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ANNALS

OF

THE ASTRONOMICAL OBSERVATORY OF HARVARD COLLEGE

HARLOW SHAPLEY, DIRECTOR

VOLUME 111

HISTORY AND BIBLIOGRAPHY OF THE LIGHT VARIATIONS OF VARIABLE STARS

SECOND EDITION, SUPPLEMENTARY VOLUME
CONTAINING THE STARS RECOGNIZED TO BE VARIABLE
DURING THE YEARS 1931–1938

BY
RICHARD PRAGER

CAMBRIDGE, MASS.
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PREFACE

The study of variable stars in the interest of knowledge of the variations in light, color, spectra, motions, and other properties, continues without abatement, as does also the use of variable stars in distance measurements and for other astronomical problems. The need of abstracting currently the vast literature on variable stars has therefore not lessened. In the present volume Dr. Prager has provided the history and bibliography for most of the stars discovered during the past decade, thus supplementing the earlier surveys with which he was long associated at the Berlin-Babelsberg Observatory.

We are indebted to the Executive Committee of the International Astronomical Union for providing some of the funds that have made the preparation and printing of this volume possible. To the Honorable Lucius N. Littauer of New York we are indebted for generous assistance, and among others to the Ittleson Foundation and the Emergency Committee in Aid of Displaced Foreign Scholars. It should be a source of satisfaction to all that they have been able to help maintain continuously, during a time of political and economic disturbance throughout the world, the activity of a recognized expert in an important astronomical field. This basic volume, which will be much used by astronomers of the present and future, is in a sense a memorial to those who have assisted with what is essentially an international enterprise.

HARLOW SHAPLEY

June 1941

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INTRODUCTION

The second edition of the "History and Bibliography of the Light Variations of Variable Stars" was intended to deal in its main part, which was expected to comprise three volumes, with all variables which had been named up to the end of the year of 1930, that is, "recognized as variable" by the Committee of the Astronomische Gesellschaft. The first volume was issued in 1934, the second in 1936.[1] The manuscript of the third volume was completed for about three quarters of the stars it should contain, when I was forced to abandon the continuation of the work at the Berlin-Babelsberg Observatory.[2]

From the first, it was my purpose (Geschichte und Literatur, second edition, Vol. I, p. V) to provide a supplementary volume in a somewhat abridged form for all those variables which should have been named between 1931 and the completion of the third volume. When I came to the Harvard College Observatory, I was, therefore, very glad to prepare, at Dr. Shapley's suggestion, the fourth volume which is now published. Since there is a possibility that the third volume, comprising the older stars of the constellations Orion to Vulpecula, may be completed elsewhere, I have restricted myself exactly to the original program, and have included also for the last third of the constellations none but the variables that have been named since 1931.

The present volume contains, therefore, all the variable stars which appear in the Benennungslisten 29–36 (1931–1938), and also seven stars whose elements have been derived from photoelectric or selenium photometric observations, and which for formal reasons only had not been inserted in the earlier volumes. The volume has 3,592 entries. An extension to stars which may have been named since 1938 was impossible, because I have not been able to learn anything about the publication of any further Benennungsliste.

The large number of new variables rendered necessary a restriction of the space that could be devoted to an individual star. On the other hand, the number of references for the greater part of the stars is so small that such a restriction results only in little inconvenience to the reader. I have chosen, therefore, a tabular form for the basic numerical material and for the history of discovery of the stars. Later, when further shortening appeared advisable, I collected also the information about Charts of the Surroundings, about the Magnitudes of Comparison Stars, and about Diagrams of the Light Curves in tabular form, so that, except for a few stars for which extensive literature exists, the necessary remarks require only very little space. In these remarks, "History" and "Bibliography" are no longer separated as they were in Volumes I and II. Such a separation would have meant, for the overwhelming majority of the stars, quite unnecessary repetition.

[1] Geschichte und Literatur des Lichtwechsels der Veränderlichen Sterne. Zweite Ausgabe, enthaltend die Literatur der Jahre 1916–1933. Von R. Prager. Berlin, Ferd. Dümmlers Verlagsbuchhandlung. Veröffentlichung der Universitätssternwarte Berlin-Babelsberg.

[2] This work was carried out between March 1937 and November 1938. The statement in Guthnick's report of the Variable Star Commission of the Astronomische Gesellschaft for the years 1937–1939 (Vierteljahrsschrift der Astronomischen Gesellschaft, 74.276): "Die Geschichte und Literatur des Lichtwechsels der Veränderlichen Sterne, von der bekanntlich noch der dritte und letzte Band aussteht, konnte vorläufig nicht weitergeführt werden" is erroneous. My request that a correction be printed was declined by the editors of the Vierteljahrsschrift, and I therefore feel that it is desirable to take this opportunity to make a rectification.

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Nevertheless, I was anxious to furnish the same completeness for the information about the individual variables as in the earlier volumes. The chief feature was, as before, the description of the variations of the brightness. Furthermore, I have tried to render the references about spectrum, color, proper motion, radial velocity, photometric and spectroscopic orbits, parallax, and so on, as complete as possible. For this purpose I have found in Miss Cannon's card catalogue, which she kindly put at my disposal, a most valuable help. I have, of course, looked over the literature on the subject, but I am conscious that some publications may have escaped my attention, especially in those points not immediately related to the variations of brightness. One reason for such failures may be found in the fact that in such publications the variable star is often not mentioned by name, or not even designated as variable, a procedure that has already been criticized in the Report of the IAU Commission for Variable Stars (Transactions IAU, 6, 234).

The literature is intended to be complete up to the end of 1940. This aim certainly has not been reached in full, due to the circumstances of the time. Many publications from distant points arrive here with great delay, others are not sent at all, and I shall be grateful to be apprised of all omissions. On the other hand, of course, I have included reference to some publications really pertaining to the year 1941, which came to hand before the printing started.

When the typing was already finished I had the opportunity, by the kind permission of Professor H. N. Russell, to look through the card catalogue of eclipsing variables which has been prepared by Professor R. S. Dugan and Dr. N. S. Pierce at the Princeton University Observatory. From this inspection I found that several reports of observatories as well as a few other papers which do not especially deal with variable stars had not been taken into account in the Harvard catalogue. Since some readers may be interested in the collection of these references, I have added them at the end of the "Remarks," together with some notes from the most recent literature, and some others which had been inadvertently omitted in the preparation of the typewritten copy. Such an addendum is indicated by a + sign at the end of a Remark or in the corresponding column of the Table.

DESCRIPTION OF THE TABLE

LEFT HAND PAGE

Col. 1. *Name.* The constellations are arranged in alphabetical order, and within each constellation stars are arranged corresponding to their names in the designation of Argelander and André-Nijland, respectively, in conformity to the resolutions of the International Astronomical Union (Transactions IAU, 2, 240).

Col. 2. *Provisional Designation.* The provisional designation of a variable should really disappear from astronomical literature at the moment when the star is given its definitive name. I have retained it here deliberately, because in by far the greater number of cases the variable is mentioned in the literature, here alluded to, almost exclusively under this provisional designation; this designation, therefore, appears indispensable for an easy and certain identification in lists of discovery announcements, which are sometimes very long. In the Table is given the designation which the star received on its first announcement. Further provisional designations are given in the Remarks.

Col. 3. *Position 1900.*

Col. 4. *Discoverer.* Name of the first discoverer, or, if this name cannot be ascertained without uncertainty, of that author who announced the first discovery.

Col. 5. *Year.* Generally the year of the announcement of the discovery is given, and only when the discoverer expressly mentions an earlier time of discovery, the year of the actual discovery is given.

Col. 6. *Place.* Name of the Observatory where the discovery occurred, or where the photographic plates were obtained on which the variability was discovered.

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Col. 7. *Remarks.* At the end of the Table are given Remarks with further information about the star, especially references to other papers than those connected with the discovery. After these Remarks there follow, as pointed out above, three Appendices: Appendix I referring to Charts of the Surroundings of the variable, Appendix II to Sequences of Comparison Stars, and Appendix III to Diagrams of the Light Curve. An asterisk in this Column under the corresponding letter means that the star is mentioned in the Remarks (R), in the Table of the Charts (C), of the Sequences (S), and of the Light Curves (L), respectively.

RIGHT HAND PAGE

Col. 8. *Name.*

Col. 9. *Type.* The following abbreviations are used:

Alg = Algol	N = Nova
Cep = Cepheid	R C = R Coronae Borealis
Cl = Cluster	Sh = Short Period
Ecl = Eclipsing	SR = Semiregular
Ell = Elliptic	U G = U Geminorum
Irr = Irregular	W = W Ursae majoris
L = Long Period	β = β Lyrae

Col. 10. *Epoch.* Minimum for eclipsing stars, Maximum for all others. Exceptions are especially mentioned in the Remarks.

Col. 11. *Period.*

Col. 12. *Max.* Maximum brightness in the spectral region given in the 14th column.

Col. 13. *Min.* Minimum brightness in the spectral region given in the 14th column.

Col. 14. *Kind of obs.* The following observations are used:

pe = photoelectric pg = photographic pv = photovisual v = visual

Col. 15. *References.* These references refer only to the discovery and further comments by the discoverer. They refer likewise to the elements in Col. 10 to 14 when these are due to the discoverer. If, however, elements are derived or improved by other authors, the corresponding references are collected in the Remarks.

In the "Remarks" the following abbreviations have been used:

M = Maximum
m = Minimum
A = Amplitude
D = Duration of the Minimum
d = Duration of the constant phase of Minimum
The index numbers 1 and 2 refer to primary and secondary minima, respectively.

AAVSO = American Association of Variable Star Observers
AFOEV = Association Française d'Observateurs d'Étoiles Variables
AOLU = Variable Star Section of the Astronomical Observatory of Leningrad University
ASJap = Astronomical Society of Japan
BAA = British Astronomical Association
NAS = Nordisk Astronomisk Selskab
NZAS = New Zealand Astronomical Society
OAA = Oriental Astronomical Association

Time is expressed throughout in Heliocentric Mean Astronomical Greenwich Time (Day begins at noon).

I am greatly indebted, first of all, to Professor Harlow Shapley who provided me the opportunity to continue my work at the Harvard College Observatory, who suggested the preparation of the present volume, who did everything possible to promote the carrying through of the project and its publication; to Miss Annie J. Cannon who put her card catalogue at my disposal in a most convenient way; and to Mrs. Cecilia H. Payne-Gaposchkin who looked through the whole manuscript and gave many valuable suggestions. Mrs. Penelope Anthon has prepared the volume for planographing.

RICHARD PRAGER

Cambridge, Mass., June 1941.

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LIST OF ABBREVIATIONS

AAb	Acta Astronomica, Sér. b.
AAc	Acta Astronomica, Sér. c.
Aarhus Medd	Meddelelser fra Ole Rømer-Observatoriet i Aarhus.
AAS	Publications of the American Astronomical Society.
Abast Bull	Abastumani Astrophysical Observatory Mount Kanobili Bulletin.
Abh Berl Akad	Abhandlungen der Preussischen Akademie der Wissenschaften, Phys.-Math. Klasse.
AJ	The Astronomical Journal.
Allegh Publ	Publications of the Allegheny Observatory of the University of Pittsburgh.
AN	Astronomische Nachrichten.
Ann Fenn	Annales Academiae Scientiarum Fennicae, Ser. A.
Ann Solar Phys Obs	Annals of the Solar Physics Observatory, Cambridge.
ApJ	The Astrophysical Journal.
ASP	Publications of the Astronomical Society of the Pacific.
Astr Herald	The Astronomical Herald.
Astr Nord	Bulletin de l'Association Astronomique du Nord.
Atti Pont Acc	Atti della Pont. Accademia delle Scienze Nuovi Lincei.
BAA Circ	British Astronomical Association Circular.
BAF	Bulletin de l'Association Française d'Observateurs d'Étoiles Variables.
Bamb Veröff	Veröffentlichungen der Remeis-Sternwarte zu Bamberg.
BAN	Bulletin of the Astronomical Institutes of the Netherlands.
Belgrad Bull	Bulletin de l'Observatoire Astronomique de l'Université de Belgrade.
Berl Ber	Sitzungsberichte der Preussischen Akademie der Wissenschaften. Physikalisch-Mathematische Klasse.
Bonn Beob	Astronomische Beobachtungen auf der Sternwarte zu Bonn.
BSAF	Bulletin de la Société Astronomique de France et Revue Mensuelle de l'Astronomie, de Météorologie et de Physique de Globe.
Budapest Mitt	Mitteilungen der Sternwarte Budapest-Svábhegy.
Bull Cl Sci	Académie Royale de Belgique. Bulletin de la Classe des Sciences. 5e Série.
BZ	Beobachtungs-Zirkular der Astronomischen Nachrichten.
Canberra Mem	Memoirs of the Commonwealth Solar Observatory Mount Stromlo, Canberra, Australia.
Cape Ann	Annals of the Cape Observatory.
Cook Obs	The Cook Observatory, Roslyn House, Wynnewood, Pennsylvania.
CR	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences.
CRM Acad Pol	Académie Polonaise des Sciences et des Lettres. Comptes Rendus Mensuels des Séances de la Classe des Sciences mathématiques et naturelles.
DAO	Publications of the Dominion Astrophysical Observatory, Victoria, B. C.
Diss	Veranderlijke Sterren op een Veld van 10° bij 10° in of nabij het Sterrenbeeld Corona Australis. Academisch Proefschrift door Hendrik van Gent. Leiden, 1932.
DO	Publications of the Dominion Observatory, Ottawa.
Duns Obs	Astronomical Observations and Researches made at Dunsink, the Observatory of Trinity College, Dublin.
EM	English Mechanic and World of Science.
Engelh Bull	V. I. Ulianoff-Lenin University of Kasan, Engelhardt Observatory Bulletin.
ErgAN	Astronomische Abhandlungen. Ergänzungshefte zu den Astronomischen Nachrichten.
Fabra Bol	Boletín del Observatorio Fabra. Sección Astronómica.

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Gaz astr	Gazette astronomique. Bulletin mensuel de la Société d'Astronomie d'Anvers.
Genève Publ	Publications de l'Observatoire de Genève. Série A: Astronomie, Chronométrie, Géophysique.
Gött Mitt	Astronomische Mitteilungen der Königlichen Sternwarte zu Göttingen.
Gött Veröff	Veröffentlichungen der Universitäts-Sternwarte zu Göttingen.
HA	Annals of the Astronomical Observatory of Harvard College.
HAC	Harvard College Observatory Announcement Card.
Harv Repr	The Astronomical Observatory of Harvard College. Reprints.
HB	Bulletin of the Harvard College Observatory.
HC	Harvard College Observatory Circular.
Heid Publ	Publikationen des Astrophysikalischen Observatoriums Königstuhl-Heidelberg.
Heid Veröff	Veröffentlichungen der Badischen Sternwarte zu Heidelberg (Königstuhl).
Inf Circ	Information Circular of the Astronomical Institutions in the USSR.
Jahn, Unterhaltungen	Wöchentliche Unterhaltungen für Dilettanten und Freunde der Astronomie, Geographie und Witterungskunde.
JBAA	The Journal of the British Astronomical Association.
JO	Journal des Observateurs.
JRASC	The Journal of the Royal Astronomical Society of Canada.
KE	Katalog und Ephemeriden veränderlicher Sterne.
Kharkov Bull	Bulletin de l'Observatoire Astronomique de l'Université de Kharkov.
Kharkov Publ	Kharkiv Astronomical Observatory Publications.
KVBB	Kleinere Veröffentlichungen der Universitäts-Sternwarte zu Berlin-Babelsberg.
Kyoto Bull	Bulletin published by the Kwasan Observatory, Kyoto Imperial University, Japan.
Leipzig Ber	Berichte der Mathematisch-Physischen Klasse der Sächsischen Akademie der Wissenschaften zu Leipzig.
Leipzig Veröff	Veröffentlichungen der Universitätssternwarte zu Leipzig.
Lembang Ann	Annalen v.d. Bosscha-Sterrenwacht Lembang (Java).
Leningrad Bull	Leningrad University Astronomical Observatory Bulletin.
Leningrad Eph	Catalogue and Ephemerides of Short-period Cepheids, published by the Astronomical Institute, Leningrad.
Lick Bull	University of California Publications. Astronomy. Lick Observatory Bulletins.
Lick Publ	University of California Publications. Publications of the Lick Observatory.
Lund Medd	Meddelande från Lunds Astronomiska Observatorium.
Lwów Contr	Contributions from the Astronomical Institute of Lwów University.
Lyon Bull	Bulletin de l'Observatoire de Lyon.
Mem Astr Soc Jap	Memoirs of the Astronomical Society of Japan.
Mich Publ	Publications of the Astronomical Observatory of the University of Michigan.
Minn Publ	Publications of the Astronomical Observatory, University of Minnesota.
Mirov Bull	Mirovedenie Astronomical Bulletin.
MN	Monthly Notices of the Royal Astronomical Society.
Mt Wils Rep	Annual Report of the Director of the Mount Wilson Observatory.
Nat	Nature. A weekly illustrated Journal of Science.
NAT	Nordisk Astronomisk Tidsskrift.
Nižbor Ber	Berichte des Astrophysikalischen Observatoriums Nižbor in Böhmen. Bulletin Internationale de l'Académie des Sciences de Bohême.
NNVS	Verein von Freunden der Physik und Astronomie in Gorki (Nishni-Novgorod). Veränderliche Sterne. Fosrchungs- und Informationsbulletin.
Ntw	Die Naturwissenschaften.
OAAR	Report of the Variable Star Section of the Oriental Astronomical Association.
Obs	The Observatory.
Odessa Bull	Bulletin du Premier Observatoire Astronomique d'Odessa.
OGyalla	Beobachtungen angestellt am Astrophysikalischen Observatorium in OGyalla.
PA	Popular Astronomy.
Penn Publ	Publications of the University of Pennsylvania. Astronomical Series.
Perkins Contr	Contributions from the Perkins Observatory, Ohio Wesleyan University and Ohio State University.
Pg Pm	Photographische Photometrie met Toepassing op de Veranderlijke Ster SZ Camelopardalis. Academisch Proefschrift door Adriaan Jan Wesselink. Leiden, 1938.
Potsdam Publ	Publikationen des Astrophysikalischen Observatoriums zu Potsdam.

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Poznań Publ	Publications de l'Observatoire Astronomique de l'Université de Poznań.
Princ Contr	Contributions from the Princeton University Observatory.
Proc Amer Acad	Proceedings of the American Academy of Arts and Sciences.
Proc NA	Proceedings of the National Academy of Sciences of the United States of America.
Pulk Bull	Bulletin de l'Observatoire Central à Poulkovo.
Pulk Circ	Poulkovo Observatory Circular.
RAJ	Russian Astronomical Journal.
Riverview Publ	Riverview College Observatory Publications.
SAC	Rocznik Astronomiczny Obserwatorjum Krakowskiego. Supplemento internationale.
Šaf-Pr	Ladislav Pračka: Untersuchungen über den Lichtwechsel älterer veränderlicher Sterne. Nach den Beobachtungen von Prof. Dr. Vojtěch Šafařík in Prag.
SAI	Memorie della Società Astronomica Italiana.
Seel-Festschr	Probleme der Astronomie. Festschrift für Hugo v. Seeliger, dem Forscher und Lehrer zum fünfundsiebzigsten Geburtstage.
Sonn Mitt	Mitteilungen der Sternwarte zu Sonneberg.
Spec Vat	Specola Astronomica Vaticana.
Stockh Ann	Stockholms Observatoriums Annaler (Astronomiska Iakttagelser och Undersökningar å Stockholms Observatorium).
Sternb Card	Sternberg State Astronomical Institute of Moscow, Cards.
Sternb Publ	Publications of the Sternberg State Astronomical Institute.
Sunderland Publ	Publications of West Henden House Observatory, Sunderland.
Tadjik Ann	Annals of the Tadjik Astronomical Observatory.
Tadjik Circ	Tadjik Observatory Circular. Stalinabad.
Tadjik Eph	Tadjik Astronomical Observatory Stalinabad. Catalogue and Ephemeris of Short period Cepheids.
Tashk Bull	Bulletin of the Tashkent Astronomical Observatory.
Tashk Circ	Astronomical Circular, Tashkent Astronomical Observatory.
Tashk Publ	Publications of the Tashkent Astronomical Observatory.
Tokyo Astr Obs Rep	Reports of the Tokyo Astronomical Observatory.
Tokyo Bull	Tokyo Astronomical Bulletin, published by the Tokyo Astronomical Observatory.
UAI Circ	Bureau Central des Télégrammes Astronomiques. Union Astronomique Internationale. Observatoire de Copenhague. Circulaire.
UOC	Circular of the Union Observatory.
VAP	Die Himmelswelt. Mitteilungen der Vereinigung von Freunden der Astronomie und kosmischen Physik.
Vat Com	Specola Vaticana Comunicazioni.
VBB	Veröffentlichungen der Universitätssternwarte zu Berlin-Babelsberg.
Verh D Phys Ges	Verhandlungen der Deutschen Physikalischen Gesellschaft.
VJS	Vierteljahrsschrift der Astronomischen Gesellschaft.
Wars Circ	Circular of the Astronomical Observatory at Warsaw.
Wars Polyt	Institut d'Astronomie Pratique de l'École Polytechnique de Varsovie.
Wars Publ	Publications of the Astronomical Observatory of the Warsaw University.
Wars Repr	Astronomical Observatory of the Warsaw University. Reprint.
Washb Publ	Publications of the Washburn Observatory of the University of Wisconsin.
Wien Ber	Sitzungsberichte der Akademie der Wissenschaften in Wien. Mathematisch-naturwissenschaftliche Klasse, Abteilung IIa.
Wien Mitt	Mitteilungen der Wiener Sternwarte.
Wien Zirk	Mittelmeerstation der Wiener Universitätssternwarte. Zirkular.
Wilno Bull	Bulletin de l'Observatoire Astronomique de Wilno. I. Astronomie.
Yerkes Publ	Publications of the Yerkes Observatory of the University of Chicago.
ZAp	Zeitschrift für Astrophysik.

Star Catalogues have been abbreviated according to the lists of Auwers (AN 4176) and Kopff (AN 5947).

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TABLE I
THE CATALOGUE

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
			ANDROMEDA						
AN	9 And	$23^h13^m39^s$ +41°13'.6	Stebbins	1924	Washburn	*			*
AO	Ross 97	23 13 19 +46 12.5	Ross	1926	Yerkes	*	*		
AP	381.1931	23 44 32 +45 13.4	Lassovszky	1931	Babelsberg	*	*	*	*
AQ	..	0 22 14 +35 2.1	Wendell	1906	Harvard	*			
AR	Ross 346	1 39 12 +37 26.8	Ross	1929	Yerkes	*		*	
AS	SVS 747	23 34 10 +46 41.5	Beljawsky	1936	Simeis		*	*	
AT	178.1935	23 37 37 +42 27.9	Morgenroth	1935	Sonneberg	*	*		
AU	156.1935	1 41 27 +39 18.7	Morgenroth	1935	Sonneberg	*			
AV	459.1934	2 5 21 +39 44.3	Morgenroth	1934	Sonneberg		*		
AW	512.1934	23 50 33 +45 47.2	Zinner	1934	Bamberg				
ζ	..	0 42 2 +23 43.4	Stebbins	1922	Washburn	*		*	*
			ANTLIA						
RT	HV 7533	$9^h27^m43^s$ -24°45'.4	Boyce	1936	Harvard	*			
RU	HV 7538	9 29 31 -27 22.4	Boyce	1936	Harvard				
RV	HV 7542	9 30 39 -24 39.5	Boyce	1936	Harvard				
RW	HV 7543	9 31 41 -28 29.8	Boyce	1936	Harvard				
RX	HV 7548	9 33 30 -27 17.0	Boyce	1936	Harvard				
RY	HV 7550	9 33 42 -27 16.6	Boyce	1936	Harvard	*			
RZ	HV 7551	9 34 13 -29 29.9	Boyce	1936	Harvard	*			
SS	HV 7554	9 34 42 -26 6.2	Boyce	1936	Harvard				
ST	HV 7570	9 39 57 -28 18.2	Boyce	1936	Harvard				
SU	HV 7577	9 42 10 -24 19.4	Boyce	1936	Harvard				
SV	HV 7580	9 42 29 -27 10.4	Boyce	1936	Harvard	*			
SW	HV 7583	9 43 55 -24 43.4	Boyce	1936	Harvard	*			
SX	HV 7526	9 23 5 -29 1.2	Boyce	1936	Harvard				
SY	HV 7531	9 26 38 -28 46.4	Boyce	1936	Harvard	*			
SZ	HV 7552	9 34 30 -29 31.8	Boyce	1936	Harvard				
TT	HV 7553	9 34 32 -24 25.4	Boyce	1936	Harvard				
TU	HV 7563	9 38 9 -25 24.1	Boyce	1936	Harvard	*			
TV	HV 7564	9 38 23 -26 24.4	Boyce	1936	Harvard				
TW	HV 7566	9 38 54 -25 12.2	Boyce	1936	Harvard				
TX	HV 7569	9 39 37 -26 5.2	Boyce	1936	Harvard				
TY	HV 7576	9 41 43 -28 55.3	Boyce	1936	Harvard				
TZ	HV 7578	9 42 18 -28 51.2	Boyce	1936	Harvard				
UU	HV 7579	9 42 22 -26 15.0	Boyce	1936	Harvard				
UV	HV 7584	9 44 0 -28 12.0	Boyce	1936	Harvard				
UW	HV 7585	9 44 27 -27 39.4	Boyce	1936	Harvard				
			APUS						
X	HV 5055	$13^h56^m7^s$ -71° 5'.0	Florence	1931	Harvard		*		
Y	HV 5058	13 57 26 -71 54.1	Florence	1931	Harvard		*		
Z	HV 5060	13 58 28 -70 53.5	Florence	1931	Harvard	*	*		
RR	HV 5061	13 58 59 -70 33.8	Florence	1931	Harvard		*		
RS	HV 5063	13 59 55 -71 56.9	Florence	1931	Harvard		*		
RT	HV 5066	14 0 36 -71 7.8	Florence	1931	Harvard	*	*		
RU	HV 5075	14 13 12 -71 11.1	Florence	1931	Harvard	*	*		
RV	HV 5079	14 14 53 -72 49.6	Florence	1931	Harvard				
RW	HV 5089	14 22 36 -70 20.1	Florence	1931	Harvard		*		
RX	HV 5090	14 22 50 -70 20.5	Florence	1931	Harvard		*		
RY	HV 5092	14 23 50 -71 29.7	Florence	1931	Harvard		*		
RZ	HV 5093	14 23 57 -71 30.2	Florence	1931	Harvard		*		
SS	HV 5094	14 25 1 -72 29.1	Florence	1931	Harvard		*		
ST	HV 5095	14 25 8 -71 44.1	Florence	1931	Harvard		*		
SU	HV 5099	14 29 11 -70 16.3	Florence	1931	Harvard		*		
SV	HV 5101	14 29 17 -72 5.1	Florence	1931	Harvard		*		
SW	HV 5100	14 29 17 -70 52.6	Florence	1931	Harvard		*		
SX	HV 5102	14 29 38 -71 12.5	Florence	1931	Harvard		*		

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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AN	β	2421060.326	3.2196	5.90	6.06	pe	PA 32.234; Washb Publ 15.56
AO	L	2427810	354	12	14.4	v	AJ 856
AP	Alg	2426565.460	1.58730	11.26	11.87	pg	BZ 13.51; AN 5831; 5877
AQ	L	2426952	332	6.90	8.28	v	HA 55.88; 92; 69.111
AR				11.5	[15	pg	AJ 926
AS	Alg	2428124.175	1.7002	13.8	15.2	pg	NNVS 50; Pulk Circ 19
AT	Cl	2428022.37	0.628	11.5	12.5	pg	AN 6119
AU	Irr			9.9	10.6	v	AN 6119
AV	Irr			13.8	14.5	pg	AN 6094
AW	L		330	12.4	13.2	pg	AN 6102
ζ	Ell	2420038.306	17.7673	4.35	4.45	pe	PA 30.233; Washb Publ 15.29
				ANTLIA			
RT	Cl	2426411.50	0.55294	13.4	14.8	pg	HB 903
RU	Cl	2426411.30	0.53914	14.3	15.7	pg	HB 903
RV	Cl	2426382.55	0.53490	13.9	15.5	pg	HB 903
RW	Cl	2426382.42	0.36661	13.9	15.0	pg	HB 903
RX	L	2426050	242	12.2	16.2	pg	HB 903
RY	SR		65?	11.4	12.8	pg	HB 903
RZ	L	2425660	221	13.8	16.0	pg	HB 903
SS	Cl	2426410.32	0.48371	13.0	14.8	pg	HB 903
ST	Cl	2426411.50	0.51950	13.9	15.7	pg	HB 903
SU	L	2425250	350	14.6	[16.2	pg	HB 903
SV	L	2425620	297	12.8	[16.0	pg	HB 903
SW	W	2425986.50	0.38020	13.8	14.9	pg	HB 903
SX	Irr			12.7	13.3	pg	HB 903
SY	Irr			12.0	13.0	pg	HB 903
SZ	Ecl			11.7	12.4	pg	HB 903
TT	Irr			13.8	14.8	pg	HB 903
TU	Irr			11.8	12.8	pg	HB 903
TV	Irr			13.3	14.4	pg	HB 903
TW	Irr			14.1	14.6	pg	HB 903
TX	Irr:			15.3	15.9	pg	HB 903
TY	Irr:			12.6	13.6	pg	HB 903
TZ	Irr			12.7	13.5	pg	HB 903
UU	Ecl			12.5	13.1	pg	HB 903
UV	Ecl			13.4	14.0	pg	HB 903
UW	Irr			14.2	16.0	pg	HB 903
				APUS			
X	L	2425670	240	14.0	[16.5	pg	HB 883
Y	L	2426090	247.5	14.2	[16.5	pg	HB 883
Z	Irr			10.0	12.5	pg	HB 883
RR	L	2425720	124.0	13.4	16.5:	pg	HB 883
RS	Cl	2425327.48	0.5652	14.5	16.0	pg	HB 883
RT	L	2425345	252	12.6	[16.5	pg	HB 883
RU	L?	2425410	163	14.5	15.3	pg	HB 883
RV	Ecl	2425360.4	34.074	10.6	15.2	pg	HB 883
RW	L	2425355	117.3	13.8	[16.5	pg	HB 883
RX	L	2425450	474	10.5	16.0	pg	HB 883
RY	L	2425660	383	10.0	[16.0	pg	HB 883
RZ	L	2425330	222.7	13.5	[16.5	pg	HB 883
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SU	Sh			14.7	15.4	pg	HB 883
SV	Cl			14.0	14.6	pg	HB 883
SW	L	2425410	303	10.0	16.0	pg	HB 883
SX	Sh			13.5	14.5	pg	HB 883

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
			APUS						
SY	HV 5103	14h29m48s -72°23'.5	Florence	1931	Harvard		*		
SZ	HV 5104	14 29 51 -71 12.3	Florence	1931	Harvard		*		
TT	HV 5106	14 30 11 -71 7.9	Florence	1931	Harvard		*		
TU	HV 5107	14 31 13 -70 18.9	Florence	1931	Harvard		*		
TV	HV 5113	14 36 26 -70 51.9	Florence	1931	Harvard		*		
TW	HV 5114	14 36 48 -71 38.7	Florence	1931	Harvard	*	*		
TX	HV 5115	14 38 21 -72 22.3	Florence	1931	Harvard	*	*		
TY	HV 5118	14 39 25 -70 54.4	Florence	1931	Harvard		*		
TZ	HV 5119	14 40 1 -70 33.3	Florence	1931	Harvard		*		
UU	HV 5122	14 40 51 -72 18.4	Florence	1931	Harvard		*		
UV	HV 5125	14 41 27 -70 42.1	Florence	1931	Harvard	*	*		
UW	HV 5126	14 42 54 -70 56.5	Florence	1931	Harvard	*	*		
UX	HV 5127	14 42 58 -70 28.6	Florence	1931	Harvard		*		
UY	HV 5129	14 49 52 -71 23.8	Florence	1931	Harvard		*		
UZ	HV 5130	14 51 56 -71 35.3	Florence	1931	Harvard		*		
VV	HV 5131	14 52 57 -71 24.4	Florence	1931	Harvard		*		
VW	HV 5132	14 53 10 -70 33.8	Florence	1931	Harvard		*		
			AQUARIUS						
AE	342.1931	20h35m 1s - 1° 8'.9	Wachmann	1931	Bergedorf	*			
AF	HV 4964	21 58 51 -22 5.5	Hughes	1931	Harvard		*		
AG	HV 4965	21 59 56 -22 59.0	Hughes	1931	Harvard		*		
AH	HV 4966	22 0 1 -24 11.6	Hughes	1931	Harvard		*		
AI	HV 4968	22 1 32 -21 11.5	Hughes	1931	Harvard	*	*		
AK	HV 4970	22 4 5 -19 43.4	Hughes	1931	Harvard		*		*
AL	HV 4971	22 4 58 -22 15.6	Hughes	1931	Harvard		*		
AM	HV 4972	22 5 41 -20 0.3	Hughes	1931	Harvard	*	*		
AN	HV 4973	22 5 46 -19 10.3	Hughes	1931	Harvard		*		
AO	HV 3368	22 5 58 -23 16.3	Leavitt	1913	Harvard	*	*		
AP	HV 4975	22 6 38 -23 48.9	Hughes	1931	Harvard	*	*		
AQ	HV 4976	22 7 20 -21 39.5	Hughes	1931	Harvard		*		
AR	HV 4977	22 7 41 -25 12.8	Hughes	1931	Harvard		*		*
AS	HV 4981	22 12 33 -18 54.5	Hughes	1931	Harvard		*		
AT	HV 4984	22 14 52 -20 35.8	Hughes	1931	Harvard		*		*
AU	HV 4985	22 16 1 -25 17.0	Hughes	1931	Harvard	*	*		
AV	HV 4986	22 18 49 -20 17.5	Hughes	1931	Harvard		*		
AW	HV 4987	22 19 22 -24 8.8	Hughes	1931	Harvard		*		
AX	HV 4988	22 20 16 -18 44.0	Hughes	1931	Harvard		*		
AY	HV 4989	22 21 28 -19 55.2	Hughes	1931	Harvard		*		*
AZ	HV 4990	22 21 39 -25 14.2	Hughes	1931	Harvard		*		
BB	HV 4991	22 22 4 -22 50.9	Hughes	1931	Harvard		*		
BC	HV 4992	22 26 11 -18 34.5	Hughes	1931	Harvard	*	*		
BD	HV 4993	22 27 52 -24 8.2	Hughes	1931	Harvard		*		*
BE	HV 4994	22 30 14 -18 29.5	Hughes	1931	Harvard		*		
BF	HV 4995	22 30 39 -19 49.2	Hughes	1931	Harvard		*		
BG	HV 4996	22 32 4 -18 52.7	Hughes	1931	Harvard		*		
BH	HV 4997	22 33 34 -20 18.9	Hughes	1931	Harvard	*	*		
BI	HV 4998	22 34 43 -23 44.8	Hughes	1931	Harvard	*	*		*
BK	87.1931	21 3 45 - 5 29.1	Hoffmeister	1931	Sonneberg	*			
BL	88.1931	21 9 2 - 2 23.5	Hoffmeister	1931	Sonneberg	*			
BM	91.1931	22 1 20 -16 7.9	Hoffmeister	1931	Sonneberg	*			
BN	94.1931	22 22 35 - 7 59.5	Hoffmeister	1931	Sonneberg	*	*	*	
BO	102.1931	22 48 52 -12 53.6	Hoffmeister	1931	Sonneberg	*	*	*	*
BP	383.1931	22 55 43 -10 11.1	Wolf	1931	Heidelberg	*	*		
BQ	106.1931	23 30 57 -17 1.3	Hoffmeister	1931	Sonneberg	*	*		
BR	107.1931	23 33 24 - 9 52.8	Hoffmeister	1931	Sonneberg	*	*	*	*
BS	109.1931	23 43 37 - 8 42.1	Hoffmeister	1931	Sonneberg	*			*
BT	Ross 285	20 52 31 - 6 4.7	Ross	1928	Yerkes	*	*		
BU	SVS 316	20 52 44 -13 36.6	Neujmin	1932	Simeis	*	*		
BV	HV 3366	21 57 20 -22 0.4	Leavitt	1913	Harvard	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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TU	Sh			11.0	12.2	pg	HB 883
TV	Ecl?			13.7	14.7	pg	HB 883
TW	Cl			14.6	15.7	pg	HB 883
TX	L	2425655	240	13.0	[16.5	pg	HB 883
TY	Cl	2425384.34	0.501692	9.8	11.5	pg	HB 883
TZ	L	2425740	315.1	13.5	[16.5	pg	HB 883
UU	Ecl			14.5	16.0	pg	HB 883
UV	Cl	2425433.24	0.4194:	15.1	15.9	pg	HB 883
UW	Cl?			14.4	16.0	pg	HB 883
UX	Cl	2425327.52	0.40075	14.7	15.8	pg	HB 883
UY	Cl	2425326.54	0.48252	12.0	13.7	pg	HB 883
UZ	L	2425690	88.3	12.1	13.9	pg	HB 883
VV	L	2425300	234	12.4	[16.5	pg	HB 883
VW	Cl?			13.5	14.7	pg	HB 883
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AE	L	2427298	371	9.7	12.1	pg	AN 5805
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AG	Sh			14.5	15.4	pg	HB 883
AH	Sh			14.1	14.9	pg	HB 883
AI	Cl	2425424.65	0.618665	12.5	14.5	pg	HB 883
AK	Cl	2425424.65	0.60738	13.4	15.3	pg	HB 883
AL	Cl	2425442.50	0.5707	14.1	15.1	pg	HB 883
AM	W	2425417.63	0.45994	12.8	14.2	pg	HB 883
AN	Cl.	2425412.65	0.37664	13.5	14.3	pg	HB 883
AO	W	2425412.60	0.648558	11.5	12.3	pg	HC 179; AN 4728
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AQ	L	2425530	235.6	13.0	[16.5	pg	HB 883
AR	Cl	2425425.60	0.5821	15.0	16.1	pg	HB 883
AS	Cl	2425449.55	0.5306	14.2	15.6	pg	HB 883
AT	W	2425425.63	0.304095	14.1	15.0	pg	HB 883
AU	W	2425426.60	0.45604	12.9	14.0	pg	HB 883
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AW	Cl	2425412.63	0.654	15.0	[16.2	pg	HB 883
AX	Cl	2425417.60	0.6355	12.4	13.4	pg	HB 883
AY	W	2425446.55	0.281995	13.7	14.7	pg	HB 883
AZ	Cl			14.7	15.6	pg	HB 883
BB	Cl	2425442.50	0.53474	14.7	16.2	pg	HB 883
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BD	Cl	2425439.53	0.50113	14.0	15.8	pg	HB 883
BE	Cl	2425439.58	0.4864	13.1	14.8	pg	HB 883
BF	Ecl:			14.2	14.9	pg	HB 883
BG	Cl	2425424.60	0.5055	13.6	15.4	pg	HB 883
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BI	Alg	2425426.60	13.04	12.6	13.7	pg	HB 883
BK	Irr		70?	9.5	10	pg	AN 5791
BL	L	2426634	85	9.5	11.5	v	AN 5791
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BN	Cl	2426578.360	0.469632	11.32	13.18	pg	AN 5791
BO	Cl	2426589.433	0.69401	11.52	12.70	pg	AN 5791
BP	Sh			13.5	14.5	pg	BZ 13.59; AN 5833
BQ	Alg	2426575.413	6.623	9.5	11.5	pg	AN 5791
BR	Cl	2426595.4157	0.48187896	11.0	12.2	pg	AN 5791
BS	Cl	2428095.264	0.197822	8.8	9.2	pg	AN 5791
BT	Cl	2427395.907	0.40686	11	12.3	v	AJ 897
BU	Cl	2425418.60	0.53100	12.5	14.1	pg	NNVS 38; Pulk Circ 4
BV	Sh			10.1	10.6	pg	HC 179; AN 4728

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
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BW	HV 3156	22h17m54s -15°50'.3	Leavitt	1908	Harvard	*		*	*
BX	248.1932	20 46 16 -11 28.2	Hoffmeister	1932	Sonneberg	*	*		
BY	SVS 323	20 52 39 -11 25.7	Shajn	1933	Simeis	*	*	*	
BZ	SVS 324	20 56 4 - 7 49.6	Shajn	1933	Simeis		*	*	
CC	SVS 325	21 8 11 - 9 2.4	Shajn	1933	Simeis		*	*	
CD	251.1932	21 14 46 - 4 31.8	Hoffmeister	1933	Sonneberg	*			
CE	99.1931	22 47 4 -11 17.1	Hoffmeister	1931	Sonneberg	*	*	*	
CF	HV 6204	20 48 27 -14 9.6	Hughes	1934	Harvard				
CG	HV 6207	20 49 40 -12 43.3	Hughes	1934	Harvard				
CH	HV 6218	20 53 53 -14 24.8	Hughes	1934	Harvard				
CI	HV 6219	20 55 20 -12 16.0	Hughes	1934	Harvard	*			
CK	HV 6222	20 55 35 -11 27.3	Hughes	1934	Harvard	*			
CL	HV 6232	21 0 33 -14 47.4	Hughes	1934	Harvard				
CM	HV 6240	21 2 56 -14 17.6	Hughes	1934	Harvard				
CN	HV 6241	21 2 58 -13 25.2	Hughes	1934	Harvard	*			
CO	HV 6247	21 4 41 -14 44.8	Hughes	1934	Harvard				
CP	748.1933	21 5 3 - 2 7.4	Hoffmeister	1933	Sonneberg	*	*	*	*
CQ	HV 6249	21 5 30 -14 42.3	Hughes	1934	Harvard				
CR	HV 6251	21 5 45 -14 23.4	Hughes	1934	Harvard	*			
CS	HV 6250	21 5 45 -10 49.4	Hughes	1934	Harvard	*			
CT	HV 6256	21 10 52 -13 0.0	Hughes	1934	Harvard				
CU	HV 6259	21 13 0 -11 40.0	Hughes	1934	Harvard				
CV	HV 6262	21 16 13 -14 43.6	Hughes	1934	Harvard	*			
CW	258.1932	22 13 57 -17 23.6	Hoffmeister	1932	Sonneberg	*		*	*
CX	752.1933	22 30 36 - 1 12.8	Hoffmeister	1933	Sonneberg	*	*	*	*
CY	391.1934	22 32 40 + 1 1.8	Hoffmeister	1934	Babelsberg	*	*	*	*
CZ	260.1932	23 17 6 -16 29.2	Hoffmeister	1932	Sonneberg	*	*	*	*
DD	189.1935	22 40 46 + 0 31.4	Hoffmeister	1935	Sonneberg	*	*		
DE	HV 6209	20 50 10 -12 46.2	Hughes	1931	Harvard				
DF	HV 6215	20 52 52 -11 43.8	Hughes	1931	Harvard				
DG	HV 6216	20 53 16 -11 6.4	Hughes	1931	Harvard	*			
DH	HV 6220	20 55 25 -12 28.4	Hughes	1931	Harvard				
DI	HV 6238	21 2 24 -12 52.0	Hughes	1931	Harvard	*			
DK	HV 6255	21 8 36 -12 18.0	Hughes	1931	Harvard				
DL	750.1933	21 17 38 - 3 13.2	Hoffmeister	1933	Sonneberg	*	*		
DM	Ross 343	23 13 48 - 7 51.6	Ross	1928	Yerkes	*		*	
DN	658.1935	23 13 57 -24 45.9	Hoffmeister	1935	Sonneberg	*			
		AQUILA							
HK	356.1930	18h37m11s + 0° 3'.6	Müller	1930	La Paz	*			
HL	HV 4929	18 41 22 - 2 7.3	Walton	1927	Nantucket	*			
HM	HV 4931	18 42 13 - 2 19.7	Walton	1927	Nantucket	*			
HN	HV 4933	18 45 43 - 2 7.0	Walton	1927	Nantucket	*			
HO	HV 4935	18 48 48 - 0 34.4	Walton	1927	Nantucket	*			
HP	HV 4937	18 54 14 - 5 22.3	Walton	1927	Nantucket	*			
HQ	80.1906	18 54 21 - 5 22.5	Wolf	1906	Heidelberg	*			
HR	HV 4938	18 54 31 - 2 0.6	Walton	1927	Nantucket	*			
HS	HV 4939	18 54 56 - 8 49.4	Walton	1927	Nantucket	*			
HT	HV 4947	18 54 59 - 8 49.4	Harrison	1930	Harvard	*			
HU	HV 4948	18 55 6 - 5 38.3	Mohr	1930	Harvard	*			
HV	HV 4940	18 55 54 + 0 6.0	Walton	1927	Nantucket	*			
HW	HV 4949	18 57 23 - 6 20.7	Mohr	1930	Harvard	*			
HX	HV 4950	18 57 24 - 6 19.3	Harrison	1930	Harvard	*			
HY	90.1925	18 57 26 - 6 22.5	Beljawsky	1925	Simeis	*			
HZ	HV 4952	18 58 22 - 2 31.2	Loines	1930	Harvard				
II	HV 4941	19 0 7 - 3 44.8	Walton	1927	Nantucket	*			
IK	HV 4953	19 0 29 - 2 52.9	Mohr	1930	Harvard	*			
IL	HV 4954	19 1 40 - 0 54.6	Loines	1930	Harvard				
IM	HV 4942	19 2 34 - 6 54.5	Walton	1927	Nantucket	*			
IN	HV 4955	19 3 16 - 4 45.9	Loines	1930	Harvard	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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BY	Cl	2425447.50	0.65781	12.7	14.2	pg	NNVS 39; Pulk Circ 6
BZ				13.0	14.1	pg	NNVS 39; Pulk Circ 6
CC	Sh			13.4	14.6	pg	NNVS 39; Pulk Circ 6
CD	Alg	2427340.35	4.8378	9.8	10.5	pg	AN 5919
CE	Cl		7.0/n	11.3	12.8	pg	AN 5791
CF	Cl	2425481.40	0.63238	14.3	15.4	pg	HA 90.169
CG	Cl	2425442.50	0.453325	13.0	14.7	pg	HA 90.169
CH	Cl	2425449.55	0.49706	14.2	15.8	pg	HA 90.169
CI	L	2425445	163:	14.0	15.7	pg	HA 90.169
CK	Cl	2425425.57	0.12406	12.9	13.8	pg	HA 90.169
CL	Cl	2425413.60	0.59542	14.3	15.5	pg	HA 90.169
CM	W	2425409.40	0.70356	13.0	13.6	pg	HA 90.169
CN	L	2425170	105.5	12.5	13.6	pg	HA 90.169
CO	Cl	2425481.40	0.56107	13.7	14.9	pg	HA 90.169
CP	Cl	2427634.324	0.463407	10.78	12.10	v	AN 6002
CQ	Ecl	2425424.58	0.98006	13.7	14.5	pg	HA 90.169
CR	β	2425423.65	0.51449	13.6	14.5	pg	HA 90.170
CS	Cl	2425442.50	0.56985	12.6	14.0	pg	HA 90.170
CT	Cl	2425423.65	0.53966	14.3	16.2	pg	HA 90.170
CU	Cl	2425447.55	0.48297	14.6	16.2	pg	HA 90.170
CV	U G			12.4	[16.6	pg	HA 90.170
CW	β	2426192.548	0.542909	10.4	10.8	v	AN 5919
CX	β	2426331.292	0.5559825	10.04	10.96	v	AN 6002
CY	Cl	2427658.4096	0.061038639	10.1	10.9	v	BZ 16.45; AN 6051
CZ	β	2427413.968	0.8627505	9.5	11.1	v	AN 5919
DD	β	2428371.379	0.7207	10.5	11	pg	AN 6118
DE	Irr			13.0	13.9	pg	HA 90.169
DF	Irr			13.0	13.7	pg	HA 90.169
DG	SR			13.1	14.1	pg	HA 90.169
DH	SR			12.3	13.3	pg	HA 90.169
DI	Irr			12.1	12.9	pg	HA 90.169
DK	SR?			13.5	14.5	pg	HA 90.170
DL	L	2427736	138	10.0	11.5	v	AN 6002
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DN	Cl	2428433.4436	0.38759	10	10.5	pg	AN 6171
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HL	Cl			14.5	15.2	pg	PA 35.25
HM	Cl			13.6	14.4	pg	PA 35.25
HN	Cl		<1d	12.8	13.7	pg	PA 35.25
HO	Cl		0.335	14.1	14.6	pg	PA 35.25
HP	L	2426472	230	14.0	16.9	pg	PA 35.25
HQ	L	2417077	222.2	13.3	16.3	pg	AN 4108
HR				14.4	15.1	pg	PA 35.25
HS	L	2424000	310	13.7	[15.6	pg	PA 35.25
HT	Cl			13.9	14.9	pg	HB 880
HU	L			14.3	15.1	pg	HB 880
HV	Cl		0.508	14.4	15.0	pg	PA 35.25
HW	Cl			14.4	15.3	pg	HB 880
HX				14.6	15.9	pg	HB 880
HY	Alg	2424054.608	8.36078	13.4	15.5	pg	BZ 7.71
HZ	L			15.3	15.9	pg	HB 880
II	L	2424350	315	14.1	[17.0	pg	PA 35.25
IK	L	2424082	286.5	14.2	17.0	pg	HB 880
IL	L?			15.3	16.5	pg	HB 880
IM	Cl	2424047.552	0.313368	13.9	15.3	pg	PA 35.25
IN	Ecl?			15.1	[15.7	pg	HB 880

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		AQUILA							
IO	HV 4956	19h 3m 20s - 7°17'.2	Harrison	1930	Harvard	*			
IP	HV 4957	19 3 22 - 7 17.3	Mohr	1930	Harvard	*			
IQ	HV 4943	19 3 31 - 6 58.9	Walton	1927	Nantucket	*			
IR	85.1906	19 4 27 - 5 32.5	Wolf	1906	Heidelberg	*			
IS	HV 4944	19 5 1 - 0 31.4	Walton	1927	Nantucket	*			
IT	HV 4958	19 6 1 - 6 23.7	Mohr	1930	Harvard	*			
IU	HV 4945	19 9 24 - 1 7.4	Walton	1927	Nantucket	*			
IV	HV 4959	19 9 54 - 0 16.1	Mohr	1930	Harvard				
IW	HV 4946	19 10 34 - 2 29.8	Walton	1927	Nantucket	*			
IX	HV 4960	19 14 30 - 2 11.1	Mohr	1930	Harvard				
IY	HV 4961	19 16 38 - 0 53.9	Mohr	1930	Harvard	*			
IZ	HV 4962	19 21 18 - 6 8.1	Mohr	1930	Harvard	*			
KK	310.1930	19 43 15 +14 18.7	Hoffmeister	1930	Sonneberg	*		*	
KL	32.1929	19 56 35 +15 31.7	Ceraski	1929	Moscow	*		*	
KM	336.1931	20 0 30 - 8 48.0	Beljawsky	1931	Simeis				
KN	360.1930	20 25 11 + 1 32.5	Ceraski	1930	Moscow	*			
KO	302.1930	18 42 28 +10 39.4	Hoffmeister	1930	Sonneberg	*		*	*
KP	323.1931	18 57 59 +15 39.3	Plaut	1931	Babelsberg	*		*	
KQ	69.1930	19 7 19 + 1 23.2	Hoffmeister	1930	Sonneberg	*	*		
KR	HV 5420	19 20 38 + 9 26.0	Hoffleit	1932	Harvard				
KS	HV 5421	19 23 54 +13 15.4	Hoffleit	1932	Harvard				
KT	HV 5422	19 25 20 +12 7.4	Hoffleit	1932	Harvard				
KU	Ross 253	19 26 30 +12 14.2	Ross	1928	Yerkes	*			
KV	HV 5425	19 27 21 +11 31.1	Hoffleit	1932	Harvard				
KW	HV 5426	19 27 24 +12 50.0	Hoffleit	1932	Harvard				
KX	HV 5428	19 29 18 +14 4.7	Hoffleit	1932	Harvard	*			
KY	HV 5429	19 29 19 +11 31.6	Hoffleit	1932	Harvard				
KZ	HV 5430	19 30 29 + 8 55.3	Hoffleit	1932	Harvard				
LL	HV 5432	19 31 0 +10 8.6	Hoffleit	1932	Harvard				
LM	34.1905	19 31 12 + 1 49.7	Wolf	1905	Heidelberg	*	*		
LN	HV 5433	19 31 36 +11 40.3	Hoffleit	1932	Harvard	*			
LO	HV 5434	19 31 45 +10 45.0	Hoffleit	1932	Harvard				
LP	HV 5435	19 33 2 + 9 6.8	Hoffleit	1932	Harvard				
LQ	HV 5436	19 33 9 +15 24.5	Hoffleit	1932	Harvard				
LR	66.1903	19 33 11 +12 33.8	Wolf	1903	Heidelberg	*	*		
LS	HV 5437	19 33 51 +12 28.9	Hoffleit	1932	Harvard	*		*	
LT	289.1931	19 33 54 + 6 22.9	Hoffmeister	1931	Sonneberg	*			
LU	HV 5438	19 34 19 +15 30.5	Hoffleit	1932	Harvard	*			
LV	HV 5440	19 34 29 +12 42.4	Hoffleit	1932	Harvard				
LW	49.1905	19 34 31 +11 58.0	Wolf	1905	Heidelberg	*	*		
LX	HV 5441	19 34 33 +14 37.7	Hoffleit	1932	Harvard				
LY	HV 5442	19 35 6 +12 26.3	Hoffleit	1932	Harvard				
LZ	HV 5443	19 35 12 +15 42.5	Hoffleit	1932	Harvard	*			
MM	HV 5444	19 35 31 +14 31.8	Hoffleit	1932	Harvard				
MN	HV 5446	19 35 48 +11 30.6	Hoffleit	1932	Harvard	*			
MO	HV 5445	19 35 48 +14 44.4	Hoffleit	1932	Harvard				
MP	HV 5447	19 36 1 +14 56.9	Hoffleit	1932	Harvard				
MQ	HV 5448	19 36 15 +12 23.5	Hoffleit	1932	Harvard				
MR	HV 5449	19 36 32 +13 8.0	Hoffleit	1932	Harvard				
MS	431.1928	19 36 25 +11 34.9	Buser	1928	Arosa	*	*		
MT	HV 5451	19 37 25 + 9 27.3	Hoffleit	1932	Harvard				
MU	Ross 261	19 37 33 +13 6.2	Ross	1928	Yerkes	*		*	
MV	HV 5453	19 38 3 +11 18.4	Hoffleit	1932	Harvard				
MW	70.1903	19 38 6 +13 20.4	Wolf	1903	Heidelberg	*	*		
MX	HV 5455	19 39 4 +13 48.8	Hoffleit	1932	Harvard				
MY	HV 5456	19 39 10 +11 53.5	Hoffleit	1932	Harvard				
MZ	HV 5457	19 39 48 +15 0.0	Hoffleit	1932	Harvard				
NN	HV 5458	19 40 0 +15 19.0	Hoffleit	1932	Harvard	*			
NO	324.1931	19 40 14 + 4 39.4	Plaut	1931	Babelsberg	*		*	*
NP	52.1905	19 40 18 +11 31.2	Wolf	1905	Heidelberg	*	*		
NQ	HV 5459	19 40 26 +12 8.0	Hoffleit	1932	Harvard				
NR	HV 5460	19 40 34 + 9 39.6	Hoffleit	1932	Harvard				

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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IO	Cl?			12^m.8	13^m.4	pg	HB 880
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IQ	L	2424353	247.8	13.5	[16.4	pg	PA 35.25
IR	L	2417074	350.6	12.8	[16.0	pg	AN 4108
IS	SR	2418575	69.60	13.2	14.5	pg	PA 35.25
IT	L	2424080	150	14.2	[17.0	pg	HB 880
IU	Cep?			13.5	14.5	pg	PA 35.25
IV	L?			12.8	13.6	pg	HB 880
IW	L	2414854	221.4	14.2	16.3	pg	PA 35.25
IX	Ecl?			14.2	[14.9	pg	HB 880
IY	Sh			13.3	13.8	pg	HB 880
IZ	Ecl			14.3	14.9	pg	HB 880
KK	SR		90?	10.6	[12.4	pg	AN 5748
KL	Cep	2426199.50	6.1080	8.5	9.5	v	AN 5638, corr. 5657
KM	Cl			12.7	13.8	pg	AN 5800
KN	L	2426153	139	9.1	10.9	pg	AN 5771
KO	Alg	2426585.442	2.863844	8.15	9.28	v	AN 5748
KP	Alg	2426096.526	3.36683	9.52	10.02	pg	AN 5793; 5846
KQ	L	2426258	320	11	12.5	pg	AN 5700; Sonn Mitt 22
KR	Sh			13.5	14.6	pg	HB 887
KS				15.0	[16.0	pg	HB 887
KT	L	2426150	260:	14.5	[16.0	pg	HB 887
KU	L	2426570	470	14.2	[16.0	pg	AJ 897
KV				15.5	[16.3	pg	HB 887
KW	Sh			15.0	15.7	pg	HB 887
KX	U G?			13.1	[16.3	pg	HB 887
KY	Cl?		0.502?	14.3	15.6	pg	HB 887
KZ	L	2425400	330	12.7	16.0	pg	HB 887
LL				13.4	14.8	pg	HB 887
LM	L	2427285	255	12.8	[16.0	pg	AN 4005
LN	SR	2426232	65	14.5	15.4	pg	HB 887
LO	L	2426750	157	12.1	15.0	pg	HB 887
LP	L?			14.2	15.7	pg	HB 887
LQ				14.4	15.8	pg	HB 887
LR	Sh?			13	[14.5	pg	AN 3925; 3959; 4018; 4056
LS				12.6	13.1	pg	HB 887
LT	Alg	2425850.30	1.846197	13.0	14.3	pg	AN 5791; BZ 21.136
LU	Irr?			9.5	12.0	pg	HB 887
LV	L	2425820	225	14.9	[16.4	pg	HB 887
LW	L	2426130	380:	14.2	[16.5	pg	AN 4018; 4056
LX	L	2426280	196	14.0	16.0	pg	HB 887
LY	L?			14.9	[16.4	pg	HB 887
LZ	L	2426160	260:	14.9	[16.4	pg	HB 887
MM	L?			14.5	[15.9	pg	HB 887
MN	Irr?			12.7	13.7	pg	HB 887
MO				15.2	16.0	pg	HB 887
MP	Sh			15.3	[16.0	pg	HB 887
MQ	Cl	2426162.731	0.5959:	13.7	15.3	pg	HB 887
MR	Ecl	2425039.796	1.3893	15.0	[16.0	pg	HB 887
MS				9.0	10.8	v	AN 5619; 5833; 5875; 5905
MT	Sh?			14.7	15.3	pg	HB 887
MU	L	2428117	142.9	12.0	15.5	pg	AJ 897
MV	Cl?			14.2	14.8	pg	HB 887
MW	L		760	14.0	[16.2	pg	AN 3925; 3959; 4018; 4056
MX	L	2426200	440:	15.0	[16.3	pg	HB 887
MY	Cl?			14.7	15.5	pg	HB 887
MZ	Sh			15.0	16.0	pg	HB 887
NN	Cl	2426243.537	0.5791	14.0	15.5	pg	HB 887
NO	SR		80+	10.7	12.6	pg	AN 5793; 5846
NP	L	2426170	195	13.8	16.5	pg	AN 4018; 4056
NQ	Sh			14.9	15.5	pg	HB 887
NR	L	2424760	216	13.5	[15.8	pg	HB 887

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		A Q U I L A							
NS	HV 5461	19h 40m 51s +14° 40.'5	Hoffleit	1932	Harvard				
NT	HV 5462	19 41 16 +14 55.0	Hoffleit	1932	Harvard				
NU	HV 5463	19 41 21 +11 31.3	Hoffleit	1932	Harvard				
NV	HV 5464	19 41 51 +13 36.3	Hoffleit	1932	Harvard	*			
NW	75.1903	19 42 30 +12 14.3	Wolf	1903	Heidelberg	*	*		
NX	HV 5466	19 42 31 +13 14.3	Hoffleit	1932	Harvard				
NY	HV 5467	19 42 57 +11 54.6	Hoffleit	1932	Harvard				
NZ	55.1905	19 43 12 +12 53.7	Wolf	1905	Heidelberg	*	*		
OO	HV 5468	19 43 20 + 9 3.4	Hoffleit	1932	Harvard	*	*	*	*
OP	HV 5469	19 43 25 + 9 8.5	Hoffleit	1932	Harvard				
OQ	HV 5470	19 43 56 +14 41.9	Hoffleit	1932	Harvard				
OR	HV 5472	19 44 20 +15 48.7	Hoffleit	1932	Harvard				
OS	HV 5473	19 44 29 +15 10.5	Hoffleit	1932	Harvard	*			
OT	HV 5474	19 44 50 +15 48.9	Hoffleit	1932	Harvard				
OU	HV 5475	19 45 0 + 9 8.1	Hoffleit	1932	Harvard				
OV	HV 5476	19 46 26 +13 15.3	Hoffleit	1932	Harvard				
OW	HV 5477	19 46 47 +14 45.0	Hoffleit	1932	Harvard				
OX	HV 5478	19 46 49 +14 51.4	Hoffleit	1932	Harvard				
OY	HV 5479	19 47 15 +11 31.9	Hoffleit	1932	Harvard				
OZ	HV 5480	19 47 25 +15 19.8	Hoffleit	1932	Harvard				
PP	114.1905	19 48 6 +12 24.6	Wolf	1905	Heidelberg	*	*		
PQ	HV 5482	19 48 25 +12 43.5	Hoffleit	1932	Harvard				
PR	HV 5483	19 48 35 +13 53.8	Hoffleit	1932	Harvard				
PS	56.1905	19 49 2 +12 32.2	Wolf	1905	Heidelberg	*	*		
PT	HV 5484	19 49 6 +14 25.2	Hoffleit	1932	Harvard				
PU	HV 5485	19 49 22 +12 51.6	Hoffleit	1932	Harvard				
PV	325.1931	19 55 2 +10 14.0	Plaut	1931	Babelsberg	*	*	*	
PW	SVS 315	19 29 46 - 5 31.7	Neujmin	1932	Simeis	*	*		
PX	HV 5487	19 52 36 - 9 29.6	O'Connell	1932	Harvard	*		*	
PY	241.1932	20 12 53 - 6 27.5	Hoffmeister	1932	Sonneberg	*	*		
PZ	HV 6115	18 50 42 - 3 0.6	Robinson	1933	Harvard	*			
QQ	82.1906	18 56 40 - 9 12.7	Wolf	1906	Heidelberg	*			
QR	HV 5419	19 15 59 +12 45.0	Hoffleit	1932	Harvard	*			
QS	..	19 36 28 +13 35.0	Guthnick and Prager	1930	Babelsberg	*			*
QT	129.1930	19 38 5 + 2 14.1	Hoffmeister	1930	Sonneberg	*	*	*	
QU	53.1905	19 42 43 + 8 20.0	Wolf	1905	Heidelberg	*	*		
QV	84.1903	19 49 25 + 7 21.0	Wolf	1903	Heidelberg	*	*		
QW	247.1930	19 51 39 - 0 15.1	Reinmuth	1930	Heidelberg	*			
QX	Ross 263	19 53 2 - 2 43.7	Ross	1928	Yerkes	*			
QY	Ross 268	20 4 52 +15 1.0	Ross	1928	Yerkes	*			
QZ	Ross 274	20 12 54 + 7 41.7	Ross	1928	Yerkes	*			
V 335	Ross 276	20 16 13 + 1 0.3	Ross	1928	Yerkes	*			
V 336	744.1933	18 56 11 - 0 0.7	Hoffmeister	1933	Sonneberg	*		*	*
V 337	745.1933	18 58 58 - 2 10.6	Hoffmeister	1933	Sonneberg	*	*	*	
V 338	79.1933	19 0 50 +17 40.7	Morgenroth	1933	Sonneberg	*	*	*	
V 339	309.1930	19 33 3 -10 10.9	Hoffmeister	1930	Sonneberg	*			
V 340	140.1905	19 51 22 +15 35.5	Wolf	1905	Heidelberg	*	*	*	
V 341	747.1933	20 27 26 + 0 13.8	Hoffmeister	1933	Sonneberg	*	*	*	*
V 342	110.1935	19 12 17 + 9 9.9	Hoffmeister	1935	Sonneberg	*			
V 343	81.1933	19 33 55 +12 31.6	Morgenroth	1933	Sonneberg	*	*	*	*
V 344	790.1933	19 48 22 + 1 55.8	Hoffmeister	1933	Sonneberg	*		*	
V 345	791.1933	19 48 46 + 2 42.8	Hoffmeister	1933	Sonneberg	*		*	
V 346	SVS 641	20 5 12 +10 3.4	Beljawsky	1935	Simeis	*			
V 347	65.1930	19 3 6 + 6 8.6	Hoffmeister	1930	Sonneberg	*	*		
V 348	278.1931	19 6 12 + 0 19	Hoffmeister	1931	Sonneberg	*			
V 349	67.1930	19 7 0 - 0 53.4	Hoffmeister	1930	Sonneberg	*	*		
V 350	68.1930	19 7 14 - 1 15.8	Hoffmeister	1930	Sonneberg	*	*		
V 351	70.1930	19 7 32 + 1 44.7	Hoffmeister	1930	Sonneberg	*	*		
V 352	279.1931	19 8 34 + 2 8	Hoffmeister	1931	Sonneberg	*			
V 353	280.1931	19 10 19 + 4 54	Hoffmeister	1931	Sonneberg	*			
V 354	73.1930	19 10 52 + 0 27.4	Hoffmeister	1930	Sonneberg	*	*		
V 355	281.1931	19 12 6 + 0 45	Hoffmeister	1931	Sonneberg	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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NS				15.0m	16.0m	pg	HB 887
NT	Sh			13.2	14.0	pg	HB 887
NU	Sh			14.6	15.3	pg	HB 887
NV	Irr?			11.9	13.2	pg	HB 887
NW	L?			11.5	[15	pg	AN 3925; 3959; 4018; 4056
NX	Ecl	2426270.500	5.d849	15.0	16.0	pg	HB 887
NY	L?	2426150	290:	13.2	14.8	pg	HB 887
NZ	L	2426215	330:	15.0	[16.5	pg	AN 4018; 4056
OO	W	2426920.4406	0.50679485	9.17	10.09	pv	HB 887
OP				13.2	15.4	pg	HB 887
OQ				12.0	13.0	pg	HB 887
OR				15.0	16.3	pg	HB 887
OS				13.8	15.5	pg	HB 887
OT	L?			14.0	[16.3	pg	HB 887
OU	L	2426160	282	12.0	16.0	pg	HB 887
OV				15.5	16.5	pg	HB 887
OW	L	2425140	435:	12.3	14.8	pg	HB 887
OX	L	2425790	260	13.0	[16.0	pg	HB 887
OY				13.4	15.6	pg	HB 887
OZ				13.3	14.5	pg	HB 887
PP	Sh?			11.5	13	pg	AN 4056
PQ				15.6	[16.3	pg	HB 887
PR				15.2	16.3	pg	HB 887
PS	L	2425780	290:	14.0	16.3	pg	AN 4018; 4056
PT	L	2426150	380:	13.5	[16.0	pg	HB 887
PU				14.2	15.1	pg	HB 887
PV	Irr			10.8	12.3	pg	AN 5793; 5846
PW	Cl			12.0	14.0	pg	NNVS 38; Pulk Circ 4
PX	SR			10.9	12.4	pg	HB 890
PY	L	2425885	340	11	[12	pg	AN 5919
PZ	Cep	2426174.853	8.75546	12.4	13.5	pg	HB 893
QQ	L	2424060	353	13.4	[16	pg	AN 4108
QR				14.8	15.4	pg	HB 887
QS	β?	2423963.75	2.5133	6.0	6.1	pe	VJS 65.87
QT	L	2427594	157	11.5	[16	pg	AN 5700; Sonn Mitt 22
QU	L			13.5	[15.5	pg	AN 4018; 4056
QV	SR	2427347	169.5	14.5	15.5	pg	AN 3925; 3959; 4018; 4056
QW	L			14.3	[16.5	pg	AN 5709
QX	L			12.5	[16.5	pg	AJ 897
QY	Ecl	2428828.3	7.2295	11.0	[13	v	AJ 897
QZ	L	2427632	212	12.5	[15.5	pg	AJ 897
V 335	Irr			11.5	16	pg	AJ 897
V 336	Cep	2427651.60	7.304068	10.0	11.4	pg	AN 6002
V 337	Alg	2428110.788	2.73389	8.75	9.45	pg	AN 6002
V 338	L?			12	13	v	AN 5974
V 339	L	2427380	217	9.5	[11	pg	AN 5748
V 340	Ecl		1.82?	12.2	[14.1	pg	AN 4079
V 341	Cl	2427624.376	0.57790	10.35	11.33	v	AN 6002; 6118
V 342	Alg	2428023.550	3.3910	9.1	12.6	v	AN 6118
V 343	Alg	2428443.41702	1.8445762	10.82	12.29	v	AN 5974; 6118
V 344	L	2428077	277:	10.9	[13.5	v	AN 6002
V 345	L	2427930	300	10.8	[13.8	v	AN 6002
V 346	Alg	2427970.4408	1.10638	9.0	10.4	v	NNVS 47; Pulk Circ 15
V 347	Irr			11.9	13.0	pg	AN 5700; Sonn Mitt 22
V 348	Irr			13.1	14.0	pg	AN 5791
V 349	Irr			14.5	[15.3	pg	AN 5700; Sonn Mitt 22
V 350	L	2426250	265	13.7	[15.9	pg	AN 5700; Sonn Mitt 22
V 351	L	2425861	197	13.9	[15.4	pg	AN 5700; Sonn Mitt 22
V 352	R C			13.1	[15.0	pg	AN 5791
V 353	Irr			13.0	14.4	pg	AN 5791
V 354	Irr			11.7	13.0	pg	AN 5700; Sonn Mitt 22
V 355	L	2426185	210	13.8	[15.1	pg	AN 5791

