1.5}4f [4.5]^{\circ} - s ^6D_{1.5}5g [5.5]$	4-5	3.22	38884.179	38873.578	15	2571.740 ^A	-1	7.144	7.463	0.97^{d}	
	$s ^6D_{1.5}4f [4.5]^{\circ} - s ^6D_{1.5}5g [5.5]$	5-6	3.60	38866.935	38856.338	0	2572.881 ^A	0	7.144	7.463	•••	
785	$s ^6D_{0.5}4f [3.5]^{\circ} - s ^6D_{0.5}5g [4.5]$	3-4	3.72	38989.850	38979.220	15	2564.770 ^A	-1	7.159	7.477	• • • •	
	$s ^6D_{0.5}4f [2.5]^{\circ} - s ^6D_{0.5}5g [3.5]$	2-3	2.78	38965.846	38955.222	15	2566.350^{B}	-1	7.159	7.477	0.74^{d}	
	$s ^6D_{0.5}4f [3.5]^{\circ} - s ^6D_{0.5}5g [4.5]$	4-5	3.36	38962.658	38952.035	15	2566.560^{D}	-1	7.159	7.477	• • •	
	$s ^6D_{0.5}4f [3.5]^{\circ} - s ^6D_{0.5}5g [3.5]$	4-4	2.87	38962.172	38951.549	-152	2566.592^{B}	10	7.159	7.477	• • •	
	$s^{6}D_{0.5}4f[2.5]^{\circ}-s^{6}D_{0.5}5g[3.5]$	3-4	3.26	38961.125	38950.502	30	2566.661^{B}	-2	7.159	7.477		

¹*: denotes multiplet is different from MT.

² Intensity in arbitrary units. These are given as log (I) to two decimal places for FT spectra. Grating intensities are on a different scale to the FT

TABLE 2—Continued

intensities and are from the continuous hollow cathode spectra, except those in italics, which are from the pulsed hollow cathode. Symbols are d: diffuse; b: blended; *: unresolved; ?: questionable.

³ Wavelengths measured in FT spectra are given to 4 decimal places, and those measured in grating spectra to three decimal places in the UV. No grating spectra were recorded above 3250 Å.

⁴ Difference between observed wavelength and the Ritz wavelength derived from the energy levels in Table 1. This difference should be subtracted from the wavelengths in cols. (5) or (6) (footnote 3) to obtain the Ritz wavelength.

⁵ Wavenumbers measured in FT spectra are given to 3 decimal places and those measured in grating spectra to two decimal places. A: Uncertainty of wavenumber < 0.005 cm⁻¹; B: uncertainty < 0.01 cm⁻¹; C: uncertainty < 0.02 cm⁻¹; D: uncertainty > 0.02 cm⁻¹ or blended line. Wavelength uncertainties are given in table 3.

⁶ Difference between observed wavenumber and the Ritz wavenumber derived from the energy levels in Table 1. This difference should be subtracted from the wavenumber in column 8 (footnote 5) to obtain the Ritz wavenumber.

⁷ Sources for log (gf) values are a: O'Brien et al. 1991; b: Fuhr et al. 1988; c: Meylan et al. 1992; d: Johansson et al. 1993.

⁸ I: Line blended with another Fe I transition; II: Line blended with Fe II transition; Ne: Line blended with Ne line; Ar: Line blended with Ar line; R: Line is self-reversed. Ritz wavelengths and wavenumber are given; M: Line is masked by another line of the given species.

TABLE 4
FINDING LIST

ν 											
λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	١.	σ	No.
	(cm ⁻¹)	140.	(Å)	(cm ⁻¹)	140.	(Å)	(cm^{-1})	140.	λ_{air}		INU.
(Å) 1704.320 1704.845	(cm -)		(A)	(cm -)		(A)	(cm ')		(Å)	(cm^{-1})	
Ω ₁ 1704 200	50674.42	0.4	1060 2057	52606 201	7.4	1046 0000	510(1.00(2006215		
1704.320	58674.43	84	1862.3257	53696.301	74	1946.9880	51361.386	55	2006.245	49828.24	163
3 1704.845	58656.36	84	1863.543	53661.23	64	1949.1427	51304.608	56	2006.318	49826.42	167
[⊣] 1709.944	58481.44	83	1864.1918	53642.549	67	1949.6072	51292.383	58	2006.464	49822.81	167
1710.216	58472.15	84	1864.3215	53638.818	71	1950.2270	51276.082	57	2007.179	49805.06	49
			1864.7465								
1712.289	58401.35	84		53626.591	64	1950.646	51265.07	59	2007.2194	49804.053	166
1712.852	58382.16	84	1865.3093	53610.413	67	1951.5708	51240.776	57	2008.233	49778.91	165
1716.486	58258.56	84	1865.612	53601.72	61	1952.2685	51222.462	57	2008.478	49772.84	169
1717.703	58217.28	84	1866.0621	53588.786	74	1952.5886	51214.064	55	2008.505	49772.17	169
1718.148	58202.20	83	1866.1414	53586.508	63	1953.0051	51203.142	53	2008.553	49771.00	169
1719.777	58147.07	83	1866.191	53585.08	66	1955.7022	51132.528	57	2009.031	49759.14	173
1721.484	58089.41	83	1866.8190	53567.056	74	1956.0345	51123.843	55	2010.248	49729.03	50
1722.195	58065.43	83	1869.2606	53497.090	72	1956.0512	51123.405	53	2011.441	49699.54	171
1722.542	58053.74	83	1870.011	53475.62	72	1957.8429	51076.622	55	2011.926	49687.57	165
			1870.3520								
1723.141	58033.56	82		53465.872	68	1958.5691	51057.683	53	2013.441	49650.19	163
1725.011	57970.65	84	1871.8913	53421.906	71	1958.6086	51056.652	57	2014.940	49613.25	164
1726.678	57914.68	82	1872.3709	53408.221	74	1958.7331	51053.408	55	2015.782	49592.53	49
1729.616	57816.30	82	1873.0576	53388.641	64	1960.1441	51016.658	53	2016.5089	49574.654	163
1731.184	57763.93	82	1873.2581	53382.927	74	1960.621	51004.25				
								58	2017.159	49558.68	49
1735.576	57617.76	82	1874.897	53336.26	64	1961.0464	50993.183	54	2019.075	49511.66	164
1757.829	56888.35	77	1875.1588	53328.817	66	1961.2458	50988.000	57	2019.775	49494.50	168
1758.355	56871.34	80	1875.697	53313.52	65	1962.0254	50967.741	53	2020.452	49477.92	172
1758.443	56868.49	78	1876.1476	53300.710	74	1962.1108	50965.521	53	2021.099	49462.09	164
								ľ			
1758.914	56853.26	80	1876.4197	53292.981	74	1962.7333	50949.357	56	2021.444	49453.65	171
1761.700	56763.35	80	1877.1685	53271.722	72	1962.8836	50945.456	55	2021.714	49447.03	171
1762.037	56752.50	79	1878.1045	53245.174	64	1963.1043	50939.728	55	2021.9830	49440.460	166
1762.666	56732.25	79	1878.8480	53224.104	74	1963.1218	50939.274	53	2022.415	49429.90	166
1762.910	56724.40	76	1879.3807	53209.017	72	1963.6337	50925.994	55	2022.779		
										49421.01	169
1763.304	56711.72	79	1880.1407	53187.510	72	1964.0551	50915.069	53	2023.013	49415.28	166
1763.444	56707.22	78	1881.3115	53154.408	64	1965.076	50888.62	56	2024.067	49389.57	49
1764.156	56684.33	78	1882.036	53133.94	71	1966.580	50849.70	55	2024.135	49387.91	167
1765.275	56648.40	78	1883.6799	53087.577	72	1967.127	50835.56	174	2024.692	49374.31	167
			1883.7789	53084.785		1970.760					
1765.471	56642.11	81			64		50741.85	55	2025.361	49358.02	165
1765.542	56639.83	78	1883.9226	53080.736	67	1973.9163	50660.709	55	2025.4616	49355.560	166
1768.611	56541.55	77	1884.684	53059.29	69	1974.057	50657.11	55	2025.823	49346.75	170
1769.385	56516.81	75	1885.1767	53045.426	62	1975.178	50628.36	52	2026.261	49336.09	165
1769.820	56502.92	76	1885.741	53029.55	176	1976.190	50602.42	174	2026.491	49330.49	165
			1885.9074	53024.873							
1775.684	56316.33	79			72	1979.769	50510.94	171	2028.464	49282.52	168
1841.582	54301.14	72	1887.047	52992.85	68	1980.776	50485.27	52	2028.719	49276.32	171
1841.9940	54288.993	66	1887.7648	52972.702	64	1984.634	50387.13	174	2029.955	49246.32	166
1847.9266	54114.703	67	1888.3221	52957.068	64	1987.957	50302.90	50	2031.687	49204.36	164
1848.318	54103.24	71	1889.640	52920.13	70	1991.044	50224.90	169	2034.214	49143.23	168
								1			
1851.248	54017.61	61	1889.8979	52912.910	66	1991.255	50219.59	169	2034.347	49140.02	162
1851.3804	54013.752	68	1891.7440	52861.276	62	1991.540	50212.40	52	2034.555	49135.00	48
1851.688	54004.78	74	1892.689	52834.88	68	1992.146	50197.13	52	2034.920	49126.19	163
1851.770	54002.39	66	1892.853	52830.31	70	1992.599	50185.70	52	2037.452	49065.14	51
1852.424	53983.32	. 1	1896.8581	52718.757	68	1994.5705	50136.107	1	2038.685	49035.47	
		73						165			164
1853.8610	53941.476	61	1899.2089	52653.501	62	1997.507	50062.40	171	2039.984	49004.25	166
1854.3644	53926.834	71	1903.3950	52537.703	62	1997.560	50061.07	171	2043.491	48920.16	170
1855.3174	53899.132	67	1917.4069	52153.772	60	1997.560	50061.07	171	2044.936	48885.60	168
1855.5792	53891.530	72	1924.220	51969.11	59	1997.9134	50052.219	50	2047.248	48830.40	263
		ł			1			- 1			
1855.9142	53881.802	68	1927.483	51881.13	59	1999.319	50017.04	50	2047.402	48826.73	48
1856.2151	53873.068	66	1930.701	51794.66	60	λ_{air}	σ	No.	2058.105	48572.85	262
1856.930	53852.32	63	1933.757	51712.81	175	Å	/cm ⁻¹		2072.059	48245.77	263
1857.296	53841.72	63	1934.5351	51692.006	57	2000.578	49969.37	170	2072.693	48231.03	46
1857.4308			1937.2685		53						
	53837.807	71		51619.072		2000.671	49967.05	165	2074.1888	48196.245	261
1857.724	53829.31	176	1939.741	51553.27	59	2002.3800	49924.403	52	2077.348	48122.95	43
1857.8164	53826.631	67	1940.6604	51528.850	57	2003.605	49893.88	172	2077.5030	48119.368	261
1858.106	53818.24	66	1941.400	51509.22	60	2003.728	49890.81	172	2084.1213	47966.581	45
1859.2635	53784.738	67	1945.0913	51411.468	53	2003.8697	49887.294	50	2085.020	47945.90	
											46
1861.0329	53733.601	68	1945.2758	51406.593	57	2005.297	49851.79	50	2085.712	47930.01	43
1861.542	53718.91	63	1946.2278	51381.446	53	2005.594	49844.41	165	2087.5111	47888.701	47
1861.675	53715.07	67	1946.8391	51365.312	56	2006.2445	49828.250	167	2089.8739	47834.565	44
		'			'			- 1			

TABLE 4—Continued

					ADLE 4	—Commuea					
λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
2090.3833	47822.910	43	2142.5663	46658.301	151	2166.5860	46141.085	151	2200.086	45438.58	258
2090.8548	47812.127	44	2142.8317	46652.522	158	2166.7733	46137.096	32	2200.3520	45433.089	32
2090.8548	47812.127	47	2143.3693	46640.823	149	2167.2762	46126.391	161	2200.3900	45432.306	32
2093.6848	47747.508	45	2143.550	46636.89	156	2167.3862	46124.051	151	2200.4915	45430.210	149
2095.4641	47706.970	43	2143.8965	46629.355	149	2167.526	46121.08	257	2200.577	45428.44	30
2098.1197	47646.593	43	2144.4486	46617.350	155	2168.0566	46109.790	158	2200.7243	45425.405	32
2098.9390	47627.998	47	2144.5682	46614.751	158	2168.3778	46102.961	151	2201.1180	45417.281	31
2099.6660	47611.508	261	2145.1896	46601.250	38	2169.9437	46069.694	152	2204.074	45356.37	257
2099.9042	47606.109	43	2146.2822	46577.529	42	2170.5299	46057.253	256	2206.440	45307.75	260
2100.1464	47600.620	47	2146.7207	46568.017	38	2170.5544	46056.733	152	2207.0686	45294.842	30
2100,614	47590.03	39	2147.0455	46560.972	154	2170.5544	46056.733	155	2208.723	45260.92	31
2100.7978	47585.860	45	2147.479	46551.57	154	2171.2340	46042.320	259	2210.6885	45220.681	29
2102.3538	47550.647	45	2147.7884	46544.869	155	2171.2972	46040.980	35	2211.2355	45209.496	31
2102.9105	47538.059	47	2148.4032	46531.551	40	2171.3703	46039.429	259	2213.481	45163.63	260
2103.0531	47534.837	43	2148.4929	46529.609	151	2172.1424	46023.066	34	2214.257	45147.81	254
2103.061	47534.66	261	2149.1787	46514.763	159	2172.225	46021.32	150	2217.585	45080.06	254
2103.9721	47514.075	43	2149.627	46505.06	156	2172.5848	46013.696	34	2217.7431	45076.848	31
2106.2602	47462.467	43	2149.6296	46505.008	156	2172.6709	46011.872	152	2220.9151	45012.474	30
2106.3948	47459.434	45	2150.1848	46493.000	36	2173.2137	46000.381	35	2221.318	45004.32	255
2106.693	47452.72	41	2151.0024	46475.330	151	2173,469	45994.98	156	2222.071	44989.06	254
2108.1371	47420.215	39	2151.0995	46473,232	35	2173.543	45993.41	257	2222.7633	44975.050	253
2108.1939	47418.938	43	2151.0995	46473.232	36	2173.706	45989.97	159	2223.767	44954.76	148
2108.3028	47416.488	47	2151.6954	46460.363	152	2174.1430	45980.722	150	2227.868	44872.00	148
2108.9591	47401.734	45	2152.2488	46448.418	155	2175.239	45957.55	161	2228.1717	44865.895	29
2110.2354	47373.069	159	2153.0067	46432.071	38	2175.4991	45952.063	154	2228.5175	44858.933	30
2111.2323	47350.702	43	2154.1246	46407.977	155	2176.0234	45940.991	257	2229.0733	44847.749	29
2112.9688	47311.793	45	2154.4456	46401.063	257	2176.2281	45936.671	153	2231.101	44806.99	252
2113.0872	47309.142	160	2154.4690	46400.558	154	2176.4007	45933.028	152	2231.2132	44804.742	29
2114.5997	47275.308	45	2155.0198	46388.700	36	2176.677	45927.20	159	2234.4329	44740.187	254
2115.1701	47262.561	45	2155.2430	46383.896	38	2176.8402	45923.755	34	2237.817	44672.53	254
2117.798	47203.92	261	2155.6141	46375.913	155	2177.697	45905.68	159	2238.263	44663.63	29
2119.1366	47174.107	39	2155.6474	46375.197	258	2178.0807	45897.603	32	2240.6298	44616.460	252
2121.8688	47113.371	257	2155.8146	46371.601	149	2178.1186	45896.804	33	2242.5700	44577.863	29
2122.1785	47106.495	37	2156.4303	46358.362	259	2178.805	45882.34	155	2242.7808	44573.674	29
2122.7991	47092.725	36	2156.4952	46356.967	158	2178.982	45878.63	149	2243.908	44551.29	27
2122.957	47089.23	149	2157.7945	46329.055	35	2180.250	45851.94	158	2245.0735	44528.159	148
2123.1246	47085.508	156	2158.4745	46314.463	152	2180.869	45838.93	34	2245.6528	44516.674	29
2124.5016	47054.993	160	2158.5344	46313.178	38	2181.1407	45833.218	31	2247.244	44485.15	148
2125.324	47036.78	41	2158.6295	46311.136	34	2181.652	45822.48	157	2247.4608	44480.864	141
2126.2106	47017.175	38	2158.7349	46308.876	36	2181.7187	45821.077	159	2248.8602	44453.189	140
2126.6094	47008.358	37	2158.9201	46304.903	35	2183.4665	45784.403	34	2250.7904	44415.071	27
2126.8165	47003.781	40	2158.9978	46303.237	154	2183.9799	45773.642	259	2251.230	44406.40	251
2120.8103	46989.255	39	2159.150	46299.98	260	2184.4602	45763.577	150	2251.230	44393.713	29
2127.8646	46980.633	149	2159.130	46293.948	38	2185.2139	45747.795	156	2252.752	44393.713 44376.40	143
2127.8646	46978.33	154	2159.6375	46289.524	149	2186.2498	45726.122	31	2255.8611	44315.245	143
2130.4076	46924.559	159	2159.6558	46289.131	35	2186.4869	45720.122	32	2256.070	44313.245	
2130.4405	46923.834	151	2159.8810	46284.305	152	2186.767	45715.31	260	2256.7549	44311.14 44297.694	146 252
2130.4403	46912.267	154	2159.9237	46283.392	35	2186.8926	45713.51	33			
2130.9039	46889.136	36	2160.2383	46276.651	161	2187.119	45712.083 45707.95		2259.2826	44248.138	26
2132.0173	46860.648	160	2160.2383	46271.869	151	2187.119	45707.95 45706.374	152	2259.5102	44243.682	27
2135.3133	46821.453	158	2161.5791	46247.949	38	2187.1945	45706.374 45664.761	32	2259.5804	44242.308	140
2135.0996	46802.579	155	2161.3791 21.62.2480	46233.644	155	2189.1878		254	2260.5972	44222.409	252
2136.941	46781.11	36	2163.3667	46209.740			45660.574	152	2260.8873	44216.736	144
2136.941 2138.0027	46781.11 46757.882	151	2163.3667	46209.740 46199.155	151 35	2190.7697	45631.791	259	2261.9970	44195.046	147
2138.5925	46744.988	35	2163.8624	46199.133 46197.78	33	2190.8811	45629.471	150	2263.4743	44166.204	26
			2163.927	46188.077		2191.2043	45622.741	33	2264.3893	44148.359	142
2139.6981	46720.837	35			158	2191.8391	45609.530	32	2265.0543	44135.399	27
2139.730	46720.15	38	2164.528	46184.96	159	2192.261	45600.75	154	2265.595	44124.87	144
2139.9346	46715.676	40	2164.5488	46184.506	35	2192.8234	45589.059	255	2265.758	44121.69	250
2141.0859	46690.558	37	2165.5352	46163.470	159	2193.4103	45576.861	150	2266.9059	44099.352	140
2141.4718	46682.145	155	2165.8615 2165.9913	46156.517	152	2193.5602	45573.748	254	2267.0847	44095.875	28
0141 7100		36	7165 0013	46153.752	156	2106 0420	45577 740	27	7747 4606	44000 201	1.40
2141.7183 2142.1461	46676.774 46667.452	42	2166.222	46148.84	151	2196.0420 2197.2342	45522.249 45497.552	32 31	2267.4695 2269.0988	44088.391 44056.737	140 26

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2277.1930			43959.12	144	2306.1740	43348.523	142	2398.705					
2275.1916		2274.303	43955.93	144	2306.3823	43344.609	247			1			
2275.6999			43938.768	26	2308.9989	43295.493	25	2404.639		1			
2275.679			43930.942	249	2313.1041	43218.662	25			1			
2275.7588 43927.84 143 2317.8980 43129.284 250 2411.588 41454.377 132 2465.1492 40553.231 127 1276.0258 43922.664 25 2318.1869 43123.91 138 2411.9647 41447.375 131 2465.392 40549.23 137 1277.1004 43901.999 142 2320.5577 43083.568 25 2412.180 41443.68 246 2466.2823 40534.602 459 2277.147 43890.009 252 2323.4220 43026.751 24 2412.769 41433.56 130 2466.5967 40527.792 450 2278.623 43876.261 26 2323.623 43023.03 22 2417.498 4133.56 130 2465.967 40524.50 126 2278.623 43876.261 26 2323.623 43023.03 22 2417.498 41352.52 239 2467.5689 40513.468 459 2279.153 43847.321 27 2325.519 42991.65 23 2418.787 4133.048 244 2467.5689 40513.468 459 2279.153 43847.321 27 2329.6406 42911.900 22 2419.0407 41319.990 691 2468.8799 40991.97 124 2280.2100 43842.073 142 2329.472 4291.004 23 2419.8786 41311.856 132 2469.080 4049.9957 124 2280.2100 43842.073 142 2329.474 43842.845 461 2334.5240 43824.546 4399.101 140 2344.5964 3472.156 22 2402.3057 41303.012 130 2469.6679 40479.038 20 2288.644 43791.101 140 2341.594 4269.58 22 2426.315 4120.25 242 2470.0564 40477.878 128 2288.8644 43791.101 140 2341.595 4269.58 23 24271.250 41188.505 242 2470.0564 40457.83 128 2283.0574 43738.826 12 2345.0575 42630.365 136 2429.878 4114.927 13 2472.411 40435.273 124 2283.0573 4378.826 69 25 2345.0727 42630.056 136 2429.878 4114.927 13 15 2472.3411 40435.273 124 2283.0573 43775.938 26 2345.0727 42630.056 136 2429.878 4114.927 13 15 2472.3411 40435.273 124 2283.0573 43775.938 26 2345.0727 4250.064 43 2429.878 4114.927 13 15 2472.3411 40435.273 124 2283.0573 43775.938 26 2345.0727 4250.064 43 2429.878 4114.927 13 15 2472.3411 40435.273 124 2283.0573 43775.938 26 2345.097 4250.064 43 2429.878 4114.978 13 15 2472.8713 4046.664 13 122286.363 43767.600 25 2345.097 4250.064 43 2429.878 4114.978 13 15 2472.8713 4046.664 13 122286.363 43775.098 12 2424.241.188 200 2475.670 13 2475.670 13 2475.470 13 2475.670 13 2475.470 13 2475.670 13 2475.470 13 2475.670 13 2475.470 13 2475.470 13 2475.470 13 2475.470 13 2475.470 13 2475.470 13 2475.470 13 2475.470 13 2475.470 13 2475			43929.36	247	2313.5641	43210.070	139	2408.0610		135			
2277.104 43901.939 142 2323.5577 4308.558 25 2412.180 41447.375 134 2465.392 40534.692 459 2277.16671 43891.016 140 2323.4220 43026.751 24 2412.180 4143.58 246 246 2823 40534.692 459 2277.16671 43891.016 140 2323.4220 43026.751 24 2412.180 4143.58 246 246 2823 40534.692 459 2277.147 43890.099 252 2323.622 43026.751 242 2412.180 4142.39 238 2466.897 40524.792 458 2278.783 43862.40 251 2328.652 34023.00 22 2417.498 4132.552 239 2467.5869 40513.468 457 2279.153 43862.40 251 2328.855 42926.83 138 2419.053 0 4132.5764 133 2467.3735 40513.648 457 2279.9371 43842.07 27 2329.6466 42910.90 22 2419.4017 41319.980 61 33 2467.3735 40513.648 457 2279.9371 43842.073 142 2329.742 42910.04 23 2419.878 6 41318.36 135 2469.089 4049.98 8 130 2280.2333 43841.625 140 2334.520 43822.152 247 2420.3957 41303.012 130 2469.6679 40479.038 20 2281.893 43841.625 140 2334.520 43822.152 247 2420.3957 41303.012 130 2469.6679 40479.038 20 2282.8644 43791.101 140 2344.1595 42692.85 23 2427.1250 4118.8505 235 2469.3391 40474.593 252 2282.8644 43791.101 140 2344.1595 42692.85 23 2427.1250 4118.8505 236 2472.3312 40435.273 128 2283.8673 4378.68.26 142 2345.057 42650.365 136 2429.3494 4114.279 18 135 2472.3411 40435.273 128 2283.8673 4378.68.26 142 2345.563 4260.19 462 2439.1900 414 2342.508 42675.43 138 2429.439 4114.927 135 2472.3411 40435.273 128 2283.8673 4378.68.26 142 2345.563 4260.19 462 2431.9100 4118.8505 236 2472.3411 40435.273 128 2283.8673 4378.68.26 142 2345.563 4260.19 462 2431.9100 4118.5505 257 2472.3411 40435.273 128 2283.8673 43775.938 26 2345.0377 4260.19 462 2433.807 4114.927 135 55 2472.3411 40435.273 128 2283.8673 43775.938 26 2345.0377 4260.19 462 2433.807 4114.927 135 55 2472.3411 40435.273 128 2283.8673 43775.938 26 2345.0377 4260.19 422 423.3489 4110.15 238 2475.8762 40435.42 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24 40435.24		2275.758	43927.84	143	2317.8980	43129.284	250	2411.558	41454.37	132			
2277.1004 4399.1039 142 2320.3577 43083.568 25 2412.180 41443.68 246 2466.2823 40534.602 459 2277.6731 4389.1016 140 2323.4220 4302.6751 24 2412.769 41433.56 130 2466.687 40527.792 458 2277.147 43890.099 252 2323.4220 4302.6751 463 2414.002 41412.39 238 2466.887 40524.50 152 278.623 43872.61 26 2323.4220 4302.6751 463 2414.002 41412.39 238 2466.887 40524.50 152 278.623 43872.61 26 2323.4220 4302.6751 24 2417.898 41352.52 239 2467.5689 40513.468 457 2278.780 4386.958 27 2325.319 42991.65 23 2417.898 41352.52 239 2467.5689 40513.468 457 2279.153 43847.321 27 2329.6406 42911.909 22 2419.4017 41319.980 691 2468.8799 40911.957 12280.2100 43842.073 142 2339.742 42910.44 23 2419.8786 41311.836 135 2469.0899 40491.957 12281.629 4381.481 252 2339.6453 42782.825 4240 2423.1052 41256.830 135 2469.6679 40479.038 20 2281.629 4381.481 252 2339.6453 42782.825 461 2423.1052 41256.830 135 2469.6679 40479.038 20 2281.629 4381.481 252 2339.6453 42782.825 461 2423.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 4242.1052 42		2276.0258		25	2318.1869	43123.910	138	2411.9647	41447.375	134	2465.392		
2277.147		2277.1004	43901.939		2320.3577		25	2412.180	41443.68	246			
2277.147		2277.6671		140	2323.4220	43026.751		2412.769	41433.56	130			
2278,623 43872.61 26 2323.623 43023.03 22 2417.498 4135.52 299 2467.5689 40513.468 457 2278.768.3 4386.95 27 2323.519 42991.65 23 2418.787 41330.42 244 2467.5689 40513.468 459 2279.153 4386.240 251 2328.855 42926.38 138 2419.0630 4131.835.5764 133 2467.7335 40510.765 127 2279.9371 43847.321 27 2329.742 4291.004 23 2419.8786 41311.836 135 2469.088 40489.86 130 2280.2333 43841.626 140 2334.5240 42822.152 247 2420.3957 41303.012 130 2499.667 40479.038 20 2281.629 43814.81 252 2339.6435 42728.425 461 2423.1052 4125.6830 135 2469.9391 40474.593 525 2281.9932 43807.817 28 2340.025 42721.50 22 2426.315 4120.225 242 2470.9654 40457.783 128 2282.8264 43791.101 140 2341.595 4269.85 23 2427.125 2418.8780 236 2472.332 40435.42 239 2282.922 43790.00 144 2342.598 42676.21 137 2428.871 41158.90 527 2472.3411 40435.273 128 2283.8673 43786.86 142 2434.551 42675.43 138 2429.8149 41149.218 135 2472.8711 40435.273 128 2283.8673 4375.938 26 2435.037 42630.19 462 2430.1904 41136.56 527 2472.3411 40435.273 128 2283.8673 4375.938 26 2435.037 42630.19 462 2430.1904 41136.56 527 2472.8419 40462.18 19 2284.0856 4376.7690 25 2345.944 42621.89 23 2431.0248 4112.247 414 2473.1568 40421.938 18 2286.443 43792.56 145 2345.563 42620.64 4303.474 41098.896 130 2474.943 4039.276 2287.2930 4370.532 144 2351.846 4221.89 23 2433.0474 41098.896 130 2474.943 4039.276 2287.2930 4370.632 144 2350.841 4250.579 137 2438.1826 41001.723 127 2476.0312 4093.66 127 2287.2930 4370.632 144 2350.894 2422.841 136 2433.347 122 2433.141 41098.896 130 2474.943 4039.276 236 2287.2930 4370.632 144 2350.894 2425.19 23 2433.0474 41098.896 130 2474.943 4039.276 236 2287.2930 4370.538 142 2351.8916 4223.141 136 2433.3471 41098.896 130 2474.943 4039.276 236 2287.2930 4370.538 144 2351.591 4228.8413 136 2433.9479 4099.548 247.8414 4098.866 127 2288.643 3401.444 1235.1591 4228.441 136 2433.9479 4099.548 247.8414 4098.866 127 2288.643 3401.444 1236.644 1235.1591 4228.441 136 2433.3479 4099.544 144 144.144 144.144 144.144 144.144 144.144 144.144 144.144 144.144 144.144 144.144 1		2277.7147	43890.099	252	2323.4220	43026.751	463	2414.002	41412.39	238	2466.897	40524.50	
2278,780 43869,58 27 2325,319 42991,65 23 2418,787 4133,048 244 2467,5689 40513,668 459 2279,153 4384,7321 27 2329,6406 42911,909 22 2419,4017 4131,980 691 2468,8799 40491,957 124 2280,2100 43842,073 142 2329,742 4291,009 22 2419,8168 43131,481 315 2469,088 4048,866 130 2281,629 43814,81 252 2339,6453 4272,152 247 2420,3957 41303,012 130 2469,6679 40479,038 20 2281,693 43814,81 252 2339,6453 4272,1250 22 2426,315 4120,225 242 2470,9654 40477,783 128 2281,693 43814,81 252 2339,6453 4272,150 22 2426,315 4120,225 242 2470,9654 40477,783 128 2282,993 4370,101 140 2341,595 4272,125 22			43872.61	26	2323.623	43023.03	22	2417.498		239			
2279.9371 43847.321 27 2329.6406 42911.909 22 2419.017 41319.980 691 2468.8799 40.991.957 124 2280.2333 43841.626 140 2334.5240 42822.152 247 2420.3957 41303.012 130 2469.058 40489.86 130 2281.629 43814.81 252 2339.6453 42728.425 461 2423.1052 41265.830 135 2469.9391 40474.593 525 2281.9932 43807.817 28 2340.025 42721.50 22 2426.315 4120.25 24 242.949.9391 40474.593 525 2282.8644 43791.101 140 2341.595 42692.85 23 2427.1250 41188.505 236 2472.3312 40435.42 129 2282.922 43790.00 144 2342.508 42676.21 137 2428.871 41158.90 527 2472.3411 40435.273 128 2283.0873 43768.826 142 2342.551 42675.43 138 2429.439 41149.27 135 2472.3411 40435.273 128 2283.0873 43786.826 142 2345.251 42675.43 138 2429.439 41149.27 135 2472.3411 40435.273 128 2283.0873 43786.826 142 2345.036 4269.819 462 2430.190 41136.562 527 2472.8949 40426.604 12 2284.0856 43767.690 25 2345.037 42630.19 462 2430.1900 41136.562 527 2472.8949 40426.218 19 2283.6552 43775.938 26 2345.037 42630.19 462 2430.1900 41136.562 527 2472.8949 40426.218 19 2283.6552 43775.932 25 2345.037 42630.19 462 2430.1900 41136.562 527 2472.8949 40426.218 19 2287.2990 43706.322 144 2350.413 42532.69 21 2433.0767 41087.911 135 2474.943 40392.76 236 2287.2930 43706.322 144 2351.8366 42506.048 22 2433.892 41074.00 238 2475.8621 40379.040 412 2288.616 43681.06 141 2351.8966 42506.048 22 2433.892 41074.00 238 2475.621 40379.040 412 2288.616 43681.06 141 2351.8966 42506.048 22 2433.892 41074.00 238 2475.621 40379.040 412 2288.616 43681.06 141 2351.901 4228.41 415 2439.6307 40975.387 238 2475.6721 40375.015 4389.934 4304.322 4232.818 2289.0399 43673.141 42 2356.191 42428.41 415 2439.6307 40975.388 26 2476.8169 40367.811 132 2290.0662 43653.400 140 2361.9422 42325.100 244 2439.7409 40975.468 527 2478.179 40340.03 524 2299.5405 4363.302 140 2366.630 42312.78 239 2440.3319 40965.613 409 2476.8119 40367.831 458 2290.0746 43639.00 140 2366.437 42221.88 229 2440.81 43639.00 140 2366.437 42221.88 239 2440.3319 40965.613 409 2478.111 40339.503 524 2499.048 4363.324 442.236.83 442.236.83 442.236		2278.780	43869.58	27	2325.319	42991.65	23	2418.787	41330.48	244	2467.5689	40513.468	459
2280,2100 43842,073 142 2329,742 42910.04 23 2419,8786 41311.836 135 2469,069 40489,86 130 2280,2333 43841,656 140 2334,5240 42822,155 247 2420,3957 41303,012 130 2469,6679 40479,038 20 2281,629 43814,81 252 2339,6453 42728,425 461 2423,1052 4125,6830 135 2469,9391 40474,593 25 2281,9932 43807,817 28 2340,025 4721,50 22 2426,315 4120,225 242 2470,9654 40457,783 128 2428,2922 43790,00 144 2342,595 42692,85 23 2427,1250 41188,505 236 2472,332 40435,427 2282,922 43790,00 144 2342,551 42675,43 138 2429,439 41149,27 135 2472,3411 40435,273 124 2283,0873 43786,826 142 2342,551 42675,43 138 2429,439 41149,27 135 2472,3411 40435,273 124 2283,0873 43786,826 142 2345,505 42630,365 136 2429,8145 41142,918 135 2472,2411 40435,273 124 2283,0873 43786,826 142 2345,561 42630,19 462 2340,1900 41136,562 527 2472,3411 40435,273 124 2284,0856 43767,690 25 2345,494 42621,89 23 2431,0248 41122,437 414 2473,1568 40421,918 13 2286,443 4372,256 145 2345,563 42600,14 4262,189 23 2431,0248 41122,437 414 2473,1568 40421,918 13 2287,2990 43706,322 144 2350,413 42532,69 21 2433,0477 41087,911 135 2475,6472 40384,213 52287,2930 43706,322 144 2350,413 42532,69 21 2433,0477 41087,911 135 2475,6672 40384,213 525 2287,0312 43699,861 142 2351,8866 4250,6048 22 2433,879 41040,00 238 2475,5621 40399,404 412 2288,9683 43674,336 27 2355,9092 42433,477 22 2439,1706 40985,116 130 2476,6719 40367,831 458 2289,0399 43673,141 142 2356,191 42428,41 136 2439,5358 40982,005 413 2476,6656 40364,820 127 2290,0662 43653,400 140 2356,191 42428,41 136 2439,3558 40982,005 413 2476,6769 40364,820 127 2290,0662 43653,400 140 2356,191 42428,41 136 2439,3558 40982,005 413 2476,6769 40364,820 127 2290,0662 43653,400 140 2356,191 42428,41 136 2439,3558 40982,005 413 2476,6769 40364,820 127 2290,0662 43653,400 140 2356,191 42428,41 136 2439,3558 40982,005 413 2476,6769 40364,820 127 2290,0662 43653,400 140 2356,191 42428,41 415 2439,6706 4309,840 4309,840 4304,003 145 2290,0662 43653,400 140 2356,191 42428,41 415 2439,640 4098,445 424 2479,1483 40340,000 127 2290,0662 4		2279.153	43862.40	251	2328.855	42926.38	138		41325.764	133	2467.7335	40510.765	127
228B.02333 43841.626 140 2334.5240 4282.152 247 2420.3957 41303.012 130 2469.66679 40479.038 20 2281.629 4381.431 252 2339.6453 42728.425 461 2423.1052 4126.230 23 2469.9391 40474.593 525 2281.932 43807.817 28 2340.025 42721.50 22 2426.315 4120.225 242 2470.9654 40457.783 128 2282.922 43790.00 144 22342.508 42676.21 137 2428.871 41185.90 527 2472.3411 40435.733 124 2283.0873 43786.826 142 2345.037 42630.365 136 2429.439 41149.27 135 2472.3411 40435.273 124 2284.0856 43767.690 25 2345.934 42621.89 23 2431.0248 41149.27 135 2472.3413 4049.466 127 2287.2930 43706.322 144 2350.413 4253.626 2432.434 <t< td=""><td></td><td>2279.9371</td><td>43847.321</td><td>27</td><td>2329.6406</td><td>42911.909</td><td>22</td><td>2419.4017</td><td>41319.980</td><td>691</td><td>2468.8799</td><td>40491.957</td><td>124</td></t<>		2279.9371	43847.321	27	2329.6406	42911.909	22	2419.4017	41319.980	691	2468.8799	40491.957	124
2280.2333 43841.626 140 2334.5240 4282.152 247 2420.3957 41303.012 130 2469.6679 40479.038 20 2281.699 43814.81 252 2339.6453 42721.50 22 2426.315 41255.830 135 2469.9991 40474.933 525 2281.9932 43807.817 28 2340.025 42721.10 22 2426.315 41202.25 242 2470.99654 40457.733 128 2282.922 43790.00 144 2342.508 42676.21 137 2428.871 4118.90 527 2472.3411 404355.273 124 2283.0873 43786.826 142 2345.037 42630.165 136 2429.439 41149.27 135 2472.3411 404355.273 124 2284.0856 43767.690 25 2345.944 42621.89 23 2431.0248 41149.27 135 2472.8894 40426.18 19 2287.2930 43707.150 25 2345.308 4260.064 463		2280.2100	43842.073	142	2329.742	42910.04	23	2419.8786	41311.836	135	2469.008	40489.86	130
2281,9932 43807,817 28 2340,025 42721,50 22 2426,315 4120,25 242 2470,9654 40437,783 128 2282,8942 43791,00 144 2342,508 42676,21 137 2428,871 4118,850 527 2472,3411 40435,273 124 2283,0873 43786,826 142 2342,551 42675,43 138 2429,8149 4118,291 135 2472,3411 40435,273 128 2283,0873 43786,826 122 2345,037 42630,365 136 2429,8149 41142,918 135 2472,8113 40426,604 19 2284,0856 43767,690 25 2345,044 42621,89 23 2431,0248 41100,15 238 2474,8144 40394,866 127 2287,2930 43706,500 25 2346,563 4260,64 463 2432,343 41100,15 238 2474,9144 40394,866 127 2287,2930 43706,532 144 2350,414 2350,414 2432,504 </td <td></td> <td>2280.2333</td> <td>43841.626</td> <td>140</td> <td>2334.5240</td> <td>42822.152</td> <td>247</td> <td>2420.3957</td> <td>41303.012</td> <td>130</td> <td>2469.6679</td> <td>40479.038</td> <td></td>		2280.2333	43841.626	140	2334.5240	42822.152	247	2420.3957	41303.012	130	2469.6679	40479.038	
2282.8644 43791.101 140 2341.595 42692.85 23 2427.1250 41188.505 236 2472.332 2472.341 40435.273 124 2282.922 43790.00 144 2342.508 42676.21 137 2428.871 41188.90 527 2472.3411 40435.273 124 2283.0873 43786.826 142 2342.551 42675.43 138 2429.439 41149.27 135 2472.3411 40435.273 128 2283.6552 43775.938 26 2345.037 42630.19 462 2430.1900 41164.562 257 2472.8713 40426.604 19 2284.0856 43767.690 25 2345.5494 42621.89 23 2431.0248 4112.2437 414 2473.1568 40421.938 18 2287.2496 43707.150 25 2346.308 42607.11 22 2432.4174 41087.896 130 2474.943 40392.76 236 2287.6312 43699.861 142 2351.8866 42506.048		2281.629	43814.81	252		42728.425	461	2423.1052	41256.830	135	2469.9391	40474.593	525
2282.922 43790.00 144 2342.508 42676.21 137 2428.871 41158.90 527 2472.3411 40435.273 124 2283.0873 43786.826 142 2342.557 42630.365 136 2429.8145 41142.918 135 2472.3411 40435.273 128 2283.03652 43777.938 26 2345.037 42630.19 462 2430.1900 41136.562 527 2472.8949 40426.218 19 2284.0856 43767.690 25 2345.944 42621.89 23 2431.0048 1122.437 414 2473.1568 40421.938 18 2287.2496 43707.150 25 2346.308 42607.11 22 2432.4174 41098.896 130 2475.4672 40384.213 525 2287.2390 43706.322 144 2351.8866 42506.048 22 2433.892 41074.00 238 2475.4672 40384.213 525 2288.0616 142 2351.8866 42506.048 22 2433.677 </td <td></td> <td>2281.9932</td> <td>43807.817</td> <td>28</td> <td>2340.025</td> <td>42721.50</td> <td>22</td> <td>2426.315</td> <td>41202.25</td> <td>242</td> <td>2470.9654</td> <td>40457.783</td> <td>128</td>		2281.9932	43807.817	28	2340.025	42721.50	22	2426.315	41202.25	242	2470.9654	40457.783	128
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TABLE 4—Continued

