TWENTY-FIRST ASTEROID.

OBSERVATIONS MADE AT THE VIENNA OBSERVATORY.

[Communicated by Dr. PETERSEN.]

1852.	Vienna M. T. h. m. s.	(21) App. α h. m. s.	Log. Factor of Parallax.	(21) App. δ	Log. Factor of Parallax.	Comp.	Observer.
Dec. 4	8 40 45.1	2 29 49.82	8.027 n	12° 20′ 0.″5	9.771	3	HORNSTEIN.
5	7 6 26.1	2 29 18.45	8.429 n	12 19 49.8	9.787	4	
7	6 19 41.4	2 28 25.39	8.511 n	12 19 35.0	9.799	6	
9	7 30 31.5	2 27 37.56	8.295 n	12 20 1.2	9.777	6	

Mean Places of Comparison-Stars for 1852.0.

	α h. m. s.	δ	
Dec. 4 and 7	2 29 3.28	+12° 15′ 32.″0	B. Z. 126
5 and 9	2 27 59.80 2 28 10.02	+12 22 5.5 +12 17 44.5	By a meridian-circle observation and comparison with B. Z. 126.

OBSERVATIONS MADE AT PARIS.

1852.	Paris M. T. h. m.	(21) α h. m. s.	(21) δ
Nov. 15	10 0	2 41 0	+12° 34′
16	11 45	2 40 5	12 32
17	10 30	2 39 55	+12 30

ELEMENTS AND EPHEMERIS OF IRIS, FOR 1854.

BY E. SCHUBERT.

[Communicated by Lieutenant C. H. DAVIS, Superintendent of the Nautical Almanac.]

THE integrated perturbations by *Jupiter* and *Saturn*, from 1848, January 1.0, to 1854, June 13.0, are,

	δi	$\delta \Omega$	$\delta \varphi$	$\delta \pi$	$\delta \mu$	$\int \delta \mu$	δL	δM
♃	—5.″78	— 304.″20	+ 72.″23	— 977.″48	—0.″44849	+ 356.″47	—40.″73	+ 936.″74
♄	+0.97	— 14.50	+ 0.23	+ 32.93	—0.00410	+ 15.10	—12.86	— 45.79
♃+♄	—4.81	—5′ 18.70	+1′ 12.46	—15′ 44.55	—0.45259	+6′ 11.57	—53.59	+14′ 50.95

OSCULATING ELEMENTS.

1854, June 13.0, M. T. Washington.

M	241° 13′ 55.″53	
i	5 28 12.32	
Ω	259 45 58.31	M. Equinox, June 13.0.
π	41 15 49.31	
φ	13 22 57.06	
μ	962″.41141	
Log. a	0.3777639	

Ephemeris for the Opposition.

12^h M. T. Washington.	☊ α	☊ δ	Log. r	Log. $\triangle$
	h. m. s.	° ′ ″		
May 20	17 50 19.96	—23 42 25.8	0.443064	0.264489
21	49 34.48	40 38.5	.442815	.262596
22	48 47.60	38 48.9	.442565	.260751
23	47 59.36	36 57.1	.442314	.258956
24	47 9.79	35 3.1	.442063	.257212
25	46 18.93	33 6.8	.441809	.255520
26	45 26.83	31 8.2	.441555	.253883
27	44 33.53	29 7.2	.441299	.252302
28	43 39.08	27 3.9	.441041	.250778
29	42 43.54	24 58.3	.440783	.249311
30	41 46.97	22 50.3	.440524	.247904
31	40 49.43	20 39.9	.440263	.246558
June 1	39 50.96	18 27.1	.440001	.245274
2	38 51.64	16 11.9	.439738	.244053
3	37 51.51	13 54.4	.439473	.242895
4	36 50.65	11 34.6	.439207	.241802
5	35 49.11	9 12.4	.438940	.240774
6	34 46.95	6 48.1	.438671	.239811
7	33 44.26	4 21.5	.438401	.238916
8	32 41.07	23 1 52.8	.438130	.238089
9	31 37.45	22 59 21.9	.437858	.237329
10	30 33.48	56 48.9	.437584	.236638
11	29 29.21	54 13.9	.437310	.236017
12	28 24.71	51 37.1	.437034	.235464
☽ 13	27 20.06	48 58.5	.436756	.234982
14	26 15.34	46 18.1	.436478	.234570
15	25 10.60	43 36.1	.436198	.234227
16	24 5.91	40 52.7	.435916	.233956
17	23 1.33	38 7.8	.435634	.233755
18	21 56.93	35 21.6	.435351	.233625
19	20 52.79	32 34.2	.435066	.233565
20	19 48.99	29 45.9	.434779	.233576
21	18 45.59	26 56.8	.434492	.233657
22	17 42.65	24 7.0	.434203	.233808
23	16 40.25	21 16.7	.433913	.234028
24	15 38.48	18 26.2	.433622	.234318
25	14 37.40	15 35.3	.433329	.234675
26	13 37.06	12 44.5	.433035	.235099
27	12 37.54	9 53.8	.432740	.235591
28	11 38.88	7 3.5	.432443	.236148
29	10 41.16	4 13.7	.432145	.236770
30	9 44.43	22 1 24.6	.431847	.237456
July 1	8 48.75	21 58 36.4	.431547	.238204
2	7 54.17	55 49.1	.431245	.239014
3	7 0.75	53 3.0	.430942	.239883
4	6 8.52	50 18.4	.430638	.240812
5	5 17.53	47 35.4	.430332	.241799
6	4 27.86	44 54.1	.430026	.242842
7	17 3 39.55	—21 42 14.6	0.429718	0.243939

☽ 1854, June 13, 6^h 10^m $13^s.0$, M. T. Washington.

Mean Longitude,	262° 32′ 28″.2
Geocentric Latitude,	+ 0 25 22.6
Heliocentric Latitude,	+ 0 15 56.6
Intensity of Light,	0.496