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		AQUILA							
V 356	618.1936	19h12m 9s + 1°33.'6	Tamm	1936	Kvistaberg	*	*	*	*
V 357	78.1930	19 15 35 - 0 59.4	Hoffmeister	1930	Sonneberg	*	*		
V 358	79.1930	19 16 18 - 0 46.6	Hoffmeister	1930	Sonneberg	*	*		
V 359	82.1930	19 17 58 - 1 21.6	Hoffmeister	1930	Sonneberg	*	*		
V 360	81.1930	19 17 57 + 2 33.3	Hoffmeister	1930	Sonneberg	*	*		
V 361	85.1930	19 19 37 - 0 20.2	Hoffmeister	1930	Sonneberg	*	*		
V 362	86.1930	19 19 47 - 1 16.5	Hoffmeister	1930	Sonneberg	*	*		
V 363	88.1930	19 20 41 + 4 34.4	Hoffmeister	1930	Sonneberg	*	*		
V 364	89.1930	19 21 3 + 3 18.8	Hoffmeister	1930	Sonneberg	*	*		
V 365	342.1936	19 21 15 + 3 39	Hoffmeister	1936	Sonneberg	*			
V 366	90.1930	19 21 20 + 2 5.3	Hoffmeister	1930	Sonneberg	*	*		
V 367	91.1930	19 21 27 + 3 44.1	Hoffmeister	1930	Sonneberg	*	*		
V 368	668.1936	19 21 43 + 7 24.3	Tamm	1936	Kvistaberg	*	*	*	*
V 369	92.1930	19 21 44 + 0 6.0	Hoffmeister	1930	Sonneberg	*	*		
V 370	98.1930	19 22 38 + 2 2.6	Hoffmeister	1930	Sonneberg	*	*		
V 371	97.1930	19 22 41 + 0 16.6	Hoffmeister	1930	Sonneberg	*	*		
V 372	284.1931	19 24 9 + 3 2	Hoffmeister	1931	Sonneberg	*			
V 373	344.1936	19 24 24 + 6 36	Hoffmeister	1936	Sonneberg	*			
V 374	101.1930	19 25 6 - 1 2	Hoffmeister	1930	Sonneberg	*	*		
V 375	102.1930	19 25 12 + 6 20.8	Hoffmeister	1930	Sonneberg	*	*		
V 376	285.1931	19 25 51 + 3 4	Hoffmeister	1931	Sonneberg	*			
V 377	103.1930	19 25 53 + 0 53.0	Hoffmeister	1930	Sonneberg	*	*		
V 378	104.1930	19 26 11 - 0 50.9	Hoffmeister	1930	Sonneberg	*	*		
V 379	105.1930	19 26 51 - 0 39.8	Hoffmeister	1930	Sonneberg	*	*		
V 380	345.1936	19 27 34 + 2 5	Hoffmeister	1936	Sonneberg	*			
V 381	346.1936	19 27 38 - 1 15	Hoffmeister	1936	Sonneberg	*			
V 382	348.1936	19 30 11 + 1 42	Hoffmeister	1936	Sonneberg	*			
V 383	347.1936	19 29 59 + 1 49	Hoffmeister	1936	Sonneberg	*			
V 384	108.1930	19 30 5 + 5 47.8	Hoffmeister	1930	Sonneberg	*	*		
V 385	349.1936	19 30 50 + 4 45	Hoffmeister	1936	Sonneberg	*			
V 386	350.1936	19 30 54 + 6 34	Hoffmeister	1936	Sonneberg	*			
V 387	112.1930	19 31 21 + 0 36.5	Hoffmeister	1930	Sonneberg	*	*		
V 388	111.1930	19 31 22 + 1 20.3	Hoffmeister	1930	Sonneberg	*	*		
V 389	114.1930	19 31 37 + 2 51.7	Hoffmeister	1930	Sonneberg	*	*		
V 390	116.1930	19 32 32 + 3 14.6	Hoffmeister	1930	Sonneberg	*	*		
V 391	287.1931	19 33 0 + 6 31	Hoffmeister	1931	Sonneberg	*			
V 392	288.1931	19 33 25 - 0 47	Hoffmeister	1931	Sonneberg	*			
V 393	117.1930	19 33 40 + 2 25.8	Hoffmeister	1930	Sonneberg	*	*		
V 394	119.1930	19 34 17 + 1 46.4	Hoffmeister	1930	Sonneberg	*	*		
V 395	121.1930	19 34 42 + 2 38.5	Hoffmeister	1930	Sonneberg	*	*		
V 396	120.1930	19 34 49 - 0 49.5	Hoffmeister	1930	Sonneberg	*	*		
V 397	122.1930	19 35 21 + 5 8.2	Hoffmeister	1930	Sonneberg	*	*		
V 398	290.1931	19 35 38 + 4 54	Hoffmeister	1931	Sonneberg	*			
V 399	123.1930	19 35 43 + 2 58.2	Hoffmeister	1930	Sonneberg	*	*		
V 400	124.1930	19 36 26 + 1 34.2	Hoffmeister	1930	Sonneberg	*	*		
V 401	125.1930	19 36 41 + 4 31.7	Hoffmeister	1930	Sonneberg	*	*		
V 402	126.1930	19 37 22 + 4 36.2	Hoffmeister	1930	Sonneberg	*	*		
V 403	127.1930	19 37 26 + 2 15.0	Hoffmeister	1930	Sonneberg	*	*		
V 404	128.1930	19 37 40 + 2 26.0	Hoffmeister	1930	Sonneberg	*	*		
V 405	93.1930	19 21 42 + 4 15.1	Hoffmeister	1930	Sonneberg	*	*		
V 406	335.1936	19 6 0 + 1 1	Hoffmeister	1936	Sonneberg	*			
V 407	66.1930	19 6 6 + 0 59.4	Hoffmeister	1930	Sonneberg	*	*		
V 408	71.1930	19 9 19 + 4 35.7	Hoffmeister	1930	Sonneberg	*	*		
V 409	74.1930	19 12 49 - 0 51.7	Hoffmeister	1930	Sonneberg	*	*		
V 410	338.1936	19 17 24 + 5 8	Hoffmeister	1936	Sonneberg	*			
V 411	83.1930	19 18 17 + 4 54.7	Hoffmeister	1930	Sonneberg	*	*		
V 412	340.1936	19 18 17 + 1 27	Hoffmeister	1936	Sonneberg	*			
V 413	87.1930	19 19 49 + 2 17.8	Hoffmeister	1930	Sonneberg	*	*		
V 414	95.1930	19 21 54 + 4 47.5	Hoffmeister	1930	Sonneberg	*	*		
V 415	117.1935	19 26 6 +13 27.8	Hoffmeister	1935	Sonneberg	*	*		
V 416	286.1931	19 28 36 + 0 20	Hoffmeister	1931	Sonneberg	*			
V 417	119.1935	19 30 29 + 5 37.1	Hoffmeister	1935	Sonneberg	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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V 356	N			7.m0	[16.m5	pg	BZ 18.66; AN 6236
V 357	L	2425445	305d	14.0	[15.7	pg	AN 5700; Sonn Mitt 22
V 358	L	2426546	270	14.3	[15.6	pg	AN 5700; Sonn Mitt 22
V 359	Irr			14.0	[15.6	pg	AN 5700; Sonn Mitt 22
V 360	L	2425535	400	14.3	[15.3	pg	AN 5700; Sonn Mitt 22
V 361	L	2425523	219	14.7	[15.4	pg	AN 5700; Sonn Mitt 22
V 362	Sh?			13.0	14.7	pg	AN 5700; Sonn Mitt 22
V 363	L	2425800	263	12.9	[15.8	pg	AN 5700; Sonn Mitt 22
V 364	L	2425465	487	13.1	[14.6	pg	AN 5700; Sonn Mitt 22
V 365	L	2426150	110	15.3	[15.9	pg	AN 6195
V 366	L	2425460	465	14.1	[16.2	pg	AN 5700; Sonn Mitt 22
V 367	Irr			14.0	[15.0	pg	AN 5700; Sonn Mitt 22
V 368	N			5.9	[15.0	pg	AN 6241
V 369	L	2425840	238	14.7	[15.3	pg	AN 5700; Sonn Mitt 22
V 370	Irr			12.7	14.1	pg	AN 5700; Sonn Mitt 22
V 371	L	2425860	515	14.7	[15.7	pg	AN 5700; Sonn Mitt 22
V 372	Irr			14.5	15.2	pg	AN 5791
V 373	Irr			14.1	15.2	pg	AN 6195
V 374	Irr			12.5	15.1	pg	AN 5700; Sonn Mitt 22
V 375	Irr?			14.1	15.2	pg	AN 5700; Sonn Mitt 22
V 376	Irr			14.0	15.0	pg	AN 5791
V 377	Irr			14.6	15.5	pg	AN 5700; Sonn Mitt 22
V 378	Irr			14.0	15.9	pg	AN 5700; Sonn Mitt 22
V 379	L	2425815	188	14.0	15.6	pg	AN 5700; Sonn Mitt 22
V 380	SR?	2425500	82	13.2	[13.9	pg	AN 6195
V 381	SR	2426247	54.8	13.5	14.5	pg	AN 6195
V 382	L	2425790	280	15.2	[16.0	pg	AN 6195
V 383	Irr			13.9	14.5	pg	AN 6195
V 384	L	2425535	365	14.2	[15.7	pg	AN 5700; Sonn Mitt 22
V 385	Irr			13.8	14.3	pg	AN 6195
V 386	L	2426650	332	12.4	[14.6	pg	AN 6195
V 387	L	2426545	153	14.0	15.4	pg	AN 5700; Sonn Mitt 22
V 388	L	2425420	290	14.4	[16.1	pg	AN 5700; Sonn Mitt 22
V 389	Irr			13.4	14.3	pg	AN 5700; Sonn Mitt 22
V 390	L	2425850	270	14.8	[16.0	pg	AN 5700; Sonn Mitt 22
V 391	Irr			12.8	13.8	pg	AN 5791
V 392	Irr			13.4	14.2	pg	AN 5791
V 393	L	2425860	260	13.9	[15.5	pg	AN 5700; Sonn Mitt 22
V 394	Irr			15.0	15.6	pg	AN 5700; Sonn Mitt 22
V 395	Irr			13.4	15.6	pg	AN 5700; Sonn Mitt 22
V 396	L	2426210	390	13.1	[15.5	pg	AN 5700; Sonn Mitt 22
V 397	L	2425500	182	13.8	15.7	pg	AN 5700; Sonn Mitt 22
V 398	L	2426470	235:	14.5	[15.3	pg	AN 5791
V 399	L	2425830	230	12.9	[15.0	pg	AN 5700; Sonn Mitt 22
V 400	L?			14.2	[16.2	pg	AN 5700; Sonn Mitt 22
V 401	L	2426550	378	13.6	[15.2	pg	AN 5700; Sonn Mitt 22
V 402	Irr			14.1	[15.6	pg	AN 5700; Sonn Mitt 22
V 403	L	2426590	391	14.4	[15.6	pg	AN 5700; Sonn Mitt 22
V 404	L	2425430	177.5	14.4	15.4	pg	AN 5700; Sonn Mitt 22
V 405	L	2426830	185	14.3	[15.3	pg	AN 5700; Sonn Mitt 22
V 406	Ecl			13.3	13.7	pg	AN 6195
V 407	Alg	2425792.500	1.182015	13.4	14.7	pg	AN 5700; Sonn Mitt 22
V 408	Ecl			14.7	[15.5	pg	AN 5700; Sonn Mitt 22
V 409	β	2425503.397	2.049405	11.8	12.6	pg	AN 5700; Sonn Mitt 22
V 410	Alg			14.4	15.1	pg	AN 6195
V 411	Irr			14.0	15.0	pg	AN 5700; Sonn Mitt 22
V 412	Irr			13.1	14.5	pg	AN 6195
V 413	Alg			13.3	[14.5	pg	AN 5700; Sonn Mitt 22
V 414	Ecl			14.0	15.6	pg	AN 5700; Sonn Mitt 22
V 415	Alg	2428670.532	2.4628	10	11	pg	AN 6118
V 416	Ecl			14.0	14.9	pg	AN 5791
V 417	W	2428427.127	0.370114	11	11.5	pg	AN 6118

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		AQUILA							
V 418	115.1930	19h31m40s + 3°43'.6	Hoffmeister	1930	Sonneberg	*	*		
V 419	118.1930	19 33 41 + 0 2.2	Hoffmeister	1930	Sonneberg	*	*		
V 420	351.1936	19 35 12 + 2 25	Hoffmeister	1936	Sonneberg	*			
V 421	424.1934	19 40 38 + 7 32.7	Morgenroth	1934	Sonneberg	*	*		
V 422	378.1934	19 43 23 + 6 7.6	Hoffmeister	1934	Sonneberg	*	*		
V 423	780.1933	19 43 36 + 0 25	Hoffmeister	1933	Sonneberg				
V 424	708.1933	19 45 22 + 3 33	Morgenroth	1933	Sonneberg	*	*		
V 425	709.1933	19 49 3 +12 2	Morgenroth	1933	Sonneberg	*	*		
V 426	380.1934	19 51 52 + 6 28.1	Hoffmeister	1934	Sonneberg	*	*		
V 427	373.1933	19 52 36 + 8 26.7	Morgenroth	1933	Sonneberg	*	*		
V 428	381.1934	19 53 37 +12 45.5	Hoffmeister	1934	Sonneberg	*	*		
V 429	712.1933	19 53 56 +15 44	Morgenroth	1933	Sonneberg	*	*	*	*
V 430	382.1934	19 54 24 + 5 47.1	Hoffmeister	1934	Sonneberg	*	*		
V 431	376.1933	19 55 39 +10 32.0	Morgenroth	1933	Sonneberg	*	*		
V 432	377.1933	19 56 16 +10 43.1	Morgenroth	1933	Sonneberg	*	*		
V 433	714.1933	19 56 36 +15 1.1	Morgenroth	1933	Sonneberg	*	*	*	*
V 434	383.1934	19 58 32 + 8 35.7	Hoffmeister	1934	Sonneberg	*	*		
V 435	716.1933	19 58 40 +12 29.3	Morgenroth	1933	Sonneberg	*	*		
V 436	378.1933	19 59 49 +11 28.0	Morgenroth	1933	Sonneberg	*	*		
V 437	384.1934	19 59 54 +13 30.5	Hoffmeister	1934	Sonneberg	*	*		
V 438	379.1933	20 0 8 + 7 25.4	Morgenroth	1933	Sonneberg	*	*		
V 439	717.1933	20 0 28 +12 4.5	Morgenroth	1933	Sonneberg	*	*		
V 440	388.1934	20 2 59 +11 25.0	Hoffmeister	1934	Sonneberg	*	*		
V 441	718.1933	20 4 45 +14 11.9	Morgenroth	1933	Sonneberg	*	*		
V 442	SVS 642	20 5 17 +12 33.1	Beljawsky	1935	Simeis	*	*	*	
V 443	719.1933	20 7 14 +12 32.6	Morgenroth	1933	Sonneberg	*	*		
V 444	389.1934	20 14 2 + 7 16.1	Hoffmeister	1934	Sonneberg	*	*		
V 445	382.1933	20 14 43 + 5 50.8	Morgenroth	1933	Sonneberg	*	*		
б	..	19 34 16 + 5 10.2	Stebbins	1919	Urbana	*			*
		ARA							
VW	HV 5398	16h27m48s -56°24'.5	Hoffleit	1931	Harvard	*	*	*	*
VX	HV 5401	16 28 21 -59 21.8	Hoffleit	1931	Harvard				
VY	HV 5402	16 28 25 -58 34.4	Hoffleit	1931	Harvard				
VZ	HV 5403	16 28 59 -58 11.6	Hoffleit	1931	Harvard	*	*	*	*
WW	HV 5404	16 29 26 -57 59.1	Hoffleit	1931	Harvard				
WX	HV 5405	16 29 41 -56 21.2	Hoffleit	1931	Harvard				
WY	HV 5407	16 30 18 -59 24.3	Hoffleit	1931	Harvard				
WZ	HV 5408	16 30 42 -57 41.4	Hoffleit	1931	Harvard				
XX	HV 5409	16 30 46 -59 19.7	Hoffleit	1931	Harvard	*	*	*	*
XY	HV 5410	16 30 50 -57 44.0	Hoffleit	1931	Harvard				
XZ	HV 5411	16 31 32 -58 39.6	Hoffleit	1931	Harvard				
YY	HV 5413	16 32 39 -59 40.9	Hoffleit	1931	Harvard	*			
YZ	HV 5415	16 34 3 -59 55.6	Hoffleit	1931	Harvard	*			
ZZ	..	16 28 59 -51 12.7	Oosterhoff	1932	Johannesburg	*	*	*	*
AA	..	16 32 11 -56 20.4	Oosterhoff	1932	Johannesburg	*	*	*	*
AB	..	16 33 35 -57 8.0	Kruytbosch	1932	Johannesburg		*	*	*
AC	..	16 35 6 -56 16.0	van Gent	1932	Johannesburg	*	*	*	*
AD	..	16 37 47 -55 35.8	Oosterhoff	1932	Johannesburg	*	*	*	*
AE	HV 5491	17 33 34 -47 0.4	Cannon	1933	Harvard	*			
AF	..	16 29 10 -55 31.8	van Gent	1935	Johannesburg	*	*	*	*
AG	434.1935	16 30 0 -54 22.2	Kruytbosch	1935	Johannesburg	*			
AH	..	16 34 3 -53 40.2	van Gent	1935	Johannesburg	*	*	*	*
AI	HV 6523	17 8 23 -45 51.3	Boyd	1934	Harvard				
AK	HV 6525	17 12 42 -47 16.0	Boyd	1934	Harvard				
AL	HV 6526	17 12 46 -45 36.7	Boyd	1934	Harvard				
AM	HV 6531	17 17 31 -45 43.6	Boyd	1934	Harvard	*			
AN	HV 6535	17 19 6 -47 12.6	Boyd	1934	Harvard	*			
AO	HV 6537	17 19 42 -46 32.4	Boyd	1934	Harvard	*			
AP	HV 6542	17 21 0 -46 35.1	Boyd	1934	Harvard				

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				AQUILA			
V 418	Ecl			14.0^m	14.8^m	pg	AN 5700; Sonn Mitt 22
V 419	Irr			13.7	14.7	pg	AN 5700; Sonn Mitt 22
V 420	Alg			13.8	[14.9	pg	AN 6195
V 421	L	2427372	307^d	13.5	15.5	pg	AN 6070; 6094
V 422	L	2427316	246	13.5	[15.5	pg	AN 6058
V 423	Irr			14.5	15.5	pg	AN 6002
V 424	L	2427646	193	13.5	[15.5	pg	AN 6002; 6118
V 425	L	2427715	109	12.5	14	pg	AN 6002
V 426	L	2427342	119	14.5	15.5	pg	AN 6058
V 427	L	2427332	198	13	[15.5	pg	AN 5981
V 428	SR	2427296	97.6	13.5	14.5	pg	AN 6058
V 429	Irr			10.7	11.9	v	AN 6002
V 430	L	2427670	266	13.5	[15.5	pg	AN 6058
V 431	L	2426957	222.5	13.5	[15.5	pg	AN 5981
V 432	L	2427677	248	13.0	[15.5	pg	AN 5981
V 433	Irr			9.9	11.0	v	AN 6002
V 434	L	2427285	315	13	15	pg	AN 6058; 6118
V 435	L	2427330	205	13	15	pg	AN 6002
V 436	L	2426960	285	12.5	[15.5	pg	AN 5981
V 437	L	2427325	192	13.5	[15.5	pg	AN 6058
V 438	L	2426963	279	12.5	[15.5	pg	AN 5981; 6118
V 439	L	2427353	380	13.5	[15.5	pg	AN 6002
V 440	L	2427323	228	14	[15.5	pg	AN 6058
V 441	L	2427730	230	12.5	15	pg	AN 6002
V 442	L	2428088	308	12.5	[15.5	pg	NNVS 47; Pulk Circ 15
V 443	L	2427286	280	14	[15.5	pg	AN 6002
V 444	L	2427378	314	14.5	[15.5	pg	AN 6058
V 445	Alg			13	15.5	pg	AN 5981
δ	β	2422486.797	1.95026	4.93	5.11	pe	PA 27.677; Washb Publ 15.56
				ARA			
VW	Alg	2425776.869	3.71955^d	15.3^m	16.0^m	pg	HB 884
VX				13.8	14.4	pg	HB 884
VY	L	2423992	247	15.0	[16.5	pg	HB 884
VZ	Cl	2425678.320	0.62563	14.9	16.2	pg	HB 884
WW	L	2424300	221	14.0	[16.5	pg	HB 884
WX	L	2425412	252	15.0	[16.5	pg	HB 884
WY				15.7	[16.5	pg	HB 884
WZ	Ecl			13.5	14.2	pg	HB 884
XX	Alg	2425744.950	9.8442	14.6	15.5	pg	HB 884
XY	L	2424273	219.5	15.0	16.5	pg	HB 884
XZ	L	2424680	224	15.0	[16.5	pg	HB 884
YY	Ecl?			11.8	13.0:	pg	HB 884
YZ	L	2424270	263	13.4	16.2	pg	HB 884
ZZ	Alg	2425771.410	1.79942	12.7	13.9	pg	BAN 236
AA	Alg	2425822.590	8.5207	13.0	14.9	pg	BAN 236
AB	Cep	2425765.000	5.9594	12.1	14.3	pg	BAN 236
AC	Alg	2425623.330	16.4370	13.1	14.8	pg	BAN 236
AD	Cep	2425752.680	16.016	12.4	15.4	pg	BAN 236
AE	Irr			11.6	13.8	pg	HB 891
AF	Alg	2425765.428	0.844688	13.6	14.7	pg	BAN 267
AG	L	2425435	193	13.2	16.0	pg	BAN 267
AH	Alg	2425889.088	1.00502	13.05	14.45	pg	BAN 267
AI	L	2426505	310.4	14.4	[16.5	pg	HA 90.181
AK	L	2426080	293.3	13.3	[16.5	pg	HA 90.181
AL	L	2426505	178.7	14.8	[16.5	pg	HA 90.181
AM	L	2426175	262.3	13.5	[16.5	pg	HA 90.181
AN	L	2425780	153	12.7	14.0	pg	HA 90.182
AO	L	2425770	265	14.0	[16.5	pg	HA 90.182
AP	L	2426060	184.1	15.2	[16.7	pg	HA 90.182

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R C S L
		A R A				
AQ	HV 6543	17h21m 5s -46°53'.2	Boyd	1934	Harvard	
AR	HV 6546	17 22 16 -46 24.6	Boyd	1934	Harvard	*
AS	HV 6550	17 22 53 -47 18.6	Boyd	1934	Harvard	
AT	HV 6551	17 23 9 -46 1.1	Boyd	1934	Harvard	*
AU	HV 6554	17 24 1 -45 40.0	Boyd	1934	Harvard	
AV	HV 6555	17 24 17 -47 18.4	Boyd	1934	Harvard	
AW	HV 6556	17 24 40 -45 57.2	Boyd	1934	Harvard	*
AX	HV 6559	17 25 33 -46 9.9	Boyd	1934	Harvard	*
AY	HV 6561	17 26 50 -46 39.9	Boyd	1934	Harvard	
AZ	HV 6562	17 27 15 -47 2.1	Boyd	1934	Harvard	*
BB	HV 6566	17 28 17 -46 16.9	Boyd	1934	Harvard	
BC	HV 6568	17 28 18 -46 30.6	Boyd	1934	Harvard	
BD	HV 6569	17 28 24 -46 56.9	Boyd	1934	Harvard	
BE	HV 6574	17 30 8 -47 8.8	Boyd	1934	Harvard	
BF	HV 6576	17 30 40 -47 7.0	Boyd	1934	Harvard	
BG	HV 6583	17 32 22 -46 2.0	Boyd	1934	Harvard	
BH	HV 6587	17 32 35 -47 39.1	Boyd	1934	Harvard	
BI	HV 6588	17 32 57 -45 52.6	Boyd	1934	Harvard	
BK	HV 6592	17 34 18 -47 24.8	Boyd	1934	Harvard	
BL	HV 6609	17 37 5 -45 52.0	Boyd	1934	Harvard	
BM	HV 6622	17 39 19 -46 27.3	Boyd	1934	Harvard	
BN	HV 6628	17 40 22 -47 16.7	Boyd	1934	Harvard	
BO	HV 6630	17 40 50 -47 17.9	Boyd	1934	Harvard	
BP	HV 6633	17 41 2 -47 37.1	Boyd	1934	Harvard	
BQ	HV 6634	17 41 17 -46 12.7	Boyd	1934	Harvard	*
BR	HV 6650	17 44 21 -45 44.9	Boyd	1934	Harvard	*
BS	HV 6665	17 47 16 -46 6.7	Boyd	1934	Harvard	
BT	HV 6666	17 47 17 -45 54.9	Boyd	1934	Harvard	
BU	HV 6678	17 49 10 -46 2.0	Boyd	1934	Harvard	
BV	HV 6681	17 50 43 -46 56.1	Boyd	1934	Harvard	
BW	HV 6845	16 40 24 -59 1.5	Boyd	1935	Harvard	
BX	HV 6846	16 40 52 -59 7.6	Boyd	1935	Harvard	*
BY	HV 6847	16 41 17 -58 42.6	Boyd	1935	Harvard	*
BZ	HV 6848	16 41 42 -58 34.7	Boyd	1935	Harvard	
CC	HV 6849	16 41 49 -58 36.4	Boyd	1935	Harvard	*
CD	459.1935	16 41 51 -58 44.2	Luyten	1935	Harvard	*
CE	461.1935	16 44 6 -58 47.8	Luyten	1935	Harvard	*
CF	HV 6854	16 45 13 -58 59.6	Boyd	1935	Harvard	
CG	HV 6857	16 47 54 -58 54.9	Boyd	1935	Harvard	
CH	484.1935	16 58 4 -58 55.1	Luyten	1935	Harvard	*
CI	485.1935	16 59 42 -55 42.0	Luyten	1935	Harvard	*
CK	HV 6706	16 59 51 -61 41.5	Swope	1935	Harvard	
CL	HV 6925	17 1 22 -58 2.3	Swope	1935	Harvard	
CM	HV 6708	17 2 22 -62 43.5	Swope	1935	Harvard	
CN	513.1933	17 2 27 -60 13.7	Luyten	1933	Harvard	*
CO	HV 6710	17 2 29 -58 15.1	Swope	1935	Harvard	
CP	514.1933	17 3 16 -62 43.4	Luyten	1933	Harvard	*
CQ	492.1935	17 3 28 -58 26.9	Luyten	1935	Harvard	*
CR	HV 6926	17 3 32 -61 35.8	Swope	1935	Harvard	
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CX	HV 6716	17 5 36 -60 16.5	Swope	1935	Harvard	
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DD	HV 6718	17 6 58 -61 40.7	Swope	1935	Harvard	
DE	HV 6719	17 7 5 -56 58.3	Swope	1935	Harvard	
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DG	HV 6931	17 7 26 -59 48.3	Swope	1935	Harvard	
DH	HV 6932	17 8 11 -54 59.4	Swope	1935	Harvard	

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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AY	L	2425410	358	13.7	[16.0	pg	HA 90.182
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CD	L	2426920	244:	14.3	[17.0	pg	AN 6138; 6337; Minn Publ 2.100
CE	L	2426930	270	12.5	16.6	pg	AN 6138; Minn Publ 2.100
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CG	L	2426930	270	14.5	[16.6	pg	HB 901
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CO	L	2426150	187.5	13.2	14.6:	pg	HA 90.208
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DF	Irr			12.5	13.9	pg	HA 90.208
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DH	Cl	2426188.240	0.47664	13.4	14.9	pg	HA 90.212

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DK	HV 6724	17 9 24 -55 51.9	Swope	1935	Harvard	
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DM	HV 6726	17 10 47 -57 15.1	Swope	1935	Harvard	*
DN	HV 6727	17 11 3 -62 39.6	Swope	1935	Harvard	*
DO	HV 6934	17 11 20 -58 38.5	Swope	1935	Harvard	
DP	HV 6729	17 12 36 -58 44.6	Swope	1935	Harvard	*
DQ	505.1935	17 13 12 -53 37.5	Luyten	1935	Harvard	*
DR	HV 6731	17 13 14 -63 7.2	Swope	1935	Harvard	
DS	HV 6732	17 13 17 -56 47.1	Swope	1935	Harvard	
DT	HV 6733	17 13 21 -57 13.6	Swope	1935	Harvard	
DU	HV 6935	17 13 38 -63 47.6	Swope	1935	Harvard	*
DV	HV 6734	17 13 40 -61 20.5	Swope	1935	Harvard	
DW	HV 6735	17 13 45 -57 12.2	Swope	1935	Harvard	
DX	HV 6736	17 14 6 -57 58.4	Swope	1935	Harvard	*
DY	HV 6737	17 14 11 -54 32.8	Swope	1935	Harvard	
DZ	249.1934	17 14 26 -58 46.2	Luyten	1934	Harvard	*
EE	250.1934	17 14 57 -56 16.4	Luyten	1934	Harvard	*
EF	HV 6936	17 15 14 -57 43.4	Swope	1935	Harvard	
EG	HV 6740	17 15 23 -61 38.4	Swope	1935	Harvard	
EH	HV 6741	17 15 37 -63 20.7	Swope	1935	Harvard	*
EI	HV 6937	17 15 40 -59 38.6	Swope	1935	Harvard	
EK	HV 6742	17 15 57 -59 35.6	Swope	1935	Harvard	*
EL	HV 6744	17 16 18 -59 38.7	Swope	1935	Harvard	*
EM	251.1934	17 16 29 -56 54.8	Luyten	1934	Harvard	*
EN	HV 6938	17 16 49 -55 0.6	Swope	1935	Harvard	
EO	HV 6746	17 17 7 -60 9.5	Swope	1935	Harvard	
EP	HV 6750	17 17 58 -60 59.2	Swope	1935	Harvard	
EQ	HV 6751	17 18 19 -55 11.9	Swope	1935	Harvard	
ER	HV 6752	17 18 37 -61 58.5	Swope	1935	Harvard	*
ES	HV 6753	17 19 5 -55 53.6	Swope	1935	Harvard	
ET	HV 6941	17 19 45 -57 32.8	Swope	1935	Harvard	
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EZ	HV 6943	17 21 12 -55 43.2	Swope	1935	Harvard	*
FF	HV 6758	17 21 13 -59 24.4	Swope	1935	Harvard	
FG	HV 6759	17 21 19 -63 5.2	Swope	1935	Harvard	
FH	HV 6760	17 21 28 -53 52.7	Swope	1935	Harvard	*
FI	520.1933	17 22 36 -60 55.3	Luyten	1933	Harvard	*
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FO	HV 6946	17 22 56 -55 0.5	Swope	1935	Harvard	
FP	HV 6947	17 23 0 -57 19.9	Swope	1935	Harvard	
FQ	HV 6765	17 23 19 -64 12.0	Swope	1935	Harvard	*
FR	HV 6766	17 23 41 -59 6.4	Swope	1935	Harvard	
FS	HV 6948	17 23 47 -55 31.8	Swope	1935	Harvard	*
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FU	HV 6768	17 24 53 -58 5.4	Swope	1935	Harvard	*
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FY	HV 6774	17 26 51 -56 53.0	Swope	1935	Harvard	
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GI	HV 6950	17 27 54 -60 16.9	Swope	1935	Harvard	
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GO	HV 6783	17 28 41 -54 9.5	Swope	1935	Harvard				
GP	HV 6953	17 29 19 -56 23.1	Swope	1935	Harvard				
GQ	HV 6784	17 30 19 -57 7.5	Swope	1935	Harvard				
GR	HV 6785	17 30 21 -59 43.1	Swope	1935	Harvard				
GS	HV 6787	17 31 20 -55 1.6	Swope	1935	Harvard				
GT	257.1934	17 31 28 -59 54.1	Luyten	1934	Harvard	*			
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GV	HV 6955	17 31 38 -63 23.2	Swope	1935	Harvard				
GW	HV 6790	17 31 39 -59 59.1	Swope	1935	Harvard				
GX	HV 6956	17 31 51 -55 36.7	Swope	1935	Harvard				
GY	HV 6791	17 31 54 -54 1.6	Swope	1935	Harvard				
GZ	HV 6792	17 32 0 -62 54.4	Swope	1935	Harvard				
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HL	HV 6959	17 37 18 -56 57.3	Swope	1935	Harvard				
HM	HV 6802	17 37 32 -53 59.0	Swope	1935	Harvard	*			
HN	HV 6805	17 38 16 -56 38.1	Swope	1935	Harvard				
HO	HV 6969	17 44 9 -56 40.5	Swope	1935	Harvard				
HP	HV 6971	17 44 12 -55 6.3	Swope	1935	Harvard				
HQ	HV 6814	17 45 10 -53 49.2	Swope	1935	Harvard	*			
HR	HV 6815	17 45 58 -55 50.1	Swope	1935	Harvard				
HS	HV 6816	17 46 35 -56 25.7	Swope	1935	Harvard				
HT	HV 6976	17 47 46 -55 26.9	Swope	1935	Harvard	*			
HU	HV 6817	17 48 4 -55 10.2	Swope	1935	Harvard	*			
HV	HV 6821	17 49 38 -57 0.7	Swope	1935	Harvard	*			
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IK	HV 6980	17 54 47 -54 36.0	Swope	1935	Harvard				
IL	HV 6981	17 56 25 -56 28.0	Swope	1935	Harvard				
IM	HV 6839	17 58 33 -55 55.0	Swope	1935	Harvard				
IN	HV 6982	17 59 26 -54 37.0	Swope	1935	Harvard				
IO	HV 6728	17 12 28 -53 46.4	Swope	1935	Harvard				
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IS	HV 6725	17 9 38 -55 7.7	Swope	1935	Harvard				
IT	HV 6743	17 16 3 -59 48.7	Swope	1935	Harvard				
IU	HV 6747	17 17 17 -54 46.2	Swope	1935	Harvard				
IV	HV 6761	17 22 14 -58 6.6	Swope	1935	Harvard				
IW	HV 6767	17 24 20 -58 30.0	Swope	1935	Harvard	*			
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IY	HV 6773	17 26 37 -57 16.8	Swope	1935	Harvard				
IZ	HV 6775	17 26 51 -57 58.9	Swope	1935	Harvard				
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RV	267.1934	2 9 37 +17 36.6	Hoffmeister	1934	Sonneberg	*	*	*	*

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HI	Ecl	2426505.530	1.72402	14.3	16.5	pg	HA 90.209
HK	SR:		100±15	14.0	15.0	pg	HA 90.209
HL	Cl	2426179.340	0.58996	14.4	15.5	pg	HA 90.212
HM	L	2426200	171	13.7	[16.5	pg	HA 90.209
HN	Irr			13.6	15.0	pg	HA 90.209
HO	Cl	2426864.450	0.52023	14.9	16.4	pg	HA 90.212
HP	Cl	2425470.310	0.44908	14.8	16.4	pg	HA 90.212
HQ	L	2426510	261.5	11.8	[16.5	pg	HA 90.210
HR	Irr			12.0	13.2	pg	HA 90.210
HS	Ecl	2427627.200	2.64564	14.0	15.4	pg	HA 90.210
HT	Cl	2426091.540	0.49660	13.9	15.0:	pg	HA 90.212
HU	L	2426800	240	13.6	[16.5	pg	HA 90.210
HV	L	2427630	306.4	13.3	[16.5	pg	HA 90.210
HW	Cl	2426598.340	0.45219	14.6	15.7	pg	HA 90.212
HX	W	2426869.430	0.359686	11.0	11.6	pg	HA 90.210
HY	L	2426565	114.1	13.8	17.0:	pg	HA 90.210
HZ	Cl	2425416.470	0.34254	14.6	15.6	pg	HA 90.212
II	L	2426190	222.3	13.8	[16.5	pg	HA 90.210
IK	Cl	2426868.530	0.58658	14.3	15.4	pg	HA 90.213
IL	Cl	2426218.280	0.57670	14.9	15.8	pg	HA 90.213
IM	L	2427280	269.7	13.2	[16.5	pg	HA 90.210
IN	Cl	2427247.540	0.631491	11.1	12.8	pg	HA 90.213
IO	L	2426900	267	13.2	[16.5	pg	HA 90.208
IP	Cl	2426120.621	0.8567876	13.9	14.6	pg	BAN 296
IQ	Cl	2426472.584	0.41066286	13.6	14.8	pg	BAN 296
IR	Ecl:	2427621.220		13.7	14.2	pg	HA 90.208
IS	Ecl	2426154.460		14.1	15.3	pg	HA 90.208
IT	Ecl	2426091.540		12.5	13.1	pg	HA 90.208
IU	Ecl	2426154.460		13.5	14.0	pg	HA 90.208
IV	Ecl	2426598.340		13.4	14.5	pg	HA 90.209
IW	Ecl	2426154.460		13.9	14.5	pg	HA 90.209
IX	Ecl	2426091.540		13.7	14.3	pg	HA 90.209
IY	Ecl	2426154.460		15.0	16.0	pg	HA 90.209
IZ	Ecl	2426868.550		14.2	15.0	pg	HA 90.209
KK	Irr:			12.0	12.8	pg	HA 90.209
KL	Ecl	2426091.540		14.0	14.8	pg	HA 90.209
KM	Ecl	2426505.511		14.0	14.9	pg	HA 90.209
KN	Ecl	2426218.280		13.6	14.3	pg	HA 90.209
KO	Ecl	2427621.200		13.3	14.1	pg	HA 90.209
KP	Ecl	2426091.540		14.0	15.0	pg	HA 90.210
				A R I E S			
RU	L	2424064	353.5	11.4	[15.2	pg	AN 5761
RV	Cl	2428043.6042	0.08517439	11.82	12.55	pg	AN 6058

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		ARIES							
RW	624.1936	$2^h10^m34^s$ +17° 4.3	Detre	1936	Budapest	*	*	*	*
RX	268.1934	2 9 43 +22 7.0	Hoffmeister	1934	Sonneberg	*		*	*
		AURIGA							
AP	..	$7^h17^m11^s$ +36° 38.6	Stanley Williams	1921	Polvarth	*		*	*
AQ	Ross 154	4 59 51 +35 15.0	Ross	1926	Yerkes	*			
AR	17 Aur	5 11 44 +33 39.6	Pedersen and Steensgaard	1932	Aarhus	*		*	*
AS	337.1930	5 59 4 +28 47.5	Hoffmeister	1930	Sonneberg	*	*	*	
AT	119.1931	5 16 29 +36 5.7	Hoffmeister	1931	Sonneberg	*	*	*	
AU	398.1933	4 46 35 +49 42.8	Morgenroth	1933	Sonneberg	*	*		
AV	394.1929	5 30 18 +39 0.7	Ceraski	1929	Moscow	*	*	*	
AW	SVS 333	5 33 41 +28 39.4	Shajn	1933	Simeis		*	*	
AX	332.1930	5 40 21 +31 33.5	Hoffmeister	1930	Sonneberg	*	*	*	
AY	Ross 14	5 49 34 +32 7.0	Ross	1925	Yerkes	*			
AZ	397.1933	5 54 10 +39 39.8	Mayall	1930	Mount Wilson	*		*	
BB	135.1931	5 56 59 +31 39.4	Hoffmeister	1931	Sonneberg	*		*	
BC	191.1935	5 39 43 +32 48.4	Pedersen and Steensgaard	1935	Aarhus	*	*		
BD	45.1934	6 0 40 +40 33.1	Morgenroth	1934	Sonneberg		*		
BE	110.1931	4 53 20 +29 49.4	Hoffmeister	1931	Sonneberg	*	*		
BF	159.1935	4 58 3 +41 9.0	Morgenroth	1935	Sonneberg	*	*	*	*
BG	HV 6884	5 3 25 +28 33.6	Hoffleit	1935	Harvard				
BH	HV 6885	5 5 29 +33 50.5	Hoffleit	1935	Harvard				
BI	117.1931	5 10 12 +29 44.5	Hoffmeister	1931	Sonneberg	*	*		
BK	SVS 768	5 2 57 +49 33.1	Gitz	1936	Moscow	*			*
BL	45.1936	5 43 53 +30 18	Hoffmeister	1936	Sonneberg	*			
BM	333.1930	5 44 56 +31 10.6	Hoffmeister	1930	Sonneberg	*	*		
BN	335.1930	5 48 8 +31 22.7	Hoffmeister	1930	Sonneberg	*	*		
BO	131.1931	5 53 46 +29 13	Hoffmeister	1931	Sonneberg	*			
BP	50.1936	5 55 3 +28 33	Hoffmeister	1936	Sonneberg	*			
BQ	51.1936	5 55 22 +29 27	Hoffmeister	1936	Sonneberg	*			
BR	134.1931	5 56 29 +29 39	Hoffmeister	1931	Sonneberg	*			
BS	137.1931	5 57 57 +28 28	Hoffmeister	1931	Sonneberg	*			
BT	136.1931	5 57 59 +29 51	Hoffmeister	1931	Sonneberg	*			
BU	52.1936	6 3 27 +31 25.1	Hoffmeister	1936	Sonneberg	*			
BV	139.1931	6 4 35 +30 15	Hoffmeister	1931	Sonneberg	*			
BW	HV 7645	6 19 38 +45 50.5	Boyd	1937	Harvard				
BX	HV 7651	6 27 22 +42 45.6	Boyd	1937	Harvard				
BY	HV 7656	6 30 32 +44 34.0	Boyd	1937	Harvard				
BZ	HV 7657	6 32 40 +44 53.1	Boyd	1937	Harvard				
CC	HV 7663	6 41 42 +46 2.3	Boyd	1937	Harvard	*			
CD	HV 7664	6 42 4 +48 23.8	Boyd	1937	Harvard				
CE	HV 7666	6 48 0 +46 25.1	Boyd	1937	Harvard				
CF	28.1936	4 47 56 +33 48	Hoffmeister	1936	Sonneberg	*			
CG	HV 6870	4 57 24 +29 2.1	Hoffleit	1935	Harvard	*			
CH	HV 6872	4 58 57 +31 27.5	Hoffleit	1935	Harvard	*			
CI	HV 6883	5 2 59 +29 19.7	Hoffleit	1935	Harvard	*			
CK	160.1935	5 3 8 +36 50.4	Morgenroth	1935	Sonneberg		*		
CL	HV 6886	5 6 21 +33 23.3	Hoffleit	1935	Harvard	*			
CM	43.1934	5 22 7 +43 21.1	Morgenroth	1934	Sonneberg	*			
CN	470.1934	5 37 12 +51 9.2	Morgenroth	1934	Sonneberg	*			
CO	343.1933	5 53 48 +35 18.3	Morgenroth	1933	Sonneberg	*	*		
CP	342.1933	5 53 52 +39 44.3	Morgenroth	1933	Sonneberg		*		
CQ	161.1935	5 57 25 +31 19.6	Morgenroth	1935	Sonneberg	*		*	*
CR	HV 7647	6 21 46 +43 49.9	Boyd	1937	Harvard				
CS	HV 7650	6 26 6 +44 28.2	Boyd	1937	Harvard				
CT	HV 7653	6 27 47 +45 0.2	Boyd	1937	Harvard				
CU	HV 7654	6 28 30 +47 12.4	Boyd	1937	Harvard				
CV	HV 7658	6 32 42 +44 7.6	Boyd	1937	Harvard				

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				ARIES			
RW	Cl	2428183.2955	0.2614151	12.12	12.73	pg	AN 6241
RX	Alg	2428829.231	1.02943	9.36	9.72	v	AN 6058
				AURIGA			
AP	β	2423080.520	0.5692932	10.35	10.60	v	MN 91.698; 702; Obs 54.130
AQ	L	2428240	340	11	[16	pg	AJ 875
AR	Alg	2426742.434	4.1346294	5.81	6.52	pg	BZ 13.70; 72; 14.48; 71 NAT 13.31
AS	Cl?			12.0	13.6	pg	AN 5748; Sonn Mitt 22
AT	L	2413549	436.0	13	[16	pg	AN 5791; Sonn Mitt 22
AU	L			13.5	[15	pg	AN 6002
AV	β			11.0	12.0	pg	AN 5655
AW				12.3	[14.6	pg	Pulk Circ 7.28; NNVS 40
AX	Ecl			13.0	14.0	pg	AN 5748; Sonn Mitt 22
AY	L			13.5	[15.5	pg	AJ 852-853
AZ	L	2426647	416.3	11.1	[15.0	pg	Mt Wils Rep 1930-31, p. 203; ASP 45.45
BB	L	2427280	680	10.9	12.4	pg	AN 5791
BC	Alg	2426771.2	5.760	11.5	12.4	pg	BZ 17.34; AN 6128
BD	L	2426310	274	13.5	[15.5	pg	AN 6048; 6058
BE	Alg	2429589.434	2.104454	13.5	14.7	v	AN 5791; Sonn Mitt 22
BF	β	2426596.298	1.583219	8.54	9.15	pg	AN 6119
BG	L	2425950	300	14.9	16.5	pg	HB 901
BH	Cl		0.45608	11.6	12.5	pg	HB 901
BI	L	2425250	298	13.5	16.3	pg	AN 5791; Sonn Mitt 22
BK	Cep	2428300.90	8.008141	9.9	11.1	pg	NNVS 51
BL	Irr?			14.0	15.6	pg	AN 6195
BM	L	2426300	195	13.3	16.0	pg	AN 5748; Sonn Mitt 22
BN	L	2426250	136	13.6	[15.5	pg	AN 5748; Sonn Mitt 22
BO	L	2426740	940	11.4	12.1	pg	AN 5791
BP	Irr			13.9	14.9	pg	AN 6195
BQ	Irr			13.4	14.5	pg	AN 6195
BR	Irr			13.5	14.7	pg	AN 5791
BS	L	2427715	462	11.5	[15.6	pg	AN 5791
BT	L	2427085	560	13.0	[15.6	pg	AN 5791
BU	L	2426655	169	11.3	11.8	pg	AN 6195
BV	L	2426280	388	13.8	[15.6	pg	AN 5791
BW	L	2427730	335	12.9	[16.0	pg	HB 905
BX	Irr			11.2	12.1	pg	HB 905
BY	L	2427727	264:	14.9	[16.8	pg	HB 905
BZ	Irr			14.6	15.8	pg	HB 905
CC	Irr			12.9	14.7	pg	HB 905
CD	L	2427800	334.5	12.6	[16.5	pg	HB 905
CE	L	2427010	332	11.8	[17.5	pg	HB 905
CF	Irr			15.3	15.7	pg	AN 6195
CG	Alg	2427148.90	1.80487	12.3	13.0	pg	HB 901
CH	Ecl			14.9	16.1	pg	HB 901
CI	Ecl			13.3	14.1	pg	HB 901
CK	Alg			11	12	pg	AN 6119
CL	Alg	2426689.43	1.24436	11.9	13.6	pg	HB 901
CM	Irr			13	14	pg	AN 6048; 6058
CN	SR	2428602	84	10.0	11.1	v	AN 6094
CO	Irr?			8.2	8.5	pg	AN 5981
CP	Alg			14	15	pg	AN 5981
CQ	Alg	2425681.70	10.62214	9.12	9.49	v	AN 6119
CR	Cl	2427778.871	0.59141	13.8	14.9	pg	HB 905
CS	Irr:			13.0	14.2	pg	HB 905
CT	Irr:			12.8	13.7	pg	HB 905
CU	Ecl	2427724.873		15.6	16.7	pg	HB 905
CV	Irr:			14.4	15.6	pg	HB 905

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		AURIGA							
CW	HV 7659	6h 34m 34s +45° 58.6'	Boyd	1937	Harvard				
CX	HV 7667	6 48 58 +47 9.2	Boyd	1937	Harvard	*			
ζ	..	4 55 29 +40 55.8	Hopmann; Schneller	1932	Leipzig; Babelsberg	*	*	*	*
		BOOTES							
UV	393.1929	14h 18m 2s +26° 0.4'	Rajchl	1929	Prag	*		*	
UW	34.1929	14 17 17 +47 33.3	Ceraski	1929	Moscow	*			*
UX	35.1929	14 17 50 +47 27.7	Ceraski	1929	Moscow	*			
UY	27.1935	13 53 55 +13 26.2	Hoffmeister	1935	Sonneberg	*	*		
		CAMELOPARDALIS							
SX	407.1929	4h 14m 6s +67° 59.8'	Haas	1929	Babelsberg	*	*		
SY	408.1929	5 53 30 +80 4.8	Haas	1929	Babelsberg	*		*	
SZ	257.1930	3 59 1 +62 3.7	Guthnick and Prager	1930	Babelsberg	*	*		*
TT	SVS 697	4 51 49 +58 3.9	Gitz	1935	Moscow	*	*	*	
TU	31 Cam	5 46 0 +59 51.9	Stebbins	1928	Washburn	*		*	*
TV	SVS 695	3 59 2 +60 2.8	Gitz	1935	Moscow	*	*	*	
TW	SVS 696	4 12 33 +57 11.9	Gitz	1935	Moscow	*	*	*	
TX	SVS 778	4 52 33 +56 2.0	Parenago	1936	Moscow	*	*	*	
TY	SVS 698	5 24 5 +62 24.8	Gitz	1935	Moscow	*	*	*	
TZ	SVS 699	5 44 16 +62 59.3	Gitz	1935	Moscow	*	*	*	
UU	208.1937	3 40 30 +74 15.5	Baker	1937	Edinburgh		*	*	
UV	..	3 57 11 +61 31.2	Wendell	1913	Harvard	*		*	
UW	209.1937	4 36 16 +73 23.7	Baker	1937	Edinburgh		*	*	
UX	..	5 0 6 +68 32.3	Espin	1892	Tow Law	*			
UY	214.1937	7 47 29 +73 3.1	Baker	1937	Edinburgh	*	*	*	
UZ	SVS 597	14 22 +81 29	Beljawsky	1934	Simeis	*	*	*	*
		CANCER							
SX	329.1931	8h 45m 25s +25° 55.4'	Beljawsky	1931	Simeis	*			
SY	401.1929	8 55 24 +18 17.7	Ceraski	1929	Moscow	*		*	
SZ	..	8 15 48 +14 19.3	Godard	1928	Bordeaux	*	*	*	
TT	337.1934	8 27 53 +13 31.9	Hoffmeister	1934	Sonneberg	*	*	*	*
TU	SVS 561	8 46 52 + 9 27.9	Deutsch	1934	Pulkowo	*		*	*
TV	108.1934	8 7 51 + 8 52.9	Morgenroth	1934	Sonneberg	*	*		
TW	336.1934	8 24 5 +12 47.3	Hoffmeister	1934	Sonneberg	*			
TX	220.1937	8 34 19 +19 21.2	Haffner	1937	Göttingen	*			*
TY	Ross 229	8 41 47 + 8 46.6	Ross	1928	Yerkes	*			
TZ	SVS 544	8 58 16 +21 20.2	Koulikovsky	1934	Moscow	*	*	*	
		CANES VENATICI							
SW	385.1931	12h 36m 2s +37° 38.2'	Plaut	1931	Babelsberg	*	*	*	*
SX	322.1931	13 25 28 +45 59.6	Rügemer	1931	Bamberg	*			
		CANIS MAJOR							
RT	37.1931	6h 8m 47s -17° 37.7'	Hoffmeister	1931	Sonneberg	*	*	*	*
RU	52.1929	6 18 20 -22 37.7	Hoffmeister	1929	Sonneberg	*	*	*	*
RV	43.1931	6 56 5 -14 12.5	Hoffmeister	1931	Sonneberg	*	*		*
RW	51.1931	7 8 47 -18 33.8	Hoffmeister	1931	Sonneberg	*	*	*	*
RX	55.1929	7 9 27 -17 59.8	Hoffmeister	1929	Sonneberg	*	*	*	*
RY	54.1931	7 11 56 -11 18.6	Hoffmeister	1931	Sonneberg	*	*	*	*

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
			AURIGA				
CW	Ecl			15.5m	16.3m	pg	HB 905
CX	Irr:			11.7	12.3	pg	HB 905
ζ	Alg	2429637.18	972.24d	5.18	5.94	pg	AN 5857; VJS 66.122
			BOOTES				
UV	Irr			7.8m	8.4m	v	AN 5655; Lyon Bull 12.71
UW	Alg		1.0047152d	10.37	11.40	pg	AN 5638
UX	Ecl?			9.3	9.6	pg	AN 5638
UY	Cl	2425688.836	0.6507849	9.5	10.5	pg	AN 6118
			CAMELOPARDALIS				
SX	L	2428632	390d	10.8m	[14.5m	v	AN 5676; 5790
SY	SR		390	10.5	11.8	pg	AN 5676; 5790
SZ	β	2427533.5191	2.6984166	7.00	7.28	pg	AN 5713
TT	L	2427185	252.6	11.8	[15.0	pg	NNVS 49
TU	β	2427333.31	2.93328	5.20	5.30	v	PA 37.155; Washb Publ 15.56
TV	Cep	2428300.20	5.29325	11.92	13.27	pg	NNVS 49
TW	SR	2428405	85.3	10.6	11.5	pg	NNVS 49
TX	L	2427406	522	11.4	[14.7	pg	NNVS 52
TY	Cl	2427579.003	0.670084	12.6	13.85	pg	NNVS 49
TZ	L	2428300	253.5	11.4	12.5	pg	NNVS 49
UU	Cep		4.404	11.6	12.5	pg	MN 98.65; AN 6353
UV	Irr			9.36	9.80	pg	HA 69.112
UW	L		560	11.5	12.9	pg	MN 98.65; AN 6353
UX	Irr			9.6	10.9	pg	AN 3090; JBAA 1.316
UY	Cep		6.16	10.8	11.4	pg	MN 98.67; AN 6353
UZ	L	2427998	225	11.0	[14.5	v	NNVS 46; Pulk Circ 13
			CANCER				
SX	Cl			12.3m	13.8m	pg	AN 5800
SY	Irr			9.9	12.4	pg	AN 5657
SZ	L	2419853	315.8d	9.4	[14.2	v	Lyon Bull 10.76A
TT	Cl	2425647.421	0.563457	10.3	11.0	v	AN 6058
TU	Alg	2425644.386	5.56153	9.52	12.4	pg	BZ 16.35; AN 6036; NNVS 45
TV	L	2419442.2	370.0	11.5	[13.0	pg	AN 6048
TW	Alg	2428599.5	70.8	9	10	pg	AN 6058
TX	W	2428523.6076	0.3828882	10.45	10.76	pg	Gött Veröff 55.94; ZAp 14.285; AN 6353
TY	Irr			11.5	[14	v	AJ 897
TZ	Alg		3.9/n	10.9	12.3	pg	NNVS 45
			CANES VENATICI				
SW	Cl	2425646.558	0.4416419d	11.32m	12.76m	pg	BZ 13.65; AN 5846
SX	Cl?			9.6	10.5	pg	AN 5793
			CANIS MAJOR				
RT	Alg	2426625.547	1.293772d	11.43m	12.93m	v	AN 5791; 6171
RU	Alg	2426711.342	1.976168	11.30	[12.83	v	AN 5655
RV	Cep	2426628.0	30.46	10.6	11.3	v	AN 5791
RW	Cep	2428021.83	5.72941	11.45	12.15	v	AN 5791
RX	Alg	2426067.323	2.069083	10.70	12.95	v	AN 5655
RY	Cep	2426625.26	4.67762	7.85	8.70	v	AN 5791

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		CANIS MAJOR							
RZ	57.1929	7h17m 2s -16°29'.4	Hoffmeister	1929	Sonneberg	*	*		*
SS	60.1929	7 21 58 -25 3.6	Hoffmeister	1929	Sonneberg	*	*	*	*
ST	40.1931	6 28 10 -22 40.4	Hoffmeister	1931	Sonneberg	*	*		*
SU	44.1931	6 56 58 -18 54.5	Hoffmeister	1931	Sonneberg	*	*		*
SV	45.1931	6 57 2 -18 53.8	Hoffmeister	1931	Sonneberg	*	*		*
SW	47.1931	7 4 1 -22 16.9	Hoffmeister	1931	Sonneberg	*	*		*
SX	49.1931	7 5 36 -16 4.8	Hoffmeister	1931	Sonneberg	*	*	*	*
SY	54.1929	7 6 11 -19 40.2	Hoffmeister	1929	Sonneberg	*	*	*	*
SZ	50.1931	7 8 31 -15 14.9	Hoffmeister	1931	Sonneberg	*	*	*	*
TT	56.1931	7 17 28 -14 45.5	Hoffmeister	1931	Sonneberg	*	*		
TU	267.1930	6 27 28 -24 6.1	Hoffmeister	1930	Sonneberg	*	*	*	*
TV	53.1929	7 4 40 -13 37.1	Hoffmeister	1929	Sonneberg	*	*	*	*
TW	58.1929	7 17 27 -14 7.1	Hoffmeister	1929	Sonneberg	*	*		*
TX	174.1932	6 9 13 -22 31.2	Hoffmeister	1932	Sonneberg	*	*		
TY	175.1932	6 13 36 -16 26.6	Hoffmeister	1932	Sonneberg	*	*		
TZ	179.1932	6 37 25 -19 34.9	Hoffmeister	1932	Sonneberg	*	*		
UU	181.1932	6 54 18 -18 40.6	Hoffmeister	1932	Sonneberg	*	*		
UV	182.1932	7 1 10 -28 9.3	Hoffmeister	1932	Sonneberg	*	*		
UW	29 CMa	7 14 31 -24 22.6	Gaposchkin	1936	Harvard	*	*	*	*
UX	56.1929	7 15 42 -12 2.8	Hoffmeister	1929	Sonneberg	*	*		*
UY	51.1929	6 13 54 -17 0	Hoffmeister	1929	Sonneberg	*	*		*
UZ	38.1931	6 14 21 -17 0	Hoffmeister	1931	Sonneberg	*	*		*
VV	HV 7609	7 2 8 -14 20.6	McLeod	1936	Harvard				
VW	53.1931	7 8 20 -25 20.8	Hoffmeister	1931	Sonneberg	*	*	*	*
VX	..	7 12 24 -22 0.3	Mergentaler	1937	Johannesburg		*	*	*
VY	60.1931	7 18 51 -25 34.5	Hoffmeister	1931	Sonneberg	*	*		
VZ	61.1931	7 22 22 -25 43.2	Hoffmeister	1931	Sonneberg	*	*		*
		CANIS MINOR							
VZ	Ross 199	7h 6m41s +11°29'.4	Ross	1927	Yerkes	*	*		
WW	92.1933	7 5 49 + 4 14.5	Morgenroth	1933	Sonneberg	*	*		
WX	451.1934	7 6 32 + 7 40.1	Morgenroth	1934	Sonneberg	*	*		
WY	94.1933	7 10 58 + 3 54.7	Morgenroth	1933	Sonneberg	*	*		
WZ	96.1933	7 13 36 + 2 54.3	Morgenroth	1933	Sonneberg	*	*		
XX	53.1934	7 7 45 + 2 47.9	Morgenroth	1934	Sonneberg		*		
XY	55.1934	7 11 29 + 3 17.5	Morgenroth	1934	Sonneberg		*		
XZ	318.1934	7 48 51 + 3 54.5	Hoffmeister	1934	Sonneberg	*		*	*
YY	107.1934	8 1 27 + 2 13.0	Morgenroth	1934	Sonneberg	*		*	*
		CAPRICORNUS							
TU	82.1931	20h 8m30s -16°11'.7	Hoffmeister	1931	Sonneberg	*			
TV	84.1931	20 18 26 -12 8.9	Hoffmeister	1931	Sonneberg	*			
TW	240.1932	20 8 53 -14 8.5	Hoffmeister	1932	Sonneberg	*		*	*
TX	247.1932	20 34 53 -17 24.9	Hoffmeister	1932	Sonneberg	*	*	*	
TY	243.1932	20 18 58 -13 17.3	Hoffmeister	1932	Sonneberg	*			
TZ	SVS 322	20 44 0 -14 57.0	Shajn	1933	Simeis		*	*	
UU	318.1930	21 30 43 -14 18.9	Hoffmeister	1930	Sonneberg	*		*	*
UV	SVS 326	21 39 10 -17 40.2	Shajn	1933	Simeis		*	*	
UW	242.1932	20 15 22 -10 50.3	Hoffmeister	1932	Sonneberg	*			
UX	HV 6203	20 48 25 -17 49.8	Hughes	1934	Harvard				
UY	HV 6208	20 50 0 -18 6.0	Hughes	1934	Harvard	*			
UZ	HV 6210	20 51 2 -16 2.4	Hughes	1934	Harvard				
VV	HV 6217	20 53 38 -18 31.0	Hughes	1934	Harvard				
VW	HV 6228	20 58 36 -17 50.3	Hughes	1934	Harvard				
VX	HV 6233	21 0 45 -19 13.5	Hughes	1934	Harvard				
VY	HV 6244	21 3 31 -14 51.2	Hughes	1934	Harvard				
VZ	HV 6246	21 3 54 -15 47.5	Hughes	1934	Harvard				