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2501.6940 39960.870 121 2523.271 39619.18 331 2543.3780 39305.986 409 2565.595 38965.63 4 2501.734 39960.23 455 2523.271 39619.18 336 2543.678 39301.35 519 2568.154 38926.81 4 2502.225 39952.39 408 2523.3236 39618.354 332 2543.8961 39297.981 616 2568.407 38922.98 5 2502.4907 39948.149 414 2523.6612 39613.055 617 2543.9225 39297.573 523 2568.8647 38916.041 1 2503.4917 39932.178 619 2523.9970 39607.785 456 2544.465 39289.19 123 2569.029 38913.55 62 2503.555 39931.16 458 2524.2925 39603.149 17 2544.6566 39286.237 123 2569.089 38912.64 5 2504.542 39915.44 339 2524.563 3958.91 335 2546.1748 39262.814 329 2569.5970 38904.952 1	2501.1319	39969.850	17	2522.8494		17	2543.0510	39311.040	451	2565.4694	38967.542	408
2501.734 39960.23 455 2523.271 39619.18 336 2543.678 39301.35 519 2568.154 38926.81 4 2502.225 39952.39 408 2523.3236 39618.354 332 2543.8961 39297.981 616 2568.407 38922.98 5 2502.4907 39948.149 414 2523.6612 39613.055 617 2543.9225 39297.573 523 2568.8647 38916.041 1 2503.4917 39932.178 619 2523.9970 39607.785 456 2544.465 39289.19 123 2569.029 38913.55 6 2503.555 39931.16 458 2524.2925 39603.149 17 2544.6566 39286.237 123 2569.089 38912.64 5 2504.102 39922.45 617 2524.394 39601.55 456 2545.9784 39265.842 17 2569.345 38908.77 6 2504.542 39915.44 339 2524.563 39598.91 335 2546.1748 39262.814 406 2569.7436 38902.732 1 <td>2501.4236</td> <td>39965.189</td> <td>124</td> <td>2523.1376</td> <td>39621.274</td> <td>409</td> <td>2543.378</td> <td>39305.99</td> <td>615</td> <td>2565.531</td> <td>38966.60</td> <td>327</td>	2501.4236	39965.189	124	2523.1376	39621.274	409	2543.378	39305.99	615	2565.531	38966.60	327
2502.225 39952.39 408 2523.3236 39618.354 332 2543.8961 39297.981 616 2568.407 38922.98 5 2502.4907 39948.149 414 2523.6612 39613.055 617 2543.9225 39297.573 523 2568.8647 38916.041 1 2503.4917 39932.178 619 2523.9970 39607.785 456 2544.465 39289.19 123 2569.029 38913.55 6 2503.555 39931.16 458 2524.2925 39603.149 17 2544.6566 39286.237 123 2569.089 38912.64 5 2504.102 39922.45 617 2524.394 39601.55 456 2545.9784 39265.842 17 2569.345 38908.77 6 2504.542 39915.44 339 2524.563 39598.91 335 2546.1748 39262.814 329 2569.5970 38904.952 1 2504.628 39914.07 337 2525.0238 39591.680 617 2546.1748 39262.814 406 2569.7436 38902.732 1 <td></td> <td>39960.870</td> <td>121</td> <td></td> <td></td> <td>331</td> <td>2543.3780</td> <td></td> <td>409</td> <td>2565.595</td> <td>38965.63</td> <td>404</td>		39960.870	121			331	2543.3780		409	2565.595	38965.63	404
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2503.555 39931.16 458 2524.2925 39603.149 17 2544.6566 39286.237 123 2569.089 38912.64 5 2504.102 39922.45 617 2524.394 39601.55 456 2545.9784 39265.842 17 2569.345 38908.77 6 2504.542 39915.44 339 2524.563 39598.91 335 2546.1748 39262.814 329 2569.5970 38904.952 1 2504.628 39914.07 337 2525.0238 39591.680 617 2546.1748 39262.814 406 2569.7436 38902.732 1						1						119
2504.102 39922.45 617 2524.394 39601.55 456 2545.9784 39265.842 17 2569.345 38908.77 6 2504.542 39915.44 339 2524.563 39598.91 335 2546.1748 39262.814 329 2569.5970 38904.952 1 2504.628 39914.07 337 2525.0238 39591.680 617 2546.1748 39262.814 406 2569.7436 38902.732 1			1									615
2504.542 39915.44 339 2524.563 39598.91 335 2546.1748 39262.814 329 2569.5970 38904.952 1 2504.628 39914.07 337 2525.0238 39591.680 617 2546.1748 39262.814 406 2569.7436 38902.732 1									1			522
2504.628 39914.07 337 2525.0238 39591.680 617 2546.1748 39262.814 406 2569.7436 38902.732 1			J			i i						615
						L			1			115
2505.0079 39908.010 618 2525.111 39590.31 328 2546.179 39262.75 329 2572.549 38860.31 5												120
·	2505.0079	39908.010	618	2525.111	39590.31	328	2546.179	39262.75	329	2572.549	38860.31	521

TABLE 4—Continued

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\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	σ (cm ⁻¹)	No.	Avac	σ	No.	\(\lambda_{vac}\)	σ	No.	λ_{air}	σ	No.
: (Å)	(cm ')		(Å)	(cm ⁻¹)		(Å)	(cm ⁻¹)		(Å)	(cm ⁻¹)	
2572.7554	38857.194	228	2609.2209	38314.173	689	2660.3972	37577.193	114	2689.8800	37165.346	441
2572.7554 2575.7453 2576.6902	38812.092	520	2610.7509	38291.722	16	2661.1933	37565.952	113	2690.0682	37162.746	14
2576.6902	38797.860	115	2612.7722	38262.100	16	2661.3047	37564.380	439	2690.420	37157.88	437
2576.984	38793.44	231	2613.2543	38255.041	689	2661.4154	37562.817	441	2691.4925	37143.081	435
2577.187	38790.38	405	2614.4946	38236.894	115	2661.521	37561.32	611	2692.2482	37132.656	217
2578.0034	38778.098	408	2614.780	38232.72	227	2662.0566	37553.770	113	2692.601	37127.79	516
2579.260	38759.21	120	2614.944	38230.32	520	2662.3032	37550.292	436	2692.6503	37127.111	113
2579.2702	38759.053	116	2615.8502	38217.081	446	2663.164	37538.16	439	2692.810	37124.91	610
2579.272	38759.03	449	2615.879	38216.66	689	2663.440	37534.27	438	2694.5359	37101.132	437
2579.8440 2580.0648	38750.433 38747.117	689 119	2615.984 2618.0180	38215.13	609	2664.0430	37525.771	444	2695.0355	37094.254	110
2580.0048	38743.674	227	2618.7107	38185.437 38175.338	115	2664.1673 2665.806	37524.019	439	2695.211	37091.84	437
2580.2941	38741.292	119	2618.8491	38173.320	16 688	2666.364	37500.95 37493.11	221	2695.303	37090.57	684
2580.5543	38739.767	230	2619.848	38158.76	117	2666.3986	37493.11	435 113	2695.5311	37087.434	438
2580.9509	38733.815	120	2623.3660	38107.598	16	2666.4541	37492.820	436	2695.5884 2695.6514	37086.646	687
2582.2981	38713.609	520	2623.5339	38105.159	115	2666.8125	37486.802	111	2695.9895	37085.779	437
2583.668	38693.09	521	2623.9929	38098.494	445	2666.9650	37484.659	220	2696.1233	37081.128 37079.288	437 727
2584.5360	38680.089	115	2624.129	38096.52	688	2667.218	37481.10	608	2696.2811	37079.288	436
2585.470	38666.12	831	2624.7476	38087.539	609	2667.521	37476.84	435	2697.0210	37066.948	220
2586.477	38651.06	448	2627.1282	38053.028	224	2667.9127	37471.344	16	2697.661	37058.16	441
2586.556	38649.88	690	2627.2242	38051.638	114	2668.7087	37460.168	611	2698.1650	37051.232	442
2587.374	38637.66	224	2628.998	38025.97	223	2668.9096	37457.348	442	2698.239	37050.22	325
2587.877	38630.16	613	2632.2376	37979.168	115	2669.009	37455.95	608	2698.784	37042.73	609
2587.9954	38628.389	520	2632.5939	37974.028	16	2669.4933	37449.159	517	2699.0019	37039.744	441
2588.304	38623.79	613	2632.9873	37968.355	791	2670.7860	37431.034	439	2699.1067	37038.306	111
2588.480	38621.15	613	2633.6186	37959.254	611	2672.217	37410.99	441	2700.608	37017.72	728
2588.891	38615.02	118	2633.813	37956.46	436	2672.446	37407.78	439	2701.8088	37001.266	607
2589.9071	38599.877	445	2634.923	37940.47	446	2672.781	37403.09	443	2701.9104	36999.874	605
2590.879	38585.40	117	2635.7213	37928.974	518	2673.089	37398.79	439	2702.264	36995.04	515
2591.2568	38579.774	411	2635.8088	37927.714	115	2673.2132	37397.049	113	2702.300	36994.54	608
2591.757	38572.33	119	2636.136	37923.00	609	2673.548	37392.37	608	2702.4502	36992.484	514
2592.2863	38564.452	689	2636.136	37923.00	688	2674.182	37383.50	443	2702.5601	36990.980	435
2592.286	38564.45	449	2636.4786	37918.079	114	2674.617	37377.42	611	2702.638	36989.92	607
2593.260	38549.97	690	2639.676	37872.15	222	2674.714	37376.07	402	2702.768	36988.13	435
2593.5010 2593.5161	38546.392 38546.167	520 447	2641.0293 2641.490	37852.747 37846.14	518 688	2675.2755 2676.162	37368.222	441	2702.9153	36986.120	727
2594.0363	38538.438	689	2641.6438	37843.943	113	2677.719	37355.85	612	2703.013	36984.78	437
2594.0503	38536.734	115	2642.277	37834.88	113	2678.214	37334.12 37327.23	790	2703.304	36980.80	607
2595.428	38517.78	119	2643.9986	37810.240	115	2679.0242	37315.937	436 517	2703.805 2704.099	36973.95 36969.93	900
2596.071	38508.24	690	2644.376	37804.85	439	2679.0618	37315.413	111	2704.099	36969.93 36966.68	441 516
2596.6161	38500.152	114	2644.792	37798.90	439	2679.211	37313.34	437	2704.337	36964.934	727
2597.8291	38482.175	408	2645.4216	37789.903	16	2679.716	37306.31	442	2704.5775	36963.389	440
2597.883	38481.37	830	2646.3928	37776.035	439	2680.1162	37300.734	439	2704.6151	36962.876	516
2597.9457	38480.448	403	2646.512	37774.34	441	2680.271	37298.58	435	2704.793	36960.44	610
2598.8525	38467.023	689	2647.395	37761.73	518	2680.4531	37296.046	113	2705.279	36953.80	433
2599.217	38461.63	614	2647.5576	37759.417	16	2680.9128	37289.651	220	2706.0126	36943.788	514
2599.5669	38456.452	115	2648.165	37750.75	219	2681.4609	37282.029	438	2706.582	36936.02	728
2600.098	38448.60	609	2648.5800	37744.842	436	2681.5858	37280.293	436	2706.5819	36936.017	110
2600.2070	38446.986	409	2648.752	37742.39	222	2681.887	37276.11	609	2706.999	36930.32	437
2600.2703	38446.050	118	2649.9121	37725.868	611	2682.2110	37271.603	438	2707.035	36929.84	1111
2603.043	38405.10	403	2651.7062	37700.345	114	2683.9366	37247.642	443	2707.4484	36924.196	606
2603.5546	38397.554	520	2652.188	37693.50	611	2684.0674	37245.826	442	2707.451	36924.16	727
2603.607	38396.78	613	2653.051	37681.23	444	2684.585	37238.65	513	2708.039	36916.15	221
2603.6084	38396.761	227	2653.138	37680.00	517	2684.8560	37234.887	113	2708.039	36916.15	435
2604.220	38387.75	613	2655.139	37651.61	220	2685.135	37231.02	687	2708.5708	36908.896	605
2604.7547	38379.864	688	2656.1454	37637.340	517	2687.4142	37199.444	441	2708.649	36907.83	728
2605.6573	38366.571	114	2656.300	37635.15	612	2687.723	37195.17	441	2708.8929	36904.508	727
2606.3037	38357.056	411	2656.7919	37628.183	219	2687.8005	37194.098	436	2709.5398	36895.698	512
2606.8263	38349.366	115	2658.4764	37604.341	439	2689.2122	37174.574	111	2709.9889	36889.583	437
2607.212	38343.69	445	2658.920	37598.07	433	2689.4138	37171.788	436	2710.4148	36883.787	728
2607.831	38334.60	447	2658.9467	37597.691	443	2689.8289	37166.052	219	2710.443	36883.41	727
2608.297	38327.75	117	2659.251	37593.39	439	2689.8800	37165.346	433	2710.5437	36882.034	220

TABLE 4—Continued

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2710.545 36882.02 726 2730.022 36618.90 685 2745.9608 36406.359 215 2764.3231 36164.5 2710.9741 36876.178 319 2730.9819 36606.029 110 2746.671 36396.95 786 2765.236 36152.6 2711.273 36872.11 217 2731.2814 36602.016 605 2746.9820 36392.825 108 2765.689 36146.6 2711.4589 36869.585 437 2731.3401 36602.029 685 2747.002 36392.825 111 2766.026 36142.2 2711.6552 36866.917 111 2732.018 36592.15 607 2747.534 36385.52 829 2766.439 36136.8 2714.0601 36834.251 605 2732.9399 36579.805 607 2748.197 36376.74 600 2766.5516 36135.4 2714.869 36823.27 437 2733.5805 36571.233 109 2750.0509 36352.215 827 2766.991 36135.4	338 324 50 395 58 211 27 598 38 723 13 899 109 509 109 595
2711.4589 36869.585 437 2731.2814 36602.016 605 2746.9820 36392.825 108 2765.689 36146.62 2711.4589 36869.585 437 2731.3401 36601.229 685 2747.002 36392.56 111 2766.026 36142.2 2711.6552 36866.917 111 2732.018 36592.15 607 2747.534 36385.52 829 2766.439 36136.8 2714.0601 36834.251 605 2732.9399 36579.805 607 2748.197 36376.74 600 2766.5516 36135.4 2714.8693 36823.27 311 2733.3655 36574.109 218 2749.6827 36357.083 112 2766.5516 36135.4 2714.869 36823.27 437 2733.5805 36571.233 109 2750.0509 36352.215 827 2766.9091 36130.7 2715.3225 36817.127 14 2733.896 36565.01 434 2750.1406 36351.030 15 2767.449 36123.6 2715.5208 36813.01 724 2734.2673 36565.548 111 2750.419 36347.35 899 2767.944 36117.2 2716.004 36807.89 440 2734.2673 36562.048 318 2750.517 36346.05 724 2768.0384 36116.0 2716.043 36807.89 440 2734.2673 36552.048 326 2750.5234 36345.970 724 2768.0384 36110.8 2716.2574 36804.455 515 2734.6152 36557.396 111 2750.8736 36341.344 324 2768.4315 36110.8 2716.487 36802.271 514 2734.8816 36553.836 789 2751.209 36332.27 394 2768.4315 36110.8 2717.132 36792.61 323 2734.886 36553.77 725 2751.8661 36328.237 394 2768.5573 36109.2 2717.3663 36789.437 110 2735.4753 36545.902 109 2752.1502 36324.488 724 2769.1528 36101.4	338 324 50 395 58 211 27 598 38 723 13 899 109 509 109 595
2711.4589 36869.585 437 2731.2814 36602.016 605 2746.9820 36392.825 108 2765.689 36146.62 2711.4589 36869.585 437 2731.3401 36601.229 685 2747.002 36392.56 111 2766.026 36142.2 2711.6552 36866.917 111 2732.018 36592.15 607 2747.534 36385.52 829 2766.439 36136.8 2714.0601 36834.251 605 2732.9399 36579.805 607 2748.197 36376.74 600 2766.5516 36135.4 2714.8693 36823.27 311 2733.3655 36574.109 218 2749.6827 36357.083 112 2766.5516 36135.4 2714.869 36823.27 437 2733.5805 36571.233 109 2750.0509 36352.215 827 2766.9091 36130.7 2715.3225 36817.127 14 2733.896 36565.01 434 2750.1406 36351.030 15 2767.449 36123.6 2715.5208 36813.01 724 2734.2673 36565.548 111 2750.419 36347.35 899 2767.944 36117.2 2716.004 36807.89 440 2734.2673 36562.048 318 2750.517 36346.05 724 2768.0384 36116.0 2716.043 36807.89 440 2734.2673 36552.048 326 2750.5234 36345.970 724 2768.0384 36110.8 2716.2574 36804.455 515 2734.6152 36557.396 111 2750.8736 36341.344 324 2768.4315 36110.8 2716.487 36802.271 514 2734.8816 36553.836 789 2751.209 36332.27 394 2768.4315 36110.8 2717.132 36792.61 323 2734.886 36553.77 725 2751.8661 36328.237 394 2768.5573 36109.2 2717.3663 36789.437 110 2735.4753 36545.902 109 2752.1502 36324.488 724 2769.1528 36101.4	50 395 58 211 27 598 58 723 43 899 409 509 409 595
2711.273 36872.11 217 2731.2814 36602.016 605 2746.9820 36392.825 108 2765.689 36146.6 2711.4589 36869.585 437 2731.3401 36601.229 685 2747.002 36392.56 111 2766.026 36142.2 2711.4589 36866.917 111 2732.018 36592.15 607 2747.534 36385.52 829 2766.439 36136.8 2713.450 36842.53 727 2732.778 36581.97 900 2747.5545 36385.242 326 2766.550 36135.4 2714.8693 36823.273 111 2733.3655 36571.233 109 2750.0509 36352.215 827 2766.5516 36135.4 2715.3225 36817.127 14 2733.896 36567.01 434 2750.0509 36352.215 827 2766.9091 36130.4 2715.5208 36813.01 724 2734.2673 36562.048 318 2750.1406 36351.030 15 2767.944 36117.2	58 211 27 598 58 723 43 899 409 509 409 595
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2718.4363 36774.958 110 2736.199 36536.24 724 2753.240 36310.11 601 2769.6693 36094.7	
2719.0274 36766.963 15 2736.397 36533.59 599 2753.285 36309.52 511 2770.408 36085.1	
2719.138 36765.47 900 2736.491 36532.34 723 2753.6869 36304.218 109 2770.539 36083.4	
2719.4203 36761.651 514 2736.5274 36531.853 107 2753.7920 36302.832 685 2770.6951 36081.3	
2719.6803 36758.137 607 2736.612 36530.72 316 2753.867 36301.85 316 2770.847 36079.4	
2720.1967 36751.159 324 2736.7625 36528.715 723 2753.9663 36300.535 723 2771.734 36067.8	
2720.5191 36746.805 14 2736.9661 36525.997 112 2754.0321 36299.668 111 2771.8810 36065.9	
2720.9023 36741.630 15 2737.1398 36523.680 724 2754.233 36297.02 317 2772.0740 36063.4	
2721.1069 36738.867 318 2737.3092 36521.419 15 2754.4273 36294.460 110 2772.1101 36062.9	
2721.815 36729.31 726 2737.6409 36516.995 510 2754.552 36292.82 1058 2772.3197 36060.2	
2721.815 36729.31 727 2737.8329 36514.434 107 2754.941 36287.69 723 2772.5086 36057.7	
2722.0390 36726.287 216 2738.2133 36509.361 110 2754.9434 36287.660 323 2772.822 36053.7	
2722.237 36723.61 727 2738.278 36508.50 221 2755.1819 36284.520 508 2773.2326 36048.3	
2722.3243 36722.439 434 2738.278 36508.50 603 2755.455 36280.93 723 2773.9051 36039.6 2722.352 36722.07 726 2738.3162 36507.990 603 2755.660 36278.23 723 2774.164 36036.2	
2723.025 36712.99 514 2738.973 36499.23 512 2755.950 36274.41 217 2774.7299 36028.9 2723.210 36710.50 724 2739.1048 36497.479 317 2756.087 36272.61 603 2774.9379 36026.2	
2723.266 36709.74 726 2739.220 36495.94 723 2756.2667 36270.239 14 2775.055 36024.6	
2723.5775 36705.543 15 2740.261 36482.08 686 2756.3282 36269.431 15 2775.230 36022.4	
2723.7865 36702.726 599 2740.6888 36476.386 723 2757.3155 36256.444 109 2775.458 36019.4	
2724.127 36698.14 727 2740.8922 36473.680 723 2757.4226 36255.036 213 2775.791 36015.1	
2724.3412 36695.253 724 2741.0463 36471.629 604 2757.712 36251.23 785 2775.8439 36014.4	
2724.417 36694.23 726 2741.1012 36470.899 953 2758.013 36247.28 597 2776.3972 36007.2	
2724.6694 36690.834 606 2741.216 36469.37 599 2758.9833 36234.529 319 2776.451 36006.5	
2724.9532 36687.012 111 2741.358 36467.48 313 2759.180 36231.95 1007 2776.7671 36002.4	76 508
2724.9532 36687.012 724 2741.5768 36464.572 217 2759.180 36231.95 686 2777.266 35996.0	
2725.0162 36686.165 14 2741.6844 36463.141 602 2759.724 36224.81 899 2777.812 35988.9	3 1005
2725.2847 36682.550 899 2742.0158 36458.734 14 2759.8138 36223.625 111 2777.8885 35987.9	43 595
2725.3293 36681.950 217 2742.2542 36455.565 109 2759.922 36222.20 400 2778.0676 35985.6	
2725.6019 36678.281 110 2742.3318 36454.534 326 2760.6129 36213.140 321 2778.2203 35983.6	
2725.625 36677.97 725 2742.4053 36453.556 15 2761.4978 36201.537 684 2778.563 35979.2	
2725.8060 36675.535 605 2742.756 36448.89 789 2761.7798 36197.840 109 2778.753 35976.7	
2726.0553 36672.181 110 2743.060 36444.85 899 2762.0266 36194.606 109 2778.8423 35975.5	
2726.2328 36669.794 605 2743.5654 36438.143 110 2762.6813 36186.029 324 2778.928 35974.4	
2726.368 36667.98 725 2744.0674 36431.477 15 2762.6813 36186.029 723 2779.694 35964.5	
2726.7869 36662.343 789 2744.352 36427.70 724 2762.7716 36184.846 326 2780.528 35953.7	
2728.0210 36645.759 110 2744.5275 36425.371 109 2762.920 36182.90 1006 2780.571 35953.2 2728.450 36640.00 513 2744.786 36421.94 724 2763.092 36180.65 108 2780.6973 35951.5	
2728.450 36640.00 513 2744.786 36421.94 724 2763.092 36180.65 108 2780.6973 35951.5 2728.8202 36635.026 514 2745.2805 36415.380 323 2763.1095 36180.421 110 2780.8818 35949.2	
2728.9698 36633.018 14 2745.735 36409.35 724 2763.503 36175.27 828 2781.8356 359349.2	.VO 1118
21207070 300037010 11 2710703 30107.03 124 2703.303 30173.27 020 2701.0330 33930.6	

TABLE 4—Continued

:											
λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
. (Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})	
2782.0513	35934.097	317	2807.2439	35611.636	12	2830.565	25210.24	1000	2062.272		
2782.0513 2782.769 2783.081	35924.83	722	2807.2439	35597.902	108	2830.363	35318.24	1220	2862.273	34927.01	896
2783.081	35924.83	722	2808.356	35597.54	399	2830.739	35315.82 35313.77	683 828	2862.4947	34924.307	105
2783.081	35920.80	722 788	2808.947	35590.04	399 829	2831.8378	35313.77		2862.744	34921.27	894
2783.199	35919.28 35918.16	788 684	2810.311	35572.77	720	2831.8378		432	2863.057	34917.45	432
							35300.63	682	2863.100	34916.92	894
2783.4438	35916.121	829	2810.837	35566.11	683	2832.4355	35294.923	106	2863.4300	34912.900	204
2783.5498	35914.753	213	2811.167	35561.94	211	2833.013	35287.73	720	2863.8631	34907.620	12
2783.852	35910.85	394	2811.597	35556.50	787	2833.4022	35282.882	393	2866.153	34879.73	591
2784.0086	35908.835	598	2811.775	35554.25	897	2834.059	35274.71	721	2866.153	34879.73	821
2784.342	35904.54	829	2811.859	35553.19	897	2834.1734	35273.281	212	2866.380	34876.97	675
2784.3420	35904.535	509	2811.906	35552.59	897	2834.4172	35270.247	207	2866.6249	34873.991	105
2785.132	35894.35	594	2812.0403	35550.898	682	2834.4172	35270.247	211	2867.3094	34865.666	212
2785.349	35891.55	1005	2812.213	35548.72	596	2834.7526	35266.075	592	2867.5617	34862.598	207
2786.172	35880.96	322	2812.307	35547.52	214	2835.240	35260.01	828	2867.8780	34858.753	208
2787.125	35868.68	509	2812.4999	35545.088	828	2835.4564	35257.321	12	2868.2147	34854.662	431
2787.9314	35858.312	212	2813.2864	35535.151	106	2835.6581	35254.813	398	2868.4541	34851.753	390
2787.9580	35857.969	212	2815.0174	35513.301	399	2835.9507	35251.176	212	2869.2283	34842.349	431
2788.1048	35856.081	106	2815.5066	35507.131	213	2836.3147	35246.653	720	2869.3078	34841.384	12
2788.628	35849.35	597	2815.6154	35505.759	823	2838.1195	35224.240	106	2869.8253	34835.102	431
2788.981	35844.82	826	2815.841	35502.92	314	2839.233	35210.43	722	2871.724	34812.07	506
2789.4762	35838.455	317	2816.690	35492.21	784	2839.9761	35201.214	720	2872.3339	34804.679	105
2789.6767	35835.879	212	2817.5038	35481.963	106	2840.4223	35195.684	12	2872.4986	34802.683	782
2789.8016	35834.274	682	2817.766	35478.66	896	2840.460	35195.22	784	2872.802	34799.01	822
2789.839	35833.79	898	2817.945	35476.41	209	2840.9374	35189.303	314	2873.5200	34790.314	398
2790.758	35822.00	315	2818.023	35475.43	722	2841.252	35185.41	787	2873.6543	34788.687	589
2790.808	35821.35	826	2818.596	35468.21	784	2842.793	35166.33	677	2874.1722	34782.419	12
2790.946	35819.58	598	2819.2753	35459.669	398	2842.911	35164.87	952	2874.8779	34773.881	431
2791.504	35812.42	827	2819.3026	35459.326	682	2843.055	35163.09	895	2875.249	34769.39	398
2791.591	35811.31	825	2820.192	35448.14	787	2843.2141	35161.126	786	2875.301	34768.76	818
2791.7858	35808.807	508	2820.530	35443.90	207	2843.625	35156.05	721	2875.3021	34768.751	203
2791.7858	35808.807	826	2820.815	35440.32	681	2843.6308	35155.974	105	2875.478	34766.62	893
2791.899	35807.35	315	2820.924	35438.95	720	2843.7959	35153.934	394	2876.400	34755.48	312
2792.3989	35800.946	213	2821.625	35430.14	397	2843.9212	35152.385	12	2876.7127	34751.704	589
2792.807	35795.71	320	2821.625	35430.14	679	2843.9764	35151.702	106	2877.3007	34744.602	203
2794.143	35778.60	318	2822.262	35422.14	823	2844.141	35149.67	589	2878.629	34728.57	952
2794.7021	35771.442	109	2822.808	35415.30	823	2844.279	35147.96	679	2878.685	34727.90	431
2794.852	35769.52	320	2823.2757	35409.427	106	2844.414	35146.30	896	2878.7606	34726.983	783
2795.0047	35767.570	13	2823.511	35406.48	395	2845.5476	35132.294	207	2878.9498	34724.701	207
2795.149	35765.72	722	2824.577	35393.12	432	2845.5947	35131.712	105	2879.102	34722.86	432
2795.268	35764.20	826	2824.706	35391.50	682	2845.7132	35130.249	205	2879.458	34718.57	401
2795.5400	35760.721	106	2824.953	35388.41	678	2845.8175	35128.962	432	2879.735	34715.23	591
2795.865	35756.56	392	2825.3228	35383.773	784	2846.4599	35121.035	825	2880.375	34707.52	674
2796.2163	35752.073	826	2825.5557	35380.856	108	2846.8298	35116.471	204	2880.5793	34705.058	105
2796.8676	35743.748	214	2825.6875	35379.206	13	2846.990	35114.50	432	2881.073	34699.11	431
2797.041	35741.53	596	2825.849	35377.19	432	2847.535	35107.77	432	2881.741	34691.07	1004
2797.375	35737.27	509	2825.997	35375.33	13	2848.627	35094.32	676	2881.805	34690.30	1004
2797.6308	35733.997	401	2826.4966	35369.079	211	2848.7147	35093.237	105	2881.805	34690.30	1004
2797.7753	35732.151	108	2826.740	35366.04	314	2851.5100	35058.837	593	2882.026	34687.64	1004
2798.967	35716.94	207	2827.5899	35355.404	396	2851.7969	35055.310	106	2882.633	34680.34	505
2799.1469	35714.643	107	2827.670	35354.40	678	2852.0148	35052.632	786	2883.7472	34666.935	674
2799.8403	35705.799	828	2827.8920	35351.627	13	2852.169	35050.74	395	2885.3466	34647.720	431
2800.4666	35697.814	828	2827.894	35351.60	721	2852.973	35040.86	206	2885.3466	34647.720	
2800.4000	35679.61	1005	2828.266	35346.95	680	2853.340	35036.35	823	2886.3160		824
2801.893	35663.437	13	2828.451	35346.93 35344.64	676	2853.540	35030.33	205		34636.084 34626.16	204
2803.6134	35657.749	509	2828.581	35344.04	787	2853.7717	35032.130	589	2887.143		948
2803.6134		106	2828.6784	35343.02 35341.800					2887.360	34623.56	503
	35646.218		2828.8082		825 108	2854.183	35026.00	1220	2887.539	34621.42	719 674
2804.8617	35641.880 35639.80	682		35340.178 35336.67		2857.694	34982.97	1221	2887.8051	34618.224	674
2805.025		828	2829.089	35336.67	828	2857.9930	34979.314	391	2887.958	34616.39	506
2805.759	35630.48	315	2829.3652	35333.221	826	2858.0894	34978.135	395	2888.497	34609.93	820
2805.8103	35629.831	211	2829.3652	35333.221	897	2858.677	34970.94	822	2889.864	34593.56	675
2806.073	35626.50	401	2830.054	35324.62	722	2858.8964	34968.262	12	2889.9000	34593.131	506
2806.9842	35614.931	108	2830.529	35318.69	396	2860.200	34952.32	432	2889.9879	34592.078	431

TABLE 4—Continued

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\\ \lambda_{vac}	σ (1)	No.	Avac	σ (- 1)	No.	\lambda_{vac}	σ	No.	λ_{air}	σ	No.
(Å)	(cm ⁻¹)		(Å)	(cm ⁻¹)		(Å)	(cm ⁻¹)		(Å)	(cm ⁻¹)	
2890.320	34588.10	951	2914.3034	34303.473	206	2931.8035	34098.722	673	2953.4857	33848.407	673
2890.411	34587.01	210	2914.513	34301.00	819	2931.8035	34098.722	712	2953.5391	33847.795	712
2890.824	34582.08	894	2914.649	34299.40	818	2933.804	34075.47	713	2953.6910	33846.055	710
2890.859	34581.65	1174	2915.271	34292.09	717	2934.371	34068.89	305	2953.9400	33843.202	10
2890.859	34581.65	820	2915.980	34283.75	707	2935.232	34058.89	709	2954.107	33841.29	715
2891.405	34575.13	206	2916.214	34281.00	713	2935.679	34053.71	1054	2954.3443	33838.570	1057
2891.692	34571.69	949	2917.872	34261.52	891	2936.0324	34049.611	504	2954.3443	33838.570	1109
2891.7084	34571.498	590	2918.0248	34259.727	1110	2936.0674	34049.205	717	2954.6523	33835.043	388
2891.844	34569.88	310	2918.1590	34258.151	713	2936.1174	34048.625	206	2954.929	33831.88	581
2891.9062	34569.133	495	2918.3528	34255.876	397	2936.4378	34044.910	713	2954.983	33831.26	305
2892.229 2892.4776	34565.27 34562.305	395 431	2918.672 2918.8169	34252.13	949	2936.749	34041.30	709	2954.983	33831.26	430
2892.4776	34550.92	891	2919.2133	34250.430 34245.779	713 718	2936.9034 2937.465	34039.513	10	2956.7014	33811.595	716
2893.7627	34546.957	105	2919.2133	34243.779	1172	2937.463	34033.00 34029.047	781	2956.8562 2957.3645	33809.825	670
2893.833	34546.12	716	2919.8405	34238.424	431	2938.040	34029.047	713 716	2957.3645 2957.4846	33804.014 33802.642	10
2893.8806	34545.549	205	2920.283	34233.23	401	2938.483	34020.34	710	2957.4846	33798.42	387 890
2894.5042	34538.107	390	2920.623	34229.25	495	2938.720	34021.22	305	2958.020	33796.42	950
2894.864	34533.82	675	2920.6906	34228.458	204	2938.851	34016.96	818	2958.301	33793.31	817
2894.957	34532.70	1173	2921.031	34224.47	713	2939.0534	34014.613	1110	2958.4528	33791.580	669
2895.0348	34531.777	204	2921.602	34217.78	309	2939.080	34014.30	715	2958.679	33789.00	1057
2896.444	34514.98	1001	2921.716	34216.45	507	2940.5877	33996.867	710	2959.3247	33781.624	711
2896.771	34511.08	1003	2921.771	34215.80	891	2940.6223	33996.466	502	2959.6802	33777.567	710
2897.457	34502.91	818	2922.2128	34210.630	717	2941.2348	33989.387	502	2959.9922	33774.007	670
2897.644	34500.69	501	2922.3791	34208.683	203	2941.270	33988.98	709	2960.2963	33770.537	397
2898.3506	34492.274	431	2922.6234	34205.823	713	2941.3427	33988.140	10	2960.499	33768.22	585
2898.542	34490.00	393	2923.2856	34198.075	1110	2941.524	33986.05	817	2960.5508	33767.634	498
2898.863	34486.18	312	2923.389	34196.86	391	2942.625	33973.33	710	2960.6594	33766.396	889
2899.2551	34481.513	891	2923.431	34196.38	497	2942.625	33973.33	818	2960.766	33765.18	715
2899.4146	34479.617	388	2923.4307	34196.378	710	2943.004	33968.96	710	2960.803	33764.76	1054
2899.681	34476.45	713	2923.8526	34191.444	672	2943.117	33967.65	717	2961.222	33759.98	1002
2900.938	34461.51	710	2923.9916	34189.819	669	2943.303	33965.50	497	2961.350	33758.52	202
2901.3807 2901.585	34456.253 34453.83	206 311	2924.355 2924.489	34185.57 34184.00	818 203	2943.5714 2944.525	33962.408	716	2961.449	33757.39	1056
2901.363	34451.21	208	2924.489	34184.00	712	2944.323 2945.0516	33951.41 33945.339	780	2961.711	33754.41	308
2901.803	34449.964	431	2925.096	34176.91	818	2945.0516	33945.339	1056 503	2962.1095 2962.407	33749.866	201
2901.9164	34449.19	506	2925.3577	34173.853	674	2945.105	33944.72	709	2962.407	33746.48 33745.86	1055 1056
2902.615	34441.60	718	2925.640	34170.56	396	2945.223	33943.36	710	2962.574	33744.58	1108
2904.0846	34424.173	674	2925.711	34169.73	588	2945.471	33940.50	950	2963.304	33736.26	1056
2904.1602	34423.277	399	2925.7845	34168.868	713	2945.601	33939.01	780	2963.544	33733.53	712
2904.531	34418.88	310	2925.8989	34167.532	206	2945.694	33937.94	816	2963.642	33732.41	383
2905.181	34411.18	821	2926.019	34166.13	202	2945.6971	33937.901	399	2963.692	33731.85	711
2905.364	34409.02	952	2926.246	34163.48	717	2945.860	33936.02	1109	2964.1330	33726.828	815
2905.505	34407.35	816	2926.5522	34159.905	203	2946.099	33933.27	202	2964.215	33725.89	587
2905.571	34406.56	1110	2926.6153	34159.169	713	2946.975	33923.19	500	2965.2544	33714.073	10
2906.4145	34396.578	495	2926.694	34158.25	717	2947.1207	33921.508	1110	2965.2544	33714.073	669
2906.583	34394.58	309	2926.769	34157.38	892	2947.253	33919.98	203	2965.584	33710.33	430
2906.741	34392.72	503	2927.549	34148.27	1109	2947.361	33918.74	710	2965.8039	33707.827	501
2907.5174	34383.531	674	2927.8815	34144.397	396	2947.3621	33918.730	386	2965.836	33707.46	715
2907.792	34380.28	894	2928.1024	34141.821	309	2947.8760	33912.817	10	2966.076	33704.73	709
2908.8560	34367.710	431	2928.218	34140.47	820	2948.4336	33906.403	669	2966.1974	33703.355	1055
2909.113 2909.3147	34364.67 34362.291	713	2928.7497 2928.805	34134.276 34133.63	386	2948.724	33903.07	1109	2966.1974	33703.355	499
2909.3147	34362.291 34346.37	506 497	2928.805 2929.0071	34133.63 34131.276	890 10	2948.7270	33903.030	307	2966.198	33703.35	1055
2910.003	34343.25	675	2929.0071	34131.276	713	2948.9497 2948.985	33900.470 33900.06	307	2966.2622	33702.619	307
2910.928	34343.23	713	2929.1084	34130.096	1110	2948.983	33892.07	305	2966.598	33698.80	1057
2911.230	34339.06	816	2929.117	34128.584	715	2949.702	33892.07	305 710	2966.685 2966.898	33697.82 33695.39	947
2912.1573	34331.00	10	2929.2381	34127.82	713	2950.2413	33885.629	710	2966.898 2966.8986	33695.39 33695.390	10 1056
2912.2567	34327.580	203	2929.6179	34124.160	204	2950.917	33877.87	711	2967.173	33692.27	1056 500
2912.273	34327.39	718	2930.393	34115.13	1109	2951.3585	33872.803	498	2968.332	33679.12	497
2913.059	34318.13	707	2931.413	34103.26	505	2951.5490	33870.616	1171	2968.4779	33677.465	390
2913.690	34310.69	710	2931.481	34102.47	817	2952.196	33863.19	709	2968.566	33676.46	709
2914.1966	34304.730	388	2931.658	34100.42	305	2952.564	33858.97	306	2969.359	33667.47	581
		,			'						