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
			CANIS MAJOR				
RZ	Cep	2426322.500	4.25488	9.4	10.0	v	AN 5655
SS	Cep	2426634.49	12.3596	9.98	10.90	v	AN 5655
ST	L	2426647	287	10.2	[12.8	v	AN 5791
SU	L	2426690	248	10.0	[12.9	v	AN 5791
SV	Irr			10.3	11.5	v	AN 5791
SW	Alg	2426709.324	10.092	9.1	9.6	v	AN 5791
SX	Alg	2426708.290	1.624275	9.71	11.03	v	AN 5791
SY	L	2426720	219	8.4	[12.8	v	AN 5655
SZ	Alg	2426743.337	2.856092	10.22	11.09	v	AN 5791
TT	L	2426020	314	12.3	16.3	pg	AN 5791
TU	Alg	2426977.445	1.127800	9.74	10.78	v	AN 5748
TV	Cep	2426974.52	4.6708	10.79	11.32	v	AN 5655
TW	Cep	2426985.30	6.9961	9.9	10.3	v	AN 5655
TX	Alg	2427425.361	2.3973	9.6	10.8	v	AN 5919
TY	L	2425640	228	11.5	[12.5	pg	AN 5919
TZ	Alg	2427124.871	1.91139	9.8	10.5	v	AN 5919
UU	Alg	2427860.14	2.1665	10	12.5	pg	AN 5919
UV	L	2425720	340	10.0	[12.4	v	AN 5919; 6171
UW	β	2426326.76	4.3934	4.47	4.81	pg	HB 902; AAS 8.210; PA 44.99
UX	W	2426706.235	0.962084	11	11.9	v	AN 5655
UY	SR	2426636	113.1	11.0	12.1	v	AN 5655
UZ	SR	2427058	82.5	11.0	12.3	v	AN 5791
VV	Cep	2426090.220	3.8627	12.2	12.8	pg	HB 904
VW	β	2427924.229	0.720831	9.0	9.2	pg	AN 5791
VX	Cep	2427831.413	2.04425	15.2	16.0	pg	BAN 296
VY	Irr			8.8	9.3	v	AN 5791
VZ	Cep	2426747.14	3.12595	9.7	10.0	v	AN 5791
			CANIS MINOR				
VZ	L	2427457	283	12.5	[15.5	pg	AJ 882
WW	L	2427440	178	13.0	[15.5	pg	AN 5974
WX	L	2427719	419	11.0	15.8	pg	BZ 16.72;77; AN 6094; 6119; IAU Circ 497
WY	L	2427732	274	13.0	16.0	pg	AN 5974
WZ	L	2427364	316	13	[15.5	pg	AN 5974
XX	Irr			14	15.3	pg	AN 6048; 6058
XY	Irr			14	15.5	pg	AN 6048; 6058
XZ	Alg	2428877.103	0.578827	9.66	10.09	v	AN 6058
YY	β	2426003.509	1.0940651	8.45	9.1	v	AN 6048
			CAPRICORNUS				
TU	L			10	[12	pg	AN 5791
TV	L	2426576	151	9.5	11.5	pg	AN 5791
TW	Cl	2426212.17	28.5778	10.0	11.5	pg	AN 5919
TX	L	2426945.401	129.7	10.9	[12.5	pg	AN 5919
TY	Alg	2427343.295	1.42347	10.2	11.4	v	AN 5919
TZ	Sh			11.8	13.6	pg	NNVS 39; Pulk Circ 6
UU	Irr			9.2	10.9	pg	AN 5748
UV	Sh			12.8	[14.9	pg	NNVS 39; Pulk Circ 6
UW	W	2428757.290	0.69958	10	11.5	pg	AN 5919
UX	Cl	2425413.60	0.62553	13.5	14.5	pg	HA 90.169
UY	L	2425500	139:	13.5	14.3	pg	HA 90.169
UZ	Cl	2425498.40	0.53282	14.0	15.3	pg	HA 90.169
VV	Cl	2425479.40	0.50177	14.0	15.4	pg	HA 90.169
VW	Cl	2425409.60	0.31426	12.6	13.5	pg	HA 90.169
VX	Cep	2425418.60	1.32752	13.8	15.5	pg	HA 90.169
VY	Cl	2425423.60	0.60189	13.2	13.9	pg	HA 90.169
VZ	Cl	2425447.55	0.64464	14.4	15.8	pg	HA 90.169

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		CAPRICORNUS							
WW	HV 6248	21h 5m 24s -16° 3'.3	Hughes	1934	Harvard				
WX	HV 6253	21 6 48 -18 26.8	Hughes	1934	Harvard				
WY	HV 6254	21 7 9 -17 48.3	Hughes	1934	Harvard				
WZ	HV 6264	21 17 46 -15 36.1	Hughes	1934	Harvard				
XX	HV 6202	20 48 1 -15 2.1	Hughes	1934	Harvard				
XY	HV 6211	20 51 42 -17 20.6	Hughes	1934	Harvard				
XZ	HV 6224	20 57 11 -19 39.8	Hughes	1934	Harvard	*			
YY	HV 6226	20 58 16 -19 10.8	Hughes	1934	Harvard	*			
		CARINA							
GM	..	10h 33m 29s -58° 44'.3	Oosterhoff	1933	Johannesburg	*		*	*
GN	..	11 4 54 -63 46.9	Oosterhoff	1933	Johannesburg	*	*	*	*
GO	..	10 16 46 -61 4.7	van Gent	1934	Johannesburg	*	*	*	*
GP	..	10 26 21 -58 34.0	van Gent	1936	Johannesburg	*	*	*	*
GQ	..	10 32 40 -60 4.6	van Gent	1936	Johannesburg	*	*		*
GR	..	10 34 58 -57 41.4	Kruytbosch	1936	Johannesburg	*	*	*	
GS	..	10 48 0 -60 56.1	van Gent	1936	Johannesburg	*	*		*
GT	..	10 55 19 -58 56.8	van Gent	1936	Johannesburg	*	*		*
GU	..	11 2 34 -56 41.6	Kruytbosch	1936	Johannesburg	*	*	*	
GV	..	11 1 19 -58 11.5	Oosterhoff	1933	Johannesburg	*		*	*
		CASSIOPEIA							
AO	..	0h 12m 25s +50° 52'.7	Guthnick	1919	Babelsberg	*			*
AP	260.1930	0 27 35 +62 21.2	Nielsen	1930	Aarhus	*	*	*	*
AQ	418.1928	1 12 37 +61 51.2	Guthnick	1929	Babelsberg	*		*	
AR	1 H. Cas	23 25 25 +57 59.9	Stebbins	1919	Urbana	*			*
AS	354.1931	0 20 4 +63 40.6	Beljawsky	1931	Simeis	*			
AT	1.1931	0 28 39 +62 1.9	Nielsen	1931	Aarhus	*	*	*	*
AU	358.1931	0 49 5 +63 43.1	Beljawsky	1931	Simeis	*			
AV	359.1931	0 53 30 +60 10.9	Beljawsky	1931	Simeis	*			
AW	363.1931	1 9 39 +61 5.5	Beljawsky	1931	Simeis	*			*
AX	367.1931	1 17 19 +61 3.1	Beljawsky	1931	Simeis	*			
AY	371.1931	1 31 59 +64 28.8	Beljawsky	1931	Simeis	*			
AZ	373.1931	1 35 29 +60 54.9	Beljawsky	1931	Simeis	*			
BB	344.1931	23 46 4 +61 35.2	Beljawsky	1931	Simeis	*			
BC	345.1931	23 46 24 +59 44.7	Beljawsky	1931	Simeis	*			
BD	349.1931	0 4 39 +60 57.4	Beljawsky	1931	Simeis	*			
BE	350.1931	0 4 44 +58 39.7	Beljawsky	1931	Simeis	*			
BF	351.1931	0 8 45 +60 25.7	Beljawsky	1931	Simeis	*			
BG	352.1931	0 9 24 +61 46.5	Beljawsky	1931	Simeis	*			
BH	353.1931	0 15 56 +58 35.8	Beljawsky	1931	Simeis	*			
BI	355.1931	0 37 41 +62 7.3	Beljawsky	1931	Simeis	*			
BK	356.1931	0 47 0 +64 3.3	Beljawsky	1931	Simeis	*			
BL	357.1931	0 48 20 +63 0.7	Beljawsky	1931	Simeis	*			
BM	417.1928	0 48 38 +63 32.5	Guthnick	1929	Babelsberg	*			
BN	360.1931	0 53 58 +59 32.7	Beljawsky	1931	Simeis	*			
BO	361.1931	0 56 38 +60 3.9	Beljawsky	1931	Simeis	*			
BP	362.1931	1 8 25 +65 4.7	Beljawsky	1931	Simeis	*		*	
BQ	364.1931	1 11 24 +58 46.5	Beljawsky	1931	Simeis	*			
BR	365.1931	1 14 55 +65 5.4	Beljawsky	1931	Simeis	*			
BS	366.1931	1 15 18 +58 39.0	Beljawsky	1931	Simeis	*			
BT	368.1931	1 18 32 +60 33.4	Beljawsky	1931	Simeis	*			
BU	369.1931	1 22 7 +60 36.6	Beljawsky	1931	Simeis	*			
BV	370.1931	1 23 22 +61 46.1	Beljawsky	1931	Simeis	*			
BW	372.1931	1 32 33 +62 55.6	Beljawsky	1931	Simeis	*			
BX	374.1931	1 40 11 +62 4.1	Beljawsky	1931	Simeis	*	*	*	
BY	375.1931	1 40 15 +60 54.9	Beljawsky	1931	Simeis	*		*	*
BZ	376.1931	1 44 32 +62 17.0	Beljawsky	1931	Simeis	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				CAPRICORNUS			
WW	Cl	2425447.55	$0^d.46572$	$14^m.3$	$15^m.9$	pg	HA 90.169
WX	Cl	2425439.50	0.85524	14.7	15.8	pg	HA 90.170
WY	Cl	2425413.60	0.46564	13.7	14.9	pg	HA 90.170
WZ	W	2425424.58	0.313086	14.0	14.7	pg	HA 90.170
XX	Irr			12.8	14.2	pg	HA 90.169
XY	SR			13.5	14.6	pg	HA 90.169
XZ	Irr			13.8	14.8	pg	HA 90.169
YY	Irr			11.1	11.6	pg	HA 90.169
				CARINA			
GM	β	2423964.142	$1^d.53556$	$8^m.9$	$9^m.1$	pg	BAN 245
GN	β	2423970.247	4.34581	11.8	13.1	pg	BAN 245
GO	Alg	2424641.422	2.75646	14.33	14.8	pg	BAN 256
GP	Alg	2424445.440	2.464192	12.4	12.8	pg	BAN 275
GQ	W	2424001.220	0.68371	13.0	13.7	pg	BAN 275
GR	Ecl	2423872.26	5.701	15.3	15.8	pg	BAN 275
GS	Cep	2424072.10	4.05515	12.8	14.1	pg	BAN 275
GT	Cep	2424153.94	13.149	14.1	14.9	pg	BAN 275
GU	Alg		3.49056	11.1	12.2	pg	BAN 275
GV	Alg	2423828.433	4.294621	9.1	9.6	pg	BAN 244; 245; 283
				CASSIOPEIA			
AO	β	2424002.564	$3^d.52341$	$6^m.12$	$6^m.32$	pe	BZ 1.12; 2.17
AP	Cep	2426741.47	6.8465	11.97	12.57	v	AN 5713
AQ	Alg	2426282.43	11.7203	10.00	10.95	v	AN 5619
AR	Alg	2422586.492	6.06630	4.89	5.02	pe	PA 27.677; 29.276; ApJ 54.81
AS	Sh	2425999.26	3.143/n	12.8	13.8	pg	AN 5815; Pulk Circ 6.22
AT	Alg	2427139.027	1.595557	13.9	15.1	pg	AN 5782
AU	Cl	2425553.23	0.52826	13.5	15.0	pg	AN 5815; Pulk Circ 6.22
AV	L	2425553	328	13.5	[14.8	pg	AN 5815; Pulk Circ 6.22
AW	Cep	2426972.26	4.254	13.0	14.0	pg	AN 5815; Pulk Circ 6.22
AX	Alg			13.0	13.8	pg	AN 5815; Pulk Circ 6.22
AY	Cep	2428790.3	2.87	12.0	13.5	pg	AN 5815; Pulk Circ 6.22
AZ	Alg			11.2	12.5	pg	AN 5815; Pulk Circ 6.22
BB	L		4050/n	13.3	[14.2	pg	AN 5815; Pulk Circ 6.22
BC	L			12.1	[13.2	pg	AN 5815; Pulk Circ 6.22
BD	Cep?	2428759.4	2.19	11.4	12.3	pg	AN 5815; Pulk Circ 6.22
BE	SR?			12.0	13.2	pg	AN 5815; Pulk Circ 6.22
BF	Cep	2428776.2	3.65	12.5	14.1	pg	AN 5815; Pulk Circ 6.22
BG	β?	2425893.22	1.988?	12.0	13.2	pg	AN 5815; Pulk Circ 6.22
BH	W?		0.5?	12.1	12.9	pg	AN 5815; Pulk Circ 6.22
BI	Cep	2425553.23	3.1177?	12.8	13.6	pg	AN 5815; Pulk Circ 6.22
BK	Cl	2425893.22	0.43525	13.5	14.5	pg	AN 5815; Pulk Circ 6.22
BL	Cep?			12.4	13.6	pg	AN 5815; Pulk Circ 6.22
BM	β?	2427352.7	197.4	9.09	9.44	v	AN 5619
BN	Sh?			12.1	13.3	pg	AN 5815; Pulk Circ 6.22
BO				14.5	15.1	pg	AN 5815; Pulk Circ 6.22
BP	Cep	2428800.3	6.2722	12.1	13.2	pg	AN 5815; Pulk Circ 6.22
BQ				13.5	14.2	pg	AN 5815; Pulk Circ 6.22
BR	Cl	2426589.28	0.30287	12.5	14.0	pg	AN 5815; Pulk Circ 6.22
BS	Ecl?			11.8	13.0	pg	AN 5815; Pulk Circ 6.22
BT	L	2425893	>365	12.8	14.9	pg	AN 5815; Pulk Circ 6.22
BU	Cep?			11.2	12.0	pg	AN 5815; Pulk Circ 6.22
BV	Cl	2428771.3	5.388	12.2	14.8	pg	AN 5815; Pulk Circ 6.22
BW	Ecl?	2425999.26	1.895	12.4	13.1	pg	AN 5815; Pulk Circ 6.22
BX	Cep?	2426213	11.1	11.4	12.3	pg	AN 5815; Pulk Circ 6.22
BY	Cep	2426933.30	3.23993	11.5	11.8	pg	AN 5815; Pulk Circ 6.22
BZ	Sh?	2425999.26	4.7369	10.7	12.3	pg	AN 5815; Pulk Circ 6.22

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
			CASSIOPEIA						
		h m s ° '							
CC	255.1930	3 6 11 +59 11.3	Guthnick and Prager	1930	Babelsberg	*			*
CD	343.1931	23 40 17 +62 27.0	Beljawsky	1931	Simeis	*			
CE	346.1931	23 53 7 +60 39.2	Beljawsky	1931	Simeis	*			
CF	347.1931	23 53 15 +60 39.7	Beljawsky	1931	Simeis	*			
CG	348.1931	23 55 54 +60 24.7	Beljawsky	1931	Simeis	*			*
CH	153.1935	23 17 36 +62 12.5	Szeligowski	1935	Wilno	*	*		*
CI	1.1936	1 14 11 +66 54.3	Hoffmeister	1936	Sonneberg	*			
CK	2.1936	1 26 4 +67 57.6	Hoffmeister	1936	Sonneberg	*			
CL	3.1936	1 34 46 +69 54.9	Hoffmeister	1936	Sonneberg	*			
CM	4.1936	1 45 16 +67 27.1	Hoffmeister	1936	Sonneberg	*			
CN	6.1936	2 13 10 +67 38.9	Hoffmeister	1936	Sonneberg	*			
CO	7.1936	2 14 4 +68 3.2	Hoffmeister	1936	Sonneberg	*			
CP	629.1936	0 29 37 +69 58.7	Morgenroth	1936	Sonneberg		*		
CQ	63.1933	2 38 43 +62 35.1	Krüger	1913	Aarhus	*	*		
CR	450.1934	23 0 40 +59 1.7	Nielsen	1934	Aarhus	*	*		
CS	SVS 750	23 45 15 +50.50.7	Beljawsky	1936	Simeis		*	*	
γ	..	0 50 40 +60 10.5	Baize	1936	Paris	*			*
			CENTAURUS						
		h m s ° '							
IV	..	11 23 38 -59 37.0	Bruna	1930	Johannesburg	*	*	*	*
IW	..	11 28 43 -59 16.5	Bruna	1930	Johannesburg	*	*	*	*
IX	..	11 32 48 -60 54.7	Bruna	1930	Johannesburg	*	*	*	*
IY	..	11 33 26 -62 32.7	Bruna	1930	Johannesburg	*	*	*	*
IZ	..	11 36 35 -61 42.5	Bruna	1930	Johannesburg		*	*	*
KK	..	11 37 59 -58 26.3	Bruna	1930	Johannesburg	*	*	*	*
KL	..	11 41 12 -62 11.5	Bruna	1930	Johannesburg	*	*	*	*
KM	..	11 44 24 -61 30.6	Bruna	1930	Johannesburg	*	*	*	*
KN	HV 5019	13 29 35 -64 2.8	Florence	1931	Harvard		*		*
KO	HV 5028	13 35 9 -63 29.7	Florence	1931	Harvard		*		
KP	HV 5048	13 52 0 -64 6.1	Florence	1931	Harvard		*		
KQ	HV 5084	14 17 39 -63 32.4	Florence	1931	Harvard	*	*		
KR	HV 5088	14 21 28 -63 54.4	Florence	1931	Harvard		*		
KS	..	11 42 11 -40 58.4	van Gent	1932	Johannesburg	*	*	*	*
KT	..	11 43 14 -61 47.8	Uitterdijk	1932	Johannesburg	*	*	*	*
KU	..	11 46 50 -40 43.5	Martin	1932	Johannesburg	*	*	*	*
KV	..	11 47 18 -39 55.8	van Gent	1932	Johannesburg	*	*	*	*
KW	..	11 50 4 -43 58.2	Hertzsprung	1932	Johannesburg	*	*	*	*
KX	..	11 54 8 -39 40.9	Hertzsprung	1932	Johannesburg	*	*	*	*
KY	..	11 56 37 -45 43.4	Martin	1932	Johannesburg	*	*	*	*
KZ	..	11 56 48 -45 43.3	Martin	1932	Johannesburg	*	*	*	*
LL	..	12 9 47 -39 34.0	Hertzsprung	1932	Johannesburg	*	*	*	*
LM	..	12 10 39 -44 34.2	Martin	1932	Johannesburg	*	*	*	*
LN	..	12 11 39 -47 25.2	Martin	1932	Johannesburg		*	*	*
LO	..	12 11 49 -46 40.3	Martin	1932	Johannesburg	*	*	*	*
LP	..	12 16 59 -41 12.9	van Gent	1932	Johannesburg	*	*	*	*
LQ	..	12 17 1 -46 24.3	Martin	1932	Johannesburg		*	*	*
LR	..	11 19 22 -60 17.2	Uitterdijk	1932	Johannesburg	*	*	*	*
LS	..	11 24 2 -61 55.6	Uitterdijk	1932	Johannesburg		*	*	*
LT	..	11 24 28 -60 19.8	Uitterdijk	1932	Johannesburg	*		*	*
LU	..	11 24 29 -59 7.1	Uitterdijk	1932	Johannesburg	*	*	*	*
LV	..	11 28 45 -62 41.4	Uitterdijk	1932	Johannesburg		*	*	*
LW	..	11 32 53 -62 47.7	Uitterdijk	1932	Johannesburg	*		*	*
LX	..	11 35 18 -58 41.6	Uitterdijk	1932	Johannesburg	*	*	*	*
LY	..	11 43 54 -58 8.9	Uitterdijk	1932	Johannesburg	*	*	*	
LZ	..	11 45 38 -60 14.3	Uitterdijk	1932	Johannesburg	*		*	*
MM	..	11 49 56 -60 17.3	Uitterdijk	1932	Johannesburg	*	*	*	*
MN	..	11 23 33 -60 51.6	Oosterhoff	1933	Johannesburg	*		*	*
MO	..	11 37 16 -61 7.2	Oosterhoff	1933	Johannesburg	*		*	*
MP	..	11 38 59 -61 11.4	Oosterhoff	1933	Johannesburg	*		*	*
MQ	..	11 39 27 -61 9.7	Oosterhoff	1933	Johannesburg	*		*	*

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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CC	Alg	2426000.30	3d.36897	7m.39	7m.55	pg	AN 5713
CD				12.2	13.8	pg	AN 5815; Pulk Circ 6.22
CE	Cl?			10.3	11.4	pg	AN 5815; Pulk Circ 6.22
CF	Cep	2426706.64	4.8697	11.3	12.6	pg	AN 5815; Pulk Circ 6.22
CG	Cep	2426945.11	4.363	11.0	12.4	pg	AN 5815; Pulk Circ 6.22
CH	Cep	2427745.2	15.0824	11.5	13.5	pg	BZ 17.14; AN 6097
CI	Irr			13.9	15.3	pg	AN 6195
CK	Irr		65?	13.7	14.8	pg	AN 6195
CL	L	2425492	320	12.7	[16	pg	AN 6195
CM	L	2425652	250	13.4	[16	pg	AN 6195
CN	Irr			13.4	14.1	pg	AN 6195
CO	Irr			12.5	14	pg	AN 6195
CP	Irr			13	14.5	pg	AN 6253
CQ	Irr			11.7	12.7	pg	Spec Vat 7.16; 127; VAP 24.63
CR	Alg	2428100.421	1.420000	12.0	12.6	pg	AN 6082; BZ 16.77; 19.79
CS	Sh	2428540	15.1	12.0	14.1	pg	NNVS 50; 53; Pulk Circ 19
γ	Irr			1.5	3.0	v	BSAF 50.395
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IV	Alg	2424464.62	19d.138	11m.4	12m.1	pg	BAN 207
IW	β	2424776.098	1.132963	12.0	12.4	pg	BAN 207
IX	Alg	2424950.085	9.0904	12.6	13.8	pg	BAN 207
IY	Alg	2424679.48	20.461	12.0	12.5	pg	BAN 207
IZ	Cep	2424773.95	5.89192	13.4	13.8	pg	BAN 207
KK	Cep	2424780.367	12.1822	11.3	12.3	pg	BAN 207
KL	Alg	2424708.483	5.29654	12.3	13.6	pg	BAN 207
KM	W	2424775.681	0.773320	13.0	13.4	pg	BAN 207
KN	Cep	2425382.0	34.02	10.5	11.8	pg	HB 883
KO	Sh?			13.8	15.2	pg	HB 883
KP	Sh			14.0	15.5	pg	HB 883
KQ	SR	2423890	159	12.0	13.5	pg	HB 883
KR	L	2426170	286.6	13.3	[16.5	pg	HB 883
KS	Cl	2425995.342	0.397420	12.5	14.2	pg	BAN 235
KT	Alg	2425030.002	4.130463	12.00	12.45	pg	BAN 237
KU	Cl	2425995.1073	0.08000536	13.47	14.15	pg	BAN 232
KV	Cl	2425995.165	0.340109	14.0	14.7	pg	BAN 235
KW	Cl	2425995.318	0.592629	13.3	13.9	pg	BAN 235
KX	Cl	2425782.324	0.576153	13.4	14.4	pg	BAN 235
KY	β	2425350.367	0.5306986	13.1	13.5	pg	BAN 232; 235
KZ	Cep	2425994.9615	1.519927	12.3	12.9	pg	BAN 232
LL	Alg	2425782.2934	2.091827	13.0	14.4	pg	BAN 235
LM	Cl	2425995.433	0.562723	13.3	14.4	pg	BAN 235
LN	Cl	2425995.228	0.825040	13.9	14.5	pg	BAN 235
LO	Cl	2425995.260	0.594348	13.4	14.3	pg	BAN 235
LP	Alg	2425994.2848	2.472329	10.0	11.4	pg	BAN 235
LQ	Cl	2425995.109	0.612294	13.6	14.6	pg	BAN 235
LR	Alg	2424608.5402	2.095595	12.0	13.3	pg	BAN 240
LS	Cl	2424921.523	0.5129933	13.1	13.5	pg	BAN 240
LT	Alg	2425028.933	0.812957	9.1	9.6	pg	BAN 240
LU	Alg	2424480.356	1.554970	13.0	13.7	pg	BAN 240
LV	Cep	2424951.32	4.9747	12.8	13.4	pg	BAN 240
LW	β	2424824.462	1.0025674	9.3	9.6	pg	BAN 240
LX	Alg	2424634.17	4.33734	13.5	13.9	pg	BAN 240
LY	L	2425380	345	11.8	[15.0	pg	BAN 240
LZ	β	2424953.290	2.75769	8.0	8.3	pg	BAN 240
MM	β	2424860.248	2.094477	12.3	12.8	pg	BAN 240
MN	β	2424918.58	3.48916	8.5	9.0	pg	BAN 245
MO	Alg	2424294.33	9.6565	9.7	10.1	pg	BAN 245
MP	β	2425329.607	2.99328	9.8	10.6	pg	BAN 245
MQ	Alg	2424296.453	1.84338	9.8	10.2	pg	BAN 245

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
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MT	..	11 39 12 -60 0.2	Uitterdijk	1934	Johannesburg	*	*	*	*
MU	..	12 7 42 -43 54.4	van Gent	1934	Johannesburg	*	*	*	
MV	..	12 18 44 -48 21.3	van Gent	1934	Johannesburg	*	*	*	*
MW	..	12 22 56 -47 46.7	Voûte	1927	Lembang	*	*	*	*
MX	..	12 24 9 -48 55.3	van Gent	1934	Johannesburg	*	*	*	*
MY	HV 6430	13 4 46 -61 5.6	Swope	1934	Harvard				
MZ	HV 6431	13 7 30 -63 47.5	Swope	1934	Harvard				
NN	HV 6432	13 7 56 -60 20.6	Swope	1934	Harvard	*			
NO	HV 6433	13 8 43 -58 38.6	Swope	1934	Harvard	*			
NP	HV 6434	13 10 11 -61 41.0	Swope	1934	Harvard	*			
NQ	HV 6435	13 10 39 -58 24.3	Swope	1934	Harvard				
NR	HV 6439	13 13 7 -59 32.9	Swope	1934	Harvard				
NS	HV 6443	13 15 20 -57 58.5	Swope	1934	Harvard				
NT	HV 6445	13 15 47 -61 14.8	Swope	1934	Harvard				
NU	HV 6447	13 16 36 -64 3.4	Swope	1934	Harvard	*			
NV	HV 6448	13 16 45 -56 17.0	Swope	1934	Harvard				
NW	145.1934	13 16 55 -60 16.8	Luyten	1934	Harvard	*			
NX	HV 6450	13 17 56 -62 10.7	Swope	1934	Harvard				
NY	HV 6453	13 19 9 -62 23.5	Swope	1934	Harvard				
NZ	146.1934	13 19 23 -62 47.1	Luyten	1934	Harvard	*			
OO	HV 6455	13 19 50 -62 38.3	Swope	1934	Harvard				
OP	HV 6456	13 20 13 -58 14.8	Swope	1934	Harvard	*			
OQ	HV 6457	13 20 49 -58 17.1	Swope	1934	Harvard				
OR	HV 6458	13 21 10 -61 48.8	Swope	1934	Harvard				
OS	235.1934	13 21 11 -58 49.6	Luyten	1934	Harvard	*			
OT	HV 6466	13 27 35 -63 24.2	Swope	1934	Harvard				
OU	HV 6467	13 28 16 -61 27.6	Swope	1934	Harvard	*			
OV	HV 6469	13 29 6 -62 20.5	Swope	1934	Harvard	*			
OW	150.1934	13 35 1 -61 49.6	Luyten	1934	Harvard	*			
OX	HV 6474	13 36 12 -63 32.4	Swope	1934	Harvard	*			
OY	HV 6476	13 36 20 -57 41.8	Swope	1934	Harvard				
OZ	HV 6479	13 40 4 -58 45.8	Swope	1934	Harvard				
PP	HV 6480	13 40 49 -60 28.9	Swope	1934	Harvard				
PQ	HV 6482	13 43 15 -63 17.1	Swope	1934	Harvard	*			
PR	HV 6485	13 46 23 -62 42.3	Swope	1934	Harvard				
PS	HV 6486	13 47 32 -58 24.0	Swope	1934	Harvard				
PT	HV 6487	13 48 44 -60 23.8	Swope	1934	Harvard				
PU	HV 6488	13 49 2 -59 26.8	Swope	1934	Harvard				
PV	HV 6489	13 49 45 -58 17.8	Swope	1934	Harvard				
PW	HV 6490	13 49 53 -57 6.2	Swope	1934	Harvard				
PX	HV 6491	13 50 15 -59 53.2	Swope	1934	Harvard				
PY	HV 6493	13 51 14 -57 45.2	Swope	1934	Harvard				
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QT	HV 6498	13 56 11 -62 6.9	Swope	1934	Harvard	*			
QU	HV 6499	13 56 13 -62 48.5	Swope	1934	Harvard	*			
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V 335	HV 6511	14 3 26 -58 51.0	Swope	1934	Harvard				
V 336	HV 6514	14 6 9 -56 53.6	Swope	1934	Harvard	*			
V 337	HV 6517	14 9 36 -62 33.6	Swope	1934	Harvard				
V 338	HV 6518	14 13 26 -63 1.3	Swope	1934	Harvard				
V 339	HV 6520	14 14 33 -61 5.4	Swope	1934	Harvard	*			
V 340	HV 6521	14 15 42 -63 6.0	Swope	1934	Harvard				
V 341	HV 6522	14 18 37 -63 12.1	Swope	1934	Harvard				

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MT	N	2426472		] 8	[15	pg	BAN 256
MU	U G			12.4	15.0	pg	Lwów Contr 2
MV	W	2425984.4059	0.3381606	14.2	14.7	pg	Lwów Contr 2
MW	Alg	2425984.4208	2.2815304	12.0	14.0	pg	BAN 123
MX	Alg	2425984.3102	1.199676	13.5	14.5	pg	Lwów Contr 2
MY	Cep	2426097.20	3.7186	13.0	14.3	pg	HA 90.178
MZ	Cep	2426063.5	10.353	12.4	13.6	pg	HA 90.178
NN	U G			13.2	[16.5:	pg	HA 90.178
NO	Ecl	2426485.30	1.69524	14.0	15.1	pg	HA 90.178
NP	Ecl	2425361.43	2.85294	9.9	10.6	pg	HA 90.178
NQ	Ecl	2426156.28	1.32036	13.7	14.3	pg	HA 90.178
NR	Ecl	2426062.51	0.48085	14.2	14.7	pg	HA 90.178
NS	L	2426190	345.5	11.6	[16.5	pg	HA 90.178
NT	Ecl	2425687.62	1.84735	14.4	15.2	pg	HA 90.178
NU	L	2425650	620:	14.6	[16.5	pg	HA 90.178
NV	Ecl	2426474.41	2.5054	13.4	14.1	pg	HA 90.178
NW	L	2425630	384	13.7	[16.5	pg	AN 6054; Minn Publ 2.91
NX	Ecl	2424700.51	1.7605	13.0	13.6	pg	HA 90.178
NY	Ecl	2426460.39	1.2952	11.8	12.8	pg	HA 90.178
NZ	L	2425620	382	12.3	[16.5	pg	AN 6054; Minn Publ 2.91
OO	Cep	2426118.0	12.88	12.7	14.6	pg	HA 90.178
OP	W	2426142.26	0.46231	13.1	13.8	pg	HA 90.178
OQ	L	2425430	547	13.7	[16.5	pg	HA 90.178
OR	L:	2426120	129	14.0	14.8	pg	HA 90.178
OS	L	2421344	433	11.0	15.4	pg	AN 6054; Minn Publ 2.116
OT	L	2425670	383	13.5	[16.5	pg	HA 90.178
OU	Ecl	2425411.22	1.00702	10.5	11.2	pg	HA 90.179
OV	Ecl	2423958.52	0.56860	10.5	11.3	pg	HA 90.179
OW	L	2426020	290	12.0	16.7	pg	AN 6054; Minn Publ 2.116
OX	Ecl	2426159.24	0.46698	13.7	14.8	pg	HA 90.179
OY	L	2426380	353.5	14.2	[16.5	pg	HA 90.179
OZ	W	2426118.32	0.35577	12.6	13.1	pg	HA 90.179
PP	L	2426165	314.5	12.9	14.4	pg	HA 90.179
PQ	Ecl	2426159.31	1.05716	10.5	11.2	pg	HA 90.179
PR	Ecl	2425684.51	1.17505	14.0	14.6	pg	HA 90.179
PS	Ecl	2426172.20	0.9621	14.8	16.0	pg	HA 90.179
PT	Ecl	2426118.24	2.50026	14.5	16.5	pg	HA 90.179
PU	Ecl	2426479.38	1.14524	13.1	14.3	pg	HA 90.179
PV	Ecl	2425684.50	1.91733	11.4	12.5	pg	HA 90.179
PW	Ecl	2424682.59	2.5034	11.3	11.8	pg	HA 90.179
PX	Ecl	2426179.28	1.18078	14.0	14.9	pg	HA 90.179
PY	L	2424700	390:	15.5	[16.5	pg	HA 90.179
PZ	Ecl	2426204.23	1.4396	13.8	14.6	pg	HA 90.179
QQ	L	2425680	323	14.3	16.7	pg	HA 90.179
QR	Ecl	2425413.27	1.14432	13.1	13.7	pg	HA 90.179
QS	Ecl	2426479.50	4.9387	12.1	13.7	pg	HA 90.179
QT	Ecl	2425384.32	4.59658	13.2	14.7	pg	HA 90.179
QU	L	2426090	220	12.5	[16.5	pg	HA 90.179
QV	Cl	2426485.30	0.45649	13.3	14.0	pg	HA 90.179
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QX	L	2426400	341	12.3	[16.5	pg	AN 6054; Minn Publ 2.116
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QZ	Cl	2425382.34	0.50202	13.0	14.5	pg	AN 6054; Minn Publ 2.116
V 335	L	2426175	256	14.3	16.1	pg	HA 90.180
V 336	L:	2425750	240	12.7	14.3	pg	HA 90.180
V 337	Ecl	2426479.37	1.86435	12.1	12.7	pg	HA 90.180
V 338	Ecl	2425413.20	1.1127	14.7	15.5	pg	HA 90.180
V 339	Cep	2426142.26	9.466	9.6	10.2	pg	HA 90.180
V 340	L	2426180	357	13.6	[16.5	pg	HA 90.180
V 341	L	2425690	342	13.3	[16.5	pg	HA 90.180

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V 343	..	11 22 25 -61 38.9	Oosterhoff	1936	Johannesburg	*	*	*	*
V 344	..	11 18 56 -60 18.7	Bruna	1936	Johannesburg	*	*	*	*
V 345	302.1935	11 37 58 -47 33.5	Luyten	1935	Harvard	*	*	*	
V 346	610.1936	11 38 3 -61 52.6	O'Connell	1936	Riverview	*	*	*	*
V 347	..	11 40 3 -46 30.4	van Gent	1936	Johannesburg	*	*	*	
V 348	..	11 43 27 -43 13.3	van Gent	1936	Johannesburg	*	*	*	*
V 349	..	11 44 46 -40 32.3	van Gent	1936	Johannesburg	*	*	*	*
V 350	611.1936	11 45 17 -63 5.8	O'Connell	1936	Riverview	*			
V 351	306.1935	11 45 27 -47 23.3	van Gent	1935	Johannesburg	*	*	*	
V 352	..	11 46 15 -48 58.3	van Gent	1935	Johannesburg	*	*	*	
V 353	..	11 46 39 -44 31.3	van Gent	1935	Johannesburg	*	*	*	*
V 354	307.1935	11 46 39 -47 22.3	van Gent	1935	Johannesburg	*	*	*	
V 355	..	11 48 53 -44 38.5	van Gent	1935	Johannesburg	*	*	*	
V 356	..	11 50 14 -48 35.4	van Gent	1936	Johannesburg	*	*	*	*
V 357	..	11 50 51 -39 20.3	van Gent	1935	Johannesburg	*	*	*	
V 358	..	11 52 27 -48 36.3	van Gent	1935	Johannesburg	*	*	*	
V 359	..	11 53 22 -41 12.4	van Gent	1935	Johannesburg	*	*	*	
V 360	..	11 54 58 -41 56.4	van Gent	1935	Johannesburg	*	*	*	
V 361	..	11 56 51 -48 26.8	van Gent	1936	Johannesburg	*	*	*	*
V 362	..	11 58 28 -42 50.4	van Gent	1935	Johannesburg	*	*	*	
V 363	..	12 0 11 -46 36.7	van Gent	1936	Johannesburg	*	*	*	*
V 364	..	12 0 5 -47 11.3	van Gent	1936	Johannesburg	*	*	*	*
V 365	..	12 4 12 -47 55.1	van Gent	1936	Johannesburg	*	*	*	*
V 366	..	12 4 1 -46 15.5	van Gent	1935	Johannesburg	*	*	*	
V 367	..	12 6 0 -40 15.4	van Gent	1935	Johannesburg	*	*	*	
V 368	HV 1293	12 7 52 -49 39.0	Leavitt	1906	Harvard	*			
V 369	614.1936	12 9 42 -54 15.8	O'Connell	1936	Riverview	*			
V 370	..	12 12 37 -45 53.5	van Gent	1936	Johannesburg	*	*	*	
V 371	..	12 13 6 -42 30.3	van Gent	1935	Johannesburg	*	*	*	*
V 372	314.1935	12 15 1 -43 59.1	van Gent	1935	Johannesburg	*	*	*	
V 373	..	12 20 44 -45 16.3	van Gent	1935	Johannesburg	*	*	*	
V 374	..	12 21 25 -42 46.3	van Gent	1935	Johannesburg	*	*	*	*
V 375	..	12 27 23 -45 51.9	van Gent	1936	Johannesburg	*	*	*	
V 376	..	12 28 9 -44 52.3	van Gent	1935	Johannesburg	*	*	*	*
V 377	699.1935	12 51 36 -47 31.0	O'Connell	1935	Riverview	*		*	
V 378	HV 2945	13 12 28 -61 51.3	Leavitt	1907	Harvard	*		*	*
V 379	616.1936	13 18 55 -59 15.6	O'Connell	1936	Riverview	*		*	*
V 380	617.1936	13 20 47 -61 21.4	O'Connell	1936	Riverview	*		*	*
V 381	HV 2947	13 44 2 -57 5.0	Leavitt	1907	Harvard	*		*	*
V 382	..	11 29 17 -60 17.3	Uitterdijk	1936	Johannesburg	*	*	*	*
V 383	..	11 33 8 -60 2.5	Bruna	1936	Johannesburg	*	*	*	*
V 384	..	11 34 37 -61 37.1	Oosterhoff	1928	Johannesburg	*	*	*	*
V 385	..	11 35 41 -48 6.3	Mergentaler	1937	Johannesburg	*	*	*	*
V 386	..	11 36 2 -48 0.2	Mergentaler	1937	Johannesburg	*	*	*	*
V 387	..	11 39 16 -62 38.1	Bruna	1936	Johannesburg	*	*	*	*
V 388	..	11 56 42 -45 4.9	Mergentaler	1937	Johannesburg	*	*	*	*
V 389	..	12 3 38 -44 34.7	Mergentaler	1937	Johannesburg	*	*	*	
V 390	..	12 4 22 -47 43.2	Mergentaler	1937	Johannesburg		*	*	
V 391	..	12 14 14 -47 42.6	Mergentaler	1937	Johannesburg		*	*	
V 392	..	12 19 8 -46 49	van Gent	1935	Johannesburg	*	*	*	
V 393	..	12 19 28 -44 0.1	Mergentaler	1937	Johannesburg	*	*	*	*
V 394	..	12 24 33 -46 34.3	Mergentaler	1937	Johannesburg	*	*	*	*
V 395	..	12 29 32 -47 25.6	Mergentaler	1937	Johannesburg		*	*	*
V 396	HV 6436	13 10 59 -61 3.3	Swope	1934	Harvard	*			
V 397	HV 6437	13 11 14 -62 9.9	Swope	1934	Harvard				
V 398	HV 6440	13 13 30 -60 11.0	Swope	1934	Harvard				
V 399	HV 6444	13 15 36 -59 14.6	Swope	1934	Harvard				
V 400	HV 6446	13 15 58 -61 38.0	Swope	1934	Harvard				
V 401	HV 6452	13 18 54 -59 56.6	Swope	1934	Harvard	*			
V 402	HV 6460	13 21 40 -63 4.0	Swope	1934	Harvard	*			
V 403	HV 6462	13 22 56 -58 47.6	Swope	1934	Harvard				

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
			CENTAURUS				
V 342	Irr			m 14.6	[16.0	pg	BAN 275
V 343	W	2425301.535	0d5877106	13.1	13.7	pg	BAN 275; 289
V 344	Alg	2424516.663	1.891912	12.2	13.0	pg	BAN 280
V 345	SR	2425675	81	13.5	15.1	pg	Lwów Contr 5, corr. 10
V 346	Alg	2427985.213	6.321901	8.34	8.68	pg	AN 6216; Riverview Publ 2.5
V 347	L	2425615	268	14.0	[15.5	pg	Lwów Contr 5, corr. 10
V 348	Alg	2425355.4320	2.1524026	10.7	13.4	pg	Lwów Contr 5, corr. 10
V 349	W	2425362.3752	0.45563292	13.87	14.46	pg	Lwów Contr 5, corr. 10
V 350	Alg	2427892.86	3.217	10.5	11.0	pg	AN 6216
V 351	L	2426090	370	14.0	15.5	pg	Lwów Contr 4
V 352	L	2426124	240.7	12.5	15.1	pg	Lwów Contr 4
V 353	Alg	2426171.562	6.68525	13.0	15.3	pg	Lwów Contr 4; 6
V 354	L	2425738	150.4	13.8	[16	pg	Lwów Contr 4
V 355	SR	2426130	81	12.0	13.1	pg	Lwów Contr 4
V 356	W	2425351.3581	0.3109235	14.7	15.0	pg	Lwów Contr 5, corr. 10
V 357	SR	2425657.2	63.14	13.8	14.7	pg	Lwów Contr 4
V 358	L	2425695	231.9	13.9	15.8	pg	Lwów Contr 4
V 359	N			13.8	[16	pg	Lwów Contr 4
V 360	L	2426015	187.1	13.2	15.7	pg	Lwów Contr 4
V 361	L	2425347.0	174.5	14.2	16.2	pg	Lwów Contr 5, corr. 10
V 362	L	2425973	275.9	12.7	[16	pg	Lwów Contr 4
V 363	Alg	2425354.384	2.862479	15.1	15.7	pg	Lwów Contr 5, corr. 10
V 364	Cl	2425350.3607	0.5513845	15.0	16.2	pg	Lwów Contr 5, corr. 10
V 365	Alg	2425361.44	9.5508	14.0	15.0	pg	Lwów Contr 5, corr. 10
V 366	L	2426124	247.7	11.8	16.1	pg	Lwów Contr 4
V 367	L	2426125	265.2	13.1	[16	pg	Lwów Contr 4
V 368	L	2427615	175	10.2	11.0	pg	HC 122; AN 4152
V 369	L	2427620	105	9.0	9.9	pg	AN 6216
V 370	L	2425700	403	13.2	[16.7	pg	Lwów Contr 5, corr. 10
V 371	Cl	2426174.204	0.44611598	13.5	15.3	pg	Lwów Contr 4; 6
V 372	L	2425973	316.7	11.0	16.2	pg	Lwów Contr 4
V 373	U G:			13.3	15.8	pg	Lwów Contr 4
V 374	Cl	2426173.939	0.5435242	14.7	15.8	pg	Lwów Contr 4; 6
V 375	L	2425695.0	280.0	12.2	[16.0	pg	Lwów Contr 5, corr. 10
V 376	Cl	2426174.043	0.4662865	15.0	15.6	pg	Lwów Contr 4; 6
V 377	Alg	2427472.874	8.25158	8.44	9.20	pg	AN 6168; Riverview Publ 1.8
V 378	Cep	2427559.71	6.4582	9.32	9.93	pg	HC 130; AN 4196
V 379	Alg	2427569.902	1.874687	8.77	9.80	pg	AN 6216; Riverview Publ 1.40
V 380	β	2427268.204	1.087226	9.458	10.142	pg	AN 6216; Riverview Publ 1.45
V 381	Cep	2427572.903	5.07886	7.59	8.85	pg	HC 130; AN 4196
V 382	Alg	2425329.484	6.0137	13.3	13.9	pg	BAN 286
V 383	Alg	2425352.31	6.78459	13.1	13.7	pg	BAN 288
V 384	Alg	2425056.372	12.63524	11.8	12.38	pg	BAN 292
V 385	Alg	2425361.4638	1.062665	12.9	13.5	pg	Lwów Contr 6
V 386	Alg	2425650.331	1.383374	14.6	15.2	pg	Lwów Contr 6
V 387	Alg	2425393.269	12.77143	12.9	13.7	pg	BAN 288
V 388	β	2425354.4518	4.4633148	14.7	15.7	pg	Lwów Contr 6
V 389	L	2425415	278.5	14.6	[17	pg	Lwów Contr 6
V 390	L?	2425646	366?	15.5	[16	pg	Lwów Contr 6
V 391	L	2425338	284	14.0	15.8	pg	Lwów Contr 6
V 392	Irr			15.0	16.0	pg	Lwów Contr 4
V 393	Alg	2425362.417	3.185704	13.3	13.9	pg	Lwów Contr 6
V 394	Cl	2425354.399	0.5223834	15.2	16.1	pg	Lwów Contr 6
V 395	L	2425500	370	12.2	14.2	pg	Lwów Contr 6
V 396	Irr:			10.0	10.6	pg	HA 90.178
V 397	Irr:			14.3	15.8	pg	HA 90.178
V 398	Irr			11.9	13.9	pg	HA 90.178
V 399	Ecl			13.0	13.7	pg	HA 90.178
V 400	SR:			14.2	15.1	pg	HA 90.178
V 401	Irr:			11.1	11.6	pg	HA 90.178
V 402	Ecl			9.8	10.3	pg	HA 90.178
V 403	SR:			11.6	13.1	pg	HA 90.178

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		CENTAURUS							
V 404	HV 6465	13h26m 9s -59°31.'0	Swope	1934	Harvard				
V 405	HV 6468	13 28 39 -59 48.7	Swope	1934	Harvard				
V 406	HV 6471	13 34 30 -63 25.3	Swope	1934	Harvard				
V 407	HV 6475	13 36 13 -62 46.2	Swope	1934	Harvard				
V 408	HV 6477	13 38 43 -61 42.4	Swope	1934	Harvard				
V 409	HV 6478	13 39 1 -58 27.8	Swope	1934	Harvard				
V 410	HV 6481	13 42 16 -62 5.6	Swope	1934	Harvard				
V 411	HV 6484	13 44 45 -63 34.0	Swope	1934	Harvard				
V 412	HV 6492	13 50 40 -57 13.4	Swope	1934	Harvard	*			
V 413	HV 6502	13 57 42 -58 24.6	Swope	1934	Harvard	*			
V 414	HV 6508	14 1 20 -61 34.0	Swope	1934	Harvard				
V 415	HV 7380	14 7 10 -44 25.3	Hoffleit	1936	Harvard	*			
V 416	HV 6515	14 8 30 -60 16.0	Swope	1934	Harvard				
V 417	HV 6516	14 8 33 -61 25.9	Swope	1934	Harvard				
V 418	HV 6519	14 13 35 -63 46.9	Swope	1934	Harvard	*			
		CEPHEUS							
AA	365.1929	22h 4m42s +56° 1.'8	Hoffmeister	1929	Sonneberg	*	*		
AB	367.1929	22 7 34 +54 47.1	Hoffmeister	1929	Sonneberg	*	*		
AC	374.1929	22 23 38 +56 44.9	Hoffmeister	1929	Sonneberg		*		
AD	52.1933	0 24 18 +82 2.6	Morgenroth	1933	Sonneberg	*	*	*	
AE	53.1933	1 13 14 +79 29.3	Morgenroth	1933	Sonneberg	*	*	*	
AF	55.1933	2 0 53 +82 15.1	Morgenroth	1933	Sonneberg	*	*	*	
AG	56.1933	2 8 49 +78 18.8	Morgenroth	1933	Sonneberg	*	*	*	
AH	..	22 44 16 +64 32.0	Stebbins	1929	Washburn	*		*	*
AI	SVS 505	21 43 9 +56 27.6	Zessewitsch	1934	Pulkowo	*			
AK	SVS 572	22 25 11 +57 42.0	Lavdovsky	1934	Pulkowo	*	*	*	*
AL	395.1933	22 45 18 +58 3.6	Morgenroth	1933	Sonneberg	*	*	*	
AM	734.1933	21 41 32 +75 55.3	Morgenroth	1933	Sonneberg	*	*		
AN	994.1935	23 16 16 +82 27.8	Morgenroth	1935	Sonneberg	*			
AO	222.1935	22 32 22 +56 30.4	Morgenroth	1935	Sonneberg	*	*		
AP	..	0 16 2 +75 53.8	Baker	1937	Edinburgh	*	*	*	
AQ	SVS 594	7 48 46 +86 22.4	Beljawsky	1934	Simeis	*	*	*	*
AR	228.1937	22 53 28 +84 30.8	de Sitter	1937	Leiden	*		*	*
AS	SVS 604	22 57 57 +59 16.9	Gitz	1934	Moscow	*	*	*	*
AT	..	23 45 19 +77 28.7	Baker	1937	Edinburgh	*	*	*	
β	..	21 27 22 +70 7.3	Guthnick	1913	Babelsberg	*			*
		CETUS							
RT	HV 4841	1h12m 5s -24°22.'3	Hughes	1930	Harvard	*	*		*
RU	3.1931	0 55 42 -16 30.2	Hoffmeister	1931	Sonneberg	*	*		*
RV	11.1931	2 10 22 -11 16.0	Hoffmeister	1931	Sonneberg	*	*		
RW	12.1931	2 10 29 -12 40.5	Hoffmeister	1931	Sonneberg	*	*		*
RX	153.1932	0 28 36 -16 2.6	Hoffmeister	1932	Sonneberg	*	*	*	*
RY	163.1932	2 11 21 -20 59.0	Hoffmeister	1932	Sonneberg	*	*	*	
RZ	36.1929	2 23 36 - 8 48.5	Hoffmeister	1929	Sonneberg	*	*		
SS	..	2 43 26 + 1 20.8	Pólit	1933	Barcelona	*	*	*	
ST	HV 6377	0 43 55 + 1 53.0	Hughes	1934	Harvard				
SU	HV 6378	0 44 26 + 1 50.6	Hughes	1934	Harvard				
SV	..	0 29 56 -23 11.8	van Gent	1936	Johannesburg	*	*	*	*
SW	260.1934	1 33 21 + 0 51.2	Hoffmeister	1934	Sonneberg	*	*		
SX	HV 6375	0 42 47 - 1 51.6	Hughes	1934	Harvard				
SY	HV 6376	0 43 0 + 0 18.0	Hughes	1934	Harvard				
SZ	HV 6382	0 59 54 - 3 14.4	Hughes	1934	Harvard	*			
TT	155.1932	1 42 0 -10 15.1	Hoffmeister	1932	Sonneberg	*		*	
TU	741.1933	2 54 8 + 2 53.4	Hoffmeister	1933	Sonneberg	*	*		
TV	270.1934	3 9 26 + 2 22.8	Hoffmeister	1934	Sonneberg	*		*	*

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V 405	SR			12.8	13.7	pg	HA 90.179
V 406	Ecl			12.0	12.5	pg	HA 90.179
V 407	Ecl			13.9	14.5	pg	HA 90.179
V 408	Ecl			14.7	15.3	pg	HA 90.179
V 409	L			15.0	[16.5	pg	HA 90.179
V 410	SR:			12.6	13.5	pg	HA 90.179
V 411	Irr			13.0	13.9	pg	HA 90.179
V 412	Irr			8.5	9.6	pg	HA 90.179
V 413	Ecl			10.1	10.5	pg	HA 90.179
V 414	Ecl			15.2	16.0	pg	HA 90.180
V 415	Cep	2425771.300	26.735	12.5	14.3	pg	HB 902
V 416	Ecl			11.3	12.1	pg	HA 90.180
V 417	Irr			11.7	13.5	pg	HA 90.180
V 418	Irr:			8.7	9.5	pg	HA 90.180
				CEPHEUS			
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AB	L			13	15.5	pg	AN 5655; Sonn Mitt 17
AC	L			12.5	[15	pg	AN 5655; Sonn Mitt 17
AD	SR		166	10.8	13.2	pg	AN 5951
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AF	L	2428733	250:	12.5	[13.6	pg	AN 5951
AG	L	2426435	445.9	11.1	[16	pg	AN 5951
AH	β	2426440.495	1.77465	6.63	6.85	v	PA 37.156; 388
AI	β	2426550.256	4.22524	9.0	9.8	pg	NNVS 45; Tadj Circ 1
AK	Cep	2427273.26	7.2399	11.46	12.50	pg	Pulk Circ 11; NNVS 45; 47
AL	L	2427750	277.3	10.9	14.3	pg	AN 5981
AM	L	2427790	326	12.5	[14	v	AN 6002
AN	L	2428223	244.7	10.7	11.7	pg	AN 6183
AO	Alg	2426973.40	8.2392	13.5	14.5	pg	AN 6135
AP	L		125	12.8	[16	pg	MN 97.545
AQ	Cl	2428655.41	0.39447	12.2	13.4	v	NNVS 46; Pulk Circ 13
AR	SR		116	7.1	7.8	pv	BAN 302; AN 6353
AS	Irr			11.0	12.6	pg	NNVS 47
AT	SR		94	12.2	13.7	pg	MN 97.545
β	Cep?	2419985.350	0.1904795	3.32	3.37	pe	AN 4701; VJS 49.118
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RU	Cl	2426964.019	0.5863003	10.5	12	pg	AN 5791
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RW	Alg	2427422.2025	0.975179	9	10	pg	AN 5791
RX	Cl	2425938.272	0.5737064	10.8	12.1	pg	AN 5919
RY	L	2425795	374	8.4	13.0	v	AN 5919
RZ	Cl	2426585.448	0.510633	11.0	12.0	v	AN 5655
SS	Alg	2427483.375	2.9739	9.4	12.6	v	Fabra Bol 2.88; AN 6021
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SU	Cl	2425197.35	0.54264	13.7	15.2	pg	HA 90.172
SV	W	2425887.425	0.5841870	14.8	15.2	pg	BAN 275
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SY	Irr			13.5	14.4	pg	HA 90.172
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TT	W	2427662.456	0.4862	9.8	10.8	v	AN 5919
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TV	Alg	2426692.494	4.55155	8.77	9.10	v	AN 6058

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Y	HV 5022	13h 32m 10s -64° 31.'6	Florence	1931	Harvard	*	*		
Z	HV 5037	13 43 7 -69 58.4	Florence	1931	Harvard	*	*		
RR	HV 5038	13 43 9 -66 27.7	Florence	1931	Harvard		*		
RS	HV 5039	13 44 6 -68 22.3	Florence	1931	Harvard	*	*		
RT	HV 5040	13 44 8 -69 40.6	Florence	1931	Harvard		*		*
RU	HV 5041	13 45 14 -69 0.0	Florence	1931	Harvard		*		
RV	HV 5042	13 45 55 -64 54.2	Florence	1931	Harvard		*		
RW	HV 5043	13 46 0 -68 21.5	Florence	1931	Harvard	*	*		
RX	HV 5044	13 46 26 -69 24.2	Florence	1931	Harvard	*	*		
RY	HV 5045	13 47 58 -66 47.8	Florence	1931	Harvard		*		
RZ	HV 5046	13 49 34 -64 28.5	Florence	1931	Harvard	*	*		
SS	HV 5047	13 50 4 -65 24.6	Florence	1931	Harvard		*		
ST	HV 5049	13 53 26 -69 2.1	Florence	1931	Harvard		*		
SU	HV 5050	13 53 30 -65 17.4	Florence	1931	Harvard	*	*		
SV	HV 5051	13 53 58 -67 12.5	Florence	1931	Harvard		*		
SW	HV 5052	13 54 4 -70 0.6	Florence	1931	Harvard		*		
SX	HV 5053	13 54 6 -65 23.2	Florence	1931	Harvard		*		
SY	HV 5054	13 55 40 -69 8.1	Florence	1931	Harvard	*	*		*
SZ	HV 5056	13 56 47 -70 5.7	Florence	1931	Harvard		*		
TT	HV 5057	13 56 48 -67 57.0	Florence	1931	Harvard	*	*		
TU	HV 5059	13 58 7 -65 19.3	Florence	1931	Harvard	*	*		
TV	HV 5062	13 59 5 -69 3.2	Florence	1931	Harvard		*		
TW	HV 5064	14 0 13 -69 40.9	Florence	1931	Harvard	*	*		
TX	HV 5065	14 0 27 -66 52.8	Florence	1931	Harvard	*	*		
TY	HV 5067	14 1 4 -67 46.4	Florence	1931	Harvard		*		
TZ	HV 5068	14 3 14 -68 10.4	Florence	1931	Harvard		*		
UU	HV 5069	14 3 26 -66 35.2	Florence	1931	Harvard		*		
UV	HV 5070	14 4 38 -68 12.9	Florence	1931	Harvard		*		
UW	HV 5071	14 4 50 -67 29.7	Florence	1931	Harvard	*	*		
UX	HV 5072	14 7 58 -67 11.1	Florence	1931	Harvard		*		
UY	HV 5073	14 9 46 -67 29.9	Florence	1931	Harvard	*	*		
UZ	HV 5074	14 12 51 -67 3.2	Florence	1931	Harvard	*	*		*
VV	HV 5076	14 13 14 -66 13.9	Florence	1931	Harvard		*		
VW	HV 5077	14 13 55 -65 54.9	Florence	1931	Harvard	*	*		*
VX	HV 5078	14 14 33 -69 29.8	Florence	1931	Harvard	*	*		
VY	HV 5080	14 15 50 -69 30.5	Florence	1931	Harvard		*		
VZ	HV 5081	14 16 4 -65 38.3	Florence	1931	Harvard		*		
WW	HV 5082	14 17 2 -64 36.1	Florence	1931	Harvard		*		
WX	HV 5083	14 17 7 -68 41.2	Florence	1931	Harvard	*	*		
WY	HV 5085	14 18 41 -64 32.8	Florence	1931	Harvard		*		
WZ	HV 5086	14 19 51 -69 4.8	Florence	1931	Harvard		*		
XX	HV 5087	14 21 4 -68 11.0	Florence	1931	Harvard	*	*		
XY	HV 5091	14 22 53 -66 12.2	Florence	1931	Harvard		*		
XZ	HV 5096	14 27 39 -69 24.2	Florence	1931	Harvard		*		
YY	HV 5097	14 28 12 -66 9.1	Florence	1931	Harvard		*		
YZ	HV 5098	14 28 22 -67 11.4	Florence	1931	Harvard		*		
ZZ	HV 5105	14 30 6 -66 3.9	Florence	1931	Harvard		*		
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AB	HV 5109	14 31 39 -66 36.5	Florence	1931	Harvard		*		
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AG	HV 5117	14 38 45 -67 30.2	Florence	1931	Harvard		*		
AH	HV 5120	14 40 31 -69 14.4	Florence	1931	Harvard		*		
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AK	HV 5123	14 41 7 -68 27.4	Florence	1931	Harvard		*		
AL	HV 5124	14 41 13 -70 2.1	Florence	1931	Harvard		*		
AM	HV 5128	14 44 48 -68 50.3	Florence	1931	Harvard		*		
AN	441.1933	13 56 50 -65 9.2	Luyten	1933	Harvard	*			
AO	HV 6503	13 59 1 -64 36.0	Swope	1934	Harvard				
AP	HV 6483	13 44 2 -65 0.4	Swope	1934	Harvard				

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RW	L	2425670	310	14.9	[16.5	pg	HB 883
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RZ	Ecl	2425384.34	3.6933	14.1	15.2	pg	HB 883
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SU	L	2426100	224.3	14.9	[16.5	pg	HB 883
SV	Ecl			13.0	15.0	pg	HB 883
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TT	L	2423960	326	14.0	[16.3	pg	HB 883
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TY	Sh			12.5	13.5	pg	HB 883
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UW	L?	2426150	190.5	13.0	14.8	pg	HB 883
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UY	Sh			13.3	14.2	pg	HB 883
UZ	L	2421700	528	11.1	15.8	pg	HB 883
VV	L	2425460	423.5	13.0	[16.5	pg	HB 883
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AP	L			15.0	[16.5	pg	HA 90.179

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SX	394.1931	12 4 32 +18 42	Baade	1931	Bergedorf	*		*	
SY	319.1931	12 5 15 +20 3.6	Zinner	1931	Bamberg	*			
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CV	Cl	2423992.303	0.4709644	13.2	14.2	pg	BAN 243
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CX	Cl	2424029.214	0.5225518	14.4	15.2	pg	BAN 243
CY	Cl	2423881.52	0.5159328	13.1	14.3	pg	BAN 243; AN 5967
CZ	Cl	2423883.558	0.4429593	14.1	15.1	pg	BAN 243
DD	Cl	2424019.238	0.6096285	14.1	15.7	pg	BAN 243
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DG	Irr			13.1	15.3	pg	BAN 243
DH	Cl	2423877.56	0.7630378	14.3	15.2	pg	BAN 243; AN 5967
DI	L			13.5	14.5	pg	BAN 243
DK	Cl	2423880.544	0.4613204	13.6	15.0	pg	BAN 243
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DZ	Ecl	2426118.540	2.6696	13.0	13.8	pg	HA 90.220
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EG	L	2426180	128.1	13.6	16.5	pg	HA 90.220
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EI	Irr:			14.7	15.9	pg	HA 90.220
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EL	L	2424700	239	14.3	[16.5	pg	HA 90.220
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FL	Irr:			13.6	14.5	pg	HA 90.221
FM	L	2424720	270	14.9	[16.5	pg	HA 90.222
FN	L	2424760	242.5	15.4	[16.5	pg	HA 90.222
FO	SR		100±20	13.3	15.0	pg	HA 90.222
FP	L	2424700	240	14.8	[16.5	pg	HA 90.222

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R C S L
		CORONA AUSTRINA				
		h m s ° ′				
FQ	HV 7165	17 58 41 -38 13.6	Swope	1935	Harvard	
FR	HV 7169	17 59 0 -38 12.9	Swope	1935	Harvard	
FS	HV 7177	17 59 21 -37 31.2	Swope	1935	Harvard	
FT	311.1933	17 59 34 -37 26.4	Luyten	1933	Harvard	*
FU	HV 7181	17 59 37 -37 50.1	Swope	1935	Harvard	
FV	HV 7182	17 59 40 -37 15.5	Swope	1935	Harvard	
FW	HV 7186	18 0 3 -37 32.7	Swope	1935	Harvard	*
FX	HV 7188	18 0 17 -37 39.0	Swope	1935	Harvard	
FY	HV 7191	18 0 33 -37 29.5	Swope	1935	Harvard	
FZ	HV 7192	18 0 37 -37 16.8	Swope	1935	Harvard	
GG	HV 7196	18 0 45 -37 53.5	Swope	1935	Harvard	
GH	HV 7204	18 1 12 -37 25.4	Swope	1935	Harvard	
GI	HV 7205	18 1 12 -37 27.9	Swope	1935	Harvard	
GK	HV 7206	18 1 12 -37 46.3	Swope	1935	Harvard	
GL	HV 7208	18 1 14 -37 15.8	Swope	1935	Harvard	
GM	HV 7209	18 1 14 -37 59.1	Swope	1935	Harvard	
GN	HV 7210	18 1 15 -37 8.2	Swope	1935	Harvard	
GO	HV 7211	18 1 16 -37 23.2	Swope	1935	Harvard	
GP	HV 7213	18 1 19 -37 33.7	Swope	1935	Harvard	
GQ	HV 7215	18 1 23 -38 5.8	Swope	1935	Harvard	
GR	HV 7222	18 1 55 -37 38.5	Swope	1935	Harvard	
GS	HV 7225	18 2 2 -37 1.8	Swope	1935	Harvard	*
GT	HV 7227	18 2 8 -38 15.3	Swope	1935	Harvard	
GU	HV 7229	18 2 11 -37 24.4	Swope	1935	Harvard	
GV	HV 7230	18 2 19 -37 27.0	Swope	1935	Harvard	
GW	HV 7235	18 2 38 -37 9.1	Swope	1935	Harvard	
GX	HV 7236	18 2 38 -37 25.3	Swope	1935	Harvard	
GY	HV 7237	18 2 47 -37 18.1	Swope	1935	Harvard	
GZ	HV 7244	18 3 8 -37 13.4	Swope	1935	Harvard	
HH	HV 7247	18 3 13 -38 3.9	Swope	1935	Harvard	
HI	HV 7254	18 3 47 -37 4.5	Swope	1935	Harvard	
HK	HV 7259	18 4 3 -38 12.6	Swope	1935	Harvard	
HL	HV 7262	18 4 7 -37 46.0	Swope	1935	Harvard	
HM	HV 7263	18 4 15 -37 45.7	Swope	1935	Harvard	
HN	HV 7265	18 4 23 -37 22.4	Swope	1935	Harvard	
HO	HV 7271	18 4 37 -37 47.4	Swope	1935	Harvard	
HP	HV 7273	18 4 44 -37 58.8	Swope	1935	Harvard	
HQ	HV 7280	18 5 4 -37 40.3	Swope	1935	Harvard	*
HR	HV 7285	18 5 39 -38 0.7	Swope	1935	Harvard	
HS	HV 7293	18 6 3 -37 14.1	Swope	1935	Harvard	
HT	HV 7298	18 6 24 -38 11.3	Swope	1935	Harvard	
HU	HV 7304	18 6 54 -37 56.6	Swope	1935	Harvard	
HV	HV 7308	18 7 7 -37 33.8	Swope	1935	Harvard	
HW	HV 7310	18 7 12 -37 23.2	Swope	1935	Harvard	
HX	HV 7311	18 7 12 -38 5.6	Swope	1935	Harvard	
HY	HV 7312	18 7 16 -37 19.2	Swope	1935	Harvard	
HZ	HV 7314	18 7 27 -37 20.1	Swope	1935	Harvard	
II	HV 7317	18 7 32 -37 11.2	Swope	1935	Harvard	
IK	HV 7323	18 7 46 -37 41.1	Swope	1935	Harvard	
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IM	HV 7333	18 8 28 -37 3.8	Swope	1935	Harvard	
IN	HV 7337	18 8 38 -38 7.8	Swope	1935	Harvard	
IO	HV 7353	18 9 52 -37 27.4	Swope	1935	Harvard	
IP	HV 7356	18 10 1 -37 59.4	Swope	1935	Harvard	
IQ	HV 7361	18 11 3 -37 24.8	Swope	1935	Harvard	
IR	HV 7368	18 11 35 -37 48.8	Swope	1935	Harvard	
IS	HV 7372	18 12 46 -38 6.5	Swope	1935	Harvard	
IT	HV 7373	18 13 22 -37 26.6	Swope	1935	Harvard	*
IU	HV 7374	18 13 32 -38 19.3	Swope	1935	Harvard	
IV	HV 7201	18 1 5 -38 5.8	Swope	1935	Harvard	
IW	HV 7243	18 3 6 -38 15.2	Swope	1935	Harvard	
IX	HV 7275	18 4 55 -38 5.1	Swope	1935	Harvard	