TABLE 4—Continued

:											
λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
: (Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm ⁻¹)	
•											
2969.3598 2969.4746 2970.0994 2970.1060	33667.463	11	2987.056	33468.02	1108	3008.495	33229.53	946	3037.162	32915.90	779
2969.4746	33666.161	103	2987.2905	33465.388	712	3008.678	33227.51	949	3037.3887	32913.438	9
2970.0994	33659.079	10	2987.2906	33465.387	103	3008.789	33226.28	708	3037.542	32911.78	1050
	33659.004	396	2987.429	33463.84	498	3009.0932	33222.922	493	3037.685	32910.23	582
2970.1181	33658.867	11	2988.187	33455.35	711	3009.5693	33217.666	103	3037.7796	32909.203	104
2970.360	33656.13	582	2988.4713	33452.166	200	3009.681	33216.43	1055	3037.782	32909.18	1218
2970.360	33656.13	669	2988.783	33448.68	814	3010.168	33211.06	579	3038.313	32903.43	807
2970.917	33649.82	810	2988.8826	33447.563	382	3011.271	33198.89	1053	3038.974	32896.27	814
2970.971	33649.21	1057	2988.9432	33446.885	670	3011.474	33196.66	585	3039.3171	32892.556	494
2971.092	33647.83	581	2989.162	33444.44	810	3011.4810	33196.580	670	3039.599	32889.51	808
2971.760	33640.27	1055	2989.487	33440.80	1055	3011.8849	33192.129	390	3040.4273	32880.546	103
2971.936	33638.28	308	2990.3915	33430.686	669	3012.4414	33185.997	495	3040.759	32876.96	1170
2972.2784	33634.405	307	2990.600	33428.36	947	3012.933	33180.58	1053	3040.956	32874.83	578
2972.416	33632.85	1053	2991.6314	33416.832	495	3012.933	33180.58	810	3040.956	32874.83	806
2972.774	33628.80	1056	2991.763	33415.36	810	3013.489	33174.46	1053	3041.029	32874.04	586
2972.856	33627.87	1057	2991.828	33414.64	581	3014.099	33167.75	887	3041.6372	32867.467	200
2973.1324	33624.744	10	2991.904	33413.79	812	3014.1734	33166.929	104	3041.7388	32866.370	103
2973.2354	33623.579	10	2993.281	33398.42	1053	3014.315	33165.37	496	3041.891	32864.73	1166
2973.910	33615.95	715	2993.792	33392.72	1053	3015.9191	33147.732	493	3042.0196	32863.336	103
2974.483	33609.48	714	2994.074	33389.57	1055	3016.1847	33144.813	103	3042.6649	32856.367	103
2974.7778	33606.146	1056	2994.427	33385.64	9	3017.251	33133.10	809	3042.841	32854.47	1000
2974.7778	33606.146	711	2994.5022	33384.797	11	3017.4176	33131.271	807	3042.841	32854.47	810
2975.287	33600.39	498	2995.2499	33376.463	576	3017.6272	33128.969	9	3043.796	32844.16	1217
2975.648	33596.32	587	2995.475	33373.95	1053	3017.861	33126.40	807	3044.103	32840.84	1107
2976.1266	33590.916	386	2995.594	33372.63	583	3018.1351	33123.395	494	3044.217	32839.62	1048
2976.506	33586.64	200	2995.830	33370.00	889	3018.248	33122.16	584	3044.256	32839.20	806
2976.5500	33586.138	711	2995.956	33368.60	708	3018.701	33117.19	707	3044.236	32839.20	102
2976.585	33585.74	1055	2996.3857	33363.812	390	3018.9830	33114.092	103	3045.5887	32830.326	493
2976.907	33582.11	710	2996.570	33361.76	708	3019.221	33111.48	1053	3045.746	32824.823	381
2978.050	33569.22	496	2997.526	33351.12	712	3019.2875	33110.752	494	3043.746		
	33567.57	379	2998.326	33342.22	587	3019.2873				32814.95	1051
2978.197							33103.75	944	3046.644	32813.46	810
2978.282	33566.61	383	2998.436	33341.00	711	3020.4907	33097.564	9	3046.803	32811.74	668
2978.502	33564.13	582	2998.478	33340.53	708	3020.639	33095.94	9	3046.9241	32810.440	493
2978.555	33563.53	1053	2998.930	33335.51	1050	3021.073	33091.19	9	3047.0493	32809.091	885
2978.674	33562.19	709	2998.930	33335.51	1053	3023.426	33065.43	943	3047.205	32807.42	779
2979.408	33553.92	709	2999.1882	33332.637	496	3024.0327	33058.799	11	3047.454	32804.73	804
2980.211	33544.88	1108	2999.5118	33329.042	103	3024.793	33050.49	812	3047.605	32803.11	9
2980.409	33542.65	708	3000.4511	33318.608	200	3025.2800	33045.169	102	3048.001	32798.85	585
2980.5324	33541.265	669	3000.577	33317.21	1050	3025.6364	33041.277	493	3049.144	32786.55	580
2980.592	33540.59	501	3000.9478	33313.094	9	3025.8424	33039.027	9	3049.3528	32784.308	809
2981.140	33534.43	715	3001.658	33305.21	945	3026.4619	33032.265	103	3049.538	32782.32	1048
2981.4450	33530.998	11	3001.787	33303.78	585	3027.589	33019.97	580	3050.770	32769.08	998
2981.722	33527.88	714	3001.827	33303.34	950	3027.700	33018.76	495	3052.491	32750.60	809
2981.8509	33526.434	307	3001.924	33302.26	889	3029.074	33003.78	804	3053.0656	32744.441	386
2981.8509	33526.434	670	3003.0307	33289.989	103	3029.2340	33002.038	200	3053.4283	32740.552	808
2981.970	33525.09	500	3003.251	33287.55	1055	3030.1483	32992.080	493	3053.4535	32740.282	104
2982.015	33524.59	1054	3003.338	33286.58	888	3030.6038	32987.122	381	3053.755	32737.05	1166
2982.228	33522.19	889	3003.687	33282.72	1050	3030.759	32985.43	888	3053.856	32735.97	582
2982.380	33520.49	1056	3004.1136	33277.989	494	3030.959	32983.26	380	3055.2624	32720.898	199
2983.419	33508.81	494	3004.6269	33272.304	201	3031.2125	32980.498	493	3055.2935	32720.565	808
2983.570	33507.12	9	3005.006	33268.11	707	3031.330	32979.22	814	3055.357	32719.89	1217
2983.7754	33504.811	671	3005.3027	33264.823	494	3031.472	32977.68	579	3055.6817	32716.408	578
2983.857	33503.90	1055	3005.726	33260.14	579	3031.6366	32975.884	103	3056.101	32711.92	1217
2984.558	33496.03	709	3005.966	33257.48	815	3031.712	32975.06	810	3056.101	32711.92	813
2984.7681	33493.668	102	3006.539	33251.14	1053	3031.860	32973.45	1216	3056.2418	32710.413	578
2984.952	33491.60	582	3006.596	33250.51	1052	3032.051	32971.38	886	3056.580	32706.79	807
2985.168	33489.18	1056	3006.608	33250.38	586	3033.098	32960.00	386	3057.4458	32697.532	101
2985.7281	33482.900	576	3007.1452	33244.442	199	3033.796	32952.41	778	3057.584	32696.05	1046
2985.901	33480.96	1055	3007.2824	33242.925	11	3034.479	32945.00	201	3057.718	32694.62	583
2986.4559	33474.740	11	3007.471	33240.84	379	3034.5366	32944.372	812	3057.7884	32693.869	102
2986.6546	33472.513	499	3008.1382	33233.468	9	3034.592	32943.77	810	3057.7884	32692.06	1047
2987.032	33468.28	585	3008.483	33229.66	1053	3035.7357	32931.360	815	3058.038	32691.20	1047
2,07.002	22.30,20	202	2000.100	22227.00	- 355	2020.1001	52,51.500	015	5050.050	32071.20	107/

TABLE 4—Continued

``						ADLL 4	—Commuea					
$\vdots \frac{1}{2^{n}} \frac{1}{\lambda}$	vac (1)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
S 30	058.078	32690.77	1218	3078.502	32473.90	885	3099.122	32257.84	575	3119.4949	32047.179	489
G 30	058.363	32687.73	581	3079.610	32462.22	1219	3099.385	32255.10	302	3119.4949	32047.179	489 196
¹ 3(058.4914	32686.354	1107	3079.833	32459.86	304	3099.502	32253.89	885	3120.019	32040.290	577
J 1	059.0858	32680.004	9	3079.9885	32458.226	1107	3099.670	32252.14	1214	3120.2322	32039.607	660
	059.530	32675.26	1051	3080.1085	32456.961	660	3099.670	32252.14	199	3120.4354	32037.521	489
	060.5378	32664.500	885	3080.356	32454.35	581	3099.8945	32249.803	101	3120.4334	32037.321	1041
	060.626	32663.56	809	3080.590	32451.89	1047	3099.9682	32249.037	101	3121.491	32026.69	805
	060.7766	32661.952	808	3080.879	32448.84	1217	3100.3035	32245.549	101	3121.777	32023.75	1041
	060.9833	32659.746	199	3081.0014	32447.555	942	3100.6650	32241.790	101	3122.2947	32018.443	655
	061.108	32658.42	886	3081.223	32445.22	812	3100.8363	32240.009	490	3122.324	32018.14	997
	061.162	32657.84	583	3081.293	32444.49	885	3101.0024	32238.282	666	3122.536	32015.97	1214
	061.969	32649.23	1216	3081.700	32440.20	1218	3101.6001	32232.069	1041	3122.668	32014.62	662
	062.164	32647.15	886	3081.831	32438.82	197	3102.259	32225.22	302	3123.129	32009.89	1215
	062.826	32640.10	1048	3083.057	32425.92	1217	3102.6367	32221.301	102	3123.199	32009.17	490
	062.874	32639.59	884	3083.057	32425.92	886	3102.763	32219.99	812	3123.265	32008.50	302
	063.151	32636.63	304	3083.150	32424.94	492	3102.8692	32218.887	1041	3123.351	32007.62	428
30	063.9295	32628.343	387	3083.490	32421.37	1046	3103.769	32209.55	385	3123.552	32005.56	667
30	064.020	32627.38	813	3083.7409	32418.731	101	3103.8524	32208.681	378	3124.093	32000.01	429
30	064.695	32620.19	1044	3085.291	32402.44	804	3103.8524	32208.681	997	3124.886	31991.89	1041
30	064.837	32618.68	1219	3086.524	32389.50	1215	3103.855	32208.65	997	3125.038	31990.34	197
30	066.4789	32601.217	666	3087.434	32379.95	1044	3103.982	32207.34	1217	3125.269	31987.97	666
30	066.486	32601.14	1215	3088.172	32372.22	1041	3105.556	32191.01	577	3125.646	31984.11	424
30	066.689	32598.98	884	3088.2145	32371.771	1215	3105.659	32189.95	196	3125.646	31984.11	666
30	066.813	32597.67	1049	3088.244	32371.46	1044	3106.512	32181.11	1046	3125.6505	31984.068	101
30	066.9970	32595.710	1107	3088.346	32370.39	1044	3106.539	32180.83	491	3125.6825	31983.741	489
30	067.1183	32594.421	200	3088.761	32366.04	1215	3107.333	32172.61	1041	3125.694	31983.62	1106
30	067.2439	32593.086	101	3089.500	32358.30	655	3107.623	32169.60	1217	3126.1765	31978.687	1041
30	067.9482	32585.604	665	3089.623	32357.01	1216	3107.976	32165.95	576	3126.754	319,72.78	1106
	068.1735	32583.212	199	3090.2048	32350.922	666	3107.976	32165.95	662	3126.837	31971.93	574
	068.301	32581.86	1045	3090.729	32345.44	1044	3108.917	32156.21	805	3127.125	31968.99	775
	068.451	32580.26	1043	3091.002	32342.58	1048	3108.957	32155.80	384	3128.8980	31950.873	198
	068.727	32577.34	807	3091.090	32341.66	1045	3110.1950	32143.001	387	3129.3331	31946.431	195
	068.940	32575.07	197	3091.420	32338.21	1166	3110.2759	32142.165	1045	3129.802	31941.65	706
	069.332	32570.91	812	3091.5765	32336.569	101	3110.663	32138.16	1215	3130.205	31937.53	1213
	069.440	32569.77	1044	3091.688	32335.40	804	3110.8360	32136.378	657	3131.235	31927.03	303
	070.034	32563.47	808	3091.875	32333.45	1218	3110.928	32135.43	657	3131.455	31924.78	429
	070.226	32561.43	668	3092.079	32331.31	1217	3111.6814	32127.647	574	3132.5180	31913.952	1042
	070.540	32558.10	383	3092.482	32327.10	1217	3112.0772	32123.561	882	3132.649	31912.62	1106
	070.694	32556.47	1046	3092.7817	32323.969	102	3112.238	32121.90	879	3133.170	31907.31	1169
	070.785	32555.50	1166	3093.310	32318.45	578	3112.836	32115.73	304	3133.963	31899.24	425
	071.1251	32551.898 32550.29	1217	3093.529 3093.8052	32316.16	304	3113.433	32109.57	1168	3134.1100	31897.741	101
	071.277		884	3093.8052	32313.276 32312.518	199	3113.5881	32107.974	655	3134.249	31896.33	1165
)71.428)71.679	32548.69 32546.03	806 812	3093.8777	32312.318	578	3113.666	32107.17	429	3134.412	31894.67	661
	072.046	32542.14	1048	3094.291	32308.20	1214 1218	3113.822 3114.066	32105.56 32103.05	1165 196	3134.639	31892.36	665
	72.040	32539.52	811	3094.871	32302.15	665	3114.297	32103.03	1217	3134.934 3135.4573	31889.36 31884.035	706
	72.487	32537.47	1218	3094.8997	32301.848	655	3115.010	32093.32	664	3135.5907	31882.679	1041 662
	73.235	32529.55	999	3095.216	32298.55	805	3115.6572	32086.652	942	3135.8606	31879.935	489
	773.233	32522.82	942	3095.267	32298.02	1043	3115.858	32084.58	1214	3136.5008	31873.428	1045
	73.9785	32521.683	666	3095.2670	32298.016	662	3115.870	32084.46	884	3136.761	31870.78	657
	74.1481	32519.889	885	3096.045	32289.90	660	3116.193	32081.14	302	3137.021	31868.14	706
	74.694	32514.12	580	3096.616	32283.95	1217	3116.280	32080.24	429	3137.021	31868.14	770
	75.7196	32503.274	101	3096.8764	32281.231	661	3116.394	32079.07	578	3137.781	31860.42	775
	75.996	32500.35	1048	3096.877	32281.22	809	3116.474	32078.24	302	3138.398	31854.16	197
	76.277	32497.38	808	3096.975	32280.20	1043	3116.6315	32076.621	101	3138.5145	31852.979	657
	76.759	32492.29	806	3097.494	32274.80	429	3116.997	32072.86	1045	3139.023	31847.82	1215
	77.013	32489.61	998	3097.780	32271.82	1214	3117.412	32068.59	1214	3139.606	31841.91	490
	77.548	32483.96	1217	3097.959	32269.95	1216	3117.6401	32066.245	102	3139.6601	31841.357	419
	77.6359	32483.036	578	3098.1893	32267.552	666	3117.977	32062.78	1217	3139.918	31838.74	664
	78.0157	32479.028	102	3098.548	32263.82	884	3118.164	32060.86	706	3140.3898	31833.958	1042
	78.354	32475.46	1218	3098.970	32259.42	304	3119.038	32051.87	665	3141.513	31822.58	1214
	78.4322	32474.634	386	3098.998	32259.13	1214	3119.181	32050.40	1214	3141.886	31818.80	573
						'			. 1			5.5

TABLE 4—Continued

:											
λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
3142.4539	31813.049	428	3158.567	31650.76	1039	3174.218	31494.71	1042	<u> </u>		1204
3142.456	31813.03	1041	3159.0211	31646.215	879	3175.3119	31483.861	194	3192.406 3192.4093	31315.28 31315.251	1204 301
3142.8889	31808.646	377	3159.123	31645.19	1213	3175.312	31483.86	1164	3192.5056	31314.306	659
3142.895	31808.58	1165	3159.250	31643.92	573	3175.381	31483.18	706	3192.8004	31311.415	419
3142.944	31808.09	996	3159.435	31642.07	665	3175.4447	31482.544	419	3192.8433	31310.994	879
3143.2426	31805.067	7	3160.1965	31634.445	1042	3175.984	31477.20	704	3193.2259	31307.243	7
3143.9905	31797.501	1042	3160.243	31633.98	706	3176.283	31474.24	1042	3193.2999	31306.518	423
3144.428	31793.08	658	3160.3415	31632.993	486	3176.3593	31473.480	571	3193.730	31302.30	1164
3144.4967	31792.383	1041	3160.6574	31629.832	419	3177.071	31466.43	194	3194.335	31296.37	769
3144.923	31788.07	486	3160.7740	31628.665	423	3178.0128	31457.105	420	3194.4238	31295.503	419
3145.0570	31786.719	879	3160.9182	31627.222	424	3178.170	31455.55	487	3194.5938	31293.838	704
3145.165	31785.63	661	3161.3710	31622.692	195	3178.5364	31451.923	879	3195.070	31289.17	1203
3146.270	31774.46	1167	3161.5512	31620.890	486	3178.607	31451.22	1039	3195.230	31287.61	1210
3146.469	31772.45	424	3161.9463	31616.939	424	3178.657	31450.73	770	3195.9594	31280.467	486
3146.604	31771.09	1169	3162.3300	31613.103	423	3178.9622	31447.711	486	3196.1226	31278.870	704
3146.895	31768.15	655	3162.3300	31613.103	660	3179.047	31446.87	1206	3196.549	31274.70	1033
3147.2913	31764.154	663	3162.331	31613.09	423	3179.4785	31442.604	195	3196.626	31273.94	777
3147.601	31761.03	1041	3162.516	31611.24	661	3180.094	31436.52	1211	3196.9274	31270.996	419
3147.750	31759.53	770	3162.568	31610.72	1033	3180.2234	31435.240	419	3196.9868	31270.415	8
3147.7948	31759.073	883	3163.114	31605.27	196	3180.479	31432.71	777	3197.310	31267.25	1209
3148.165	31755.34 31753.83	667 706	3163.372 3163.8713	31602.69	657	3180.7554	31429.982	7	3197.5140	31265.259	1204
3148.315 3148.4058	31753.83	489	3163.8713	31597.703 31593.461	659	3181.044 3181.237	31427.13	375	3197.749	31262.96	1040
3148.4654	31752.309	425	3164.811	31588.32	427 664	3181.5194	31425.22 31422.435	1208	3198.033	31260.19	1040
3148.6809	31750.136	303	3164.916	31587.27	657	3181.749	31422.433	571 1210	3198.2642	31257.926	571
3149.495	31741.93	880	3165.0036	31586.399	419	3181.8472	31420.17	704	3198.476 3199.4996	31255.86 31245.857	1037
3149.723	31739.63	1212	3165.077	31585.67	489	3181.9114	31418.564	419	3199.5304	31245.556	7 420
3150.201	31734.82	425	3165.128	31585.16	1210	3181.924	31418.44	941	3199.653	31243.336	1201
3150.240	31734.42	662	3165.161	31584.83	301	3182.0555	31417.141	423	3199.938	31241.58	420
3150.3068	31733.750	1045	3165.262	31583.82	771	3182.225	31415.47	881	3200.3159	31237.887	656
3150.760	31729.19	1324	3165.8577	31577.878	424	3182.336	31414.37	1033	3200.4716	31236.368	419
3151.102	31725.74	1169	3165.934	31577.12	488	3182.808	31409.71	1165	3200.474	31236.34	426
3151.8656	31718.057	7	3166.2444	31574.021	419	3182.974	31408.08	301	3200.7844	31233.315	8
3152.0045	31716.659	1208	3166.336	31573.11	487	3182.974	31408.08	704	3201.446	31226.86	1037
3152.969	31706.96	1106	3166.4355	31572.116	573	3183.109	31406.74	880	3201.613	31225.23	1038
3153.056	31706.08	300	3166.5867	31570.608	1207	3183.5751	31402.145	486	3202.5558	31216.040	992
3153.056	31706.08	880	3166.592	31570.56	1207	3184.107	31396.90	1204	3202.657	31215.05	195
3153.1997	31704.637	425	3166.592	31570.56	301	3184.2012	31395.971	775	3202.947	31212.23	704
3153.3136	31703.492	424	3166.861	31567.87	1289	3184.6174	31391.868	426	3203.831	31203.62	1033
3154.110	31695.49	196	3166.974	31566.75	879	3184.618	31391.86	419	3204.305	31199.00	1105
3154.3851	31692.723	300	3167.782	31558.70	300	3184.8947	31389.135	7	3204.462	31197.47	1208
3154.4295	31692.277	1166	3167.9209	31557.313	1042	3186.254	31375.74	1167	3205.210	31190.19	705
3154.433	31692.24	771	3168.1422	31555.108	704	3186.787	31370.50	1033	3205.3980	31188.362	419
3154.4966	31691.603	425	3168.521	31551.34	771	3186.8096	31370.275	301	3205.778	31184.67	567
3155.118	31685.36	425	3168.8542 3168.942	31548.019	424	3186.943	31368.96	658	3206.855	31174.19	573
3155.2934	31683.600	488		31547.14	424	3186.943	31368.96	706	3207.0752	31172.052	423
3155.7959 3156.2738	31678.556 31673.759	486	3169.335 3169.335	31543.23 31543.23	1204 198	3187.158 3187.6783	31366.85	704	3207.188	31170.96	1033
3156.2738	31672.28	1042 706	3170.131	31545.25	661		31361.726	195	3207.243	31170.42	1036
3156.4630	31671.861	879	3171.348	31523.21	195	3188.0173 3188.494	31358.391 31353.70	656 657	3207.5817	31167.130	1035
3156.895	31667.53	1106	3171.3513	31523.179	995	3188.530	31353.70	i i	3207.656	31166.41	777
3157.0362	31666.111	424	3171.6623	31520.088	424	3188.5675	31352.980	1204 423	3208.4706 3208.762	31158.495 31155.67	1204 1034
3157.1432	31665.037	377	3171.764	31519.08	767	3188.8191	31350.507	423	3208.876		
3157.204	31664.43	1211	3172.0383	31516.352	488	3190.0163	31338.741	573	3209.105	31154.56 31152.34	1206 299
3157.289	31663.58	665	3172.0837	31515.901	300	3190.6495	31332.522	994	3209.103	31152.54	1204
3157.409	31662.37	880	3172.1121	31515.619	301	3190.8167	31330.880	992	3209.2982	31150.461	704
3157.4513	31661.948	658	3172.290	31513.85	663	3190.932	31329.75	660	3210.1865	31141.841	572
3157.8850	31657.599	1214	3172.500	31511.77	1212	3191.1116	31327.985	571	3210.2291	31141.428	423
3157.8850	31657.599	428	3173.239	31504.43	775	3191.193	31327.19	880	3210.383	31139.94	1161
3157.9873	31656.574	423	3173.4063	31502.766	704	3191.374	31325.41	1207	3210.643	31137.41	776
3158.213	31654.31	424	3173.6065	31500.779	704	3191.499	31324.18	777	3210.8292	31135.608	420
3158.391	31652.53	1169	3173.6878	31499.972	656	3191.6592	31322.610	8	3211.137	31132.62	193
		'						1			

TABLE 4—Continued

•						ADLL T	—Commuea					
94.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ_{vac} (Å)	σ (cm ⁻¹)	No.	λ _{υας} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
g.	3211.4828	31129.271	426	3229.7938	30952.793	1201	3250.3969	30756.602	774	3306.5851	30233.978	870
994ApJS	3211.6075	31128.063	704	3229.8710	30952.054	1201	3250.6235	30754.458	298	3307.0053	30230.136	874
ر 4	3211.6774	31127.385	1204	3229.955	30951.25	567	3250.7590	30753.176	1104	3307.2337	30228.049	1102
2	3211.8751	31125.469	1204	3229.9909	30950.905	993	3252.4289	30737.387	1201	3307.6862	30223.914	803
•	3211.9873	31124.382	422	3230.096	30949.90	100	3252.9144	30732.799	567	3310.3412	30199.674	877
	3211.995	31124.31	1203	3230.1563	30949.320	420	3253.5990	30726.333	1162	3310.4907	30198.310	1159
	3212.160	31122.71	1210	3230.2072	30948.832	422	3253.8239	30724.209	1201	3312.2216	30182.530	876
	3212.320	31121.16	1163	3230.214	30948.77	1161	3253.8239	30724.209	566	3314.0663	30165.730	1248
	3212.557	31118.86	1161	3230.847	30942.70	1035	3253.9428	30723.087	570	3314.4428	30162.303	566
	3212.673	31117.74	1201	3230.9636	30941.587	421	3254.3619	30719.130	1104	3314.7413	30159.587	1160
	3213.674	31108.05	656	3231.5794	30935.691	192	3254.7233	30715.719	653	3317.1209	30137.952	372
	3213.756	31107.25	880	3232.161	30930.12	1036	3256.7007	30697.070	1201	3319.2531	30118.593	877
	3214.0126	31104.770	1204	3232.161	30930.12	571	3257.212	30692.25	100	3320.6430	30105.987	483
	3214.0126	31104.770	420	3232.703	30924.94	773	3257.2345	30692.039	878	3320.7738	30104.801	803
	3214.0616	31104.296	422	3232.796	30924.05	776	3257.5927	30688.665	295	3322.4729	30089.406	803
	3214.3958	31101.062	7	3232.937	30922.70	1161	3259.9895	30666.103	421	3323.7364	30077.968	768
	3214.6127	31098.964	376	3233.0518	30921.603	1104	3260.2672	30663.491	566	3324.3703	30072.233	1102
	3215.215	31093.14	1203	3233.2795	30919.425	374	3261.3256	30653.540	1205	3324.5366	30070.729	484
	3215.4087	31091.265	655	3233.705	30915.36	1034	3262.0084	30647.124	1202	3324.7821	30068.509	872
	3215.8334	31087.159	1205	3233.9675	30912.848	422	3263.3694	30634.343	377	3325.4647	30062.337	484
	3215.9380	31086.148	420	3234.450 3234.6132	30908.24	1039	3264.5122	30623.619	295	3327.4957	30043.988	483
	3215.985 3215.985	31085.69 31085.69	1203 658	3234.6132	30906.677 30899.89	8 654	3264.6946 3265.0469	30621.908 30618.604	421	3328.8659	30031.622	1102
	3215.983	31085.06	1164	3235.5885	30897.361	653	3265.5433	30613.950	8 653	3329.5229 3331.6111	30025.696 30006.877	990
	3216.031	31078.61	1039	3235.813	30895.22	772	3265.6166	30613.263	297	3331.7750	30005.401	484 377
	3217.3772	31073.31	421	3236.2223	30891.310	7	3268.2329	30588.757	298	3334.2177	29983.420	483
	3219.368	31053.03	653	3236.418	30889.44	1035	3269.2290	30579.437	1202	3334.2718	29982.933	1102
	3219.5821	31050.964	420	3237.2226	30881.765	194	3270.9999	30562.882	297	3335.5111	29971.793	191
	3219.7662	31049.189	8	3237.497	30879.15	1039	3271.4847	30558.353	1160	3335.7155	29969.957	652
	3219.8046	31048.819	422	3238.318	30871.32	993	3271.6835	30556.496	191	3335.7685	29969.481	768
	3221.644	31031.09	1203	3239.0119	30864.706	373	3272.5964	30547.973	193	3336.2567	29965.095	1103
	3221.871	31028.91	776	3239.0421	30864.418	374	3274.4508	30530.673	1202	3337.6651	29952.451	649
	3221.9162	31028.470	420	3239.307	30861.89	1038	3276.4704	30511.855	295	3338.6208	29943.878	803
	3222.059	31027.10	567	3239.344	30861.54	774	3278.7313	30490.816	566	3339.1946	29938.732	483
	3222.0671	31027.017	420	3239.4329	30860.695	421	3279.7310	30481.522	877	3339.5768	29935.306	940
	3223.084	31017.23	1164	3239.4574	30860.462	421	3280.2604	30476.603	1104	3340.5643	29926.457	372
	3223.255	31015.58	1037	3239.6588	30858.543	772	3282.8903	30452.189	1160	3341.9060	29914.443	650
	3223.2675	31015.463	193	3240.0123	30855.176	992	3284.5875	30436.455	297	3342.2144	29911.683	371
	3223.437	31013.83	704	3240.112	30854.23	422	3285.1933	30430.842	803	3342.2918	29910.990	766
	3223.478	31013.44	1105	3240.363	30851.84	1250	3286.0151	30423.232	295	3343.2394	29902.512	293
	3223.843	31009.93	100	3240.970	30846.06	1201	3286.4448	30419.254	1202	3343.7605	29897.852	803
	3224.9240	30999.532	775	3241.508	30840.94	100	3286.7530	30416.402	297	3344.9393	29887.316	1200
	3225.051 3225.6074	30998.31 30992.964	1104 485	3241.508 3241.682	30840.94 30839.28	1037 1161	3287.0897 3288.6490	30413.287 30398.867	803	3346.9345	29869.500	292
	3225.7872	30992.904	419	3242.2578	30833.808	569	3288.9653	30395.943	377 295	3347.9255 3349.7243	29860.659 29844.624	370 766
	3226.0135	30989.063	568	3242.986	30826.88	1038	3289.4351	30391.602	768	3351.5219	29828.618	294
	3226.436	30985.01	1038	3243.1084	30825.721	485	3290.7122	30379.808	295	3351.7440	29826.641	649
	3226.7146	30982.330	8	3243.3996	30822.953	1202	3290.9883	30377.259	298	3353.2603	29813.154	483
	3226.720	30982.28	941	3243.8749	30818.437	1205	3292.0208	30367.732	1160	3354.0594	29806.052	766
	3226.893	30980.62	1037	3244.1876	30815.467	420	3292.5895	30362.487	297	3355.2277	29795.673	1102
	3227.0612	30979.003	420	3244.547	30812.05	1038	3293.1406	30357.406	193	3356.3125	29786.043	98
	3227.269	30977.01	1249	3245.375	30804.19	704	3296.4638	30326.804	566	3356.4015	29785.254	1409
	3227.7955	30971.955	421	3245.410	30803.86	1201	3298.1319	30311.466	295	3356.4015	29785.254	371
	3227.9953	30970.038	774	3245.9657	30798.587	100	3301.2195	30283.117	768	3356.6831	29782.755	982
	3228.2490	30967.605	421	3246.0048	30798.216	8	3303.5296	30261.941	296	3359.4864	29757.904	98
	3228.396	30966.19	776	3246.4802	30793.706	567	3303.5689	30261.581	877	3359.8088	29755.048	1102
	3228.494	30965.25	1201	3246.9607	30789.150	298	3305.8521	30240.681	803	3360.9248	29745.168	374
	3228.5975	30964.262	1104	3247.2100	30786.786	567	3305.9708	30239.596	297	3361.9487	29736.110	766
	3228.8987	30961.374	421	3247.2801	30786.121	421	3306.0809	30238.589	870	3362.2681	29733.285	872
	3229.1203	30959.249	8	3248.2042	30777.363	421	3306.3396	30236.223	991	3364.2611	29715.671	939
	3229.570	30954.94	704	3249.1911	30768.015	565	3306.3548	30236.084	297	3366.7854	29693.392	647
	3229.613	30954.53	656	3249.5064	30765.030	193	3306.4818	30234.922	1160	3366.8639	29692.700	292

TABLE 4—Continued

:											
λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
. (Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})	
3367.15	40 29690.142	374	3416.2800	29263.212	988	3471.3431	28799.047	265			702
3367.15 3367.21 3369.13 3369.54		1198	3417.2563	29254.852	99	3473.2970	28782.847	365 983	3522.8976 3523.1748	28377.611 28375.378	703 1156
3369.13		484	3417.8406	29249.851	288	3473.6842	28779.639	1339	3523.1748	28374.300	699
3369.54		649	3418.1643	29247.081	1342	3475.4502	28765.015	6	3524.0742	28368.137	560
3370.78		649	3418.5071	29244.148	288	3475.6516	28763.348	285	3524.2398	28366.804	365
3372.07		289	3419.1450	29238.692	871	3475.8634	28761.596	481	3524.5188	28364.558	646
3372.34		875	3419.6939	29233.999	765	3476.3444	28757.616	1340	3525.8535	28353.821	702
3373.87		650	3422.4924	29210.096	986	3476.7018	28754.660	6	3526.0408	28352.315	6
3374.19		294	3422.6560	29208.700	291	3476.8543	28753.399	562	3526.1658	28351.310	97
3376.49		1343	3424.2844	29194.810	288	3477.0038	28752.163	372	3526.2380	28350.730	700
3378.67		648	3425.0100	29188.625	987	3477.8509	28745.160	287	3526.3814	28349.577	699
3378.73		371	3426.3243	29177.429	369	3478.3698	28740.872	480	3526.4675	28348.885	364
3379.01		291	3426.3825	29176.934	287	3478.6229	28738.781	985	3526.6746	28347.220	699
3380.11		649	3426.3825	29176.934	98	3479.6774	28730.072	1323	3527.7928	28338.235	699
3380.74		939	3426.6280	29174.843	287	3480.3375	28724.623	1032	3527.8898	28337.456	645
3381.33		764	3426.6659	29174.521 29171.779	1101	3481.5635	28714.508	366	3528.2384	28334.656	478
3382.40 3383.69		290 291	3426.9880 3427.1195	29171.779 29170.659	99 288	3483.0071 3484.8506	28702.607	97	3529.5242	28324.334	981
3383.97		289	3428.0097	29170.039	1100	3484.9785	28687.424 28686.371	480 370	3529.8198	28321.962	699
3385.43		873	3428.1927	29161.528	288	3485.3402	28683.394	285	3530.3868 3531.4378	28317.414	699
3387.40		651	3428.7481	29156.804	1341	3486.5518	28673.427	286	3532.5691	28308.986 28299.921	478 1150
3387.40		1199	3431.8116	29130.304	764	3489.4117	28649.927	869	3533.0066	28299.921	699
3387.61		1342	3431.8427	29130.513	1158	3489.6677	28647.825	869	3533.1982	28294.882	699
3388.61		939	3433.5679	29115.877	648	3490.5740	28640.387	6	3534.5257	28284.255	1322
3389.74		292	3437.0445	29086.427	984	3490.7438	28638.994	367	3534.5257	28284.255	1408
3392.00		938	3437.9489	29078.776	1100	3493.2805	28618.198	190	3534.9063	28281.210	190
3392.30	49 29470.023	1198	3438.3066	29075.751	1339	3493.6892	28614.850	646	3536.5559	28268.019	699
3392.30		289	3439.0358	29069.586	647	3493.6892	28614.850	871	3537.4921	28260.538	560
3392.65		291	3439.8684	29062.550	1339	3495.2867	28601.772	559	3537.7291	28258.645	560
3393.37		764	3440.6059	29056.320	6	3497.0030	28587.735	645	3537.8949	28257.320	700
3393.91		1339	3440.9887	29053.088	6	3497.1033	28586.915	285	3538.2516	28254.472	762
3394.07		482	3442.1393	29043.377	1339	3497.1482	28586.548	285	3538.5534	28252.062	371
3394.58		288	3442.3619	29041.499	368	3497.8406	28580.890	6	3538.7820	28250.237	1322
3396.37 3396.97		98 99	3442.6690 3442.9724	29038.908 29036.349	99 938	3497.8870 3497.9595	28580.511	935	3540.1211	28239.551	702
3397.20		937	3442.9724	29036.349	938	3500.5647	28579.918 28558.649	1032 559	3540.7097	28234.857	96 480
3397.20		875	3445.1491	29018.004	288	3501.5676	28550.470	1340	3540.8009 3541.0833	28234.130 28231.878	480 699
3397.53		99	3445.7645	29012.822	1341	3504.8612	28523.641	364	3542.0756	28223.969	699
3398.21		649	3446.7868	29004.217	564	3505.0586	28522.035	934	3542.2434	28222.632	363
3399.22		647	3447.2782	29000.083	287	3506.4977	28510.329	365	3543.3851	28213.539	479
3399.33		291	3448.7815	28987.442	763	3506.5803	28509.658	700	3543.6749	28211.232	1246
3401.51		99	3450.3281	28974.449	287	3508.4745	28494.266	869	3544.6298	28203.632	560
3402.25		1101	3451.6134	28963.660	372	3508.5182	28493.911	560	3545.6400	28195.597	694
3403.29		766	3451.9145	28961.134	288	3509.1188	28489.034	699	3545.8308	28194.080	980
3404.27		98	3452.2746	28958.113	98	3509.7258	28484.107	700	3546.2053	28191.102	479
3404.30		648	3453.0204	28951.859	648	3509.8616	28483.005	285	3547.1942	28183.243	1099
3404.35		289	3456.2443	28924.854	936	3510.4391	28478.320	372	3548.0206	28176.679	932
3405.83		647	3457.0869	28917.804	1340	3511.7377	28467.789	559	3549.8648	28162.041	190
3406.43		1158	3458.3033	28907.633	372	3512.2256	28463.835	699	3552.1060	28144.273	935
3406.79		291	3459.4265	28898.248	646	3512.9544	28457.930	935	3552.4250	28141.746	478
3406.83 3407.45		1343 289	3459.9140 3462.3520	28894.176 28873.831	935 286	3513.0531	28457.130	190	3552.8280	28138.554	694
3407.43		289	3462.3320	28865.904	190	3513.8180 3514.6272	28450.936 28444.385	97 479	3552.8551 3553.7386	28138.339	935
3407.33		482	3464.9108	28852.509	561	3514.6272	28444.383 28429.973	869	3553./386 3554.1182	28131.344 28128.339	1321 96
3410.02		989	3465.8606	28844.602	6	3516.5574	28428.773	699	3554.1182	28125.307	698
3410.16		1247	3466.2829	28841.088	480	3518.6829	28411.601	700	3554.6428	28123.307	1151
3410.89		98	3466.4988	28839.292	97	3518.8697	28410.093	285	3554.9246	28121.959	699
3411.12		647	3466.8927	28836.015	563	3520.0231	28400.784	1154	3555.4481	28117.818	1154
3411.35		648	3468.8445	28819.791	562	3520.8465	28394.142	559	3556.6806	28108.075	698
3413.13		291	3469.0119	28818.400	1101	3521.2612	28390.798	97	3556.8779	28106.516	700
3415.53		289	3469.8305	28811.601	562	3521.8368	28386.158	285	3558.4127	28094.393	868
3416.04	63 29265.214	1199	3471.2656	28799.690	287	3522.2680	28382.683	699	3558.5151	28093.585	97
								,			

TABLE 4—Continued

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λ_{vac} λ_{vac} λ_{vac}	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{υας} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
3559.5033	28085.786	934	3593.3227	27821.457	1030	3620.2402	27614.602	697	3650.2792	27387.361	475
3559.5033 3560.6968 3564.5153	28076.372	1155	3594.6322	27811.322	695	3620.2402	27614.602	1154	3650.2792	27387.361	695
3564.5153	28046.296	479	3595.3014	27806.146	695	3621.1966	27607.309	1031	3651.4669	27378.453	643
ລ 3564.5570	28045.968	479	3595.8646	27800.140	476	3621.4607	27605.296	642	3653.7545	27361.312	475
3565.3790	28039.502	97	3596.1960	27799.229	476	3621.7190	27603.230	1319	3653.9666	27359.724	1479
3565.5813	28037.911	694	3597.0211	27792.852	1028	3622.0034	27603.327	643	3654.6741	27354.428	284
3566.3098	28032.184	362	3597.0526	27792.609	1145	3623.1860	27592.151	475	3655.3513	27334.428	364
3566.5805	28030.056	476	3598.7173	27779.753	1157	3623.4466	27590.167	555	3655.4649	27349.500	760
3567.0312	28026.515	698	3598.9291	27778.118	1027	3623.7731	27587.681	696	3656.2097	27342.939	1147
3567.3690	28023.861	479	3598.9794	27777.730	695	3624.0621	27585.481	1029	3656.3483	27342.939	696
3568.4324	28015.510	694	3599.6251	27772.747	1320	3624.3079	27583.481	367	3657.1329	27336.037	365
3568.8234	28013.310	1156	3602.0827	27753.799	695	3625.1417	27577.266	696	3657.8985	27330.337	802
3568.9745	28012.441	642	3602.4621	27750.876	695	3627.0562	27562.710	1319	3658.0203	27329.406	864
3570.0103	28003.128	369	3602.4021	27750.388	697	3628.0916	27554.844	284	3659.5168	27318.230	475
3570.0103	28003.128	97	3602.7648	27748.545	761	3628.8106	27549.385	864	3659.7336	27316.230	1152
3570.2542	28002.44	699	3603.0886	27746.051	1197	3630.3478	27537.720	696	3660.3265	27310.012	696
3571.2257	27993.598	189	3603.2035	27745.166	643	3631.0970	27532.038	695	3661.3635	27312.167	474
3571.2257	27987.567	694	3603.5675	27742.364	476	3631.2643	27532.038	1094	3662.8375	27304.432	1479
	27982.904	698	3603.5673	27741.490	557	3631.4632	27529.262	96	3663.2591	27290.323	
3572.5905	27982.904		3603.8179	27740.436	932	3632.0388	27524.899	932			862
3573.3936		1156						,	3663.4514	27288.891	553
3573.8291	27973.206	476	3603.9415	27739.485	1197	3632.5554	27520.985	863	3663.9602	27285.101	862
3573.8886	27972.740	1098	3604.3716	27736.175 27729.794	696	3632.9769 3633.0691	27517.792	369	3664.5374	27280.804	800
3574.2440	27969.959	1031	3605.2010		1087	3633.8268	27517.094	799	3664.6913	27279.658	799
3575.1136	27963.156	694	3605.4528	27727.858 27727.490	642	3633.8268	27511.356	865	3666.2416	27268.123	474
3575.2452	27962.127	695	3605.5006 3606.3760		695		27510.913	1148	3666.2416	27268.123	798
3575.3700	27961.151	932		27720.760	555	3634.1881	27508.621	1152	3666.7670	27264.216	1244
3575.9775	27956.401	701	3606.5334	27719.550	367	3634.1881	27508.621 27507.564	1480	3667.2531	27260.602	1029
3576.7587	27950.295	1097	3606.5998	27719.040	1154 642	3634.3278		798	3667.9862	27255.154	1028
3578.3825	27937.612	694	3606.6794	27718.428		3634.3965	27507.044	1089	3667.9862	27255.154	864
3578.6765	27935.317	362	3608.1416	27707.195 27706.945	698	3634.4608	27506.557	1155	3668.2105	27253.487 27248.424	1027
3581.193	27915.69	96	3608.1742		864	3634.6970	27504.770	1457	3668.8921		553
3581.6467	27912.151	643	3608.8593	27701.685	96	3635.1852	27501.076	1089	3669.1519	27246.495	863
3581.8075	27910.898	934	3609.3366	27698.022	1197	3636.1614 3636.1614	27493.693	1027	3669.5212	27243.753	640
3582.1999	27907.841	1094	3610.1591	27691.712 27690.796	694	3636.2236	27493.693 27493.223	284	3670.0244	27240.018	760
3582.3201	27906.904	1151	3610.2785 3610.6946	27690.796	1027 696	3636.4811	27493.223	1288	3670.0884 3670.8075	27239.543 27234.207	862 367
3582.5642	27905.003	476						1027			
3582.6833	27904.075	701	3612.0686	27677.073 27670.427	698	3636.6491 3636.9941	27490.006 27487.398	929	3671.6878	27227.677	644
3583.6818	27896.301	1030	3612.9362		189			555	3672.7075	27220.118	475
3584.6594	27888.693	642	3612.9362 3613.1448	27670.427 27668.830	284	3637.0458 3637.2486	27487.008 27485.475	864	3673.0822	27217.341 27210.241	1481
3584.7858	27887.710	695			697			475	3674.0407		1096
3584.9577	27886.373	1098	3613.4434	27666.543	1087	3637.7342	27481.806	553	3674.4064	27207.533	1091
3585.1897	27884.568	864	3613.4434	27666.543	1155	3637.8675	27480.799 27478.606	794	3674.7636	27204.888	760
3585.3189	27883.563	96	3613.6062	27665.297 27664.457	1150 477	3638.1579 3638.2386		697	3676.3110	27193.438 27189.285	554
3585.7054	27880.558	96	3613.7159				27477.996	644	3676.8725		798
3586.0042	27878.235	1482	3614.1123	27661.423	1092	3638.2965	27477.559	642	3677.3061	27186.079	1286
3586.1126	27877.392	1098	3614.5557	27658.030	1456	3640.3885	27461.769	643	3677.4538	27184.987	1456
3586.7385	27872.528	698	3614.7121	27656.833	1152	3643.6233	27437.389	794	3677.5038	27184.618	1153
3586.9848	27870.614	96	3614.7724	27656.372	802	3643.7154	27436.696	555	3677.6277	27183.702	640
3587.2392	27868.637	698	3615.1912	27653.168	1028	3643.7937	27436.106	1149	3678.8603	27174.594	364
3587.4231	27867.209	368	3616.1483	27645.849	1028	3644.5855	27430.146	556	3679.3461	27171.006	554
3588.5264	27858.641	801	3616.3199	27644.537	366	3644.7951	27428.568	1029	3679.9134	27166.818	5
3588.6093	27857.998	698	3616.5652	27642.662	1478	3645.0748	27426.464	696	3680.3779	27163.389	1241
3588.9178	27855.603	695	3617.4263	27636.082	1149	3645.4940	27423.310	866	3680.6575	27161.326	1027
3589.1050	27854.150	96	3617.7861	27633.334	932	3645.8201	27420.857	932	3680.8096	27160.203	1456
3589.4519	27851.458	643	3617.9627	27631.985	476	3647.408	27408.92	189	3680.9392	27159.247	1477
3589.6054	27850.267	867	3618.2990	27629.417	697	3647.4238	27408.801	933	3681.2252	27157.137	1093
3590.0840	27846.555	865	3618.3858	27628.754	1030	3647.8428	27405.653	1028	3681.6440	27154.048	799
3591.3493	27836.744	694	3618.3858	27628.754	643	3647.8428	27405.653	96	3682.1676	27150.187	794
3591.4840	27835.700	1027	3618.5971	27627.141	1148	3649.3029	27394.688	5	3682.2441	27149.623	1287
3592.4702	27828.059	558	3618.7679	27625.837	96	3649.3332	27394.461	979	3683.0548	27143.647	5
3592.6749	27826.473	1028	3618.8126	27625.496	862	3649.5063	27393.161	640	3684.1076	27135.890	641
3592.8919	27824.793	284	3619.7687	27618.199	475	3650.0296	27389.234	801	3684.1376	27135.669	1095

TABLE 4—Continued

λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})	
3685.9971	27121.980	794	3725.4908	26834.469	975	3760.0497	26587.838	473	3793.5871	26352.792	1196
3686.2580	27120.061	364	3726.8961	26824.351	282	3760.5318	26584.429	283	3793.8716	26350.816	758
3687.0971	27113.889	281	3726.9265	26824.132	794	3761.4085	26578.233	552	3794.3398	26347.565	473
3687.4567	27111.245	94	3727.0924	26822.938	796	3762.2036	26572.616	1195	3795.0022	26342.966	94
3687.6580	27109.765	640	3727.5270	26819.811	1195	3763.5686	26562.979	363	3797.5149	26325.536	1085
3688.4605	27103.867	1150	3727.6190	26819.149	94	3763.7891	26561.423	94	3797.9492	26322.526	547
3689.0768	27099.339	1152	3727.6738	26818.755	550	3764.2081	26558.466	282	3798.5114	26318.630	94
3689.3690	27097.193	800	3727.8092	26817.781	795	3765.5389	26549.080	1086	3799.5475	26311.453	94
3689.4582	27096.538	795	3728.6680	26811.604	552	3765.7001	26547.944	1086	3801.6794	26296.699	758
3690.4547	27089.221	933	3730.3864	26799.254	977	3766.0888	26545.204	551	3801.8086	26295.805	758
3690.7267	27087.225	1318	3730.4604	26798.722	798	3766.6592	26541.184	795	3801.9840	26294.592	1194
3692.6478	27073.133	1152	3730.9463	26795.232	554	3767.1918	26537.432	94	3802.2789	26292.553	1146
3693.0265	27070.357	862	3731.3737	26792.163	550	3768.0270	26531.550	280	3804.0094	26280.592	1192
3693.7774	27064.854	189	3732.3964	26784.822	283	3769.9874	26517.754	796	3804.6111	26276.436	1144
3694.0060	27063.179	801	3733.1914	26779.118	550	3770.3015	26515.545	636	3804.7914	26275.191	861
3695.0515	27055.522	553	3733.3176	26778.213	5	3770.4045	26514.820	473	3805.3426	26271.385	1086
3695.0515	27055.522	978	3734.864	26767.13	94	3771.4916	26507.178	1085	3805.3426	26271.385	1191
3695.5146	27052.132	550	3735.3238	26763.831	797	3771.4916	26507.178	1196	3805.7891	26268.303	1615
3696.0302	27048.358	363	3737.131	26750.88	1000	3772.5831 3773.3586	26499.509 26494.063	1240 975	3806.2167 3806.6957	26265.352 26262.047	1243 1085
3697.4255	27038.151	798	3738.3051 3738.5004	26742.487 26741.090	1090 1407	3773.6916	26494.003	795	3806.7603	26262.047	549
3697.5360	27037.343 27029.544	1149 928	3739.1158	26736.689	281	3774.8243	26483.776	280	3807.5369	26256.245	280
3698.6029 3699.1387	27029.544	928	3739.1138	26735.271	282	3775.8541	26476.553	636	3808.2810	26251.115	926
3701.0863	27023.029	794	3739.5231	26733.777	1147	3776.4548	26472.342	281	3808.7286	26248.030	547
3701.0803	27004.527	760	3740.0591	26729.946	976	3777.0666	26468.054	860	3809.0399	26245.885	758
3702.472	27001.30	189	3740.2395	26728.657	1147	3777.3303	26466.206	1192	3809.5643	26242.272	796
3702.4920	27001.153	282	3741.4748	26719.832	1191	3777.4495	26465.371	548	3810.7557	26234.068	1144
3703.5479	26993.455	640	3742.1405	26715.079	1455	3778.3147	26459.311	758	3811.0350	26232.145	636
3703.5842	26993.190	641	3742.5560	26712.113	798	3778.5090	26457.950	1144	3811.8045	26226.850	1191
3703.6909	26992.413	798	3742.6166	26711.681	796	3778.6968	26456.635	280	3811.8910	26226.255	636
3703.8212	26991.463	760	3742.9445	26709.341	1194	3779.2027	26453.094	639	3812.9645	26218.871	95
3704.0140	26990.058	931	3743.3621	26706.361	94	3779.4160	26451.601	547	3813.0580	26218.228	547
3704.3499	26987.611	1090	3743.4682	26705.604	1317	3779.4537	26451.337	1144	3813.6349	26214.262	634
3704.4612	26986.800	639	3743.7765	26703.405	639	3779.5082	26450.956	282	3813.8845	26212.547	1358
3705.5660	26978.754	5	3744.1026	26701.079	1087	3781.1863	26439.217	281	3813.9334	26212.211	472
3705.6979	26977.794	1092	3744.1026	26701.079	794	3781.9399	26433.949	1405	3814.5232	26208.158	95
3707.0444	26967.995	794	3745.4713	26691.322	1146	3782.1173	26432.709	1245	3814.7789	26206.401	1239
3707.3396	26965.848	863	3745.5613	26690.681	5 5	3782.4490 3782.6096	26430.391 26429.269	797 928	3815.8403 3816.3402	26199.112 26195.680	188 280
3707.4566	26964.997	553	3745.8995 3746.4747	26688.271 26684.174	280	3782.0090	26407.650	1086	3817.4508	26188.059	1474
3707.5616	26964.233	1455 5	3746.4747	26680.953	795	3785.7865	26407.091	1192	3817.4308	26186.765	1191
3707.8221	26962.339 26961.628	283	3746.9276	26680.460	797	3785.7863	26405.962	473	3818.6178	26180.056	1242
3707.9199 3708.6025	26956.665	550	3748.209	26671.83	1195	3786.1494	26404.560	757	3819.4932	26174.056	1193
3708.6023	26951.986	94	3748.2622	26671.449	5	3786.1869	26404.298	758	3820.425	26167.67	93
3709.5338	26949.898	862	3748.9041	26666.882	638	3786.6768	26400.882	95	3821.1778	26162.517	1086
3709.6654	26948.942	550	3748.9646	26666.452	795	3787.1633	26397.491	1406	3821.8345	26158.022	547
3711.2227	26937.634	554	3749.4854	26662.748	94	3787.8802	26392.495	94	3824.0746	26142.699	549
3711.4083	26936.287	930	3750.6813	26654.247	550	3789.1761	26383.469	638	3824.3037	26141.133	1085
3715.9116	26903.644	361	3751.0893	26651.348	282	3789.5738	26380.700	551	3824.4437	26140.176	4
3716.4422	26899.803	797	3751.8214	26646.147	636	3789.8192	26378.992	1192	3824.5555	26139.412	636
3718.4065	26885.593	641	3752.4145	26641.936	794	3790.0929	26377.087	95	3825.4027	26133.623	360.
3719.935	26874.55	5	3752.8554	26638.806	759	3790.2386	26376.073	549	3825.8812	26130.355	93
3721.1850	26865.519	928	3753.1377	26636.802	473	3790.4122	26374.865	1476	3826.6261	26125.268	472
3721.2724	26864.888	1195	3753.6109	26633.444	280	3790.4954	26374.286	1194	3826.8415	26123.798	634
3721.2724	26864.888	282	3754.5002	26627.136	795	3790.6547	26373.178	796	3827.5716	26118.815	635
3721.3934	26864.014	364	3756.0683	26616.020	281	3790.7540	26372.487	280	3827.8226	26117.102	188
3721.5027	26863.225	798	3756.9374	26609.863	1316	3791.5058	26367.258	548	3828.1507	26114.864	1194
3721.6004	26862.520	863	3757.4546	26606.200	1146	3791.7424	26365.613	1193	3828.5040	26112.454	636
3722.0241	26859.462	640	3757.9665	26602.576	1088	3792.1544	26362.748	636	3829.4518	26105.991	1142
3722.2277	26857.993	927	3758.0261	26602.154 26600.690	1194 94	3792.8266 3793.3534	26358.076 26354.416	282 797	3829.7642 3830.7574	26103.862 26097.094	546 549
3722.5630	26855.574 26842.494	5 361	3758.2330 3759.1548	26594.167	1359	3793.3334	26353.532	797 796	3830.7574	26097.094	635
3724.3770	26842.494	301	3137.1346	20374.107	1337	3733.4000	20333.332	/30	3030.0019	20030.362	033

TABLE 4—Continued

					TIDEE 1						
λ_{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λυας (Å)	σ (cm ⁻¹)	No.	λ_{air} (Å)	σ (cm ⁻¹)	No.
·		546	L		93	L			<u> </u>		
3833.3082 3834.2225 3834.4554 3836.3304	26079.729 26073.510	546 93	3887.0482 3888.4162	25719.174 25710.126	93 1024	3935.3067 3935.8124	25403.788	754	3976.8612	25138.348	1141
3834.4554	26073.310	1142	3888.5135	25709.483	188	3935.8605	25400.524 25400.214	754	3976.8612 3977.7410	25138.348	859
3836.3304	26059.184	1142	3888.8216	25707.446	925	3937.3279	25390.748	1023 630	3977.7410	25132.788 25128.269	279 755
3836.9154	26055.211	637	3889.9202	25700.186	1023	3940.8776	25367.878	93	3978.4364	25128.269	630
3837.1350	26053.720	547	3890.3958	25697.044	1026	3941.1835	25365.909	1454	3983.9564	25093.579	629
3839.2558	26039.328	974	3890.8405	25694.107	632	3941.2753	25365.318	1021	3984.9340	25087.423	1020
3840.4375	26031.316	93	3891.9264	25686.938	1238	3942.3641	25358.313	859	3985.3159	25087.423	544
3841.0480	26027.179	188	3892.8923	25680.565	634	3942.4399	25357.825	756	3985.3873	25084.570	1140
3842.8963	26014.661	547	3892.9822	25679.972	1026	3943.3407	25352.033	279	3986.1717	25079.634	1138
3842.9887	26014.035	546	3893.3094	25677.814	756	3943.5754	25350.524	1475	3989.8572	25056.468	1281
3843.2568	26012.221	973	3893.3903	25677.280	858	3944.7387	25343.048	755	3990.3733	25053.227	971
3845.1689	25999.286	361	3893.9125	25673.837	471	3944.8893	25342.081	858	3993.6168	25032.880	1610
3845.2153	25998.972	1191	3894.0120	25673.181	1142	3945.1172	25340.617	632	3994.1132	25029.769	970
3845.6950	25995.729	1285	3895.6564	25662.344	4	3946.9949	25328.562	1020	3995.2047	25022.931	1561
3845.9851	25993.768	1193	3897.4487	25650.543	857	3947.3789	25326.098	418	3995.8610	25018.821	1610
3846.2835	25991.752	1433	3897.8899	25647.640	632	3947.5309	25325.123	755	3995.9835	25018.054	631
3846.4094	25990.901	1315	3898.0089	25646.857	93	3948.0973	25321.490	1021	3996.9639	25011.918	1432
3846.7998	25988.263	1144	3899.0289	25640.148	471	3948.2763	25320.342	1020	3997.3922	25009.238	630
3846.7998	25988.263	1192	3899.7074	25635.687	4	3948.7749	25317.145	1083	3997.4838	25008.665	1015
3846.9335	25987.360	472	3900.5150	25630.379	1024	3949.1414	25314.795	1237	3998.0527	25005.106	628
3848.2888	25978.208	549	3902.9457	25614.417	188	3949.9530	25309.594	279	4000.2522	24991.358	1015
3849.9666	25966.887	93	3903.8979	25608.170	857	3950.1379	25308.409	1284	4000.4572	24990.077	855
3850.8179 3852.5727	25961.147 25949.322	95 280	3906.4798 3906.5323	25591.245 25590.901	4 632	3951.1632 3952.6015	25301.842	1140	4001.6617	24982.555	279
3853.4567	25949.322	857	3906.7471	25589.494	1144	3952.6013	25292.635 25292.032	630	4002.6609	24976.319	1138
3854.3666	25937.245	1026	3900.7471	25584.791	635	3953.1514	25292.032	754 858	4003.7619 4004.8275	24969.451 24962.807	1236 1081
3855.3138	25937.243	634	3907.9341	25581.722	632	3953.8576	25284.600	754	4004.8273	24962.807	923
3855.8454	25927.298	1026	3908.8426	25575.776	1614	3954.7127	25279.133	1084	4004.9783	24960.224	186
3856.3716	25923.760	4	3909.6576	25570.445	1024	3955.3413	25275.116	1021	4005.3861	24959.326	360
3859.2125	25904.677	471	3909.8296	25569.320	756	3955.9555	25271.192	925	4005.4822	24958.727	544
3859.911	25899.99	4	3910.8437	25562.690	635	3956.4554	25267.999	1083	4006.1576	24954.519	1023
3861.3402	25890.403	634	3910.9991	25561.674	1021	3956.6768	25266.585	630	4006.3108	24953.565	1082
3863.6906	25874.654	1024	3913.6318	25544.479	358	3957.0184	25264.404	1021	4006.6242	24951.613	925
3863.7413	25874.314	632	3914.2730	25540.295	1026	3960.2792	25243.602	1404	4007.2721	24947.579	629
3864.5936	25868.608	1614	3916.7310	25524.267	1084	3961.1402	25238.115	755	4009.5420	24933.456	1015
3865.5231	25862.388	93	3917.1810	25521.335	93	3962.3520	25230.397	1025	4009.7128	24932.394	279
3867.0195	25852.380	1615	3918.3153	25513.947	361	3963.1005	25225.632	1021	4010.1763	24929.512	1403
3867.2159	25851.067	925	3918.4154	25513.295	756	3963.4320	25223.522	1137	4010.7481	24925.958	544
3867.9205	25846.358	546	3918.6417	25511.822	858	3964.5153	25216.630	755	4011.4075	24921.861	543
3868.2323	25844.275	858	3919.0655	25509.063	858	3965.5088	25210.312	1024	4011.7113	24919.974	418
3869.5583	25835.419	635	3920.2581	25501.303	4	3965.9152	25207.729	1613	4012.1490	24917.255	1081
3869.6080	25835.087	635	3920.8370	25497.538	1026	3966.0617	25206.798	188	4013.6395	24908.002	1016
3871.7480	25820.808	857	3921.2724	25494.707	545	3966.4995	25204.016	1021	4013.7818	24907.119	922
3872.5012	25815.786	93	3922.9118	25484.053	4	3966.8100	25202.043	1139	4013.8248	24906.852	923
3872.9212	25812.986	635	3925.2005	25469.194	1026	3967.4206	25198.164	1083	4014.2652	24904.120	855
3873.7606	25807.393	471	3925.6438	25466.318	756	3967.9614	25194.730	1020	4014.5308	24902.472	972
3874.0535 3876.0400	25805.442 25792.217	358	3925.9413 3926.0132	25464.388 25463.922	756	3969.2572	25186.505	186	4014.8781	24900.318	1453
3876.6703	25788.023	95 359	3926.0132 3927.7497	25452.664	1021 1614	3969.6276 3970.2608	25184.155	1136	4015.6059	24895.805	1598
3878.0182	25779.060	93	3927.7497	25451.561	4		25180.139	1282	4016.4194	24890.763	1019
3878.1819	25777.972	1024	3927.9199	25451.561	755	3970.3891 3971.3227	25179.325 25173.406	925 629	4017.0835 4017.1485	24886.648 24886.245	631 971
3878.5733	25775.371	4	3928.0829	25450.505	1024	3972.9155	25173.400	1314	4017.1483	24884.304	1611
3878.6709	25774.722	471	3929.1164	25443.811	632	3973.6493	25158.667	1283	4017.4619	24879.315	1019
3878.7259	25774.357	1143	3929.2083	25443.216	1139	3974.2564	25154.824	1564	4019.0420	24874.521	544
3881.9736	25752.794	1278	3930.2967	25436.170	4	3974.3807	25154.037	1023	4020.4836	24865.602	1404
3883.2800	25744.131	1142	3931.1172	25430.861	1024	3974.7576	25151.652	279	4021.6028	24858.682	358
3884.3587	25736.982	633	3932.2443	25423.572	1338	3975.2055	25148.818	418	4021.8665	24857.052	630
3885.1456	25731.769	858	3932.6273	25421.096	632	3975.8412	25144.797	1280	4022.2127	24854.913	751
3885.5106	25729.352	361	3933.5997	25414.812	1021	3976.3856	25141.355	924	4022.7358	24851.681	1015
3885.9205	25726.638	1434	3933.5997	25414.812	1565	3976.5463	25140.339	1138	4022.7358	24851.681	1137
3886.2823	25724.243	4	3933.5997	25414.812	925	3976.6132	25139.916	1237	4024.0963	24843.279	629
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TABLE 4—Continued

:					ADLL T	—Сопиниеи					
λ_{vac} λ_{vac} λ_{vac}	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
		1010	1 4071 5001			L		440			
4024.7250 4029.6293 4030.1849	24839.398	1019	4071.5201	24553.918	543	4114.9376	24294.850	1187	4161.0769	24025.467	1181
4029.6293	24809.168	1015	4071.7380	24552.604	186	4115.1363	24293.677	1186	4161.4844	24023.114	852
4030.1849	24805.748	279	4072.5024	24547.996	1189	4117.8528	24277.651	1190	4163.6763	24010.468	627
₋ 4030.4663	24803.879	1019	4073.7623	24540.404	1017	4118.5450	24273.571	1313	4164.7818	24004.095	850
4030.8904	24801.406	1431	4074.7858	24534.240	969	4118.8868	24271.557	1018	4165.3580	24000.774	1398
4031.2402	24799.254	923	4076.2180	24525.620	923	4120.2065	24263.783	853	4165.4177	24000.430	1357
4031.7280	24796.254	856	4076.4898	24523.985	543	4121.8026	24254.387	749	4167.8587	23986.374	1080
4031.9607	24794.823	1138	4076.6291	24523.147	1017	4122.5155	24250.193	749	4167.9552	23985.819	1429
4032.4559	24791.778	1613	4076.8000	24522.119	1016	4123.7283	24243.061	852	4168.6147	23982.024	1181
4032.6275	24790.723	187	4076.8811	24521.631	1018	4123.7661	24242.839	542	4168.9416	23980.144	1186
4033.1863	24787.288	543	4078.3539	24512.776	542	4124.4873	24238.600	1399	4169.7562	23975.459	1185
4035.5943	24772.498	1599	4079.1681	24507.883	1190	4125.6175	24231.960	1596	4170.9018	23968.874	921
4036.3665	24767.759	631	4079.8380	24503.859	753	4125.8804	24230.416	748	4171.0407	23968.076	1657
4038.7899	24752.898	1280	4080.2092	24501.630	1017	4126.1827	24228.641	1187	4171.6908	23964.341	1430
4039.9379	24745.864	628	4080.8769	24497.621	1016	4126.8545	24224.697	748	4171.8993	23963.143	1135
4040.6381	24741.576	1138	4081.2676	24495.276	1561	4127.6078	24220.276	750	4172.1222	23961.863	1134
4041.2717	24737.697	1082	4082.1079	24490.234	1189	4127.7843	24219.240	1017	4172.5735	23959.271	1079
4041.2717	24737.697	1137	4082.4246	24488.334	1402	4127.8128	24219.073	1235	4172.6408	23958.885	1181
4041.6492	24735.387	1610	4083.5492	24481.590	357	4129.4611	24209.406	1187	4172.7448	23958.288	92
4043.885	24721.71	628	4083.7632	24480.307	1188	4130.0367	24206.032	187	4172.9620	23957.041	1562
4043.8966	24721.640	1016	4084.4915	24475.942	1189	4130.0367	24206.032	923	4173.1816	23955.780	1189
4043.9770	24721.149	1018	4085.0041	24472.871	752	4131.9354	24194.909	1187	4173.3151	23955.014	747
4044.4909	24718.008	1562	4085.2483	24471.408	628	4131.9718	24194.696	1017	4173.4719	23954.114	920
4044.5447	24717.679	1081	4085.3031	24471.080	1018	4132.0582	24194.190	186	4173.9207	23951.538	92
4044.6092	24717.285	753	4085.9842	24467.001	1562	4132.5329	24191.411	1596	4174.4019	23948.777	1311
4045.1119	24714.213	1612	4087.0939	24460.358	1186	4132.8992	24189.267	750	4174.9131	23945.845	92
4045.5939	24711.269	1018	4088.2045	24453.713	1682	4133.8557	24183.670	1189	4175.6361	23941.699	748
4045.8124	24709.934	186	4088.5568	24451.606	1402	4134.3363	24180.859	3	4175.8986	23940.194	1186
4046.0623	24708.408	1016	4089.2169	24447.659	852	4134.4207	24180.365	1188	4176.5659	23936.369	1187
4047.3040	24700.828	357	4090.0726	24442.544	1190	4134.4207	24180.365	921	4176.8645	23934.658	1597
4049.3270	24688.488	543	4090.9535	24437.281	1187	4134.6776	24178.863	750	4177.0858	23933.390	1182
4050.6742	24680.277	1563	4091.5531	24433.700	750	4136.5213	24168.086	1186	4177.5939	23930.479	91
4051.9053	24672.778	1190	4092.2770	24429.378	1398	4136.9977	24165.303	1234	4180.4103	23914.357	627
4052.0133	24672.121	1081	4092.5060	24428.011	1399	4139.9273	24148.203	91	4181.1868	23909.916	1397
4052.2954	24670.403	1190	4095.9707	24407.348	542	4140.4024	24145.432	1187	4181.5500	23907.839	1275
4052.4406	24669.519	1022	4096.1072	24406.535	1401	4141.8633	24136.916	852	4181.7547	23906.669	748
4052.6531	24668.226	969	4096.2102	24405.921	91	4142.5889	24132.688	1596	4182.3826	23903.080	919
4052.7227	24667.802	1016	4096.6903	24403.061	1400	4143.4146	24127.879	968	4182.7577	23900.936	1186
4054.1771	24658.953	1016	4096.9500	24401.514	470	4143.4972	24127.398	1188	4183.0061	23899.517	1188
4054.8056	24655.131	1189	4097.0172	24401.114	1190	4143.8680	24125.239	186	4184.8918	23888.748	747
4054.8669	24654.758	1189	4097.0834	24400.720	1017	4145.1995	24117.490	627	4187.0390	23876.498	417
4055.0355	24653.733	543	4098.1758	24394.216	1017	4146.0642	24112.460	852			
4056.3449	24645.775	1396	4100.3470	24394.210	1596	4140.0642	24112.460	1185	4187.5870	23873.373 23872.185	1186
4057.3435	24639.709	629	4100.3470	24378.975	91	4147.6690	24103.031	185	4187.7954		417 1595
	24634.406	1017	4100.7379	24375.865	1189	4149.3650	24103.131		4188.3271	23869.155	
4058.2170 4058.7539	24631.147	358	4101.2011	24373.540	1188	4149.3630	24093.279	1186	4188.7316 4189.5566	23866.850 23862.150	1656
4059.7135	24625.325	1279	4101.6323	24373.346	358	4149.7610	24090.980				1427
4061.0965	24625.323	1610	4101.6649	24373.340	1135	4150.2491	24086.147	1187	4191.4307	23851.481	417
	24611.739		4103.0131					1233	4191.6765	23850.082	747
4061.9546		1561	4104.1136	24358.923 24358.684	1017	4151.7607	24079.377	1593	4193.6042	23839.119	469
4062.4409	24608.793	753			749	4151.9448	24078.309	1277	4194.4931	23834.067	627
4063.2757	24603.737	1189	4104.4599	24356.868	852	4152.1692	24077.008	91	4195.3291	23829.318	1185
4063.4169	24602.882	1610	4104.9407	24354.015	1186	4153.3871	24069.948	469	4195.6179	23827.678	920
4063.5942	24601.809	186	4106.2587	24346.198	542	4153.8997	24066.978	1187	4196.2083	23824.325	1185
4064.4493	24596.633	187	4106.4229	24345.225	1188	4154.0985	24065.826	1186	4196.5311	23822.493	850
4065.3812	24590.995	1189	4107.4883	24338.910	748	4154.4987	24063.508	747	4196.6715	23821.696	469
4066.5852	24583.714	854	4108.1330	24335.091	1018	4154.8055	24061.731	1186	4197.0971	23819.280	91
4066.9742	24581.363	752	4109.0561	24329.624	1017	4156.4538	24052.189	1185	4198.2469	23812.757	1185
4067.2712	24579.568	542	4109.8017	24325.210	750	4156.6714	24050.930	851	4198.3043	23812.431	417
4067.4872	24578.263	852	4112.3185	24310.323	1187	4156.7988	24050.193	748	4198.5281	23811.162	850
4067.9777	24575.299	1018	4112.9119	24306.816	1562	4157.7801	24044.517	1187	4198.6341	23810.561	1185
4069.0678	24568.716	1016	4112.9589	24306.538	1596	4158.7924	24038.664	1187	4199.0952	23807.946	967
4070.7707	24558.438	1017	4114.4450	24297.759	750	4160.5521	24028.497	851	4199.3612	23806.438	848
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: :												
94	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
:	(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})	
š.	4199.9835	23802.911	3	4243.8162	23557.065	1473	4291.4637	23295.519	3	4369.7718	22878.061	964
1994ApJS	4200.7789	23798.404	187	4245.2572	23549.069	746	4292.1178	23293.319	277	4370.9810	22871.732	964 276
941	4200.9242	23797.581	1181	4245.3444	23548.585	1183	4292.1631	23291.723	540	4372.9817	22861.268	916
ا ک	4202.0292	23791.323	185	4246.0128	23544.878	1134	4292.2844	23291.065	277	4373.5607	22858.242	845
	4202.3300	23789.620	540	4246.0850	23544.478	1397	4293.7983	23282.853	469	4374.4892	22853.390	1133
	4202.7530	23787.226	966	4247.3061	23537.709	468	4294.0377	23281.555	539	4375.4768	22848.232	1309
	4203.5678	23782.615	92	4247.4255	23537.047	1185	4294.1248	23281.083	184	4375.9301	22845.865	2
	4203.9383 4203.9848	23780.519 23780.256	1356 747	4248.2240 4248.4026	23532.623 23531.634	921 92	4298.0364 4299.2349	23259.895 23253.411	965	4375.9862	22845.572	963
	4205.5385	23780.236	1181	4248.4026	23525.116	540	4299.2349	23253.411	1077 417	4376.7742 4376.7742	22841.459 22841.459	1395
	4206.6967	23764.926	3	4250.1195	23522.128	417	4299.4670	23252.156	1133	4370.7742	22841.439	915 1132
	4207.1271	23762.495	746	4250.1913	23521.731	467	4299.6286	23251.282	848	4382.7680	22810.222	1310
	4208.6040	23754.156	1181	4250.7869	23518.435	185	4300.2066	23248.157	1451	4383.5450	22806.179	184
	4209.8294	23747.242	1655	4250.8918	23517.855	920	4302.1858	23237.462	965	4384.6722	22800.316	917
	4210.3436	23744.342	417	4251.4977	23514.503	1428	4304.5408	23224.749	846	4385.2496	22797.314	847
	4210.3833	23744.118	921	4251.6417	23513.707	469	4305.1314	23221.563	625	4387.8912	22783.590	918
	4213.6474	23725.725	747	4253.9303	23501.057	1395	4305.2070	23221.155	1272	4388.4068	22780.913	1337
	4215.4233	23715.730	851	4254.9453	23495.451	851	4305.4505	23219.842	918	4389.2449	22776.563	2
	4215.4777 4215.9678	23715.424 23712.667	851 626	4255.5004 4256.2055	23492.386 23488.494	848 1182	4306.5787	23213.759 23207.692	1183	4390.4480	22770.322	845
	4215.9678	23712.007	3	4236.2033	23487.919	468	4307.7046 4307.9023	23207.692	1076 185	4390.7527 4390.9505	22768.742 22767.716	1592
	4217.5456	23703.796	1185	4256.8071	23485.175	1594	4307.9023	23203.435	468	4391.8633	22762.984	846 1471
	4219.3604	23693.601	1312	4258.3158	23476.854	3	4309.0307	23200.550	1355	4392.5797	22759.272	1449
	4219.4144	23693.298	851	4258.6112	23475.226	745	4309.3745	23198.699	846	4393.0240	22756.970	916
	4220.0495	23689.732	1473	4258.9517	23473.349	851	4309.4538	23198.272	920	4393.0900	22756.628	1590
	4220.3417	23688.092	921	4259.3358	23471.232	848	4310.3741	23193.319	1473	4395.2741	22745.320	1335
	4222.2131	23677.593	417	4259.9992	23467.577	1181	4315.0846	23168.001	278	4395.4973	22744.165	1471
	4223.2332	23671.874	469	4260.0806	23467.129	1182	4317.0475	23157.467	1274	4401.2899	22714.232	1335
	4223.7289	23669.096	849	4260.1352	23466.828	919	4318.8010	23148.065	540	4401.4429	22713.442	744
	4224.1717 4224.5128	23666.615 23664.704	1181 1181	4260.4744 4260.7289	23464.960 23463.558	417 745	4320.4829 4324.9486	23139.054	1183	4403.1749	22704.508	1710
	4224.3128	23659.431	1185	4264.2034	23444.440	1184	4324.9486	23115.162	277	4404.7504	22696.387	184
	4225.4343	23657.983	1594	4265.2361	23438.764	1473	4325.762	23113.952 23110.82	849	4405.0190 4407.2329	22695.003 22683.603	2 1334
	4225.9557	23656.624	966	4265.2681	23438.588	1472	4325.7619	23110.816	185	4407.6571	22681.420	917
	4226.3428	23654.457	469	4266.9645	23429.270	626	4325.9400	23109.865	1078	4407.7092	22681.152	275
	4226.4240	23654.003	746	4267.3894	23426.937	1594	4326.7533	23105.521	845	4408.4135	22677.528	275
	4227.4266	23648.393	1185	4267.8265	23424.538	921	4327.0956	23103.693	1273	4409.1195	22673.897	1132
	4228.7184	23641.169	1182	4268.7488	23419.477	1134	4327.9034	23099.381	1077	4414.9309	22644.052	1469
	4229.4040	23637.337	541	4271.1538	23406.290	417	4330.9519	23083.122	1077	4415.1225	22643.069	184
	4229.5102	23636.743	1134	4271.7605	23402.966	185	4337.0463	23050.686	184	4418.4196	22626.173	844
	4229.7516	23635.394	184	4271.9423 4273.8685	23401.970	467	4337.5171	23048.184	539	4422.5681	22604.949	744
	4232.7263 4233.6028	23618.784 23613.894	3 417	4275.6986	23391.423 23381.411	920 540	4338.2478 4340.4899	23044.302 23032.399	277	4423.1415	22602.019	844
	4235.3873	23603.945	1182	4275.6986	23376.067	1452	4341.8134	23025.378	625 1270	4423.8408 4424.0683	22598.446 22597.284	1337 1394
	4235.8177	23601.547	468	4278.2314	23367.569	1183	4343.2164	23017.940	1560	4424.1879	22596.673	1271
	4235.9370	23600.882	417	4279.4887	23360.704	1472	4343.2712	23017.650	1132	4425.6563	22589.176	1308
	4237.0742	23594.548	92	4279.8700	23358.623	745	4343.6975	23015.391	963	4425.7521	22588.687	1014
	4237.6708	23591.226	850	4280.5396	23354.969	1078	4343.8692	23014.481	1269	4427.298	22580.80	1335
	4238.0238	23589.261	1181	4282.4029	23344.807	278	4344.4995	23011.142	1337	4427.3099	22580.739	2
	4238.6084	23586.008	1355	4284.4054	23333.896	1655	4344.8902	23009.073	1560	4428.5670	22574.329	1449
	4238.8100	23584.886	1185	4284.4054	23333.896	849	4346.5526	23000.273	1078	4429.1869	22571.170	1468
	4239.3613	23581.819	1398	4285.4420	23328.252 23326.181	1077	4347.2336	22996.670	1225	4430.1891	22566.064	914
	4239.7324 4239.8477	23579.755 23579.114	848 626	4285.8225 4286.4342	23326.181	1395 846	4347.8326 4348.9366	22993.502 22987.665	1335	4430.6140	22563.900	275
	4239.8477	23578.587	919	4286.8645	23320.511	1183	4348.9300	22973.892	846 845	4432.5678 4433.2187	22553.954 22550.643	1309 1337
	4240.3708	23576.205	1276	4286.9837	23319.863	1452	4352.7347	22967.607	278	4433.7824	22547.776	1337
	4240.6940	23574.408	848	4287.9385	23314.670	1183	4358.4991	22937.231	844	4435.1489	22540.829	2
	4241.1143	23572.072	745	4288.1458	23313.543	626	4358.6842	22936.257	917	4436.9206	22531.828	962
	4242.5960	23563.840	626	4288.9560	23309.139	539	4360.8032	22925.112	1394	4438.3433	22524.606	1335
	4242.7294	23563.099	1134	4289.9146	23303.931	1183	4365.8967	22898.367	847	4439.6341	22518.057	1706
	4243.3685	23559.550	1397	4290.3789	23301.409	848	4367.5785	22889.550	846	4439.6341	22518.057	961
	4243.5411	23558.592	1426	4290.8647	23298.771	745	4367.9036	22887.846	184	4439.8808	22516.806	356