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FT	L	2424400	120.5	13.4	16.0:	pg	AN 5975; Minn Publ 2.118
FU	L	2423910	99	13.8	16.3	pg	HA 90.222
FV	L	2424720	199	15.2	[16.5	pg	HA 90.222
FW	L	2425830	114.2	13.8	15.6	pg	HA 90.222
FX	Ecl	2426145.250	2.0475	14.4	15.4	pg	HA 90.222
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GH	L	2426590	299.6	14.7	[16.5	pg	HA 90.222
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GL	Cl	2426179.440	0.47233	15.2	16.2	pg	HA 90.223
GM	L	2426110	224.6	13.5	[16.5	pg	HA 90.223
GN	Cl	2426125.450	0.53849	14.6	15.4	pg	HA 90.223
GO	Cl	2426180.310	0.53040	15.0	16.1	pg	HA 90.223
GP	Cl	2424712.660	0.43631	15.5	[16.5	pg	HA 90.223
GQ	SR			14.8	16.4	pg	HA 90.223
GR	L	2426180	220	12.7	[16.5	pg	HA 90.223
GS	L	2425360	282	14.4	[16.5	pg	HA 90.223
GT	Cl	2426179.340	0.45711	15.4	16.7:	pg	HA 90.223
GU	L	2426170	341	13.7	[16.5	pg	HA 90.223
GV	Irr			14.0	16.0	pg	HA 90.223
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GX	Irr			14.0	15.2	pg	HA 90.223
GY	Irr			13.2	14.1	pg	HA 90.223
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HN	Cl	2425851.280	0.53668	15.1	16.1	pg	HA 90.224
HO	Cl	2425799.460	0.48744	15.3	16.4	pg	HA 90.224
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HU	Cl	2425801.500	0.7059	14.8	16.0	pg	HA 90.224
HV	Cl	2424728.630	0.65005	14.3	15.5	pg	HA 90.224
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HX	Cl	2426158.480	0.6593	14.9	15.8	pg	HA 90.224
HY	Irr			13.7	15.0	pg	HA 90.224
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IP	Cl	2426131.490	0.48807	14.2	15.4	pg	HA 90.225
IQ	Cl	2426102.570	0.450177	14.7	15.5	pg	HA 90.225
IR	Cl	2426120.390	0.50950	14.0	14.9	pg	HA 90.225
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IU	L	2424010	251.6	12.7	[16.5	pg	HA 90.222
IV	Irr:			14.3	15.3	pg	HA 90.223
IW	SR:			14.4	15.4	pg	HA 90.224
IX	Irr:			14.0	15.4	pg	

CORONA AUSTRINA

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		C O R O N A B O R E A L I S							
α	..	15h 30m 27s +27° 3'.1	Stebbins	1912	Urbana	*			
		C O R V U S							
W	286.1930	12h 2m 28s -12° 36'.1	Hoffmeister	1930	Sonneberg	*	*		*
X	288.1930	12 43 27 -18 57.9	Hoffmeister	1930	Sonneberg	*			
Y	287.1930	12 32 58 -14 26.7	Hoffmeister	1930	Sonneberg	*	*		
		C R A T E R							
U	279.1930	11h 7m 42s - 6° 45'.2	Hoffmeister	1930	Sonneberg	*	*		
V	281.1930	11 19 12 -16 7.8	Hoffmeister	1930	Sonneberg	*			*
W	283.1930	11 21 30 -17 22.5	Hoffmeister	1930	Sonneberg	*	*		
X	223.1932	11 43 51 - 9 53.4	Hoffmeister	1932	Sonneberg	*			
Y	280.1930	11 15 30 -24 22.3	Hoffmeister	1930	Sonneberg	*			
Z	282.1930	11 21 1 -21 56.3	Hoffmeister	1930	Sonneberg	*	*		
		C R U X							
TV	..	11h 56m 7s -63° 10'.9	Bruna	1930	Johannesburg	*	*	*	*
TW	..	11 58 9 -62 22.9	Bruna	1930	Johannesburg	*	*	*	*
TX	..	11 58 36 -60 26.5	Bruna	1930	Johannesburg	*	*	*	*
TY	..	12 1 27 -62 2.9	Bruna	1930	Johannesburg		*	*	*
TZ	..	12 4 36 -60 15.7	Bruna	1930	Johannesburg	*	*	*	*
UU	..	12 7 4 -62 38.7	Bruna	1930	Johannesburg	*	*	*	*
UV	..	12 7 17 -62 5.7	Bruna	1930	Johannesburg	*	*	*	*
UW	..	12 8 44 -64 7.6	Bruna	1930	Johannesburg	*	*	*	*
UX	..	12 12 40 -62 8.7	Bruna	1930	Johannesburg	*	*	*	*
UY	..	12 15 59 -63 48.5	Bruna	1930	Johannesburg	*	*	*	*
UZ	..	12 16 0 -57 16.6	Bruna	1930	Johannesburg	*	*	*	*
VV	..	12 17 58 -63 55.0	Bruna	1930	Johannesburg		*	*	*
VW	..	12 27 36 -62 57.2	Bruna	1930	Johannesburg	*		*	*
VX	..	12 28 44 -60 40.9	Bruna	1930	Johannesburg	*	*	*	*
VY	..	12 29 47 -62 42.1	Bruna	1930	Johannesburg	*	*	*	*
VZ	..	12 32 19 -63 20.4	Bruna	1930	Johannesburg	*	*	*	*
WW	..	11 51 28 -60 6.5	Uitterdijk	1932	Johannesburg	*	*	*	*
WX	..	11 58 38 -62 5.6	Uitterdijk	1932	Johannesburg	*	*	*	*
WY	..	12 3 21 -60 51.8	Uitterdijk	1932	Johannesburg	*	*	*	*
WZ	..	12 5 15 -60 29.7	Uitterdijk	1932	Johannesburg		*	*	*
XX	..	12 7 22 -61 22.4	Uitterdijk	1932	Johannesburg	*	*	*	*
XY	..	12 14 5 -63 12.4	Uitterdijk	1932	Johannesburg	*	*	*	*
XZ	..	12 15 38 -58 7.1	Uitterdijk	1932	Johannesburg	*	*	*	*
YY	..	12 26 14 -60 5.4	Uitterdijk	1932	Johannesburg	*	*	*	*
YZ	..	12 26 21 -59 18.7	Uitterdijk	1932	Johannesburg	*	*	*	*
ZZ	..	12 0 35 -62 56.9	Oosterhoff	1933	Johannesburg	*		*	*
AA	..	12 11 48 -61 55.4	Oosterhoff	1933	Johannesburg	*		*	*
AB	..	12 12 16 -57 36.5	Oosterhoff	1933	Johannesburg	*		*	*
AC	..	12 19 6 -63 27.5	Oosterhoff	1933	Johannesburg	*	*	*	*
AD	..	12 7 42 -61 32.4	Oosterhoff	1936	Johannesburg	*	*	*	*
AE	613.1936	11 53 32 -60 36.6	O'Connell	1936	Riverview	*			
AF	..	12 13 43 -62 36.4	Oosterhoff	1936	Johannesburg	*		*	*
AG	HV 1296	12 35 41 -59 14.7	Leavitt	1906	Harvard	*	*	*	*
AH	..	11 52 5 -61 20.3	Uitterdijk	1936	Johannesburg	*	*	*	
AI	..	12 0 56 -60 42.0	Oosterhoff	1933	Johannesburg	*			*
AK	..	12 9 1 -60 57.3	Oosterhoff	1936	Johannesburg	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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α	Alg	2423163.770	$17^d.360$	$2^m.31$	$2^m.42$	pe	AAS 2.110; ApJ 39.478
CORVUS							
W	W	2427861.361	$0^d.388083$	$10^m.5$	$11^m.4$	v	AN 5748
X	L	2427602	127	9.5	10.7	v	AN 5748
Y	Irr			10.2	11.0	v	AN 5748
CRATER							
U	L	2427590	170d	9m	[13m	v	AN 5748
V	β	2427460.525	0.702015	9.5	10.5	pg	AN 5748
W	Cl	2427459.387	0.412013	10	11.5	pg	AN 5748; 6171
X	Cl	2427858.345	0.73146	10	11	pg	AN 5919
Y	L		155	11.2	[13	v	AN 5748
Z	Alg	2427507.47	3.05175	10.5	11.5	pg	AN 5748
CRUX							
TV	Alg	2424691.679	$1^d.615336$	$13^m.5$	$14^m.4$	pg	BAN 207
TW	W	2424776.1574	0.3881358	12.4	12.9	pg	BAN 207
TX	Alg	2425381.56	61.50	13.6	14.1	pg	BAN 207
TY	Cep	2424774.063	4.9898	12.5	13.2	pg	BAN 207
TZ	Alg	2424791.045	1.045570	11.8	12.4	pg	BAN 207
UU	Alg	2424834.187	3.55272	13.4	14.3	pg	BAN 207
UV	Alg	2424478.843	16.120	13.0	14.0	pg	BAN 207
UW	Alg	2424949.157	6.35447	12.3	13.1	pg	BAN 207
UX	Alg	2426043.119	12.29745	11.7	12.1	pg	BAN 207
UY	Alg	2423917.373	1.40443	12.7	13.5	pg	BAN 207
UZ	Alg	2424943.58	56.252	11.1	11.6	pg	BAN 207
VV	Cep	2424778.988	6.1217	13.0	13.6	pg	BAN 207
VW	Cep	2424776.965	5.26485	10.3	11.3	pg	BAN 207
VX	Cep	2424772.481	12.2144	12.2	13.7	pg	BAN 207
VY	W	2424776.017	0.695599	12.38	13.13	pg	BAN 207
VZ	Alg	2424775.902	0.562905	12.9	14.0	pg	BAN 207
WW	Alg	2424955.312	1.147618	12.7	13.3	pg	BAN 240
WX	Alg	2425025.86	60.288	13.3	14.6	pg	BAN 240
WY	Alg	2425092.37	4.506645	13.0	13.6:	pg	BAN 240
WZ	Cl	2424251.902	0.451254	13.4	14.0	pg	BAN 240
XX	Alg	2425216.658	1.64283	13.3	13.7	pg	BAN 240
XY	Alg	2424537.884	1.024005	11.6	12.4	pg	BAN 240
XZ	Alg	2425241.395	0.8247965	12.6	13.1	pg	BAN 240
YY	W	2425275.192	0.5172918	12.8	13.0	pg	BAN 240
YZ	β	2425074.364	0.836736	13.0	13.5	pg	BAN 240
ZZ	β	2425439.670	1.862194	9.45	10.15	pg	BAN 245
AA	Alg	2425331.485	1.89382	10.8	11.4	pg	BAN 245
AB	Alg	2425330.28	1.70679	8.8	9.5	pg	BAN 245
AC	β	2424918.533	0.9041954	11.3	12.1	pg	BAN 245
AD	Cep	2424949.45	6.3982	11.1	11.9	pg	BAN 275
AE	Alg	2427957.47	3.4782	9.2	10.1	pg	AN 6216
AF	Alg	2424988.959	1.895669	10.3	11.1	pg	BAN 280
AG	Cep	2427437.489	3.83737	8.03	9.58	pg	HC 122; AN 4152
AH	SR	2425363	83	13.4	14.4	pg	BAN 288
AI	Alg	2425351.382	1.417722	9.2	10.3	pg	BAN 245
AK	L	2424300	275	13.6	[15.5	pg	BAN 289

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		CYGNUS							
GZ	288.1929	19h 24m 0s +34° 9'.1	Hoffmeister	1929	Sonneberg	*	*	*	
HH	289.1929	19 24 50 +32 40.6	Hoffmeister	1929	Sonneberg	*	*	*	
HI	290.1929	19 26 28 +30 41.2	Hoffmeister	1929	Sonneberg	*	*	*	
HK	291.1929	19 26 48 +34 8.4	Hoffmeister	1929	Sonneberg		*		
HL	292.1929	19 29 14 +27 58.9	Hoffmeister	1929	Sonneberg		*	*	
HM	293.1929	19 29 30 +36 38.0	Hoffmeister	1929	Sonneberg	*	*		
HN	294.1929	19 29 41 +28 43.0	Hoffmeister	1929	Sonneberg	*	*	*	
HO	295.1929	19 29 56 +38 19.6	Hoffmeister	1929	Sonneberg		*		
HP	296.1929	19 30 6 +40 18.5	Hoffmeister	1929	Sonneberg	*	*		
HQ	298.1929	19 30 20 +38 37.7	Hoffmeister	1929	Sonneberg		*		
HR	297.1929	19 30 32 +30 26.5	Hoffmeister	1929	Sonneberg	*	*	*	
HS	300.1929	19 32 44 +39 13.8	Hoffmeister	1929	Sonneberg	*	*		
HT	301.1929	19 34 47 +31 30.1	Hoffmeister	1929	Sonneberg	*	*	*	
HU	302.1929	19 34 58 +35 40.9	Hoffmeister	1929	Sonneberg	*	*		
HV	303.1929	19 36 24 +31 32.2	Hoffmeister	1929	Sonneberg	*	*	*	
HW	304.1929	19 36 30 +32 32.0	Hoffmeister	1929	Sonneberg	*	*	*	
HX	305.1929	19 36 44 +33 49.4	Hoffmeister	1929	Sonneberg	*	*	*	
HY	306.1929	19 36 54 +28 48.7	Hoffmeister	1929	Sonneberg	*	*	*	
HZ	308.1929	19 37 3 +35 53.0	Hoffmeister	1929	Sonneberg		*		
II	307.1929	19 37 8 +30 41.6	Hoffmeister	1929	Sonneberg	*	*	*	
IK	309.1929	19 38 42 +29 53.5	Hoffmeister	1929	Sonneberg	*	*	*	
IL	310.1929	19 39 1 +35 25.5	Hoffmeister	1929	Sonneberg		*		
IM	311.1929	19 39 32 +34 10.1	Hoffmeister	1929	Sonneberg	*	*		
IN	312.1929	19 40 19 +34 16.9	Hoffmeister	1929	Sonneberg		*		
IO	313.1929	19 40 44 +32 14.6	Hoffmeister	1929	Sonneberg	*	*	*	
IP	314.1929	19 40 57 +34 35.0	Hoffmeister	1929	Sonneberg	*	*		
IQ	315.1929	19 43 16 +32 10.5	Hoffmeister	1929	Sonneberg	*	*	*	
IR	317.1929	19 43 42 +37 36.3	Hoffmeister	1929	Sonneberg		*		
IS	318.1929	19 44 8 +40 28.9	Hoffmeister	1929	Sonneberg	*	*		
IT	319.1929	19 44 25 +33 25.2	Hoffmeister	1929	Sonneberg	*	*	*	
IU	320.1929	19 46 23 +33 54.7	Hoffmeister	1929	Sonneberg		*	*	
IV	321.1929	19 46 28 +34 4.2	Hoffmeister	1929	Sonneberg		*	*	
IW	322.1929	19 48 43 +35 2.0	Hoffmeister	1929	Sonneberg		*		
IX	323.1929	19 49 21 +31 55.8	Hoffmeister	1929	Sonneberg	*	*	*	
IY	324.1929	19 51 42 +31 29.8	Hoffmeister	1929	Sonneberg	*	*		
IZ	325.1929	19 51 42 +36 48.0	Hoffmeister	1929	Sonneberg	*	*		
KK	326.1929	19 52 13 +35 52.5	Hoffmeister	1929	Sonneberg		*		
KL	327.1929	19 54 2 +32 53.2	Hoffmeister	1929	Sonneberg	*	*		
KM	329.1929	19 56 33 +35 52.0	Hoffmeister	1929	Sonneberg		*		
KN	330.1929	19 58 2 +42 39.1	Hoffmeister	1929	Sonneberg	*	*		
KO	331.1929	20 2 6 +37 41.6	Hoffmeister	1929	Sonneberg		*		
KP	332.1929	20 2 15 +40 58.2	Hoffmeister	1929	Sonneberg	*	*	*	
KQ	333.1929	20 3 10 +43 4.9	Hoffmeister	1929	Sonneberg		*		
KR	327.1931	20 5 5 +30 15.5	Schneller	1931	Babelsberg	*		*	*
KS	334.1929	20 7 33 +36 56.2	Hoffmeister	1929	Sonneberg		*		
KT	335.1929	20 7 59 +36 13.2	Hoffmeister	1929	Sonneberg	*	*	*	
KU	436.1928	20 9 39 +47 4.9	Schneller	1928	Babelsberg	*	*	*	
KV	336.1929	20 11 54 +36 29.1	Hoffmeister	1929	Sonneberg	*	*		
KW	337.1929	20 19 30 +43 52.1	Hoffmeister	1929	Sonneberg		*		
KX	338.1929	20 20 44 +40 13.9	Hoffmeister	1929	Sonneberg		*		
KY	339.1929	20 22 15 +38 1.5	Hoffmeister	1929	Sonneberg	*	*		
KZ	340.1929	20 23 49 +40 44.6	Hoffmeister	1929	Sonneberg	*	*		
LL	341.1929	20 35 56 +35 29.5	Hoffmeister	1929	Sonneberg		*		
LM	342.1929	20 38 16 +36 56.0	Hoffmeister	1929	Sonneberg		*		
LN	Ross 286	20 53 26 +32 51.4	Ross	1928	Yerkes	*			
LO	340.1931	21 40 13 +45 24.3	Wachmann	1931	Bergedorf	*		*	
LP	50.1919	21 42 36 +47 39.3	Wolf	1919	Heidelberg	*		*	
LQ	343.1929	21 43 6 +52 6.3	Hoffmeister	1929	Sonneberg	*	*		
LR	339.1931	21 47 50 +45 47.6	Wachmann	1931	Bergedorf	*		*	
LS	344.1929	21 49 34 +48 19.9	Hoffmeister	1929	Sonneberg	*	*	*	
LT	345.1929	21 49 50 +49 26.7	Hoffmeister	1929	Sonneberg		*		

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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GZ	SR		120d	13m.5	14m.8	pg	AN 5655; Sonn Mitt 17
HH	L	2425310	330:	15.2	[17	pg	AN 5655; Sonn Mitt 17
HI	L	2425780	264	14.5	16.5	pg	AN 5655; Sonn Mitt 17
HK	Alg			13	15	pg	AN 5655; Sonn Mitt 17
HL	Alg			14.5	16	pg	AN 5655; Sonn Mitt 17
HM	L	2425623	384	11.5	[13.4	pg	AN 5655; Sonn Mitt 17
HN	L	2427965	73.6	12.9	14.9	v	AN 5655; Sonn Mitt 17
HO	L			14.5	[15.5	pg	AN 5655; Sonn Mitt 17
HP	L			13	[15.5	pg	AN 5655; Sonn Mitt 17
HQ	L			12.5	[15.5	pg	AN 5655; Sonn Mitt 17
HR	L	2425556	570:	12.7	17.0	pg	AN 5655; Sonn Mitt 17
HS	L	2425885.6	187.9	13	[15	pg	AN 5655; Sonn Mitt 17
HT	L	2425163	310	13.8	[17	pg	AN 5655; Sonn Mitt 17
HU	L	2425573.7	330.6	13.5	[15	pg	AN 5655; Sonn Mitt 17
HV	Irr			12.5	[15	pg	AN 5655; Sonn Mitt 17
HW	L	2425242	124.8	13.7	16.4	pg	AN 5655; Sonn Mitt 17
HX	L	2425418	292	13.3	[17.5	pg	AN 5655; Sonn Mitt 17
HY	L	2425334	344	13.0	15.7	pg	AN 5655; Sonn Mitt 17
HZ				14	15	pg	AN 5655; Sonn Mitt 17
II	SR			13.9	15.0	pg	AN 5655; Sonn Mitt 17
IK	L	2425199.2	77.3	13.1	14.5	pg	AN 5655; Sonn Mitt 17
IL	L			13	[15	pg	AN 5655; Sonn Mitt 17
IM	L	2425489	265.5	14.5	[17.5	pg	AN 5655; Sonn Mitt 17
IN	L			12.5	[15.5	pg	AN 5655; Sonn Mitt 17
IO	L	2425415	255.5	13.7	17.5	pg	AN 5655; Sonn Mitt 17
IP	L			12	[15.5	pg	AN 5655; Sonn Mitt 17
IQ	L	2425334	304	14.4	[17.5	pg	AN 5655; Sonn Mitt 17
IR	L			14.5	[15.5	pg	AN 5655; Sonn Mitt 17
IS	L			13	[15.5	pg	AN 5655; Sonn Mitt 17
IT	SR		67.4	13.0	15.2	pg	AN 5655; Sonn Mitt 17
IU	L?			13.5	15	pg	AN 5655; Sonn Mitt 17
IV	L?			14	15	pg	AN 5655; Sonn Mitt 17
IW	L			13	[15	pg	AN 5655; Sonn Mitt 17
IX	SR		169:	15.0	16.1	pg	AN 5655; Sonn Mitt 17
IY	Sh			14.5	16	pg	AN 5655; Sonn Mitt 17
IZ	L			12.2	[15	pg	AN 5655; Sonn Mitt 17
KK	L?			14.5	[15.5	pg	AN 5655; Sonn Mitt 17
KL	L	2425560	533	12.4	17	pg	AN 5655; Sonn Mitt 17
KM	L?			12.5	[15	pg	AN 5655, corr. 5735; Sonn Mitt 17
KN	Alg?			13	14.5	pg	AN 5655; Sonn Mitt 17
KO	L			14	[16.5	pg	AN 5655; Sonn Mitt 17
KP	Cl?			12.6	[13.8	pg	AN 5655; Sonn Mitt 17
KQ	L			14	[16	pg	AN 5655; Sonn Mitt 17
KR	Alg	2414500.45	0.8451526	9.02	9.67	v	AN 5793; 5828; 5859
KS	L			13	[16	pg	AN 5655; Sonn Mitt 17
KT	Cl?			12.7	13.3	pg	AN 5655; Sonn Mitt 17
KU	Ecl		0.73?	11.4	13.2	pg	AN 5619; 5828
KV	W?		1.986/n	12.0	12.7	pg	AN 5655; Sonn Mitt 17
KW	L			13	[16	pg	AN 5655; Sonn Mitt 17
KX	Sh			12.5	14	pg	AN 5655; Sonn Mitt 17
KY				12.5	13.5	pg	AN 5655; Sonn Mitt 17
KZ	L	2414430	404	12.3	17	pg	AN 5655; Sonn Mitt 17
LL	L			13	[16.5	pg	AN 5655; Sonn Mitt 17
LM	L			14	[16.5	pg	AN 5655; Sonn Mitt 17
LN	Alg	2426189.37	7.23	11.0	[13.0	v	AJ 897
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LP	L	2425836	416	12.6	[14	pg	AN 5007
LQ				12.5	13.5	pg	AN 5655; Sonn Mitt 17
LR	Sh			13.1	15.0	pg	AN 5805; 6115
LS	L	2426119	305	14.1	[16	pg	AN 5655; Sonn Mitt 17
LT	L			13	[16	pg	AN 5655; Sonn Mitt 17

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		CYGNUS							
LU	346.1929	21h 50m 13s +45° 53.'6	Hoffmeister	1929	Sonneberg	*	*	*	
LV	338.1931	21 51 13 +47 45.9	Wachmann	1931	Bergedorf	*		*	
LW	347.1929	21 51 31 +50 1.4	Hoffmeister	1929	Sonneberg	*			
LX	348.1929	21 52 7 +47 52.2	Hoffmeister	1929	Sonneberg	*	*	*	
LY	58.1919	21 52 21 +47 35.7	Wolf	1919	Heidelberg	*	*	*	
LZ	59.1919	21 52 58 +48 22.3	Wolf	1919	Heidelberg	*	*	*	
MM	353.1929	21 53 54 +49 6.6	Hoffmeister	1929	Sonneberg		*		
MN	352.1929	21 53 59 +43 57.5	Hoffmeister	1929	Sonneberg	*	*	*	
MO	351.1929	21 53 59 +45 4.1	Hoffmeister	1929	Sonneberg	*	*	*	
MP	355.1929	21 54 27 +45 23.4	Hoffmeister	1929	Sonneberg	*	*	*	
MQ	356.1929	21 54 52 +52 55.3	Hoffmeister	1929	Sonneberg		*		
MR	337.1931	21 55 5 +47 30.3	Wachmann	1931	Bergedorf	*		*	*
MS	357.1929	21 55 7 +45 30.6	Hoffmeister	1929	Sonneberg	*	*	*	
MT	359.1929	21 55 11 +51 32.1	Hoffmeister	1929	Sonneberg	*	*		
MU	358.1929	21 55 14 +44 13.0	Hoffmeister	1929	Sonneberg	*	*	*	
MV	361.1929	21 57 23 +49 47.8	Hoffmeister	1929	Sonneberg		*		
MW	312.1930	20 8 27 +32 34.5	Hoffmeister	1930	Sonneberg	*	*	*	*
MX	Ross 82	20 14 26 +36 5.4	Ross	1926	Yerkes	*		*	
MY	313.1930	20 16 9 +33 37.6	Hoffmeister	1930	Sonneberg	*			
MZ	89.1931	21 17 53 +37 2.3	Hoffmeister	1931	Sonneberg	*	*	*	*
NN	118.1928	19 45 56 +38 29.7	Baade	1928	Bergedorf				
NO	126.1928	19 46 7 +37 56.5	Baade	1928	Bergedorf	*			
NP	127.1928	19 46 16 +37 31.2	Baade	1928	Bergedorf	*			
NQ	80.1928	19 46 21 +37 53.2	Baade	1928	Bergedorf				
NR	123.1928	19 47 6 +37 31.2	Baade	1928	Bergedorf	*			
NS	89.1928	19 47 12 +39 13.5	Baade	1928	Bergedorf				
NT	116.1928	19 47 35 +38 45.4	Baade	1928	Bergedorf				
NU	130.1928	19 48 6 +38 51.9	Baade	1928	Bergedorf	*			
NV	88.1928	19 48 23 +38 30.7	Baade	1928	Bergedorf				
NW	91.1928	19 48 27 +38 38.7	Baade	1928	Bergedorf				
NX	110.1928	19 48 28 +37 37.3	Baade	1928	Bergedorf				
NY	92.1928	19 48 59 +37 40.3	Baade	1928	Bergedorf	*			
NZ	129.1928	19 49 5 +38 27.5	Baade	1928	Bergedorf	*			
OO	119.1928	19 49 10 +37 43.3	Baade	1928	Bergedorf				
OP	72.1928	19 49 14 +37 57.8	Baade	1928	Bergedorf				
OQ	99.1928	19 49 57 +37 36.1	Baade	1928	Bergedorf	*			
OR	131.1928	19 50 0 +37 43.3	Baade	1928	Bergedorf	*			
OS	112.1928	19 50 27 +38 56.5	Baade	1928	Bergedorf	*			
OT	94.1928	19 50 33 +38 2.9	Baade	1928	Bergedorf	*			
OU	107.1928	19 50 37 +38 25.9	Baade	1928	Bergedorf	*			
OV	71.1928	19 50 40 +38 9.7	Baade	1928	Bergedorf	*			
OW	95.1928	19 50 53 +37 14.6	Baade	1928	Bergedorf				
OX	108.1928	19 51 8 +38 59.2	Baade	1928	Bergedorf				
OY	76.1928	19 51 12 +38 41.1	Baade	1928	Bergedorf	*			
OZ	87.1928	19 51 41 +37 59.7	Baade	1928	Bergedorf				
PP	117.1928	19 51 45 +39 11.3	Baade	1928	Bergedorf				
PQ	120.1928	19 52 0 +37 35.5	Baade	1928	Bergedorf	*			
PR	70.1928	19 52 6 +38 0.2	Baade	1928	Bergedorf	*			
PS	111.1928	19 52 30 +37 44.1	Baade	1928	Bergedorf				
PT	73.1928	19 52 34 +38 28.7	Baade	1928	Bergedorf				
PU	67.1928	19 52 39 +37 36.1	Baade	1928	Bergedorf	*			
PV	93.1928	19 52 52 +37 27.1	Baade	1928	Bergedorf	*			
PW	115.1928	19 53 0 +39 14.5	Baade	1928	Bergedorf				
PX	132.1928	19 53 7 +37 21.6	Baade	1928	Bergedorf	*			
PY	104.1928	19 53 24 +38 39.0	Baade	1928	Bergedorf	*			
PZ	103.1928	19 53 55 +38 58.1	Baade	1928	Bergedorf	*			
QQ	81.1928	19 53 57 +37 49.3	Baade	1928	Bergedorf				
QR	105.1928	19 53 57 +38 11.6	Baade	1928	Bergedorf	*			
QS	106.1928	19 54 6 +38 32.2	Baade	1928	Bergedorf	*			
QT	100.1928	19 54 34 +38 33.3	Baade	1928	Bergedorf	*			
QU	97.1928	19 54 52 +37 57.2	Baade	1928	Bergedorf	*			
QV	128.1928	19 54 52 +38 30.5	Baade	1928	Bergedorf				

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CYGNUS

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LX	L	2426772	461	11.9	[16.5	pg	AN 5655; Sonn Mitt 17
LY	L	2425879	290	14.2	[16	pg	AN 5007
LZ	L	2426209	353	14.6	[16	pg	AN 5007
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MN	L	2426272	125.0	14.5	15.2	pg	AN 5655; Sonn Mitt 17
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MP	L	2426751	439	12.66	[15.4	pg	AN 5655; Sonn Mitt 17
MQ	L		400±	12	[16	pg	AN 5655; Sonn Mitt 17
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MS	L	2425968	216	14.4	15.2	pg	AN 5655; Sonn Mitt 17
MT				12	13	pg	AN 5655; Sonn Mitt 17
MU	β	2426194.461	3.76060	14.12	14.81	pg	AN 5655; Sonn Mitt 17
MV	L			13	14.5	pg	AN 5655; Sonn Mitt 17
MW	Cep	2426572.45	5.95465	10.1	10.9	pg	AN 5748
MX				10	11	pg	AJ 856
MY	Alg	2429163.539	2.0025974	8.89	9.48	pg	AN 5748
MZ	Cep	2427642.12	21.1655	10.79	12.20	v	AN 5791
NN	Ecl			14.3	14.9	pg	AN 5548
NO	Irr			13.1	14.1	pg	AN 5548; 5967
NP	Ecl		0.785	14.0	14.6	pg	AN 5548; 5967; ApJ 79.477
NQ	Ecl			14.8	15.5	pg	AN 5548; 5967
NR	Irr			13.5	14.0	pg	AN 5548; 5967
NS	Cl	2424270.602	0.550293	13.3	14.5	pg	AN 5548; 5967
NT	L	2425891	390	14.0	[16.0	pg	AN 5548; 5967; ApJ 79.479
NU	Ecl	2424055.425	0.281125	14.3	14.9	pg	AN 5548; 5967
NV	Ecl			15.7	[16.3	pg	AN 5548; 5967
NW	L	2423680	388	14.1	[16.5	pg	AN 5548; 5967; ApJ 79.479
NX	Ecl			14.6	[15.7	pg	AN 5548; 5967
NY	Ecl	2423352.52	12.0507	13.8	16.1	pg	AN 5548; 5967; ApJ 79.477
NZ	Ecl	2424047.285	0.405969	13.7	14.2	pg	AN 5548; 5967
OO	Ecl			14.1	14.6	pg	AN 5548; 5967
OP	Ecl	2423641.401	1.456275	14.8	15.2	pg	AN 5548; 5967
OQ	Irr			13.6	14.6	pg	AN 5548; 5967
OR	Ecl	2424059.318	1.104446	14.4	14.8	pg	AN 5548; 5967; ApJ 79.477
OS	Ecl		4.76269	14.7	15.5	pg	AN 5548; 5967; ApJ 79.477
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OU	Ecl	2425121.404	0.560327	15.5	15.9	pg	AN 5548; 5967; ApJ 79.477
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OW	Ecl	2423652.538	2.65882	14.6	16.3	pg	AN 5548; 5967
OX	Sh			15.6	16.2	pg	AN 5548; 5967
OY	Irr			14.6	15.7	pg	AN 5548; 5967
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PW	Ecl			13.4	14.0	pg	AN 5548
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PY	Ecl	2424029.338	0.4650306	14.8	15.2	pg	AN 5548; 5967
PZ	Irr			15.3	16.2	pg	AN 5548; 5967
QQ	Cl			14.4	15.1	pg	AN 5548; 5967
QR	Ecl		28.0/n	13.4	14.7	pg	AN 5548; 5967; ApJ 79.477
QS	Ecl	2423730.358	1.043994	13.2	13.8	pg	AN 5548; 5967; ApJ 79.477
QT	Ecl		10.0	14.7	[16.5	pg	AN 5548; 5967; ApJ 79.477
QU	Ecl	2424026.509	0.3469103	14.5	15.3	pg	AN 5548; 5967
QV	Sh			14.5	15.1	pg	AN 5548; 5967

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
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QW	86.1928	19h 54m 53s +37° 13.'0	Baade	1928	Bergedorf				
QX	69.1928	19 54 59 +37 58.3	Baade	1928	Bergedorf	*			
QY	109.1928	19 55 14 +37 22.5	Baade	1928	Bergedorf				
QZ	68.1928	19 55 28 +37 59.4	Baade	1928	Bergedorf	*			
V 335	125.1928	19 56 18 +37 50.2	Baade	1928	Bergedorf	*			
V 336	82.1928	19 56 20 +38 30.2	Baade	1928	Bergedorf				
V 337	101.1928	19 56 21 +38 57.4	Baade	1928	Bergedorf	+			
V 338	98.1928	19 56 29 +38 42.0	Baade	1928	Bergedorf	*			
V 339	78.1928	19 56 55 +38 27.6	Baade	1928	Bergedorf				
V 340	113.1928	19 57 21 +38 45.2	Baade	1928	Bergedorf				
V 341	74.1928	19 57 24 +38 38.2	Baade	1928	Bergedorf	*			
V 342	75.1928	20 0 13 +38 40.8	Baade	1928	Bergedorf				
V 343	121.1928	20 0 30 +38 49.3	Baade	1928	Bergedorf	*			
V 344	84.1928	20 0 40 +38 40.5	Baade	1928	Bergedorf				
V 345	SVS 304	20 6 9 +30 11.2	Beljawsky	1932	Simeis	*	*	*	
V 346	SVS 309	20 15 38 +36 1.5	Beljawsky	1932	Simeis	*	*	*	*
V 347	SVS 287	20 47 44 +45 46.0	Balanovsky	1932	Pulkowo	*			
V 348	SVS 288	20 50 54 +43 34.2	Balanovsky	1932	Pulkowo	*			
V 349	SVS 289	20 54 59 +44 49.4	Balanovsky	1932	Pulkowo	*			
V 350	SVS 290	20 55 4 +45 40.4	Balanovsky	1932	Pulkowo	*			
V 351	SVS 291	20 55 11 +44 54.4	Balanovsky	1932	Pulkowo				
V 352	SVS 292	20 56 17 +45 13.4	Balanovsky	1932	Pulkowo	*			
V 353	SVS 293	20 56 55 +42 52.5	Balanovsky	1932	Pulkowo	*			
V 354	SVS 294	20 58 37 +44 6.5	Balanovsky	1932	Pulkowo	*			
V 355	SVS 295	20 59 46 +45 45.6	Balanovsky	1932	Pulkowo	*			
V 356	SVS 296	21 4 10 +46 19.8	Balanovsky	1932	Pulkowo	*			
V 357	SVS 306	21 4 48 +31 35.3	Beljawsky	1932	Simeis	*	*	*	
V 358	SVS 297	21 4 48 +45 20.8	Balanovsky	1932	Pulkowo	*			
V 359	SVS 298	21 6 3 +43 52.9	Balanovsky	1932	Pulkowo	*			
V 360	SVS 305	21 6 22 +30 15.9	Beljawsky	1932	Simeis	*	*	*	
V 361	SVS 299	21 7 13 +45 5.9	Balanovsky	1932	Pulkowo				
V 362	SVS 300	21 7 34 +47 3.9	Balanovsky	1932	Pulkowo				
V 363	Ross 338	21 17 6 +31 32.0	Ross	1928	Yerkes	*	*	*	
V 364	Ross 325	20 16 40 +53 22.0	Ross	1928	Yerkes	*			
V 365	Ross 327	20 19 51 +51 43.1	Ross	1928	Yerkes	*			
V 366	438.1928	20 41 42 +53 43.8	Schneller	1928	Babelsberg	*		*	*
V 367	..	20 44 14 +38 55.1	Christie	1932	Mount Wilson	*		*	*
V 368	407.1928	19 33 24 +28 52.4	Gengler	1928	Wolfersdorf	*	*	*	
V 369	437.1934	19 39 36 +54 26.4	Morgenroth	1934	Sonneberg	*	*		
V 370	408.1928	19 39 38 +32 33.3	Gengler	1928	Wolfersdorf	*	*	*	
V 371	381.1933	20 14 18 +29 49.9	Morgenroth	1933	Sonneberg	*	*	*	
V 372	447.1934	20 24 11 +55 24.4	Morgenroth	1934	Sonneberg	*	*		
V 373	SVS 482	20 40 17 +32 46.9	Beljawsky	1934	Simeis		*	*	
V 374	SVS 487	20 43 12 +34 38.1	Beljawsky	1934	Simeis	*	*	*	*
V 375	190.1935	20 43 34 +35 31.1	Zonn	1935	Wilno		*	*	*
V 376	Ross 332	20 56 28 +29 12.1	Ross	1928	Yerkes	*			
V 377	Ross 333	20 58 57 +28 43.4	Ross	1928	Yerkes	*			
V 378	SVS 494	20 59 12 +29 35.6	Beljawsky	1934	Simeis	*	*	*	
V 379	SVS 720	19 41 43 +50 16.6	Beljawsky	1936	Simeis		*	*	
V 380	..	19 47 11 +40 20.7	Stebbins	1925	Washburn	*		*	*
V 381	SVS 726	19 51 23 +45 48.0	Beljawsky	1936	Simeis		*	*	
V 382	169.1935	20 15 0 +36 1.8	Morgenroth	1935	Sonneberg	*			
V 383	SVS 478	20 25 3 +33 48.1	Beljawsky	1934	Simeis	*	*	*	*
V 384	SVS 485	20 42 40 +34 37.6	Beljawsky	1934	Simeis	*	*	*	*
V 385	974.1935	20 49 47 +35 10.9	Zonn	1935	Wilno	*	*	*	*
V 386	174.1935	21 10 52 +41 18.2	Morgenroth	1935	Sonneberg	*		*	
V 387	175.1935	21 11 35 +37 5.1	Morgenroth	1935	Sonneberg	*	*		
V 388	171.1935	20 25 10 +31 3.5	Morgenroth	1935	Sonneberg	*			
V 389	..	21 4 24 +29 48.1	Guthnick and Bottlinger	1922	Babelsberg	*	*		*

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				C Y G N U S			
QW	Sh		$<1^d$	$13^m.3$	$14^m.0$	pg	AN 5548; 5967
QX	Ecl	2423352.335	0.89961	14.3	15.0	pg	AN 5548; 5967; ApJ 79.477
QY	Cep	2424021.127	3.89175	14.9	15.9	pg	AN 5548; 5967; ApJ 79.481
QZ	Irr			11.2	12.4	pg	AN 5548; 5967
V 335	Irr			13.8	14.4	pg	AN 5548; 5967
V 336	Cep	2423643.0	15.793	15.1	16.6	pg	AN 5548; 5967; ApJ 79.481
V 337	U G?			14.4	[16.5	pg	AN 5548; 5967
V 338	L	2424058	321	13.1	[16.3	pg	AN 5548; 5967; ApJ 79.479
V 339	L			15.9	[17.0	pg	AN 5548; 5967
V 340	Ecl			14.5	15.5	pg	AN 5548; 5967
V 341	L	2425834	351.3	14.0	[16.5	pg	AN 5548; 5967; ApJ 79.479
V 342	L	2425183	447	14.4	[16.0	pg	AN 5548; 5967; ApJ 79.479
V 343	Cep	2424080.43	11.9290	14.1	15.4	pg	AN 5548; 5967; ApJ 79.481
V 344	Ecl	2423343.453	0.967127	14.3	14.8	pg	AN 5548; 5967
V 345	Ecl			11.7	12.8	pg	NNVS 37
V 346	Alg	2427300.411	2.743358	11.43	12.59	v	NNVS 37
V 347	Sh		6/n	13.4	14.1	pg	Pulk Circ 1
V 348	Cep?		2?	13.8	15.2	pg	Pulk Circ 1
V 349	Sh			13.5	15.0	pg	Pulk Circ 1
V 350				13.7	14.7	pg	Pulk Circ 1
V 351				14.1	14.7	pg	Pulk Circ 1
V 352	Sh			14.2	15.1	pg	Pulk Circ 1
V 353	Alg			13.8	15.0	pg	Pulk Circ 1
V 354	Irr			11.8	12.4	pg	Pulk Circ 1
V 355	Alg		0.87	13.7	[15.3	pg	Pulk Circ 1
V 356	Cep		5.058	12.9	14.9	pg	Pulk Circ 1
V 357	Cl			13.2	14.3	pg	NNVS 37
V 358				13.6	15.0	pg	Pulk Circ 1
V 359				13.1	14.0	pg	Pulk Circ 1
V 360	SR	2426967	63.26	10.68	11.43	v	NNVS 37
V 361				14.5	15.2	pg	Pulk Circ 1
V 362				13.9	14.9	pg	Pulk Circ 1
V 363	L?			11.6	[13.2	pg	AJ 903
V 364	L			13.5	[15.5	pg	AJ 903
V 365	L			14	[15.5	pg	AJ 903
V 366	β	2429085.123	1.096016	9.35	9.81	v	AN 5619
V 367	β	2428947.5	18.5980	6.98	7.58	v	ASP 44.125; ApJ 78.200
V 368	Alg	2425031.45	0.49191	13.3	[13.7	pg	AN 5595
V 369	L	2427555	104	10	16	pg	AN 6070
V 370	Ecl		2.0/(2n+1)	11.9	13.3	pg	AN 5595
V 371	Alg	2427774.0	45.37	12.9	14.1	pg	AN 5981
V 372	L	2427380	308	11	12	pg	AN 6070
V 373	L	2427303	320	13.0	15.3	pg	NNVS 44
V 374	Alg	2425157.416	4.24970	13.02	14.08	pg	NNVS 44
V 375	L	2426215	180	12.5	13.5	pg	BZ 17.34; AN 6128; Wilno Bull 17.26
V 376	L	2426685	250	13.6	[15	pg	AJ 903
V 377	Alg	2426973.75	3.388	14.4	[15	pg	AJ 903
V 378	L	2427284	295	13.0	[15	pg	NNVS 44
V 379	Alg	2428078.340	6.100	13.0	[14.5	pg	NNVS 50; Pulk Circ 19
V 380	Alg	2423587.145	12.4262	5.62	5.74	v	PA 33.302; 37.156; Washb Publ 15.56
V 381	Cep	2428102.26	4.88	13.8	15.4	pg	NNVS 50; Pulk Circ 19
V 382	β	2428145.183	1.88558	8.7	9.45	v	AN 6119
V 383	Cep	2425149.670	4.61184	12.25	13.25	v	NNVS 44
V 384	L	2425140	120	12.7	14.1	v	NNVS 44
V 385	Alg	2425883.49	1.22805	12.31	13.29	v	BZ 18.2; AN 6175; Wilno Bull 17.26
V 386	Cep	2428066.70	5.25979	10.4	11.3	pg	AN 6119
V 387	β	2427985.461	0.6406	11.5	12.3	v	AN 6119
V 388	β	2428404.464	0.859047	9.5	10.2	v	AN 6119
V 389	Irr			6.0	6.2	pe	BZ 4.45

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		C Y G N U S							
V 390	SVS 712	19h29m 7s +48°14'.7	Beljawsky	1936	Simeis		*	*	
V 391	SVS 718	19 38 3 +48 33.6	Beljawsky	1936	Simeis		*	*	
V 392	439.1934	19 50 35 +56 5.7	Morgenroth	1934	Sonneberg	*	*		
V 393	167.1935	19 55 30 +43 1.5	Morgenroth	1935	Sonneberg	*			
V 394	SVS 731	20 2 46 +48 14.8	Beljawsky	1936	Simeis		*	*	
V 395	168.1935	20 5 22 +43 46.1	Morgenroth	1935	Sonneberg	*			
V 396	532.1936	20 12 45 +41 48.0	Hoffmeister	1936	Sonneberg	*	*	*	
V 397	SVS 479	20 28 20 +35 7.0	Beljawsky	1933	Simeis	*	*	*	*
V 398	SVS 486	20 42 52 +33 50.0	Beljawsky	1933	Simeis	*	*	*	
V 399	SVS 489	20 45 8 +33 19.4	Beljawsky	1933	Simeis	*	*	*	
V 400	HV 6134	21 27 22 +28 59.8	Hughes	1934	Harvard				
		D E L P H I N U S							
SY	299.1931	20h28m36s +14°38'.2	Hoffmeister	1931	Sonneberg	*	*	*	
SZ	178.1930	20 36 14 +18 35.4	Hoffmeister	1930	Sonneberg	*	*		
TT	326.1931	20 31 11 + 8 6.2	Plaut	1931	Babelsberg	*	*	*	
TU	307.1931	20 36 12 +14 29.4	Hoffmeister	1931	Sonneberg	*			
TV	150.1930	20 21 57 +12 10.5	Hoffmeister	1930	Sonneberg	*	*		
TW	SVS 399	20 30 29 + 7 51.8	Beljawsky	1934	Simeis	*	*	*	
TX	139.1935	20 45 12 + 3 15.9	Hoffmeister	1935	Sonneberg	*			
TY	141.1935	20 59 34 +12 49.1	Hoffmeister	1935	Sonneberg	*		*	*
TZ	130.1930	20 14 6 +14 12	Hoffmeister	1930	Sonneberg	*	*		
UU	131.1930	20 14 59 +14 53	Hoffmeister	1930	Sonneberg	*	*		
UV	132.1930	20 16 20 +18 2	Hoffmeister	1930	Sonneberg	*	*		
UW	134.1930	20 17 3 +16 59	Hoffmeister	1930	Sonneberg	*	*		
UX	135.1930	20 17 26 +11 43	Hoffmeister	1930	Sonneberg	*	*		
UY	136.1930	20 17 42 +13 29	Hoffmeister	1930	Sonneberg	*	*		
UZ	137.1930	20 17 49 +12 55	Hoffmeister	1930	Sonneberg	*	*		
VV	138.1930	20 17 47 +14 47	Hoffmeister	1930	Sonneberg	*	*		*
VW	139.1930	20 18 3 +17 17	Hoffmeister	1930	Sonneberg	*	*		
VX	143.1930	20 19 3 +17 33	Hoffmeister	1930	Sonneberg	*	*		
VY	849.1933	20 19 14 +17 57	Hoffmeister	1933	Sonneberg	*			
VZ	144.1930	20 19 33 +17 43	Hoffmeister	1930	Sonneberg	*	*		
WW	294.1931	20 22 11 +15 18	Hoffmeister	1931	Sonneberg	*			
WX	151.1930	20 22 17 +14 48	Hoffmeister	1930	Sonneberg	*	*		
WY	852.1933	20 22 37 +13 35	Hoffmeister	1933	Sonneberg	*			
WZ	153.1930	20 22 46 +16 33	Hoffmeister	1930	Sonneberg	*	*		
XX	295.1931	20 23 44 +18 13	Hoffmeister	1931	Sonneberg	*			*
XY	154.1930	20 23 52 +10 4	Hoffmeister	1930	Sonneberg	*	*		
XZ	155.1930	20 24 31 +12 33	Hoffmeister	1930	Sonneberg	*	*		
YY	158.1930	20 25 25 +13 43	Hoffmeister	1930	Sonneberg	*	*		*
YZ	159.1930	20 25 48 +13 59	Hoffmeister	1930	Sonneberg	*	*		
ZZ	160.1930	20 26 30 +14 45	Hoffmeister	1930	Sonneberg	*	*		*
AA	296.1931	20 26 45 +17 41	Hoffmeister	1931	Sonneberg	*			
AB	161.1930	20 26 59 +15 34	Hoffmeister	1930	Sonneberg	*	*		
AC	162.1930	20 27 39 +18 5	Hoffmeister	1930	Sonneberg	*	*		
AD	297.1931	20 28 19 +13 5	Hoffmeister	1931	Sonneberg	*			
AE	298.1931	20 28 28 +17 14	Hoffmeister	1931	Sonneberg	*			
AF	165.1930	20 29 41 +15 14	Hoffmeister	1930	Sonneberg	*	*		
AG	166.1930	20 29 45 +18 16	Hoffmeister	1930	Sonneberg	*	*		
AH	855.1933	20 29 49 +13 39	Hoffmeister	1933	Sonneberg	*			
AI	167.1930	20 29 55 +12 52	Hoffmeister	1930	Sonneberg	*	*		
AK	168.1930	20 30 26 +11 52	Hoffmeister	1930	Sonneberg	*	*		
AL	303.1931	20 31 33 +12 44.7	Hoffmeister	1931	Sonneberg	*			*
AM	856.1933	20 31 43 +13 9	Hoffmeister	1933	Sonneberg	*			
AN	176.1930	20 34 13 +13 15	Hoffmeister	1930	Sonneberg	*	*		
AO	857.1933	20 35 10 +17 1	Hoffmeister	1933	Sonneberg	*			
AP	306.1931	20 35 31 +13 2	Hoffmeister	1931	Sonneberg	*			
AQ	860.1933	20 36 22 +16 59	Hoffmeister	1933	Sonneberg	*			
AR	182.1930	20 37 34 +16 55	Hoffmeister	1930	Sonneberg	*	*		

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				CYGNUS			
V 390	L	2428540	249^{d}	12.8^{m}	[15.0^{m}	pg	NNVS 50; 53; Pulk Circ 19
V 391	L	2428330	405	13.0	[15.2	pg	NNVS 50; 53; Pulk Circ 19
V 392	L	2427577	102	12.5	14.5	pg	AN 6070
V 393	Alg			9	10	pg	AN 6119
V 394	L	2428365	417	12.0	[14.7	pg	NNVS 50; 53; Pulk Circ 19
V 395	L		100±	8.5	9.5	pg	AN 6119
V 396	Sh		33±	12.8	14.2	pg	AN 6195
V 397	Irr			12.3	13.7	pg	NNVS 44
V 398	Ecl			12.5	[15	pg	NNVS 44
V 399	SR	2425172	60	12.9	14.3	pg	NNVS 44
V 400	Ecl			13.2	14.3	pg	HA 90.167
				DELPHINUS			
SY	L	2425824	109^{d}	10.6^{m}	[13^{m}	pg	AN 5791
SZ	L	2426339	238.2	11	[16	pg	AN 5700; Sonn Mitt 22
TT	Alg	2425918.32	2.87143	10.6	12.5	pg	AN 5793; 5846
TU	SR			11.2	12.9	pg	AN 5791
TV	L	2425852	217	12.7	[16.0	pg	AN 5700; Sonn Mitt 22
TW	SR	2425526	86.0	10.3	11.7	pg	NNVS 44
TX	Cep	2428067.22	6.01	9	10	pg	AN 6118
TY	Alg	2428407.508	1.1911298	10.64	11.95	pg	AN 6118
TZ	L	2425800	308	13.3	14.4	pg	AN 5700; Sonn Mitt 22
UU	L	2427650	111	14.1	16.3	pg	AN 5700; Sonn Mitt 22
UV	Irr			12.3	13.7	pg	AN 5700; Sonn Mitt 22
UW	L	2427596	409	12.7	[16.5	pg	AN 5700; Sonn Mitt 22
UX	L	2427624	125.3	13.5	14.7	pg	AN 5700; Sonn Mitt 22
UY	Irr			11.6	13.2	pg	AN 5700; Sonn Mitt 22
UZ	L	2425865	85	11.7	14.1	pg	AN 5700; Sonn Mitt 22
VV	Alg	2425827.482	2.60595	14.4	[15.5	pg	AN 5700; Sonn Mitt 22
VW	L	2425885	219	10.8	15.7	pg	AN 5700; 6118; Sonn Mitt 22
VX	L	2425510	248	13.5	15.7	pg	AN 5700; Sonn Mitt 22
VY	Irr			13.4	14.9	pg	AN 6002
VZ	Irr			12.2	13.8	pg	AN 5700; Sonn Mitt 22
WW	L	2426212	147.3	13.8	15.5	pg	AN 5791
WX	L	2425850	540	11.8	[15.0	pg	AN 5700; 6118; Sonn Mitt 22
WY	L	2426620	330	14.3	[16.2	pg	AN 6002
WZ	L	2425850	259	12.2	[15.3	pg	AN 5700; Sonn Mitt 22
XX	Alg	2425882.366	2.12363	13.0	14.8	pg	AN 5791
XY	L	2426169	204	13.2	15.7	pg	AN 5700; Sonn Mitt 22
XZ	L	2426925	165	13.6	16.1	pg	AN 5700; Sonn Mitt 22
YY	Alg	2425795.488	0.793076	11.1	11.9	pg	AN 5700; 6118; Sonn Mitt 22
YZ	L	2425813	139.6	12.1	14.5	pg	AN 5700; Sonn Mitt 22
ZZ	Cl	2428045.442	0.520185	12.75	13.60	pg	AN 5700; Sonn Mitt 22
AA	Irr			12.7	14.5	pg	AN 5791
AB	L	2425850	137.3	13.8	15.2	pg	AN 5700; Sonn Mitt 22
AC	Irr			12.1	14.2	pg	AN 5700; Sonn Mitt 22
AD	L	2425840	88.6	11.3	13.3	pg	AN 5791
AE	L	2425840	260	12.7	14.8	pg	AN 5791
AF	L	2426677	392	13.1	[16.0	pg	AN 5700; Sonn Mitt 22
AG	L	2426172	239.7	10.7	[15.5	pg	AN 5700; Sonn Mitt 22
AH	SR	2425870	112	14.8	15.9	pg	AN 6002
AI	Irr			13.2	15.0	pg	AN 5700; Sonn Mitt 22
AK	Irr			12.7	14.3	pg	AN 5700; Sonn Mitt 22
AL	β	2425807.520	1.4855	11.5	12.2	pg	AN 5791
AM	Irr			13.9	15.6	pg	AN 6002
AN	L	2426920	194	11.4	[16.2	pg	AN 5700; Sonn Mitt 22
AO	Irr			11.4	12.4	pg	AN 6002
AP	Irr			12.5	13.6	pg	AN 5791
AQ	SR	2425832	66	10.4	11.9	pg	AN 6002
AR	Irr			13.7	14.2	pg	AN 5700; Sonn Mitt 22

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
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AS	861.1933	20h 37m 36s +15° 8'	Hoffmeister	1933	Sonneberg	*			
AT	183.1930	20 37 48 +14 59	Hoffmeister	1930	Sonneberg	*	*		
AU	312.1931	20 41 20 +12 55	Hoffmeister	1931	Sonneberg	*			
AV	184.1930	20 40 46 +10 49	Hoffmeister	1930	Sonneberg	*	*		*
AW	313.1931	20 43 17 +16 42	Hoffmeister	1931	Sonneberg	*			
AX	185.1930	20 43 30 +15 1	Hoffmeister	1930	Sonneberg	*	*		*
AY	187.1930	20 45 50 +13 21	Hoffmeister	1930	Sonneberg	*	*		
AZ	315.1931	20 47 43 +14 23	Hoffmeister	1931	Sonneberg	*			
BB	190.1930	20 48 54 +15 23	Hoffmeister	1930	Sonneberg	*	*		
BC	497.1934	20 10 59 +15 49.4	Morgenroth	1934	Sonneberg	*	*		
BD	724.1933	20 16 37 + 9 15.3	Morgenroth	1933	Sonneberg	*	*		
BE	848.1933	20 19 7 +12 54	Hoffmeister	1933	Sonneberg	*			
BF	146.1930	20 20 25 +11 58.3	Hoffmeister	1930	Sonneberg	*	*		
BG	149.1930	20 21 52 +17 12.7	Hoffmeister	1930	Sonneberg	*	*		
BH	152.1930	20 22 55 +13 20.7	Hoffmeister	1930	Sonneberg	*	*		
BI	SVS 397	20 22 58 +14 0.4	Beljawsky	1933	Simeis	*	*	*	
BK	156.1930	20 24 38 +11 33.7	Hoffmeister	1930	Sonneberg	*	*		
BL	300.1931	20 29 24 +14 45	Hoffmeister	1931	Sonneberg	*			
BM	171.1930	20 31 22 +17 2.3	Hoffmeister	1930	Sonneberg	*	*		
BN	174.1930	20 33 21 +13 12.0	Hoffmeister	1930	Sonneberg	*	*		
BO	305.1931	20 34 36 +14 1	Hoffmeister	1931	Sonneberg	*			
BP	180.1930	20 36 57 +18 33.1	Hoffmeister	1930	Sonneberg	*	*		
BQ	310.1931	20 39 43 +14 6	Hoffmeister	1931	Sonneberg	*			
BR	138.1935	20 41 35 + 4 1.3	Hoffmeister	1935	Sonneberg	*			
BS	316.1931	20 48 18 +15 39	Hoffmeister	1931	Sonneberg	*			
BT	865.1933	20 49 0 +15 21	Hoffmeister	1933	Sonneberg	*			
			DRACO						
XZ	433.1928	19h 9m 6s +64° 41'.7	Schneller	1928	Babelsberg	*	*	*	*
YY	SVS 504	11 37 52 +72 15.4	Zessewitsch	1934	Pulkowo				
YZ	88.1934	19 24 54 +71 29.4	Morgenroth	1934	Sonneberg	*	*		*
ZZ	89.1934	19 40 29 +67 31.8	Morgenroth	1934	Sonneberg	*	*		*
AA	91.1934	20 4 57 +66 0.2	Morgenroth	1934	Sonneberg	*	*		*
			ERIDANUS						
SZ	HV 4856	2h 46m 34s -20° 29'.4	Hughes	1930	Harvard		*		
TT	HV 4857	2 48 10 -24 11.2	Hughes	1930	Harvard	*	*		
TU	HV 4861	2 58 42 -21 0.3	Hughes	1930	Harvard		*		
TV	HV 4865	3 4 13 -19 50.6	Hughes	1930	Harvard		*		
TW	38.1929	3 6 54 -20 4.4	Hoffmeister	1929	Sonneberg	*	*		
TX	HV 4868	3 8 3 -19 54.1	Hughes	1930	Harvard		*		
TY	HV 4870	3 11 46 -22 27.6	Hughes	1930	Harvard		*		
TZ	40.1929	4 16 46 - 6 15.3	Hoffmeister	1929	Sonneberg	*	*		
UU	HV 3047	4 32 32 -27 46.9	Leavitt	1907	Harvard	*			
UV	359.1930	4 53 37 - 6 13.6	Hoffmeister	1930	Sonneberg	*	*		
UW	15.1931	2 59 6 -14 37.4	Hoffmeister	1931	Sonneberg	*			
UX	16.1931	3 4 56 - 7 16.7	Hoffmeister	1931	Sonneberg	*		*	*
UY	17.1931	3 8 51 -10 49.0	Hoffmeister	1931	Sonneberg	*			
UZ	18.1931	3 9 5 -14 35.0	Hoffmeister	1931	Sonneberg	*	*		
VV	20.1931	3 16 36 -10 38.7	Hoffmeister	1931	Sonneberg	*	*		*
VW	21.1931	3 17 3 -21 49.0	Hoffmeister	1931	Sonneberg	*			
VX	22.1931	3 20 25 -12 42.5	Hoffmeister	1931	Sonneberg	*			
VY	264.1930	3 36 30 -11 4.2	Hoffmeister	1930	Sonneberg	*			
VZ	266.1930	4 37 2 - 8 9.1	Hoffmeister	1930	Sonneberg	*	*		
WW	25.1931	5 0 14 - 7 42.4	Hoffmeister	1931	Sonneberg	*	*	*	*
WX	HV 3037	3 19 15 - 1 5.2	Leavitt	1907	Harvard	*		*	*
WY	HV 6270	3 57 31 -13 57.7	Hughes	1934	Harvard				
WZ	HV 6271	3 57 31 -14 1.7	Hughes	1934	Harvard				

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				DELPHINUS			
AS	Irr			13m.9	16m.0	pg	AN 6002
AT	Irr			11.4	12.3	pg	AN 5700; Sonn Mitt 22
AU	Irr			13.4	15.3	pg	AN 5791
AV	Alg	2425291.30	3d.8536	10.7	12.7	pg	AN 5700; 6118; Sonn Mitt 22
AW	Irr			11.8	13.1	pg	AN 5791
AX	Cl	2425804.460	0.563731	12.4	13.4	pg	AN 5700; Sonn Mitt 22
AY	Irr			12.3	14.3	pg	AN 5700; Sonn Mitt 22
AZ	L	2425860	253.6	10.8	[16.0	pg	AN 5791
BB	L	2425750	240	11.3	15.3	pg	AN 5700; Sonn Mitt 22
BC	L	2427365	230	14.5	[15.5	pg	AN 6094
BD	L	2427325	262	13	[15.5	pg	AN 6002
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BF	Ecl			13.1	14.4	pg	AN 5700; Sonn Mitt 22
BG	Ecl			13.2	13.8	pg	AN 5700; Sonn Mitt 22
BH	Alg	2428371.507	1.61407	12.3	15.0	pg	AN 5700; Sonn Mitt 22
BI	Alg	2428366.33	7.2527	11.4	13.3	pg	Inf Circ 1.4; NNVS 44
BK	Sh		0.8/n?	12.7	14.2	pg	AN 5700; Sonn Mitt 22
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BM	Sh			12.4	14.1	pg	AN 5700; Sonn Mitt 22
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BS	Ecl			11.5	13.4	pg	AN 5791
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ZZ	L	2427398	266	9.2	14.5	v	AN 6048
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TW	L	2425220	321	11.0	15.2	pg	AN 5655
TX	Sh			12.7	13.4	pg	HB 877
TY	Ecl?			12.8	13.8	pg	HB 877
TZ	Alg	2428836.47	2.60606	9.8	12.6	v	AN 5655
UU	Irr?			9.7	10.5	pg	HC 135; AN 4258
UV	L	2426325	467	10.5	17	pg	BZ 12.96; AN 5791
UW	Irr?			9.5	10	pg	AN 5791
UX	W	2427425.291	0.4452786	10.68	11.20	pg	AN 5791
UY	Sh			9.5	11	pg	AN 5791
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VV	Alg	2427342.522	1.557586	11	12	pg	AN 5791
VW	L?			9	10.5	pg	AN 5791
VX	L	2426598	400	9.6	11.4	pg	AN 5791
VY	Irr			10.2	11.6	pg	AN 5748
VZ	L	2426628	294	10.5	12.5	pg	AN 5748
WW	β	2426586.462	0.924365	11.25	11.70	pg	AN 5791
WX	Alg	2427396.664	0.823272	9.4	10.1	v	HC 135; AN 4258
WY	Cl	2424772.80	0.50690	14.0	14.7	pg	HA 90.170
WZ	L	2424820	400	12.8	[16.3	pg	HA 90.170