TABLE 4—Continued

:											
λ _{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
(Å)	(cm ⁻¹)	110.	(Å)	(cm ⁻¹)	110.	(Å)	(cm ⁻¹)	110.	(Å)	(cm ⁻¹)	140.
•			(71)	(6111)		(71)	——————————————————————————————————————		(A)	(CIII)	
4440.4793 4440.8239 4440.9689 4441.5456	22513.771	1336	4490.8107	22261.449	1449	4566.8668	21890.715	1652	4625.0453	21615.356	1013
^Ω d 4440.8239	22512.024	1471	4492.6783	22252.195	1445	4566.9885	21890.132	1231	4627.5467	21603.672	1072
4440.9689	22511.289	1132	4493.3707	22248.766	1308	4568.6026	21882.398	1470	4630.1203	21591.664	355
4441.5456	22508.366	1468	4494.0555	22245.376	1449	4568.7632	21881.629	1013	4632.8204	21579.080	1327
4442.3390	22504.346	275	4494.4648	22243.350	843	4568.8392	21881.265	1390	4632.9117	21578.655	182
4442.8316	22501.851	276	4494.5632	22242.863	275	4569.0555	21880.229	1072	4633.7558	21574.724	842
4443.1942	22500.015	744	4495.5680	22237.892	1334	4571.4378	21868.827	693	4634.7125	21570.271	1740
4443.1942	22500.015	917	4495.9531	22235.987	1332	4574.2162	21855.544	1013	4635.6170	21566.062	693
4445.4715	22488.489	2	4498.5332	22223.234	1469	4574.7179	21853.147	355	4635.8462	21564.996	743
4446.8321	22481.608	1335	4499.1365	22220.254	1708	4575.7802	21848.074	1072	4636.6707	21561.161	959
4446.8958	22481.286	1075	4500.6301	22212.880	1740	4576.5175	21844.554	1390	4637.5034	21557.290	1013
4447.1304	22480.100	276	4502.5909	22203.207	1308	4579.0667	21832.393	1129	4638.0098	21554.936	1329
4447.7173	22477.134	275	4504.8306	22192.168	1014	4579.3264	21831.155	693	4639.6602	21547.269	1702
4447.8057	22476.687	1588	4507.2132	22180.437	917	4580.4596	21825.754	741	4643.4634	21529.621	1327
4450.3156	22464.011	918	4509.7342	22168.038	1589	4580.5774	21825.193	1334	4647.1791	21512.407	1741
4450.7669	22461.733	1448	4510.8205	22162.700	1330	4581.1918	21822.266	1740	4647.4342	21511.226	841
4452.6095	22452.438	1445	4514.1839	22146.187	960	4581.5080	21820.760	1014	4648.9769	21504.088	1072
4452.7989	22451.483	538	4514.4163	22145.047	1707	4582.9397	21813.943	741	4649.8165	21500.205	1070
4454.3810	22443.509	744	4514.4999	22144.637	1468	4583.7208	21810.226	914	4653.4904	21483.231	90
4454.6712	22442.047	1393	4515.1667	22141.367	693	4584.7164	21805.490	1327	4654.4983	21478.579	182
4455.0273	22440.253	1450	4517.5245	22129.811	914	4584.8192	21805.001	1327	4654.6050	21478.087	1328
4456.3257	22433.715	962	4517.5245	22125.366	1072	4585.3399	21802.525	1704	4654.6286	21478.087	1013
4456.6302	22432.182	1449	4518.5771	22124.656	276	4586.2313	21798.287	1652	4656.4573	21469.543	1654
4458.0802	22424.886	1471	4523.3987	22101.073	1336	4586.9923	21794.671	842	4657.5848	21464.346	740
4459.1176	22419.669	275	4525.1368	22092.584	1333	4587.1276	21794.028	1307	4658.2947	21461.075	1071
4459.3527	22419.009	1588	4525.8635	22089.037	693	4587.7204	21794.028	1447	4660.4315	21461.073	1681
4461.1967	22418.487	915	4526.3989	22089.037	1445	4590.7897	21776.643	1679	4661.3197	21431.233	742
4461.3729	22409.221	1232	4526.5608	22085.634	915	4592.6511	21767.817	182	4661.5344		1739
4461.6528	22406.930	2	4527.7827	22079.674	1131	4593.5252	21763.675	1		21446.160	1739
4461.9698	22405.338	1332	4528.4790	22079.074	1703	4595.2080	21765.075	1447 1352	4661.8768	21444.585	
4461.9698	22405.338	1393	4528.6142	22075.620	275	4595.3586	21753.703	1073	4661.9703 4663.1782	21444.155 21438.600	841 1267
4461.9698	22403.338	1331	4528.7570	22073.020	1074	4596.0605	21754.992	1327			
4462.1933	22399.501	915	4528.7370	22074.924	912	4596.4155	21731.670	1327	4664.7183	21431.522	742
	22399.301	1591	4529.5511	22074.612	1468	4596.4155 4596.5748			4666.1118	21425.122	1651
4463.4072		i		22071.034 22063.275	182	4596.5748 4597.2512	21749.236	1072	4667.4531	21418.965	1329
4464.6875	22391.700	1014	4531.1482		- 1		21746.036	1680	4668.0616	21416.173	1333
4464.7665	22391.304	914	4531.6302	22060.928	1014	4597.3802	21745.426	1737	4668.1344	21415.839	1013
4466.5518	22382.354	744	4531.6302	22060.928	1353	4597.7454	21743.699	1708	4669.1711	21411.084	1328
4466.9386	22380.416	1471	4533.9567	22049.608	842	4597.8714	21743.103	1675	4671.4147	21400.801	1709
4469.3756	22368.213	1337	4536.4866	22037.312	1389	4598.1171	21741.941	1013	4672.8305	21394.317	183
4471.6772	22356.700	2	4537.6734	22031.548	1073	4598.3669	21740.760	1446	4673.1636	21392.792	1327
4472.7113	22351.531	1392	4538.8366	22025.902	1445	4598.7400	21738.996	1326	4673.2700	21392.305	1329
4476.0186	22335.016	744	4540.6722	22016.998	843	4599.7415	21734.263	1072	4674.6478	21386.000	183
4476.0755	22334.732	1337	4541.3141	22013.886	1129	4599.8425	21733.786	1650	4675.0961	21383.949	1558
4478.0182	22325.043	276	4541.9416	22010.845	1072	4600.9340	21728.630	1071	4677.5896	21372.550	1559
4479.6028	22317.146	1354	4542.4121	22008.565	1390	4602.0010	21723.592	182	4678.8458	21366.812	1328
4479.9629	22315.352	1450	4542.6986	22007.177	1334	4602.9410	21719.156	182	4679.2247	21365.082	1126
4480.1366	22314.487	961	4547.0169	21986.277	182	4603.3424	21717.262	741	4679.2247	21365.082	1737
4480.2717	22313.814	1330	4547.8474	21982.262	1268	4603.9489	21714.401	842	4680.2948	21360.197	182
4481.6093	22307.154	1334	4549.4669	21974.437	1448	4604.5575	21711.531	1681	4680.4672	21359.410	740
4482.1699	22304.364	2	4551.6470	21963.912	1448	4604.8515	21710.145	1352	4680.5503	21359.031	1777
4482.2527	22303.952	275	4554.4512	21950.389	693	4605.5878	21706.674	1652	4682.1111	21351.911	1737
4482.7393	22301.531	1335	4556.1259	21942.321	1327	4607.6469	21696.974	1013	4682.5605	21349.862	793
4483.7770	22296.370	1391	4556.9250	21938.473	1130	4607.6469	21696.974	1445	4683.5597	21345.307	740
4484.2198	22294.168	1335	4558.1054	21932.792	1390	4611.0638	21680.896	1131	4684.5971	21340.580	1654
4485.6756	22286.933	1337	4560.0881	21923.256	1330	4611.1849	21680.327	693	4685.0246	21338.633	742
4485.9725	22285.458	1332	4561.4143	21916.882	1650	4611.2789	21679.885	1333	4687.3030	21328.261	90
4487.7364	22276.699	1073	4564.6986	21901.113	1330	4613.2027	21670.844	1013	4687.3865	21327.881	741
4488.1331	22274.730	1326	4564.8214	21900.524	914	4613.9036	21667.552	1742	4687.6709	21326.587	742
4488.9069	22270.890	1334	4565.3102	21898.179	1131	4614.2054	21666.135	1130	4688.1761	21324.289	1739
4489.7391	22266.762	2	4565.4115	21897.693	1650	4615.5626	21659.764	1777	4690.1380	21315.369	1327
4490.0840	22265.052	913	4565.6619	21896.492	1013	4618.7577	21644.781	841	4690.3697	21314.316	1068
4490.7601	22261.700	1450	4566.5145	21892.404	1131	4619.2880	21642.296	1328	4690.3697	21314.316	90
					'			,			

TABLE 4—Continued

2.	٠.						ADLL 4	-Commueu					
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4754.0393 21028.863 1797 4844.0138 20638.271 1263 4918.0125 20327.742 1557 4991.2683 20029.400 1552 4757.5780 21013.222 1127 4845.6482 20631.310 1386 4918.9539 20323.852 1552 4991.8004 20027.265 739 4766.7868 20972.628 1777 4848.8836 20617.544 354 4918.9940 20323.686 692 4991.8675 20026.996 1584 4766.8659 20972.280 1180 4849.6688 20614.206 1305 4920.5031 20317.453 692 4992.7854 20023.314 1605 4768.3203 20965.883 1328 4855.6732 20588.715 1179 4924.2984 20301.794 1796 4993.6805 20019.725 1606 4768.3965 20965.548 793 4858.2439 20577.821 1556 4924.2984 20301.794 1839 4993.7514 20019.441 1530 4768.6988 20964.219 1533 4859.1218 20574.103 1555 4924.7695 20299.852 354 4994.1295							1						
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4766.7868 20972.628 1777 4848.8836 20617.544 354 4918.9940 20323.686 692 4991.8675 20026.996 1584 4766.8659 20972.280 1180 4849.6688 20614.206 1305 4920.5031 20317.453 692 4992.7854 20023.314 1605 4768.3203 20965.883 1328 4855.6732 20588.715 1179 4924.2984 20301.794 1796 4993.6805 20019.725 1606 4768.3965 20965.548 793 4858.2439 20577.821 1556 4924.2984 20301.794 1839 4993.7514 20019.441 1530 4768.6988 20964.219 1533 4859.1218 20574.103 1555 4924.7695 20299.852 354 4994.1295 20017.925 89 4771.6965 20951.049 274 4859.7414 20571.480 692 4925.2834 20297.734 1552 4995.4097 20012.795 1608 4772.8303 20946.072 911 4862.5969 20559.400 1556 4927.4901 20288.644 1733 4999.1125							1						
4766.8659 20972.280 1180 4849.6688 20614.206 1305 4920.5031 20317.453 692 4992.7854 20023.314 1605 4768.3203 20965.883 1328 4855.6732 20588.715 1179 4924.2984 20301.794 1796 4993.6805 20019.725 1606 4768.3965 20965.548 793 4858.2439 20577.821 1556 4924.2984 20301.794 1839 4993.7514 20019.441 1530 4768.6988 20964.219 1533 4859.1218 20574.103 1555 4924.7695 20299.852 354 4994.1295 20017.925 89 4771.6965 20951.049 274 4859.7414 20571.480 692 4925.2834 20297.734 1552 4995.4097 20012.795 1608 4772.8030 20946.072 911 4862.5969 20559.400 1556 4927.4901 20288.644 1733 4999.1125 19997.972 1532										- 1			
4768.3203 20965.883 1328 4855.6732 20588.715 1179 4924.2984 20301.794 1796 4993.6805 20019.725 1606 4768.3965 20965.548 793 4858.2439 20577.821 1556 4924.2984 20301.794 1839 4993.7514 20019.441 1530 4768.6988 20964.219 1533 4859.1218 20574.103 1555 4924.7695 20299.852 354 4994.1295 20017.925 89 4771.6965 20951.049 274 4859.7414 20571.480 692 4925.2834 20297.734 1552 4995.4097 20012.795 1608 4772.8030 20946.072 911 4862.5969 20559.400 1556 4927.4901 20288.644 1733 4999.1125 19997.972 1532										i i			
4768.3965 20965.548 793 4858.2439 20577.821 1556 4924.2984 20301.794 1839 4993.7514 20019.441 1530 4768.6988 20964.219 1533 4859.1218 20574.103 1555 4924.7695 20299.852 354 4994.1295 20017.925 89 4771.6965 20951.049 274 4859.7414 20571.480 692 4925.2834 20297.734 1552 4995.4097 20012.795 1608 4772.8030 20946.192 181 4860.9785 20566.245 1180 4927.4182 20288.940 1304 4997.9598 20002.584 1736 4772.8303 20946.072 911 4862.5969 20559.400 1556 4927.4901 20288.644 1733 4999.1125 19997.972 1532													
4768.6988 20964.219 1533 4859.1218 20574.103 1555 4924.7695 20299.852 354 4994.1295 20017.925 89 4771.6965 20951.049 274 4859.7414 20571.480 692 4925.2834 20297.734 1552 4995.4097 20012.795 1608 4772.8030 20946.192 181 4860.9785 20566.245 1180 4927.4182 20288.940 1304 4997.9598 20002.584 1736 4772.8303 20946.072 911 4862.5969 20559.400 1556 4927.4901 20288.644 1733 4999.1125 19997.972 1532													
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4772.8303 20946.072 911 4862.5969 20559.400 1556 4927.4901 20288.644 1733 4999.1125 19997.972 1532				1									
1880 A 180 A 2014 COT A 1800 A 2018 A							1						
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. 44 . –	λ_{vac}	σ -1>	No.	λ_{vac}	σ -1>	No.	\(\lambda_{vac}\)	σ1>	No.	λ_{air}	σ	No.
•	(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})	
<u>.</u> _	5001.8636	19986.973	1442	5065.0185	19737.762	1584	5150.1971	19411.325	1300	5240.3553	19077.365	1063
ď	5002.5809	19984.107	1525	5065.1927	19737.083	1383	5150.8395	19408.904	89	5242.4911	19069.593	1350
4.7	5002.5809	19984.107	1796	5067.1496	19729.461	1582	5151.9109	19404.868	89	5243.7769	19064.917	1579
, ,	5002.7927	19983.261	1179	5068.7658	19723.170	792	5159.0576	19377.987	1581	5247.0504	19053.023	1379
	5004.0443	19978.263	1607	5069.4233	19720.612	1631	5161.2977	19369.577	1607	5249.1054	19045.564	1674
	5004.3414	19977.077	1121	5071.5113	19712.493	1732	5162.2729	19365.918	1579	5250.2089	19043.561	1074
	5005.7123	19971.606	1465	5072.0784	19710.289	1579	5164.5506	19357.377	1674	5250.6460	19039.976	273
	5006.1191	19969.983	692	5072.6721	19707.982	1585	5164.9106	19356.028	1522	5251.9659	19035.191	1300
	5007.2753	19965.372	1552	5073.8968	19703.225	1444	5165.4107	19354.154	1579	5253.4617	19029.771	1012
	5008.6390	19959.936	1734	5074.7483	19699.919	1584	5166.2822	19350.889	1	5254.9554	19024.362	1
	5011.2120	19949.688	910	5076.2646	19694.035	1579	5167.4885	19346.372	180	5255.6654	19021.792	1579
	5012.0684	19946.279	89	5078.9748	19683.526	1582	5167.7118	19345.536	1228	5255.7356	19021.538	1581
	5012.1579	19945.923	1557	5079.2230	19682.564	273	5168.8981	19341.096	1	5257.6553	19014.593	1299
	5012.6947	19943.787	1583	5079.7400	19680.561	89	5169.2987	19339.597	1521	5262.8809	18995.713	1119
	5014.9425	19934.848	1442	5080.3518	19678.191	1423	5171.3144	19332.059	1838	5263.3063	18994.178	1012
	5016.4790	19928.742	1579	5080.7881	19676.501	838	5171.5964	19331.005	179	5263.8650	18992.162	1299
	5019.7307	19915.833	1443	5080.9361	19675.928	1064	5171.6731	19330.718	1382	5265.2439	18987.188	837
	5020.8170	19911.524	1262	5083.3386	19666.629	89	5173.1252	19325.292	837	5266.5554	18982.460	792
	5021.5912	19908.454	1583	5084.5457	19661.960	1422	5173.5038	19323.878	838	5267.2699	18979.885	1645
	5021.6835	19908.088	1554	5088.1531	19648.020	1553	5177.2340	19309.955	1421	5269.0608	18973.434	1890
	5022.2355	19905.900	1442	5090.7740	19637.905	1580	5178.8006	19304.114	1674	5269.5374	18971.718	88
	5022.7891	19903.706	839	5096.9980	19613.925	1582	5182.2231	19291.365	1838	5270.3564	18968.770	180
	5023.1866	19902.131	1585	5098.5723	19607.869	1465	5184.1760	19284.098	1646	5273.1636	18958.672	1012
	5023.4978	19900.898	1649	5098.6981	19607.385	273	5184.2661	19283.763	1579	5273.3736	18957.917	354
	5024.7936	19895.766	1527	5099.0773	19605.927	1442	5185.7260	19278.334	1301	5274.9813	18952.139	1517
	5025.0844	19894.615	1605	5104.0302	19586.902	908	5187.9142	19270.203	1521	5278.5804	18939.217	1120
	5025.3026	19893.751	1609	5104.1912	19586.284	1582	5191.4550	19257.060	792	5280.3620	18932.827	1381
	5027.1231	19886.547	1552	5104.4375	19585.339	1580	5192.3442	19253.762	792	5281.6307	18928.279	1890
	5027.2255	19886.142	1383	5107.4474	19573.797	89	5194.9418	19244.135	179	5281.7904	18927.707	792
	5027.3425	19885.679	1444	5107.6411	19573.055	179	5195.4723	19242.170	1582	5283.6210	18921.149	1012
	5027.7567	19884.041	1605	5108.4034	19570.134	1732	5196.0596	19239.995	1581	5284.4248	18918.271	1349
	5028.1264	19882.579	1303	5109.6520	19565.352	1579	5197.9373	19233.045	1581	5284.6086	18917.613	1521
	5029.6176	19876.684	1229	5110.3588	19562.646	1302	5198.7111	19230.182	273	5285.1286	18915.752	1674
	5030.7786	19872.097	1064	5110.4131	19562.438	1	5202.2564	19217.077	1580	5288.5247	18903.605	1420
	5031.0363	19871.079	1383	5112.9170	19552.858	1838	5202.3360	19216.783	273	5293.0294	18887.517	1673
	5031.9145	19867.611	1649	5115.7781	19541.923	1300	5204.5826	19208.488	1	5293.9588	18884.201	1520
	5036.9222	19847.859	908	5121.6392	19519.560	1585	5204.9506	19207.130	837	5294.5482	18882.099	1379
	5039.2520	19838.683	1179	5121.9732	19518.287	1261	5207.9376	19196.114	1381	5295.3121	18879.375	1645
	5040.2400	19834.794	1583	5123.2804	19513.307	1649	5208.5940	19193.695	1012	5298.7758	18867.034	1379
	5040.8525	19832.384	1582	5123.7200	19511.633	89	5209.8847	19188.940	1063	5298.9497	18866.415	1835
	5040.9061	19832.173	1584	5124.6198	19508.207	1064	5213.8414	19174.378	1700	5304.7614	18845.746	1837
	5041.0716	19831.522	89	5125.1171	19506.314	1580	5214.6080	19171.559	1634	5305.4227	18843.397	1380
	5041.3474	19830.437	909	5125.8345	19503.584	1524	5215.1806	19169.454	1012	5307.3610	18836.515	179
	5041.4476	19830.043	1699	5126.1930	19502.220	1579	5216.2740	19165.436	179	5314.0249	18812.894	1951
	5041.7560	19828.830	179	5127.3593	19497.784	89	5217.3893	19161.339	1012	5315.7714	18806.713	1380
	5041.8486	19828.466	1582 692	5127.6796 5129.6308	19496.566	1 1 1 1 1 1 1 1	5217.9193	19159.393	1381	5320.0356	18791.639	1380
	5044.2114	19819.178	1		19489.150	1442	5221.0381	19147.948	1633	5321.1080	18787.852	1673
	5046.3632	19810.727	1840	5131.4687 5133.6885	19482.170	273	5221.7630	19145.290	1119	5321.8345	18785.287	1347
	5048.4361 5049.8198	19802.593 19797.167	1465 354	5133.6885 5136.0931	19473.746 19464.629	1582 1524	5223.1855 5224.2983	19140.076 19135.999	1381	5322.0408	18784.559	352
									272	5324.1790	18777.015	1012
	5051.6345 5052.9814	19790.055 19784.780	89 1064	5137.3822 5139.2515	19459.745 19452.667	1580 792	5225.5261 5226.0661	19131.503 19129.526	1	5326.1428 5328.0387	18770.092	1296
	5054.6426	19784.780	1384	5139.4628	19432.867	792	5226.8623	19129.526	1227 792		18763.413	88 190
	5055.9916	19773.001	1648	5141.7390	19431.867	354	5227.1507	19126.612	354	5328.5317 5329.9891	18761.677 18756.547	180 1518
	5056.8412	19769.679	1606	5142.4941	19443.230	1580	5227.1307	19125.337	180	5332.6602	18747.152	1518 1520
	5050.8412	19767.168	1554	5142.5412	19440.223	1582	5228.3767	19123.413	1581	5332.8997	18747.132	179
	5057.4836	19767.168	1649	5142.9285	19440.223	89	5229.8485	19121.072	1012	5339.9294	18721.632	1012
	5058.4975	19763.206	1384	5143.7237	19435.754	272	5229.8743	19115.597	1580	5341.0240	18721.032	180
	5060.0344	19757.203	1585	5145.0937	19430.579	273	5231.3885	19110.064	1298	5349.7376	18687.308	1671
	5060.0344	19757.029	1 1	5146.3064	19426.000	1649	5232.9403	19104.397	792	5353.3736	18674.616	1550
	5064.5905	19739.430	1522	5148.0428	19419.448	1580	5235.3867	19095.470	1520	5358.1147	18658.092	1119
	5064.9528	19738.018	1585	5148.2292	19418.745	1585	5236.2041	19092.489	1521	5361.6251	18645.876	1641
			55							2201.0221	100.5.070	1011

TABLE 4—Continued

:												
94	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
:	(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm ⁻¹)	110.	(Å)	(cm ⁻¹)	140.
s.			1645	<u></u>		1.671	<u></u>					
94ApJS	5364.8713	18634.594	1645	5463.2762	18298.950	1671	5560.2116	17979.934	1672	5650.7055	17691.995	1885
4 A	5365.3991 5367.4668	18632.761	1297	5464.2796	18295.590	1519	5561.2428	17976.600	1730	5651.4690	17689.605	1669
99	5369.9619	18625.583 18616.929	1645 1645	5466.3962 5466.9878	18288.506 18286.527	1642 1295	5562.7065	17971.870 17968.983	1671	5651.5243	17689.432	1642
Н	5371.4897	18611.634	88	5470.0940	18276.143	1642	5563.6002 5563.6950		1550	5652.3180	17686.948	1603
	5373.7086	18603.949	1674	5472.7091	18267.410	1603	5565.7040	17968.677 17962.191	352 1697	5653.8668 5655.1765	17682.103	1666
	5376.7293	18593.497	1834	5473.1642	18265.891	1551	5567.2782	17957.112	1643	5655.4900	17678.008 17677.028	1885 1602
	5376.8334	18593.137	1632	5473.9005	18263.434	1550	5567.3911	17956.748	537	5655.4900	17677.028	1885
	5378.5112	18587.337	1951	5476.2885	18255.470	1517	5569.6181	17949.568	1178	5658.5317	17667.526	1178
	5379.5740	18583.665	1419	5476.5642	18254.551	1550	5572.8424	17939.183	1178	5658.6579	17667.132	1577
	5383.3692	18570.564	1645	5478.4556	18248.249	1550	5573.1024	17938.346	1549	5658.8164	17666.637	1178
	5385.5753	18562.957	1418	5480.8608	18240.241	1550	5576.0888	17928.739	1178	5659.5747	17664.270	1888
	5386.3341	18560.342	1551	5481.2430	18238.969	1546	5584.7647	17900.887	1293	5660.8011	17660.443	1375
	5386.9596	18558.187	1379	5481.4387	18238.318	1549	5586.7559	17894.507	1178	5661.0217	17659.755	1775
	5387.4804	18556.393	1520	5481.8989	18236.787	1889	5587.5740	17891.887	1516	5661.3455	17658.745	1603
	5389.4792	18549.511	1644	5482.4616	18234.915	1887	5592.2346	17876.976	1373	5661.9707	17656.795	1604
	5391.2466	18543.430	1296	5483.0988	18232.796	1549	5594.6553	17869.241	1696	5662.5162	17655.094	1577
	5391.4585	18542.701	1550	5487.1451	18219.351	1641	5600.0993	17851.870	1918	5662.9380	17653.779	1416
	5391.6225	18542.137	1349	5487.3951	18218.521	1731	5600.2242	17851.472	1603	5665.6338	17645.379	1375
	5393.1676	18536.825	1012	5487.4819	18218.233	1376	5602.7673	17843.369	1550	5666.7910	17641.776	1548
	5395.2184	18529.779	1641	5487.5213	18218.102	1551	5602.9451	17842.803	1178	5667.4608	17639.691	1886
	5397.1280	18523.223 18522.968	88	5487.7460	18217.356	1641	5603.7459	17840.253	1373	5667.5180	17639.513	1574
	5397.2023 5397.6178	18521.542	1646 1348	5491.8315 5492.0786	18203.804 18202.985	1520 1515	5607.6637 5608.9723	17827.789	1546	5667.6648	17639.056	537
	5398.2794	18521.542	1644	5493.4988	18198.279	1515	5611.3599	17823.630 17816.046	1603	5669.6477	17632.887	1547
	5398.2794	18517.433	1836	5494.4626	18195.087	1514	5611.6790	17815.046	1375 1922	5671.8302	17626.102	1666
	5400.5022	18511.650	1644	5497.5161	18184.981	88	5614.2717	17815.033	1885	5672.2640 5673.3768	17624.754 17621.297	1775
	5400.6559	18511.123	1376	5498.4788	18181.797	1917	5615.2966	17800.800	537	5677.6848	17621.297	1415 1545
	5401.2689	18509.022	1645	5501.4653	18171.927	88	5615.6439	17802.455	1178	5678.3788	17607.927	1464
	5403.8215	18500.279	1517	5504.3620	18162.364	1295	5617.1366	17797.724	1578	5678.6016	17605.775	353
	5404.1172	18499.267	1644	5505.8817	18157.351	1644	5618.6327	17792.985	1602	5679.0229	17603.778	1697
	5404.1516	18499.149	1673	5506.7791	18154.392	88	5619.2249	17791.110	1415	5680.2404	17600.005	1516
	5405.3499	18495.048	1670	5508.4088	18149.021	1832	5619.5954	17789.937	1669	5681.5065	17596.083	1515
	5405.7752	18493.593	88	5512.2567	18136.352	1641	5620.0269	17788.571	1516	5682.4989	17593.010	1830
	5406.7751	18490.173	1647	5512.4026	18135.872	1647	5620.4203	17787.326	1924	5684.4841	17586.866	1923
	5407.3758	18488.119	1260	5517.0655	18120.544	1604	5620.4924	17787.098	1549	5685.8633	17582.600	1833
	5409.1336	18482.111	1646	5522.4465	18102.888	1603	5622.9461	17779.336	1375	5686.1204	17581.805	1371
	5410.9098	18476.044	1673	5523.9933	18097.819	1919	5624.0220	17775.935	1667	5686.5302	17580.538	1696
	5412.7857	18469.641	1670	5525.5443	18092.739	1550	5624.5422	17774.291	1178	5691.4970	17565.196	1577
	5415.1993	18461.409	1673	5528.8990	18081.761	1669	5627.0860	17766.256	1575	5693.3183	17559.577	1830
	5417.0332	18455.159	1647	5529.1602	18080.907	1378	5627.7166	17764.265	1375	5696.0896	17551.034	1693
	5423.7383	18432.344	1418	5531.9839	18071.678	1833	5633.9465	17744.622	1885	5698.0200	17545.088	1371
	5424.0682	18431.223	1645	5532.7472	18069.185	1294	5635.8226	17738.715	1578	5698.3649	17544.026	1630
	5429.5045 5429.6967	18412.769	1550	5532.8687 5534.6634	18068.788 18062.929	1643 1377	5636.2115	17737.491	1541	5699.4100	17540.809	1822
	5429.8395	18412.117 18411.633	1670	5535.4179	18060.467	1517	5636.2462 5636.6962	17737.382 17735.966	1547	5701.5446	17534.242	537
	5432.9479	18401.099	1641	5536.5801	18056.676	738	5637.1081	17733.900	1373 1374	5701.8987 5702.3479	17533.153 17531.772	1574 1372
	5434.5238	18395.763	88	5538.5162	18050.364	1346	5638.2621	17734.070	1577	5702.9067	17531.772	1827
	5436.2958	18389.767	1669	5538.5162	18050.364	1551	5639.3445	17727.637	1833	5704.7337	17524.440	1883
	5436.5962	18388.751	353	5539.2800	18047.875	1377	5640.3101	17724.602	1730	5705.4646	17522.195	1577
	5437.1928	18386.733	1644	5543.0292	18035.668	1551	5640.8766	17722.822	1549	5705.9922	17520.575	1697
	5441.3387	18372.724	1642	5543.1896	18035.146	1832	5641.4340	17721.071	1577	5706.0961	17520.256	1578
	5445.0424	18360.227	1671	5543.9357	18032.719	1550	5641.4913	17720.891	1373	5707.0495	17517.329	1373
	5446.5829	18355.034	1642	5546.5058	18024.363	1644	5642.7513	17716.934	1698	5707.2479	17516.720	1372
	5446.8746	18354.051	180	5546.9924	18022.782	1549	5643.9262	17713.246	1512	5707.7041	17515.320	1544
	5446.9168	18353.909	88	5549.9527	18013.169	1417	5644.0259	17712.933	1730	5708.0945	17514.122	1669
	5452.0882	18336.500	1376	5552.6937	18004.277	1833	5644.3573	17711.893	1545	5709.3783	17510.184	1178
	5455.4544	18325.186	1644	5553.5778	18001.411	1669	5645.8338	17707.261	1730	5709.9323	17508.485	1578
	5455.6095	18324.665	88	5554.8951	17997.142	1697	5646.6843	17704.594	1604	5711.8486	17502.611	1577
	5460.8769	18306.990	907	5557.9028	17987.403	1672	5647.7667	17701.201	351	5712.1316	17501.744	1178
	5461.5499	18304.734	1644	5557.9028	17987.403	907	5649.6306	17695.361	1345	5712.8886	17499.425	1829
	5462.9595	18300.011	1671	5557.9822	17987.146	1671	5649.9873	17694.244	1885	5714.5491	17494.340	1883

TABLE 4—Continued

•					ADLE 4	—Сопиниви					
λ_{vac} λ_{vac} λ_{vac}	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
5715.0986	17492.658	1549	5780.2829	17295.395	1574	5838.1413	17123.992	1822	5898.5107	16948.735	1882
5715.0986 5715.0986 5715.4694	17492.658	1576	5780.6001	17294.446	1011	5838.3718	17123.316	1441	5899.0635	16947.147	1258
5715.4694	17491.523	1542	5780.8043	17293.835	1011	5842.0275	17112.601	1570	5901.5314	16940.060	1573
5716.1721	17489.373	1668	5781.4944	17291.771	1728	5843.1523	17109.307	1569	5901.7429	16939.453	1855
5717.8329	17484.293	1602	5782.1096	17289.931	1883	5843.2268	17109.089	1062	5902.4736	16937.356	1775
5720.8982	17474.925	1692	5783.8947	17284.595	1011	5844.9188	17104.136	1544	5905.6720	16928.183	1695
5721.7069	17472.455	1545	5784.0342	17284.178	1573	5845.2869	17103.059	1884	5906.2557	16926.510	1542
5721.7069	17472.455	1578	5784.6584	17282.313	1178	5845.9620	17101.084	1829	5906.8430	16924.827	1824
5723.6724	17466.455	1667	5785.1712	17280.781	1370	5848.0665	17094.930	1011	5907.8634	16921.904	1412
5724.4547	17464.068	1604	5785.5201	17279.739	1970	5848.1294	17094.746	1689	5909.8439	16916.233	1877
5730.8570	17444.558	1826	5785.6580	17279.327	1822	5849.1850	17091.661	1062	5909.9736	16915.862	1011
5731.7623	17441.803	1577	5786.9910	17275.347	1575	5849.6840	17090.203	1413	5914.1120	16904.025	1695
5732.2960	17440.179	1884	5787.9626	17272.447	1574	5850.0907	17089.015	1827	5914.2013	16903.770	1694
5732.8630	17438.454	1543	5790.4065	17265.157	1884	5851.2052	17085.760	1824	5916.0401	16898.516	1880
5734.5652	17433.278	1831	5791.0180	17263.334	1011	5852.2187	17082.801	1692	5916.2474	16897.924	466
5735.7088	17429.802	1824	5791.1941	17262.809	1822	5853.1483	17080.088	178	5916.5506	16897.058	1543
5738.2277	17422.151	1575	5791.5239	17261.826	1775	5853.6826	17078.529	1543	5918.9319	16890.260	1573
5739.7804	17417.438	1545	5791.8511	17260.851	1916	5854.6305	17075.764	1667	5920.5030	16885.778	1061
5741.8484	17411.165	1576	5793.6787	17255.406	1774	5855.0766	17074.463	1693	5923.5150	16877.192	1854
5742.9600	17407.795	1575	5793.9148	17254.703	1576	5856.0880	17071.514	1627	5923.7494	16876.524	1768
5743.9291	17404.858	1916	5796.4306	17247.214	1729	5858.2654	17065.169	466	5926.8237	16867.770	1772
5747.4532	17394.186	1727	5796.6595	17246.533	1542	5858.7780	17063.676	1575	5927.7891	16865.023	1689
5747.8382	17393.021	1668	5798.1714	17242.036	1464	5859.2343	17062.347	1575	5929.6772	16859.653	1690
5747.9542	17392.670	1696	5801.2688	17232.830	1883	5859.5867	17061.321	1695	5930.1799	16858.224	1694
5749.4094	17388.268	1372	5804.0350	17224.617	1441	5859.9549	17060.249	1542	5931.8907	16853.362	1507
5749.6365	17387.581	1667	5804.4627	17223.348	1577	5861.1096	17056.888	1575	5933.8004	16847.938	1724
5750.0331	17386.382	1830	5805.7571	17219.508	1884	5862.3565	17053.260	1694	5934.6549	16845.512	1464
5752.0320	17380.340	1694	5806.6268	17216.929	1825	5864.2444	17047.770	1576	5935.1295	16844.165	1770
5753.1227	17377.045	1602	5806.7249	17216.638	1694	5864.3965 5866.2334	17047.328	1824	5936.9377	16839.035	1826
5753.3836	17376.257 17375.321	1575 1578	5807.7838 5807.9755	17213.499 17212.931	1011 1692	5866.2334 5866.4451	17041.990 17041.375	1766 1573	5939.2402 5940.4521	16832.507 16829.073	1062 1827
5753.6935 5753.9697	17374.487	466	5809.1553	17212.931	1414	5866.9901	17041.373	1728	5940.4321	16827.545	1573
5754.4026	17373.180	1372	5809.1333	17209.433	1464	5871.3037	17027.273	1543	5943.1007	16821.573	1512
5755.1327	17373.180	1886	5809.8825	17207.281	1575	5872.7261	17023.149	1011	5943.5784	16820.221	270
5755.3481	17370.376	1371	5809.9713	17207.018	1292	5873.2129	17021.738	1577	5943.6240	16820.092	1569
5759.2621	17358.521	1698	5811.9145	17201.265	1513	5876.1338	17013.277	1291	5945.3903	16815.095	1062
5759.5412	17357.680	1577	5812.4450	17199.695	1725	5876.2782	17012.859	1575	5947.5115	16809.098	1725
5760.3446	17355.259	1371	5813.3299	17197.077	1542	5877.7880	17008.489	1573	5949.2797	16804.102	87
5760.5318	17354.695	1542	5814.0081	17195.071	1886	5879.4870	17003.574	1727	5949.3470	16803.912	1690
5760.6935	17354.208	1062	5814.8075	17192.707	1576	5879.4870	17003.574	1853	5951.4536	16797.964	1061
5760.6935	17354.208	1544	5815.2178	17191.494	1543	5880.0272	17002.012	1727	5952.7184	16794.395	1441
5761.0819	17353.038	1545	5815.2178	17191.494	1775	5881.2801	16998.390	1692	5952.8850	16793.925	1569
5761.2559	17352.514	1371	5815.5141	17190.618	1623	5881.7510	16997.029	270	5953.5975	16791.915	1773
5762.2315	17349.576	1822	5815.6282	17190.281	1831	5883.0753	16993.203	1624	5956.4605	16783.844	1569
5762.4135	17349.028	1372	5816.0609	17189.002	1626	5883.8170	16991.061	1464	5956.6944	16783.185	87
5762.6058	17348.449	1769	5816.3735	17188.078	1693	5886.8167	16982.403	1825	5957.8645	16779.889	1572
5762.8384	17347.749	1576	5817.0765	17186.001	1827	5887.4646	16980.534	1728	5958.2284	16778.864	1725
5762.9922	17347.286	1602	5819.2802	17179.493	1573	5888.8175	16976.633	1724	5958.2284	16778.864	87
5767.9727	17332.307	1629	5821.8896	17171.793	1831	5889.3896	16974.984	1725	5958.3332	16778.569	270
5769.3228	17328.251	1693	5826.6380	17157.799	1575	5890.4962	16971.795	1884	5959.9146	16774.117	1510
5769.5692	17327.511	1578	5827.4542	17155.396	1829	5891.1759	16969.837	1693	5960.3609	16772.861	1882
5769.6725	17327.201	1543	5827.8771	17154.151	1011	5891.8786	16967.813	1771	5961.5246	16769.587	1913
5770.1563	17325.748	1774	5828.4044	17152.599	1884	5892.4652	16966.124	1727	5961.9181	16768.480	1570
5773.4503	17315.863	1292	5833.3599	17138.028	1569	5892.6937	16965.466	1576	5962.2197	16767.632	1726
5774.7049	17312.101	1511	5833.9267	17136.363	537	5892.8010	16965.157	270	5963.0657	16765.253	1369
5775.0806	17310.975	1577	5834.0298	17136.060	1829	5893.2349	16963.908	1543	5963.2386	16764.767	270
5775.6301	17309.328	1855	5835.1008 5835.4170	17132.915 17131.984	1575 1884	5895.0173 5895.1633	16958.779	1776	5965.4718	16758.491	1543
5776.2244 5778.4533	17307.547 17300.871	1414 1542	5835.4179 5835.4962	17131.984	1574	5895.1633	16958.359 16953.815	1259 1916	5965.6943	16757.866	1061
5778.4533	17300.871	537	5835.4962	17131.734	737	5890.7433 5897.7525	16953.815	1774	5965.9909 5966.9808	16757.033 16754.253	1829 1508
5778.8091	17299.806	1728	5836.7551	17131.327	1915	5898.2153	16949.584	1774	5969.5622	16734.233	1508
5779.6881	17297.175	1822	5837.7012	17125.283	1628	5898.5107	16948.735	1855	5973.4709	16736.050	1877
5/17.0001	1,40,1,113	1022	1 2037.7012	1.123.203	.020	2070.5107	107-10.733	1000	5715.7103	10/30.030	1077

TABLE 4—Continued

TABLE 4—Continued												
λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ_{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.	
5975.3464	16730.797	1507	6065.4822	16482.172	536	6253.8309	15985.777	1788	6438.7581	15526.654	1665	
5975.3464	16730.797	1794	6065.8009	16481.306	1061	6254.2585	15984.684	350	6439.5623	15524.715	1664	
5976.1604	16728.518	1625	6071.4202	16466.052	1853	6256.3615	15979.311	465	6446.1003	15508.969	1503	
5976.4391	16727.738	1571	6078.4911	16446.898	1793	6265.1340	15956.937	269	6459.2860	15477.310	1506	
5976.7771	16726.792	1441	6079.0093	16445.496	1690	6270.2250	15943.981	736	6462.7251	15469.074	464	
5978.3233	16722.466	1825	6081.7107	16438.191	1640	6271.2788	15941.302	1177	6462.7251	15469.074	86	
5978.8946	16720.868	1829	6081.8280	16437.874	1508	6280.6182	15917.597	86	6464.6642	15464.434	86	
5981.3650	16713.962	1344	6082.7106	16435.489	271	6280.7741	15917.202	1765	6469.1181	15453.787	464	
5981.7544	16712.874	1879	6083.6634	16432.915	1463	6290.9656	15891.416	1790	6469.1930	15453.608	1790	
5982.3121	16711.316	1823	6085.2590	16428.606	624	6291.0701	15891.152	1789	6472.1494	15446.549	1639	
5983.6810	16707.493	1689	6087.8786	16421.537	1510	6293.9257	15883.942	1794	6475.6244	15438.260	535	
5984.8151	16704.327	1794	6091.7207	16411.180	1726	6297.7931	15874.188	269	6476.6095	15435.912	1540	
5985.1885	16703.285	1824	6093.6444	16405.999	1691	6301.5012	15864.847	1325	6481.8703	15423.384	348	
5986.9563	16698.353	1061	6094.3736	16404.036	1691	6302.4936	15862.349	1325	6483.9462	15418.446	177	
5987.0649	16698.050	1794	6096.6653	16397.870	1441	6307.8549	15848.867	1367	6494.4999	15393.391	1787	
5988.5565 5991.2611	16693.891 16686.355	1914 1877	6097.0814 6098.2447	16396.751 16393.623	271 1726	6311.5003 6312.7705	15839.713	736	6494.9805	15392.252	464	
5992.6413	16682.512	1570	6100.2716	16388.176	1725	6312.7703	15836.526 15830.166	1664	6495.7422	15390.447	1785	
5992.9987	16681.517	1543	6100.2710	16383.057	1690	6315.4125	15829.901	1505 1506	6496.4666	15388.731 15382.876	1790	
5994.5439	16677.217	1258	6102.1777	16383.057	1793	6315.8115	15828.901	1504	6498.9392 6499.6161	15382.876	86 1660	
5995.9141	16673.406	1724	6103.1851	16380.353	1794	6318.0175	15823.374	464	6500.4787	15379.233	2004	
5997.6749	16668.511	1877	6103.2939	16380.061	1791	6322.6855	15811.692	536	6504.1835	15379.233	1786	
5997.7778	16668.225	1689	6105.1314	16375.131	1689	6330.8495	15791.302	1786	6504.5089	15369.704	1506	
5998.9385	16665.000	1344	6107.3296	16369.237	1505	6335.3308	15780.132	269	6509.6168	15357.644	1501	
6000.6305	16660.301	1882	6120.2494	16334.682	87	6336.8243	15776.413	1325	6518.3671	15337.028	736	
6003.0123	16653.691	1441	6127.9066	16314.271	1507	6338.8775	15771.303	1790	6533.9294	15300.499	1723	
6005.5413	16646.678	536	6135.7901	16293.310	1878	6344.1491	15758.198	465	6538.4939	15289.818	1504	
6007.7150	16640.655	1061	6136.6153	16291.119	465	6350.5448	15742.328	1765	6546.2395	15271.727	623	
6007.9601	16639.976	1692	6136.9947	16290.112	269	6351.2726	15740.524	1639	6547.5763	15268.609	86	
6008.5566	16638.324	1464	6137.2859	16289.339	1767	6353.8363	15734.173	86	6551.6780	15259.050	86	
6009.8263	16634.809	1118	6137.4984	16288.775	1177	6355.0290	15731.220	736	6555.8696	15249.294	1498	
6009.8263	16634.809	1770	6137.6917	16288.262	536	6358.6337	15722.302	1506	6556.7880	15247.158	1787	
6012.2099	16628.214	271	6139.8671	16282.491	1572	6358.6976	15722.144	86	6559.7713	15240.224	1764	
6012.4377	16627.584	1792	6141.7320	16277.547	1325	6362.8763	15711.819	1509	6569.2155	15218.314	1785	
6012.7584	16626.697	1724	6147.8347	16261.389	1506	6364.3657	15708.142	1785	6571.1677	15213.793	1621	
6013.9148	16623.500	1877	6151.6181	16251.388	269	6364.6951	15707.329	1765	6574.2284	15206.710	86	
6015.2443	16619.826	270	6157.7284	16235.262	1505	6367.1204	15701.346	1789	6575.0158	15204.889	535	
6016.0475	16617.607	1880	6159.3776	16230.915 16219.942	1689	6368.3790	15698.243	1440	6581.2101	15190.578	177	
6018.2995 6019.3659	16611.389 16608.446	1690 1290	6163.5445 6165.3603	16219.942	271 1508	6368.6346 6376.1999	15697.613	1788	6584.5799	15182.804	2003	
6020.1692	16606.230	1692	6169.5978	16204.028	1789	6380.7433	15678.988 15667.824	1639	6591.3129	15167.295	1765	
6021.7912	16601.757	270	6170.5071	16204.028	1794	6385.7185	15655.617	1505 1785	6592.6095 6592.9138	15164.312	1819 623	
6024.0580	16595.510	1692	6173.3356	16194.217	269	6392.5388	15638.914	348	6593.8705	15163.612 15161.412	464	
6027.0509	16587.269	1508	6180.2042	16176.219	624	6393.6013	15636.315	464	6597.5611	15152.931	1785	
6027.7236	16585.418	1879	6185.6970	16161.855	2108	6397.9689	15625.641	1664	6601.1220	15144.757	1821	
6027.9660	16584.751	1695	6187.9904	16155.865	1441	6399.6493	15621.538	1440	6603.1965	15139.999	1366	
6028.1067	16584.364	2123	6191.5584	16146.555	1572	6400.0012	15620.679	1325	6603.3404	15139.669	349	
6034.0355	16568.069	1640	6191.5584	16146.555	465	6400.3180	15619.906	86	6604.5890	15136.807	1786	
6035.3378	16564.494	1625	6200.3129	16123.757	536	6408.0184	15601.136	1325	6608.0260	15128.934	348	
6035.3378	16564.494	1770	6213.4303	16089.718	269	6408.3350	15600.365	1663	6608.9525	15126.813	1540	
6036.4573	16561.422	1880	6215.1438	16085.282	1508	6411.1078	15593.618	1788	6609.1103	15126.452	535	
6042.2254	16545.612	1695	6219.2810	16074.582	269	6411.6493	15592.301	1325	6609.6787	15125.151	86 ⁻	
6054.0741	16513.230	1640	6220.7837	16070.699	1440	6412.2025	15590.956	465	6613.8254	15115.668	86	
6055.0917	16510.455	1877	6226.2503	16056.589	1368	6416.9307	15579.468	1785	6614.9497	15113.099	2002	
6055.4016	16509.610	1823	6226.7363	16055.336	1463	6419.6454	15572.880	1440	6622.4073	15096.080	1662	
6056.0047	16507.966	1793	6229.2283	16048.913	736	6419.9496	15572.142	1790	6623.7912	15092.926	1500	
6057.2585	16504.549	1881	6230.7230	16045.063	536	6420.0655	15571.861	1763	6625.0220	15090.122	86	
6060.6243	16495.383	178	6232.6412	16040.125	1325	6421.3508	15568.744	350	6627.5448	15084.378	1687	
6060.8081	16494.883	1571	6240.3105	16020.412	1505	6430.8464	15545.756	269	6631.9797	15074.291	1819	
6062.8484	16489.332	270	6240.6462	16019.550	271	6434.8760	15536.021	1226	6633.4125	15071.035	1790	
6062.9447	16489.070	1828	6246.3188	16005.002	1325	6436.4072	15532.325	1506	6633.7497	15070.269	1723	
6065.4822	16482.172	1826	6252.5554	15989.038	465	6438.4596	15527.374	1969	6634.1071	15069.457	1790	