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XX	HV 6272	3h 57m 40s -12° 23.'3	Hughes	1934	Harvard				
XY	HV 6275	4 6 43 -14 7.0	Hughes	1934	Harvard				
XZ	HV 6276	4 6 53 -15 39.4	Hughes	1934	Harvard	*			
YY	169.1932	4 7 24 -10 43.4	Hoffmeister	1932	Sonneberg	*		*	*
YZ	HV 6279	4 7 36 -18 11.3	Hughes	1934	Harvard				
ZZ	HV 6280	4 8 20 -11 0.4	Hughes	1934	Harvard	*			
AA	HV 6281	4 9 2 -11 49.2	Hughes	1934	Harvard				
AB	HV 6282	4 11 16 -18 38.8	Hughes	1934	Harvard				
AC	HV 6283	4 11 33 -14 49.3	Hughes	1934	Harvard				
AD	HV 6285	4 13 27 -16 47.0	Hughes	1934	Harvard				
AE	HV 6286	4 14 29 -15 29.6	Hughes	1934	Harvard				
AF	HV 6288	4 15 38 -10 39.4	Hughes	1934	Harvard				
AG	HV 6291	4 17 46 -15 39.7	Hughes	1934	Harvard				
AH	HV 6292	4 18 4 -13 36.0	Hughes	1934	Harvard	*			
AI	HV 6293	4 18 26 -16 31.0	Hughes	1934	Harvard				
AK	HV 6296	4 21 10 -19 2.1	Hughes	1934	Harvard				
AL	HV 6297	4 23 37 -17 24.2	Hughes	1934	Harvard				
AM	HV 6298	4 25 14 -12 27.9	Hughes	1934	Harvard	*			
AN	HV 6299	4 27 30 -17 33.7	Hughes	1934	Harvard	*			
AO	HV 6300	4 27 32 -17 57.7	Hughes	1934	Harvard	*			
AP	HV 6301	4 28 10 -16 44.5	Hughes	1934	Harvard				
AQ	431.1934	5 1 15 - 4 16.1	Morgenroth	1934	Sonneberg	*	*		
AR	433.1934	5 6 3 - 5 21.5	Morgenroth	1934	Sonneberg		*		
AS	271.1934	3 27 25 - 3 39.1	Hoffmeister	1934	Sonneberg	*			*
AT	HV 6273	4 1 34 -18 55.3	Hughes	1934	Harvard	*			
AU	625.1935	4 12 56 -25 15.6	Hoffmeister	1935	Sonneberg	*			
AV	HV 6287	4 15 32 -18 58.4	Hughes	1934	Harvard				
AW	HV 6290	4 17 9 -14 18.2	Hughes	1934	Harvard				
AX	HV 6294	4 18 39 -12 36.2	Hughes	1934	Harvard				
AY	HV 6295	4 20 46 -11 50.8	Hughes	1934	Harvard				
AZ	HV 6300	4 27 32 -17 57.7	Hughes	1934	Harvard	*			
BB	630.1935	4 49 15 -19 35.9	Hoffmeister	1935	Sonneberg	*	*		
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W	HV 4852	2 37 18 -26 27.0	Hughes	1930	Harvard		*		
X	HV 4853	2 38 33 -26 32.6	Hughes	1930	Harvard	*	*		
Y	HV 4854	2 43 16 -27 26.4	Hughes	1930	Harvard		*		
Z	HV 4855	2 45 44 -26 41.2	Hughes	1930	Harvard		*		
RR	HV 4858	2 49 21 -27 17.0	Hughes	1930	Harvard		*		
RS	HV 4859	2 50 14 -27 49.0	Hughes	1930	Harvard	*	*		
RT	HV 4860	2 51 57 -25 31.6	Hughes	1930	Harvard	*	*		
RU	HV 4862	2 58 54 -27 23.9	Hughes	1930	Harvard	*	*		
RV	HV 4863	3 1 55 -26 35.2	Hughes	1930	Harvard		*		
RW	HV 4864	3 3 5 -24 53.6	Hughes	1930	Harvard		*		
RX	HV 4867	3 6 54 -26 52.0	Hughes	1930	Harvard	*	*		*
RY	HV 4869	3 11 32 -25 3.3	Hughes	1930	Harvard	*	*		
RZ	HV 3038	3 28 11 -25 59.8	Leavitt	1907	Harvard	*			
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		GEMINI							
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AV	265.1932	6 36 21 +13 30.4	Nielsen	1932	Aarhus	*	*	*	*
AW	8.1933	7 16 25 +28 41.7	Delporte and Arend	1933	Uccle	*	*	*	*
AX	7.1933	6 31 7 +21 12.4	Rügemer	1933	Bamberg	*		*	
AY	6.1934	6 26 0 +19 44.5	Morgenroth	1934	Sonneberg	*	*		*

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AC	Cl	2424766.90	0.48207	13.3	14.8	pg	HA 90.170
AD	Cl	2425234.32	0.46988	14.7	16.0	pg	HA 90.170
AE	Cl	2424798.80	0.62140	14.5	15.2	pg	HA 90.170
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AM	W	2424791.85	0.31643	14.4	15.2	pg	HA 90.171
AN	Ecl	2424772.84	0.42821	14.4	15.4	pg	HA 90.171
AO	Alg	2429631.15	9.2982	11.8	13.8	pg	HA 90.171
AP	Cl	2424744.90	0.42114	14.9	15.7	pg	HA 90.171
AQ	U G	2427398	78	12.5	16.5	pg	AN 6070
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AU			62±	10.5	11.5	pg	AN 6171
AV	Irr			12.4	13.2	pg	HA 90.170
AW	Irr:			13.2	14.2	pg	HA 90.170
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AY	Irr			12.3	13.3	pg	HA 90.171
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X	Cl			10.0	10.9	pg	HB 877
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Z	Cl	2424759.830	0.37044	12.2	13.0	pg	HB 877
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RS	Cl?			12.7	13.4	pg	HB 877
RT	Ecl			12.7	13.3	pg	HB 877
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BD	473.1934	6 28 51 +15 37.7	Morgenroth	1934	Sonneberg	*	*	*	*
BE	312.1934	7 38 57 +14 17.1	Hoffmeister	1934	Sonneberg	*	*	*	
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BG	336.1930	5 57 13 +27 42	Hoffmeister	1930	Sonneberg	*	*		
BH	138.1931	5 58 10 +26 25	Hoffmeister	1931	Sonneberg	*			
BI	338.1930	5 59 40 +25 15.4	Hoffmeister	1930	Sonneberg	*	*		
BK	1.1934	6 24 19 +13 40.8	Zonn	1934	Wilno	*		*	
BL	179.1935	6 28 38 +14 30.0	Zonn	1935	Wilno	*	*	*	
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CD	361.1930	17 22 45 +45 59.6	Ceraski	1930	Moscow	*		*	
CE	396.1929	17 37 23 +15 7.6	Ceraski	1929	Moscow	*	*	*	*
CF	19.1930	17 40 48 +21 31.7	Hoffmeister	1930	Sonneberg	*	*		
CG	Ross 297	18 7 40 +26 24.3	Ross	1928	Yerkes	*			
CH	203.1929	18 30 40 +24 43.2	Hoffmeister	1929	Sonneberg	*	*	*	
CI	205.1929	18 32 8 +24 23.9	Hoffmeister	1929	Sonneberg	*	*	*	
CK	210.1929	18 34 38 +23 23.3	Hoffmeister	1929	Sonneberg	*	*	*	
CL	211.1929	18 34 48 +23 53.4	Hoffmeister	1929	Sonneberg	*	*	*	
CM	212.1929	18 35 1 +23 23.6	Hoffmeister	1929	Sonneberg	*	*	*	
CN	221.1929	18 38 32 +25 33.9	Hoffmeister	1929	Sonneberg	*	*	*	
CO	222.1929	18 38 57 +24 22.6	Hoffmeister	1929	Sonneberg		*	*	
CP	226.1929	18 42 11 +24 42.6	Hoffmeister	1929	Sonneberg		*	*	
CQ	228.1929	18 42 46 +25 47.8	Hoffmeister	1929	Sonneberg		*	*	
CR	230.1929	18 45 24 +25 49.6	Hoffmeister	1929	Sonneberg	*	*	*	
CS	234.1929	18 47 5 +24 57.7	Hoffmeister	1929	Sonneberg		*	*	
CT	295.1930	16 15 59 +18 41.3	Hoffmeister	1930	Sonneberg	*		*	*
CU	382.1931	16 33 25 + 5 35.5	Wolf	1931	Heidelberg	*	*		
CV	14.1930	16 34 43 +31 3.1	Hoffmeister	1930	Sonneberg	*	*		
CW	Ross 358	16 47 2 +35 37.1	Ross	1929	Yerkes	*			
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CY	386.1931	18 0 21 +16 59.3	Plaut	1931	Babelsberg	*		*	
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DD	85.1929	18 1 51 +28 27.9	Hoffmeister	1929	Sonneberg	*	*		
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DF	389.1931	18 2 17 +20 15.8	Plaut	1931	Babelsberg	*	*	*	
DG	390.1931	18 19 52 +18 21.4	Plaut	1931	Babelsberg	*	*	*	
DH	303.1930	18 43 21 +22 44.0	Hoffmeister	1930	Sonneberg	*			*
DI	307.1930	18 49 18 +24 9.3	Hoffmeister	1930	Sonneberg	*		*	*
DK	16.1930	17 8 9 +13 18.0	Hoffmeister	1930	Sonneberg	*	*		
DL	18.1930	17 15 57 +14 35.1	Hoffmeister	1930	Sonneberg	*	*		
DM	13.1914	17 33 22 +34 14	Ceraski	1914	Moscow	*	*		
DN	57.1935	16 7 25 +10 52.1	Hoffmeister	1935	Sonneberg		*		
DO	63.1935	16 26 26 +23 40.0	Hoffmeister	1935	Sonneberg	*	*		
DP	355.1933	17 29 59 +15 8.7	Morgenroth	1933	Sonneberg	*	*		
DQ	452.1934	18 4 52 +45 50.6	Prentice	1934	Stowmarket	*	*	*	*
DR	79.1934	18 24 21 +19 44.2	Morgenroth	1934	Sonneberg		*		
DS	Ross 49	18 29 5 +16 1.4	Ross	1926	Yerkes	*	*		
DT	414.1934	18 30 38 +22 3.7	Morgenroth	1934	Sonneberg		*		
DU	415.1934	18 32 14 +17 55.7	Morgenroth	1934	Sonneberg		*		
DV	82.1934	18 32 42 +18 26.9	Morgenroth	1934	Sonneberg		*		
DW	84.1934	18 40 2 +23 5.9	Morgenroth	1934	Sonneberg		*		
DX	416.1934	18 42 17 +19 22.1	Morgenroth	1934	Sonneberg		*		

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BI	β?			12.0	13.8	pg	AN 5748; Sonn Mitt 22
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CI	L	2425489	281	13.1	[16.0	pg	AN 5655; Sonn Mitt 17
CK	Cl	2429231.234	0.519201	13.92	15.21	pg	AN 5655; Sonn Mitt 17
CL	SR	2425472	175	12.8	14.5	pg	AN 5655; Sonn Mitt 17
CM	Cl	2429050.440	0.562725	13.73	15.18	pg	AN 5655; Sonn Mitt 17
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CP			30?	14	15	pg	AN 5655; Sonn Mitt 17
CQ				13.5	14.5	pg	AN 5655; Sonn Mitt 17
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CS	Alg?			13.5	14.5	pg	AN 5655; Sonn Mitt 17
CT	Alg	2426481.465	1.78633	9.93	11.16	v	AN 5748
CU	Cl			13.3	14.5	pg	BZ 13.59; AN 5833
CV	Irr			11.5	12.5	pg	AN 5700
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CY	Irr			11.0	12.5	pg	BZ 13.65; AN 5846
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DK	Alg	2425730.445	1.94229	10.5	11.0	pg	AN 5700, corr. 6047; BZ 16.44
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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		HERCULES							
DY	62.1935	16h 26m 37s +12° 13.'3	Hoffmeister	1935	Sonneberg	*			
DZ	90.1935	18 3 2 +17 32.6	Hoffmeister	1935	Sonneberg	*	*	*	
EE	58.1935	16 8 15 +18 16.7	Hoffmeister	1935	Sonneberg	*	*		
EF	15.1930	16 50 59 +17 27.4	Hoffmeister	1930	Sonneberg	*	*		
EG	183.1931	17 35 33 +29 21	Hoffmeister	1931	Sonneberg	*			
EH	188.1931	17 42 15 +32 55	Hoffmeister	1931	Sonneberg	*			
EI	189.1931	17 44 21 +24 44	Hoffmeister	1931	Sonneberg	*			
EK	190.1931	17 45 26 +25 1	Hoffmeister	1931	Sonneberg	*			
EL	192.1931	17 47 54 +26 40	Hoffmeister	1931	Sonneberg	*			
EM	175.1936	17 48 8 +29 41	Hoffmeister	1936	Sonneberg	*			
EN	193.1931	17 49 42 +26 39	Hoffmeister	1931	Sonneberg	*			
EO	194.1931	17 49 58 +28 14	Hoffmeister	1931	Sonneberg	*			
EP	196.1931	17 51 6 +26 35	Hoffmeister	1931	Sonneberg	*			*
EQ	176.1936	17 52 27 +24 48	Hoffmeister	1936	Sonneberg	*			
ER	197.1931	17 52 43 +25 54	Hoffmeister	1931	Sonneberg	*			
ES	198.1931	17 53 9 +32 55	Hoffmeister	1931	Sonneberg	*			*
ET	177.1936	17 54 15 +29 3	Hoffmeister	1936	Sonneberg	*			
EU	199.1931	17 54 35 +31 57	Hoffmeister	1931	Sonneberg	*			
EV	201.1931	17 55 23 +31 42	Hoffmeister	1931	Sonneberg	*			
EW	203.1931	18 0 15 +33 25	Hoffmeister	1931	Sonneberg	*			
EX	178.1936	18 0 27 +28 53	Hoffmeister	1936	Sonneberg	*			
EY	204.1931	18 0 58 +32 42	Hoffmeister	1931	Sonneberg	*			
EZ	205.1931	18 1 10 +28 32	Hoffmeister	1931	Sonneberg	*			
FF	206.1931	18 1 26 +30 3	Hoffmeister	1931	Sonneberg	*			
FG	179.1936	18 1 54 +31 0	Hoffmeister	1936	Sonneberg	*			
FH	208.1931	18 2 34 +32 21	Hoffmeister	1931	Sonneberg	*			
FI	209.1931	18 6 11 +31 21	Hoffmeister	1931	Sonneberg	*			
FK	183.1936	18 7 32 +29 57	Hoffmeister	1936	Sonneberg	*			
FL	185.1936	18 8 16 +32 27	Hoffmeister	1936	Sonneberg	*			
FM	187.1936	18 12 15 +29 5	Hoffmeister	1936	Sonneberg	*			
FN	60.1935	16 20 31 +11 31.7	Hoffmeister	1935	Sonneberg	*	*		
FO	157.1936	17 16 48 +22 33	Hoffmeister	1936	Sonneberg	*			
FP	70.1935	17 24 43 +18 47.8	Hoffmeister	1935	Sonneberg	*	*		
FQ	75.1934	17 28 59 +37 48.2	Morgenroth	1934	Sonneberg		*		
FR	74.1935	17 32 43 +18 16.9	Hoffmeister	1935	Sonneberg	*	*	*	*
FS	186.1931	17 40 8 +25 17	Hoffmeister	1931	Sonneberg	*			
FT	195.1931	17 50 21 +28 57	Hoffmeister	1931	Sonneberg	*			
FU	83.1935	17 54 15 +23 27.4	Hoffmeister	1935	Sonneberg	*	*		*
FV	410.1934	17 55 5 +41 25.6	Morgenroth	1934	Sonneberg		*		
FW	200.1931	17 55 19 +25 45	Hoffmeister	1931	Sonneberg	*			
FX	88.1935	18 0 34 +23 22.9	Hoffmeister	1935	Sonneberg	*	*		
FY	207.1931	18 2 39 +29 6	Hoffmeister	1931	Sonneberg	*			
FZ	77.1934	18 5 46 +40 3.0	Morgenroth	1934	Sonneberg		*		
GG	412.1934	18 18 12 +15 42.0	Morgenroth	1934	Sonneberg		*		
GH	80.1934	18 28 30 +20 16.3	Morgenroth	1934	Sonneberg		*		
GI	83.1934	18 32 45 +20 55.6	Morgenroth	1934	Sonneberg		*		
GK	31.1930	18 40 19 +25 47.3	Hoffmeister	1930	Sonneberg		*	*	
GL	37.1930	18 46 19 +23 32.1	Hoffmeister	1930	Sonneberg	*	*	*	
GM	86.1934	18 52 2 +20 49.2	Morgenroth	1934	Sonneberg		*		
		HYDRA							
VV	Ross 355	9h 6m 23s - 8° 57.'8	Ross	1929	Yerkes	*	*		
VW	72.1929	8 29 11 -14 19.6	Hoffmeister	1929	Sonneberg	*	*		
VX	79.1931	9 40 55 -11 32.8	Hoffmeister	1931	Sonneberg	*	*	*	*
VY	217.1932	10 15 34 -22 39.0	Hoffmeister	1932	Sonneberg	*		*	
VZ	HV 5489	8 26 46 - 5 58.9	O'Connell	1932	Harvard	*		*	
WW	273.1930	8 52 45 - 2 54.0	Hoffmeister	1930	Sonneberg	*	*		
WX	275.1930	9 8 42 -13 58.6	Hoffmeister	1930	Sonneberg	*	*		
WY	109.1934	8 9 3 + 0 48.5	Morgenroth	1934	Sonneberg	*	*	*	*
WZ	215.1932	10 8 32 -12 38.8	Hoffmeister	1932	Sonneberg	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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DY	Cl	2428310.239	0.14858158	10	10.5	pg	AN 6118
DZ	L	2425747	122.3	10.7	12.2	pg	AN 6118
EE	Cl	2428403.257	0.4956	11	12	pg	AN 6118
EF	Alg	2426440.37	4.7291	11	12	pg	AN 5700
EG	Sh			14.4	15.7	pg	AN 5791
EH	L	2426533	220	13.4	15.2	pg	AN 5791
EI	SR	2427540	152	14.2	16.0	pg	AN 5791
EK	Irr			13.3	14.8	pg	AN 5791
EL	L	2426473	120	13.0	16.0	pg	AN 5791
EM	Irr			15.3	16.3	pg	AN 6195
EN	SR			14.1	14.9	pg	AN 5791
EO	L	2427133	173	12.3	14.6	pg	AN 5791
EP	Cl	2428048.349	0.425725	12.65	13.85	pg	AN 5791
EQ	Irr			14.3	15.3	pg	AN 6195
ER	L	2426111	165	13.0	[16	pg	AN 5791
ES	β	2426146.457	0.782036	13.1	14.4	pg	AN 5791
ET	SR	2426497	113	13.7	14.8	pg	AN 6195
EU	L	2426152	165	12.6	14.1	pg	AN 5791
EV	Irr			14.2	15.1	pg	AN 5791
EW	L	2426095	228	12.7	[16.0	pg	AN 5791
EX	SR	2426112	109	14.2	16.2	pg	AN 6195
EY	L	2426541	177	12.5	14.9	pg	AN 5791
EZ	SR	2426120	118	12.1	12.9	pg	AN 5791
FF	L	2426137	285	13.0	15.7	pg	AN 5791
FG	SR	2426415	178	13.8	14.8	pg	AN 6195
FH	SR	2426105	169	13.1	14.2	pg	AN 5791
FI	L	2426107	239	12.4	[16	pg	AN 5791
FK	Irr			13.2	13.9	pg	AN 6195
FL	Irr			12.1	13.9	pg	AN 6195
FM	L	2427685	442	14.5	15.4	pg	AN 6195
FN	Alg	2428309.294	2.691364	10.5	11.5	pg	AN 6118
FO	SR		84	10.5	12	pg	AN 6195
FP	L	2428810	319.0	11.5	[12.5	pg	AN 6118
FQ	SR	2426220	100	12.5	14	pg	AN 6048; 6058
FR	L	2428800	134.2	11.0	13.0	v	AN 6118
FS	Sh			13.1	14.3	pg	AN 5791
FT	Ecl			14.0	15.5	pg	AN 5791
FU	L	2428856	213	11	[14.6	v	AN 6118
FV	Irr			14	15	pg	AN 6070; 6094
FW	Ecl	2426744.614	0.8354	14.3	15.2	pg	AN 5791
FX	L	2428423	363	11.5	[13	pg	AN 6118
FY	Ecl			14.1	14.5	pg	AN 5791
FZ	Irr			13.3	14	pg	AN 6048; 6058
GG	Irr			14	15.5	pg	AN 6070; 6094
GH	Irr			13.5	15	pg	AN 6048; 6058
GI	L			13.5	[15.5	pg	AN 6048; 6058
GK	Irr			12	13	pg	AN 5700; Sonn Mitt 22
GL	Alg	2428375.279	2.3449	11.5	13.5	v	AN 5700; Sonn Mitt 22
GM	Irr			13.5	14	pg	AN 6048; 6058
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VV	L	2427421	155	10.4	[12.7	pg	AJ 926
VW	Alg	2426421.430	2.69658	10	11.5	pg	AN 5655
VX				9.9	10.9	v	AN 5791
VY	Alg	2426439.351	2.00108	9.4	12.3	pg	AN 5919
VZ	Alg	2421925.8246	1.4521499	9.1	9.9	pg	HB 889
WW	L			10	[12.5	pg	AN 5748
WX	L	2427182	234	9.1	[12.5	v	AN 5748
WY	Alg	2425644.382	0.358005	10.35	11.44	v	AN 6048
WZ	Cl	2427829.477	0.537735	9.5	11	pg	AN 5919

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
			HYDRA						
XX	73.1931	$9^h\ 5^m30^s$ $-15°11'.8$	Hoffmeister	1931	Sonneberg	*	*		
XY	HV 7511	9 18 13 −23 50.8	Boyce	1936	Harvard	*			
XZ	HV 7519	9 20 49 −21 44.8	Boyce	1936	Harvard	*			
YY	HV 7523	9 22 22 −21 56.0	Boyce	1936	Harvard				
YZ	HV 7525	9 22 56 −21 20.0	Boyce	1936	Harvard				
ZZ	HV 7528	9 24 30 −20 28.7	Boyce	1936	Harvard				
AA	HV 7529	9 25 11 −21 25.1	Boyce	1936	Harvard				
AB	HV 7537	9 28 58 −21 49.3	Boyce	1936	Harvard				
AC	HV 7549	9 33 32 −22 3.6	Boyce	1936	Harvard				
AD	HV 7568	9 39 30 −22 20.0	Boyce	1936	Harvard	*			
AE	HV 7572	9 40 29 −22 35.0	Boyce	1936	Harvard	*			
AF	HV 7582	9 43 28 −22 44.2	Boyce	1936	Harvard	*			
AG	HV 7591	9 45 55 −23 17.0	Boyce	1936	Harvard	*			
AH	HV 7597	9 47 46 −24 22.1	Boyce	1936	Harvard	*			
AI	331.1934	8 13 38 + 0 35.6	Hoffmeister	1934	Sonneberg	*		*	
AK	70.1931	8 35 18 −16 56.7	Hoffmeister	1931	Sonneberg	*			
AL	Ross 233	9 9 35 + 3 12.8	Ross	1928	Yerkes	*			
AM	HV 7503	9 14 26 −21 27.4	Boyce	1936	Harvard				
AN	HV 7506	9 14 56 −20 27.6	Boyce	1936	Harvard				
AO	77.1931	9 16 14 −23 50.7	Hoffmeister	1931	Sonneberg	*			
AP	HV 7516	9 19 41 −21 26.4	Boyce	1936	Harvard	*			
AQ	HV 7518	9 20 40 −22 42.5	Boyce	1936	Harvard				
AR	HV 7520	9 21 23 −23 19.9	Boyce	1936	Harvard	*			
AS	209.1932	9 26 9 −18 29.7	Hoffmeister	1932	Sonneberg	+	*		
AT	HV 7530	9 26 29 −22 42.6	Boyce	1936	Harvard				
AU	HV 7532	9 26 50 −21 59.1	Boyce	1936	Harvard	*			
AV	350.1934	9 29 47 + 5 45.9	Hoffmeister	1934	Sonneberg		*		
AW	HV 7544	9 32 29 −23 12.3	Boyce	1936	Harvard	*			
AX	HV 7557	9 35 7 −23 8.6	Boyce	1936	Harvard				
AY	HV 7565	9 38 54 −22 30.3	Boyce	1936	Harvard	*			
AZ	HV 7574	9 41 2 −23 26.2	Boyce	1936	Harvard				
BB	HV 7586	9 45 18 −21 46.0	Boyce	1936	Harvard				
BC	HV 7587	9 45 20 −22 21.7	Boyce	1936	Harvard	*			
			HYDRUS						
R	HV 6320	$0^h\ 5^m35^s$ $-75°44'.0$	Hughes	1934	Harvard				
S	HV 6326	0 14 48 −80 28.2	Hughes	1934	Harvard				
T	HV 6329	0 20 3 −76 50.2	Hughes	1934	Harvard				
U	HV 6331	0 24 27 −79 55.0	Hughes	1934	Harvard				
V	HV 6332	0 25 4 −81 27.8	Hughes	1934	Harvard				
W	HV 6333	0 29 7 −80 13.6	Hughes	1934	Harvard				
X	HV 6335	0 36 41 −80 34.7	Hughes	1934	Harvard				
Y	HV 6336	0 42 55 −79 22.1	Hughes	1934	Harvard	*			
Z	HV 6338	0 45 2 −77 32.2	Hughes	1934	Harvard				
RR	HV 6343	1 4 36 −82 24.4	Hughes	1934	Harvard				
RS	HV 860	1 8 2 −77 22.4	Leavitt	1904	Harvard	*			
RT	HV 6347	1 9 33 −79 42.7	Hughes	1934	Harvard				
RU	HV 6349	1 20 17 −82 5.3	Hughes	1934	Harvard	*			
RV	HV 6350	1 20 22 −80 50.3	Hughes	1934	Harvard	*			
RW	HV 6352	1 30 25 −79 0.1	Hughes	1934	Harvard				
RX	HV 6353	1 31 23 −79 50.8	Hughes	1934	Harvard				
RY	HV 6354	1 32 26 −75 45.3	Hughes	1934	Harvard	*			
RZ	HV 2233	1 33 56 −74 23.7	Leavitt	1908	Harvard	*			
SS	HV 6356	1 37 4 −76 4.2	Hughes	1934	Harvard				
ST	HV 865	1 38 50 −75 0.8	Leavitt	1904	Harvard	*			
SU	HV 6358	1 43 2 −80 30.7	Hughes	1934	Harvard				
SV	HV 6361	1 44 16 −78 15.4	Hughes	1934	Harvard				
SW	HV 6363	1 45 46 −73 50.7	Hughes	1934	Harvard				
SX	HV 6367	2 8 10 −78 17.1	Hughes	1934	Harvard				
SY	HV 6368	2 19 0 −79 53.0	Hughes	1934	Harvard	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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			d	m	m		
XX	Cl	2428259.386	0.33663	10.5	12	pg	AN 5791
XY	SR			12.0	13.2	pg	HB 903
XZ	β	2425617.50	0.62628	14.7	15.6	pg	HB 903
YY	Cl	2426382.50	0.33479	13.5	14.7	pg	HB 903
YZ	Cl	2426411.40	0.598154	14.3	16.0	pg	HB 903
ZZ	W	2426382.55	0.359536	14.3	14.9	pg	HB 903
AA	Cl	2426382.35	0.52231	13.8	15.6	pg	HB 903
AB	L	2426685	420	13.2	[16.0	pg	HB 903
AC	Cl	2426411.45	0.59774	14.0	15.5	pg	HB 903
AD	SR			13.8	14.9	pg	HB 903
AE	W	2426382.35	0.392887	13.9	14.8	pg	HB 903
AF	W	2426382.45	0.57611	12.8	13.8	pg	HB 903
AG	U G			14.3	[16.0	pg	HB 903
AH	SR			13.7	16.0	pg	HB 903
AI	Alg	2428935.46	8.29	9.00	9.50	v	AN 6058
AK	Irr			7.1	8.0	pg	AN 5791
AL	Irr			11	[13	v	AJ 897
AM	Irr			12.7	13.5	pg	HB 903
AN	Irr			13.4	14.2	pg	HB 903
AO	Irr			11.5	12.5	pg	AN 5791
AP	Irr			12.5	13.6	pg	HB 903
AQ	Irr			12.8	14.0	pg	HB 903
AR	Irr			10.9	11.9	pg	HB 903
AS	Alg	2425651.0	15.99	10.5	[12	pg	AN 5919
AT	Irr:			12.8	13.4	pg	HB 903
AU	Irr			11.6	13.0	pg	HB 903
AV	Ecl			10	11	pg	AN 6058
AW	Irr:			13.6	14.1	pg	HB 903
AX	Irr			12.6	13.2	pg	HB 903
AY	Irr			12.2	12.8	pg	HB 903
AZ	Irr			12.0	13.3	pg	HB 903
BB	Irr			12.8	13.8	pg	HB 903
BC	Ecl			11.2	12.0	pg	HB 903
				HYDRUS			
			d	m	m		
R	Cep	2425565.20	10.093	14.8	16.4	pg	HA 90.171
S	Ecl	2425452.56	0.90312	12.0	13.0	pg	HA 90.171
T	Cl	2425531.40	0.56875	13.0	14.3	pg	HA 90.171
U	β	2425851.55	0.70108	13.9	15.2	pg	HA 90.171
V	Cl	2425477.50	0.59396	13.8	15.2	pg	HA 90.171
W	L	2426200	281	13.0	[16.1	pg	HA 90.171
X	L	2426000	308.5	12.8	16.0	pg	HA 90.171
Y	Ecl	2425481.50	3.53597	10.4	14.0	pg	HA 90.171
Z	Cl	2424789.60	0.45038	15.0	16.3	pg	HA 90.171
RR	L	2425800	194	13.3	14.3	pg	HA 90.172
RS	L	2425850	215.5	10.0	16.0	pg	HC 79; AN 3963; HA 60.96
RT	W	2425480.50	0.284038	13.2	14.1	pg	HA 90.172
RU	SR	2424780	157	14.8	16.2	pg	HA 90.172
RV	Ecl	2425477.40	7.19505	11.8	12.8	pg	HA 90.172
RW	Cl	2425481.50	0.55577	12.5	13.3	pg	HA 90.172
RX	Cl	2425483.45	0.61966	14.4	15.6	pg	HA 90.172
RY	L	2426650	319	11.0	15.5	pg	HA 90.172
RZ	Cep	2425452.60	15.172	13.8	15.5	pg	HA 60.96
SS	Cl	2425439.60	0.54888	14.8	16.2	pg	HA 90.172
ST	Cep	2425462.00	33.32	12.5	14.4	pg	HC 79; AN 3963; HA 60.96
SU	Cl	2425441.60	0.34835	12.5	13.8	pg	HA 90.172
SV	Cl	2425444.65	0.53890	14.5	15.8	pg	HA 90.172
SW	Cl	2425530.40	0.48760	13.8	15.5	pg	HA 90.172
SX	Cl	2425469.50	0.31067	12.5	13.5	pg	HA 90.172
SY	Irr			13.4	15.5	pg	HA 90.172

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
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SZ	HV 6345	1h 7m 35s -76° 1.'0	Hughes	1934	Harvard				
TT	HV 6340	0 53 0 -80 34.7	Hughes	1934	Harvard				
TU	HV 6365	1 53 38 -76 52.2	Hughes	1934	Harvard	*			
TV	HV 6366	2 1 23 -78 34.3	Hughes	1934	Harvard				
		INDUS							
RW	380.1931	21h50m17s -69°41.'1	Baldwin	1931	Melbourne	*	*		
		LACERTA							
BI	360.1929	21h56m45s +42°16.'8	Hoffmeister	1929	Sonneberg	*	*		
BK	362.1929	21 58 15 +43 5.9	Hoffmeister	1929	Sonneberg	*	*		
BL	363.1929	21 58 36 +41 47.6	Hoffmeister	1929	Sonneberg		*		
BM	364.1929	22 4 16 +44 31.2	Hoffmeister	1929	Sonneberg		*		
BN	366.1929	22 5 39 +46 45.6	Hoffmeister	1929	Sonneberg	*	*		
BO	368.1929	22 10 44 +41 51.2	Hoffmeister	1929	Sonneberg		*		
BP	369.1929	22 11 21 +44 15.5	Hoffmeister	1929	Sonneberg		*		
BQ	370.1929	22 11 44 +45 29.7	Hoffmeister	1929	Sonneberg		*		
BR	371.1929	22 13 3 +45 55.8	Hoffmeister	1929	Sonneberg		*		
BS	372.1929	22 15 26 +43 46.7	Hoffmeister	1929	Sonneberg		*		
BT	373.1929	22 20 27 +55 41.1	Hoffmeister	1929	Sonneberg		*		
BU	375.1929	22 24 43 +50 3.3	Hoffmeister	1929	Sonneberg	*	*		
BV	376.1929	22 26 1 +46 22.4	Hoffmeister	1929	Sonneberg	*	*		
BW	377.1929	22 28 26 +47 54.3	Hoffmeister	1929	Sonneberg		*		
BX	378.1929	22 29 40 +56 8.0	Hoffmeister	1929	Sonneberg		*		
BY	379.1929	22 31 58 +47 45.4	Hoffmeister	1929	Sonneberg	*	*		
BZ	380.1929	22 34 48 +45 44.0	Hoffmeister	1929	Sonneberg		*		
CC	381.1929	22 38 32 +51 18.7	Hoffmeister	1929	Sonneberg		*		
CD	383.1929	22 39 15 +49 4.2	Hoffmeister	1929	Sonneberg		*		
CE	382.1929	22 39 19 +42 54.5	Hoffmeister	1929	Sonneberg	*	*		
CF	384.1929	22 39 50 +46 59.0	Hoffmeister	1929	Sonneberg		*		
CG	385.1929	22 40 41 +48 35.4	Hoffmeister	1929	Sonneberg		*		
CH	386.1929	22 40 52 +49 22.3	Hoffmeister	1929	Sonneberg		*		
CI	387.1929	22 41 4 +44 49.8	Hoffmeister	1929	Sonneberg		*		
CK	388.1929	22 42 15 +47 56.2	Hoffmeister	1929	Sonneberg		*		
CL	389.1929	22 47 20 +51 48.7	Hoffmeister	1929	Sonneberg	*	*		
CM	397.1931	21 56 3 +44 4.3	Wachmann	1931	Bergedorf	*	*	*	*
CN	4.1930	22 2 9 +45 49.4	Wachmann	1930	Bergedorf	*		*	
CO	62.1933	22 42 27 +56 18.6	Zonn	1933	Wilno	*	*	*	*
CP	605.1936	22 12 0 +55 7.1	Gomi	1936	Horonobe	*	*	*	*
CQ	177.1935	22 16 56 +39 12.6	Morgenroth	1935	Sonneberg	*	*		
CR	SVS 108	22 37 44 +50 37.5	Wassiliew	1926	Pulkowo	*	*	*	
CS	670.1936	21 55 37 +42 5.5	Gesundheit	1936	Wilno	*			
CT	662.1936	22 2 43 +47 58.4	Morgenroth	1936	Sonneberg	*	*		
CU	69.1927	22 12 26 +50 55.0	Hoffmeister	1927	Sonneberg		*	*	
CV	76.1927	22 22 21 +50 46.4	Hoffmeister	1927	Sonneberg		*	*	
CW	224.1935	22 32 38 +50 15.0	Gitz	1934	Moscow	*	*	*	
		LEO							
TW	341.1931	9h19m17s +30°24.'6	Wachmann	1931	Bergedorf	*			
TX	61.1933	10 29 47 + 9 10.0	Meyer	1933	Babelsberg	*			
TY	220.1932	10 47 24 - 4 33.4	Hoffmeister	1932	Sonneberg	*	*		
TZ	345.1933	11 18 27 +17 20.4	Morgenroth	1933	Sonneberg	*	*		
UU	351.1934	9 42 26 +13 26.9	Hoffmeister	1934	Sonneberg	*	*	*	*
UV	363.1934	10 33 1 +14 47.3	Hoffmeister	1934	Sonneberg	*		*	*
UW	221.1932	11 10 6 - 5 2.7	Hoffmeister	1932	Sonneberg	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				HYDRUS			
SZ	Cl	2425441.63	0.44108	14.8	16.0	pg	HA 90.172
TT	Irr			12.4	13.3	pg	HA 90.171
TU	Irr			11.0	11.8	pg	HA 90.172
TV	Irr			11.8	13.1	pg	HA 90.172
				INDUS			
RW	L	2426510	150	9.6	[13.4	v	BZ 13.51; AN 5828
				LACERTA			
BI				12.5	13.5	pg	AN 5655; Sonn Mitt 17
BK				13	14	pg	AN 5655; Sonn Mitt 17
BL	Sh			13	15	pg	AN 5655; Sonn Mitt 17
BM				13	14.5	pg	AN 5655; Sonn Mitt 17
BN	L			12	[16	pg	AN 5655; Sonn Mitt 17
BO				13	14	pg	AN 5655; Sonn Mitt 17
BP	Alg?			14	15.5	pg	AN 5655; Sonn Mitt 17
BQ				12.5	14	pg	AN 5655; Sonn Mitt 17
BR	R C?			13	16.5	pg	AN 5655; Sonn Mitt 17
BS	Alg			12.5	13.5	pg	AN 5655; Sonn Mitt 17
BT	Sh?		14.2/n?	12.6	14.8	pg	AN 5655; Sonn Mitt 17
BU	Irr			12.0	[13.4	pg	AN 5655; Sonn Mitt 17
BV	L			12.5	[16	pg	AN 5655; Sonn Mitt 17
BW	Alg			13	15	pg	AN 5655; Sonn Mitt 17
BX	L			13	[15	pg	AN 5655; Sonn Mitt 17
BY	Irr			11.5	12.5	pg	AN 5655; Sonn Mitt 17
BZ				13	14	pg	AN 5655; Sonn Mitt 17
CC	L		365+	13	[16	pg	AN 5655; Sonn Mitt 17
CD	L			14	16	pg	AN 5655; Sonn Mitt 17
CE				13	14	pg	AN 5655; Sonn Mitt 17
CF	Alg			12	14	pg	AN 5655; Sonn Mitt 17
CG	Alg			13	14	pg	AN 5655; Sonn Mitt 17
CH	Sh			13	14	pg	AN 5655; Sonn Mitt 17
CI				13	15	pg	AN 5655; Sonn Mitt 17
CK				14	15	pg	AN 5655; Sonn Mitt 17
CL	Irr?			12	15	pg	AN 5655; Sonn Mitt 17
CM	Alg	2427026.316	1.6046917	8.25	9.28	pg	BZ 14.2; AN 5846
CN	β	2426267.373	0.6373713	12.44	12.94	pg	AN 5698; 6017; 6116
CO	Alg	2417330.829	1.5422068	10.67	11.14	pg	BZ 15.45; AN 5966
CP	N			1.95	15.6	pg	See Remarks
CQ	Cl	2427635.55	0.62002	11	12.5	pg	AN 6119
CR	Ecl?			13.4	14.5	pg	Mirov Bull 17
CS	Alg	2427695.4	3.7972	9.1	9.4	pg	BZ 18.86; AN 6253
CT	Irr			9	12	pg	AN 6253
CU	Irr		120?	14	15	pg	AN 5518; 5553; Sonn Mitt 12
CV	Irr			12	12.5	pg	AN 5518; 5553; Sonn Mitt 12; 20
CW	Irr			12.1	13.0	pg	NNVS 47
				LEO			
TW	L			12.9	[14	pg	AN 5805
TX	Alg	2427159.380	2.445	5.70	5.80	pe	BZ 15.33; AN 5951
TY	Alg	2425743.47	1.18466	10.5	11.5	pg	AN 5919
TZ	L	2426092	354	12	15	pg	AN 5981; 6118
UU	Alg	2426384.438	1.67975	11.4	12.7	pg	AN 6058
UV	Alg	2427931.4355	0.6000862	8.6	9.25	pg	AN 6058
UW	Cl	2427563.25	1.01608	10	10.5	pg	AN 5919

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
			LEO						
UX	222.1932	11h12m11s - 6° 2'.5	Hoffmeister	1932	Sonneberg	*	*		
UY	362.1934	10 23 51 +23 34.4	Hoffmeister	1934	Sonneberg	*			
UZ	364.1934	10 35 14 +14 5.3	Hoffmeister	1934	Sonneberg	*			*
VV	365.1934	10 43 34 + 9 11.6	Hoffmeister	1934	Sonneberg	*			
			LEPUS						
Y	27.1931	5h 4m43s -24° 33'.2	Hoffmeister	1931	Sonneberg	*			
Z	26.1931	5 5 36 -14 59.9	Hoffmeister	1931	Sonneberg	*			
RR	28.1931	5 7 34 -13 19.2	Hoffmeister	1931	Sonneberg	*			
RS	36.1931	5 55 0 -20 13.9	Hoffmeister	1931	Sonneberg	*			*
RT	173.1932	5 38 24 -23 44.5	Hoffmeister	1932	Sonneberg	*			
			LIBRA						
UW	80.1929	14h25m23s -16° 22'.0	Hoffmeister	1929	Sonneberg	*		*	*
UX	332.1931	14 49 59 - 5 53.1	Beljawsky	1931	Simeis	*			
UY	333.1931	15 25 39 -17 10.3	Beljawsky	1931	Simeis	*			
UZ	82.1929	15 27 0 - 8 11.7	Hoffmeister	1929	Sonneberg	*		*	
VV	335.1931	15 33 58 -20 41.2	Beljawsky	1931	Simeis	*			
VW	SVS 319	15 45 59 -15 47.9	Shajn	1933	Simeis	*	*	*	
VX	SVS 318	15 47 0 -16 44.1	Shajn	1933	Simeis		*	*	
VY	234.1932	15 45 40 -15 27.5	Hoffmeister	1932	Sonneberg	*	*	*	*
			LUPUS						
AX	HV 4871	15h 8m59s -47° 54'.6	Caldwell	1930	Harvard				
AY	HV 4872	15 12 50 -46 13.2	Caldwell	1930	Harvard				
AZ	HV 4873	15 15 55 -45 44.6	Caldwell	1930	Harvard				
BB	HV 4874	15 16 22 -45 23.1	Caldwell	1930	Harvard				
BC	HV 4875	15 20 20 -41 47.3	Caldwell	1930	Harvard				
BD	HV 4876	15 22 36 -41 54.8	Caldwell	1930	Harvard				
BE	HV 4877	15 22 45 -42 22.0	Caldwell	1930	Harvard				
BF	HV 4878	15 23 18 -39 30.4	Caldwell	1930	Harvard				
BG	HV 4879	15 23 29 -46 22.8	Caldwell	1930	Harvard				
BH	HV 4880	15 24 1 -44 27.7	Caldwell	1930	Harvard				
BI	HV 4881	15 24 8 -43 1.8	Caldwell	1930	Harvard				
BK	HV 4882	15 24 11 -40 20.9	Caldwell	1930	Harvard				
BL	HV 4883	15 25 21 -41 23.0	Caldwell	1930	Harvard				
BM	HV 4884	15 25 45 -46 45.0	Caldwell	1930	Harvard				
BN	HV 4885	15 27 20 -47 37.0	Caldwell	1930	Harvard				
BO	HV 4886	15 27 24 -41 12.6	Caldwell	1930	Harvard				
BP	HV 4887	15 28 34 -41 39.5	Caldwell	1930	Harvard				
BQ	HV 4888	15 28 41 -43 26.6	Caldwell	1930	Harvard				
BR	HV 4889	15 29 13 -40 14.4	Caldwell	1930	Harvard	*			
BS	HV 4890	15 29 22 -42 29.0	Caldwell	1930	Harvard				
BT	HV 4891	15 29 32 -44 46.1	Caldwell	1930	Harvard				
BU	HV 4892	15 30 41 -42 32.4	Caldwell	1930	Harvard				
BV	HV 4893	15 31 20 -44 3.8	Caldwell	1930	Harvard				
BW	HV 4894	15 31 21 -44 56.2	Caldwell	1930	Harvard				
BX	HV 4895	15 31 49 -47 1.0	Caldwell	1930	Harvard				
BY	HV 4896	15 32 12 -40 4.8	Caldwell	1930	Harvard				
BZ	HV 4897	15 32 57 -47 29.9	Caldwell	1930	Harvard				
CC	HV 4898	15 33 32 -47 1.4	Caldwell	1930	Harvard				
CD	HV 4899	15 33 50 -44 1.2	Caldwell	1930	Harvard	*			
CE	HV 4900	15 37 33 -43 32.5	Caldwell	1930	Harvard				
CF	HV 4901	15 38 51 -47 45.6	Caldwell	1930	Harvard				
CG	HV 4902	15 39 0 -47 31.3	Caldwell	1930	Harvard				
CH	HV 4903	15 39 6 -44 55.8	Caldwell	1930	Harvard	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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UX	Alg	2427562.279	1.006025	10m	11m	pg	AN 5919
UY	Irr			9.5	11	pg	AN 6058
UZ	Cl	2428656.997	0.309041	8.9	9.5	v	AN 6058
VV	L	2428215	181.5	9.3	10.1	v	AN 6058
			L E P U S				
Y	Sh			9m	10m	pg	AN 5791
Z	Alg	2427415.37	0.99372	11	12.5	pg	AN 5791
RR	β	2427386.45	10.8112	9	9.5	pg	AN 5791
RS	Alg	2427443.225	1.288612	9	10.5	pg	AN 5791
RT	L	2427380	397	10.5	[12.5	pg	AN 5919; 6171
			L I B R A				
UW	L?		84.73	10m.4	11m.0	pg	AN 5655
UX	Cl			12.5	13.5	pg	AN 5800
UY	Cl			13.0	14.0	pg	AN 5800
UZ	Cl	2425716.54	0.4413	10.3	11.1	pg	AN 5655
VV	Cl			12.0	13.5	pg	AN 5800
VW	L	2425764.6	341.4	13.0	[14.6	pg	NNVS 39; Pulk Circ 6
VX				13.9	14.8	pg	NNVS 39; Pulk Circ 6
VY	Cl	2425653.667	0.533948	10.11	11.17	v	AN 5919
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AX	L	2424710	260d	13m.8	[16m.0	pg	HB 879
AY	L	2425390	158	14.2	[16.0	pg	HB 879
AZ	L	2425400	244	15.5	[16.5	pg	HB 879
BB	L	2424720	216.5	14.8	[16.0	pg	HB 879
BC	L	2425380	268	13.0	[16.0	pg	HB 879
BD	L	2425715	257.5	13.1	[16.0	pg	HB 879
BE	L	2424730	279	13.8	[16.0	pg	HB 879
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BG	L	2423910	274	14.6	[16.0	pg	HB 879
BH	L	2424680	150.3	13.8	[16.0	pg	HB 879
BI	L	2424710	195	13.3	[16.0	pg	HB 879
BK	L	2425305	280.5	13.0	[16.0	pg	HB 879
BL	L	2423960	225	14.2	[16.2	pg	HB 879
BM	L	2423950	279.6	15.0	[16.0	pg	HB 879
BN	L	2424710	223	14.2	[16.0	pg	HB 879
BO	L	2425370	444	12.5	[16.0	pg	HB 879
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BQ	L	2424720	276.5	14.0	[16.0	pg	HB 879
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BW	L	2425360	270.5	13.6	[16.0	pg	HB 879
BX	L	2425745	270:	15.0	[16.3	pg	HB 879
BY	L	2423970	263	13.0	[16.0	pg	HB 879
BZ	L	2424740	270.3	14.4	[16.0	pg	HB 879
CC	L	2425325	206	15.0	[16.0	pg	HB 879
CD	L	2425340	192.5	13.5	[15.0	pg	HB 879
CE	L	2424760	351	13.2	[16.0	pg	HB 879
CF	L	2424710	284.5	14.0	[16.0	pg	HB 879
CG	L	2424710	279.5	13.5	[16.0	pg	HB 879
CH	L	2425740	192	13.0	16.0	pg	HB 879

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
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CK	HV 4905	15 39 23 -43 59.4	Caldwell	1930	Harvard				
CL	HV 4906	15 40 48 -42 32.1	Caldwell	1930	Harvard				
CM	HV 4907	15 42 4 -41 19.6	Caldwell	1930	Harvard				
CN	HV 4909	15 42 47 -41 15.2	Caldwell	1930	Harvard				
CO	HV 4913	15 45 16 -40 18.5	Caldwell	1930	Harvard				
CP	HV 4914	15 45 43 -40 40.9	Caldwell	1930	Harvard				
CQ	HV 4915	15 48 2 -40 37.4	Caldwell	1930	Harvard				
CR	HV 4916	15 48 6 -41 14.1	Caldwell	1930	Harvard				
CS	HV 4919	15 50 23 -40 41.2	Caldwell	1930	Harvard				
			LYRA						
CC	202.1929	18h 30m 12s +31° 31.'9	Hoffmeister	1929	Sonneberg	*	*	*	
CD	204.1929	18 31 26 +28 47.0	Hoffmeister	1929	Sonneberg	*	*	*	
CE	206.1929	18 32 54 +27 59.3	Hoffmeister	1929	Sonneberg	*	*	*	
CF	208.1929	18 33 10 +31 32.0	Hoffmeister	1929	Sonneberg	*	*	*	
CG	209.1929	18 33 31 +33 18.5	Hoffmeister	1929	Sonneberg		*		
CH	213.1929	18 35 23 +27 13.7	Hoffmeister	1929	Sonneberg	*	*	*	
CI	214.1929	18 35 52 +26 15.4	Hoffmeister	1929	Sonneberg	*	*	*	
CK	216.1929	18 35 46 +32 4.5	Hoffmeister	1929	Sonneberg	*	*	*	
CL	217.1929	18 36 4 +31 19.0	Hoffmeister	1929	Sonneberg	*	*	*	
CM	218.1929	18 36 43 +32 49.1	Hoffmeister	1929	Sonneberg	*	*		
CN	219.1929	18 37 21 +28 37.6	Hoffmeister	1929	Sonneberg	*	*	*	
CO	220.1929	18 38 11 +31 32.6	Hoffmeister	1929	Sonneberg		*	*	
CP	223.1929	18 38 41 +30 31.6	Hoffmeister	1929	Sonneberg	*	*	*	
CQ	224.1929	18 39 15 +32 14.3	Hoffmeister	1929	Sonneberg	*	*	*	
CR	225.1929	18 39 24 +27 44.8	Hoffmeister	1929	Sonneberg	*	*	*	
CS	227.1929	18 41 54 +30 9.6	Hoffmeister	1929	Sonneberg	*	*	*	
CT	229.1929	18 44 38 +30 26.5	Hoffmeister	1929	Sonneberg	*	*	*	
CU	231.1929	18 45 29 +26 15.4	Hoffmeister	1929	Sonneberg		*	*	
CV	233.1929	18 46 37 +27 59.9	Hoffmeister	1929	Sonneberg	*	*	*	
CW	235.1929	18 46 50 +31 7.5	Hoffmeister	1929	Sonneberg	*	*	*	
CX	236.1929	18 47 22 +28 40.3	Hoffmeister	1929	Sonneberg	*	*	*	
CY	237.1929	18 48 37 +26 37.9	Hoffmeister	1929	Sonneberg	*	*	*	
CZ	238.1929	18 48 43 +28 50.7	Hoffmeister	1929	Sonneberg	*	*	*	
DD	239.1929	18 49 7 +26 56.4	Hoffmeister	1929	Sonneberg	*	*	*	
DE	241.1929	18 49 19 +30 39.0	Hoffmeister	1929	Sonneberg	*	*	*	
DF	242.1929	18 49 35 +27 56.4	Hoffmeister	1929	Sonneberg	*	*	*	
DG	244.1929	18 51 5 +26 54.5	Hoffmeister	1929	Sonneberg	*	*	*	
DH	245.1929	18 52 19 +26 19.2	Hoffmeister	1929	Sonneberg	*	*	*	
DI	247.1929	18 52 51 +34 14.2	Hoffmeister	1929	Sonneberg		*		
DK	248.1929	18 54 41 +25 59.0	Hoffmeister	1929	Sonneberg	*	*	*	
DL	249.1929	18 54 47 +31 7.0	Hoffmeister	1929	Sonneberg	*	*	*	
DM	250.1929	18 54 53 +30 7.5	Hoffmeister	1929	Sonneberg	*	*	*	
DN	252.1929	18 55 13 +29 31.7	Hoffmeister	1929	Sonneberg		*	*	
DO	254.1929	18 56 26 +26 16.8	Hoffmeister	1929	Sonneberg		*	*	
DP	256.1929	18 56 46 +35 33.6	Hoffmeister	1929	Sonneberg	*	*		
DQ	257.1929	18 57 45 +31 3.4	Hoffmeister	1929	Sonneberg		*	*	
DR	258.1929	18 58 9 +26 0.2	Hoffmeister	1929	Sonneberg		*	*	
DS	261.1929	18 59 2 +30 38.9	Hoffmeister	1929	Sonneberg	*	*	*	
DT	262.1929	18 59 29 +29 44.4	Hoffmeister	1929	Sonneberg		*	*	
DU	263.1929	18 59 57 +29 59.3	Hoffmeister	1929	Sonneberg	*	*	*	
DV	264.1929	19 0 24 +31 10.6	Hoffmeister	1929	Sonneberg	*	*	*	
DW	267.1929	19 3 1 +29 35.5	Hoffmeister	1929	Sonneberg	*	*	*	
DX	268.1929	19 3 37 +25 59.4	Hoffmeister	1929	Sonneberg	*	*	*	
DY	270.1929	19 6 39 +30 19.0	Hoffmeister	1929	Sonneberg		*	*	
DZ	271.1929	19 6 49 +26 57.1	Hoffmeister	1929	Sonneberg		*	*	
EE	272.1929	19 7 23 +29 6.5	Hoffmeister	1929	Sonneberg	*	*	*	
EF	273.1929	19 7 23 +38 48.7	Hoffmeister	1929	Sonneberg	*	*		
EG	274.1929	19 7 24 +38 24.4	Hoffmeister	1929	Sonneberg	*	*		

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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CL	L	2423910	284.3	14.0	[16.0	pg	HB 879
CM	L	2423970	406.4	13.4	[16.0	pg	HB 879
CN	L	2423960	328.5	13.8	[16.5	pg	HB 879
CO	L	2424730	174.4	14.2	[16.3	pg	HB 879
CP	L	2423950	232	15.5	[16.3	pg	HB 879
CQ	L	2423970	182.7	13.0	[16.0	pg	HB 879
CR	L	2425350	292.5	12.8	[16.0	pg	HB 879
CS	L	2424370	246.6	13.5	[16.0	pg	HB 879
			LYRA				
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CE	L	2425452	321	11.7	14.5	pg	AN 5655; Sonn Mitt 17
CF				13.5	14.5	pg	AN 5655; Sonn Mitt 17
CG	Cl?			13	14.5	pg	AN 5655; Sonn Mitt 17
CH	L	2425518	254	14.1	[16.5	pg	AN 5655; Sonn Mitt 17
CI	Cl	2429167.308	0.469202	13.57	14.70	pg	AN 5655; Sonn Mitt 17
CK	L	2425496	343	13.0	16.7	pg	AN 5655; Sonn Mitt 17
CL	Cl	2429322.643	0.490753	13.77	15.50	pg	AN 5655; Sonn Mitt 17
CM	Irr			11.4	12.9	v	AN 5655; Sonn Mitt 17
CN	Cep	2427770.31	2.33596	10.8	11.2	v	AN 5655; Sonn Mitt 17
CO	Sh			13.5	14	pg	AN 5655; Sonn Mitt 17
CP	L	2429138	161±	15.2	16.7	pg	AN 5655; Sonn Mitt 17
CQ	R C			13	15.5	pg	AN 5655; Sonn Mitt 17
CR	Cl	2429759.505	0.493423	13.66	14.70	pg	AN 5655; Sonn Mitt 17
CS	Cl	2429072.500	0.620730	14.05	15.12	pg	AN 5655; Sonn Mitt 17
CT	Cl	2429759.545	0.51756	13.50	14.87	pg	AN 5655; Sonn Mitt 17
CU				14.5	15.5	pg	AN 5655; Sonn Mitt 17
CV	SR		140	10.8	13.1	v	AN 5655; Sonn Mitt 17
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CX	Cl	2427696.396	0.6166790	11.70	12.70	v	AN 5655; Sonn Mitt 17
CY	U G			12.9	[14.5	v	AN 5655; Sonn Mitt 17
CZ	L	2425418	236	13.9	[16.5	pg	AN 5655; Sonn Mitt 17
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DF	W	2427801.840	0.577128	13.10	13.48	v	AN 5655; Sonn Mitt 17
DG	Irr			14.1	14.7	pg	AN 5655; Sonn Mitt 17
DH	Cl	2429322.664	0.612472	13.47	14.42	pg	AN 5655; Sonn Mitt 17
DI	Sh			13	14.5	pg	AN 5655; Sonn Mitt 17
DK				13.5	14.5	pg	AN 5655; Sonn Mitt 17
DL				14.5	16.5	pg	AN 5655; Sonn Mitt 17
DM	N?			14	[16	pg	AN 5655; Sonn Mitt 17
DN				14	15	pg	AN 5655; Sonn Mitt 17
DO				13	14	pg	AN 5655; Sonn Mitt 17
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DR	Sh?			13.5	14.5	pg	AN 5655; Sonn Mitt 17
DS	Cl	2429050.469	0.535498	14.10	15.97	pg	AN 5655; Sonn Mitt 17
DT	Alg		7.47?	14.5	15	pg	AN 5655; Sonn Mitt 17
DU	β	2429784.470	0.83700	13.06	14.33	pg	AN 5655; Sonn Mitt 17
DV	Cl	2429421.416	0.555838	13.74	14.58	pg	AN 5655; Sonn Mitt 17
DW	SR	2427590	107	11.4	12.2	v	AN 5655; Sonn Mitt 17
DX				13	14	pg	AN 5655; Sonn Mitt 17
DY				14	15	pg	AN 5655; Sonn Mitt 17
DZ	Alg			14	15	pg	AN 5655; Sonn Mitt 17
EE	SR	2427861	73.0	11.4	13.0	v	AN 5655; Sonn Mitt 17
EF	L	2427666	294	11.2	12.9	v	AN 5655; Sonn Mitt 17
EG	SR	2427870	136.7	11.1	13.1	v	AN 5655; Sonn Mitt 17

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
			LYRA						
EH	275.1929	19h 8m 3s +26°33'.3	Hoffmeister	1929	Sonneberg	*	*	*	
EI	276.1929	19 9 8 +27 36.9	Hoffmeister	1929	Sonneberg		*		
EK	277.1929	19 9 30 +35 2.5	Hoffmeister	1929	Sonneberg	*	*		
EL	278.1929	19 9 35 +31 53.0	Hoffmeister	1929	Sonneberg	*	*		
EM	279.1929	19 10 7 +28 54.7	Hoffmeister	1929	Sonneberg	*	*		
EN	281.1929	19 11 16 +34 35.2	Hoffmeister	1929	Sonneberg	*	*		
EO	280.1929	19 11 20 +32 21.7	Hoffmeister	1929	Sonneberg		*		
EP	377.1931	19 14 17 +27 39.7	Schneller	1931	Babelsberg	*		*	
EQ	282.1929	19 15 46 +40 55.2	Hoffmeister	1929	Sonneberg	*	*		
ER	283.1929	19 16 30 +40 4.3	Hoffmeister	1929	Sonneberg		*		
ES	284.1929	19 18 31 +33 12.8	Hoffmeister	1929	Sonneberg	*	*	*	
ET	285.1929	19 18 34 +34 40.0	Hoffmeister	1929	Sonneberg		*		
EU	286.1929	19 19 6 +35 20.8	Hoffmeister	1929	Sonneberg	*	*		
EV	287.1929	19 23 10 +38 50.0	Hoffmeister	1929	Sonneberg		*		
EW	298.1930	18 29 52 +37 40.4	Hoffmeister	1930	Sonneberg	*	*		
EX	207.1929	18 33 9 +26 3.9	Hoffmeister	1929	Sonneberg	*	*	*	
EY	300.1930	18 37 3 +31 34.7	Hoffmeister	1930	Sonneberg	*			
EZ	304.1930	18 44 8 +35 52.8	Hoffmeister	1930	Sonneberg	*	*	*	*
FF	84.1905	18 51 40 +32 46.7	Wolf	1905	Heidelberg	*	*	*	
FG	45.1930	18 52 41 +32 3.4	Hoffmeister	1930	Sonneberg	*	*	*	
FH	354.1928	19 7 55 +36 29.9	Hoffmeister	1928	Sonneberg	*	*		
FI	30.1930	18 38 9 +28 51.4	Hoffmeister	1930	Sonneberg	*		*	
FK	353.1928	19 6 30 +27 28.5	Hoffmeister	1928	Sonneberg	*	*	*	
FL	163.1935	19 9 10 +46 8.8	Morgenroth	1935	Sonneberg	*			
FM	301.1930	18 39 15 +35 21.3	Hoffmeister	1930	Sonneberg	*			
FN	SVS 701	19 7 12 +42 17.7	Beljawsky	1936	Simeis		*	*	
FO	172.1928	19 13 59 +26 50.5	Hoffmeister	1928	Sonneberg	*	*	*	
FP	SVS 708	19 20 10 +41 46.8	Beljawsky	1936	Simeis		*	*	
			MONOCEROS						
AN	42.1931	6h 54m 52s -10°29'.3	Hoffmeister	1931	Sonneberg	*	*		*
AO	46.1931	7 2 7 - 4 29.5	Hoffmeister	1931	Sonneberg	*	*		*
AP	48.1931	7 4 41 - 6 34.3	Hoffmeister	1931	Sonneberg	*	*		*
AQ	52.1931	7 9 26 - 7 3.1	Hoffmeister	1931	Sonneberg	*	*	*	*
AR	55.1931	7 15 52 - 5 4.4	Hoffmeister	1931	Sonneberg	*	*	*	*
AS	57.1931	7 17 37 - 8 40.3	Hoffmeister	1931	Sonneberg	*	*	*	*
AT	59.1931	7 19 39 - 7 21.7	Hoffmeister	1931	Sonneberg	*	*		
AU	41.1931	6 49 50 - 1 15.0	Hoffmeister	1931	Sonneberg	*	*	*	*
AV	61.1929	7 23 21 - 4 25.0	Hoffmeister	1929	Sonneberg	*	*	*	*
AW	188.1932	7 43 59 -10 12.1	Hoffmeister	1932	Sonneberg	*	*	*	
AX	259.1930	6 25 12 + 5 56.0	Guthnick and Prager	1930	Babelsberg	*			
AY	Ross 197	6 47 49 + 9 15.6	Ross	1927	Yerkes	*	*		
AZ	Ross 158	6 52 30 + 3 26.5	Ross	1927	Yerkes	*			
BB	48.1932	6 56 28 - 8 32.6	Lause	1932	Innsbruck	*	*	*	*
BC	190.1932	7 54 2 - 4 13.8	Hoffmeister	1932	Sonneberg	*	*		
BD	192.1932	7 56 6 - 5 21.1	Hoffmeister	1932	Sonneberg	*	*		
BE	299.1934	6 34 40 + 7 41.8	Hoffmeister	1934	Sonneberg	*			
BF	85.1933	6 42 6 + 9 44.3	Morgenroth	1933	Sonneberg	*	*		
BG	51.1934	6 50 58 + 7 11.7	Morgenroth	1934	Sonneberg		*		
BH	10.1934	6 51 9 + 9 27.3	Morgenroth	1934	Sonneberg		*		
BI	87.1933	6 55 31 +10 53.1	Morgenroth	1933	Sonneberg	*	*	*	
BK	52.1934	6 57 36 + 3 18.4	Morgenroth	1934	Sonneberg		*		
BL	694.1933	6 58 13 + 5 39.5	Morgenroth	1933	Sonneberg	*	*		
BM	90.1933	7 3 36 + 0 51.5	Morgenroth	1933	Sonneberg	*	*		
BN	..	6 16 32 + 7 23	Edmondson and Rogers	1935	Lowell	*	*	*	
BO	321.1934	7 54 49 - 3 11.9	Hoffmeister	1934	Sonneberg	*		*	*
BP	147.1931	6 51 36 + 5 9	Hoffmeister	1931	Sonneberg	*	*	*	
BQ	157.1931	6 59 44 - 9 48	Hoffmeister	1931	Sonneberg	*			
BR	160.1931	7 2 17 - 1 9	Hoffmeister	1931	Sonneberg	+			
BS	183.1932	7 19 6 - 3 21.1	Hoffmeister	1932	Sonneberg	*	*		

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				LYRA			
EH				13^m	14^m	pg	AN 5655; Sonn Mitt 17
EI				14	15	pg	AN 5655; Sonn Mitt 17
EK	SR		180^d:	11.7	12.7	v	AN 5655; Sonn Mitt 17
EL	L	2418888	237.8	12.5	16	pg	AN 5655; Sonn Mitt 17
EM	L	2425440	378	14.5	[16.8	pg	AN 5655; Sonn Mitt 17
EN	Cep	2427802.98	2.36456	12.94	13.27	v	AN 5655; Sonn Mitt 17
EO	Sh?			13	14	pg	AN 5655; Sonn Mitt 17
EP	SR	2427841.6	83.429	9.98	10.62	v	AN 5814; 5828
EQ	L			12	[15	pg	AN 5655; Sonn Mitt 17
ER	Irr?			12	15.5	pg	AN 5655; Sonn Mitt 17
ES	L	2425337	175	13.6	16.0	pg	AN 5655; Sonn Mitt 17
ET	Alg			13	15	pg	AN 5655; Sonn Mitt 17
EU				13	13.5	pg	AN 5655; Sonn Mitt 17
EV	Alg			13	15	pg	AN 5655; Sonn Mitt 17
EW	Alg	2427806.6711	1.948718	11.15	[13.5	v	AN 5748
EX	W	2427871.337	0.4174145	12.06	12.38	v	AN 5655; Sonn Mitt 17
EY	Irr			8.3	9.2	v	AN 5748
EZ	Cl	2426577.406	0.5252599	10.2	10.9	pg	AN 5748; Sonn Mitt 20
FF	L	2413447	220.8	12.9	[16.5	pg	AN 4046
FG	Alg	2427852.219	2.87169	12.43	13.35	v	AN 5700; Sonn Mitt 22
FH	Alg	2427907.518	1.589240	12.46	[13.7	v	AN 5595; Sonn Mitt 16
FI	SR	2427580	146	9.5	10.5	v	AN 5700; Sonn Mitt 22
FK	SR		43	11.4	12.1	v	AN 5595; Sonn Mitt 16
FL	Alg	2428034.327	2.17822	8.7	9.5	v	AN 6119
FM	Irr			12.3	12.9	pg	AN 5748
FN	Cl	2428540.228	0.4847	11.5	13.0	pg	NNVS 50; 53; Pulk Circ 19
FO	Alg	2425185.290	2.682748	13.1	14.2	pg	AN 5571; Sonn Mitt 15
FP	L	2428355	270	13.0	[15.2	pg	NNVS 50; 53; Pulk Circ 19
				MONOCEROS			
AN	Alg	2424622.466	2.445795^d	12.0^m	13.1^m	v	AN 5791
AO	Alg	2426735.333	0.9432727	9.35	9.93	v	AN 5791
AP	Irr			9.0	9.5	v	AN 5791
AQ	Alg	2425620.392	2.545560	10.48	11.28	pg	AN 5791
AR	β	2426606.585	21.207	8.82	10.10	v	AN 5791
AS	Alg	2426721.569	1.836486	10.68	11.36	v	AN 5791
AT	W?			10.8	11.4	v	AN 5791
AU	Alg	2426743.12	11.1107	8.28	9.35	v	AN 5791
AV	Alg	2426709.172	6.9474	10.84	11.74	v	AN 5655
AW	Alg	2426439.34	20.8128	10.4	12.1	v	AN 5919
AX	Irr			6.7	6.9	pe	AN 5713
AY	Alg	2428247.464	2.14427	13.3	15.5	v	AJ 882
AZ	L	2425580	387	12.5	15.5	pg	AJ 875
BB	Alg	2426723.324	0.7326998	9.92	10.42	v	BZ 14.63; AN 5902
BC	L	2427839	293	10	[12	pg	AN 5919
BD	L	2427855	356	10.3	[12.4	v	AN 5919
BE	Cl	2427863.244	0.4210568	10.5	11.5	pg	AN 6058
BF	L	2427470	283	13.5	[15.5	pg	AN 5974
BG	L	2427410	240	12	13.5	pg	AN 6048; 6058
BH	Alg	2426297.546	2.32464	14	15	pg	AN 6021; BZ 16.25
BI	L	2426325	435	10.5	[15.5	pg	AN 5974
BK	L	2427420	240	14.5	[15.5	pg	AN 6048; 6058
BL	L	2425682	144	13.0	16.0	pg	AN 6002
BM	Alg	2427455.395	1.24499	12.5	13.5	pg	AN 5974
BN	Irr			13.0	15.3	pg	ASP 47.191
BO	Alg	2427900.103	2.225102	9.5	10.5	pg	AN 6058
BP	Alg	2425326.5	22.83	12.5	13.5	pg	AN 5791
BQ	Irr			14	15.5	pg	AN 5791
BR	Irr			11.5	12.5	pg	AN 5791
BS	Irr			9.5	10.4	v	AN 5919

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		MUSCA							
VW	..	11h 55m 20s -65° 27.'4	Bruna	1930	Johannesburg	*	*	*	*
VX	..	11 56 17 -65 19.4	Bruna	1930	Johannesburg	*	*	*	*
VY	HV 4999	13 6 48 -71 13.5	Florence	1931	Harvard		*		
VZ	HV 5000	13 13 1 -69 46.5	Florence	1931	Harvard		*		
WW	HV 5001	13 13 9 -68 32.8	Florence	1931	Harvard		*		
WX	HV 5002	13 15 55 -72 4.6	Florence	1931	Harvard		*		
WY	HV 5003	13 18 27 -69 22.0	Florence	1931	Harvard	*	*		*
WZ	HV 5004	13 19 40 -69 53.3	Florence	1931	Harvard		*		
XX	HV 5005	13 20 23 -70 13.3	Florence	1931	Harvard		*		
XY	HV 5006	13 20 44 -64 32.7	Florence	1931	Harvard	*	*		
XZ	HV 5007	13 23 10 -70 15.1	Florence	1931	Harvard	*	*		
YY	HV 5008	13 23 16 -68 21.1	Florence	1931	Harvard		*		
YZ	HV 5009	13 24 5 -67 10.7	Florence	1931	Harvard		*		
ZZ	HV 5010	13 24 37 -70 52.7	Florence	1931	Harvard		*		
AA	HV 5011	13 26 8 -70 2.1	Florence	1931	Harvard	*	*		
AB	HV 5012	13 26 50 -67 10.6	Florence	1931	Harvard		*		*
AC	HV 5013	13 26 54 -70 7.5	Florence	1931	Harvard		*		*
AD	HV 5014	13 27 2 -69 10.1	Florence	1931	Harvard	*	*		
AE	HV 5015	13 27 10 -69 54.7	Florence	1931	Harvard	*	*		
AF	HV 5016	13 27 33 -66 15.3	Florence	1931	Harvard		*		
AG	HV 5017	13 27 37 -66 47.6	Florence	1931	Harvard		*		
AH	HV 5018	13 27 44 -68 45.9	Florence	1931	Harvard	*	*		
AI	HV 5020	13 31 11 -72 6.4	Florence	1931	Harvard		*		
AK	HV 5021	13 31 18 -71 32.9	Florence	1931	Harvard	*	*		
AL	HV 5023	13 32 38 -71 16.2	Florence	1931	Harvard		*		
AM	HV 5024	13 33 11 -69 14.0	Florence	1931	Harvard		*		
AN	HV 5025	13 33 35 -67 1.1	Florence	1931	Harvard	*	*		
AO	HV 5026	13 34 12 -67 18.0	Florence	1931	Harvard		*		
AP	HV 5027	13 34 56 -70 45.8	Florence	1931	Harvard		*		
AQ	HV 5029	13 36 32 -68 46.3	Florence	1931	Harvard		*		
AR	HV 5030	13 37 6 -68 39.0	Florence	1931	Harvard		*		
AS	HV 5031	13 37 16 -67 58.6	Florence	1931	Harvard	*	*		
AT	HV 5032	13 38 42 -67 21.5	Florence	1931	Harvard		*		
AU	HV 5033	13 38 47 -66 51.6	Florence	1931	Harvard		*		
AV	HV 5034	13 39 22 -70 8.1	Florence	1931	Harvard	*	*		
AW	HV 5035	13 41 40 -67 42.5	Florence	1931	Harvard		*		
AX	HV 5036	13 41 41 -68 5.1	Florence	1931	Harvard	*	*		
AY	..	11 27 11 -64 43.1	Uitterdijk	1932	Johannesburg	*		*	*
AZ	..	11 32 20 -65 54.0	Uitterdijk	1932	Johannesburg	*	*	*	
BB	..	11 32 35 -65 52.2	Uitterdijk	1932	Johannesburg	*	*	*	*
BC	..	11 42 45 -64 10.1	Uitterdijk	1932	Johannesburg	*	*	*	*
BD	..	12 12 41 -64 53.4	Uitterdijk	1932	Johannesburg	*	*	*	*
BE	..	12 15 35 -65 57.1	Uitterdijk	1932	Johannesburg	*	*	*	*
BF	..	12 15 44 -65 57.4	Uitterdijk	1932	Johannesburg	*	*	*	*
BG	HV 6438	13 12 13 -65 5.4	Swope	1934	Harvard				
BH	213.1933	13 18 2 -64 52.8	Luyten	1933	Harvard	*			
BI	..	11 28 11 -66 14.1	Uitterdijk	1936	Johannesburg	*	*	*	*
BK	..	11 26 6 -64 46.1	Uitterdijk	1936	Johannesburg	*	*	*	
BL	HV 6429	13 2 47 -64 45.2	Swope	1934	Harvard	*			
BM	HV 6463	13 24 22 -64 45.2	Swope	1934	Harvard				
BN	HV 6464	13 25 17 -65 18.1	Swope	1934	Harvard				
		NORMA							
WX	HV 5138	15h 32m 39s -58° 12.'6	Hoffleit	1931	Harvard	*	*	*	*
WY	HV 5139	15 33 47 -58 1.2	Hoffleit	1931	Harvard	*			
WZ	HV 5140	15 33 48 -58 48.8	Hoffleit	1931	Harvard	*	*	*	*
XX	HV 5142	15 35 5 -58 3.9	Hoffleit	1931	Harvard				
XY	HV 5143	15 35 14 -58 0.1	Hoffleit	1931	Harvard	*	*	*	*
XZ	HV 5148	15 38 16 -59 23.4	Hoffleit	1931	Harvard				
YY	HV 5149	15 39 57 -57 5.7	Hoffleit	1931	Harvard	*	*	*	*

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VX	Alg	2424775.073	3.11175	13.5	14.4	pg	BAN 207
VY	L	2425430	194.6	14.0	[16.5	pg	HB 883
VZ	Cl			15.2	16.4	pg	HB 883
WW	L	2426150	246.0	13.8	[16.5	pg	HB 883
WX	Cl	2425434.26	0.5742	14.4	16.0	pg	HB 883
WY	Cl	2424173.06	0.60562	13.7	15.4	pg	HB 883
WZ	L	2426150	241.8	14.5	[16.5	pg	HB 883
XX	Cl			14.0	15.0	pg	HB 883
XY	L?	2426030	193	12.0	13.3	pg	HB 883
XZ	L	2423960	111	12.3	14.0	pg	HB 883
YY	Sh			13.5	15.3	pg	HB 883
YZ	L	2426000	238	14.6	[16.5	pg	HB 883
ZZ	L	2426060	213	13.3	[16.5	pg	HB 883
AA	L	2425440	284	14.0	[16.5	pg	HB 883
AB	Ecl	2425412.365	0.96494	12.8	14.5	pg	HB 883
AC	Cl	2425379.36	0.51578	13.4	15.0	pg	HB 883
AD	L	2426110	230	15.1	[16.5	pg	HB 883
AE	L	2426030	169	12.0	14.4	pg	HB 883
AF	L	2425670	174.2	14.7	[16.5	pg	HB 883
AG	Ecl			13.6	16.0	pg	HB 883
AH	L	2426145	369	13.6	[16.5	pg	HB 883
AI	L	2425340	444	12.0	[16.5	pg	HB 883
AK	Sh			14.9	15.3	pg	HB 883
AL	L	2426090	167	14.5	[16.5	pg	HB 883
AM	Ecl			13.5	[15.5	pg	HB 883
AN	L?	2426010	187.6	14.9	16.0	pg	HB 883
AO	Ecl?			13.7	14.7	pg	HB 883
AP	L	2426120	176	13.4	16.7:	pg	HB 883
AQ	L	2425395	275	15.2	[16.5	pg	HB 883
AR	Ecl	2425409.33	2.2655	14.0	15.5	pg	HB 883
AS	Cep	2423960	26.425	14.0	15.5	pg	HB 883
AT	Ecl	2425413.30	4.76	13.6	16.2	pg	HB 883
AU	Cl	2425355.51	0.6103	14.0	15.4	pg	HB 883
AV	Sh			15.0	15.4	pg	HB 883
AW	L	2425440	247	14.5	15.6	pg	HB 883
AX	L	2425330	99	12.5	[16.5	pg	HB 883
AY	Alg	2425030.969	3.20559	10.2	10.5	pg	BAN 240
AZ	Ecl	2425331.52	3.3120	13.6	14.0	pg	BAN 240
BB	Alg	2425842.789	2.52223	13.4	13.7	pg	BAN 240
BC	Alg	2424951.363	3.511171	12.2	14.5:	pg	BAN 240
BD	Alg	2424768.244	1.481335	13.1	13.7	pg	BAN 240
BE	W	2425088.0628	0.3369219	13.3	13.5	pg	BAN 240
BF	W	2424752.185	0.844776	13.3	13.7	pg	BAN 240
BG	Cl	2424696.56	0.50202	13.8	15.5	pg	HA 90.178
BH	L	2426100	347.5	14.5	[16.5	pg	AN 5975; Minn Publ 2.116
BI	Alg	2426117.244	3.7636	13.8	15.2	pg	BAN 286
BK	Alg			12.8	13.2	pg	BAN 286
BL	Ecl			10.6	11.3	pg	HA 90.178
BM	Irr:			14.2	15.2	pg	HA 90.178
BN	Irr:			13.4	14.1	pg	HA 90.178
NORMA							
WX	Alg	2425745.520	1.271304	12.9	13.7	pg	HB 884
WY	Cl	2424710.501	0.536337	15.6	16.5	pg	HB 884
WZ	Alg	2425756.513	1.049018	15.1	15.6	pg	HB 884
XX	L	2424670	270	14.7	[16.5	pg	HB 884
XY	Alg	2425719.36	1.68003	13.1	13.6	pg	HB 884
XZ	L	2424710	275	15.0	[16.5	pg	HB 884
YY	Alg	2425649.084	1.694903	13.5	16.0:	pg	HB 884

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		NORMA							
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ZZ	HV 5153	15 40 39 -58 29.9	Hoffleit	1931	Harvard				
AA	HV 5154	15 41 23 -57 21.0	Hoffleit	1931	Harvard	*	*	*	*
AB	HV 4908	15 42 24 -42 46.6	Caldwell	1930	Harvard	*			
AC	HV 5158	15 43 13 -59 7.9	Hoffleit	1931	Harvard	*	*	*	*
AD	HV 5161	15 43 39 -59 34.3	Hoffleit	1931	Harvard				
AE	HV 4910	15 43 49 -44 49.6	Caldwell	1930	Harvard				
AF	HV 5165	15 44 42 -56 20.4	Hoffleit	1931	Harvard				
AG	HV 5166	15 44 44 -56 36.0	Hoffleit	1931	Harvard				
AH	HV 4911	15 44 53 -47 8.4	Caldwell	1930	Harvard				
AI	HV 4912	15 45 9 -47 16.8	Caldwell	1930	Harvard				
AK	HV 5168	15 45 49 -58 56.1	Hoffleit	1931	Harvard				
AL	HV 5169	15 46 2 -59 40.0	Hoffleit	1931	Harvard				
AM	HV 5172	15 46 46 -59 36.2	Hoffleit	1931	Harvard				
AN	HV 5173	15 46 49 -59 34.1	Hoffleit	1931	Harvard				
AO	HV 5176	15 47 47 -59 18.7	Hoffleit	1931	Harvard				
AP	HV 5177	15 47 56 -58 47.0	Hoffleit	1931	Harvard				
AQ	HV 5179	15 48 32 -59 13.1	Hoffleit	1931	Harvard				
AR	HV 5180	15 48 43 -59 47.0	Hoffleit	1931	Harvard				
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AY	HV 4920	15 51 35 -43 32.0	Caldwell	1930	Harvard				
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BC	HV 4921	15 53 30 -43 12.2	Caldwell	1930	Harvard				
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CN	HV 5249	16 5 24 -58 15.6	Hoffleit	1931	Harvard				

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SY	HV 6305	23 31 5 -80 23.0	Hughes	1934	Harvard				
SZ	HV 6307	23 40 10 -82 2.7	Hughes	1934	Harvard				
TT	HV 6310	23 44 43 -79 14.3	Hughes	1934	Harvard				
TU	HV 6313	23 47 35 -78 25.6	Hughes	1934	Harvard	*			
TV	HV 6303	23 18 30 -77 35.6	Hughes	1934	Harvard				

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
			N O R M A				
FN	L	2424682	275^{d}	14^{m}.5	[16^{m}.5	pg	HB 884
FO	Sh			14.2	14.8	pg	HB 884
FP	L			15.7	[16.4	pg	HB 884
FQ	Cl	2424654.708	1.994?	14.3	15.6	pg	HB 884
FR				14.8	15.4	pg	HB 884
FS	L	2423900	334	13.0	[16.5	pg	HB 884
FT				13.2	15.0	pg	HB 884
FU	L	2426097	384	14.7	[16.5	pg	HB 884
FV	L?			15.0	[16.2	pg	HB 884
FW	Alg	2425926.305	6.46073	15.0	[16.4	pg	HB 884
FX	Cl	2424655.755	0.51465	14.9	16.3	pg	HB 884
FY	L	2424650	239	14.7	[16.5	pg	HB 884
FZ	L	2423992	271	14.7	[16.5	pg	HB 884
GG	L	2423900	328	15.3	16.5	pg	HB 884
GH				14.7	15.7	pg	HB 884
GI	L	2424670	345	15.0	[16.2	pg	HB 884
GK	Ecl			11.0	11.7	pg	HB 884, corr. 887
GL	Alg	2425824.333	2.20889	10.6	12.8	pg	BAN 236
GM	Alg	2425726.057	0.942331	10.4	11.0	pg	BAN 236
GN	Alg	2425772.170	5.70345	12.7	13.3	pg	BAN 236; AN 5911
GO	Alg	2425738.060	5.9569	13.4	15.6	pg	BAN 236
GP	Alg	2425611.824	2.42711	13.8	14.6	pg	BAN 236
GQ	Alg	2425637.340	0.830755	13.6	14.8	pg	BAN 236
GR	Cep	2425705.960	1.9600	13.0	13.5	pg	BAN 236
GS	Alg	2425706.180	1.454044	13.8	15.9	pg	BAN 236
GT	Alg	2425577.901	2.07116	13.9	14.8	pg	BAN 236
GU	Cep	2425756.680	3.4535	11.5	12.0	pg	BAN 236
GV	Alg	2425560.039	2.97183	10.9	11.8	pg	BAN 236
GW	Cl	2425708.127	0.624999	14.4	15.3	pg	BAN 236
GX	W	2425694.210	0.268782	14.0	15.0	pg	BAN 236
GY	Alg	2425919.119	3.093067	14.2	15.2	pg	BAN 236
GZ	Cep	2425827.860	35.734	12.5	13.8	pg	BAN 236
HH	Alg	2427114.235	8.58313	10.3	11.5	pg	BAN 267
HI	Alg	2425353.6	73.562	10.1	11.2	pg	BAN 267
HK	Alg	2425771.048	0.706717	12.6	15.2	pg	BAN 267
HL	Alg	2425764.455	1.873417	13.6	14.9	pg	BAN 267
HM	Alg	2425738.756	4.426460	11.8	13.7	pg	BAN 267
HN	Alg	2425729.254	5.302621	13.2	14.4	pg	BAN 267
HO	Alg	2425705.578	2.12317	13.1	15.2	pg	BAN 267
HP	U G?			12.9	15.3	pg	BAN 267
HQ	Alg	2425390	90.9	12.6	13.5	pg	BAN 267
HR	Irr			13.3	14.3	pg	BAN 275
HS	Alg	2426067.577	5.12612	12.6	15.2	pg	BAN 296
HT	Alg	2425764.122	5.4160	13.3	13.8	pg	BAN 296
HU	Alg	2426125.46	4.94303	13.6	[14.7	pg	BAN 296
HV	Alg	2426476.547	2.282969	14.5	[15.6	pg	BAN 296
HW	Alg	2426091.460	2.574705	14.4	14.8	pg	BAN 296
HX	Alg	2425853.33	33.754	12.3	12.9	pg	BAN 296
			O C T A N S				
SX	Cl	2425441.60	0^{d}.62774	15^{m}.0	16^{m}.2	pg	HA 90.171
SY	Cl	2425447.60	0.41247	13.9	15.7	pg	HA 90.171
SZ	Cl	2425451.45	0.58341	14.7	16.1	pg	HA 90.171
TT	Cl	2425447.60	0.56772	12.9	13.7	pg	HA 90.171
TU	Irr			12.8	13.6	pg	HA 90.171
TV	Irr			13.0	16.0	pg	HA 90.171

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		OPHIUCHUS							
V 413	83.1929	16h19m34s -10°19'.5	Hoffmeister	1929	Sonneberg	*	*	*	*
V 414	173.1929	17 55 37 + 0 55.6	Hoffmeister	1929	Sonneberg	*	*	*	
V 415	176.1929	17 56 1 + 1 11.6	Hoffmeister	1929	Sonneberg	*	*	*	
V 416	177.1929	17 56 8 + 3 33.9	Hoffmeister	1929	Sonneberg	*	*	*	
V 417	178.1929	17 56 27 + 1 2.0	Hoffmeister	1929	Sonneberg	*	*	*	
V 418	179.1929	17 57 44 + 2 53.1	Hoffmeister	1929	Sonneberg	*	*	*	
V 419	180.1929	17 58 6 + 3 26.5	Hoffmeister	1929	Sonneberg	*	*	*	
V 420	181.1929	17 59 39 + 7 23.4	Hoffmeister	1929	Sonneberg	*	*	*	
V 421	182.1929	18 0 14 + 7 1.1	Hoffmeister	1929	Sonneberg	*	*	*	
V 422	184.1929	18 0 31 + 5 13.1	Hoffmeister	1929	Sonneberg	*	*	*	
V 423	186.1929	18 1 12 + 0 32.0	Hoffmeister	1929	Sonneberg	*	*	*	
V 424	187.1929	18 2 3 + 1 36.0	Hoffmeister	1929	Sonneberg	*	*	*	
V 425	188.1929	18 2 36 + 6 56.9	Hoffmeister	1929	Sonneberg	*	*	*	
V 426	29.1926	18 2 58 + 5 51.1	Beljawsky	1926	Simeis	*			
V 427	189.1929	18 3 20 + 1 54.0	Hoffmeister	1929	Sonneberg	*	*	*	
V 428	191.1929	18 5 5 + 2 59.7	Hoffmeister	1929	Sonneberg	*	*	*	
V 429	194.1929	18 5 28 + 5 33.4	Hoffmeister	1929	Sonneberg	*	*	*	
V 430	193.1929	18 5 30 + 3 49.7	Hoffmeister	1929	Sonneberg	*	*	*	
V 431	195.1929	18 6 33 + 6 54.7	Hoffmeister	1929	Sonneberg	*	*	*	
V 432	196.1929	18 8 46 + 6 25.2	Hoffmeister	1929	Sonneberg	*	*	*	
V 433	197.1929	18 9 21 + 5 10.8	Hoffmeister	1929	Sonneberg	*	*	*	
V 434	198.1929	18 12 18 + 2 40.3	Hoffmeister	1929	Sonneberg	*	*	*	
V 435	199.1929	18 12 25 + 3 19.5	Hoffmeister	1929	Sonneberg	*	*	*	
V 436	201.1929	18 12 49 + 3 38.1	Hoffmeister	1929	Sonneberg	*	*	*	
V 437	200.1929	18 12 51 + 3 56.6	Hoffmeister	1929	Sonneberg	*	*	*	
V 438	17.1930	17 9 58 +11 11.0	Hoffmeister	1930	Sonneberg	*			
V 439	212.1931	17 38 32 + 3 38.5	Hoffmeister	1931	Sonneberg	*		*	*
V 440	Ross 209	16 54 50 +12 28.8	Ross	1927	Yerkes	*			
V 441	SVS 327	17 15 4 -17 14.0	Neujmin	1933	Simeis	*	*		
V 442	SVS 337	17 26 30 -16 11.3	Shajn	1933	Simeis		*	*	
V 443	SVS 338	17 29 35 -18 11.2	Shajn	1933	Simeis		*	*	
V 444	215.1930	18 14 53 +10 22.6	Reinmuth	1930	Heidelberg	*			
V 445	245.1932	16 19 20 - 6 18.3	Hoffmeister	1932	Sonneberg	*	*	*	*
V 446	SVS 410	16 41 5 -11 27.9	Shajn	1934	Simeis	*	*	*	
V 447	350.1933	17 7 10 + 8 27.1	Morgenroth	1933	Sonneberg	*	*		
V 448	SVS 431	17 9 32 -19 0.2	Shajn	1934	Simeis		*	*	
V 449	354.1933	17 26 0 +10 39.7	Morgenroth	1933	Sonneberg	*	*		
V 450	99.1935	18 15 47 +12 36.5	Hoffmeister	1935	Sonneberg	*	*	*	
V 451	104.1935	18 24 32 +10 49.7	Hoffmeister	1935	Sonneberg	*			*
V 452	60.1935	17 13 17 +11 11.3	Hoffmeister	1935	Sonneberg	*	*		
V 453	743.1933	17 21 36 - 2 18.8	Hoffmeister	1933	Sonneberg	*		*	*
V 454	93.1935	18 8 55 +12 26.2	Hoffmeister	1935	Sonneberg	*	*	*	*
V 455	95.1935	18 10 39 +12 19.2	Hoffmeister	1935	Sonneberg	*	*	*	
V 456	108.1935	18 38 19 + 8 44.5	Hoffmeister	1935	Sonneberg	*			
V 457	214.1931	17 42 16 + 3 8	Hoffmeister	1931	Sonneberg	*		*	
V 458	216.1931	17 42 35 + 1 35	Hoffmeister	1931	Sonneberg	*		*	
V 459	218.1931	17 43 40 + 2 3	Hoffmeister	1931	Sonneberg	*		*	
V 460	220.1931	17 44 24 - 0 3	Hoffmeister	1931	Sonneberg	*		*	
V 461	222.1931	17 46 0 + 0 43	Hoffmeister	1931	Sonneberg	*		*	
V 462	223.1931	17 46 3 + 2 54	Hoffmeister	1931	Sonneberg	*		*	
V 463	224.1931	17 46 23 - 1 31	Hoffmeister	1931	Sonneberg	*		*	
V 464	225.1931	17 46 43 + 5 6	Hoffmeister	1931	Sonneberg	*		*	
V 465	226.1931	17 46 55 - 1 3	Hoffmeister	1931	Sonneberg	*		*	*
V 466	228.1931	17 47 13 + 4 55	Hoffmeister	1931	Sonneberg	*		*	
V 467	229.1931	17 48 1 - 0 28	Hoffmeister	1931	Sonneberg	*		*	
V 468	230.1931	17 49 12 + 6 20	Hoffmeister	1931	Sonneberg	*		*	
V 469	231.1931	17 49 35 + 0 47	Hoffmeister	1931	Sonneberg	*		*	
V 470	232.1931	17 49 35 + 0 55	Hoffmeister	1931	Sonneberg	*		*	
V 471	236.1931	17 50 22 + 2 20	Hoffmeister	1931	Sonneberg	*		*	
V 472	237.1931	17 50 47 + 0 57	Hoffmeister	1931	Sonneberg	*		*	

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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			d	m	m		
V 413	Cl	2426569.216	0.3096090	11.8	13.6	pg	AN 5655
V 414	Cep	2425302.63	3.16590	14.0	15.2	pg	AN 5655; Sonn Mitt 17
V 415	Ecl		10.1348/n?	14.7	15.1	pg	AN 5655; Sonn Mitt 17
V 416	L	2426870	152	14.0	[16.1	pg	AN 5655; Sonn Mitt 17
V 417	L	2425438	264	14.4	[15.9	pg	AN 5655; Sonn Mitt 17
V 418	L	2425398	106	13.8	15.5	pg	AN 5655; Sonn Mitt 17
V 419	Sh			14.0	14.8	pg	AN 5655; Sonn Mitt 17
V 420	L	2425505	435	14.3	[16.0	pg	AN 5655; Sonn Mitt 17; KVBB 19.22; 70
V 421	L	2425881	337	13.3	[15.5	pg	AN 5655; Sonn Mitt 17
V 422	L	2426087	213	11.5	[16.5	pg	AN 5655; Sonn Mitt 17
V 423	Alg	2427236.459	1.20376	11	12	pg	AN 5655; Sonn Mitt 17
V 424	L	2425498	273	14.5	[15.9	pg	AN 5655; Sonn Mitt 17
V 425	L	2425511	273	14.1	[15.6	pg	AN 5655; Sonn Mitt 17
V 426	Irr			12.2	13.8	pg	AN 5455
V 427	L	2426420	224	14.0	[15.8	pg	AN 5655; Sonn Mitt 17
V 428	L	2425020	278	13.8	15.3	pg	AN 5655; Sonn Mitt 17
V 429	L	2425308	130	15.1	16.2	pg	AN 5655; Sonn Mitt 17
V 430	Cl	2425410.460	0.4118077	13.6	14.9	pg	AN 5655; Sonn Mitt 17; KVBB 19.22; 71; BZ 21.136
V 431	L	2425433	310	14.7	[16.5	pg	AN 5655; Sonn Mitt 17
V 432	W?			14.7	15.6	pg	AN 5655; Sonn Mitt 17
V 433	L	2425500	189	14.1	16.2	pg	AN 5655; Sonn Mitt 17
V 434	L	2425500	290	13.6	16.2	pg	AN 5655; Sonn Mitt 17
V 435	Sh			13.6	14.8	pg	AN 5655; Sonn Mitt 17
V 436	L	2426485	250	13.6	[16.3	pg	AN 5655; Sonn Mitt 17
V 437	L	2425406	223	14.5	[16.2	pg	AN 5655; Sonn Mitt 17
V 438	L	2427663	288	9.5	10.5	pg	AN 5700
V 439	Cl	2425406.441	0.395094	12.6	13.9	pg	AN 5791; KVBB 19.22
V 440	L	2427309	281	10	[13	pg	AJ 882
V 441	Alg	2426870.45	3.05867	10.2	[14.5	pg	Pulk Circ 6.28; NNVS 40
V 442	Sh			12.6	[14.5	pg	Pulk Circ 7.28; NNVS 40
V 443				13.3	[14.1	pg	Pulk Circ 7.28; NNVS 40
V 444	L			13	[16	pg	AN 5709
V 445	Cl	2427543.543	0.397025	10.17	11.13	v	AN 5919
V 446	L	2427225	341	13.2	[14.7	pg	NNVS 44; 45
V 447	Irr			9.5	13.5	pg	AN 5981
V 448	Alg		6.086	12.2	13.8	pg	NNVS 44; 45
V 449	Alg	2427612.515	1.24307	11.5	13.5	v	AN 5981; 6118
V 450	L	2425753	157	11.5	[13	pg	AN 6118
V 451	Alg	2425504.320	1.098295	7.9	8.5	pg	AN 6118
V 452	Cl	2428013.269	0.560411	11.5	12.5	pg	AN 6118
V 453	Cep	2427600.283	0.97085	10.63	11.46	v	AN 6002
V 454	L	2425655	655	10.6	12.1	pg	AN 6118
V 455	Cl	2428373.504	0.4529	11.7	[12.5	pg	AN 6118
V 456	Alg	2428422.298	1.016	9	10.5	pg	AN 6118
V 457	L	2425410	190	12.9	16.1	pg	AN 5791
V 458	L	2426485	130	13.6	15.4	pg	AN 5791
V 459	L	2425885	363	13.7	[16.0	pg	AN 5791
V 460	L	2425282	132	14.3	16.2	pg	AN 5791; KVBB 19.23
V 461	L	2425412	128	14.6	16.3	pg	AN 5791
V 462	L	2426176	324	14.0	[16.0	pg	AN 5791
V 463	L	2425765	230	14.2	[15.9	pg	AN 5791; KVBB 19.23
V 464	Irr			14.1	14.8	pg	AN 5791; KVBB 19.23
V 465	Cep	2425738.25	2.84459	13.4	14.7	pg	AN 5791; KVBB 19.23
V 466	Irr			13.8	14.6	pg	AN 5791; KVBB 19.23
V 467	L	2425785	195	14.9	[16.0	pg	AN 5791; KVBB 19.23
V 468	Irr		70?	14.5	15.7	pg	AN 5791; KVBB 19.23
V 469	Irr			14.5	15.3	pg	AN 5791; KVBB 19.23
V 470	Irr			13.6	14.1	pg	AN 5791; KVBB 19.23
V 471	Irr?			13.8	[16.0	pg	AN 5791; KVBB 19.23
V 472	SR	2425370	100	12.7	14.0	pg	AN 5791; KVBB 19.23

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		O P H I U C H U S							
V 473	241.1931	17h 51m 59s + 3° 23'	Hoffmeister	1931	Sonneberg	*		*	
V 474	242.1931	17 52 47 + 0 59	Hoffmeister	1931	Sonneberg	*		*	
V 475	244.1931	17 53 20 + 4 10	Hoffmeister	1931	Sonneberg	*		*	
V 476	245.1931	17 53 21 + 3 39	Hoffmeister	1931	Sonneberg	*		*	
V 477	246.1931	17 54 12 + 5 41	Hoffmeister	1931	Sonneberg	*		*	
V 478	247.1931	17 54 35 + 0 48	Hoffmeister	1931	Sonneberg	*		*	*
V 479	248.1931	17 55 12 + 6 6	Hoffmeister	1931	Sonneberg	*		*	
V 480	249.1931	17 55 35 + 1 9	Hoffmeister	1931	Sonneberg	*		*	
V 481	250.1931	17 55 52 + 2 20	Hoffmeister	1931	Sonneberg	*		*	
V 482	252.1931	17 56 6 + 0 42	Hoffmeister	1931	Sonneberg	*		*	
V 483	253.1931	17 56 9 + 2 58	Hoffmeister	1931	Sonneberg	*		*	
V 484	257.1931	17 57 17 + 7 4	Hoffmeister	1931	Sonneberg	*		*	
V 485	255.1931	17 57 18 + 5 3	Hoffmeister	1931	Sonneberg			*	
V 486	259.1931	17 57 26 + 4 30	Hoffmeister	1931	Sonneberg			*	
V 487	258.1931	17 57 28 + 1 47	Hoffmeister	1931	Sonneberg	*		*	
V 488	260.1931	17 57 44 + 4 19	Hoffmeister	1931	Sonneberg	*		*	
V 489	261.1931	17 58 1 + 4 59	Hoffmeister	1931	Sonneberg	*		*	
V 490	262.1931	17 58 38 + 4 30	Hoffmeister	1931	Sonneberg	*		*	
V 491	263.1931	17 59 33 + 3 25	Hoffmeister	1931	Sonneberg	*		*	
V 492	264.1931	18 0 21 + 2 56	Hoffmeister	1931	Sonneberg	*		*	
V 493	265.1931	18 2 6 + 5 31	Hoffmeister	1931	Sonneberg	*		*	
V 494	268.1931	18 3 21 + 3 11	Hoffmeister	1931	Sonneberg	*		*	
V 495	270.1931	18 4 9 + 3 30	Hoffmeister	1931	Sonneberg	*		*	
V 496	271.1931	18 5 15 + 3 9	Hoffmeister	1931	Sonneberg	*		*	*
V 497	272.1931	18 5 51 + 3 12	Hoffmeister	1931	Sonneberg			*	
V 498	275.1931	18 10 36 + 0 5	Hoffmeister	1931	Sonneberg			*	
V 499	276.1931	18 11 46 + 2 26	Hoffmeister	1931	Sonneberg	*		*	
V 500	277.1931	18 12 58 + 2 13	Hoffmeister	1931	Sonneberg	*		*	
V 501	98.1935	18 14 3 +14 11.8	Hoffmeister	1935	Sonneberg	*	*	*	
V 502	65.1935	16 36 15 + 0 42.0	Hoffmeister	1935	Sonneberg	*			*
V 503	731.1936	16 47 18 - 5 16	Luyten	1936	Harvard	*			
V 504	732.1936	16 47 42 - 4 47	Luyten	1936	Harvard	*		*	
V 505	SVS 574	17 9 35 - 9 50.4	Shajn	1934	Simeis	*	*		
V 506	75.1935	17 36 14 + 7 50.1	Hoffmeister	1935	Sonneberg	*	*		*
V 507	SVS 580	17 38 35 - 2 22.8	Shajn	1934	Simeis	*	*		
V 508	82.1935	17 54 13 +13 31.2	Hoffmeister	1935	Sonneberg	*			
V 509	311.1928	17 55 3 + 3 28.6	Hoffmeister	1928	Sonneberg	*	*	*	
V 510	185.1929	18 1 6 + 2 47.7	Hoffmeister	1929	Sonneberg	*	*	*	
V 511	267.1931	18 3 16 + 2 24	Hoffmeister	1931	Sonneberg			*	
V 512	352.1930	18 6 25 +11 29.2	Hoffmeister	1930	Sonneberg	*	*		
V 513	94.1935	18 9 6 + 5 15.7	Hoffmeister	1935	Sonneberg	*			
V 514	232.1936	18 28 18 + 8 23.0	Hoffmeister	1936	Sonneberg				
V 515	276.1936	18 34 54 +11 45.1	Hoffmeister	1936	Sonneberg	*			
		O R I O N							
EP	Ross 150	4h 45m 42s + 2° 58'.5	Ross	1927	Yerkes	*			
EQ	43.1929	4 52 15 - 3 45.4	Hoffmeister	1929	Sonneberg	*			
ER	45.1929	5 6 27 - 8 40.8	Hoffmeister	1929	Sonneberg	*	*		*
ES	23.1931	4 48 16 + 5 26.2	Hoffmeister	1931	Sonneberg	*			
ET	24.1931	4 50 23 + 1 13.4	Hoffmeister	1931	Sonneberg	*	*		
EU	11.1930	5 9 52 + 3 22.1	Hoffmeister	1930	Sonneberg	*	*		
EV	12.1930	5 10 3 + 9 17.0	Hoffmeister	1930	Sonneberg	*		*	
EW	13.1930	5 14 57 + 1 56.5	Hoffmeister	1930	Sonneberg	*		*	*
EX	31.1931	5 19 36 - 6 14.3	Hoffmeister	1931	Sonneberg	*			
EY	32.1931	5 26 24 - 5 46.8	Hoffmeister	1931	Sonneberg	*		*	*
EZ	34.1931	5 29 25 - 5 9.4	Hoffmeister	1931	Sonneberg	*	*		
FF	49.1929	5 29 55 + 2 53.0	Hoffmeister	1929	Sonneberg	*	*		
FG	Ross 151	4 48 58 + 7 40.3	Ross	1927	Yerkes	*			
FH	47.1929	5 17 59 + 4 10.8	Hoffmeister	1929	Sonneberg	*	*		

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
							OPHIUCHUS
V 473	L	2425430	200^{d}	14.3^{m}	15.1^{m}	pg	AN 5791; KVBB 19.23
V 474	Irr			13.6	14.1	pg	AN 5791; KVBB 19.23
V 475	L	2425165	235	14.5	[16.3	pg	AN 5791; KVBB 19.23
V 476	Irr			14.5	15.1	pg	AN 5791; KVBB 19.23
V 477	Cep	2425410.67	1.97299?	13.9	15.2	pg	AN 5791; KVBB 19.23
V 478	Cep	2425441.2	16.38	13.2	14.5	pg	AN 5791; KVBB 19.23
V 479	Irr			12.7	13.9	pg	AN 5791; KVBB 19.23
V 480	Irr			13.9	14.6	pg	AN 5791; KVBB 19.23
V 481	Irr			14.7	15.3	pg	AN 5791; KVBB 19.23
V 482	Irr			13.3	14.0	pg	AN 5791; KVBB 19.23
V 483	L	2425298	294	15.1	[16.3	pg	AN 5791
V 484	L	2425328	185	13.6	15.4	pg	AN 5791
V 485	SR	2425445	51?	14.4	14.8	pg	AN 5791; KVBB 19.23; 75
V 486	Irr			14.5	15.4	pg	AN 5791; KVBB 19.23; 75
V 487	Alg	2425438.430	3.13603	12.8	14.1	pg	AN 5791; KVBB 19.23
V 488	L	2425366	72	13.0	14.7	pg	AN 5791
V 489	L	2426215	446	15.6	[16.3	pg	AN 5791
V 490	Irr			14.2	14.7	pg	AN 5791; KVBB 19.23
V 491	Irr			14.5	14.9	pg	AN 5791; KVBB 19.23
V 492	L	2426450	190	14.7	[16.2	pg	AN 5791
V 493	Irr?	2425980	670:	14.5	15.3	pg	AN 5791; KVBB 19.23
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V 495	L	2425700	287	14.8	16.1	pg	AN 5791
V 496	β?	2425442.405	22.576225	14.3	15.7	pg	AN 5791; KVBB 19.23
V 497	Irr			15.0	15.7	pg	AN 5791; KVBB 19.23; 77
V 498	Irr			12.5	14.0	pg	AN 5791; KVBB 19.23; 77
V 499	L	2425727	142	14.5	[16.6	pg	AN 5791
V 500	L	2426868	320	14.2	[16.3	pg	AN 5791
V 501	Ecl	2428407.313	0.966	10.6	[12.0	pg	AN 6118
V 502	W	2428684.493	0.453419	8.20	8.73	v	AN 6118
V 503	SR	2420635.5	84.2	12.0	14.5	pg	AN 6263; Minn Publ 2.100
V 504	L	2419560.3	206	11.5	[15	pg	AN 6263; Minn Publ 2.100
V 505	L	2424740	322	13.0	14.3	pg	NNVS 46; Pulk Circ 13
V 506	β	2425502.324	1.060413	11.19	12.00	pg	AN 6118
V 507	Ecl		18.72/n	12.6	15.1	pg	NNVS 46; Pulk Circ 13
V 508	W	2428416.334	0.34476	10	11	pg	AN 6118
V 509	Alg	2425123.345	1.2234565	12.6	13.8	pg	AN 5595; Sonn Mitt 16; BZ 21.136
V 510	Ecl			12.3	13.2	pg	AN 5655; Sonn Mitt 17
V 511	Ecl			13.8	15.0	pg	AN 5791; KVBB 19.23; 77
V 512	Irr?			13.5	15.5	pg	AN 5748; Sonn Mitt 22
V 513			58	10.5	11.5	pg	AN 6118
V 514	L		245	11.5	[16	pg	AN 6195
V 515			≥ 200	11	12	pg	AN 6195
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ER	W	2426336.438	0.423395	9.46	10.13	v	AN 5655
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ET	Alg	2426684.2830	0.9509356	10.3	11.8	v	AN 5791
EU	L	2426636	345	10.5	[12	pg	AN 5700
EV	Irr			11.7	12.9	pg	AN 5700
EW	Alg	2427543.350	6.936916	9.75	10.47	v	AN 5700
EX	Irr			11.3	11.7	pg	AN 5791
EY	Alg	2425866.68	16.789	9.5	10.3	v	AN 5791
EZ	R C?			11.5	13.0	pg	AN 5791
FF	Alg	2425890.40	1.81053	10	11	pg	AN 5655
FG	L		285	10	[15.5	pg	AJ 875
FH	Alg	2425900.394	2.15116	10.5	11.5	pg	AN 5655

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FK	41.1934	5 0 5 + 9 11.8	Morgenroth	1934	Sonneberg	*	*		
FL	9.1930	5 2 45 - 2 53.2	Hoffmeister	1930	Sonneberg	*	*		
FM	102.1934	5 3 25 +10 25.4	Morgenroth	1934	Sonneberg	*	*	*	*
FN	29.1931	5 11 29 + 0 18.8	Hoffmeister	1931	Sonneberg	*	*		
FO	103.1934	5 22 54 + 3 32.0	Morgenroth	1934	Sonneberg	*		*	
FP	33.1931	5 27 38 -10 42.0	Hoffmeister	1931	Sonneberg	*	*		
FQ	Ross 9	5 39 5 + 6 49.3	Ross	1925	Yerkes	*		*	
FR	282.1934	5 45 35 + 9 24.8	Hoffmeister	1934	Sonneberg	*	*		
FS	40.1934	4 48 59 + 8 46.0	Morgenroth	1934	Sonneberg	*			
FT	291.1934	6 7 58 +21 27.1	Hoffmeister	1934	Sonneberg	*			
δ	..	5 26 54 - 0 22.4	Stebbins	1911	Urbana	*		*	*
π^5	..	4 49 2 + 2 16.6	Kunz and Stebbins	1916	Urbana	*			*
		PAVO							
SY	HV 5492	17h43m24s -57°50.'0	Cannon	1933	Harvard	*			
SZ	HV 6957	17 32 36 -59 52.5	Swope	1935	Harvard				
TT	HV 6794	17 33 4 -57 41.9	Swope	1935	Harvard				
TU	HV 6798	17 35 37 -61 20.7	Swope	1935	Harvard				
TV	HV 6958	17 37 3 -58 20.9	Swope	1935	Harvard				
TW	HV 6800	17 37 9 -58 18.7	Swope	1935	Harvard	*			
TX	HV 6961	17 38 45 -60 2.5	Swope	1935	Harvard				
TY	HV 6962	17 39 18 -62 33.7	Swope	1935	Harvard				
TZ	HV 6807	17 39 34 -59 8.3	Swope	1935	Harvard				
UU	HV 6963	17 41 17 -59 59.0	Swope	1935	Harvard				
UV	HV 6809	17 42 10 -62 5.0	Swope	1935	Harvard				
UW	HV 6965	17 42 22 -61 4.6	Swope	1935	Harvard				
UX	HV 6966	17 42 29 -61 51.3	Swope	1935	Harvard				
UY	HV 6967	17 42 31 -61 5.8	Swope	1935	Harvard				
UZ	HV 6810	17 42 35 -63 7.1	Swope	1935	Harvard				
VV	HV 6811	17 42 43 -61 13.7	Swope	1935	Harvard				
VW	HV 6968	17 43 36 -58 51.0	Swope	1935	Harvard				
VX	HV 6970	17 44 9 -61 52.0	Swope	1935	Harvard				
VY	HV 6813	17 44 59 -59 18.7	Swope	1935	Harvard				
VZ	HV 6972	17 45 49 -61 34.6	Swope	1935	Harvard				
WW	HV 6973	17 46 39 -59 33.2	Swope	1935	Harvard				
WX	HV 6974	17 47 4 -59 15.3	Swope	1935	Harvard				
WY	HV 6975	17 47 39 -57 8.5	Swope	1935	Harvard				
WZ	HV 6977	17 47 49 -59 52.8	Swope	1935	Harvard				
XX	HV 6818	17 48 43 -58 35.0	Swope	1935	Harvard				
XY	HV 6820	17 49 29 -57 35.7	Swope	1935	Harvard				
XZ	HV 6822	17 49 40 -59 10.2	Swope	1935	Harvard				
YY	HV 6826	17 52 3 -58 25.7	Swope	1935	Harvard	*			
YZ	HV 6828	17 53 9 -58 7.1	Swope	1935	Harvard	*			
ZZ	HV 6829	17 53 23 -58 23.5	Swope	1935	Harvard	*			
AA	HV 6832	17 54 14 -59 3.1	Swope	1935	Harvard	*			
AB	HV 6834	17 55 8 -58 54.1	Swope	1935	Harvard	*			
AC	HV 6836	17 57 37 -57 19.1	Swope	1935	Harvard	*			
AD	HV 6838	17 58 29 -61 14.4	Swope	1935	Harvard	*			
AE	HV 6983	18 0 5 -57 22.5	Swope	1935	Harvard	*			
AF	539.1933	18 1 44 -62 19.1	Luyten	1933	Harvard	*			
AG	HV 6841	18 3 0 -62 34.5	Swope	1935	Harvard	*			
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AI	HV 6796	17 33 55 -57 35.1	Swope	1935	Harvard				
AK	HV 6801	17 37 22 -58 18.6	Swope	1935	Harvard				
AL	HV 6808	17 39 42 -59 31.8	Swope	1935	Harvard				
AM	HV 6819	17 48 58 -58 20.0	Swope	1935	Harvard				
AN	HV 6821	17 49 38 -57 0.7	Swope	1935	Harvard	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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			d	m	m		
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FL	Alg	2427452.271	1.55095	10.5	13.2	v	AN 5700
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FP	L	2425656	147	11	[12.5	pg	AN 5791
FQ	L	2428062	272	11	[15	pg	AJ 852-853
FR	β	2427862.159	0.8831582	9.5	10.5	pg	AN 6058
FS	Irr			12	13.5	pg	AN 6048; 6058
FT	W?			9	9.5	pg	AN 6058
δ	β	2419068.20	5.7325	2.40	2.50	v	Ap J 34.111; 42.133; AAS 2.49; Washb Publ 15.56
τ^5	Ell	2417922.565	3.70045	3.87	3.91	pe	PA 25.372; 27.677; Washb Publ 15.56
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SY	L	2425440	193.7	11.3	[14.3	pg	HB 891
SZ	Cl	2426865.310	0.53439	13.9	15.4	pg	HA 90.212
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TU	Ecl	2426598.420	6.32023	13.6	15.8	pg	HA 90.209
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TW	L:	2427140	397	12.0	13.2	pg	HA 90.209
TX	Cl	2427162.550	0.45987	12.3	13.4	pg	HA 90.212
TY	Cl	2426218.280	0.71040	11.3	12.5	pg	HA 90.212
TZ	Irr:			12.0	13.4	pg	HA 90.209
UU	Cl	2427252.510	0.63022	13.2	14.1	pg	HA 90.212
UV	SR	2426090	173:	12.4	13.6	pg	HA 90.210
UW	Cl	2427268.340	0.56971	12.9	14.7	pg	HA 90.212
UX	Cl	2427631.480	0.31337	13.5	14.4	pg	HA 90.212
UY	Cl	2427250.490	0.47836	15.0	16.2	pg	HA 90.212
UZ	L	2426110	149.3	14.0	15.0	pg	HA 90.210
VV	Irr			14.2	15.5	pg	HA 90.210
VW	Cl	2426810.570	0.47876	12.8	14.2	pg	HA 90.212
VX	Cl	2426869.560	0.45981	12.9	14.3	pg	HA 90.212
VY	Irr			13.0	14.3	pg	HA 90.210
VZ	Cl	2427243.500	0.65276	13.6	14.8	pg	HA 90.212
WW	Cl	2427277.450	0.44426	12.9	14.0	pg	HA 90.212
WX	Cl	2426864.400	0.55554	15.0	15.6	pg	HA 90.212
WY	Cl	2426868.320	0.58858	11.4	12.5	pg	HA 90.212
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AN	L	2427630	306.4	13.3	[16.5	pg	HA 90.210

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
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AQ	HV 6835	17 55 53 -60 2.2	Swope	1935	Harvard				
AR	HV 7860	18 10 20 -66 7.0	Mayall	1937	Harvard	*		*	*
			PEGASUS						
AT	328.1931	22h 8m25s + 7°55'.8	Schneller	1931	Babelsberg	*		*	*
AU	317.1930	21 19 21 +17 51.0	Hoffmeister	1930	Sonneberg	*		*	*
AV	90.1931	21 47 30 +22 5.5	Hoffmeister	1931	Sonneberg	*	*	*	*
AW	357.1930	21 47 45 +23 32.2	Plaut	1930	Babelsberg	*			
AX	Ross 125	21 53 50 +22 37.4	Ross	1926	Yerkes	*			
AY	Ross 294	21 56 26 +34 29.1	Ross	1928	Yerkes	*			
AZ	319.1930	22 2 5 +28 43.7	Hoffmeister	1930	Sonneberg	*			
BB	93.1931	22 18 4 +15 49.7	Hoffmeister	1931	Sonneberg	*	*	*	*
BC	95.1931	22 36 59 +20 38.9	Hoffmeister	1931	Sonneberg	*			
BD	96.1931	22 38 15 +27 38.0	Hoffmeister	1931	Sonneberg	*			
BE	97.1931	22 38 55 +22 39.1	Hoffmeister	1931	Sonneberg	*			
BF	98.1931	22 41 3 +23 36.9	Hoffmeister	1931	Sonneberg	*	*	*	*
BG	SVS 286	22 47 51 +15 7.3	Zessewitsch	1931	Moscow	*			
BH	101.1931	22 48 4 +15 14.9	Hoffmeister	1931	Sonneberg	*	*	*	*
BI	103.1931	22 52 56 +17 28.9	Hoffmeister	1931	Sonneberg	*			
BK	108.1931	23 42 6 +26 0.7	Hoffmeister	1931	Sonneberg	*			*
BL	HV 6122	21 18 31 +23 28.3	Hughes	1934	Harvard				
BM	HV 6123	21 18 48 +23 2.7	Hughes	1934	Harvard				
BN	145.1935	21 23 2 + 4 34.1	Hoffmeister	1935	Sonneberg	*		*	*
BO	146.1935	21 26 29 +11 30.5	Hoffmeister	1935	Sonneberg	*		*	*
BP	HV 6137	21 28 43 +22 18.1	Hughes	1934	Harvard	*			
BQ	HV 6138	21 29 47 +20 31.5	Hughes	1934	Harvard				
BR	HV 6139	21 30 54 +27 4.7	Hughes	1934	Harvard				
BS	HV 6140	21 31 14 +27 52.0	Hughes	1934	Harvard	*			
BT	HV 6141	21 31 58 +25 52.4	Hughes	1934	Harvard	*			
BU	HV 6142	21 32 38 +23 39.7	Hughes	1934	Harvard	*			
BV	HV 6145	21 33 32 +26 21.4	Hughes	1934	Harvard				
BW	HV 6146	21 33 36 +21 2.9	Hughes	1934	Harvard				
BX	HV 6149	21 34 25 +26 15.3	Hughes	1934	Harvard	*			
BY	HV 6151	21 34 29 +27 39.7	Hughes	1934	Harvard				
BZ	HV 6153	21 35 16 +25 54.7	Hughes	1934	Harvard				
CC	HV 6154	21 35 16 +27 57.8	Hughes	1934	Harvard	*			
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CE	HV 6156	21 36 19 +24 42.4	Hughes	1934	Harvard				
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CG	HV 6158	21 36 48 +24 19.6	Hughes	1934	Harvard	*	*	*	*
CH	HV 6159	21 36 54 +22 43.7	Hughes	1934	Harvard				
CI	HV 6160	21 37 48 +21 44.6	Hughes	1934	Harvard				
CK	HV 6161	21 38 0 +21 13.2	Hughes	1934	Harvard	*			
CL	HV 6163	21 38 18 +25 10.4	Hughes	1934	Harvard				
CM	HV 6164	21 38 38 +23 17.6	Hughes	1934	Harvard				
CN	HV 6165	21 38 55 +26 23.8	Hughes	1934	Harvard				
CO	HV 6167	21 40 44 +22 0.6	Hughes	1934	Harvard				
CP	HV 6168	21 41 7 +25 43.1	Hughes	1934	Harvard				
CQ	HV 6169	21 41 47 +26 28.5	Hughes	1934	Harvard				
CR	HV 6170	21 42 14 +26 2.8	Hughes	1934	Harvard				
CS	HV 6171	21 42 22 +24 15.3	Hughes	1934	Harvard				
CT	HV 6172	21 42 49 +25 5.3	Hughes	1934	Harvard				
CU	HV 6173	21 43 17 +26 47.5	Hughes	1934	Harvard	*			
CV	HV 6174	21 43 38 +21 47.4	Hughes	1934	Harvard				
CW	HV 6175	21 44 2 +27 39.3	Hughes	1934	Harvard	*			
CX	Ross 124	21 44 57 +22 13.5	Ross	1926	Yerkes	*			
CY	HV 6179	21 45 11 +20 41.0	Hughes	1934	Harvard				
CZ	HV 6180	21 45 54 +24 34.5	Hughes	1934	Harvard	*			

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AR	Ecl	2411255	605d	10.2	13.2	pg	HA 105.491; PA 45.95; AAS 9.13
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AV	Cl	2426582.3015	0.39037167	9.87	11.50	pg	AN 5791
AW	Alg	2426543.480	10.62228	7.23	7.97	v	BZ 12.89; AN 5846
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AY	Cl?			12.3	13.3	pg	AJ 897
AZ	Irr			10.2	11.1	pg	AN 5748
BB	W	2427675.144	0.3615435	10.81	11.36	pg	AN 5791
BC	L	2426650	100	9.5	10	pg	AN 5791
BD	Irr			8.5	11.1	pg	AN 5791
BE	Irr			9.5	11.4	pg	AN 5791
BF	Cl	2426589.293	0.495796	12.08	13.17	pv	AN 5791
BG	Alg	2427386.362	1.95246	10.5	11.8	pg	NNVS 32
BH	Cl	2426596.535	0.64101381	10.29	10.99	pg	AN 5791
BI	L	2426565	120	10	10.5	pg	AN 5791
BK	Alg	2427418.272	2.744931	9.85	10.30	v	AN 5791
BL	Cl	2424758.70	0.55543	13.3	14.7	pg	HA 90.167
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BQ	Ecl	2424789.60	1.57485	13.7	16.3	pg	HA 90.167
BR	L	2425130	260	14.5	[16.5	pg	HA 90.167
BS	L	2424770	194	12.9	15.1	pg	HA 90.167
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BU	L:	2424767	78.8	12.3	12.9	pg	HA 90.167
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BZ	Ecl	2424763.70	1.25797	14.0	15.3	pg	HA 90.167
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CF	W	2424766.70	0.413728	14.8	15.5	pg	HA 90.167
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CI	Cl	2424745.70	0.71857	13.5	15.0	pg	HA 90.167
CK	L	2424810	260	12.3	13.2	pg	HA 90.168
CL	L	2425450	181.5	14.3	16.0	pg	HA 90.168
CM	Cl	2424744.70	0.37783	14.8	15.8	pg	HA 90.168
CN	Cl	2424745.70	0.63214	13.8	15.2	pg	HA 90.168
CO	L	2424800	260	13.9	16.5	pg	HA 90.168
CP	Cl	2424769	0.57872	14.6	15.8	pg	HA 90.168
CQ	Cl	2424761.70	0.57202	13.4	14.8	pg	HA 90.168
CR	L	2424825	203.5	14.3	15.5	pg	HA 90.168
CS	Cl	2424763.70	0.56454	12.8	14.6	pg	HA 90.168
CT	L	2425150	351.5	12.3	14.2	pg	HA 90.168
CU	Alg	2428750.396	3.880124	11.1	14.3	pg	HA 90.168
CV	Cl	2424744.70	0.56288	12.9	14.4	pg	HA 90.168
CW	Alg	2428750.332	2.372552	11.8	16.1	pg	HA 90.168
CX	L	2424800	235.0	13.2	16.5	pg	AJ 861
CY	Cl	2424769.65	0.64795	12.3	13.4	pg	HA 90.168
CZ	Ecl	2424758.70	0.56223	13.4	14.4	pg	HA 90.168

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		PEGASUS							
DD	HV 6177	21h 44m 42s +25° 24.'7	Hughes	1934	Harvard	*			
DE	HV 6182	21 49 25 +26 35.2	Hughes	1934	Harvard				
DF	182.1935	21 49 55 +14 4.7	Hoffmeister	1935	Sonneberg	*		*	*
DG	184.1935	21 58 43 +13 32.3	Hoffmeister	1935	Sonneberg	*	*		
DH	186.1935	22 10 25 + 6 19.3	Hoffmeister	1935	Sonneberg	*		*	*
DI	114.1934	23 27 11 +14 25.2	Morgenroth	1934	Sonneberg	*		*	*
DK	370.1934	23 36 29 + 9 40.1	Hoffmeister	1934	Sonneberg	*			
DL	115.1934	23 43 18 +15 6.0	Morgenroth	1934	Sonneberg	*			
DM	116.1934	23 55 1 +18 10.5	Morgenroth	1934	Sonneberg	*		*	*
DN	Ross 342	21 54 38 + 5 39.9	Ross	1928	Yerkes	*	*		
DO	185.1935	22 2 31 + 5 40.1	Hoffmeister	1935	Sonneberg	*			
DP	HV 6121	21 18 26 +21 39.0	Hughes	1934	Harvard				
DQ	HV 6143	21 32 51 +25 41.7	Hughes	1934	Harvard	*			
DR	HV 6147	21 33 52 +24 27.3	Hughes	1934	Harvard	*	*		
DS	..	21 37 48 +35 3.3	Backhouse	1905	Sunderland	*			
DT	HV 6176	21 44 8 +22 14.7	Hughes	1934	Harvard	*			
DU	Ross 228	23 46 40 +29 12.5	Ross	1927	Yerkes	*			
		PERSEUS							
AX	HV 5488	1h 29m 57s +53° 44.'9	Lindsay	1932	Harvard	*			*
AY	419.1928	3 3 19 +50 33.0	Guthnick	1928	Babelsberg	*		*	*
AZ	SVS 554	3 46 3 +33 26.4	Lehman-Balanovskaja	1934	Pulkowo		*		
BB	SVS 557	3 48 59 +31 13.2	Lehman-Balanovskaja	1934	Pulkowo	*	*		
BC	11.1936	2 56 32 +49 44.2	Hoffmeister	1936	Sonneberg	*			
BD	12.1936	2 58 15 +47 44.3	Hoffmeister	1936	Sonneberg	*			
BE	16.1936	3 7 0 +45 45.9	Hoffmeister	1936	Sonneberg	*			
BF	19.1936	3 15 3 +45 52.9	Hoffmeister	1936	Sonneberg	*			
BG	20.1936	3 19 6 +50 14.6	Hoffmeister	1936	Sonneberg				
BH	21.1936	3 21 16 +50 6.5	Hoffmeister	1936	Sonneberg	*			
BI	24.1936	3 25 31 +52 23.9	Hoffmeister	1936	Sonneberg	*			
BK	25.1936	3 32 16 +51 48.7	Hoffmeister	1936	Sonneberg	*			
BL	26.1936	3 35 37 +48 6.7	Hoffmeister	1936	Sonneberg				
BM	SVS 665	4 22 14 +48 12.0	Beljawsky	1935	Simeis	*	*	*	
BN	10.1936	2 54 8 +47 9.3	Hoffmeister	1936	Sonneberg	*			
BO	14.1936	3 0 47 +53 15.2	Hoffmeister	1936	Sonneberg	*			
BP	23.1936	3 23 59 +49 4.2	Hoffmeister	1936	Sonneberg	*			
BQ	SVS 549	3 29 20 +33 48	Lehman-Balanovskaja	1934	Pulkowo		*		
BR	SVS 559	3 50 50 +31 46	Lehman-Balanovskaja	1934	Pulkowo		*		
b[1]	..	4 10 43 +50 3.0	Stebbins	1920	Urbana	*			*
		PHOENIX							
RX	HV 6389	0h 19m 32s -54° 58.'9	Hughes	1934	Harvard				
RY	HV 6398	0 45 36 -56 6.4	Hughes	1934	Harvard				
RZ	HV 6405	1 5 33 -57 6.7	Hughes	1934	Harvard				
SS	HV 6392	0 25 48 -56 45.4	Hughes	1934	Harvard				
ST	HV 6394	0 31 27 -56 22.5	Hughes	1934	Harvard				
SU	HV 6404	0 59 5 -57 18.5	Hughes	1934	Harvard				
		PISCES							
RZ	4.1931	1h 4m 13s +27° 25.'5	Hoffmeister	1931	Sonneberg	*	*	*	
SS	6.1931	1 15 28 +21 12.7	Hoffmeister	1931	Sonneberg	*	*	*	
ST	7.1931	1 22 30 +16 10.7	Hoffmeister	1931	Sonneberg	*		*	
SU	8.1931	1 24 0 +19 5.8	Hoffmeister	1931	Sonneberg	*	*	*	
SV	10.1931	1 41 8 +18 35.1	Hoffmeister	1931	Sonneberg	*		*	
SW	HV 6371	0 36 12 + 4 47.7	Hughes	1934	Harvard				
SX	428.1934	0 52 21 +11 46.2	Morgenroth	1934	Sonneberg	*	*		

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
PEGASUS							
DD	SR:			11.6m	12.7m	pg	HA 90.168
DE	L	2425420	360d	13.3	16.1	pg	HA 90.168
DF	Alg	2425862.317	14.6983	9.16	10.53	v	AN 6118
DG	L	2425554	150	11	[13	pg	AN 6118
DH	Cl	2427695.390	0.2555107	9.26	9.90	pg	AN 6118
DI	Alg	2428452.4211	0.711814	9.73	10.95	pg	AN 6048
DK	Alg	2427745.380	1.63180	9.5	10.5	pg	AN 6058
DL	L	2426351	191	10.5	12.5	pg	AN 6048
DM	Alg	2425853.470	2.588991	11.1	12.0	pg	AN 6048
DN	SR	2425834	76	11.1	12.0	pg	AJ 903
DO	Alg	2428788.305	2.6139	11	12.5	pg	AN 6118
DP	Ecl			13.3	14.2	pg	HA 90.167
DQ	Irr			13.7	14.8	pg	HA 90.167
DR	Irr			11.0	12.5	pg	HA 90.167
DS	Irr			6.0	7.0	v	Sunderland Publ 3.112
DT	Irr			12.7	13.9	pg	HA 90.168
DU	L	2427308	326	10	14	pg	AJ 882
PERSEUS							
AX	Irr			9.4m	13.4m	pg	HB 888
AY	Alg	2427152.27	11.7764d	9.37	10.03	v	AN 5619
AZ	L		208	12.6	14.2	pg	Pulk Circ 11; NNVS 45; 49
BB	L		250	12.5	13.5	pg	Pulk Circ 11; NNVS 45; 49
BC	Irr			14.9	15.7	pg	AN 6195
BD	Irr			14.2	15.2	pg	AN 6195
BE	Alg	2425624.36	5.17571	14.5	15.3	pg	AN 6195
BF	L	2425355	240	15.1	16.7	pg	AN 6195
BG	L?	2425970	219	16.1	[16.9	pg	AN 6195; KVBB 19.24; 79
BH	L	2425332	271	15.1	[16.4	pg	AN 6195
BI	Irr			14.4	15.4	pg	AN 6195
BK	Irr			14.9	15.7	pg	AN 6195
BL	Irr?			14.1	15.2	pg	AN 6195; KVBB 19.24; 80
BM	Cep	2428508.00	22.9505	11.5	13.5	pg	NNVS 47; Pulk Circ 15
BN	SR	2426390	277	14.0	15.2	pg	AN 6195; KVBB 19.24; 80
BO	Ecl			12.0	12.3	pg	AN 6195
BP	Ecl			11.7	12.0	pg	AN 6195
BQ			4.12	12.5	13.3	pg	Pulk Circ 11; NNVS 45; 49
BR			4.001	13.1	14.2	pg	Pulk Circ 11; NNVS 45; 49
b'	Sh	2422780.433	1.52732	4.54	4.60	pe	ApJ 57.1; PA 29.276
PHOENIX							
RX	Cl	2424761.75	0d.52654	14.2m	15.1m	pg	HA 90.173
RY	Cl	2424759.75	0.60650	15.4	16.0	pg	HA 90.173
RZ	Cl	2424765.80	0.55620	14.9	15.8	pg	HA 90.173
SS	Irr			13.1	13.8	pg	HA 90.173
ST	Irr			13.1	13.7	pg	HA 90.173
SU	Irr			13.6	14.1	pg	HA 90.173
PISCES							
RZ	β?		31d.89/n	11.8m	12.6m	pg	AN 5791
SS	Sh			11.3	12.6	pg	AN 5791
ST	Irr			10.9	12.7	pg	AN 5791
SU	β	2426004.344	2.681409	12.04	12.61	pg	AN 5791
SV	Irr			9.7	11.0	pg	AN 5791
SW	Cl	2425177.30	0.521265	13.8	15.4	pg	HA 90.172
SX	Alg	2427811.362	0.825875	11	12.5	pg	AN 6070