TABLE 4—Continued

:											
λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
: (Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})	
:						<u> </u>	(/		(1.1)		
6636.9646	15062.969	1501	6796.0476	14710.375	1501	7293.0454	13707.916	1567	7583.7882	13182.393	836
6639.8784	15056.359	1498	6796.1252	14710.207	1498	7306.5623	13682.557	1567	7586.0187	13178.517	1638
6645.3677	15043.922	1661	6801.8705	14697.782	177	7307.9318	13679.993	1494	7588.3053	13174.546	1873
6646.9318	15040.382	535	6803.8319	14693.545	1717	7311.0759	13674.110	1567	7594.2506	13164.232	1817
6648.0810	15037.782	86	6804.0009	14693.180	1687	7320.6826	13656.166	1715	7600.6959	13153.069	1876
6653.8527	15024.738	1540	6804.2713	14692.596	1759	7343.9468	13612.906	1979			
									7605.3593	13145.004	1875
6663.2325	15003.588	1721	6806.8449	14687.041	623	7386.3332	13534.789	1817	7606.4697	13143.085	1873
6663.4421	15003.116	350	6810.2628	14679.670	1723	7389.3086	13529.339	1816	7610.2682	13136.525	1492
6665.4271	14998.648	177	6814.7426	14670.020	1117	7389.3988	13529.174	1567	7615.0831	13128.219	622
6667.4191	14994.167	464	6819.5903	14659.592	1539	7396.5071	13516.172	1818	7615.8483	13126.900	1870
6667.7113	14993.510	1763	6820.3719	14657.912	1723	7396.5071	13516.172	1966	7617.2380	13124.505	1871
6672.6801	14982.345	2001	6824.8231	14648.352	1821	7401.6849	13506.717	1495	7617.9897	13123.210	1493
6673.8143	14979.799	1786	6828.5912	14640.269	1721	7411.1544	13489.459	1567	7620.5128	13118.865	1782
6676.8657	14972.953	1720	6833.2255	14630.340	1720	7418.6674	13475.798	1493	7623.0492	13114.500	1871
6677.9870	14970.439	623	6837.0061	14622.250	1759	7421.5588	13470.548	1715	7634.0062	13095.677	1874
		1499									
6682.2368	14960.918		6838.8325	14618.345	2198	7430.8567	13453.693	1716	7635.8482	13092.518	1783
6687.4922	14949.161	1501	6839.8305	14616.212	534	7440.9122	13435.512	1815	7647.6487	13072.316	2037
6692.2724	14938.483	1499	6841.3391	14612.989	1721	7443.0224	13431.703	1494	7647.8418	13071.986	1638
6692.4696	14938.043	1718	6842.6858	14610.113	1723	7445.7508	13426.781	1567	7650.9450	13066.684	622
6699.1418	14923.165	1763	6843.6560	14608.042	1686	7447.3938	13423.819	1815	7653.7596	13061.879	1782
6703.5674	14913.313	623	6844.6577	14605.904	177	7453.9978	13411.926	1493	7658.3299	13054.084	1783
6704.4809	14911.281	1540	6847.5954	14599.638	1568	7460.3602	13400.488	2102	7661.1974	13049.198	1567
6705.1024	14909.899	1723	6851.6347	14591.031	177	7461.5206	13398.404	533	7661.4769	13048.722	1876
6707.4332	14904.718	1688	6854.8228	14584.245	1760	7463.3822	13395.062	1874	7664.1587	13044.156	1782
6710.3195	14898.307	177	6855.1621	14583.523	1721	7466.5199	13389.433	1784	7664.2933	13043.927	
6711.8211	14894.974	1819	6855.7131	14582.351	1721	7469.1914	13384.644	i			836
								2000	7676.0658	13023.922	1784
6712.4380	14893.605	1820	6856.0732	14581.585	1968	7472.7512	13378.268	1964	7689.0365	13001.952	1871
6713.0469	14892.254	1721	6857.2503	14579.082	1497	7473.5539	13376.831	1715	7696.8127	12988.816	1870
6713.1962	14891.923	1502	6858.1498	14577.170	1686	7476.3759	13371.782	1783	7710.0969	12966.437	1911
6713.7448	14890.706	1787	6861.9420	14569.114	348	7477.5083	13369.757	1439	7710.3645	12965.987	1567
6715.3832	14887.073	1687	6876.0017	14539.324	1502	7481.3195	13362.946	2279	7719.0486	12951.400	1871
6716.2373	14885.180	1759	6880.6305	14529.543	1539	7481.7417	13362.192	622	7720.7130	12948.608	1871
6717.3014	14882.822	1912	6885.7564	14518.727	1686	7481.9326	13361.851	1782	7723.2080	12944.425	347
6717.5271	14882.322	1720	6916.6815	14453.813	1540	7482.2232	13361.332	1875	7733.7232	12926.825	1873
6725.3572	14864.995	1540	6945.2052	14394.452	350	7484.2975	13357.629	1873	7737.6661	12920.238	
		I		14381.944				,			1638
6726.6668	14862.101	1723	6951.2455		1719	7486.1105	13354.394	1462	7742.7047	12911.830	1873
6730.2924	14854.095	1819	6978.8516	14325.054	350	7486.6610	13353.412	1963	7745.5140	12907.147	1872
6732.0649	14850.184	1759	6999.8841	14282.012	1539	7491.4268	13344.917	1965	7746.5943	12905.347	1876
6733.1513	14847.788	1721	7007.9701	14265.533	1568	7491.6486	13344.522	1567	7748.2694	12902.557	836
6735.0060	14843.699	1662	7011.3437	14258.669	1758	7495.0674	13338.435	1567	7751.1091	12897.830	1871
6736.5314	14840.338	1622	7016.3920	14248.410	1539	7498.5304	13332.275	1493	7754.0267	12892.977	2107
6737.2691	14838.713	1010	7022.9539	14235.097	1539	7501.2767	13327.394	1494	7755.0246	12891.318	2047
6737.9870	14837.132	1718	7038.2234	14204.214	1539	7506.0144	13318.982	1873	7779.8120	12850.245	2101
6739.5219	14833.753	177	7068.4097	14143.554	1495	7506.1463	13318.748	1876	7780.5573	12849.014	1659
6745.1013	14821.483	1762	7090.3835	14099.722	1539	7507.2663	13316.761	1638	7788.7450	12835.507	1491
		1496			1496						
6745.9565	14819.604		7107.4610	14065.844		7508.6178	13314.364	1492	7802.4728	12812.924	1870
6746.9549	14817.411	534	7130.9221	14019.567	1539	7511.0205	13310.105	1567	7807.9091	12804.003	1870
6750.1525	14810.392	350	7132.9863	14015.510	1494	7512.1385	13308.124	1493	7810.8147	12799.240	1870
6752.7071	14804.789	1721	7148.1482	13985.782	1966	7514.1994	13304.474	1963	7813.6467	12794.601	1872
6753.4639	14803.130	1722	7164.4486	13953.962	1539	7528.1451	13279.828	1874	7820.8034	12782.893	1620
6764.1079	14779.836	1759	7181.1959	13921.420	1568	7531.1451	13274.538	1638	7832.1968	12764.298	1659
6769.6593	14767.716	1761	7187.3180	13909.562	1539	7540.4303	13258.192	622	7832.6613	12763.541	2146
6777.4094	14750.829	1502	7207.1116	13871.361	1493	7541.5316	13256.256	1439	7844.5589	12744.183	1782
6783.2657	14738.094	535	7207.3880	13870.829	1539	7541.9128	13255.586	1870	7853.6376	12744.183	1876
6783.7039	14737.142	534	7219.6853	13847.203	1493						
						7545.5827	13249.139	2279	7855.3988	12726.597	1872
6785.7405	14732.719	1761	7223.6610	13839.582	906	7547.8968	13245.077	1873	7869.6106	12703.614	1638
6785.8506	14732.480	1498	7239.8676	13808.602	1601	7551.1088	13239.443	1870	7869.6106	12703.614	1871
6786.4268	14731.229	1010	7248.1075	13792.904	1967	7559.5731	13224.619	1876	7879.7584	12687.254	1873
6786.8604	14730.288	1540	7261.5140	13767.439	1715	7559.7200	13224.362	1875	7887.0871	12675.465	1638
6787.1622	14729.633	1819	7284.8353	13723.365	1495	7563.0108	13218.608	1783	7892.5461	12666.698	2146
6793.2592	14716.413	1496	7288.7385	13716.016	1567	7568.8999	13208.323	1567	7892.7984	12666.293	2145
6794.6185	14713.469	1820	7292.8294	13708.322	1716	7582.1219	13185.290	1816	7912.8670	12634.169	85
2.20102	5		,				15.05.20	1010	7712.0070	12054.107	0.5

TABLE 4—Continued

:											
λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm ⁻¹)	110.
70147125	12621 222	2027	8198.9221	12102 272	1650	<u> </u>		1.400	<u> </u>		
7914.7125 7915.5140	12631.223 12629.944	2037 1910	8198.9221	12193.373 12188.567	1659 2179	8466.5313 8468.4074	11807.968	1489	8832.9680	11318.115	1849
7914.7125 7915.5140 7924.1504 7937.1406	12629.944	1782	8204.1030	12185.673	85	8471.7444	11805.352 11800.702	268	8838.2993	11311.288	2156
7937.1406	12595.531	1637	8204.1030	12184.434	85	8480.6313	11788.336	1812 1814	8838.4290 8846.7407	11311.122	735
7941.0892	12589.268	1116	8207.7429	12180.269	1637	8481.9818	11786.336	1489	8849.7502	11300.495 11296.652	1809
7941.8330	12588.089	957	8215.8048	12168.317	2143	8493.2563	11770.813	1714	8862.0518	11296.632	1939 1947
7945.8469	12581.730	1659	8220.3790	12161.546	1637	8493.7961	11770.065	1811	8863.5887	11279.015	1845
7945.9871	12581.508	346	8230.6396	12146.385	2087	8496.9905	11765.640	1685	8866.9329	11274.761	1685
7950.8266	12573.850	1910	8231.7456	12144.753	1812	8514.0721	11742.035	268	8868.4290	11274.761	834
7953.6168	12569.439	2145	8232.3178	12143.909	1637	8515.1084	11740.606	835	8876.0241	11263.213	1809
7954.9345	12567.357	836	8238.5918	12134.661	2308	8525.0294	11726.943	1753	8878.2438	11260.397	835
7955.6922	12566.160	1872	8239.1281	12133.871	347	8526.6690	11724.688	1812	8878.7508	11259.754	1538
7959.1435	12560.711	1871	8242.5172	12128.882	2084	8527.8531	11723.060	1812	8878.9464	11259.506	531
7964.9730	12551.518	1870	8248.1309	12120.627	1637	8538.0152	11709.107	1808	8891.4044	11243.730	1950
7974.4911	12536.537	1757	8257.2810	12107.196	2086	8559.7416	11679.387	1907	8902.9245	11229.181	1808
7981.9118	12524.882	2144	8263.4353	12098.179	2036	8562.1066	11676.161	1658	8905.9947	11225.310	1869
7986.0123	12518.451	1909	8263.7195	12097.763	2155	8567.7905	11668.415	1811	8920.0137	11207.668	1867
7996.8164	12501.538	1757	8263.8267	12097.606	1814	8570.0997	11665.271	2083	8922.6520	11204.354	1865
7997.3026	12500.778	1490	8264.2789	12096.944	2371	8571.8052	11662.950	1814	8929.0777	11196.291	1867
7998.2527	12499.293	1619	8268.1345	12091.303	2178	8582.2574	11648.746	835	8940.3311	11182.198	1804
7998.9458	12498.210	1637	8268.8341	12090.280	1618	8584.7955	11645.302	1812	8942.8959	11178.991	1803
8002.5763 8002.5763	12492.540 12492.540	1754 2046	8269.6488 8274.5817	12089.089 12081.882	1755 2086	8592.9507	11634.250 11626.295	1809	8943.0639	11178.781	734
8013.0161	12476.264	2148	8274.3817 8275.8921	12079.969	1812	8598.8302 8607.0810	11626.295	1658 1814	8945.1900	11176.124 11174.785	1867
8021.9587	12462.356	1909	8278.5936	12076.027	2143	8610.6120	11613.130	1658	8946.2619 8950.1888	111/4./85	734
8027.9418	12453.068	1116	8287.2797	12063.370	2085	8611.8040	11608.780	735	8950.6159	11169.882	1538 1948
8028.3145	12452.490	1659	8292.8094	12055.326	2086	8613.9410	11605.900	1814	8954.9390	11163.957	531
8046.0479	12425.045	1637	8293.5146	12054.301	1116	8616.2796	11602.750	1808	8959.8820	11157.798	1976
8047.6185	12422.620	85	8300.0001	12044.882	1908	8616.4741	11602.488	1257	8961.3590	11155.959	1845
8048.9928	12420.499	1490	8310.0703	12030.286	2085	8621.6007	11595.589	835	8969.4176	11145.936	1009
8052.5820	12414.963	1756	8314.4659	12023.926	2127	8632.4147	11581.063	1538	8971.4636	11143.394	1851
8059.3508	12404.536	2157	8321.9158	12013.162	2100	8656.6782	11548.603	1811	8975.4007	11138.506	834
8072.1647	12384.845	347	8324.1484	12009.940	2085	8661.9000	11541.641	268	8978.1969	11135.037	1225
8075.1509	12380.265	85	8327.0563	12005.746	268	8663.7151	11539.223	1812	8984.8886	11126.744	1867
8078.3986	12375.288	2142	8328.9475	12003.020	2085	8671.8592	11528.386	1814	8987.1372	11123.960	1845
8080.5475	12371.997	1116	8331.9157	11998.744	1658	8674.7465	11524.549	735	8994.6271	11114.697	1115
8085.1723	12364.920	1637	8332.5414	11997.843	2366	8679.6359	11518.057	1852	8999.5566	11108.609	735
8089.3535	12358.529	1908	8334.5316	11994.978	2142	8681.2601	11515.902	1939	9006.7637	11099.720	1803
8090.3269	12357.042	1755	8339.4039	11987.970	1658	8688.6255	11506.140	268	9006.7637	11099.720	1947
8090.9673	12356.064	1962 2020	8340.5032 8342.2020	11986.390	1907	8689.8641	11504.500	1907	9008.4121	11097.689	1905
8094.9322 8094.9322	12350.012 12350.012	2020	8342.8571	11983.949 11983.008	835 1812	8698.7061 8698.8265	11492.806	834	9010.5946	11095.001	531
8096.8755	12347.048	1489	8343.7073	11981.787	2142	8699.4540	11492.647 11491.818	2105	9012.0745	11093.179	1867
8098.3853	12344.746	2143	8349.0449	11961.767	85	8710.3915	11491.818	1809 1809	9013.9776 9019.7469	11090.837 11083.743	345 1867
8106.6945	12332.093	1940	8358.5224	11960.550	835	8712.8852	11477.388	2122	9019.7469	11083.743	1807
8108.3212	12329.619	621	8360.7956	11957.298	1658	8713.2034	11473.684	1809	9024.7520	11077.596	1864
8112.1635	12323.779	621	8365.6336	11950.383	1116	8729.1475	11452.727	1225	9026.4420	11077.520	1808
8126.3236	12302.305	1754	8372.1139	11941.133	2177	8747.4250	11428.797	835	9030.7129	11070.284	734
8126.5066	12302.028	1755	8387.7725	11918.841	268	8751.0261	11424.094	2330	9034.6793	11065.424	1938
8146.6773	12271.569	1116	8397.1342	11905.553	2179	8757.1876	11416.056	735	9036.7552	11062.882	1811
8149.5157	12267.295	1754	8401.4000	11899.508	347	8763.9664	11407.226	1685	9047.7676	11049.417	1869
8149.6897	12267.033	1755	8414.0882	11881.564	1659	8784.4405	11380.639	1812	9049.3499	11047.485	1944
8151.7604	12263.917	2371	8419.2787	11874.239	2371	8790.5217	11372.766	1809	9052.5940	11043.526	1948
8168.5967	12238.640	2085	8422.9141	11869.114	1489	8793.3438	11369.116	1685	9057.9713	11036.970	956
8171.1418	12234.828	2178	8424.1406	11867.386	1814	8796.4836	11365.058	1808	9058.7601	11036.009	1938
8172.8205	12232.315	2087	8434.4931	11852.820	1812	8804.6258	11354.548	345	9062.2401	11031.771	1867
8178.9940	12223.082	1637	8439.5721	11845.687	1685	8808.1710	11349.978	1809	9064.6896	11028.790	1804
8186.7957	12211.434	1814	8446.3844	11836.133	1814	8814.5190	11341.804	1907	9068.9170	11023.649	1946
8190.8289	12205.421	2228	8446.5685	11835.875	1809	8816.8869	11338.758	1813	9070.4031	11021.843	1866
8195.2477	12198.840	2142	8447.6391	11834.375	85	8819.4888	11335.413	1811	9078.5716	11011.926	1849
8196.5170 8198.2720	12196.951 12194.340	1754 2087	8465.1985 8466.1126	11809.827 11808.552	1812 1811	8824.2211 8828.0876	11329.334	268	9079.5808	11010.702	1685
0170.2720	14174.340	2001	0700.1120	11000.332	1011	0020.00/0	11324.372	1811	9080.3874	11009.724	1807

TABLE 4—Continued

TABLE 4—Continuea												
λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.	
9084.1854	11005.121	1566	9246.5589	10811.867	532	9437.7961	10592.788	1684	9705.3052	10300.818	1938	
9085.4204	11003.625	2106	9248.1294	10810.031	1921	9443.8023	10586.051	1865	9711.6380	10294.101	1805	
9086.4344	11002.397	1906	9248.7608	10809.293	1848	9452.3359	10576.494	1805	9715.5132	10289.995	1973	
9088.3186	11000.116	735	9258.2698	10798.191	1685	9452.6674	10576.123	1859	9723.1321	10281.932	1849	
9088.5078	10999.887	2278	9259.0055	10797.333	1805	9454.1951	10574.414	1865	9727.8295	10276.967	1944	
9089.4044	10998.802	834	9259.2302	10797.071	1849	9463.0287	10564.543	1805	9738.5726	10265.630	1863	
9091.6643	10996.068	1846	9263.9621	10791.556	1846	9467.7920	10559.228	1848	9745.1399	10258.712	1946	
9092.4780	10995.084	1869	9280.3626	10772.485	1849	9469.9498	10556.822	1804	9746.5508	10257.227	1946	
9098.6049	10987.680	1807	9282.2143	10770.336	1845	9472.1104	10554.414	1859	9747.3196	10256.418	1747	
9100.4461	10985.457	1806	9284.8264	10767.306	1804	9474.2387	10552.043	1868	9747.8185	10255.893	833	
9100.6748 9103.6375	10985.181 10981.606	1845 1566	9285.8829 9286.5246	10766.081 10765.337	531 1974	9475.4582	10550.685	1860	9753.0917	10250.348	1781	
9103.0373	10981.000	1864	9280.3240	10763.337	1865	9481.3641 9485.9541	10544.113 10539.011	1750 1115	9759.8767	10243.222	1945	
9116.9049	10965.625	1807	9294.5351	10756.059	1867	9494.1619	10539.011	1904	9763.0106 9763.3796	10239.934	1997	
9117.1327	10965.351	734	9297.1506	10753.033	1781	9495.8852	10527.989	1863	9763.8974	10239.547 10239.004	1863 1859	
9118.8816	10963.248	734	9297.6063	10752.506	1867	9500.5281	10522.844	1945	9764.4047	10238.472	1996	
9119.9705	10961.939	1566	9297.9557	10752.102	1804	9501.5891	10521.669	1864	9766.1532	10236.639	1746	
9123.5802	10957.602	1975	9301.7293	10747.740	1975	9503.2004	10519.885	2251	9768.3155	10234.373	1684	
9132.7416	10946.610	1846	9303.2441	10745.990	1946	9504.1111	10518.877	2329	9780.9412	10221.162	1999	
9136.7397	10941.820	1850	9304.6277	10744.392	1810	9507.1551	10515.509	1684	9783.9910	10217.976	1862	
9136.7931	10941.756	1845	9308.0194	10740.477	1864	9507.3721	10515.269	2326	9785.8470	10216.038	1847	
9140.1178	10937.776	1115	9311.5149	10736.445	1865	9513.2627	10508.758	1865	9786.6450	10215.205	1684	
9146.1293	10930.587	531	9318.1787	10728.767	1805	9513.6466	10508.334	1867	9788.2155	10213.566	1860	
9147.2188	10929.285	1949	9318.8927	10727.945	1868	9527.7719	10492.755	1864	9791.7090	10209.922	833	
9147.7068	10928.702	1950	9319.7927	10726.909	1845	9529.5202	10490.830	1947	9800.3086	10200.963	1863	
9147.9579	10928.402	1867	9320.7920	10725.759	2227	9531.2755	10488.898	1859	9800.7996	10200.452	1859	
9149.5244	10926.531 10919.224	1803	9323.8302	10722.264	1863	9532.8487	10487.167	2277	9805.5647	10195.495	1749	
9155.6471 9156.2064	10919.224	1867 834	9324.1745 9327.8389	10721.868 10717.656	1866	9541.9820	10477.129	1751	9820.2429	10180.256	345	
9157.0820	10917.513	1803	9328.8878	10717.636	1750 1948	9543.3912 9550.9568	10475.582 10467.284	1805 1805	9828.8192	10171.373	1176	
9163.9826	10909.292	1866	9329.5111	10715.735	2329	9556.5059	10467.284	1115	9832.9539 9834.1843	10167.096 10165.824	2174 1861	
9164.5715	10908.591	1805	9334.0563	10710.517	1864	9564.8628	10452.066	1866	9839.1204	10163.824	1749	
9169.3232	10902.938	1566	9343.4168	10699.787	1866	9569.9078	10446.556	1863	9847.4601	10152.119	1749	
9169.7799	10902.395	2176	9348.9170	10693.492	1944	9573.6551	10442.467	1864	9850.0963	10149.402	1944	
9173.1951	10898.336	532	9350.4175	10691.776	1684	9574.9379	10441.068	1947	9850.9990	10148.472	2141	
9173.5436	10897.922	2275	9354.6304	10686.961	1865	9578.7562	10436.906	2275	9855.4905	10143.847	1997	
9173.6758	10897.765	1866	9358.3905	10682.667	956	9579.4005	10436.204	1864	9856.1930	10143.124	2175	
9173.9620	10897.425	1115	9359.4130	10681.500	532	9582.5610	10432.762	531	9861.7368	10137.422	1863	
9174.2188	10897.120	1960	9362.3616	10678.136	345	9602.1302	10411.500	1845	9868.1868	10130.796	1859	
9178.5608	10891.965	1804	9372.8974	10666.133	531	9604.3257	10409.120	1864	9881.5244	10117.122	1747	
9178.9720	10891.477	1806	9375.1221	10663.602	834	9606.4834	10406.782	1751	9886.0819	10112.458	1847	
9179.7432	10890.562	1750	9382.9312	10654.727	1846	9608.8961	10404.169	1848	9889.0362	10109.437	1863	
9181.0213	10889.046	2106	9383.3593	10654.241 10650.701	1848	9623.0956	10388.817	1805	9913.1793	10084.816	1859	
9185.2254 9189.4081	10884.062 10879.108	1752 1713	9386.4780 9388.1837	10630.701	2251 1805	9625.6501 9626.4973	10386.060 10385.146	1846	9921.2700	10076.592	1749	
9195.1446	10873.108	2327	9389.4225	10647.361	532	9626.8254	10383.146	1863 1946	9923.9517 9924.3891	10073.869	1993	
9199.4455	10867.238	1865	9394.6760	10641.407	1806	9632.2933	10384.792	2276	9924.3891	10073.425 10071.727	1256 2126	
9204.7860	10860.933	1936	9401.1137	10634.120	1864	9634.1897	10376.854	1863	9920.0023	100/1./2/	2126 1748	
9209.3411	10855.561	1750	9403.4367	10631.493	1946	9640.7703	10369.771	1946	9944.2057	10053.351	1848	
9210.0258	10854.754	734	9404.3310	10630.482	1804	9648.6597	10361.292	1974	9947.8421	10033.531	2326	
9212.9811	10851.272	1947	9404.7698	10629.986	1806	9653.1158	10356.509	1781	9951.1583	10046.327	1994	
9214.4977	10849.486	1806	9406.6521	10627.859	1938	9657.2336	10352.093	1863	9953.4727	10043.991	1994	
9214.9759	10848.923	1976	9408.7555	10625.483	2328	9659.0764	10350.118	1859	9955.8457	10041.597	1749	
9217.5631	10845.878	1865	9409.5516	10624.584	1863	9659.0764	10350.118	1960	9959.2307	10038.184	1998	
9224.1415	10838.143	1804	9410.1583	10623.899	1865	9660.8247	10348.245	1566	9967.3034	10030.054	1860	
9231.7812	10829,174	1945	9411.4836	10622.403	1937	9660.8247	10348.245	1961	9970.2338	10027.106	905	
9233.1914	10827.520	1948	9414.0422	10619.516	1865	9676.5446	10331.434	1749	9977.6411	10019.662	1860	
9239.9383	10819.614	2122	9415.0636	10618.364	1864	9680.4134	10327.305	1847	9980.4640	10016.828	1862	
9240.3055	10819.184	1869	9422.4767	10610.010	1949	9687.9012	10319.323	1684	9987.8696	10009.401	267	
9242.1754 9242.3677	10816.995 10816.770	1566 1804	9430.5696 9430.5696	10600.905 10600.905	1009 1846	9693.8410 9693.8410	10313.000	1859	9996.0627	10001.197	1847	
9242.6967	10816.770	2329	9430.3696	10500.903	1859	9699.7739	10313.000 10306.692	1920 1859	10006.858 10019.792	9990.407	1998	
7272.0701	10010.303	2323) 1 33.6333	10377.044	1037	7077.1137	10300.092	1039	10019.792	9977.511	1996	

TABLE 4—Continued

٠.						I ADLE 4	Commuea					
. 94	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
ίς.	10022.287	9975.027	1993	10400.779	9612.030	2076	11057.774	9040.935	1700	11560 220	9641.010	2120
94ApJS				10400.779	9612.030	905			1780	11568.338	8641.918	2120
4 A	10026.081	9971.253	1749	10401.713			11081.595	9021.501	2077	11572.517	8638.797	2488
9	10032.858	9964.517	1996		9609.794	2034	11087.737	9016.503	344	11585.217	8629.327	2075
\vdash	10041.471	9955.970	1846	10423.030	9591.510	620	11097.084	9008.909	2079	11589.703	8625.987	1933
	10048.582	9948.925	1994	10423.745	9590.852	905	11098.136	9008.055	2077	11589.922	8625.824	2488
	10057.643	9939.962	1861	10435.356	9580.181	1780	11119.798	8990.507	733	11593.591	8623.094	266
	10058.249	9939.363	267	10453.153	9563.870	1998	11122.337	8988.454	1935	11594.550	8622.381	1745
	10065.045	9932.652	1781	10456.941	9560.406	2081	11127.764	8984.071	2075	11602.912	8616.167	1934
	10070.519	9927.253	1993	10469.654	9548.797	1461	11127.834	8984.014	1059	11607.575	8612.706	266
	10077.183	9920.688	833	10527.028	9496.755	2017	11131.327	8981.195	2075	11609.624	8611.186	1744
	10081.394	9916.544	345	10532.236	9492.059	1461	11135.962	8977.457	1935	11617.012	8605.709	1902
	10084.437	9913.552	1747	10553.010	9473.373	2079	11149.264	8966.746	732	11625.077	8599.739	2075
	10085.076	9912.924	1746	10555.651	9471.003	1993	11155.893	8961.418	2361	11638.264	8589.995	266
	10086.241	9911.779	833	10557.525	9469.322	2077	11161.149	8957.198	2121	11641.801	8587.385	1745
	10089.775	9908.307	1993	10577.141	9451.761	1060	11161.149	8957.198	2362	11652.984	8579.144	2080
	10104.195	9894.167	1993	10616.723	9416.522	1060	11163.694	8955.156	2076	11656.291	8576.710	2402
	10104.193	9892.872	1978	10618.077	9415.321	2032	11186.146	8937.182				
	10103.317	9884.559	620	10632.215	9402.801	2225	11188.459	8935.334	2082	11669.642	8566.898 8566.898	1712
								8933.334	2414	11669.642		2558
	10119.581	9879.124	1176	10632.500	9402.549	2019	11190.021	8934.087	1461	11674.350	8563.443	2324
	10132.640	9866.391	2226	10642.664	9393.570	2224	11190.875	8933.405	2077	11676.296	8562.016	1802
	10137.102	9862.049	1861	10658.482	9379.629	2018	11192.103	8932.425	2414	11677.999	8560.767	2558
	10142.843	9856.466	1861	10682.393	9358.634	1780	11196.485	8928.929	1933	11681.596	8558.131	1254
	10145.563	9853.824	1781	10687.795	9353.904	2034	11200.835	8925.461	2034	11682.255	8557.648	2080
	10149.078	9850.411	1861	10703.044	9340.577	2072	11218.432	8911.461	2032	11688.667	8552.954	1255
	10153.305	9846.310	1996	10717.809	9327.709	2082	11220.896	8909.504	2074	11689.976	8551.996	266
	10155.165	9844.507	267	10721.657	9324.362	2035	11224.956	8906.282	1059	11693.206	8549.634	2322
	10156.506	9843.207	1747	10725.186	9321.294	1365	11237.102	8896.655	2428	11693.951	8549.089	2077
	10156.614	9843.102	2099	10725.186	9321.294	2274	11251.116	8885.574	733	11699.946	8544.709	2360
	10167.469	9832.594	267	10731.949	9315.420	1903	11277.484	8864.798	1903	11702.220	8543.048	2305
	10173.404	9826.858	1411	10744.547	9304.497	1935	11288.729	8855.968	2429	11715.485	8533.375	2075
	10175.500	9824.833	1998	10753.007	9297.177	1461	11294.186	8851.689	2080	11724.488	8526.823	2098
	10195.108	9805.938	620	10754.283	9296.074	2072	11298.862	8848.026	733	11725.564	8526.040	2116
	10216.314	9785.584	1781	10754.756	9295.665	732	11321.679	8830.194	2080	11728.563	8523.860	1802
	10218.410	9783.576	905	10771.231	9281.447	2079	11334.144	8820.483	2078	11739.224	8516.119	2362
	10218.976	9783.034	1994	10780.694	9273.300	1060	11337.807	8817.633	2031	11755.994	8503.971	2079
	10230.787	9771.740	2224	10783.051	9271.273	905	11355.955	8803.542	1365	11773.552	8491.289	2119
	10230.767	9769.816	2224	10785.386	9269.266	2077	11357.735	8802.162	1932	11778.702	8487.576	2173
	10232.802	9754.210	2032	10783.380	9241.085	1461	11357.735	8800.767	2074	11778.702	8484.288	733
	10249.174	9750.994	2223	10818.276	9227.703	2076	11374.081	8789.512	266			
				10833.903	9227.703					11800.657	8471.785	2360
	10258.598	9745.249	1746			2017	11385.948	8780.351	2306	11808.866	8465.896	1928
	10262.463	9741.579	1995	10845.778	9217.652	2034	11388.540	8778.353	2082	11808.866	8465.896	2117
	10265.220	9738.963	267	10849.467	9214.518	2080	11390.928	8776.513	2079	11813.833	8462.337	2303
	10283.778	9721.388	1994	10863.520	9202.598	1780	11395.569	8772.938	1903	11827.145	8452.812	1745
	10307.454	9699.058	1746	10870.392	9196.781	2077	11402.718	8767.438	1488	11829.852	8450.878	2077
	10327.313	9680.407	2072	10881.760	9187.173	732	11402.718	8767.438	2471	11835.504	8446.842	1931
	10332.329	9675.708	1365	10884.265	9185.059	1461	11409.920	8761.904	2082	11854.242	8433.490	2120
	10333.182	9674.909	1746	10896.302	9174.912	905	11410.817	8761.215	2222	11882.847	8413.189	266
	10336.342	9671.951	2307	10913.036	9160.843	2079	11411.995	8760.311	2324	11884.085	8412.312	266
	10340.886	9667.701	267	10914.069	9159.976	2121	11422.323	8752.390	266	11890.490	8407.781	2075
	10345.184	9663.685	2365	10940.240	9138.064	2019	11424.068	8751.053	2360	11891.043	8407.390	2402
	10347.966	9661.087	1995	10946.760	9132.621	2018	11427.361	8748.531	2074	11896.028	8403.867	2080
	10353.807	9655.637	1994	10948.994	9130.758	2032	11432.853	8744.329	1933	11901.905	8399.717	2078
	10360.581	9649.324	2045	10970.017	9113.260	2325	11439.127	8739.533	733	11916.875	8389.165	2171
	10362.704	9647.347	1993	10976.663	9107.742	2077	11441.890	8737.422	1438	11926.399	8382.466	1745
	10364.062	9646.083	1995	10987.209	9099.000	733	11470.978	8715.266	2075	11943.390	8370.541	2323
	10365.169	9645.052	2076	10993.262	9093.990	2077	11474.320	8712.728	2361	11970.500	8351.584	1712
	10370.877	9639.744	2033	11013.237	9077.496	1780	11475.767	8711.629	2075	11973.050	8349.805	266
	10370.877	9638.991	1365	11013.237	9071.359	1933	11475.767	8701.176	2489	11973.030	8338.316	2360
	10371.087	9632.198	267	11020.088	9066.339	1438	11527.863	8672.260	2078	11989.347	8337.733	1992
	10379.002	9624.333	2080	11026.790	9056.584	2078	11527.865	8670.839				2075
	10387.483	9623.165	1994	11038.607	9050.898	2078	11529.752	8658.354	2082	12005.400	8327.306	
	10388.744	9623.165 9616.636	267	11043.602	9030.898	1438			2120	12005.548	8327.203	2075
	10373.171	3010.030	207	11033.310	70 44 .410	1430	11555.087	8651.828	2076	12010.588	8323.709	2116