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		PISCES							
SY	HV 6380	0h 57m 22s + 4° 51.'4	Hughes	1934	Harvard				
SZ	35.1934	23 8 17 + 2 7.8	Morgenroth	1934	Sonneberg	*		*	*
TT	262.1934	1 55 28 + 5 3.7	Hoffmeister	1934	Sonneberg	*		*	
TU	Ross 345	0 6 30 +11 32.7	Ross	1929	Yerkes	*			
TV	47 Psc	0 22 50 +17 20.3	Schwarzschild	1910	Göttingen	*			
		PISCIS AUSTRINUS							
X	HV 4967	22h 0m 25s -25° 23.'2	Hughes	1931	Harvard		*		*
Y	HV 4969	22 1 43 -25 44.2	Hughes	1931	Harvard		*		
Z	HV 4978	22 8 45 -26 23.3	Hughes	1931	Harvard		*		
RR	HV 4979	22 9 22 -27 8.2	Hughes	1931	Harvard		*		
RS	HV 4980	22 10 3 -26 14.6	Hughes	1931	Harvard		*		
RT	HV 4982	22 14 27 -25 39.8	Hughes	1931	Harvard		*		
RU	HV 4983	22 14 48 -26 37.7	Hughes	1931	Harvard		*		
		PUPPIS							
UZ	64.1929	7h 37m 7s -13° 9.'6	Hoffmeister	1929	Sonneberg	*	*	*	*
VV	..	8 10 38 -18 44.9	van Gent	1931	Johannesburg	*	*	*	*
VW	62.1931	7 27 25 -19 56.5	Hoffmeister	1931	Sonneberg	*	*	*	*
VX	63.1931	7 28 19 -21 43.0	Hoffmeister	1931	Sonneberg	*	*		
VY	62.1929	7 29 7 -11 26.7	Hoffmeister	1929	Sonneberg	*	*		*
VZ	63.1929	7 34 35 -28 16.2	Hoffmeister	1929	Sonneberg	*	*	*	*
WW	65.1929	7 37 35 -20 53.9	Hoffmeister	1929	Sonneberg	*	*	*	*
WX	66.1929	7 37 50 -25 38.5	Hoffmeister	1929	Sonneberg	*	*		*
WY	67.1929	7 53 50 -23 46.4	Hoffmeister	1929	Sonneberg	*	*	*	*
WZ	68.1929	7 56 3 -23 25.8	Hoffmeister	1929	Sonneberg	*	*	*	*
XX	70.1929	8 3 55 -16 14.8	Hoffmeister	1929	Sonneberg	*	*	*	*
XY	71.1929	8 4 51 -11 41.5	Hoffmeister	1929	Sonneberg	*	*	*	*
XZ	..	8 9 13 -23 39.1	Hertzsprung	1932	Johannesburg	*		*	*
YY	64.1931	7 31 28 -19 10.2	Hoffmeister	1931	Sonneberg	*	*		*
YZ	Ross 162	7 39 58 -21 37.5	Ross	1927	Yerkes	*	*		
ZZ	65.1931	7 44 0 -19 2.7	Hoffmeister	1931	Sonneberg	*	*	*	*
AA	69.1929	7 57 22 -24 26.3	Hoffmeister	1929	Sonneberg	*	*		
AB	269.1930	8 16 27 -12 9.4	Hoffmeister	1930	Sonneberg	*	*		*
AC	270.1930	8 18 8 -15 35.8	Hoffmeister	1930	Sonneberg	*	*		*
AD	189.1932	7 43 52 -25 19.7	Hoffmeister	1932	Sonneberg	*	*	*	*
AE	..	8 2 30 -42 14.5	Zagar	1935	Johannesburg	*	*	*	*
AF	..	8 10 17 -42 52.1	Zagar	1935	Johannesburg		*	*	*
AG	..	7 38 54 -21 29.0	van Gent	1936	Johannesburg	*		*	*
AH	..	7 52 45 -25 3.5	Hertzsprung	1936	Johannesburg	*	*	*	*
AI	..	7 56 36 -22 14.4	Hertzsprung	1936	Johannesburg	*	*		*
AK	..	8 0 49 -21 3.3	Hertzsprung	1936	Johannesburg	*	*		*
AL	..	8 2 2 -18 45.7	van Gent	1936	Johannesburg	*	*	*	*
AM	..	8 6 33 -42 2.6	van Hoof	1936	Johannesburg		*	*	*
AN	268.1930	7 25 46 -21 13.9	Hoffmeister	1930	Sonneberg	*	*		*
AO	247.1935	7 51 55 -39 18.5	Luyten	1935	Harvard	*		*	
AP	693.1935	7 54 17 -39 51.2	O'Leary	1935	Riverview	*		*	*
AQ	191.1932	7 54 20 -28 51.6	Hoffmeister	1936	Sonneberg	*	*	*	*
AR	608.1936	7 59 19 -36 18.9	O'Leary	1936	Riverview	*	*	*	*
AS	694.1935	8 6 2 -37 52.8	O'Leary	1935	Riverview	*		*	
AT	695.1935	8 8 40 -36 38.6	O'Connell	1935	Lembang	*		*	*
AU	696.1935	8 14 11 -41 23.8	O'Leary	1935	Riverview	*		*	*
AV	272.1930	8 20 0 -16 5.0	Hoffmeister	1930	Sonneberg	*	*		*
AW	195.1932	8 20 37 -28 30.2	Hoffmeister	1932	Sonneberg	*		*	
AX	61.1931	7 22 22 -25 43.2	Hoffmeister	1931	Sonneberg	*			
AY	186.1932	7 34 26 -24 15.8	Hoffmeister	1932	Sonneberg	*	*		
AZ	697.1935	8 14 30 -34 37.1	O'Leary	1935	Riverview	*		*	
BB	194.1932	8 19 55 -19 14.1	Hoffmeister	1932	Sonneberg	*	*		*

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				PISCES			
SY	Cl	2425180.30	0.67354	12.4	13.8	pg	HA 90.172
SZ	Alg	2425509.333	3.96637	8.28	9.8	pg	BZ 16.17; AN 6021; 6048
TT	L	2425588	252	11.3	12.5	pg	AN 6058
TU	L	2429401	179	11	13	v	AJ 926
TV	Irr			7.0	7.3	pg	Gött Mitt 14.44
				PISCIS AUSTRINUS			
X	W	2425444.70	0.397774	13.0	14.3	pg	HB 883
Y	Sh			11.1	11.7	pg	HB 883
Z	Sh			14.9	16.0	pg	HB 883
RR	Sh			14.8	15.7	pg	HB 883
RS	W	2425417.60	0.59336	14.3	15.2	pg	HB 883
RT	Ecl			13.6	14.5	pg	HB 883
RU	Cl	2425412.60	0.5083	13.2	14.8	pg	HB 883
				PUPPIS			
UZ	W	2426033.251	0.794853	9.66	10.56	v	AN 5655
VV	Cl	2426814.2227	0.06974677	13.3	16.5	pg	BAN 214
VW	Cep	2426710.22	4.2845	11.20	12.08	v	AN 5791
VX	Cep	2426961.2	3.012	7.8	9.4	pg	AN 5791
VY	β	2426990.434	0.816759	10.7	11.5	v	AN 5655
VZ	Cep	2426780.65	23.162	9.68	11.02	v	AN 5655
WW	Cep	2425992.21	5.51663	10.67	11.69	v	AN 5655
WX	Cep	2426712.03	8.9393	9.1	10.1	pg	AN 5655
WY	Cep	2426742.92	5.2511	11.2	12.0	pg	AN 5655
WZ	Cep	2425996.41	5.02704	10.7	11.4	v	AN 5655
XX	Cl	2426338.503	0.517195	10.67	11.93	v	AN 5655
XY	Alg	2426707.18	13.7788	9.21	11.39	v	AN 5655
XZ	Alg	2425850.9434	2.192306	7.4	10.8	pg	BAN 228
YY	Alg	2426761.098	2.17983	9.3	10.6	v	AN 5791
YZ	L			10.5	12.5	pg	AJ 875
ZZ	Alg	2427239.464	6.33818	9.5	11.7	pg	AN 5791
AA	Alg	2425652.59	7.0671	10.6	11.0	pg	AN 5655
AB	L	2427110	277	10.2	[12.4	v	AN 5748
AC	Irr			8.9	10.1	v	AN 5748; Sonn Mitt 20
AD	Cep	2425832.48	13.595	9.3	10.5	pg	AN 5919
AE	Alg	2426359.76	5.96544	13.4	14.6	pg	BAN 270
AF	W	2426161.875	0.3836778	13.3	13.5	pg	BAN 270
AG	β	2426097.315	4.779264	10.7	11.8	pg	BAN 275
AH	Alg	2425913.930	2.0247	10.3	11.3	pg	BAN 275
AI	Alg	2425950.406	0.773126	13.5	14.0	pg	BAN 275; 293
AK	Cl	2425998.376	0.512053	12.4	14.0	pg	BAN 275; 293
AL	Cl	2425997.418	0.57630	13.3	14.7	pg	BAN 275
AM	Cl	2426358.929	0.558866	13.4	14.6	pg	BAN 275; 289
AN	Alg	2427126.088	2.66825	10.6	11.5	v	AN 5748
AO	L	2425907	390.5	10.2	[12.2	pg	AN 6138; Minn Publ 2.82
AP	Cep	2427475.14	5.084	7.61	8.66	pg	AN 6168; Riverview Publ 1.3
AQ	Cep	2427609.15	29.92	8.82	10.72	pg	AN 5919; 6171
AR	SR	2427508	75	9.0	10.8	pg	AN 6216
AS	L	2428010	330	9.2	12.4	pg	AN 6168; Riverview Publ 1.6
AT	Cep	2426758.205	6.6648	7.96	9.44	pg	AN 6168; Riverview Publ 1.1
AU	β	2426300.031	1.126418	8.50	9.46	pg	AN 6168
AV	W	2426738.547	0.556334	10.2	10.8	v	AN 5748
AW	Alg	2427601.919	0.68108	10.15	10.89	pg	AN 5919; 6171
AX	Cep	2426747.14	3.12595	9.7	10.0	v	AN 5791
AY	W	2426371.4070	0.46895986	11.4	12.1	pg	AN 5919
AZ	Alg	2427601.498	0.86736	9.35	9.77	pg	AN 6168; Riverview Publ 1.30
BB	Cl	2427859.175	0.4872	10.0	10.9	v	AN 5919

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		PUPPIS							
BC	..	7h 25m 47s -23° 28.'0	Mergentaler	1937	Johannesburg		*	*	*
BD	..	7 26 29 -24 28.7	Mergentaler	1937	Johannesburg		*	*	*
BE	HV 3877	7 29 30 -25 38.0	Paraskevopoulos	1925	Harvard	*	*	*	
BF	176.1931	7 30 52 -14 54	Hoffmeister	1931	Sonneberg				
BG	66.1931	8 3 19 -20 23.6	Hoffmeister	1931	Sonneberg	*	*		*
BH	..	8 4 51 -41 44.2	Hertzsprung	1937	Johannesburg	*		*	
BI	..	8 7 18 -41 40.0	van Gent	1937	Johannesburg	*	*	*	*
BK	..	8 7 25 -39 40.1	Hertzsprung	1937	Johannesburg	*		*	*
		PYXIS							
W	197.1932	8h 32m 21s -17° 38.'0	Hoffmeister	1932	Sonneberg	*		*	
X	HV 7499	9 12 0 -29 11.6	Boyce	1936	Harvard				
Y	HV 7501	9 14 2 -28 0.3	Boyce	1936	Harvard	*			
Z	HV 7504	9 14 29 -24 51.4	Boyce	1936	Harvard	*			
RR	HV 7505	9 14 32 -26 8.3	Boyce	1936	Harvard	*			
RS	HV 7507	9 16 31 -27 25.1	Boyce	1936	Harvard	*			
RT	HV 7509	9 16 57 -26 7.6	Boyce	1936	Harvard				
RU	HV 7512	9 18 21 -25 30.3	Boyce	1936	Harvard	*			
RV	HV 7513	9 18 38 -29 37.2	Boyce	1936	Harvard				
RW	HV 7522	9 22 17 -29 37.6	Boyce	1936	Harvard	*			
RX	HV 7524	9 22 31 -25 57.4	Boyce	1936	Harvard				
RY	199.1932	8 35 18 -17 31.1	Hoffmeister	1932	Sonneberg	+	*		
RZ	642.1935	8 47 48 -27 6.5	Hoffmeister	1935	Sonneberg	*			*
SS	HV 7510	9 18 11 -25 1.4	Boyce	1936	Harvard				
ST	HV 7521	9 22 11 -28 50.2	Boyce	1936	Harvard				
		SAGITTA							
TZ	HV 5450	19h 36m 33s +16° 43.'1	Hoffleit	1932	Harvard				
UU	HV 5452	19 37 40 +16 51.8	Hoffleit	1932	Harvard				
UV	117.1905	19 42 29 +16 32.6	Wolf	1905	Heidelberg	*	*		
UW	HV 5471	19 44 20 +16 48.6	Hoffleit	1932	Harvard				
UX	845.1933	20 13 38 +17 50	Hoffmeister	1933	Sonneberg	*			
UY	291.1933	20 15 45 +16 20	Hoffmeister	1933	Sonneberg	*			
UZ	435.1936	20 7 48 +19 3.0	Hoffmeister	1936	Sonneberg	*			
		SAGITTARIUS							
V 363	..	19h 5m 0s -30° 2'	Becker	1930	La Paz	*			
V 364	..	18 31 46 -32 52.9	van Gent	1932	Johannesburg		*	*	*
V 365	..	18 34 32 -35 30.6	van Gent	1932	Johannesburg		*	*	*
V 366	..	18 35 10 -32 40.7	Innes	1914	Johannesburg	*	*	*	*
V 367	..	18 35 32 -32 35.1	Innes	1914	Johannesburg	*	*	*	*
V 368	..	18 36 19 -36 7.6	van Gent	1932	Johannesburg		*	*	*
V 369	..	18 36 26 -35 5.6	van Gent	1932	Johannesburg		*	*	*
V 370	..	18 36 28 -33 17.1	van Gent	1932	Johannesburg		*	*	*
V 371	..	18 36 52 -33 54.0	van Gent	1932	Johannesburg		*	*	*
V 372	..	18 38 25 -32 59.0	van Gent	1932	Johannesburg		*	*	*
V 373	..	18 39 25 -33 32.2	van Gent	1932	Johannesburg		*	*	*
V 374	..	18 39 38 -36 58.0	van Gent	1932	Johannesburg		*	*	*
V 375	..	18 40 42 -36 21.6	van Gent	1932	Johannesburg		*	*	*
V 376	..	18 41 58 -30 43.7	Ferwerda	1932	Johannesburg		*	*	*
V 377	..	18 42 14 -20 14.2	Martin	1932	Johannesburg	*	*	*	*
V 378	..	18 42 16 -33 16.7	van Gent	1932	Johannesburg		*	*	*
V 379	..	18 42 35 -34 59.5	van Gent	1932	Johannesburg		*	*	*
V 380	..	18 42 40 -35 13.8	van Gent	1932	Johannesburg		*	*	*
V 381	..	18 42 51 -26 23.9	Ferwerda	1932	Johannesburg		*	*	*
V 382	..	18 44 27 -35 32.6	van Gent	1932	Johannesburg		*	*	*

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
PUPPIS							
BC	Cep	2427843.789	3.54434 d	14.2 m	15.2 m	pg	BAN 296
BD	Cep	2427895.725	3.91817	13.8	14.8	pg	BAN 296
BE	Cep	2427810.457	2.8714	14.5	15.1	pg	HB 821
BF	Irr			14	15	pg	AN 5791
BG	Irr			9.5	10.2	v	AN 5791
BH	Alg	2421692.523	1.915854	8.4	9.1	pg	BAN 299
BI	Alg	2426179.643	4.82227	12.6	[14.4:	pg	BAN 299
BK	Alg	2426174.678	1.50127	10.4	10.7	pg	BAN 299
PYXIS							
W	L	2426766	166 d	10.8 m	12.5 m	pg	AN 5919
X	L	2425980	330	12.7	16.0	pg	HB 903
Y	SR			13.2	14.8	pg	HB 903
Z	L	2426450	237	12.2	[16.0	pg	HB 903
RR	Cl	2426382.30	0.49106	13.5	15.0	pg	HB 903
RS	L	2426500	320	12.0	16.0	pg	HB 903
RT	Cl	2426382.30	0.57600	14.5	16.2	pg	HB 903
RU	SR			13.9	15.5	pg	HB 903, corr. AN 6347
RV	L	2426130	296	12.5	16.4	pg	HB 903
RW	SR			12.6	14.2	pg	HB 903
RX	L	2426770	214	13.6	[16.0	pg	HB 903
RY	Alg			11	12	pg	AN 5919
RZ	Cl	2428548.162	0.4888	8.6	9.3	v	AN 6171
SS	Ecl			13.0	13.8	pg	HB 903
ST	Irr:			12.8	13.5	pg	HB 903
SAGITTA							
TZ	L	2426100	269 d	12.9 m	[16.0 m	pg	HB 887
UU	Ecl			14.7	16.0	pg	HB 887
UV	L	2426130	175:	14.1	[16.0	pg	AN 4079
UW				14.5	15.2	pg	HB 887
UX	L	2425870	263	14.1	[16.0	pg	AN 6002
UY	Irr			13.5	14.5	pg	AN 5791
UZ	Alg	2428700.48	2.216	11	13	pg	AN 6195
SAGITTARIUS							
V 363	N			8.8 m	[16 m	pg	ZAp 1.66
V 364	Cl	2423877.550	0.4779528 d	13.9	15.6	pg	BAN 227; Diss
V 365	Cl	2423880.554	0.4873066	14.1	15.8	pg	BAN 227; Diss
V 366	Cl	2423997.290	0.4779610	13.7	15.2	pg	UOC 20.152; 31.244; 37.302
V 367	Cl	2424294.465	0.6332400	13.9	15.1	pg	UOC 20.152; 37.302
V 368	Cl	2423878.545	0.6091309	15.2	16.1	pg	BAN 227; Diss
V 369	Cl	2423987.255	0.5800683	15.0	15.9	pg	BAN 227; Diss
V 370	Cl	2423878.554	0.4974327	14.0	15.7	pg	BAN 227; Diss
V 371	Cl	2423879.520	0.4649770	14.4	15.9	pg	BAN 227; Diss
V 372	Cl	2424018.280	0.4374442	14.0	15.5	pg	BAN 227; Diss
V 373	Cl	2423878.568	0.4558863	14.6	16.0	pg	BAN 227; Diss
V 374	Cl	2423989.286	0.5885975	14.2	15.6	pg	BAN 227; Diss
V 375	Cl	2423881.557	0.4508955	14.0	15.7	pg	BAN 227; Diss
V 376	Cl	2426118.884	0.3007673	13.5	13.8	pg	BAN 231
V 377	Cep	2426077.53	16.17076	13.6	15.0	pg	BAN 235
V 378	Cl	2423878.56	0.6212519	14.3	15.3	pg	BAN 227; Diss
V 379	Cl	2423965.369	0.5326290	13.4	15.2	pg	BAN 227; Diss
V 380	Cl	2423996.280	0.4751286	13.7	15.2	pg	BAN 227; Diss
V 381	Cl	2426119.14	0.4103325	13.3	14.9	pg	BAN 231
V 382	Cl	2423883.560	0.6192245	14.0	15.3	pg	BAN 227; Diss

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		SAGITTARIUS							
V 383	..	18h 44m 44s -32° 22.3'	Innes	1914	Johannesburg	*	*	*	*
V 384	..	18 44 50 -35 56.9	van Gent	1932	Johannesburg		*	*	*
V 385	..	18 45 52 -23 26.3	Ferwerda	1932	Johannesburg		*	*	*
V 386	..	18 47 7 -30 38.7	Innes	1915	Johannesburg	*	*	*	*
V 387	..	18 47 23 -34 38.2	van Gent	1932	Johannesburg		*	*	*
V 388	..	18 47 29 -32 52.0	van Gent	1932	Johannesburg		*	*	*
V 389	..	18 50 15 -35 16.8	van Gent	1932	Johannesburg		*	*	*
V 390	..	18 50 35 -30 29.2	Ferwerda	1932	Johannesburg		*	*	*
V 391	..	18 51 22 -36 16.5	van Gent	1932	Johannesburg		*	*	*
V 392	..	18 51 26 -35 53.5	van Gent	1932	Johannesburg		*	*	*
V 393	..	18 53 25 -34 4.0	van Gent	1932	Johannesburg		*	*	*
V 394	..	18 53 33 -30 27.1	van Gent	1932	Johannesburg	*	*	*	*
V 395	..	18 53 46 -27 50.2	Ferwerda	1932	Johannesburg		*	*	*
V 396	..	18 54 8 -34 23.6	van Gent	1932	Johannesburg		*	*	*
V 397	..	18 54 25 -35 8.9	van Gent	1932	Johannesburg	*	*	*	*
V 398	..	18 54 51 -19 44.6	Martin	1932	Johannesburg		*	*	*
V 399	..	18 54 54 -29 55.5	Ferwerda	1932	Johannesburg		*	*	*
V 400	..	18 55 34 -34 43.4	van Gent	1932	Johannesburg		*	*	*
V 401	..	18 55 45 -14 42.1	Martin	1932	Johannesburg	*	*	*	*
V 402	..	18 56 4 -34 27.0	van Gent	1932	Johannesburg		*	*	*
V 403	..	18 56 17 -34 37.2	van Gent	1932	Johannesburg	*	*	*	*
V 404	..	18 57 9 -36 42.9	van Gent	1932	Johannesburg		*	*	*
V 405	..	18 57 30 -22 24.8	Martin	1932	Johannesburg		*	*	*
V 406	..	18 57 53 -31 20.0	Ferwerda	1932	Johannesburg		*	*	*
V 407	..	18 58 33 -34 11.4	van Gent	1932	Johannesburg		*	*	*
V 408	..	18 59 11 -31 44.9	Ferwerda	1932	Johannesburg		*	*	*
V 409	..	19 0 0 -36 6.4	van Gent	1932	Johannesburg		*	*	*
V 410	..	19 0 13 -18 33.2	Martin	1932	Johannesburg	*	*	*	*
V 411	..	19 0 40 -36 17.7	Innes	1917	Johannesburg	*	*	*	*
V 412	..	19 0 52 -33 32.6	van Gent	1932	Johannesburg		*	*	*
V 413	..	19 1 0 -32 17.8	Ferwerda	1932	Johannesburg	*	*	*	*
V 414	..	19 1 31 -17 51.3	Martin	1932	Johannesburg		*	*	*
V 415	..	19 1 33 -23 46.5	Ferwerda	1932	Johannesburg	*	*	*	*
V 416	..	19 2 11 -24 52.0	van Gent	1932	Johannesburg	*	*	*	*
V 417	..	19 2 13 -17 46.4	Martin	1932	Johannesburg		*	*	*
V 418	..	19 2 45 -19 39.5	Martin	1932	Johannesburg		*	*	*
V 419	..	19 6 40 -30 19.7	Ferwerda	1932	Johannesburg		*	*	*
V 420	..	19 6 51 -24 50.2	Ferwerda	1932	Johannesburg		*	*	*
V 421	..	19 7 24 -27 3.6	Ferwerda	1932	Johannesburg		*	*	*
V 422	..	19 7 32 -35 4.2	van Gent	1932	Johannesburg		*	*	*
V 423	..	19 8 0 -26 24.7	van Gent	1932	Johannesburg	*	*	*	*
V 424	..	19 8 41 -32 31.4	Innes	1914	Johannesburg	*	*	*	*
V 425	..	19 9 16 -22 16.4	Martin	1932	Johannesburg		*	*	*
V 426	..	19 9 23 -27 47.9	Ferwerda	1932	Johannesburg	*	*	*	*
V 427	..	19 10 0 -18 57.8	Martin	1932	Johannesburg		*	*	*
V 428	..	19 10 50 -34 15.5	van Gent	1932	Johannesburg		*	*	*
V 429	..	19 11 25 -29 4.1	van Gent	1932	Johannesburg	*	*	*	*
V 430	..	19 11 49 -15 49.0	Martin	1932	Johannesburg		*	*	*
V 431	..	19 12 14 -33 35.7	van Gent	1932	Johannesburg		*	*	*
V 432	..	19 12 38 -33 31.0	van Gent	1932	Johannesburg		*	*	*
V 433	..	19 13 8 -30 30.4	van Gent	1932	Johannesburg	*	*	*	*
V 434	..	19 14 7 -31 49.5	Ferwerda	1932	Johannesburg		*	*	*
V 435	..	19 14 9 -30 58.1	Ferwerda	1932	Johannesburg		*	*	*
V 436	..	19 16 45 -32 10.0	van Gent and Ferwerda	1932	Johannesburg	*	*	*	*
V 437	..	19 16 47 -23 36.4	Ferwerda	1932	Johannesburg	*	*	*	*
V 438	..	19 17 48 -15 29.4	Martin	1932	Johannesburg		*	*	*
V 439	..	19 19 2 -27 5.5	van Gent	1932	Johannesburg		*	*	*
V 440	308.1930	19 26 19 -24 3.8	Hoffmeister	1930	Sonneberg	*		*	*
V 441	HV 5486	18 15 56 -25 31.5	Hoffleit	1932	Harvard	*			
V 442	..	18 31 0 -34 16.6	van Gent	1933	Johannesburg		*	*	*
V 443	..	18 31 59 -35 2.5	van Gent	1933	Johannesburg		*	*	*
V 444	..	18 32 29 -33 53.2	Innes	1914	Johannesburg	*	*	*	

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
							SAGITTARIUS
			d	m	m		
V 383	Cep	2423880.2	16.4465	13.1	14.4	pg	UOC 20.153; 31.243; 37.303
V 384	Cl	2423999.270	0.3893771	13.8	14.5	pg	BAN 227; Diss
V 385	Cl	2426118.95	0.4868848	13.8	14.8	pg	BAN 231
V 386	Cl	2426119.23	0.4555582	13.2	14.5	pg	UOC 31.242; 37.303
V 387	Cl	2423877.590	0.5189914	12.9	14.8	pg	BAN 227; Diss
V 388	Cl	2423877.577	0.5284496	14.6	16.0	pg	BAN 227; Diss
V 389	Cl	2423881.552	0.6273774	13.6	15.2	pg	BAN 227; Diss
V 390	Cl	2426119.25	0.5697395	13.2	14.6	pg	BAN 231
V 391	Cl	2424020.393	0.5430838	14.0	15.3	pg	BAN 227; Diss
V 392	Cl	2423878.56	0.6096817	13.6	14.4	pg	BAN 227; Diss
V 393	Cl	2423878.562	0.6376046	13.3	15.2	pg	BAN 227; Diss
V 394	Cl	2425990.86	0.5348452	13.4	14.2	pg	BAN 231
V 395	Cl	2426118.95	0.4664729	13.2	14.6	pg	BAN 231
V 396	Cl	2423877.572	0.6289524	14.1	15.7	pg	BAN 227; Diss
V 397	Cl	2425790.322	0.4636628	14.4	15.0	pg	BAN 227; Diss
V 398	Cl	2426071.180	0.594268	14.6	15.1	pg	BAN 235
V 399	Cl	2426119.13	0.5771542	13.8	14.6	pg	BAN 231
V 400	Cl	2423989.346	0.4504129	13.2	14.9	pg	BAN 227; Diss
V 401	Alg	2426071.963	3.10778	14.0	15.0	pg	BAN 235
V 402	Cl	2422231.212	0.7436049	13.1	15.2	pg	BAN 227; Diss
V 403	Cl	2425391.644	0.6364985	13.4	15.6	pg	BAN 227; Diss
V 404	Cl	2423877.54	0.5843084	13.8	14.6	pg	BAN 227; Diss
V 405	Cl	2426071.166	0.52416	14.5	15.0	pg	BAN 235
V 406	Cl	2426119.28	0.637673	13.8	15.5	pg	BAN 231
V 407	Cl	2423986.256	0.4813523	13.5	15.6	pg	BAN 227; Diss
V 408	Cl	2426118.82	0.4540303	13.2	14.2	pg	BAN 231
V 409	Cl	2423965.350	0.5944713	13.1	15.0	pg	BAN 227; Diss
V 410	Cep	2426082.83	13.7835	12.6	14.1	pg	BAN 235
V 411	Cl	2424029.298	0.4351197	13.3	14.6	pg	UOC 37.304
V 412	Cl	2423880.521	0.6772657	13.9	15.5	pg	BAN 227; Diss
V 413	Cl	2424025.308	0.4712857	14.1	15.5	pg	BAN 231
V 414	Cl	2426071.097	0.433828	13.7	14.9	pg	BAN 235
V 415	Alg	2426117.20	6.50692	11.9	14.6	pg	BAN 231
V 416	Alg	2426118.19	1.984422	13.3	14.2	pg	BAN 231
V 417	Cl	2426071.653	0.527144	14.5	15.0	pg	BAN 235
V 418	Cl	2426071.865	0.656221	14.3	14.9	pg	BAN 235
V 419	Cl	2426119.00	0.4743880	13.3	14.3	pg	BAN 231
V 420	Cl	2426118.87	0.6065108	12.9	14.6	pg	BAN 231
V 421	Cl	2426119.14	0.6343265	13.1	13.5	pg	BAN 231
V 422	Cl	2423877.608	0.764565	14.8	15.3	pg	BAN 227; Diss
V 423	Cl	2426119.07	0.5193201	13.3	14.3	pg	BAN 231
V 424	Cl	2423877.54	0.742368	14.0	15.2	pg	UOC 20.153; 31.243; 37.303
V 425	Cl	2426071.076	0.600136	14.2	15.1	pg	BAN 235
V 426	Alg	2426116.84	5.3937	12.7	13.2	pg	BAN 231
V 427	Cl	2426071.560	0.533850	14.4	15.1	pg	BAN 235
V 428	Cl	2423877.544	0.4670124	14.1	15.9	pg	BAN 227; Diss
V 429	Cl	2426118.87	0.5893533	13.5	14.2	pg	BAN 231
V 430	Cl	2426071.325	0.696466	14.6	15.1	pg	BAN 235
V 431	W	2423879.512	0.27438732	13.9	14.8	pg	BAN 227; Diss
V 432	Cl	2424018.297	0.4843211	13.3	14.9	pg	BAN 227; Diss
V 433	Cl	2426118.98	0.4963279	13.1	15.0	pg	BAN 231
V 434	Cl	2426119.33	0.743543	13.7	14.7	pg	BAN 231
V 435	Cl	2426119.30	0.5894137	13.1	14.4	pg	BAN 231
V 436	Cl	2424012.367	0.4589153	13.6	14.7	pg	BAN 231
V 437	β	2426118.40	3.03653	12.5	13.7	pg	BAN 231
V 438	Cl	2426071.382	0.663662	14.3	15.1	pg	BAN 235
V 439	Cl	2426119.08	0.4298087	13.3	14.6	pg	BAN 231
V 440	Cl	2426581.203	0.4774659	9.75	10.51	v	AN 5748
V 441	N			8.7	16.0	pg	HB 890
V 442	Cl	2424030.229	0.5631243	14.6	16.2	pg	BAN 243
V 443	Cl	2423994.336	0.4624318	14.5	16.4	pg	BAN 243
V 444	L	2419575	210	11.9	16.2	pg	UOC 20.152; 37.302

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
			SAGITTARIUS						
V 445	..	18h35m22s -35°37'.9	van Gent	1933	Johannesburg		*	*	*
V 446	..	18 36 3 -33 22.7	van Gent	1933	Johannesburg	*	*	*	*
V 447	..	18 37 16 -35 52.6	van Gent	1933	Johannesburg		*	*	*
V 448	..	18 37 23 -35 19.4	van Gent	1933	Johannesburg		*	*	*
V 449	..	18 37 36 -35 9.0	van Gent	1933	Johannesburg		*	*	*
V 450	..	18 38 15 -35 32.7	van Gent	1933	Johannesburg		*	*	*
V 451	..	18 39 23 -36 14.1	van Gent	1933	Johannesburg		*	*	*
V 452	..	18 40 18 -32 48.0	van Gent	1933	Johannesburg		*	*	*
V 453	..	18 40 19 -35 56.8	van Gent	1933	Johannesburg	*	*	*	*
V 454	..	18 41 19 -32 28.3	van Gent	1933	Johannesburg		*	*	*
V 455	..	18 42 15 -35 50.1	van Gent	1933	Johannesburg		*	*	*
V 456	..	18 42 48 -33 2.4	van Gent	1933	Johannesburg		*	*	*
V 457	..	18 44 11 -35 33.6	Innes	1914	Johannesburg	*	*	*	*
V 458	..	18 45 41 -36 4.2	van Gent	1933	Johannesburg		*	*	*
V 459	..	18 46 18 -33 43.9	van Gent	1933	Johannesburg		*	*	*
V 460	..	18 46 35 -34 47.8	van Gent	1933	Johannesburg		*	*	*
V 461	..	18 46 37 -33 29.3	van Gent	1933	Johannesburg		*	*	*
V 462	..	18 46 51 -36 30.1	van Gent	1933	Johannesburg		*	*	*
V 463	..	18 48 5 -32 54.9	van Gent	1933	Johannesburg		*	*	*
V 464	..	18 48 7 -35 41.8	van Gent	1933	Johannesburg		*	*	*
V 465	..	18 48 9 -36 50.1	van Gent	1933	Johannesburg		*	*	
V 466	..	18 48 40 -33 35.9	van Gent	1933	Johannesburg	*	*	*	*
V 467	..	18 48 45 -32 54.7	van Gent	1933	Johannesburg		*	*	*
V 468	..	18 49 9 -33 13.4	Innes	1917	Johannesburg	*	*	*	*
V 469	..	18 49 31 -33 2.0	van Gent	1933	Johannesburg		*	*	*
V 470	..	18 50 8 -32 10.0	van Gent	1933	Johannesburg		*	*	*
V 471	..	18 50 20 -35 16.3	van Gent	1933	Johannesburg		*	*	*
V 472	..	18 50 27 -35 12.8	van Gent	1933	Johannesburg		*	*	*
V 473	..	18 51 0 -34 8.6	van Gent	1933	Johannesburg		*	*	*
V 474	..	18 51 43 -34 1.9	van Gent	1933	Johannesburg		*	*	*
V 475	..	18 52 11 -32 32.6	van Gent	1933	Johannesburg		*	*	*
V 476	..	18 54 47 -34 35.1	van Gent	1933	Johannesburg		*	*	*
V 477	..	18 54 51 -34 11.3	van Gent	1933	Johannesburg		*	*	*
V 478	..	18 54 58 -32 43.8	van Gent	1933	Johannesburg		*	*	*
V 479	..	18 55 24 -35 3.7	van Gent	1933	Johannesburg		*	*	*
V 480	..	18 55 33 -34 11.6	van Gent	1933	Johannesburg		*	*	*
V 481	..	18 57 45 -35 37.9	van Gent	1933	Johannesburg	*	*	*	*
V 482	..	18 58 30 -36 2.6	van Gent	1933	Johannesburg		*	*	*
V 483	..	18 58 40 -35 38.9	van Gent	1933	Johannesburg		*	*	*
V 484	..	18 58 40 -32 9.4	van Gent	1933	Johannesburg		*	*	*
V 485	..	18 58 58 -35 18.1	van Gent	1933	Johannesburg	*	*	*	*
V 486	..	18 59 25 -35 20.8	van Gent	1933	Johannesburg		*	*	*
V 487	..	18 59 25 -35 31.4	van Gent	1933	Johannesburg		*	*	*
V 488	..	18 59 42 -36 53.7	van Gent	1933	Johannesburg		*	*	*
V 489	..	19 2 9 -35 39.8	van Gent	1933	Johannesburg		*	*	*
V 490	..	19 2 31 -34 33.3	van Gent	1933	Johannesburg		*	*	*
V 491	..	19 3 0 -33 45.9	van Gent	1933	Johannesburg		*	*	*
V 492	..	19 3 10 -32 7.6	van Gent	1933	Johannesburg		*	*	*
V 493	..	19 4 4 -35 32.5	van Gent	1933	Johannesburg		*	*	*
V 494	..	19 4 38 -35 3.4	van Gent	1933	Johannesburg		*	*	*
V 495	..	19 4 50 -33 59.6	Innes	1917	Johannesburg	*	*	*	*
V 496	..	19 9 45 -32 26.5	van Gent	1933	Johannesburg		*	*	*
V 497	..	19 10 37 -34 50.0	van Gent	1933	Johannesburg		*	*	*
V 498	..	19 10 42 -35 41.9	van Gent	1933	Johannesburg	*	*	*	*
V 499	..	19 11 40 -36 9.0	van Gent	1933	Johannesburg		*	*	*
V 500	..	19 12 11 -39 34.7	van Gent	1933	Johannesburg		*	*	*
V 501	..	19 13 38 -41 35.8	van Gent	1933	Johannesburg		*	*	*
V 502	..	19 15 49 -39 18.6	van Gent	1933	Johannesburg		*	*	*
V 503	SVS 341	17 38 24 -17 29.6	Shajn	1933	Simeis		*	*	
V 504	SVS 328	18 4 29 -16 1.8	Neujmin	1933	Simeis		*		
V 505	399.1933	19 47 28 -14 51.6	Hoffmeister	1933	Sonneberg	*		*	*
V 506	HV 6689	18 12 9 -25 43.7	Hoffleit	1934	Harvard				

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
			SAGITTARIUS				
V 445	Cl	2423883.550	0.5854805	14.5	15.2	pg	BAN 243
V 446	Cl	2424292.451	0.4572386	14.9	16.4	pg	BAN 243
V 447	Cl	2424020.383	0.4800885	14.2	15.5	pg	BAN 243
V 448	Cl	2423881.507	0.5416333	14.3	15.5	pg	BAN 243
V 449	Alg	2424029.26	2.247540	14.2	14.7	pg	BAN 243; AN 5967
V 450	Cl	2423996.253	0.4579511	14.1	15.5	pg	BAN 243
V 451	Cl	2423994.353	0.5242381	14.2	15.6	pg	BAN 243
V 452	Cl	2423998.283	0.5905392	13.4	14.6	pg	BAN 243
V 453	Cl	2424029.219	0.5800326	13.9	15.1	pg	BAN 243
V 454	Cl	2424028.292	0.6587352	14.1	15.0	pg	BAN 243
V 455	Cl	2424027.387	0.5144954	14.6	15.7	pg	BAN 243
V 456	Cl	2424293.447	0.7117164	14.3	15.2	pg	BAN 243
V 457	Cl	2423883.583	0.4778794	13.9	15.1	pg	UOC 20.153; 31.244; 37.303
V 458	Cl	2423883.605	0.5253633	14.3	15.6	pg	BAN 243
V 459	Alg	2423878.551	1.641569	13.4	14.4	pg	BAN 243
V 460	Cl	2423986.281	0.6014340	13.6	15.1	pg	BAN 243
V 461	Cl	2423986.285	0.4862863	14.6	15.5	pg	BAN 243
V 462	Cl	2423883.582	0.6311588	14.6	15.3	pg	BAN 243
V 463	Cl	2425474.226	0.5124514	14.6	15.5	pg	BAN 243
V 464	Cl	2423883.570	0.5237549	13.4	14.7	pg	BAN 243
V 465	L			13.9	15.4	pg	BAN 243
V 466	Cl	2423877.54	0.629525	14.7	15.5	pg	BAN 243; AN 5967
V 467	Cl	2423883.531	0.4341090	13.3	15.0	pg	BAN 243
V 468	Cl	2423879.485	0.5916755	14.2	15.4	pg	UOC 37.303
V 469	Cl	2423998.247	0.6549941	14.2	15.3	pg	BAN 243
V 470	Cl	2425451.467	0.4707493	14.0	15.4	pg	BAN 243
V 471	Cl	2423878.56	0.291508	13.5	14.1	pg	BAN 243; AN 5967
V 472	Cl	2424025.221	0.5480499	14.3	15.5	pg	BAN 243
V 473	Cl	2423881.553	0.5708249	14.3	15.5	pg	BAN 243
V 474	Cl	2423988.363	0.5012361	14.4	15.4	pg	BAN 243
V 475	Cl	2423878.53	0.6734982	14.2	15.3	pg	BAN 243; AN 5967
V 476	Cl	2423988.349	0.4854962	14.0	15.1	pg	BAN 243
V 477	Cl	2424012.362	0.3997703	14.6	15.3	pg	BAN 243
V 478	Cl	2423997.249	0.5640862	13.2	14.5	pg	BAN 243
V 479	Cl	2423988.332	0.6202621	13.8	14.6	pg	BAN 243
V 480	Cl	2423881.558	0.5623000	14.2	15.3	pg	BAN 243
V 481	Cl	2423880.564	0.7493464	13.9	14.6	pg	BAN 243
V 482	Cl	2423994.353	0.4659107	13.3	14.6	pg	BAN 243
V 483	Cl	2423880.506	0.4580063	14.1	15.5	pg	BAN 243
V 484	Cl	2425437.449	0.5552748	13.7	14.7	pg	BAN 243
V 485	Cl	2423987.295	0.6983888	13.9	15.1	pg	BAN 243
V 486	Cl	2423880.531	0.5603579	14.0	15.4	pg	BAN 243
V 487	Cl	2423990.340	0.5484086	14.3	15.3	pg	BAN 243
V 488	Cl	2423877.547	0.5216048	14.3	15.2	pg	BAN 243
V 489	Cl	2423987.289	0.5738563	13.7	15.0	pg	BAN 243
V 490	Cl	2424017.247	0.5463251	14.6	15.4	pg	BAN 243
V 491	Cl	2424018.291	0.5472321	13.9	14.7	pg	BAN 243
V 492	Cl	2425381.485	0.35696	14.0	14.8	pg	BAN 243; AN 5967
V 493	Cl	2424024.270	0.6497726	13.9	15.1	pg	BAN 243
V 494	Cl	2423988.359	0.10761971	14.2	14.7	pg	BAN 243
V 495	Cl	2423965.348	0.5053102	13.9	14.8	pg	UOC 37.304
V 496	W	2424019.247	0.4912978	13.8	14.3	pg	BAN 243
V 497	W	2423878.5302	0.29300972	14.4	15.2	pg	BAN 243
V 498	Cl	2424298.415	0.5048809	14.1	15.2	pg	BAN 243
V 499	Cl	2424056.280	0.5288171	14.7	15.8	pg	BAN 243
V 500	Cl	2423877.554	0.6950989	13.9	14.6	pg	BAN 243
V 501	Alg	2424020.23	1.5132599	13.2	14.3	pg	BAN 243; AN 5967
V 502	Cl	2423990.350	0.4765999	13.6	14.9	pg	BAN 243
V 503				13.3	[14.6	pg	NNVS 40; Pulk Circ 7.28
V 504	Cep?		1.5?	13	14	pg	Pulk Circ 6.28; NNVS 40
V 505	Alg	2425501.376	1.1828711	6.50	7.31	v	BZ 15.60; AN 5979; 6017
V 506	L	2424330	171	13.5	[16.5	pg	HA 90.187

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		SAGITTARIUS							
V 507	HV 6690	18h12m18s -25°54.8'	Hoffleit	1934	Harvard				
V 508	HV 6691	18 13 0 -25 53.3	Hoffleit	1934	Harvard				
V 509	HV 6692	18 13 48 -25 35.5	Hoffleit	1934	Harvard				
V 510	HV 3963	18 14 14 -26 3.7	Woods	1926	Harvard	*			
V 511	HV 6693	18 15 39 -25 4.1	Hoffleit	1934	Harvard				
V 512	HV 6694	18 15 54 -26 6.9	Hoffleit	1934	Harvard				
V 513	HV 6695	18 17 42 -25 34.5	Hoffleit	1934	Harvard				
V 514	HV 6696	18 18 8 -25 56.3	Hoffleit	1934	Harvard				
V 515	HV 6697	18 19 6 -25 28.9	Hoffleit	1934	Harvard	*			
V 516	HV 6698	18 20 8 -26 1.2	Hoffleit	1934	Harvard				
V 517	HV 6699	18 21 34 -26 0.0	Hoffleit	1934	Harvard				
V 518	HV 6700	18 21 48 -26 21.2	Hoffleit	1934	Harvard				
V 519	HV 6701	18 21 49 -26 0.1	Hoffleit	1934	Harvard				
V 520	HV 6702	18 22 18 -25 51.4	Hoffleit	1934	Harvard				
V 521	HV 6703	18 22 37 -26 14.2	Hoffleit	1934	Harvard				
V 522	..	18 41 50 -25 28.7	van Gent	1935	Johannesburg	*	*		*
V 523	..	18 56 35 -29 17.1	van Gent	1934	Johannesburg	*		*	*
V 524	746.1933	19 47 35 -15 10.5	Hoffmeister	1933	Sonneberg	*		*	*
V 525	700.1935	19 0 51 -30 18.9	O'Connell	1935	Riverview	*		*	*
V 526	701.1935	19 1 49 -31 30.3	O'Connell	1935	Riverview	*	*	*	*
V 527	..	19 10 14 -21 6.4	van Gent	1935	Johannesburg	*	*	*	*
V 528	HV 7056	17 51 47 -36 18.2	Swope	1935	Harvard				
V 529	HV 7058	17 51 49 -34 39.6	Swope	1935	Harvard				
V 530	HV 7060	17 51 50 -35 23.1	Swope	1935	Harvard				
V 531	HV 7062	17 51 56 -36 3.8	Swope	1935	Harvard				
V 532	HV 7063	17 52 11 -35 5.0	Swope	1935	Harvard	*			
V 533	HV 7064	17 52 12 -35 31.7	Swope	1935	Harvard				
V 534	HV 7065	17 52 47 -34 50.4	Swope	1935	Harvard				
V 535	HV 7068	17 52 55 -36 51.7	Swope	1935	Harvard				
V 536	HV 7072	17 53 5 -36 31.8	Swope	1935	Harvard				
V 537	HV 7074	17 53 14 -35 22.5	Swope	1935	Harvard				
V 538	HV 7075	17 53 15 -35 29.8	Swope	1935	Harvard				
V 539	HV 7076	17 53 20 -35 14.0	Swope	1935	Harvard				
V 540	HV 7077	17 53 20 -35 55.2	Swope	1935	Harvard	*			
V 541	HV 7079	17 53 22 -35 10.8	Swope	1935	Harvard				
V 542	HV 7080	17 53 28 -35 42.8	Swope	1935	Harvard	*			
V 543	HV 7081	17 53 30 -35 27.0	Swope	1935	Harvard				
V 544	HV 7083	17 53 39 -34 56.5	Swope	1935	Harvard				
V 545	HV 7086	17 53 47 -35 20.1	Swope	1935	Harvard				
V 546	HV 7087	17 53 47 -35 13.6	Swope	1935	Harvard				
V 547	HV 7088	17 53 50 -36 12.2	Swope	1935	Harvard				
V 548	HV 7091	17 53 58 -34 51.5	Swope	1935	Harvard				
V 549	HV 7092	17 54 0 -35 20.0	Swope	1935	Harvard				
V 550	HV 7094	17 54 7 -36 18.4	Swope	1935	Harvard				
V 551	HV 7095	17 54 16 -34 35.5	Swope	1935	Harvard	*			
V 552	305.1933	17 54 18 -34 58	Luyten	1933	Harvard	*			
V 553	HV 7096	17 54 25 -36 29.7	Swope	1935	Harvard				
V 554	HV 7097	17 54 26 -36 34.5	Swope	1935	Harvard	*			
V 555	306.1933	17 54 31 -35 45.2	Luyten	1933	Harvard	*			
V 556	HV 7101	17 54 44 -35 17.2	Swope	1935	Harvard				
V 557	HV 7102	17 54 55 -35 39.0	Swope	1935	Harvard	*			
V 558	HV 7103	17 54 58 -35 22.8	Swope	1935	Harvard	*			
V 559	554.1933	17 54 59 -34 48	Luyten	1933	Harvard	*			
V 560	HV 7105	17 55 7 -36 32.0	Swope	1935	Harvard				
V 561	556.1933	17 55 14 -35 11.2	Luyten	1933	Harvard	*			
V 562	HV 7109	17 55 17 -36 15.0	Swope	1935	Harvard				
V 563	HV 7112	17 55 28 -35 43.8	Swope	1935	Harvard				
V 564	HV 7113	17 55 29 -34 29.4	Swope	1935	Harvard	*			
V 565	HV 7115	17 55 36 -36 58.7	Swope	1935	Harvard				
V 566	HV 7116	17 55 39 -35 7.4	Swope	1935	Harvard				
V 567	HV 7117	17 55 48 -36 39.1	Swope	1935	Harvard	*			
V 568	560.1933	17 55 53 -35 6.8	Luyten	1933	Harvard	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				SAGITTARIUS			
V 507	L	2426560	218:d	13.8m	16.5m	pg	HA 90.187
V 508	L	2426100	294	13.5	16.5	pg	HA 90.187
V 509	Cl	2424376.60	0.53436	13.5	15.5	pg	HA 90.187
V 510	L	2426560	168	13.8	16.3:	pg	HB 838
V 511	L	2426480	158.5	13.4	16.5	pg	HA 90.187
V 512	L	2426400	196	15.4	[17.0	pg	HA 90.187
V 513	L	2426560	223	14.5	[17.0	pg	HA 90.187
V 514		2423665	66	15.4	16.4	pg	HA 90.187
V 515	L	2426220	246	14.3	[17.0	pg	HA 90.187
V 516	L	2423630	290	13.8	[16.5	pg	HA 90.187
V 517	L	2426210	280	13.0	17.0:	pg	HA 90.187
V 518	L	2426200	160	14.0	[16.3	pg	HA 90.187
V 519	L	2425820	177	13.2	17.0	pg	HA 90.187
V 520	L	2425820	263	13.3	17.0	pg	HA 90.187
V 521	L	2424300	225	14.5	[16.5	pg	HA 90.187
V 522	N			12.9	[15.3	pg	BAN 269
V 523	Alg	2425442.374	2.32380907	10.06	10.45	pg	BAN 256
V 524	Alg	2425881.304	4.1164	10.0	11.8	v	AN 6002
V 525	β	2427104.987	0.705125	8.47	9.17	pg	AN 6168; Riverview Publ 1.10
V 526	Alg	2421785.366	1.919435	9.75	10.52	pg	AN 6168; Riverview Publ 1.11
V 527	Cep	2426904.95	1.258956	14.3	15.0	pg	BAN 273
V 528	L	2424720	196.2	14.1	[16.5	pg	HA 90.220
V 529	L	2424405	196	14.8	[16.5	pg	HA 90.220
V 530	L	2424615	145.3	15.0	[16.5	pg	HA 90.220
V 531	L	2423900	100.5	14.7	[16.5	pg	HA 90.220
V 532	Cep:	2426107.0	34.21	13.7	15.0	pg	HA 90.220
V 533	L	2424640	274.5	14.8	[16.5	pg	HA 90.220
V 534	L	2423915	143.1	14.8	[16.5	pg	HA 90.220
V 535	L	2424060	212	15.0	[16.5	pg	HA 90.220
V 536	L	2424030	187.7	15.5	[16.5	pg	HA 90.220
V 537	L	2425370	296	14.6	[16.5	pg	HA 90.220
V 538	L	2424410	256	14.4	[16.5	pg	HA 90.220
V 539	L	2424700	220.5	15.0	[16.5	pg	HA 90.220
V 540	Irr			9.9	10.8	pg	HA 90.220
V 541	SR		145±	12.4	14.4	pg	HA 90.220
V 542	SR		323±	14.2	16.5	pg	HA 90.220
V 543	L	2425380	211	15.0	[16.5	pg	HA 90.220
V 544	L	2425740	405	14.5	[16.5	pg	HA 90.220
V 545	L	2426570	250	15.5	[16.5	pg	HA 90.220
V 546	L	2425490	246	14.7	[16.5	pg	HA 90.220
V 547	L	2426160		15.8	[16.5	pg	HA 90.220
V 548	L	2425830	183.6	14.2	[16.5	pg	HA 90.220
V 549	L	2424750	312	14.4	[16.5	pg	HA 90.220
V 550	L	2423960	277	14.6	[16.5	pg	HA 90.220
V 551	U G			13.7	[16.5	pg	HA 90.220; PA 44.99
V 552	L	2426470	276.5	14.5	[16.5	pg	AN 5975; Minn Publ 2.104
V 553	L	2424700	258.8	14.9	[16.5	pg	HA 90.221
V 554	β	2426123.550	0.90703	13.9	14.9	pg	HA 90.221
V 555	L	2424005	191.1	14.4	[16.5	pg	AN 5975; Minn Publ 2.118
V 556	L	2424040	285.4	14.8	[16.5	pg	HA 90.221
V 557	Cep:	2426100.0	16.260	14.2	15.4	pg	HA 90.221
V 558	SR	2426180	64.1	13.5	15.2	pg	HA 90.221
V 559	L	2427610	352	15.2	[16.5	pg	AN 5991; Minn Publ 2.104
V 560	L	2423930	211.1	14.5	[16.5	pg	HA 90.221
V 561	L	2425440	456.3	12.5	16.0:	pg	AN 5991; Minn Publ 2.118
V 562	Cl	2424728.570	0.47805	15.5	16.5	pg	HA 90.221
V 563	Irr			14.0	15.5	pg	HA 90.221
V 564	Cep	2426565	27.8	12.5	13.7	pg	HA 90.221
V 565	L	2424030	253.5	14.8	[16.5	pg	HA 90.221
V 566	Cl	2426156.440	0.59683	14.8	16.4	pg	HA 90.221
V 567	Irr			13.5	14.5	pg	HA 90.221
V 568	L	2424030	210	15.7	[16.5	pg	AN 5991; Minn Publ 2.118

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		SAGITTARIUS							
V 569	307.1933	17h 56m 6s -35°17'	Luyten	1933	Harvard	*			
V 570	HV 7124	17 56 23 -36 58.6	Swope	1935	Harvard				
V 571	HV 7129	17 56 38 -34 43.0	Swope	1935	Harvard				
V 572	HV 7130	17 56 46 -36 58.1	Swope	1935	Harvard				
V 573	HV 7132	17 56 49 -35 56.6	Swope	1935	Harvard	*			
V 574	HV 7133	17 56 57 -34 41.8	Swope	1935	Harvard	*			
V 575	HV 7137	17 57 8 -36 49.3	Swope	1935	Harvard				
V 576	HV 7140	17 57 11 -34 47.7	Swope	1935	Harvard				
V 577	HV 7143	17 57 17 -35 52.2	Swope	1935	Harvard				
V 578	HV 7144	17 57 19 -35 22.6	Swope	1935	Harvard				
V 579	HV 7146	17 57 29 -35 40.0	Swope	1935	Harvard				
V 580	HV 7147	17 57 38 -34 51.9	Swope	1935	Harvard				
V 581	HV 7148	17 57 38 -35 11.6	Swope	1935	Harvard				
V 582	HV 7149	17 57 45 -34 57.7	Swope	1935	Harvard				
V 583	HV 7150	17 57 46 -36 0.2	Swope	1935	Harvard				
V 584	HV 7151	17 57 46 -36 48.2	Swope	1935	Harvard				
V 585	575.1933	17 57 51 -35 43.7	Luyten	1933	Harvard	*			
V 586	HV 7153	17 57 51 -35 11.8	Swope	1935	Harvard				
V 587	580.1933	17 58 26 -34 39.8	Luyten	1933	Harvard	*			
V 588	HV 7161	17 58 31 -36 11.9	Swope	1935	Harvard				
V 589	583.1933	17 58 35 -34 45	Luyten	1933	Harvard	*			
V 590	HV 7163	17 58 36 -35 6.8	Swope	1935	Harvard				
V 591	HV 7164	17 58 40 -35 19.1	Swope	1935	Harvard				
V 592	HV 7166	17 58 45 -35 37.7	Swope	1935	Harvard				
V 593	584.1933	17 58 50 -34 32	Luyten	1933	Harvard	*			
V 594	HV 7167	17 58 56 -35 57.0	Swope	1935	Harvard				
V 595	HV 7168	17 59 0 -36 23.8	Swope	1935	Harvard				
V 596	HV 7170	17 59 1 -34 42.9	Swope	1935	Harvard				
V 597	HV 7171	17 59 1 -36 9.2	Swope	1935	Harvard				
V 598	HV 7172	17 59 3 -34 45.2	Swope	1935	Harvard				
V 599	HV 7173	17 59 6 -36 51.2	Swope	1935	Harvard				
V 600	HV 7174	17 59 8 -36 7.7	Swope	1935	Harvard				
V 601	HV 7175	17 59 12 -35 51.9	Swope	1935	Harvard				
V 602	HV 7176	17 59 20 -35 54.9	Swope	1935	Harvard				
V 603	HV 7178	17 59 25 -36 20.0	Swope	1935	Harvard				
V 604	HV 7179	17 59 33 -34 24.5	Swope	1935	Harvard				
V 605	HV 7183	17 59 43 -35 41.3	Swope	1935	Harvard				
V 606	HV 7184	17 59 50 -35 0.7	Swope	1935	Harvard				
V 607	HV 7185	17 59 58 -36 43.6	Swope	1935	Harvard				
V 608	HV 7187	18 0 7 -35 35.7	Swope	1935	Harvard				
V 609	HV 7189	18 0 20 -36 3.7	Swope	1935	Harvard				
V 610	HV 7190	18 0 33 -36 3.8	Swope	1935	Harvard				
V 611	HV 7194	18 0 41 -36 21.2	Swope	1935	Harvard	*			
V 612	HV 7195	18 0 41 -36 31.8	Swope	1935	Harvard	*			
V 613	HV 7197	18 0 48 -35 23.8	Swope	1935	Harvard				
V 614	HV 7198	18 0 50 -35 44.4	Swope	1935	Harvard				
V 615	HV 7199	18 0 55 -36 6.8	Swope	1935	Harvard				
V 616	HV 7200	18 1 2 -36 54.9	Swope	1935	Harvard				
V 617	HV 7202	18 1 10 -35 11.3	Swope	1935	Harvard				
V 618	313.1933	18 1 11 -36 30.3	Luyten	1933	Harvard	*			
V 619	HV 7207	18 1 14 -34 52.4	Swope	1935	Harvard				
V 620	314.1933	18 1 18 -34 58.3	Luyten	1933	Harvard	*			
V 621	HV 7214	18 1 22 -36 41.5	Swope	1935	Harvard				
V 622	595.1933	18 1 25 -35 25	Luyten	1933	Harvard	*			
V 623	HV 7217	18 1 37 -35 53.2	Swope	1935	Harvard				
V 624	597.1933	18 1 40 -35 18.3	Luyten	1933	Harvard	*			
V 625	HV 7219	18 1 48 -36 31.0	Swope	1935	Harvard				
V 626	HV 7221	18 1 54 -34 57.4	Swope	1935	Harvard	*			
V 627	HV 7223	18 1 56 -34 26.4	Swope	1935	Harvard				
V 628	HV 7224	18 1 59 -36 49.6	Swope	1935	Harvard				
V 629	HV 7226	18 2 6 -36 42.9	Swope	1935	Harvard				
V 630	619.1936	18 2 10 -34 21.2	Okabayasi	1936	Kobe	*		*	*

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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V 571	L	2424650	284	15.4	[16.5	pg	HA 90.221
V 572	L	2424080	230.7	14.2	[16.5	pg	HA 90.221
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V 574	Ecl	2426182.250	1.6712	14.8	15.5	pg	HA 90.221
V 575	Cl	2426179.450	0.69639	15.4	16.7	pg	HA 90.221
V 576	Cl	2426120.420	0.40504	13.7	15.1	pg	HA 90.221
V 577	Ecl	2426130.300	3.8221	15.1	[16.5	pg	HA 90.221
V 578	L	2423970	188.9	14.4	[16.5	pg	HA 90.221
V 579	L	2424680	262	14.3	16.0	pg	HA 90.221
V 580	Irr			14.4	15.6	pg	HA 90.221
V 581	L	2423960	218.6	14.4	[16.5	pg	HA 90.222
V 582	Cl	2426179.550	0.53809	15.2	16.3	pg	HA 90.222
V 583	SR	2426210	101.6	14.0	15.2	pg	HA 90.222
V 584	Cl	2426179.400	0.443695	15.0	16.5	pg	HA 90.222
V 585	L	2425430	224.2	14.4	[16.5	pg	AN 5991; Minn Publ 2.118
V 586	L	2424010	288.5	13.8	15.8	pg	HA 90.222
V 587	L	2424030	170	14.7	[16.5	pg	AN 5991; Minn Publ 2.118
V 588	Ecl	2426130.300	6.21480	14.8	[16.5	pg	HA 90.222
V 589	Irr			14.2	[16.5	pg	AN 5991; Minn Publ 2.105
V 590	SR			15.0	16.5:	pg	HA 90.222
V 591	L	2424700	276.5	14.6	[16.5	pg	HA 90.222
V 592	L	2424620	144.7	14.9	[16.5	pg	HA 90.222
V 593	L	2426240	225	14.5	[16.5	pg	AN 5991; Minn Publ 2.105
V 594	L	2424625	168.6	14.0	[16.5	pg	HA 90.222
V 595	L	2425760	236.4	14.8	[16.5	pg	HA 90.222
V 596	L	2426570	150.5	15.2	16.5	pg	HA 90.222
V 597	Cl	2426125.340	0.38533	15.1	15.8	pg	HA 90.222
V 598	Ecl	2425974.410	2.5741	13.6	14.8	pg	HA 90.222
V 599	Irr			13.7	14.9	pg	HA 90.222
V 600	Cl	2424656.850	0.51721	15.4	16.5	pg	HA 90.222
V 601	Cl	2426174.320	0.59181	15.4	16.8	pg	HA 90.222
V 602	L	2423930	206.7	14.8	[16.5	pg	HA 90.222
V 603	L	2424020	292	14.8	[16.5	pg	HA 90.222
V 604	Irr			14.0	15.0	pg	HA 90.222
V 605	L	2424410	267.5	14.5	[16.5	pg	HA 90.222
V 606	L	2424050	284.5	14.8	[16.5	pg	HA 90.222
V 607	L	2426870	188	14.5	[16.5	pg	HA 90.222
V 608	L	2424670	247.6	13.3	17.0:	pg	HA 90.222
V 609	L	2424740	317	14.0	[16.5	pg	HA 90.222
V 610	Irr			13.2	14.0	pg	HA 90.222
V 611	L:	2426180	116.8	14.3	[16.5	pg	HA 90.222
V 612	L	2426550	108.7	13.7	[16.5	pg	HA 90.222
V 613	L	2424400	196	14.5	[16.5	pg	HA 90.222
V 614	Ecl	2426174.320	2.6448	14.6	16.4	pg	HA 90.222
V 615	Irr			13.2	14.8	pg	HA 90.222
V 616	Cl	2424650.760	0.48551	15.2	16.5	pg	HA 90.222
V 617	Irr			13.6	15.7	pg	HA 90.222
V 618	R C			11.0	[16.5	pg	AN 5975; Minn Publ 2.118
V 619	L	2426180	254.3	15.5	[16.5	pg	HA 90.223
V 620	L	2425430	198.2	14.2	[16.5	pg	AN 5975; Minn Publ 2.118
V 621	L	2425830	269	14.7	[16.5	pg	HA 90.223
V 622	L	2425870	265.5	14.9	[17.0	pg	AN 5991; Minn Publ 2.106
V 623	Irr			13.1	14.3	pg	HA 90.223
V 624	L	2424020	259.6	14.2	[16.5	pg	AN 5991; Minn Publ 2.118
V 625	L	2426060	146.8	14.4	16.1	pg	HA 90.223
V 626	Cep	2425388.60	26.762	11.5	14.2	pg	HA 90.223
V 627	L	2427620	127.9	14.3	[16.5	pg	HA 90.223
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V 630	N			4.5	15	v	AN 6244