TABLE 4—Continued

``		·				ADLE 4	—Continuea					
. — δ λ : (A	vac Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
S 1	2025.157	8313.624	2358	12610.203	7927.917	2192	13222.619	7560.730	1992	13591.393	7355.586	2016
ď 1	2035.846	8306.241	1744	12615.926	7924.321	1712	13223.104	7560.453	2112	13592.690	7354.884	2356
17	2044.127	8300.530	1802	12631.467	7914.571	1992	13230.711	7556.106	2352	13600.644	7350.583	904
	2053.083	8294.362	1712	12631.943	7914.273	2118	13231.674	7555.556	2115	13609.744	7345.668	2168
	2060.706	8289.120	1934	12638.706	7910.038	1712	13244.122	7548.455	1843	13614.064	7343.337	1987
	2078.909	8276.628	2073	12648.742	7903.762	1712	13260.730	7539.001	1844	13621.092	7343.537	2487
	2080.922	8275.249	1928	12663.285	7894.685	2385	13260.730	7539.001	1987	13624.476	7337.725	1900
	2087.059	8271.047	1990	12667.115	7892.298	2073	13286.814	7524.201	1801	13629.189	7335.188	2112
	2089.772	8269.191	2386	12670.167	7890.397	1929	13287.829	7523.626	832	13630.025	7334.738	2596
13	2092.239	8267.504	2076	12680.701	7883.842	1992	13289.685	7522.575	2352	13643.728	7327.371	2114
13	2115.760	8251.454	2304	12729.959	7853.336	1959	13291.786	7521.386	1987	13645.030	7326.672	2028
13	2116.756	8250.776	2385	12738.796	7847.888	1990	13302.292	7515.446	2539	13650.066	7323.969	2596
12	2119.495	8248.911	1745	12739.204	7847.637	2239	13315.738	7507.857	2044	13651.507	7323.196	1114
12	2131.175	8240.969	2323	12783.446	7820.477	2487	13326.029	7502.059	2349	13653.905	7321.910	2113
12	2132.238	8240.247	2073	12789.450	7816.806	1801	13332.365	7498.494	2029	13654.636	7321.518	2168
12	2138.790	8235.799	2192	12807.150	7806.003	1364	13346.787	7490.391	2349	13657.486	7319.990	2354
	2142.490	8233.290	2117	12808.244	7805.336	1801	13352.176	7487.368	1957	13657.486	7319.990	2444
	2173.728	8212.163	2402	12819.912	7798.232	903	13366.771	7479.193	1898	13659.994	7318.646	2028
	2188.393	8202.282	2558	12820.636	7797.792	1858	13374.716	7474.750	1253	13667.989	7314.365	1364
	2190.099	8201.134	1364	12824.861	7795.223	832	13376.350	7473.837	2154	13670.045	7313.265	2237
	2190.593	8200.802	1959	12826.585	7794.175	2192	13384.471	7469.302	903	13675.451	7310.374	2596
	2193.503	8198.845	2173	12840.574	7785.684	1801	13385.238	7468.874	2299	13678.967	7308.495	1982
	2213.333	8185.533	1712	12879.769	7761.991	343	13389.419	7466.542	1958	13682.292	7306.719	2016
	2225.963	8177.077	2385	12884.638	7759.058	2171	13389.847	7466.303	832	13683.423	7306.115	2577
	2227.113	8176.308	1712	12890.693	7755.413	1990	13392.102	7465.046	1958	13686.040	7304.718	2514
	2232.532	8172.686	2557	12896.119	7752.150	1801	13408.488	7455.923	2355	13698.559	7298.042	2352
	2244.922	8164.416	1364	12897.222	7751.487	1930	13413.828	7452.955	2112	13702.707	7295.833	2218
	2267.891	8149.130	1114	12933.006	7730.040	1801	13421.914	7448.465	2115	13703.214	7295.563	1987
	2271.816	8146.524	2305	12934.667	7729.047	1986	13431.746	7443.013	2115	13703.406	7295.461	2011
	2273.024 2274.415	8145.722 8144.799	2385 1992	12946.540 12962.225	7721.959 7712.615	1114 2113	13447.920 13449.427	7434.061	2154	13706.427	7293.853	1987
	2274.413 2283.296	8138.910	2385	12962.223	7712.013	2401	13449.427	7433.228	1900	13709.731	7292.095	2069
	2283.296 2283.516	8138.764	2359	12904.422	7711.308	1858	13450.017	7432.902 7431.702	2221 2250	13709.848	7292.033	1899
	2288.241	8135.635	2402	12995.667	7692.768	1981	13455.741	7431.702	2357	13719.951 13721.350	7286.663 7285.920	2189 1008
	2290.570	8134.093	2171	13000.832	7689.712	1858	13457.056	7429.740	2113	13721.350	7285.920	2514
	2290.570	8134.093	2402	13006.688	7686.250	832	13459.212	7427.824	1990	13721.384	7285.920	2030
	2293.522	8132.140	2385	13014.842	7681.434	1987	13472.542	7420.475	1987	13721.686	7285.742	2351
	2297.157	8129.736	1801	13026.815	7674.374	2538	13474.205	7419.559	2028	13724.973	7283.997	2349
	2299.722	8128.041	2385	13039.652	7666.819	2116	13480.393	7416.153	2167	13729.304	7281.699	1900
	2301.067	8127.152	1990	13057.560	7656.304	1992	13487.508	7412.241	1986	13729.431	7281.632	1900
12	2312.153	8119.834	2171	13059.367	7655.245	2114	13495.045	7408.101	1801	13735.025	7278.666	2412
12	2320.265	8114.488	2120	13062.157	7653.610	1992	13496.807	7407.134	2595	13736.631	7277.815	2169
12	2330.505	8107.749	2240	13062.978	7653.129	2139	13499.318	7405.756	2538	13738.398	7276.879	1986
	2340.487	8101.191	343	13077.338	7644.725	1900	13502.702	7403.900	2015	13742.362	7274.780	2249
	2342.914	8099.598	1712	13097.404	7633.013	2357	13502.702	7403.900	2170	13746.446	7272.619	2167
	2397.081	8064.208	1901	13098.876	7632.155	1801	13503.623	7403.395	2016	13747.410	7272.109	2169
	2410.590	8055.430	2401	13107.979	7626.855	2116	13534.574	7386.465	1991	13755.871	7267.636	1958
	2414.087	8053.161	2113	13120.466	7619.596	1929	13535.888	7385.748	2014	13765.189	7262.716	2071
	2432.811	8041.033	2116	13134.398	7611.514	2238	13539.692	7383.673	1487	13772.386	7258.921	2016
	2446.449	8032.222	2192	13135.233	7611.030	1943	13544.603	7380.996	2514	13772.716	7258.747	2043
	2448.788	8030.713	1990	13139.589	7608.507	1992	13545.988	7380.241	2580	13784.125	7252.739	2486
	2459.765	8023.638	2073	13147.922	7603.685	1987	13546.978	7379.702	1801	13788.355	7250.514	2356
	2475.827	8013.308	2117	13151.611	7601.552	904	13558.069	7373.665	2299	13790.225	7249.531	2355
	2510.519	7991.087	1802	13170.311 13170.573	7590.759 7590.608	2191	13565.021	7369.886	1958	13799.339	7244.743	2538
	2512.247 2555.464	7989.983 7962.481	1801 2172	13170.573	7590.608 7586.931	2192 1990	13566.680	7368.985	2164	13800.699	7244.029	2165
	2555.464 2555.962	7962.481 7962.165	1987	13187.333	7580.931 7580.961	1990	13569.538	7367.433	1898	13800.699	7244.029	2426
	2555.962 2556.999	7962.163	343	13194.510	7576.837	2197	13571.242	7366.508	1858	13815.369	7236.337	1957
	2530.999 2580.201	7946.824	1959	13194.510	7574.544	2515	13573.344 13575.335	7365.367 7364.287	2580 1537	13816.797 13823.833	7235.589 7231.906	2069 2219
	2580.201 2581.134	7946.235	2301	13209.766	7568.087	2352	13579.596	7361.976	903	13824.653	7231.906	1600
	2606.476	7930.261	2304	13212.527	7566.505	2354	13581.852	7360.753	2597	13824.758	7231.477	2554
	2608.659	7928.888	2029	13222.527	7560.783	2115	13588.965	7356.900	2597	13826.103	7231.422	2152
							10000.700	, , , , , , , , , , , , , , , , , , , ,	2001	15020.105	1230.117	4134

TABLE 4—Continued

``-						ADLL 4	Continuea					
	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
94Apjs 	13826.686	7230.414	954	14124.154	7078.135	2165	14303.228	6989.518	2348	14478.670	6904.824	2442
ď	13834.789	7226.179	1981	14125.155	7077.633	2374	14308.243	6987.068	2595	14480.602	6903.903	2596
947	13842.651	7222.075	2575	14128.461	7075.977	1982	14308.700	6986.845	904	14492.479	6898.245	2321
	13843.433	7221.667	2165	14128.896	7075.759	2349	14311.910	6985.278	2512	14497.823	6895.702	1957
	13848.127	7219.219	2029	14129.144	7075.635	2349	14312.248	6985.113	2188	14498.622	6895.322	2265
	13856.891	7214.653	2164	14131.161	7074.625	2380	14312.412	6985.033	1899	14498.622	6895.322	2554
	13866.332	7209.741	2515	14134.364	7073.022	1008	14318.549	6982.039	2578	14499.516	6894.897	2380
	13868.269	7208.734	2444	14139.515	7070.445	2618	14323.865	6979.448	2206	14502.917	6893.280	2350
	13868.444	7208.643	2444	14140.731	7069.837	1537	14327.282	6977.783	2219	14507.817	6890.952	2596
	13876.668	7204.371	1985	14141.772	7069.317	2354	14331.390	6975.783	1984	14510.396	6889.727	2398
	13878.783	7203.273	1857	14149.602	7065.405	2580	14334.937	6974.057	2190	14512.208	6888.867	1957
	13879.037	7203.141	2354	14156.715	7061.855	2350	14335.457	6973.804	2189	14515.634	6887.241	1410
	13888.097	7198.442	2167	14158.182	7061.123	2349	14341.799	6970.720	2321	14518.147	6886.049	2635
	13888.385	7198.293	2348	14159.564	7060.434	1898	14343.337	6969.973	2619	14518.307	6885.973	1779
	13888.709	7198.125	2153	14160.396	7060.019	2424	14352.997	6965.282	1988	14519.673	6885.325	1982
	13889.436	7197.748	1743	14161.094	7059.671	2249	14353.126	6965.219	1981	14523.620	6883.454	2066
	13889.624	7197.651	2443	14166.635	7056.910	1985	14355.781	6963.931	2453	14524.340	6883.113	2427
	13895.670	7194.519	1857	14169.520	7055.473	2596	14361.314	6961.248	2449	14525.627	6882.503	2384
	13897.169	7193.743	1958	14169.737	7055.365	1899	14363.918	6959.986	2538	14527.104	6881.803	2635
	13899.057	7192.766	2016	14174.872	7052.809	2010	14365.984	6958.985	1985	14530.100	6880.384	2511
	13907.448	7188.426	832	14175.059	7052.716	2273	14369.970	6957.055	2010	14531.256	6879.837	2187
	13919.169	7182.373	2189	14180.210	7050.154	2424	14370.633	6956.734	265	14532.276	6879.354	2071
	13935.867	7173.767	2071	14180.210	7050.154	2519	14372.110	6956.019	1843	14542.973	6874.294	2377
	13937.041	7173.163	2016	14186.370	7047.093	2348	14374.170	6955.022	2265	14544.043	6873.788	2265
	13939.687	7171.801	2538	14187.946	7046.310	2444	14376.684	6953.806	2453	14545.112	6873.283	2350
	13941.509	7170.864	1843	14192.970	7043.816	2556	14382.785	6950.856	2212	14548.617	6871.627	1600
	13944.272	7169.443	2302	14201.062	7039.802	2592	14385.650	6949.472	2234	14555.039	6868.595	1957
	13946.778	7168.155	2354	14202.243	7039.217	2351	14387.691	6948.486	2597	14563.771	6864.477	1982
	13947.609	7167.728	2352	14204.474	7038.111	2437	14396.432	6944.267	2011	14565.937	6863.456	1957
	13948.850	7167.090	2454	14205.048	7037.827	2634	14397.479	6943.762	2443	14567.595	6862.675	2335
	13950.594	7166.194	2579	14205.603	7037.552	2350	14400.542	6942.285	1957	14568.389	6862.301	2299
	13960.114	7161.307	1537	14207.367	7036.678	2166	14400.988	6942.070	2061	14568.654	6862.176	2248
	13960.508	7161.105	1857	14209.970	7035.389	1985	14403.040	6941.081	2395	14570.657	6861.233	2511
	13965.534	7158.528	1779	14210.976	7034.891	1983	14403.858	6940.687	2597	14572.163	6860.524	2234
	13979.027	7151.618	2356	14215.644	7032.581	1977	14405.226	6940.028	2011	14574.323	6859.507	2028
	13987.230	7147.424	1981	14218.596	7031.121	2454	14407.052	6939.148	1982	14576.763	6858.359	2190
	13989.260	7146.387	2486	14227.619	7026.662	2169	14408.066	6938.660	1984	14577.090	6858.205	2379
	13990.301	7145.855	2596	14230.879	7025.052	2236	14410.248	6937.609	2579	14579.830	6856.916	2383
	13997.496	7142.182	2321	14233.047	7023.982	2167	14414.803	6935.417	2029	14581.157	6856.292	2595
	14001.976	7139.897	1957	14234.024	7023.500	2140	14416.017	6934.833	2265	14585.382	6854.306	1537
	14004.482	7138.619	2351	14236.223	7022.415	1958	14418.664	6933.560	2026	14588.949	6852.630	2380
	14007.288	7137.189	1958	14243.919	7018.621	1857	14429.529	6928.339	2380	14593.922	6850.295	2189
	14017.248	7132.118	2455	14245.086	7018.046	2139	14431.075	6927.597	2011	14600.150	6847.373	2383
	14017.747	7131.864	2455	14249.736	7015.756	2321	14432.527	6926.900	343	14601.404	6846.785	2097
	14019.827	7130.806	2595	14251.267	7015.002	2066	14434.900	6925.761	2594	14601.779	6846.609	2208
	14028.835	7126.227	1900	14256.165	7012.592	1224	14437.577	6924.477	1600	14603.669	6845.723	904
	14038.319	7121.413	2233	14258.914	7011.240	2265	14439.341	6923.631	1983	14606.714	6844.296	2321
	14038.873	7121.132	1957	14260.081	7010.666	2454	14439.856	6923.384	2218	14618.784	6838.645	2633
	14039.841	7120.641	1857	14269.658	7005.961	2442	14442.272	6922.226	1957	14620.105	6838.027	2578
	14043.505	7118.783	1858	14273.466	7004.092	2377	14442.526	6922.104	2575	14628.114	6834.283	2350
	14057.383	7111.755	1984	14275.677	7003.007	2355	14447.137	6919.895	1981	14630.392	6833.219	2426
	14057.972	7111.457	1899	14276.680	7002.515	2169	14447.262	6919.835	2027	14634.911	6831.109	1779
	14067.176	7106.804	2029	14279.811	7000.980	2334	14457.052	6915.149	2353	14641.099	6828.222	2453
	14075.001	7102.853	2596	14285.087	6998.394	1957	14458.746	6914.339	904	14641.663	6827.959	2453
	14081.308	7099.672	2350	14289.026	6996.465	2234	14459.170	6914.136	2300	14644.721	6826.533	2453
	14095.962	7092.291	2041	14290.317	6995.833	2350	14460.745	6913.383	1857	14648.032	6824.990	2165
	14099.075	7090.725	1857	14292.349	6994.838	1958	14463.281	6912.171	2592	14650.679	6823.757	2166
	14105.431	7087.530	2443	14294.258	6993.904	1957	14465.570	6911.077	2212	14651.024	6823.596	2380
	14108.511	7085.983	2164	14294.569	6993.752	2011	14467.128	6910.333	2028	14651.808	6823.231	2380
	14111.083	7084.691	2026	14298.347	6991.904	2348	14472.493	6907.771	2069	14652.901	6822.722	2380
	14119.901	7080.267	2164	14298.555	6991.802	2026	14476.050	6906.074	1857	14654.405	6822.022	2381
	14121.077	7079.677	2350	14298.555	6991.802	2616	14478.123	6905.085	2442	14659.031	6819.869	1224
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TABLE 4—Continued

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. 94	λ_{vac}	σ _1>	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ _1\	No.
:	(Å)	(cm ⁻¹)										
994ApJS	14666.369	6816.457	2511	14822.359	6744.721	2427	14988.780	6669.834	2377	15132.692	6606.404	2376
Αp	14668.348	6815.537	1600	14823.049	6744.407	2427	14989.059	6669.710	2212	15133.567	6606.022	2434
94	14669.472	6815.015	1982	14826.412	6742.877	1956	14990.162	6669.219	2597	15136.126	6604.905	2213
19	14670.408	6814.580	2555	14828.569	6741.896	2265	14993.640	6667.672	2026	15137.080	6604.489	2411
	14672.118	6813.786	2233	14834.315	6739.285	2574	14996.546	6666.380	2437	15140.193	6603.131	2364
	14672.779	6813.479	2027	14837.696	6737.749	1988	14998.247	6665.624	2370	15143.096	6601.865	2206
	14673.005	6813.374	2010	14838.275	6737.486	1857	15004.016	6663.061	2382	15144.060	6601.445	2066
	14674.254	6812.794	2426	14842.704	6735.476	2379	15004.476	6662.857	2394	15153.078	6597.516	2022
	14675.758	6812.096	2486	14845.465	6734.223	2442	15005.111	6662.575	2096	15159.721	6594.625	2411
	14678.307	6810.913	2006	14845.833	6734.056	2467	15007.221 15007.697	6661.638	2469	15160.501	6594.286	2413
	14679.844	6810.200 6809.904	2410 2400	14847.167 14848.182	6733.451 6732.991	1008 2395	15007.097	6661.427 6660.633	2468 2425	15160.703 15160.827	6594.198 6594.144	2413 2566
	14680.482 14689.762	6805.602	2380	14849.068	6732.589	954	15009.486	6660.633	2553	15168.869	6590.648	2574
	14689.762	6804.640	2410	14849.008	6728.191	2186	15007.460	6659.844	2246	15172.269	6589.171	1982
	14693.983	6803.647	2410	14861.149	6727.116	2383	15011.204	6658.733	2394	15172.209	6587.240	2217
	14700.056	6800.836	2165	14862.216	6726.633	2347	15015.466	6657.980	2377	15178.867	6586.307	2377
	14702.968	6799.489	1957	14863.668	6725.976	2441	15017.702	6656.989	2392	15179.750	6585.924	2217
	14709.406	6796.513	2595	14866.608	6724.646	2441	15020.310	6655.833	1779	15180.197	6585.730	2070
	14719.659	6791.779	1957	14867.614	6724.191	2467	15022.321	6654.942	2578	15182.922	6584.548	2426
	14722.351	6790.537	2377	14870.621	6722.831	2380	15022.666	6654.789	2190	15184.840	6583.716	2376
	14725.437	6789.114	2235	14871.035	6722.644	2441	15030.653	6651.253	2377	15194.492	6579.534	265
	14729.555	6787.216	343	14876.543	6720.155	2595	15035.791	6648.980	2616	15197.680	6578.154	2453
	14732.375	6785.917	731	14880.495	6718.370	2354	15036.167	6648.814	2347	15198.807	6577.666	2424
	14737.576	6783.522	1857	14894.868	6711.887	2353	15036.474	6648.678	2164	15202.961	6575.869	2025
	14742.942	6781.053	2377	14897.410	6710.742	2595	15039.881	6647.172	2246	15204.100	6575.376	2422
	14742.942	6781.053	2454	14899.759	6709.684	2381	15039.881	6647.172	2635	15207.530	6573.893	1956
	14745.395	6779.925	265	14903.935	6707.804	2595	15040.322	6646.977	2067	15212.297	6571.833	2553
	14745.874	6779.705	2022	14909.636	6705.239	2576	15043.993	6645.355	2273	15213.026	6571.518	2453
	14748.732	6778.391	2347	14911.389	6704.451 6701.384	2061 2321	15046.939 15051.749	6644.054 6641.931	2633 1956	15214.156	6571.030 6569.852	2424
	14749.792 14752.364	6777.904 6776.722	2380 2066	14918.213 14924.424	6698.595	2485	15053.378	6641.212	2437	15216.884 15219.622	6568.670	1983 2063
	14754.043	6775.951	1983	14924.424	6696.901	2065	15053.378	6641.212	2469	15224.731	6566.466	2213
	14754.600	6775.695	2383	14928.200	6696.474	1983	15055.578	6639.407	2297	15226.352	6565.767	2424
	14755.543	6775.262	2423	14925.151	6695.262	2427	15062.716	6637.095	2042	15229.283	6564.503	2026
	14755.864	6775.115	2213	14932.681	6694.891	2233	15062.854	6637.034	2038	15233.672	6562.612	2420
	14765.754	6770.577	2217	14937.124	6692.900	2380	15063.065	6636.941	1982	15237.775	6560.845	2167
	14767.525	6769.765	2454	14938.635	6692.223	2381	15066.961	6635.225	2069	15238.817	6560.396	2266
	14767.771	6769.652	2185	14939.644	6691.771	2595	15069.811	6633.970	2184	15239.296	6560.190	2334
	14768.579	6769.282	2426	14943.246	6690.158	2633	15073.269	6632.448	2426	15239.714	6560.010	2591
	14769.493	6768.863	2423	14946.744	6688.592	1984	15077.291	6630.679	2066	15244.973	6557.747	2061
	14771.407	6767.986	2096	14947.390	6688.303	2064	15077.291	6630.679	265	15246.498	6557.091	2440
	14771.876	6767.771	2196	14947.806	6688.117	2028	15078.492	6630.151	2013	15250.431	6555.400	2097
	14775.561	6766.083	2061	14952.215	6686.145	2247	15080.225	6629.389	2465	15251.008	6555.152	2346
	14778.824	6764.589	2380	14954.031	6685.333	2556	15084.302	6627.597	2064	15253.556	6554.057	2377
	14779.141	6764.444	2065	14956.151	6684.385	2063	15086.196	6626.765	2220	15253.826	6553.941	2420
	14781.956	6763.156	2595	14956.574	6684.196	1897	15087.972	6625.985	2265	15259.365	6551.562	2235
	14787.549	6760.598	2195	14959.224	6683.012	2591	15092.890	6623.826	2465	15260.635	6551.017	2442
	14793.111	6758.056	2095	14960.487	6682.448 6681.343	2245 2010	15094.699 15095.196	6623.032 6622.814	2575 1600	15263.235 15264.200	6549.901 6549.487	2265 2395
	14794.394 14796.076	6757.470 6756.702	2454 2208	14962.961 14963.767	6680.983	731	15093.190	6621.099	2424	15267.030	6548.273	1896
	14790.076	6756.070	2382	14968.333	6678.945	2392	15106.131	6618.020	2334	15268.895	6547.473	2442
	14798.323	6755.676	2454	14970.030	6678.188	1982	15106.131	6618.020	2441	15272.790	6545.803	2218
	14803.472	6753.326	2266	14973.440	6676.667	2248	15100.131	6616.552	2097	15274.312	6545.151	2271
	14805.171	6752.551	2443	14974.344	6676.264	2187	15112.004	6615.448	2441	15277.068	6543.970	2246
	14805.518	6752.393	2376	14978.510	6674.407	2452	15112.333	6615.304	2441	15283.655	6541.150	2397
	14806.009	6752.169	1486	14978.962	6674.206	2347	15113.679	6614.715	2441	15283.655	6541.150	2452
	14806.842	6751.789	2236	14979.707	6673.874	2378	15118.117	6612.773	2441	15287.492	6539.508	2377
	14808.325	6751.113	1958	14982.053	6672.829	2164	15120.026	6611.938	2061	15289.992	6538.439	2452
	14814.735	6748.192	1857	14982.805	6672.494	2452	15120.509	6611.727	1983	15291.364	6537.852	2452
	14815.242	6747.961	2166	14984.181	6671.881	2452	15122.382	6610.908	2066	15293.140	6537.093	2400
	14815.242	6747.961	955	14984.664	6671.666	2070	15125.645	6609.482	2389	15294.562	6536.485	1956
	14818.918	6746.287	2427	14987.295	6670.495	2452	15132.692	6606.404	1711	15294.897	6536.342	2578

TABLE 4—Continued

λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})	
15295.662	6536.015	2509	15492.144	6453.121	2185	15629.626	6396.358	1711	15776 724	(22(71(2064
15295.910	6535.909	2452	15493.011	6452.760	2009	15631.106	6395.752	1363	15776.734 15781.668	6336.716 6334.735	2264
15296.165	6535.800	1857	15493.556	6452.533	2631	15631.950	6395.407	1956	15781.008	6334.733	2550 2439
15296.500	6535.657	2438	15496.699	6451.224	2441	15638.948	6392.545	2187	15789.500	6331.587	2439
15296.814	6535.523	2616	15497.043	6451.081	2441	15639.482	6392.327	2578	15793.515	6329.983	2245
15297.167	6535.372	2413	15500.806	6449.515	2467	15645.020	6390.064	2394	15798.235	6328.092	2290
15301.562	6533.495	2212	15501.325	6449.299	2465	15647.410	6389.088	2422	15798.564	6327.960	2439
15305.380	6531.865	2347	15502.176	6448.945	2412	15648.515	6388.637	1956	15799.985	6327.391	2632
15305.608	6531.768	2399	15503.933	6448.214	2440	15649.666	6388.167	2012	15806.282	6324.870	2550
15311.724	6529.159	2446	15514.281	6443.913	2465	15652.874	6386.858	2421	15808.852	6323.842	2397
15313.234	6528.515	2377	15515.757	6443.300	2465	15656.641	6385.321	2215	15810.137	6323.328	2212
15315.655	6527.483	2395	15516.721	6442.900	2465	15659.790	6384.037	2007	15812.788	6322.268	2094
15319.842	6525.699	530	15518.896	6441.997	2393	15661.284	6383.428	2094	15815.700	6321.104	1897
15323.557	6524.117	2470	15519.098	6441.913	2465	15662.018	6383.129	2209	15816.635	6320.730	2206
15328.343	6522.080	2381	15519.365	6441.802	2434	15662.322	6383.005	2424	15818.142	6320.128	2061
15330.618	6521.112	2617	15519.932	6441.567	343	15665.245	6381.814	2213	15819.138	6319.730	2410
15330.792	6521.038	2438	15521.691	6440.837	2424	15670.131	6379.824	2378	15820.435	6319.212	2247
15335.387 15343.802	6519.084 6515.509	1956	15522.614 15524.311	6440.454 6439.750	2442	15670.999	6379.471	2424	15821.712	6318.702	2063
15345.802	6514.992	2066 1983	15524.311	6439.730	2166 2422	15671.871	6379.116	2208	15822.821	6318.259	2061
15345.019	6514.606	2378	15530.803	6437.058	2654	15673.161 15673.807	6378.591 6378.328	2421 2424	15824.334	6317.655	2398
15348.968	6513.316	2378	15530.803	6436.662	2061	15676.589	6377.196	1897	15829.295	6315.675	2410
15360.238	6508.537	1600	15534.247	6435.631	2066	15677.017	6377.190	2421	15832.624 15834.164	6314.347 6313.733	2410 2410
15366.927	6505.704	2594	15537.453	6434.303	2165	15677.523	6376.816	2421	15835.164	6313.733	2410
15371.317	6503.846	2214	15537.697	6434.202	2424	15678.339	6376.484	2233	15837.081	6312.570	2392
15375.352	6502.139	2208	15542.083	6432.386	2063	15679.825	6375.880	2480	15837.643	6312.346	2410
15375.761	6501.966	2399	15548.678	6429.658	2412	15680.080	6375.776	2377	15840.195	6311.329	2412
15384.109	6498.438	2376	15549.319	6429.393	2553	15681.406	6375.237	2382	15842.321	6310.482	2023
15387.810	6496.875	2397	15550.458	6428.922	2424	15682.021	6374.987	1956	15843.278	6310.101	2435
15394.672	6493.979	2063	15550.458	6428.922	2485	15682.518	6374.785	2470	15845.219	6309.328	2213
15394.672	6493.979	2213	15551.435	6428.518	2412	15683.391	6374.430	2067	15848.479	6308.030	2448
15395.723	6493.536	2061	15552.105	6428.241	2026	15686.024	6373.360	2424	15848.718	6307.935	2211
15395.723	6493.536	2412	15553.583	6427.630	1984	15686.445	6373.189	2421	15850.570	6307.198	2450
15396.225	6493.324	2631	15554.522	6427.242	2391	15687.157	6372.900	2470	15851.794	6306.711	2420
15408.558	6488.127 6485.058	2095 2212	15554.522 15560.786	6427.242 6424.655	2555 2412	15691.857	6370.991	2421	15852.807	6306.308	2483
15415.850 15416.382	6484.834	2012	15563.911	6423.365	2412	15692.751 15694.496	6370.628 6369.920	1956	15853.320	6306.104	2217
15422.685	6482.184	2565	15564.359	6423.180	2094	15698.513	6368.290	2376 2040	15854.029 15854.438	6305.822 6305.659	1894 2591
15423.420	6481.875	2219	15565.231	6422.820	2424	15700.098	6367.647	2420	15858.661	6303.980	2064
15426.523	6480.571	2364	15566.729	6422.202	2469	15706.901	6364.889	2391	15863.714	6301.972	2451
15427.621	6480.110	2574	15569.236	6421.168	1983	15714.809	6361.686	2594	15864.651	6301.600	2412
15436.294	6476.469	2247	15571.120	6420.391	2248	15723.593	6358.132	2066	15866.260	6300.961	2184
15437.321	6476.038	2186	15571.741	6420.135	2438	15729.763	6355.638	2214	15868.526	6300.061	2063
15441.802	6474.159	2208	15574.063	6419.178	2395	15731.414	6354.971	2578	15878.449	6296.124	2063
15451.308	6470.176	2591	15576.038	6418.364	2022	15733.511	6354.124	2439	15884.148	6293.865	2381
15451.952	6469.906	2438	15579.086	6417.108	2420	15741.930	6350.726	2061	15886.682	6292.861	2196
15451.952	6469.906	2565	15585.387	6414.514	2573	15743.717	6350.005	2039	15887.717	6292.451	2423
15454.255	6468.942	1983	15588.264	6413.330	2591	15749.203	6347.793	2062	15888.003	6292.338	530
15456.269	6468.099	2565	15590.051	6412.595	2408	15751.722	6346.778	2573	15891.167	6291.085	2452
15456.754	6467.896	2097	15590.726	6412.317	2413	15755.669	6345.188	2419	15892.291	6290.640	2411
15456.754	6467.896	2245	15591.497	6412.000	2408	15756.039	6345.039	2594	15892.412	6290.592	2423
15462.418	6465.527	2433	15591.497	6412.000	2413	15757.084	6344.618	2196	15892.468	6290.570	2564
15475.194 15475.194	6460.189	2026	15593.752 15598.876	6411.073 6408.967	1857	15761.315	6342.915	2439	15892.963	6290.374	2411
15476.507	6460.189 6459.641	2395 2467	15604.225	6406.770	2408 2408	15764.327 15764.511	6341.703 6341.629	2423	15894.757 15895.230	6289.664	2376
15478.882	6458.650	2381	15611.138	6403.933	1224	15765.784	6341.629	2439 2423	15895.230 15896.552	6289.477 6288.954	2451
15479.603	6458.349	2467	15613.632	6402.910	2469	15767.390	6340.471	2164	15896.352	6288.795	2411 2026
15479.900	6458.225	2467	15614.100	6402.718	2407	15767.572	6340.471	2296	15890.934	6288.516	2452
15480.234	6458.086	2095	15615.117	6402.301	2347	15769.097	6339.785	2423	15898.026	6288.371	2452
15485.461	6455.906	2392	15621.158	6399.825	2378	15769.427	6339.652	2061	15898.251	6288.282	2562
15490.339	6453.873	265	15621.659	6399.620	2063	15770.619	6339.173	2423	15898.898	6288.026	2423
15490.886	6453.645	2441	15629.371	6396.462	2284	15774.070	6337.786	2423	15899.259	6287.883	2423
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TABLE 4—Continued

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$\begin{array}{c} \vdots \\ \hline \delta \\ \lambda_{vac} \\ \vdots \\ (\mathring{\texttt{A}}) \end{array}$	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{υας} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
S 15900.334	6287.458	1983	16017.410	6241.501	2434	16179.585	6178.940	2245	16350.827	6114.228	2093
15900.334 15900.597 15900.992	6287.354	2007	16017.410	6241.270	1896	16179.585	6178.940	2481	16357.987	6111.552	2697
15900.997 5 15900.992	6287.198	2193	16018.727	6240.988	2094	16180.910	6178.434	2451	16362.846	6109.737	2690
15901.520	6286.989	2209	16019.787	6240.575	2411	16182.172	6177.952	2481	16366.347	6108.430	2411
15904.318	6285.883	2483	16020.953	6240.121	2376	16185.801	6176.567	2484	16369.756	6107.158	2690
15906.044	6285.201	2061	16020.733	6239.826	2093	16189.374	6175.204	2195	16372.485	6106.140	2409
15908.562	6284.206	2246	16029.422	6236.824	2411	16190.323	6174.842	2601	16375.862	6104.881	2478
15908.722	6284.143	2437	16037.826	6233.556	2463	16191.170	6174.519	2290	16375.862	6104.881	2696
15909.081	6284.001	2411	16038.129	6233.438	530	16192.570	6173.985	2441	16376.688	6104.573	2482
15909.243	6283.937	2564	16039.858	6232.766	2063	16193.294	6173.709	2287	16377.393	6104.310	2423
15911.304		2209	16040.656	6232.456	2213	16194.469	6173.261	2601	16377.393	6104.310	2482
15912.594		2484	16041.856	6231.990	2449	16195.062	6173.035	2601	16380.860	6103.018	2482
15912.789	6282.537	2484	16042.715	6231.656	2439	16195.254	6172.962	2601	16381.207	6102.889	2482
15913.629	6282.205	2564	16049.051	6229.196	2409	16197.316	6172.176	2184	16381.819	6102.661	2483
15917.331	6280.744	2591	16051.741	6228.152	2463	16197.418	6172.137	2483	16382.256	6102.498	2478
15920.114		2451	16056.168	6226.435	2594	16197.623	6172.059	2448	16384.144	6101.795	2411
15920.649	6279.435	2451	16064.731	6223.116	2411	16198.505	6171.723	1956	16389.166	6099.925	2319
15920.649	6279.435	2660	16069.645	6221.213	2007	16201.518	6170.575	2483	16390.488	6099.433	2646
15921.096	6279.259	2026	16070.185	6221.004	2208	16202.713	6170.120	2465	16391.789	6098.949	1175
15921.514		2446	16071.402	6220.533	2439	16203.336	6169.883	2420	16394.391	6097.981	2208
15922.607	6278.663	2564	16072.094	6220.265	2008	16204.255	6169.533	2465	16396.311	6097.267	2478
15922.749	6278.607	2417	16072.252	6220.204	2467	16204.549	6169.421	2551	16398.169	6096.576	2208
15926.419	6277.160	2447	16073.869	6219.578	2411	16207.746	6168.204	2465	16398.315	6096.522	2411
15926.673	6277.060	1711	16075.922	6218.784	2467	16213.003	6166.204	2465	16401.395	6095.377	2411
15928.168	6276.471	2297	16077.954	6217.998	731	16213.540	6166.000	2451	16404.600	6094.186	2482
15928.678	6276.270	2394	16082.853	6216.104	2394	16225.623	6161.408	2483	16406.151	6093.610	1895
15929.477	6275.955	2441	16083.049	6216.028	2008	16231.653	6159.119	2551	16406.151	6093.610	2433
15934.022	6274.165	2441	16086.193	6214.813	2588	16234.192	6158.156	2320	16407.791	6093.001	2439
15936.204	6273.306	2195	16087.169	6214.436	2393	16235.969	6157.482	2218	16407.977	6092.932	2483
15938.112	6272.555	2564	16088.736	6213.831	2467	16240.872	6155.623	2423	16409.501	6092.366	2578
15938.732	6272.311	2441	16089.676	6213.468	2411	16241.574	6155.357	2375	16409.633	6092.317	2417
15938.922	6272.236	2469	16090.911	6212.991	2374	16243.067	6154.791	2451	16410.393	6092.035	2396
15939.110	6272.162	2441	16100.284	6209.374	2482	16243.994	6154.440	2391	16412.176	6091.373	2483
15940.923	6271.449	2186	16100.608	6209.249	2482	16245.762	6153.770	2423	16412.979	6091.075	2439
15943.005	6270.630	2318	16102.408	6208.555	2208	16246.158	6153.620	2423	16414.766	6090.412	2411
15943.851	6270.297	2589	16102.408	6208.555	2467	16246.462	6153.505	2451	16419.276	6088.739	2587
15943.851	6270.297	2659	16109.759	6205.722	1175	16252.555	6151.198	2423	16421.213	6088.021	2210
15951.463	6267.305	2513	16111.085	6205.211	2484	16258.925	6148.788	2378	16422.793	6087.435	2587
15952.636	6266.844	2560	16115.147	6203.647	2484	16266.899	6145.774	1895	16423.131	6087.310	2587
15954.095	6266.271	2393	16115.965	6203.332	2484	16272.473	6143.669	2451	16430.164	6084.704	2407
15954.782	6266.001	2185	16123.212	6200.544	2482	16277.485	6141.777	2417	16430.164	6084.704	2436
15962.178	6263.098	2631	16125.906	6199.508	2482	16280.775	6140.536	2261	16436.626	6082.312	2217
15962.560	6262.948	2591	16126.824	6199.155	2067	16284.772	6139.029	2552	16440.402	6080.915	2439
15963.302	6262.657	2591	16130.517	6197.736	2007	16284.987	6138.948	2552	16443.463	6079.783	2445
15964.869	6262.042 6260.948	2206	16134.338	6196.268 6194.861	2631	16288.781	6137.518 6135.986	2594	16444.818	6079.282 6078.645	2209
15967.659		2469	16138.003		2510	16292.848 16294.109		2218	16446.541		2439
15971.253	6259.539	2576	16138.328	6194.736 6194.736	2263		6135.511	2244	16446.647	6078.606	2587
15980.728 15982.079	6255.828 6255.299	2463 2439	16138.328 16142.459	6193.151	2263 2407	16296.593 16297.509	6134.576 6134.231	2257 2023	16454.402 16454.906	6075.741 6075.555	2245 2220
15982.079	6252.921	2068	16142.439	6191.563	2418	16309.269	6129.808	2023	16457.108	6074.742	2333
15988.428		2614	16153.249	6189.014	1956	16311.964	6128.795	2378	16460.368	6073.539	2095
15989.594		2212	16155.499	6188.152	2095	16311.304	6127.157	2478	16466.927	6073.339	2600
15997.728	6249.180	2220	16156.564	6187.744	2209	16318.552	6126.321	2417	16471.764	6069.337	2467
15997.728	6248.922	2436	16150.304	6187.744	2614	16318.701	6126.265	2214	16471.764	6068.482	2467. 2297
16002.268	6247.407	2376	16157.732	6186.809	2040	16324.459	6124.104	1956	16476.936	6067.432	2439
16002.268	6246.275	2393	16162.846	6185.339	2481	16324.459	6124.104	2528	16477.979	6067.432	2464
16005.168	6245.655	2393	16165.031	6184.503	2481	16331.529	6121.453	2217	16481.228	6065.852	2483
16000.737	6245.528	2411	16168.686	6183.105	2392	16333.146	6120.847	2063	16486.669	6063.850	2208
16007.083	6245.139	2439	16171.932	6181.864	2483	16337.133	6119.353	2008	16492.097	6061.854	2718
16009.615		1956	16174.978	6180.700	2483	16345.494	6116.223	2591	16492.538	6061.692	2374
16012.862		2064	16177.093	6179.892	2398	16347.041	6115.644	2696	16494.435	6060.995	2600
16013.911	6242.865	2439	16177.998	6179.546	2551	16350.686	6114.281	2260	16494.704	6060.896	2463
103.00.71		,								2223.070	00

TABLE 4—Continued

					TABLE 4	—Commuea					
λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})	
16497.355	6059.922	2025	16665.484	5998.787	2291	16843.236	5935.480	2211	17008.999	5877.635	2657
16504.142	6057.430	2467	16666.790	5998.317	2410	16849.155	5933.395	2465	17008.333	5876.909	2295
16506.298	6056.639	2284	16679.164	5993.867	2207	16850.924	5932.772	2246	17015.475	5875.398	2716
16513.220	6054.100	2194	16680.836	5993.266	2591	16855.032	5931.326	2408	17018.627	5874.310	2571
16515.673	6053.201	2008	16685.541	5991.576	2404	16856.444	5930.829	2465	17019.995	5873.838	2406
16516.745	6052.808	2292	16685.719	5991.512	2559	16856.857	5930.684	2465	17020.742	5873.580	1894
16517.228	6052.631	2463	16690.190	5989.907	2343	16857.144	5930.583	2296	17027.622	5871.207	2657
16519.150	6051.927	2572	16693.080	5988.870	2552	16857.743	5930.372	2138	17029.991	5870.390	2479
16519.417	6051.829	2600	16699.617	5986.526	2510	16858.531	5930.095	2465	17033.665	5869.124	2599
16521.519	6051.059	2463	16707.557	5983.681	2591	16863.422	5928.375	2451	17037.793	5867.702	2599
16522.079	6050.854	2463	16709.293	5983.059	2024	16864.056	5928.152	2389	17039.802	5867.010	2088
16524.471	6049.978	2549	16711.307	5982.338	2433	16864.056	5928.152	2465	17047.642	5864.312	2482
16525.132	6049.736	2220	16711.609	5982.230	2700	16865.519	5927.638	2551	17047.642	5864.312	2551
16525.496	6049.603	2570	16717.805	5980.013	2458	16866.429	5927.318	2271	17049.898	5863.536	2615
16531.989	6047.227	2463	16718.115	5979.902	2504 2207	16869.953	5926.080	2551	17052.184	5862.750	2599
16536.408	6045.611	2462	16719.077 16720.735	5979.558 5978.965	2482	16870.605 16874.119	5925.851 5924.617	2501	17064.889 17065.259	5858.385 5858.258	2651 2504
16538.000 16539.195	6045.029 6044.592	2463 2549	16720.733	5978.702	2482	16874.119	5924.342	2481 2420	17003.239	5856.497	2332
16540.873	6043.979	2549	16723.280	5978.702	2214	16875.967	5923.968	2741	17070.548	5856.443	2433
16541.051	6043.914	2477	16723.966	5977.810	2550	16879.016	5922.898	2708	17070.548	5856.443	2660
16541.426	6043.777	2298	16724.696	5977.549	2550	16880.769	5922.283	2259	17070.540	5856.219	2546
16541.968	6043.579	2549	16725.443	5977.282	2482	16883.041	5921.486	2408	17072.128	5855.901	2466
16544.672	6042.591	2549	16727.147	5976.673	2479	16883.269	5921.406	2458	17072.833	5855.659	1893
16551.997	6039.917	2552	16728.311	5976.257	2407	16883.625	5921.281	2408	17075.152	5854.864	2213
16556.487	6038.279	2551	16728.311	5976.257	2550	16884.820	5920.862	2292	17081.801	5852.585	2244
16556.684	6038.207	2259	16728.681	5976.125	2550	16885.684	5920.559	2481	17086.157	5851.093	2390
16557.145	6038.039	2552	16739.311	5972.330	2482	16886.871	5920.143	2707	17094.451	5848.254	2589
16558.563	6037.522	1895	16747.909	5969.264	2421	16890.417	5918.900	2707	17094.451	5848.254	2660
16559.682	6037.114	2551	16749.152	5968.821	2573	16892.375	5918.214	2451	17098.228	5846.962	2137
16561.770	6036.353	2208	16751.335	5968.043	2220	16892.375	5918.214	2481	17100.451	5846.202	2567
16563.891	6035.580	2257	16752.744	5967.541	2214	16893.288	5917.894	2594	17107.670	5843.735	2258
16566.732	6034.545	2008	16753.070	5967.425	2550	16893.954	5917.661	2408	17112.353	5842.136	2660
16575.277	6031.434	2064	16756.970	5966.036	2631	16895.184	5917.230	2481	17114.348	5841.455	2545
16576.483	6030.995	2462	16775.160 16780.501	5959.567 5957.670	2576 1895	16898.882 16900.234	5915.935 5915.462	2451 2408	17115.707 17121.599	5840.991 5838.981	2660 2259
16578.064 16585.608	6030.420 6027.677	1893 2446	16781.183	5957.428	2410	16900.234	5913.462	2246	17121.399	5837.732	2459
16586.054	6027.515	2063	16782.842	5956.839	2410	16918.647	5909.024	1112	17123.202	5835.790	2476
16587.210	6027.095	2447	16783.039	5956.769	2421	16926.610	5906.244	2379	17130.561	5835.790	2550
16587.521	6026.982	2551	16785.809	5955.786	2244	16927.613	5905.894	2630	17132.103	5835.117	2550
16592.782	6025.071	2259	16786.585	5955.511	2410	16927.845	5905.813	2630	17137.104	5833.698	2550
16600.290	6022.346	2297	16787.348	5955.240	2477	16928.628	5905.540	2209	17137.237	5833.653	2394
16601.798	6021.799	2390	16788.304	5954.901	2410	16930.967	5904.724	2451	17138.888	5833.091	2403
16607.636	6019.682	2407	16792.224	5953.511	2410	16936.994	5902.623	2701	17138.888	5833.091	2548
16612.206	6018.026	1175	16794.204	5952.809	2653	16937.384	5902.487	2701	17140.366	5832.588	2570
16612.766	6017.823	2551	16799.651	5950.879	2212	16941.425	5901.079	2573	17151.667	5828.745	2550
16619.745	6015.296	2063	16803.166	5949.634	2593	16942.209	5900.806	2137	17152.738	5828.381	2754
16620.483	6015.029	2093	16803.502	5949.515	2462	16945.173	5899.774	2482	17154.080	5827.925	2262
16627.778	6012.390	2095	16807.438	5948.122	2207	16947.686	5898.899	2407	17159.542	5826.070	2501
16632.509	6010.680	2209	16807.610	5948.061	2410	16951.787	5897.472	2479	17161.109	5825.538	2284
16640.645	6007.741	2215	16810.620	5946.996	2410	16956.051	5895.989	2568	17166.198	5823.811	2291
16645.281	6006.068	2272	16811.377	5946.728	2421	16964.309	5893.119	2421	17173.862	5821.212	2209
16645.877	6005.853	2209	16812.681	5946.267 5944.707	2410 2694	16964.309 16968.213	5893.119 5891.763	2482	17173.862 17180.993	5821.212	2410
16646.908 16648.205	6005.481 6005.013	2615 2644	16817.093 16818.340	5944.707 5944.266	2260	16968.213	5891.763	2464 2287	17180.993	5818.796 5815.593	2410 2681
16652.212	6003.568	2644	16818.340	5944.266 5944.266	2410	16969.912	5889.773	2418	17190.433	5815.393 5815.217	2692
16652.639	6003.414	2410	16819.532	5943.845	2262	16979.499	5887.847	2389	17191.307	5813.217	2481
16652.803	6003.414	2563	16819.532	5943.792	2445	16979.499	5887.847	2482	17192.832	5814.195	2481
16653.533	6003.092	2209	16820.259	5943.588	2261	16993.286	5883.070	2417	17200.313	5812.260	2481
16659.519	6000.935	2563	16822.690	5942.729	1894	16995.941	5882.151	2545	17204.303	5810.912	2295
16659.746	6000.853	2410	16822.690	5942.729	2737	16996.238	5882.048	2340	17208.665	5809.439	2261
16659.913	6000.793	2563	16836.454	5937.871	2008	17005.449	5878.862	2295	17208.864	5809.372	2404
16661.376	6000.266	2410	16837.897	5937.362	2551	17007.492	5878.156	2551	17218.283	5806.194	2516
		'			'						

TABLE 4—Continued

``						TABLE .	Commuca					
	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
S -	17210 552	5805.766	2245	17451.228	5728.691	2650	17640.185	5667.327	1893	17857.790	5598.268	2090
	17219.552 17221.400	5805.766	2629	17451.226	5727.833	2550	17641.305	5666.967	2550	17861.727	5597.034	2693
4 4	17221.400	5803.143	2137	17453.842	5727.525	1112	17647.297	5665.043	2699	17866.286	5595.606	2628
ი 1				17454.781	5726.604	2215	17658.100	5661.577	2547	17871.952	5593.832	2729
. I	17229.714	5802.342	2293 2206	17457.366	5726.354	2136	17638.100	5657.085	2138	17876.023	5592.558	2589
	17232.232	5801.494		17458.330	5725.809	2130	17672.122	5656.226	2088	17870.023	5592.336	2369
	17233.174	5801.177	2217 2458	17460.012	5725.484	2690	17674.800	5654.918	2416	17880.845	5592.123	2624
	17239.382	5799.088	2709	17461.311	5725.383	2403	17683.910	5653.314	2547	17898.724	5585.465	2481
	17244.975 17252.293	5797.207 5794.748	2588	17461.311	5723.700	2630	17684.955	5652.980	1460	17904.648	5583.403	2408
	17252.293	5794.748 5794.470	2533	17467.303	5723.419	1893	17688.832	5651.741	2547	17904.048	5582.828	2589
		5793.854	2629	17467.614	5723.419	1460	17689.483	5651.533	2547	17907.178	5582.686	2498
	17254.955 17257.571	5792.976	2421	17469.919	5722.562	2550	17693.471	5650.259	2535	17908.814	5582.318	2598
	17261.665	5792.970	2507	17473.397	5722.302	2550	17694.514	5649.926	2656	17905.814	5580.364	2298
	17261.927	5791.502	2111	17473.397	5719.909	2690	17695.942	5649.470	2291	17913.063	5579.601	2598
	17261.927	5791.314	2694	17478.522	5716.460	2550	17700.843	5647.906	2547	17917.555	5579.174	2390
	17262.143	5791.441	2421	17488.567	5716.460	2690	17706.630	5646.060	2259	17919.407	5579.018	2598
	17263.754	5790.901	1942	17488.307	5710.400	2207	17706.630	5646.060	2656	17919.407	5577.670	2640
	17275.699	5786.897	2478	17508.034	5710.104	1894	17707.734	5645.708	2547	17923.963	5577.600	2717
	17276.968	5786.472	2463	17508.034	5708.746	2390	17709.839	5645.037	2445	17926.351	5576.857	2702
	17277.482	5786.300	2478	17512.199	5708.746	2416	17714.364	5643.595	2656	17930.158	5575.673	2207
	17278.727	5785.883	2702	17513.999	5708.159	2405	17717.139	5642.711	2561	17932.605	5574.912	2629
	17280.815	5785.184	2463	17513.999	5708.139	2477	17721.093	5641.452	2670	17934.169	5574.426	2340
	17282.299	5784.687	2629	17514.457	5707.485	2696	17721.379	5641.361	2656	17937.805	5573.296	2212
	17282.299	5783.267	2478	17518.121	5706.816	1175	17722.233	5641.089	2243	17937.803	5573.148	2738
	17289.538	5782.265	2465	17520.227	5706.130	2138	17722.987	5640.849	2408	17943.114	5571.647	2702
	17293.112	5781.070	2478	17520.227	5702.567	2696	17723.173	5640.790	2561	17946.235	5570.678	2463
	17293.112	5780.890	2478	17534.744	5701.406	2696	17727.180	5639.515	2656	17946.233	5567.941	2738
	7295.500	5780.272	2732	17537.761	5700.425	2243	17727.415	5639.440	2137	17956.034	5567.638	2738
	17301.696	5778.202	2403	17538.635	5700.141	2138	17728.107	5639.220	2656	17963.974	5565.177	2629
	7301.030	5777.994	2290	17538.635	5700.141	2288	17746.236	5633.459	2137	17966.399	5564.426	2404
	17302.316	5775.351	2463	17547.704	5697.195	2433	17747.377	5633.097	2209	17966.399	5564.426	2546
	17310.257	5775.145	2463	17548.551	5696.920	2214	17754.963	5630.690	2408	17966.399	5564.426	2569
	17313.084	5774.401	2504	17549.140	5696.729	2696	17755.168	5630.625	2561	17968.110	5563.896	2689
	7316.890	5773.132	2537	17554.135	5695.108	2590	17758.695	5629.507	2136	17968.992	5563.623	2629
	7318.339	5772.649	2292	17554.397	5695.023	2661	17762.143	5628.414	2408	17970.907	5563.030	2259
	17321.247	5771.680	2216	17559.876	5693.246	2416	17762.336	5628.353	2561	17971.983	5562.697	2695
	7321.733	5771.518	2463	17564.047	5691.894	2481	17771.126	5625.569	2287	17975.599	5561.578	2661
	7325.915	5770.125	2570	17564.325	5691.804	2340	17774.273	5624.573	2262	17977.968	5560.845	2394
	17334.083	5767.406	2421	17564.831	5691.640	2245	17774.801	5624.406	2209	17982.302	5559.505	2689
	7337.991	5766.106	2531	17569.081	5690.263	2661	17786.698	5620.644	2741	17985.737	5558.443	2695
	7349.689	5762.218	2697	17570.459	5689.817	2661	17795.937	5617.726	2671	17986.381	5558.244	2463
	7359.688	5758.899	2092	17572.417	5689.183	2481	17797.784	5617.143	2561	17993.306	5556.105	2689
	7364.914	5757.166	2290	17574.233	5688.595	2481	17801.942	5615.831	2258	17997.319	5554.866	2691
	7371.139	5755.103	2697	17575.327	5688.241	2501	17803.593	5615.310	2606	17997.539	5554.798	2475
	7374.677	5753.931	2138	17577.799	5687.441	2549	17809.254	5613.525	2147	17999.947	5554.055	2695
	7383.466	5751.022	2518	17581.001	5686.405	2214	17809.254	5613.525	2741	18003.928	5552.827	2750
	7389.831	5748.917	2245	17581.907	5686.112	2549	17810.559	5613.114	2460	18005.847	5552.235	2689
	7400.585	5745.364	2504	17590.746	5683.255	2498	17810.968	5612.985	2629	18010.966	5550.657	2695
	17405.356	5743.789	2506	17592.479	5682.695	2548	17822.503	5609.352	2475	18013.848	5549.769	2689
	17409.493	5742.424	2416	17608.698	5677.461	2630	17822.713	5609.286	2138	18016.250	5549.029	2258
	17409.888	5742.294	2504	17611.316	5676.617	2550	17827.255	5607.857	2404	18016.582	5548.927	2653
	17418.165	5739.565	2405	17613.544	5675.899	2630	17835.724	5605.194	2741	18017.419	5548.669	1893
	17418.511	5739.451	2476	17614.527	5675.582	2259	17836.084	5605.081	2737	18018.601	5548.305	2343
	17420.836	5738.685	1437	17614.527	5675.582	2630	17836.504	5604.949	2737	18018.601	5548.305	2549
	17428.125	5736.285	2137	17617.113	5674.749	2291	17839.833	5603.903	2570	18027.108	5545.687	2689
	17432.286	5734.916	2244	17617.274	5674.697	2432	17843.380	5602.789	2287	18029.315	5545.008	2549
	17433.644	5734.469	2550	17622.302	5673.078	2550	17844.355	5602.483	2688	18031.552	5544.320	2695
	17435.940	5733.714	2269	17625.766	5671.963	2297	17845.113	5602.245	2628	18042.135	5541.068	2508
	7436.274	5733.604	2418	17633.386	5669.512	2404	17845.967	5601.977	2207	18050.289	5538.565	2672
	7440.609	5732.179	2548	17633.859	5669.360	2609	17845.967	5601.977	2628	18051.361	5538.236	2698
	17442.255	5731.638	2536	17637.032	5668.340	1437	17852.420	5599.952	2626	18052.358	5537.930	2582
	17449.050	5729.406	1892	17637.374	5668.230	2531	17855.009	5599.140	2629	18055.645	5536.922	2698
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TABLE 4—Continued

:											
λυac	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ	No.
. (Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})		(Å)	(cm^{-1})	1.0.
•			L								
² 18057.275	5536.422	2479	18355.348	5446.516	2339	18586.421	5378.803	2533	18851.449	5303.184	2622
₹ 18057.608	5536.320	2544	18361.035	5444.829	2549	18587.956	5378.359	2607	18851.751	5303.099	2547
18057.275 18057.608 18058.903	5535.923	2463	18366.142	5443.315	2705	18604.120	5373.686	2460	18856.647	5301.722	1485
18061.523	5535.120	2475	18376.142	5440.353	2657	18609.921	5372.011	2628	18858.401	5301.229	2660
18065.289	5533.966	2500	18379.824	5439.263	2706	18617.358	5369.865	2581	18863.325	5299.845	2737
18073.683	5531.396	2698	18380.108	5439.179	2657	18618.364	5369.575	2705	18866.996	5298.814	2690
18075.438	5530.859	1113	18392.461	5435.526	1800	18624.194	5367.894	2290	18868.189	5298.479	2569
18084.956	5527.948	2478	18395.933	5434.500	2567	18624.194	5367.894	2403	18875.866	5296.324	2586
18090.323	5526.308	2736	18395.933	5434.500	2657	18626.908	5367.112	2544	18876.899	5296.034	2288
18090.785	5526.167	2478	18408.182	5430.884	2705	18631.007	5365.931	2584	18876.899	5296.034	2731
18092.687	5525.586	2736	18411.667	5429.856	2478	18632.500	5365.501	2535	18884.148	5294.001	2583
18093.148	5525.445	2736	18414.427	5429.042	2206	18637.638	5364.022	1800	18884.912	5293.787	2583
18096.289	5524.486	2736	18417.284	5428.200	1927	18639.083	5363.606	2605	18885.151	5293.720	2737
18098.488	5523.815	2740	18419.001	5427.694	2288	18647.288	5361.246	2571	18885.750	5293.552	2059
18098.864	5523.700	2138	18419.679	5427.494	2705	18649.386	5360.643	2290	18886.799	5293.258	2547
18102.282	5522.657	2740	18425.787	5425.695	2698	18651.258	5360.105	2628	18887.531	5293.053	2547
18102.650	5522.545	2478	18426.935	5425.357	2705	18652.813	5359.658	2296	18889.365	5292.539	2613
18104.938	5521.847	2669	18433.914	5423.303	2753	18658.000	5358.168	2583	18890.996	5292.082	2737
18108.201	5520.852	2585	18434.175	5423.226	2698	18662.803	5356.789	2583	18892.410	5291.686	2500
18116.792	5518.234	2740	18435.433	5422.856	2544	18669.533	5354.858	2726	18900.482	5289.426	2547
18117.238	5518.098	2701	18439.269	5421.728	2660	18676.889	5352.749	2517	18901.161	5289.236	1460
18117.642	5517.975	2740	18440.088	5421.487	2463	18677.779	5352.494	2289	18901.529	5289.133	2583
18127.422	5514.998	2406	18441.772	5420.992	2698	18681.870	5351.322	2584	18905.482	5288.027	2500
18128.073	5514.800	2740	18445.171	5419.993	2655	18682.858	5351.039	2696	18927.617	5281.843	1842
18131.140	5513.867	2694	18445.389	5419.929	2544	18686.706	5349.937	2292	18934.636	5279.885	1113
18133.492	5513.152	2103	18446.332	5419.652	2582	18687.562	5349.692	2705	18942.059	5277.816	1800
18137.364	5511.975	2701	18448.058	5419.145	2698	18692.946	5348.151	2685	18947.282	5276.361	2623
18142.785	5510.328	2701	18449.058	5418.851	2698	18694.012	5347.846	2705	18955.617	5274.041	2612
18147.547	5508.882	1942	18453.577	5417.524	2626	18695.033	5347.554	2705	18962.225	5272.203	2531
	5506.662	2679	18458.218	5416.162	2686	18702.472	5345.427	2503	18967.463	5272.203	2257
18155.671 18156.456	5506.417	2506	18464.037	5414.455	2660	18702.472	5345.427	2506	18977.631	5267.923	2501
	5505.048	2623	18464.259	5414.390	2295	18702.472	5344.959	2696	18987.010	5265.321	1485
18160.186	5504.846	2504	18474.314	5411.443	2628	18713.353	5342.319	1252	18994.517	5263.321	2715
18160.853		2700	18474.748	5411.316	2501	18721.269	5342.319	2609	18994.317	5262.373	2715
18169.131	5502.338		18486.414	5407.901	2628	18740.448	5334.595	2270	19004.421	5262.373 5260.497	
18179.631	5499.160	2758 2089	18489.105	5407.901	2463	18752.055	5331.293	2624	19004.421	5260.497	2529 2611
18188.958	5496.340										
18189.941	5496.043	2700	18491.451	5406.428	2500	18758.241	5329.535	2136	19010.290	5258.873	529
18190.404	5495.903	2700	18492.193	5406.211	2403	18770.148	5326.154	2688	19031.961	5252.885	2291
18198.961	5493.319	2700	18492.193	5406.211	2581	18772.919	5325.368	2656	19042.492	5249.980	2478
18201.681	5492.498	2533	18492.956	5405.988	2530	18773.514	5325.199	2500	19042.492	5249.980	2535
18212.955	5489.098	2569	18496.744	5404.881	2755	18784.047	5322.213	2535	19059.282	5245.355	2683
18224.194	5485.713	2284	18497.223	5404.741	2755	18788.411	5320.977	2656	19068.003	5242.956	2502
18229.471	5484.125	2585	18511.725	5400.507	2549	18789.343	5320.713	2693	19071.848	5241.899	2059
18232.599	5483.184	2716	18511.725	5400.507	2567	18790.985	5320.248	2287	19094.903	5235.570	1362
18238.477	5481.417	2532	18514.803	5399.609	2531	18796.309	5318.741	2680	19096.501	5235.132	2205
18247.432	5478.727	2476	18517.300	5398.881	2707	18803.005	5316.847	2699	19104.128	5233.042	2132
18250.057	5477.939	2090	18520.638	5397.908	2549	18814.091	5313.714	2090	19110.054	5231.419	2293
18263.173	5474.005	2530	18523.860	5396.969	902	18814.091	5313.714	2656	19113.679	5230.427	1485
18264.133	5473.717	2652	18525.223	5396.572	2286	18814.548	5313.585	1113	19121.810	5228.203	2500
18267.023	5472.851	2298	18542.293	5391.604	2756	18818.019	5312.605	2627	19122.197	5228.097	2104
18297.136	5463.844	2609	18542.692	5391.488	2134	18818.532	5312.460	2627	19127.052	5226.770	2268
18298.251	5463.511	2546	18542.692	5391.488	2707	18820.608	5311.874	2627	19131.690	5225.503	2671
18314.546	5458.650	2408	18542.950	5391.413	2507	18821.044	5311.751	2530	19132.997	5225.146	2258
18320.010	5457.022	2137	18545.165	5390.769	2707	18821.044	5311.751	2701	19138.176	5223.732	2502
18326.115	5455.204	2257	18545.805	5390.583	2091	18822.855	5311.240	2656	19141.598	5222.798	1926
18339.267	5451.292	2502	18548.977	5389.661	2587	18827.499	5309.930	2627	19148.843	5220.822	2730
18346.126	5449.254	2549	18548.977	5389.661	2707	18828.743	5309.579	2690	19160.892	5217.539	2286
18346.971	5449.003	2147	18554.551	5388.042	2707	18841.124	5306.090	2345	19168.905	5215.358	2613
18350.871	5447.845	2535	18575.005	5382.109	2337	18846.217	5304.656	2690	19176.123	5213.395	2137
18352.370	5447.400	2549	18575.923	5381.843	2584	18847.195	5304.381	2547	19189.532	5209.752	2609
18354.169	5446.866	2089	18578.301	5381.154	2296	18850.112	5303.560	2701	19190.585	5209.466	2740
18354.169	5446.866	2536	18580.842	5380.418	2506	18850.382	5303.484	2690	19199.187	5207.132	2587
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TABLE 4—Continued

· -						I ADLE 4	—Commuea					
:	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{air} (Å)	σ (cm ⁻¹)	No.
94ApJS.	19202.384	5206.265	2287	19560.949	5110.831	2605	20068.127	4981.666	2727	20732.262	4822.084	2769
ď	19207.782	5204.802	2736	19563.487	5110.168	2151	20070.270	4981.134	2605	20736.859	4821.015	2286
947	19208.731	5204.545	2740	19563.487	5110.168	2700	20072.100	4980.680	2136	20741.006	4820.051	2232
	19212.828	5203.435	2679	19572.503	5107.814	2506	20083.160	4977.937	2149	20756.315	4816.496	2162
	19216.034	5202.567	2679	19580.576	5105.708	2694	20083.915	4977.750	2110	20768.617	4813.643	2645
	19219.011	5201.761	2531	19582.693	5105.156	2529	20092.060	4975.732	2529	20799.053	4806.599	1437
	19219.133	5201.728	2292	19584.696	5104.634	1800	20107.914	4971.809	2735	20799.633	4806.465	2124
	19219.606	5201.600	2729	19592.737	5102.539	1800	20108.990	4971.543	2739	20805.096	4805.203	2292
	19220.304	5201.411	2584	19597.373	5101.332	2505	20118.285	4969.246	1972	20813.507	4803.261	1954
	19228.389	5199.224	2736	19599.467	5100.787	2585	20123.529	4967.951	2735	20813.854	4803.181	2149
	19231.570	5198.364	2736	19605.774	5099.146	2059	20126.405	4967.241	2611	20829.596	4799.551	2771
	19232.584	5198.090	2207	19611.574	5097.638	1113	20143.060	4963.134	2296	20840.812	4796.968	2290
	19233.613	5197.812	2133	19613.159	5097.226	2498	20166.326	4957.408	2739	20841.507	4796.808	2110
	19241.142	5195.778	2736	19614.452	5096.890	2535	20173.415	4955.666	2499	20850.718	4794.689	2292
	19258.073	5191.210	2292	19632.348	5092.244	2163	20178.395	4954.443	342	20861.169	4792.287	2771
	19259.257	5190.891	2499	19635.309	5091.476	1800	20201.718	4948.723	2163	20876.438	4788.782	2687
	19260.448	5190.570	1800	19639.425	5090.409	2534	20211.818	4946.250	2338	20882.229	4787.454	2604
	19266.725	5188.879	2693	19643.507	5089.351	2758	20227.980	4942.298	2625	20897.773	4783.893	2058
	19269.105	5188.238	2709	19657.656	5085.688	2655	20237.279	4940.027	2625	20905.582	4782.106	2611
	19294.777	5181.335	1112	19660.524	5084.946	2627	20254.069	4935.932	2698	20948.099	4772.400	2344
	19303.655	5178.952	2163	19664.964	5083.798	2501	20270.796	4931.859	2698	20958.639	4770.000	2608
	19309.192	5177.467	2689	19670.857	5082.275	1112	20274.348	4930.995	2679	20965.324	4768.479	2292
	19311.139	5176.945	2502	19685.304	5078.545	2291	20281.085	4929.357	1800	20991.046	4762.636	1485
	19312.788	5176.503	2532	19693.902	5076.328	2298	20283.319	4928.814	2625	21017.608	4756.617	2689
	19325.089 19335.154	5173.208 5170.515	2689 1437	19698.508 19707.420	5075.141 5072.846	2655 2772	20288.592 20288.592	4927.533 4927.533	2369	21095.406	4739.075 4732.689	2344
	19336.519	5170.313	2682	19707.420	5072.846	2706	20288.392	4927.333	2625 2204	21123.871 21124.473	4732.589	2288 1941
	19340.170	5169.174	2500	19711.037	5072.475	2728	20314.837	4921.167	2345	21124.473	4732.334	2498
	19340.170	5168.815	2689	19720.124	5069.578	2671	20329.197	4917.691	2625	21123.036	4732.428	2625
	19353.416	5165.636	2151	19733.751	5066.077	2110	20349.721	4912.731	1485	21178.169	4720.555	902
	19378.010	5159.080	2689	19746.458	5062.817	2532	20363.276	4909.461	2295	21195.586	4716.676	2162
	19385.375	5157.120	2136	19747.246	5062.615	1113	20372.247	4907.299	2529	21200.485	4715.586	2162
	19394.005	5154.825	2528	19763.146	5058.542	2502	20405.987	4899.185	1941	21216.322	4712.066	2625
	19395.085	5154.538	2695	19771.291	5056.458	2124	20443.326	4890.237	2163	21224.155	4710.327	2753
	19402.892	5152.464	2581	19780.649	5054.066	2500	20473.972	4882.917	2736	21238.466	4707.153	1800
	19402.892	5152.464	2608	19791.864	5051.202	1800	20486.362	4879.964	2294	21248.957	4704.829	2369
	19409.172	5150.797	2607	19800.402	5049.024	1942	20498.682	4877.031	2149	21265.573	4701.153	2232
	19411.090	5150.288	2695	19824.660	5042.846	1362	20528.171	4870.025	1955	21265.573	4701.153	2373
	19436.035	5143.678	2690	19846.652	5037.258	2528	20563.962	4861.549	2129	21275.882	4698.875	1113
	19451.846	5139.497	2606	19855.461	5035.023	2572	20574.288	4859.109	2162	21277.200	4698.584	2625
	19463.616	5136.389	2627	19881.625	5028.397	2610	20584.196	4856.770	2288	21284.357	4697.004	2109
	19463.950	5136.301	2535	19883.986	5027.800	2707	20586.150	4856.309	2345	21284.357	4697.004	902
	19466.913	5135.519	1437	19894.737	5025.083	2586	20594.933	4854.238	1842	21338.355	4685.118	2129
	19470.401	5134.599	2627	19894.737	5025.083	2707	20600.365	4852.958	2060	21361.631	4680.013	2752
	19475.495	5133.256	902	19909.960 19923.343	5021.241	2680	20601.609	4852.665	2149	21386.166	4674.644	2057
	19477.434	5132.745	2627		5017.868	1800	20601.609	4852.665	2684	21386.166	4674.644	2345
	19477.988 19484.351	5132.599 5130.923	2627 2529	19925.428 19934.896	5017.343 5014.960	2183 2532	20615.212 20618.788	4849.463 4848.622	2529	21427.759	4665.570	2704
	19484.331	5130.923	2133	19934.896	5014.906	2757	20629.271	4846.158	2706 2529	21469.414 21489.590	4656.518	2739
	19490.850	5129.343	2288	19943.347	5014.900	2150	20629.271	4846.058	2284	21508.190	4652.146 4648.123	2283 2735
	19490.830	5127.559	2345	19944.079	5012.651	2657	20633.286	4845.215	1926	21508.190	4646.620	1971
	19504.441	5125.638	2345	19947.413	5011.813	2135	20648.705	4841.597	1437	21553.280	4638.399	2735
	19504.947	5125.505	2060	19947.644	5011.755	2128	20675.284	4835.373	2135	21570.900	4634.610	2503
	19507.634	5124.799	2506	19949.459	5011.799	1941	20675.698	4835.276	2204	21572.255	4634.319	2735
	19509.317	5124.357	2535	19968.997	5006.396	2506	20677.358	4834.888	2293	21648.252	4618.050	1941
	19511.259	5123.847	2288	19970.062	5006.129	1362	20698.313	4829.993	1800	21735.476	4599.518	2344
	19533.278	5118.071	2529	19981.493	5003.265	1460	20707.921	4827.752	2638	21756.951	4594.978	2344
	19540.505	5116.178	2755	20005.716	4997.207	2753	20708.608	4827.592	2769	21775.874	4590.985	1222
	19540.998	5116.049	2755	20023.828	4992.687	2286	20712.653	4826.649	1941	21780.941	4589.917	2109
	19547.161	5114.436	2658	20041.535	4988.276	2768	20715.035	4826.094	2499	21780.941	4589.917	2161
	19548.292	5114.140	1953	20042.073	4988.142	2768	20716.954	4825.647	2286	21787.805	4588.471	2499
	19548.292	5114.140	2288	20056.198	4984.629	2296	20723.138	4824.207	2603	21788.342	4588.358	2341

TABLE 4—Continued

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21815.971 4582.421 2767 22956.005 4554.970 1941 25170.937 3991.752 2372 27654.092 3615.115 2187 21819.399 4578.075 2767 22964.788 4358.192 2318 2319.299 3991.000 2387 27715.1938 3606.259 22019 21815.376 4577.262 2162 23144.597 4319.472 2324 22516.466 3917.569 2342 27724.687 3605.692 22019 21815.376 4577.622 2162 23145.077 4319.472 2325 22574.083 3908.740 2199 27724.687 3605.8510 2180 2315.6477 2150 23233.334 4372.988 2358.257 4567.147 2150 23233.334 4372.988 2358.257 4567.147 2150 23233.334 4372.988 2368 25697.154 3800.420 2159 27827.803 3583.266 2219 21895.327 4566.564 2369 23244.066 4299.087 2202 25776.463 3878.450 1980 27877.83 3586.146 2219 21895.237 4566.564 2369 23244.066 4299.087 2202 25776.463 3878.450 1980 27877.83 3586.146 2219 21895.611 4565.879 2055 23304.722 4289.115 1484 2589.530 3866.141 2642 27913.670 3581.497 1811 21916.131 4565.879 2055 23304.722 4289.115 1484 2589.530 3866.141 2642 27913.670 3581.497 1811 21916.331 4565.879 2055 2359.671 4289.035 1971 25890.862 3866.131 2649 22808.8711 3569.344 26202.2021.755 4588.804 4456.588 2788 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494.804 23494	1, 1,	λ _{vac} (Å)		No.	λ _{vac} (Å)		No.			No.	λ _{air} (Å)		No.
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22859.512 4373.353 1891 25097.101 3983.437 2201 27474.824 3638.703 2199 29717.658 3364.085 2527													
										1			
22882.508 4508.958 2182 25097.751 3985.557 2587 27483.790 3637.516 2313 29746.334 3360.842 2602													
		22882.308	4308.938	2182	23097./31	3983.331	238/	2/483./90	3637.516	2313	29/46.334	3360.842	2602

TABLE 4—Continued

:						71BEE 1	Commuca					
	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{vac}	σ	No.	λ_{air}	σ .	No.
	(Å)	(cm ⁻¹)		(Å)	(cm ⁻¹)		(Å)	(cm ⁻¹)		(Å)	(cm ⁻¹)	
94ApJS	29755.471	3359.810	2497	34160.609	2926.550	2543	36410.999	2745.674	2523	38922.766	2568.490	2781
Ap	29840.414	3350.246	1683	34174.342	2925.374	2719	36443.558	2743.221	2050	38922.766	2568.490	2781
	30232.899	3306.753	2497	34224.918	2921.051	2054	36467.939	2741.387	1841	38926.039	2568.274	2783
	30236.940	3306.311	2527	34236.709	2920.045	2602	36476.588	2740.737	2744	38926.039	2568.274	2783
	30257.229	3304.094	2673	34259.177	2918.130	2309	36592.785	2732.034	2311	38926.964	2568.213	2782
	30390.736	3289.579	2053	34274.446	2916.830	2253	36664.126	2726.718	2720	38929.420	2568.051	2782
	30480.243	3279.919	2602	34319.038	2913.040	2050	36781.740	2717.999	1251	38929.420	2568.051	2782
	30540.404	3273.458	1484	34354.194	2910.059	2255	36799.951	2716.654	2311	38931.375	2567.922	2782
	30732.575	3252.989	2051	34354.938	2909.996	2252	36956.830	2705.122	2525	38931.830	2567.892	2783
	30732.575	3252.989	2662	34376.083 34376.083	2908.206	2773	37034.290	2699.464	1459	38932.785	2567.829	2782
	30801.099 30824.281	3245.752 3243.311	2497 2054	34376.083 34395.776	2908.206 2906.541	2780 2457	37049.305 37081.104	2698.370 2696.056	2310	38935.014	2567.682	2782
	30824.281	3234.830	2527	34393.776 34404.476	2905.806	2719	37081.104	2694.783	1778 2053	38935.969 38938.002	2567.619	2782
	30903.093	3234.830	1841	34411.001	2905.255	2053	37120.868	2693.168	2637	38941.642	2567.485 2567.245	2782 2782
	31127.192	3211.749	2005	34414.365	2904.971	2051	37148.828	2691.141	2311	38942.218	2567.243	2782
	31290.124	3195.025	2602	34432.500	2903.441	2252	37186.814	2688.392	2267	38950.502	2566.661	2785
	31345.476	3189.383	2602	34495.647	2898.126	2543	37492.808	2666.451	2637	38951.549	2566.592	2785
	31415.007	3182.324	2314	34545.652	2893.931	1483	37544.031	2662.813	2525	38952.035	2566.560	2783
	31415.609	3182.263	2054	34558.214	2892.879	2415	37589.868	2659.566	2745	38952.035	2566.560	2785
	31415.609	3182.263	2309	34571.706	2891.750	2267	37664.558	2654.292	2053	38952.612	2566.522	2781
	31462.522	3177.518	2051	34660.186	2884.368	1616	37801.534	2644.674	2312	38955.222	2566.350	2785
	31474.567	3176.302	2678	34760.502	2876.044	2749	37973.260	2632.714	2053	38964.727	2565.724	2457
	31505.375	3173.196	2254	34849.903	2868.666	2051	37984.139	2631.960	2743	38964.727	2565.724	2782
	31509.118	3172.819	2602	34872.332	2866.821	2712	37984.889	2631.908	2050	38964.727	2565.724	2782
	31550.306	3168.677	2764	34917.312	2863.128	2746	38000.440	2630.831	2457	38966.473	2565.609	2782
	31616.949	3161.998	2675	34943.393	2860.991	2524	38048.542	2627.505	2520	38968.220	2565.494	2782
	31649.900	3158.706	2647	34945.445	2860.823	2497	38142.392	2621.040	2663	38970.605	2565.337	2782
	31661.548	3157.544	2052	34979.032	2858.076	2703	38196.895	2617.300	1361	38970.605	2565.337	2784
	31704.553	3153.261	2641	34984.944	2857.593	2493	38339.146	2607.589	2746	38972.124	2565.237	2781
	31727.745	3150.956	2719	34996.505	2856.649	2253	38373.302	2605.268	2521	38979.220	2564.770	2782
	31888.079	3135.113	2052	35015.026	2855.138	2673	38651.041	2586.547	2336	38979.220	2564.770	2785
	32057.862 32106.116	3118.509 3113.822	2527 2241	35084.541 35094.886	2849.481 2848.641	2775 2543	38711.056 38713.350	2582.537 2582.384	2745 2781	38992.143 38993.162	2563.920 2563.853	2782 2782
	32106.116	3113.822	2496	35120.247	2846.584	2775	38734.184	2582.384	2781	38993.162 38994.348	2563.855 2563.775	2782
	32221.048	3108.081	2241	35170.211	2842.540	2774	38737.936	2580.745	2781	38994.348	2563.775	2784
	32227.270	3102.715	2053	35183.678	2841.452	2051	38767.213	2578.796	2781	38996.234	2563.651	2783
	32272.639	3097.755	2253	35260.106	2835.293	2748	38770.957	2578.547	2781	38998.060	2563.531	2783
	32389.021	3086.624	2664	35261.275	2835.199	2310	38792.079	2577.143	2781	38999.809	2563.416	2783
	32411.062	3084.525	2714	35331.422	2829.570	2053	38800.857	2576.560	2781	39015.943	2562.356	2783
	32414.750	3084.174	2667	35359.027	2827.361	2542	38803.838	2576.362	2781	39015.943	2562.356	2783
	32653.774	3061.598	2051	35359.027	2827.361	2776	38816.509	2575.521	2781	39019.597	2562.116	2783
:	32782.437	3049.582	2253	35412.207	2823.115	2430	38821.830	2575.168	2781	39020.176	2562.078	2782
:	32798.279	3048.109	2526	35424.567	2822.130	2710	38824.951	2574.961	2781	39020.176	2562.078	2783
	32836.846	3044.529	2662	35457.824	2819.483	2777	38827.831	2574.770	2781	39023.740	2561.844	2456
	32971.895	3032.059	2310	35465.019	2818.911	2674	38850.238	2573.285	2783	39054.641	2559.817	2781
	33004.115	3029.099	2673	35527.355	2813.965	1360	38852.397	2573.142	2781	39059.738	2559.483	2784
	33064.981	3023.523	2724	35690.080	2801.135	1925	38856.338	2572.881	2784	39081.542	2558.055	2781
	33108.673	3019.533	2253	35762.176	2795.488	2054	38865.916	2572.247	2783	39089.305	2557.547	2781
	33486.508	2985.463	2314	35780.082	2794.089	2779	38872.353	2571.821	2783	39089.305	2557.547	2781
	33506.777	2983.657	2749	35844.713	2789.051	2051	38873.578	2571.740	2784	39098.462	2556.948	2781
	33514.371	2982.981	2005	35844.713	2789.051	2779 2602	38882.483	2571.151	2782	39098.462	2556.948	2781
	33542.899 33546.005	2980.444	2252	35859.640 35891.246	2787.890		38882.483	2571.151	2783	39101.873	2556.725	2784
	33546.005 33547.761	2980.168 2980.012	2253 2719	35952.142	2785.435 2780.717	2744 2053	38884.615 38891.589	2571.010 2570.549	2782 2781	39113.040 39116.285	2555.995 2555.783	2781 2781
	33730.596	2963.859	2474	35932.142	2777.248	1360	38891.589	2570.549	2783	39110.283	2555.783 2555.559	2781 2784
	33741.730	2962.881	2021	36040.860	2773.872	2253	38895.160	2570.349	2782	39147.838	2553.723	2784 2781
	33817.609	2956.233	1841	36173.734	2763.683	2744	38898.202	2570.313	2783	39166.780	2552.488	2781
	33820.320	2955.996	2053	36178.080	2763.351	2526	38899.579	2570.112	2782	39166.780	2552.488	2781
	33841.844	2954.116	2473	36198.109	2761.822	2021	38903.484	2569.763	2782	39227.146	2548.560	2781
	34001.763	2940.222	2721	36296.070	2754.368	2778	38905.528	2569.628	2782	39238.555	2547.819	2523
	34122.809	2929.792	2714	36310.070	2753.306	2540	38910.571	2569.295	2782	39245.132	2547.392	2781
	34123.799	2929.707	2662	36343.320	2750.787	2052	38914.933	2569.007	2782	39245.132	2547.392	2781
			'						'			

TABLE 4—Continued

94	λ _{vac} (Å)	σ (cm ⁻¹)	No.	λ _{vac} (Å)	σ (cm ⁻¹)	No.	$egin{array}{c} \lambda_{oldsymbol{vac}} \ (ext{Å}) \end{array}$	σ (cm ⁻¹)	No.	λ_{air} (Å)	σ (cm ⁻¹)	No.
4ApJS	39256.551	2546.651	2781	40894.582	2444.645	2520	43817.193	2281.587	2762	46281.897	2160.083	2472
ΑÞ	39274.996	2545.455	2781	40938.575	2442.018	2636	43932.609	2275.593	2759	46370.383	2155.961	2761
9	39274.996	2545.455	2781	40998.880	2438.426	2541	43944.292	2274.988	2621	46445.309	2152.483	2492
19	39497.180	2531.136	2523	41000.326	2438.340	2761	44099.562	2266.978	2762	46526.106	2148.745	2543
	39535.042	2528.712	2050	41042.339	2435.844	2763	44101.391	2266.884	2761	46749.285	2138.487	2491
	39535.042	2528.712	2743	41364.908	2416.849	2744	44384.353	2252.432	2762	47135.652	2120.958	2495
	39536.965	2528.589	1925	41507.936	2408.521	2760	44613.817	2240.847	2761	47336.361	2111.965	2742
	39555.816	2527.384	2662	41761.154	2393.917	1841	44655.227	2238.769	1778	47377.593	2110.127	2762
	39850.351	2508.704	2312	41794.657	2391.998	2742	44883.577	2227.379	2761	47482.228	2105.477	1435
	39859.789	2508.110	2779	41804.392	2391.441	2763	45192.853	2212.136	2049	47603.074	2100.132	2733
	39900.101	2505.576	1483	41989.120	2380.920	2456	45243.555	2209.657	2761	47972.392	2083.964	2522
	39933.539	2503.478	2719	42036.897	2378.214	2743	45290.718	2207.356	2522	48087.976	2078.955	1458
	39944.356	2502.800	1436	42397.619	2357.980	2494	45337.959	2205.056	2523	48098.110	2078.517	2521
	39983.161	2500.371	1778	42454.026	2354.847	1483	45368.059	2203.593	2621	48665.467	2054.285	2620
	40252.409	2483.646	2744	42506.789	2351.924	2743	45391.130	2202.473	2663	48894.626	2044.657	2490
	40487.823	2469.205	2521	42913.955	2329.609	1361	45422.126	2200.970	2520	48914.267	2043.836	2048
	40487.823	2469.205	2666	42992.000	2325.380	2760	45452.194	2199.514	2761	49192.404	2032.280	2520
	40637.292	2460.123	2743	43060.664	2321.672	2742	45454.385	2199.408	2541	49246.660	2030.041	264
	40696.381	2456.551	2311	43101.506	2319.472	2742	45509.114	2196.763	2637	49416.572	2023.061	2759
	40807.763	2449.846	2474	43202.216	2314.065	1483	45579.493	2193.371	1778	49681.845	2012.259	264
	40833.081	2448.327	1360	43378.011	2304.687	2521	45802.830	2182.676	1778			
	40841.622	2447.815	2312	43396.539	2303.703	2762	46190.247	2164.369	2491			
	40847.930	2447.437	2494	43743.226	2285.445	2541	46238.015	2162.133	2759			