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
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		h m s ° '							
V 631	HV 7228	18 2 10 -36 12.6	Swope	1935	Harvard	*			
V 632	HV 7232	18 2 30 -36 32.2	Swope	1935	Harvard	*			
V 633	608.1933	18 2 37 -34 59.6	Luyten	1933	Harvard	*			
V 634	HV 7240	18 2 55 -35 45.0	Swope	1935	Harvard				
V 635	HV 7241	18 3 5 -36 2.6	Swope	1935	Harvard				
V 636	HV 7242	18 3 5 -36 50.1	Swope	1935	Harvard				
V 637	HV 7245	18 3 10 -36 11.8	Swope	1935	Harvard				
V 638	HV 7248	18 3 15 -35 54.5	Swope	1935	Harvard	*			
V 639	HV 7249	18 3 25 -35 27.0	Swope	1935	Harvard				
V 640	HV 7250	18 3 27 -36 54.5	Swope	1935	Harvard				
V 641	HV 7251	18 3 36 -36 22.8	Swope	1935	Harvard				
V 642	HV 7252	18 3 37 -36 30.8	Swope	1935	Harvard				
V 643	611.1933	18 3 43 -35 19.2	Luyten	1933	Harvard	*			
V 644	HV 7255	18 3 49 -34 52.5	Swope	1935	Harvard				
V 645	HV 7256	18 3 53 -35 25.8	Swope	1935	Harvard				
V 646	HV 7257	18 3 58 -35 54.6	Swope	1935	Harvard	*			
V 647	HV 7260	18 4 4 -36 1.9	Swope	1935	Harvard				
V 648	HV 7261	18 4 6 -36 57.7	Swope	1935	Harvard				
V 649	HV 7264	18 4 21 -36 24.0	Swope	1935	Harvard				
V 650	HV 7266	18 4 30 -36 22.4	Swope	1935	Harvard				
V 651	HV 7267	18 4 31 -34 46.2	Swope	1935	Harvard				
V 652	613.1933	18 4 37 -34 41.0	Luyten	1933	Harvard	*			
V 653	HV 7272	18 4 38 -36 7.5	Swope	1935	Harvard				
V 654	HV 7274	18 4 46 -36 51.4	Swope	1935	Harvard				
V 655	HV 7276	18 4 56 -36 12.8	Swope	1935	Harvard				
V 656	HV 7277	18 4 58 -34 37.2	Swope	1935	Harvard				
V 657	HV 7278	18 5 1 -35 23.3	Swope	1935	Harvard				
V 658	HV 7281	18 5 6 -36 53.8	Swope	1935	Harvard				
V 659	HV 7282	18 5 9 -36 25.6	Swope	1935	Harvard				
V 660	HV 7284	18 5 28 -36 20.0	Swope	1935	Harvard				
V 661	618.1933	18 5 42 -35 46.8	Luyten	1933	Harvard	*			
V 662	HV 7287	18 5 42 -36 56.6	Swope	1935	Harvard				
V 663	HV 7288	18 5 43 -36 6.9	Swope	1935	Harvard				
V 664	HV 7290	18 5 51 -34 23.1	Swope	1935	Harvard				
V 665	HV 7291	18 5 52 -36 37.4	Swope	1935	Harvard				
V 666	HV 7292	18 6 3 -35 26.3	Swope	1935	Harvard				
V 667	HV 7294	18 6 12 -36 22.9	Swope	1935	Harvard				
V 668	HV 7295	18 6 14 -36 10.9	Swope	1935	Harvard				
V 669	HV 7296	18 6 15 -35 31.6	Swope	1935	Harvard				
V 670	HV 7297	18 6 16 -35 23.9	Swope	1935	Harvard				
V 671	HV 7299	18 6 31 -34 27.3	Swope	1935	Harvard				
V 672	626.1933	18 6 44 -35 41.9	Luyten	1933	Harvard	*			
V 673	HV 7301	18 6 48 -35 21.2	Swope	1935	Harvard				
V 674	HV 7302	18 6 52 -35 14.0	Swope	1935	Harvard				
V 675	HV 7305	18 6 57 -34 20.6	Swope	1935	Harvard	*		*	*
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V 679	HV 7313	18 7 22 -36 6.3	Swope	1935	Harvard	*			
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V 681	HV 7316	18 7 32 -34 46.5	Swope	1935	Harvard				
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V 684	HV 7320	18 7 39 -35 14.6	Swope	1935	Harvard				
V 685	HV 7321	18 7 43 -35 9.1	Swope	1935	Harvard				
V 686	HV 7322	18 7 46 -36 27.3	Swope	1935	Harvard				
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V 691	HV 7331	18 8 23 -35 57.0	Swope	1935	Harvard				
V 692	HV 7332	18 8 26 -35 47.7	Swope	1935	Harvard				

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V 634	L	2425410	240.6	14.6	[16.5	pg	HA 90.223
V 635	L	2426170	241	13.6	[16.5	pg	HA 90.223
V 636	Cl	2426130.530	0.53540	14.5	15.8	pg	HA 90.223
V 637	L	2423970	241.5	13.0	[16.5	pg	HA 90.223
V 638	L:	2424680	73.1	14.2	15.3	pg	HA 90.223
V 639	L	2426100	216.0	14.0	[16.5	pg	HA 90.223
V 640	L	2425400	285.5	15.2	[16.5	pg	HA 90.223
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V 642	Cl	2426179.370	0.51412	15.1	[16.5	pg	HA 90.223
V 643	L	2426240	197.5	13.8	[16.5	pg	AN 5991; Minn Publ 2.118
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V 653	Irr			13.0	13.8	pg	HA 90.224
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V 658	Cl	2426174.320	0.48350	15.2	16.0	pg	HA 90.224
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V 695	HV 7339	18 8 43 -36 7.3	Swope	1935	Harvard				
V 696	HV 7340	18 8 54 -34 43.9	Swope	1935	Harvard				
V 697	HV 7341	18 9 5 -35 37.0	Swope	1935	Harvard				
V 698	HV 7342	18 9 16 -34 25.4	Swope	1935	Harvard				
V 699	HV 7344	18 9 30 -36 41.6	Swope	1935	Harvard				
V 700	HV 7345	18 9 30 -36 58.4	Swope	1935	Harvard				
V 701	HV 7346	18 9 33 -36 31.3	Swope	1935	Harvard				
V 702	HV 7347	18 9 36 -35 40.0	Swope	1935	Harvard				
V 703	HV 7348	18 9 41 -35 57.1	Swope	1935	Harvard				
V 704	642.1933	18 9 45 -35 32	Luyten	1933	Harvard	*			
V 705	HV 7349	18 9 47 -34 27.7	Swope	1935	Harvard	*			
V 706	HV 7350	18 9 47 -35 18.5	Swope	1935	Harvard				
V 707	HV 7351	18 9 48 -35 27.1	Swope	1935	Harvard				
V 708	HV 7352	18 9 49 -35 19.4	Swope	1935	Harvard				
V 709	HV 7354	18 9 54 -35 11.4	Swope	1935	Harvard				
V 710	HV 7355	18 10 1 -36 27.4	Swope	1935	Harvard				
V 711	HV 7357	18 10 2 -34 47.6	Swope	1935	Harvard				
V 712	HV 7358	18 10 13 -34 48.0	Swope	1935	Harvard				
V 713	649.1933	18 10 24 -34 25	Luyten	1933	Harvard	*			
V 714	HV 7359	18 10 47 -35 7.5	Swope	1935	Harvard				
V 715	652.1933	18 11 2 -34 50.7	Luyten	1933	Harvard	*			
V 716	HV 7363	18 11 14 -34 35.0	Swope	1935	Harvard				
V 717	654.1933	18 11 14 -35 25.2	Luyten	1933	Harvard	*			
V 718	HV 7365	18 11 19 -34 28.8	Swope	1935	Harvard				
V 719	HV 7369	18 11 37 -35 27.2	Swope	1935	Harvard				
V 720	HV 7371	18 12 32 -36 14.9	Swope	1935	Harvard				
V 721	HV 7366	18 11 29 -35 36.0	Swope	1935	Harvard	*			
V 722	HV 7089	17 53 56 -36 57.0	Swope	1935	Harvard				
V 723	HV 7145	17 57 24 -36 37.5	Swope	1935	Harvard				
V 724	HV 7193	18 0 40 -35 49.4	Swope	1935	Harvard				
V 725	HV 7642	18 5 12 -36 7.6	Swope	1937	Harvard	*	*	*	*
V 726	171.1937	18 13 19 -26 55.9	Mayall	1937	Harvard	*			*
V 727	..	18 58 39 -16 2.0	van Gent	1936	Johannesburg	*	*	*	
V 728	..	18 58 41 -16 2.1	van Gent	1936	Johannesburg	*	*	*	*
V 729	..	19 10 55 -26 25.1	van Gent	1934	Johannesburg	*	*	*	
V 730	949.1936	19 16 45 -28 40.9	van Gent	1934	Johannesburg	*	*	*	
V 731	Ross 74	19 32 39 -14 19.4	Ross	1926	Yerkes	*		*	
μ	17.1938	18 7 47 -21 5.1	Morgan and Elvey	1938	McDonald	*			*
		SCORPIUS							
KQ	HV 4963	16h 44m 24s -45° 15.'4	Millman	1931	Harvard	*			*
KR	HV 5490	16 8 29 -32 8.2	Cannon	1933	Harvard	*			
KS	HV 5493	17 51 37 -42 23.1	Woods	1933	Harvard	*			
KT	SVS 320	16 5 32 -16 36.3	Shajn	1933	Simeis		*	*	
KU	SVS 321	16 9 25 -13 31.1	Shajn	1933	Simeis		*	*	
KV	SVS 671	16 29 17 -24 44.2	Beljawsky	1935	Simeis		*		
KW	HV 6524	17 10 29 -40 16.4	Boyd	1934	Harvard				
KX	HV 6527	17 14 15 -44 53.5	Boyd	1934	Harvard				
KY	HV 6528	17 14 50 -43 53.9	Boyd	1934	Harvard				
KZ	HV 6529	17 14 54 -45 29.2	Boyd	1934	Harvard				
LL	HV 6530	17 17 0 -43 43.6	Boyd	1934	Harvard	*			
LM	HV 6532	17 17 44 -44 18.0	Boyd	1934	Harvard				
LN	HV 6533	17 18 15 -44 33.6	Boyd	1934	Harvard				
LO	HV 6534	17 18 25 -44 22.5	Boyd	1934	Harvard	*			
LP	HV 6536	17 19 40 -45 18.7	Boyd	1934	Harvard				
LQ	HV 6538	17 19 43 -42 55.0	Boyd	1934	Harvard				
LR	HV 6539	17 20 40 -43 45.7	Boyd	1934	Harvard				

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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V 696	Cl	2425794.400	0.48304	14.9	15.9	pg	HA 90.225
V 697	Cl	2426120.490	0.49225	13.5	15.4	pg	HA 90.225
V 698	Irr			14.0	15.4	pg	HA 90.225
V 699	L	2426570	175.0	14.0	[16.5	pg	HA 90.225
V 700	Cl	2424727.640	0.63419	14.9	15.9	pg	HA 90.225
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V 702	Cl	2426095.540	0.47466	14.5	15.9	pg	HA 90.225
V 703	Cl	2426123.530	0.57079	14.7	15.7	pg	HA 90.225
V 704	L	2426570	198.0	14.6	[16.5	pg	AN 5991; Minn Publ 2.107
V 705	Ecl	2427594.640	1.22776	12.0	13.0	pg	HA 90.225
V 706	Cl	2426179.370	0.68153	14.9	16.0	pg	HA 90.225
V 707	Cl	2425386.600	0.51270	14.7	16.0	pg	HA 90.225
V 708	Cl	2426095.540	0.48192	14.7	15.8	pg	HA 90.225
V 709	Cl	2427597.270	0.460904	14.8	16.2	pg	HA 90.225
V 710	Ecl	2426101.550	2.3817	13.0	16.0	pg	HA 90.225
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V 712	Cl	2427296.370	0.575242	14.1	15.2:	pg	HA 90.225
V 713	L	2424680	253.4	14.5	[16.5	pg	AN 5991; Minn Publ 2.107
V 714	Irr			12.0	13.2	pg	HA 90.225
V 715	Cl	2424727.640	0.619141	13.0	14.4	pg	AN 5991; Minn Publ 2.118
V 716	L	2424670	277	14.5	[16.5	pg	HA 90.225
V 717	L	2425440	227	13.9	[16.5	pg	AN 5991; Minn Publ 2.118
V 718	L	2425850	153.2	15.0	[17.0	pg	HA 90.225
V 719	Irr			11.5	12.4	pg	HA 90.225
V 720	L	2425830	264	13.0	[16.5	pg	HA 90.225
V 721	SR			12.0	14.0	pg	HA 90.225
V 722	Ecl	2425421.460		13.8	14.6	pg	HA 90.220
V 723	Ecl	2423992.630		14.9	15.8	pg	HA 90.221
V 724	Irr:			14.4	15.5	pg	HA 90.222
V 725	SR	2426087	15.933	12.3	14.2	pg	HA 105.499; AN 6357
V 726	N			10.8	[16.5	pg	HAC 439; HB 907; BZ 19.76; AN 6383
V 727	Irr			14.2	14.9	pg	BAN 288
V 728	Cl	2427169.435	0.4383079	14.5	15.6	pg	BAN 288
V 729	Irr			12.9	14.6	pg	BAN 256
V 730	U G?			12.8	[17.5	pg	BAN 256
V 731	L	2424672.5	248.2	10.5	[15.0	pg	AJ 856
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KQ	Cep	2425412.2	28.6846	10.8	12.5	pg	HB 881
KR	L	2426140	357	11.6	14.4	pg	HB 891
KS	L	2426445	429	11.4	[16.3	pg	HB 891
KT				13.1	[14.2	pg	NNVS 39; Pulk Circ 6
KU				12.3	13.7	pg	NNVS 39; Pulk Circ 6
KV	L	2423194	238	12.5	[13.0	pg	NNVS 47
KW	L	2425410	428	14.2	[16.5	pg	HA 90.181
KX	L	2425830	172.5	13.5	[16.5	pg	HA 90.181
KY	L	2424420	187.3	13.9	16.5	pg	HA 90.181
KZ	L	2425420	259.8	13.8	[16.5	pg	HA 90.181
LL	L	2426570	238.1	14.9	[16.5	pg	HA 90.181
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LN	L	2426140	335	15.0	[16.8	pg	HA 90.182
LO	L	2425450	420	12.0	[16.5	pg	HA 90.182
LP	L	2425750	252	15.2	[17.0	pg	HA 90.182
LQ	L	2426240	182.6	14.8	17.3:	pg	HA 90.182
LR	L	2426460	104.4	10.9	12.3	pg	HA 90.182

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R C S L
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LT	HV 6541	17 20 52 -40 54.7	Boyd	1934	Harvard	
LU	HV 6544	17 21 8 -40 47.0	Boyd	1934	Harvard	
LV	HV 6545	17 22 15 -43 21.4	Boyd	1934	Harvard	
LW	HV 6547	17 22 42 -44 22.6	Boyd	1934	Harvard	
LX	HV 6548	17 22 48 -43 45.7	Boyd	1934	Harvard	
LY	HV 6549	17 22 48 -43 53.4	Boyd	1934	Harvard	
LZ	HV 6552	17 23 37 -43 35.4	Boyd	1934	Harvard	
MM	HV 6553	17 23 39 -42 6.4	Boyd	1934	Harvard	*
MN	HV 6557	17 24 45 -41 34.0	Boyd	1934	Harvard	
MO	HV 6558	17 25 21 -42 19.5	Boyd	1934	Harvard	
MP	HV 6560	17 26 40 -43 56.8	Boyd	1934	Harvard	
MQ	HV 6563	17 27 17 -45 11.3	Boyd	1934	Harvard	
MR	HV 6564	17 27 35 -41 22.6	Boyd	1934	Harvard	
MS	HV 6565	17 28 1 -42 21.5	Boyd	1934	Harvard	
MT	HV 6567	17 28 18 -41 52.7	Boyd	1934	Harvard	*
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MW	HV 6572	17 29 17 -45 24.8	Boyd	1934	Harvard	
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MY	HV 6575	17 30 15 -43 3.9	Boyd	1934	Harvard	
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NO	HV 6580	17 31 28 -43 56.7	Boyd	1934	Harvard	
NP	HV 6581	17 32 4 -40 33.2	Boyd	1934	Harvard	
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NR	HV 6585	17 32 28 -39 23.8	Boyd	1934	Harvard	
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NT	HV 6589	17 33 25 -44 28.9	Boyd	1934	Harvard	
NU	HV 6590	17 33 50 -44 14.7	Boyd	1934	Harvard	
NV	HV 6591	17 33 53 -43 15.3	Boyd	1934	Harvard	
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NX	HV 6594	17 34 41 -41 14.9	Boyd	1934	Harvard	*
NY	HV 6595	17 35 8 -41 13.0	Boyd	1934	Harvard	*
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OP	HV 6598	17 35 24 -44 57.0	Boyd	1934	Harvard	
OQ	HV 6599	17 35 35 -41 24.3	Boyd	1934	Harvard	
OR	HV 6600	17 35 43 -42 48.8	Boyd	1934	Harvard	
OS	HV 6601	17 35 43 -42 52.2	Boyd	1934	Harvard	
OT	HV 6602	17 36 11 -45 17.8	Boyd	1934	Harvard	
OU	HV 6603	17 36 34 -39 19.9	Boyd	1934	Harvard	
OV	HV 6604	17 36 36 -45 27.1	Boyd	1934	Harvard	
OW	HV 6605	17 36 40 -42 44.6	Boyd	1934	Harvard	
OX	HV 6607	17 36 58 -45 6.3	Boyd	1934	Harvard	
OY	HV 6606	17 36 58 -40 33.4	Boyd	1934	Harvard	
OZ	HV 6608	17 37 5 -43 33.0	Boyd	1934	Harvard	
PP	HV 6610	17 37 39 -39 38.8	Boyd	1934	Harvard	
PQ	HV 6612	17 37 51 -42 21.7	Boyd	1934	Harvard	
PR	HV 6611	17 37 51 -41 22.5	Boyd	1934	Harvard	*
PS	HV 6613	17 37 54 -43 50.3	Boyd	1934	Harvard	
PT	HV 6614	17 38 36 -43 1.1	Boyd	1934	Harvard	
PU	HV 6615	17 38 42 -43 3.8	Boyd	1934	Harvard	
PV	HV 6616	17 38 43 -41 43.6	Boyd	1934	Harvard	
PW	HV 6617	17 38 51 -41 22.4	Boyd	1934	Harvard	*
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QT	HV 6625	17 39 53 -44 7.0	Boyd	1934	Harvard	

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MU	L	2426125	250.8	14.8	[16.5	pg	HA 90.182
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QW	HV 6629	17 40 29 -41 0.9	Boyd	1934	Harvard				
QX	HV 6632	17 40 52 -44 13.9	Boyd	1934	Harvard	*			
QY	HV 6631	17 40 52 -43 5.6	Boyd	1934	Harvard				
QZ	HV 6635	17 41 27 -43 9.2	Boyd	1934	Harvard	*			
V 335	HV 6636	17 41 51 -42 56.4	Boyd	1934	Harvard	*			
V 336	HV 6637	17 42 0 -43 9.3	Boyd	1934	Harvard				
V 337	HV 6638	17 42 10 -42 59.7	Boyd	1934	Harvard				
V 338	HV 6639	17 42 15 -40 24.7	Boyd	1934	Harvard				
V 339	HV 6640	17 42 26 -43 55.0	Boyd	1934	Harvard	*			
V 340	HV 6641	17 42 35 -40 50.9	Boyd	1934	Harvard				
V 341	HV 6642	17 42 57 -41 52.0	Boyd	1934	Harvard				
V 342	HV 6643	17 43 4 -41 42.8	Boyd	1934	Harvard	*			
V 343	HV 6644	17 43 11 -42 59.2	Boyd	1934	Harvard				
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V 345	HV 6646	17 43 18 -43 6.0	Boyd	1934	Harvard				
V 346	HV 6647	17 43 23 -43 22.5	Boyd	1934	Harvard				
V 347	HV 6648	17 43 58 -44 50.1	Boyd	1934	Harvard	*			
V 348	HV 6649	17 44 19 -43 14.6	Boyd	1934	Harvard				
V 349	HV 6651	17 44 39 -40 12.0	Boyd	1934	Harvard				
V 350	HV 6652	17 44 57 -42 14.0	Boyd	1934	Harvard				
V 351	HV 6653	17 45 4 -45 3.0	Boyd	1934	Harvard	*			
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V 357	HV 6659	17 45 42 -42 36.7	Boyd	1934	Harvard				
V 358	HV 6660	17 45 43 -41 37.4	Boyd	1934	Harvard				
V 359	HV 6662	17 46 1 -45 13.1	Boyd	1934	Harvard				
V 360	HV 6661	17 46 1 -43 13.2	Boyd	1934	Harvard				
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V 364	HV 6668	17 47 32 -44 8.1	Boyd	1934	Harvard				
V 365	HV 6669	17 47 40 -41 9.6	Boyd	1934	Harvard				
V 366	HV 6670	17 47 43 -45 26.4	Boyd	1934	Harvard				
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V 371	HV 6675	17 48 44 -42 11.4	Boyd	1934	Harvard				
V 372	HV 6676	17 49 1 -45 14.5	Boyd	1934	Harvard				
V 373	HV 6677	17 49 8 -42 38.2	Boyd	1934	Harvard				
V 374	HV 6679	17 49 49 -42 59.5	Boyd	1934	Harvard				
V 375	HV 6680	17 50 25 -45 16.9	Boyd	1934	Harvard				
V 376	HV 6682	17 50 53 -41 1.3	Boyd	1934	Harvard				
V 377	HV 6683	17 51 14 -42 32.1	Boyd	1934	Harvard				
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V 379	HV 6685	17 51 46 -44 38.3	Boyd	1934	Harvard	*			
V 380	HV 3884	16 49 46 -30 9.4	Cannon	1925	Harvard	*	*	*	
V 381	HV 6990	17 40 20 -35 44.8	Swope	1935	Harvard	*			*
V 382	HV 7006	17 45 14 -35 23.6	Swope	1935	Harvard	*			
V 383	HV 7021	17 46 43 -38 3.6	Swope	1935	Harvard	*			*
V 384	HV 7104	17 54 58 -35 39.2	Swope	1935	Harvard	*			
V 385	HV 6985	17 31 21 -37 38.6	Swope	1935	Harvard				
V 386	HV 6986	17 34 15 -34 37.8	Swope	1935	Harvard	*			
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V 388	HV 6988	17 37 49 -37 46.4	Swope	1935	Harvard				

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V 373	L	2424370	315.2	14.6	[16.5	pg	HA 90.185
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V 385	Ecl	2424711.690	2.34515	10.9	11.7	pg	HA 90.219
V 386	Alg	2428161.0303	1.776925	11.6	15.3:	pg	HA 90.219
V 387	Ecl	2426120.570	1.37494	12.1	12.5	pg	HA 90.219
V 388	L	2424710	413	15.0	[16.5	pg	HA 90.219

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		SCORPIUS							
V 389	HV 6989	17h38m38s -36°42.'8	Swope	1935	Harvard				
V 390	HV 6991	17 40 22 -35 57.3	Swope	1935	Harvard	*			
V 391	HV 6992	17 40 46 -34 53.6	Swope	1935	Harvard				
V 392	HV 6993	17 41 23 -37 41.6	Swope	1935	Harvard				
V 393	HV 6994	17 42 7 -35 1.4	Swope	1935	Harvard	*		*	*
V 394	HV 6995	17 42 9 -35 44.2	Swope	1935	Harvard	*			
V 395	HV 6997	17 42 10 -37 35.8	Swope	1935	Harvard				
V 396	297.1933	17 43 0 -35 56.3	Luyten	1933	Harvard	*			
V 397	HV 7000	17 43 6 -35 3.9	Swope	1935	Harvard				
V 398	HV 7001	17 43 9 -36 42.2	Swope	1935	Harvard				
V 399	HV 7002	17 43 44 -35 41.5	Swope	1935	Harvard				
V 400	HV 7003	17 44 34 -36 9.2	Swope	1935	Harvard	*			
V 401	HV 7004	17 44 38 -37 30.7	Swope	1935	Harvard				
V 402	HV 7005	17 45 8 -35 8.2	Swope	1935	Harvard				
V 403	HV 7007	17 45 16 -36 27.7	Swope	1935	Harvard	*			
V 404	HV 7008	17 45 23 -36 58.8	Swope	1935	Harvard				
V 405	HV 7009	17 45 24 -37 13.6	Swope	1935	Harvard				
V 406	HV 7010	17 45 36 -37 35.6	Swope	1935	Harvard				
V 407	HV 7011	17 45 45 -35 1.8	Swope	1935	Harvard				
V 408	HV 7012	17 45 53 -37 42.8	Swope	1935	Harvard				
V 409	HV 7013	17 46 2 -36 38.5	Swope	1935	Harvard				
V 410	HV 7015	17 46 13 -37 10.7	Swope	1935	Harvard	*			
V 411	HV 7017	17 46 26 -36 49.9	Swope	1935	Harvard	*			
V 412	HV 7018	17 46 31 -36 8.8	Swope	1935	Harvard				
V 413	HV 7019	17 46 32 -38 6.8	Swope	1935	Harvard				
V 414	HV 7022	17 46 45 -35 50.6	Swope	1935	Harvard				
V 415	HV 7023	17 46 49 -36 59.2	Swope	1935	Harvard				
V 416	HV 7024	17 46 52 -37 12.5	Swope	1935	Harvard				
V 417	HV 7025	17 46 54 -37 21.2	Swope	1935	Harvard				
V 418	HV 7026	17 47 8 -37 39.7	Swope	1935	Harvard				
V 419	HV 7027	17 47 13 -36 53.6	Swope	1935	Harvard				
V 420	HV 7028	17 47 19 -34 22.5	Swope	1935	Harvard				
V 421	HV 7029	17 47 46 -35 47.5	Swope	1935	Harvard	*			
V 422	HV 7030	17 47 55 -37 41.7	Swope	1935	Harvard				
V 423	HV 7031	17 48 6 -35 18.7	Swope	1935	Harvard	*			
V 424	HV 7032	17 48 13 -37 3.4	Swope	1935	Harvard				
V 425	531.1933	17 48 30 -34 24	Luyten	1933	Harvard	*			
V 426	HV 7033	17 48 36 -35 31.8	Swope	1935	Harvard				
V 427	HV 7034	17 49 12 -36 59.7	Swope	1935	Harvard				
V 428	HV 7035	17 49 43 -37 7.0	Swope	1935	Harvard				
V 429	532.1933	17 49 54 -34 58	Luyten	1933	Harvard	*			
V 430	HV 7036	17 50 5 -35 32.0	Swope	1935	Harvard				
V 431	HV 7037	17 50 6 -37 7.8	Swope	1935	Harvard	*			
V 432	HV 7038	17 50 14 -35 10.2	Swope	1935	Harvard				
V 433	HV 7039	17 50 19 -38 11.8	Swope	1935	Harvard				
V 434	HV 7040	17 50 20 -37 5.5	Swope	1935	Harvard				
V 435	HV 7041	17 50 22 -38 16.4	Swope	1935	Harvard				
V 436	HV 7042	17 50 24 -37 53.4	Swope	1935	Harvard				
V 437	HV 7043	17 50 27 -36 18.7	Swope	1935	Harvard	*			
V 438	HV 7044	17 50 28 -37 27.8	Swope	1935	Harvard	*		*	
V 439	HV 7045	17 50 38 -37 16.2	Swope	1935	Harvard	*			
V 440	HV 7046	17 50 50 -35 21.3	Swope	1935	Harvard				
V 441	300.1933	17 50 50 -38 0.8	Luyten	1933	Harvard	*			
V 442	HV 7048	17 51 5 -35 46.2	Swope	1935	Harvard				
V 443	HV 7049	17 51 15 -36 14.8	Swope	1935	Harvard				
V 444	HV 7050	17 51 16 -36 36.6	Swope	1935	Harvard	*			
V 445	HV 7051	17 51 32 -37 26.0	Swope	1935	Harvard				
V 446	HV 7052	17 51 35 -36 15.1	Swope	1935	Harvard	*			
V 447	HV 7054	17 51 35 -37 3.2	Swope	1935	Harvard				
V 448	HV 7055	17 51 39 -35 34.5	Swope	1935	Harvard				
V 449	202.1937	17 30 28 -32 3.9	Voûte	1937	Lembang	*			
V 450	..	17 35 42 -35 11.8	Fleming	1896	Harvard	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
							SCORPIUS
V 389	L	2424630	295[d]	14.9[m]	[16.5[m]	pg	HA 90.219
V 390	L	2424700	420:	14.5	[16.5	pg	HA 90.219
V 391	L	2426450	291	15.5	[16.5	pg	HA 90.219
V 392	L	2424060	248	15.5	[16.5	pg	HA 90.219
V 393	Alg	2428321.118	7.71272	7.75	8.60	pg	HA 90.219
V 394	L	2426450	403	15.2	[16.5	pg	HA 90.219
V 395	L	2426460	244.5	14.6	[16.5	pg	HA 90.219
V 396	L	2426220	219.3	13.2	16.2	pg	AN 5975; Minn Publ 2.117
V 397	L	2425430	224	15.5	[16.5	pg	HA 90.219
V 398	Irr			13.6	15.0	pg	HA 90.219
V 399	L	2424620	259	15.5	[16.5	pg	HA 90.219
V 400	SR	2426090	102.8:	14.7	15.9	pg	HA 90.219
V 401	Irr			13.1	14.0	pg	HA 90.219
V 402	L	2425420	262	14.8	[16.5	pg	HA 90.219
V 403	Ecl	2424711.700	1.04087	13.0	14.1	pg	HA 90.219
V 404	L	2426120	212.2	14.6	[16.5	pg	HA 90.219
V 405	L	2425800	201	14.6	[16.5	pg	HA 90.219
V 406	L	2424710	210.7	15.2	[16.5	pg	HA 90.219
V 407	L	2423960	396	12.8	[16.5	pg	HA 90.219
V 408	L	2425850	469	14.0	[16.5	pg	HA 90.219
V 409	L	2426110	173.5	14.0	16.8:	pg	HA 90.219
V 410	L	2425740	303.5	15.2	[16.5	pg	HA 90.219
V 411	SR	2426120	135	13.4	15.0	pg	HA 90.219
V 412	W	2426179.225	0.420662	13.8	14.8	pg	HA 90.219
V 413	L	2427360	217.4	15.2	[16.5	pg	HA 90.219
V 414	L	2424730	217.8	14.4	[16.5	pg	HA 90.219
V 415	Cl	2426090.550	0.62581	14.8	15.8	pg	HA 90.219
V 416	L	2426110	327	14.4	[16.5	pg	HA 90.219
V 417	L	2424740	235	14.0	[16.5	pg	HA 90.219
V 418	L	2424020	171	15.0	17.0:	pg	HA 90.219
V 419	L	2424710	214	15.4	[16.5	pg	HA 90.219
V 420	L	2426130	213:	15.3	[16.5	pg	HA 90.219
V 421	L	2424030	299	15.0	[16.5	pg	HA 90.219
V 422	Ecl	2425418.430	1.0762	14.0	15.0	pg	HA 90.219
V 423	β	2426125	59.61	13.4	15.0	pg	HA 90.219
V 424	L	2426060	330	15.2	[16.5	pg	HA 90.219
V 425	L	2425420	109.3	15.5	[17.0	pg	AN 5991; Minn Publ 2.103
V 426	L	2423970	211	15.0	[16.5	pg	HA 90.219
V 427	L	2427620	237	13.9	[16.5	pg	HA 90.219
V 428	Irr			13.8	15.5	pg	HA 90.219
V 429	L	2426500	216.7	15.4	[16.5	pg	AN 5991; Minn Publ 2.104
V 430	L	2424040	172.7	14.5	[16.5	pg	HA 90.219
V 431	L	2423970	263.5	15.3	[16.5	pg	HA 90.219
V 432	Irr			15.0	16.5	pg	HA 90.219
V 433	Irr			13.0	14.3	pg	HA 90.220
V 434	L	2426090	153.1	15.5	[16.5	pg	HA 90.220
V 435	L	2426060	286	14.8	[16.5	pg	HA 90.220
V 436	L	2424690	213.5	14.5	[16.5	pg	HA 90.220
V 437	Ecl	2426179.240	4.880	13.4	14.7	pg	HA 90.220
V 438	L	2426490	388.5	11.5	16.2	pg	HA 90.220
V 439	L	2424020	171.5	14.0	[16.5	pg	HA 90.220
V 440	L	2425435	212.5	14.7	[16.5	pg	HA 90.220
V 441	L	2424680	146.3	14.6	[16.5	pg	AN 5975; Minn Publ 2.117
V 442	Irr:			13.5	14.0	pg	HA 90.220
V 443	Cl	2424728.620	0.54923	15.2	16.3	pg	HA 90.220
V 444	L	2426140	128.8	15.2	[16.5	pg	HA 90.220
V 445	Ecl	2426089.650	1.881	14.8	16.5	pg	HA 90.220
V 446	Cep	2424650.0	28.634	13.1	14.9	pg	HA 90.220
V 447	Cl	2426092.520	0.40987	15.5	16.7	pg	HA 90.220
V 448	Irr			13.3	13.9	pg	HA 90.220
V 449	Alg		38.8±	7.7	8.3	pg	AN 6330
V 450	Irr			10.7	11.6	pg	HC 7; AN 3362; HA 55.49

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		SCORPIUS							
V 451	HV 6996	17h42m10s -35°20'.4	Swope	1935	Harvard				
V 452	HV 7016	17 46 25 -37 16.9	Swope	1935	Harvard				
μ^1	..	16 45 6 -37 52.5	Maury	1920	Harvard	*			*
		SCULPTOR							
RV	HV 4842	1h14m58s -27°23'.7	Hughes	1930	Harvard	*	*		
RW	HV 4843	1 18 10 -26 49.0	Hughes	1930	Harvard		*		
RX	HV 4844	1 21 43 -28 1.9	Hughes	1930	Harvard		*		
RY	HV 4845	1 28 47 -31 0.5	Hughes	1930	Harvard		*		
RZ	HV 4846	1 37 21 -26 43.2	Hughes	1930	Harvard		*		
SS	HV 4847	1 37 37 -30 29.8	Hughes	1930	Harvard		*		
ST	HV 4848	1 38 1 -30 31.6	Hughes	1930	Harvard		*		
SU	HV 4849	1 39 0 -30 1.2	Hughes	1930	Harvard	*	*		
SV	HV 4850	1 40 27 -30 34.2	Hughes	1930	Harvard	*	*		
SW	HV 6423	0 1 9 -33 22.0	Fleming	1934	Harvard	*			
SX	HV 6424	0 1 52 -30 10.2	Hughes	1934	Harvard				
SY	150.1932	0 2 29 -26 2.3	Hoffmeister	1932	Sonneberg	*			
SZ	HV 6427	0 10 43 -31 39.3	Hughes	1934	Harvard	*			
TT	HV 6428	0 11 53 -30 47.2	Hughes	1934	Harvard				
TU	HV 6411	23 46 26 -29 43.9	Hughes	1934	Harvard				
TV	HV 6412	23 47 43 -30 43.8	Hughes	1934	Harvard				
TW	HV 6415	23 49 30 -34 1.6	Hughes	1934	Harvard				
TX	HV 6416	23 50 12 -26 51.6	Hughes	1934	Harvard				
TY	HV 6417	23 52 57 -34 18.0	Hughes	1934	Harvard				
TZ	HV 6418	23 55 41 -29 22.4	Hughes	1934	Harvard				
UU	HV 6419	23 56 15 -27 8.8	Hughes	1934	Harvard	*			
UV	..	0 51 6 -27 55.5	van Gent	1936	Johannesburg	*	*		*
UW	..	0 58 28 -26 3.3	van Gent	1936	Johannesburg	*	*		*
UX	HV 6421	23 57 25 -30 59.4	Hughes	1934	Harvard				
		SCUTUM							
BT	HV 4926	18h36m50s - 4°26'.4	Walton	1927	Nantucket	*			
BU	HV 4927	18 40 50 - 4 43.3	Walton	1927	Nantucket	*			
BV	HV 4928	18 41 4 - 5 15.3	Walton	1927	Nantucket	*			
BW	HV 4930	18 42 3 - 4 52.1	Walton	1927	Nantucket	*			
BX	HV 4932	18 44 52 - 4 29.1	Walton	1927	Nantucket	*			*
BY	HV 4934	18 45 50 - 7 55.4	Walton	1927	Nantucket	*			
BZ	HV 4936	18 52 12 - 5 55.9	Walton	1927	Nantucket	*			
CC	..	18 46 28 -14 47.6	Martin	1932	Johannesburg	*	*	*	*
CD	..	18 46 30 -14 35.9	Martin	1932	Johannesburg		*	*	*
CE	HV 6111	18 40 38 - 5 44.5	Robinson	1933	Harvard				
CF	HV 6112	18 43 1 - 8 28.7	Robinson	1933	Harvard	*			
CG	HV 6113	18 46 22 - 8 26.2	Robinson	1933	Harvard	*			
CH	HV 6114	18 47 27 - 8 49.8	Robinson	1933	Harvard				
CI	Ross 238	18 47 46 -10 15.9	Ross	1928	Yerkes	*			
δ	..	18 36 48 - 9 8.9	Fath	1935	Lick	*		*	*
		SERPENS							
XX	Ross 357	15h41m51s +21°12'.6	Ross	1929	Yerkes	*	*	*	
XY	174.1929	17 55 47 - 0 38.3	Hoffmeister	1929	Sonneberg	*	*	*	
XZ	175.1929	17 55 52 - 1 20.6	Hoffmeister	1929	Sonneberg	*	*	*	
YY	183.1929	18 0 23 - 1 10.7	Hoffmeister	1929	Sonneberg		*	*	
YZ	190.1929	18 4 9 - 0 20.1	Hoffmeister	1929	Sonneberg	*	*	*	
ZZ	HV 4924	18 29 25 - 1 59.1	Walton	1927	Nantucket	*			
AA	HV 4925	18 36 11 - 1 12.3	Walton	1927	Nantucket	*			

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				SCORPIUS			
V 451	Ecl	2424411.480		12.0	12.4	pg	HA 90.219
V 452	Ecl	2426101.550		14.2	15.0	pg	HA 90.219
μ^1	β	2428414.2978	1.4462683 d	3.05	3.35	pv	PA 29.22; HA 84.157
				SCULPTOR			
RV	Cl?			11.1	11.8	pg	HB 877
RW	Cl	2424731.860	0.4517 d	12.6	14.1	pg	HB 877
RX	Cl	2424744.805	0.54453	14.0	15.1	pg	HB 877
RY	Cl?			14.5	15.1	pg	HB 877
RZ	Cl	2424765.850	0.46062	14.8	16.2	pg	HB 877
SS	Cl	2424744.775	0.4187	13.9	14.5	pg	HB 877
ST	Cl	2424744.800	0.51455	12.9	14.5	pg	HB 877
SU	Sh			11.6	12.2	pg	HB 877
SV	Cl	2427385.181	0.3776	11.0	12.0	pg	HB 877
SW	L	2425550	144	10.3	11.7	pg	HA 90.173
SX	Cl	2425482.50	0.52943	14.7	15.8	pg	HA 90.173
SY	L	2426160	411	12.4	[16.3	pg	AN 5919
SZ	W	2425446.60	0.32084	13.1	13.8	pg	HA 90.173
TT	L	2425470	132.7	13.8	16.2	pg	HA 90.173
TU	Ecl	2425446.60	1.1567	14.3	14.9	pg	HA 90.173
TV	Cl	2425449.60	0.59724	14.3	15.4	pg	HA 90.173
TW	Cl	2425441.60	0.38110	13.5	14.4	pg	HA 90.173
TX	Cl	2425446.60	0.72777	12.5	13.7	pg	HA 90.173
TY	Cl	2425530.35	0.65020	14.3	15.8	pg	HA 90.173
TZ	Cl	2425479.45	0.58293	14.6	15.6	pg	HA 90.173
UU	Ecl	2425538.20	3.447	14.5	16.0	pg	HA 90.173
UV	Cl	2425854.323	0.52056	13.3	13.9	pg	BAN 275
UW	Cl	2425852.336	0.575096	13.7	14.4	pg	BAN 275
UX	Irr			13.8	[16.0	pg	HA 90.173
				SCUTUM			
BT				11.7	12.6	pg	PA 35.25
BU	Cl	2425804.625	0.42022 d	13.1	14.3	pg	PA 35.25
BV	Cl			12.7	13.7	pg	PA 35.25
BW	Cep	2413752.67	3.823	11.8	13.6	pg	PA 35.25
BX	Cep	2424388.164	6.411695	13.2	14.4	pg	PA 35.25
BY	Cl	2425805.586	0.30645	11.3	12.2	pg	PA 35.25
BZ	SR	2426153	80	13.0	14.0	pg	PA 35.25
CC	Cep?	2426077.09	15.5521	14.7	15.3	pg	BAN 235
CD	W	2426071.293	0.606318	14.4	14.9	pg	BAN 235
CE	L			15	[16.0	pg	HB 893
CF	Alg	2426177.1	31.9415	13.2	15.5	pg	HB 893
CG	L	2428744	408	13.4	[16.0	pg	HB 893
CH	L	2426180	189.5	13.4	[16.0	pg	HB 893
CI				12	14	pg	AJ 897
δ		2427991.786	0.193770	4.62	4.86	pe	ASP 47.232; Lick Bull 479
				SERPENS			
XX	L	2426103	168 d	11.5	13.3	pg	AJ 926
XY	L	2425414	166	11.7	[15.6	pg	AN 5655; Sonn Mitt 17
XZ	L	2425437	165	12.6	14.6	pg	AN 5655; Sonn Mitt 17
YY	L	2425495	250	14.4	[16.5	pg	AN 5655; Sonn Mitt 17; KVBB 19.23; 78
YZ	L	2425450	420	13.4	[15.8	pg	AN 5655; Sonn Mitt 17
ZZ				12.5	13.5	pg	PA 35.25
AA	Cep	2425474.9	17.129	13.8	15.4	pg	PA 35.25

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		SERPENS							
AB	297.1930	17h 16m 22s -13° 3'.2	Hoffmeister	1930	Sonneberg	*	*	*	
AC	SVS 336	17 24 21 -10 12.4	Shajn	1933	Simeis		*	*	
AD	Ross 27	17 33 19 -15 3.8	Ross	1925	Yerkes	*	*	*	
AE	Ross 33	17 38 29 -14 2.9	Ross	1925	Yerkes	*	*	*	
AF	SVS 343	17 41 46 -14 53.3	Shajn	1933	Simeis		*	*	
AG	Ross 48	18 28 53 + 3 38.2	Ross	1926	Yerkes	*			
AH	50.1935	15 54 54 +20 4.8	Hoffmeister	1935	Sonneberg		*		
AI	54.1935	16 1 59 - 0 3.0	Hoffmeister	1935	Sonneberg		*		
AK	SVS 464	17 36 24 -13 50.2	Shajn	1934	Simeis		*	*	
AL	SVS 376	17 52 54 - 2 55.5	Shajn	1933	Simeis	*	*	*	
AM	39.1935	15 24 29 - 0 3.9	Hoffmeister	1935	Sonneberg	*	*	*	*
AN	45.1935	15 48 51 +13 16.1	Hoffmeister	1935	Sonneberg	*	*		
AO	49.1935	15 53 46 +17 32.5	Hoffmeister	1935	Sonneberg	*			*
AP	34.1935	15 9 10 +10 21.7	Hoffmeister	1935	Sonneberg	*	*		
AQ	36.1935	15 17 10 + 2 51.1	Hoffmeister	1935	Sonneberg	*	*		*
AR	40.1935	15 28 27 + 3 6.6	Hoffmeister	1935	Sonneberg	*	*		*
AS	42.1935	15 33 46 + 2 36.4	Hoffmeister	1935	Sonneberg	*	*		
AT	46.1935	15 50 51 + 8 17.2	Hoffmeister	1935	Sonneberg	*	*		
AU	48.1935	15 52 29 +22 33.1	Hoffmeister	1935	Sonneberg	*	*		
AV	53.1935	15 58 46 + 0 52.3	Hoffmeister	1935	Sonneberg	*	*		
AW	55.1935	16 1 54 +15 48.1	Hoffmeister	1931	Sonneberg	*		*	
AX	256.1931	17 57 24 - 0 6	Hoffmeister	1931	Sonneberg	*		*	
AY	266.1931	18 3 0 - 0 17	Hoffmeister	1931	Sonneberg	*		*	
AZ	273.1931	18 9 43 - 0 14	Hoffmeister	1931	Sonneberg			*	
BB	274.1931	18 10 31 - 0 15	Hoffmeister	1935	Sonneberg	*	*		
BC	51.1935	15 55 55 + 2 27.5	Hoffmeister	1934	Simeis	*	*	*	
BD	SVS 576	17 26 1 -14 0.7	Shajn	1934	Simeis	*	*	*	
BE	SVS 583	17 59 52 -13 53.7	Shajn						
		SEXTANS							
X	218.1932	10h 18m 30s - 6° 34'.6	Hoffmeister	1932	Sonneberg	*		*	
		TAURUS							
AB	5.1932	5h 34m 44s +28° 3'.2	Steensgaard and Pedersen	1932	Aarhus	*		*	*
AC	41.1929	4 31 56 + 1 28.2	Hoffmeister	1929	Sonneberg	*		*	
AD	SVS 331	5 28 6 +25 32.1	Shajn	1933	Simeis	*	*	*	
AE	120.1931	5 28 23 +26 7.7	Hoffmeister	1931	Sonneberg	*	*	*	*
AF	HV 6185	3 30 29 +23 50.7	Hughes	1934	Harvard				
AG	SVS 553	3 38 36 +30 3.8	Lehman-Balanovskaja	1934	Pulkowo		*		
AH	HV 6187	3 41 13 +24 48.5	Hughes	1934	Harvard	*			
AI	HV 6190	3 42 30 +20 2.6	Hughes	1934	Harvard				
AK	HV 6197	3 56 55 +20 46.4	Hughes	1934	Harvard	*			
AL	329.1930	5 27 41 +25 58.2	Hoffmeister	1930	Sonneberg	*	*		
AM	283.1934	5 46 33 +16 15.7	Hoffmeister	1934	Sonneberg	*	*	*	*
AN	432.1928	3 50 0 +29 13.7	Guthnick	1928	Babelsberg	*		*	*
AO	HV 6860	4 43 24 +28 10.0	Hoffleit	1935	Harvard				
AP	HV 6862	4 48 33 +26 45.6	Hoffleit	1935	Harvard				
AQ	HV 6863	4 49 43 +27 43.6	Hoffleit	1935	Harvard				
AR	HV 6874	4 59 58 +27 13.7	Hoffleit	1935	Harvard				
AS	SVS 329	5 8 13 +27 35.6	Shajn	1933	Simeis	*	*	*	
AT	121.1931	5 33 32 +27 48	Hoffmeister	1931	Sonneberg	*			
AU	330.1930	5 37 14 +28 5	Hoffmeister	1930	Sonneberg	*	*		
AV	331.1930	5 39 30 +27 1.7	Hoffmeister	1930	Sonneberg	*	*		*
AW	122.1931	5 41 13 +27 5	Hoffmeister	1931	Sonneberg	*		*	
AX	HV 6924	5 43 3 +24 5.3	Hoffleit	1935	Harvard	*			
AY	123.1931	5 43 41 +25 23	Hoffmeister	1931	Sonneberg	*			
AZ	46.1936	5 45 27 +28 16	Hoffmeister	1936	Sonneberg	*			
BB	125.1931	5 46 5 +25 49	Hoffmeister	1931	Sonneberg	*			

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AP	Cl	2428334.279	0.25447	10	11	pg	AN 6118
AQ	β	2428333.220	1.68736	10.50	11.16	v	AN 6118
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AS	Alg	2428333.323	0.4660	10.5	11	pg	AN 6118
AT	Cl			10	11	pg	AN 6118
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AV	Cl	2428342.367	0.322608.5382	10.5	11.5	pg	AN 6118
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AX	L	2426161	141	13.6	15.3	pg	AN 5791
AY	L	2426490	300	12.9	15.9	pg	AN 5791
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BC	L	2428319	238	10	[12.5	pg	AN 6118
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AD				12.0	13.7	pg	NNVS 40; Pulk Circ 7.28
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AF	L	2425150	240	13.8	15.4	pg	HA 90.168
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AS	Alg		3.4835	12.2	13.6	pg	NNVS 40; Pulk Circ 7.28
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BB	Irr			13.2	14.0	pg	AN 5791

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BE	48.1936	5 50 4 +24 47	Hoffmeister	1936	Sonneberg	*			
BF	130.1931	5 53 22 +24 44	Hoffmeister	1931	Sonneberg	*			
BG	HV 6183	3 25 5 +28 21.2	Hughes	1934	Harvard				
BH	HV 6186	3 34 51 +26 21.0	Hughes	1934	Harvard				
BI	HV 6192	3 43 33 +26 12.3	Hughes	1934	Harvard				
BK	HV 6194	3 45 37 +25 27.4	Hughes	1934	Harvard				
BL	HV 6195	3 47 12 +19 54.5	Hughes	1934	Harvard	*			
BM	SVS 556	3 48 30 +28 14	Lehman-Balanovskaja	1934	Pulkowo		*		
BN	SVS 689	4 9 13 +30 24	Lehman-Balanovskaja	1935	Pulkowo				
BO	SVS 690	4 11 44 +26 7	Lehman-Balanovskaja	1935	Pulkowo				
BP	SVS 691	4 12 48 +28 52	Lehman-Balanovskaja	1935	Pulkowo				
BQ	SVS 692	4 15 10 +22 22	Lehman-Balanovskaja	1935	Pulkowo				
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BS	HV 6865	4 52 32 +28 22.3	Hoffleit	1935	Harvard				
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RT	461.1934	2 15 30 +31 25.8	Morgenroth	1934	Sonneberg		*		
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RY	HV 5134	15 26 19 -61 9.5	Hoffleit	1931	Harvard				
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SU	HV 5141	15 34 51 -62 28.5	Hoffleit	1931	Harvard				
SV	HV 5144	15 36 0 -60 49.8	Hoffleit	1931	Harvard				
SW	HV 5145	15 36 40 -61 51.7	Hoffleit	1931	Harvard				
SX	HV 5146	15 37 43 -60 21.6	Hoffleit	1931	Harvard				
SY	HV 5147	15 38 8 -61 41.7	Hoffleit	1931	Harvard				
SZ	HV 5150	15 40 3 -63 18.2	Hoffleit	1931	Harvard				
TT	HV 5152	15 40 33 -62 37.5	Hoffleit	1931	Harvard				
TU	HV 5155	15 41 38 -60 58.3	Hoffleit	1931	Harvard				
TV	HV 5156	15 42 7 -61 21.6	Hoffleit	1931	Harvard	*			
TW	HV 5157	15 42 39 -63 24.5	Hoffleit	1931	Harvard				
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TZ	HV 5162	15 43 42 -62 17.3	Hoffleit	1931	Harvard				
UU	HV 5163	15 44 9 -63 31.3	Hoffleit	1931	Harvard				
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UW	HV 5167	15 45 3 -62 20.5	Hoffleit	1931	Harvard				
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UZ	HV 5174	15 47 16 -63 42.7	Hoffleit	1931	Harvard	*			
VV	HV 5175	15 47 42 -60 7.8	Hoffleit	1931	Harvard				
VW	HV 5178	15 48 21 -64 35.5	Hoffleit	1931	Harvard				
VX	HV 5181	15 49 21 -60 51.7	Hoffleit	1931	Harvard				
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WW	HV 5186	15 50 25 -61 14.6	Hoffleit	1931	Harvard				
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AA	HV 5205	15 56 59 -61 19.8	Hoffleit	1931	Harvard	
AB	HV 5206	15 57 21 -61 27.6	Hoffleit	1931	Harvard	
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BX	HV 5315	16 13 25 -60 8.7	Hoffleit	1931	Harvard	
BY	HV 5317	16 13 44 -60 22.9	Hoffleit	1931	Harvard	
BZ	HV 5320	16 13 53 -62 42.6	Hoffleit	1931	Harvard	
CC	HV 5322	16 14 5 -61 32.0	Hoffleit	1931	Harvard	
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CE	HV 5325	16 15 32 -64 3.5	Hoffleit	1931	Harvard	*
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CL	HV 5340	16 18 6 -62 38.6	Hoffleit	1931	Harvard	

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BS	L	2424680	335	14.9	16.5	pg	HB 884
BT	Sh			14.5	15.1	pg	HB 884
BU	L	2424650	304:	15.0	[16.5	pg	HB 884
BV	Cl	2424679.648	0.5003	14.2	15.5	pg	HB 884
BW	L			14.7	[16.5	pg	HB 884
BX	L			14.5	[16.3	pg	HB 884
BY	Cl			14.7	16.1	pg	HB 884
BZ	L	2424710	280	14.5	[16.5	pg	HB 884
CC	L	2423961	270	13.0	16.5	pg	HB 884
CD	Sh			13.7	14.2	pg	HB 884
CE	Cl	2424285.763	0.5272	14.7	16.0	pg	HB 884
CF	Sh			14.3	15.1	pg	HB 884
CG	L	2424670	290	14.5	[16.5	pg	HB 884
CH	Cl			13.7	15.3	pg	HB 884
CI	Cl			14.7	15.3	pg	HB 884
CK	Cl			14.7	15.9	pg	HB 884
CL	Ecl			14.9	15.9	pg	HB 884

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R C S L
		TRIANGULUM AUSTRALE				
CM	HV 5342	16h 18m 40s -61° 1'.7	Hoffleit	1931	Harvard	
CN	HV 5347	16 19 33 -61 42.1	Hoffleit	1931	Harvard	
CO	HV 5348	16 19 40 -60 6.5	Hoffleit	1931	Harvard	*
CP	HV 5349	16 19 52 -61 44.3	Hoffleit	1931	Harvard	
CQ	HV 5350	16 19 56 -63 23.2	Hoffleit	1931	Harvard	
CR	HV 5354	16 20 28 -61 57.5	Hoffleit	1931	Harvard	
CS	HV 5357	16 20 31 -64 23.0	Hoffleit	1931	Harvard	*
CT	HV 5358	16 20 32 -60 57.6	Hoffleit	1931	Harvard	
CU	HV 5363	16 21 33 -64 48.8	Hoffleit	1931	Harvard	*
CV	HV 5364	16 21 41 -60 18.6	Hoffleit	1931	Harvard	*
CW	HV 5366	16 21 54 -61 29.0	Hoffleit	1931	Harvard	
CX	HV 5367	16 22 21 -61 9.1	Hoffleit	1931	Harvard	
CY	HV 5370	16 22 38 -60 32.0	Hoffleit	1931	Harvard	
CZ	HV 5371	16 22 46 -61 26.0	Hoffleit	1931	Harvard	
DD	HV 5372	16 22 52 -61 33.3	Hoffleit	1931	Harvard	
DE	HV 5373	16 22 53 -62 20.1	Hoffleit	1931	Harvard	
DF	HV 5374	16 23 8 -60 54.8	Hoffleit	1931	Harvard	
DG	HV 5378	16 24 10 -62 47.8	Hoffleit	1931	Harvard	
DH	HV 5382	16 24 25 -61 19.2	Hoffleit	1931	Harvard	
DI	HV 5383	16 24 30 -64 21.9	Hoffleit	1931	Harvard	
DK	HV 5384	16 24 34 -64 16.9	Hoffleit	1931	Harvard	
DL	HV 5385	16 24 40 -62 1.2	Hoffleit	1931	Harvard	
DM	HV 5386	16 24 50 -61 26.2	Hoffleit	1931	Harvard	
DN	HV 5390	15 25 33 -61 16.7	Hoffleit	1931	Harvard	
DO	HV 5391	16 26 32 -64 32.7	Hoffleit	1931	Harvard	
DP	HV 5394	16 26 55 -63 29.4	Hoffleit	1931	Harvard	
DQ	HV 5395	16 27 10 -61 10.5	Hoffleit	1931	Harvard	
DR	HV 5396	15 27 20 -61 37.3	Hoffleit	1931	Harvard	
DS	HV 5397	16 27 46 -64 4.7	Hoffleit	1931	Harvard	*
DT	HV 5399	16 27 58 -64 52.4	Hoffleit	1931	Harvard	
DU	HV 5400	16 28 4 -62 14.9	Hoffleit	1931	Harvard	
DV	HV 5406	16 30 0 -64 19.1	Hoffleit	1931	Harvard	*
DW	HV 5412	16 31 44 -63 20.7	Hoffleit	1931	Harvard	
DX	HV 5414	16 33 17 -61 52.2	Hoffleit	1931	Harvard	
DY	HV 5416	16 35 38 -61 23.5	Hoffleit	1931	Harvard	
DZ	HV 5417	16 36 53 -62 53.8	Hoffleit	1931	Harvard	
EE	HV 5418	16 37 8 -62 8.9	Hoffleit	1931	Harvard	
		TUCANA				
UW	HV 6318	0h 0m 57s -74° 40'.0	Hughes	1934	Harvard	
UX	HV 809	0 9 24 -73 10.4	Leavitt	1904	Harvard	*
UY	HV 3019	0 10 17 -60 46.8	Cannon	1907	Harvard	*
UZ	HV 6386	0 10 50 -59 26.1	Hughes	1934	Harvard	
VV	HV 6325	0 14 17 -74 35.4	Hughes	1934	Harvard	*
VW	HV 6327	0 15 49 -74 26.2	Hughes	1934	Harvard	*
VX	HV 6390	0 21 51 -59 46.1	Hughes	1934	Harvard	
VY	HV 6391	0 22 23 -61 21.8	Hughes	1934	Harvard	
VZ	HV 6334	0 30 4 -73 49.3	Hughes	1934	Harvard	*
WW	HV 6396	0 40 47 -60 18.6	Hughes	1934	Harvard	
WX	49.1932	0 59 2 -62 18.0	Luyten	1932	Harvard	*
WY	HV 6311	23 45 44 -74 49.7	Hughes	1934	Harvard	
WZ	HV 6406	1 11 12 -59 51.8	Hughes	1934	Harvard	
XX	HV 6407	1 13 24 -61 32.3	Hughes	1934	Harvard	*
XY	HV 6309	23 44 12 -74 45.2	Hughes	1934	Harvard	
XZ	HV 6321	0 7 44 -74 38.4	Hughes	1934	Harvard	*
		URSA MAJOR				
TX	317.1931	10h 39m 28s +46° 5'.5	Rügemer	1931	Bamberg	* * *

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
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CM	Ecl	2424656.752	d 0.92553	m 13.0	m 13.7	pg	HB 884
CN	Cl			13.9	14.7	pg	HB 884
CO	Cl			15.3	16.2	pg	HB 884
CP	L	2423914	214	14.3	16.3	pg	HB 884
CQ	Cl			13.7	15.2	pg	HB 884
CR	L	2424320	292	13.0	16.0:	pg	HB 884
CS	Ecl?			14.1	14.8	pg	HB 884
CT	Ecl	2424320.663	1.1464	14.8	16.0	pg	HB 884
CU	Cl	2424285.763	0.4499	13.0	15.0	pg	HB 884
CV	Cl	2424650.657	0.51027	13.4	14.1	pg	HB 884
CW	Cl			13.9	14.7	pg	HB 884
CX	L	2423950	292	14.0	[16.5	pg	HB 884
CY	Ecl	2424710.659	2.1058	15.3	16.3	pg	HB 884
CZ				13.2	14.3	pg	HB 884
DD	L	2424320	157.6	14.6	[16.3	pg	HB 884
DE	L	2423914	291	14.6	16.5	pg	HB 884
DF	Sh			15.0	15.5	pg	HB 884
DG	L	2423914	270	14.2	[16.3	pg	HB 884
DH	Cl?			15.8	16.3	pg	HB 884
DI	Cl?			13.6	14.4	pg	HB 884
DK	Sh			14.5	15.1	pg	HB 884
DL	L	2424320	206	15.0	[16.5	pg	HB 884
DM	Sh			13.1	13.6	pg	HB 884
DN	Sh			14.1	15.0	pg	HB 884, corr. 887
DO	L	2424710	233.5	13.4	[16.4	pg	HB 884
DP	Cl			13.4	14.8	pg	HB 884
DQ	Cl			15.0	15.9	pg	HB 884
DR	L	2424650	200	15.0	[16.5	pg	HB 884, corr. 887
DS	Cl	2424655.755	0.51345	13.2	14.5	pg	HB 884
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DU	L	2423900	241	13.8	16.4	pg	HB 884
DV	SR	2424273	34.3	13.2	16.1	pg	HB 884
DW	Cl			13.4	14.9	pg	HB 884
DX	Ecl	2424320.695	1.341	12.9	13.2	pg	HB 884
DY	L	2424300	260:	15.0	[16.5	pg	HB 884
DZ	Ecl	2424650.657	4.943	15.2	16.3	pg	HB 884
EE	Sh			13.0	14.0	pg	HB 884
							T U C A N A
UW	Cl	2425479.55	d 0.46619	m 14.9	m 15.8	pg	HA 90.171
UX	Cl	2425525.40	0.50909	13.8	15.2	pg	HC 79; AN 3963; HA 60.90
UY	L	2425480	105.2	12.2	13.8	pg	HC 134; AN 4230
UZ	Cl	2424765.80	0.62536	13.3	14.4	pg	HA 90.173
VV	Irr			13.1	14.3	pg	HA 90.171
VW	Irr			15.4	[16.5	pg	HA 90.171
VX	Cl	2424760.75	0.51104	14.7	15.9	pg	HA 90.173
VY	Cl	2424763.70	0.66517	14.5	16.1	pg	HA 90.173
VZ	N			11.4	[16.3	pg	HB 898; HA 90.171
WW	Cl	2424761.75	0.73396	14.6	15.6	pg	HA 90.173
WX	Cl	2424761.70	0.83750	14.3	15.6	pg	AN 5903; Minn Publ 2.116
WY	Cl	2425451.55	0.56030	13.2	14.9	pg	HA 90.171
WZ	Cl	2424762.75	0.45676	13.3	14.5	pg	HA 90.173
XX	L:	2425810	268	13.8	15.1	pg	HA 90.173
XY	Cl	2425481.50	0.55891	13.5	14.9	pg	HA 90.171
XZ	Irr			11.2	12.2	pg	HA 90.171
							U R S A M A J O R
TX	Alg	2416426.784	d 3.0633175	m 6.83	m 9.32	pg	BZ 13.23; AN 5793

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
		URSA MAJOR							
TY	SVS 366	12h 4m 0s +56° 35'.3	Beljawsky	1933	Simeis	*	*	*	
TZ	SVS 363	12 4 35 +58 56.5	Beljawsky	1933	Simeis	*	*	*	
UU	SVS 357	12 15 16 +57 27.2	Beljawsky	1933	Simeis	*	*	*	
UV	SVS 358	12 55 0 +53 18.5	Beljawsky	1933	Simeis	*	*	*	
UW	SVS 361	13 7 55 +56 54.7	Beljawsky	1933	Simeis	*	*	*	
UX	SVS 365	13 32 42 +52 25.4	Beljawsky	1933	Simeis	*	*	*	*
UY	SVS 359	13 40 53 +55 43.4	Axenoff	1933	Simeis	*	*	*	
UZ	216.1937	8 7 36 +73 24.2	Baker	1937	Edinburgh	*	*	*	
		URSA MINOR							
Y	SVS 600	17h 25m 57s +83° 56'.5	Beljawsky	1934	Simeis	*	*	*	*
		VELA							
AH	..	8h 8m 51s -46° 20'.7	van Gent	1931	Johannesburg	*		*	*
AI	..	8 10 47 -44 16.3	Hertzsprung	1931	Johannesburg	*			*
AK	..	8 2 46 -46 25.7	Zagar	1935	Johannesburg		*	*	*
AL	..	8 28 0 -47 19.7	Hertzsprung	1934	Johannesburg	*			*
AM	..	8 32 31 -47 22.1	Zagar	1935	Johannesburg		*	*	*
AN	..	8 1 51 -43 22.5	van Hoof	1936	Johannesburg		*	*	*
AO	..	8 8 55 -48 26.6	Hertzsprung	1936	Johannesburg	*		*	
AP	..	8 36 17 -43 30.5	Hertzsprung	1936	Johannesburg	*		*	*
AQ	..	10 25 34 -54 32.4	van Gent	1936	Johannesburg	*	*	*	*
AR	..	10 36 7 -56 13.2	Kruytbosch	1936	Johannesburg	*	*	*	*
AS	698.1935	8 24 37 -38 38.4	O'Leary	1935	Riverview	*		*	
AT	..	8 1 27 -44 44.0	Hertzsprung	1931	Johannesburg	*	*	*	*
AU	..	8 3 25 -44 38.4	Hertzsprung	1931	Johannesburg	*	*	*	*
AV	..	8 3 59 -47 21.4	Hertzsprung	1931	Johannesburg		*	*	*
AW	..	8 4 55 -44 3.4	Hertzsprung	1931	Johannesburg	*	*	*	*
AX	..	8 7 46 -47 24.1	Hertzsprung	1937	Johannesburg	*		*	*
AY	..	8 16 56 -43 34.0	Hertzsprung	1937	Johannesburg	*		*	*
AZ	..	8 19 31 -44 6.6	Hertzsprung	1931	Johannesburg	*	*	*	*
BB	..	8 33 35 -47 1.9	de Kort	1937	Johannesburg	*	*		
BC	..	8 39 54 -44 17.4	Hertzsprung	1931	Johannesburg	*		*	*
BD	..	8 41 11 -42 43.6	Hertzsprung	1931	Johannesburg	*	*	*	*
BE	..	8 47 3 -48 36.9	Hertzsprung	1931	Johannesburg	*	*	*	*
BF	191.1937	8 52 38 -39 35.8	O'Leary	1937	Riverview	*		*	
BG	HV 3194	9 5 3 -51 2.0	Cannon	1909	Harvard	*		*	*
		VIRGO							
AM	76.1929	13h 18m 12s -16° 9'.2	Hoffmeister	1929	Sonneberg	*	*	*	*
AN	79.1929	14 12 34 -14 14.7	Hoffmeister	1929	Sonneberg	*		*	
AO	397.1929	14 16 50 + 4 21.8	Ceraski	1929	Moscow	*		*	
AP	330.1931	14 23 33 + 7 44.6	Beljawsky	1931	Simeis	*			
AQ	81.1929	14 41 11 - 6 51.5	Hoffmeister	1929	Sonneberg	*	*	*	
AR	331.1931	14 49 36 + 3 5.8	Beljawsky	1931	Simeis	*			
AS	289.1930	12 47 34 - 9 42.4	Hoffmeister	1930	Sonneberg	*	*		
AT	290.1930	12 50 0 - 4 54.8	Hoffmeister	1930	Sonneberg	*	*	*	*
AU	292.1930	13 19 35 - 6 27.1	Hoffmeister	1930	Sonneberg	*	*	*	*
AV	14.1935	13 15 10 + 9 43.5	Hoffmeister	1935	Sonneberg	*	*	*	*
AW	16.1935	13 22 28 + 3 33.6	Hoffmeister	1935	Sonneberg	*	*	*	*
AX	17.1935	13 22 40 + 4 23.6	Hoffmeister	1935	Sonneberg	*		*	*
AY	22.1935	13 46 41 - 3 10.9	Hoffmeister	1935	Sonneberg	*			
AZ	18.1935	13 38 24 + 5 7.1	Hoffmeister	1935	Sonneberg	*	*		
BB	23.1935	13 46 40 + 6 55.0	Hoffmeister	1935	Sonneberg	*		*	*
BC	15.1935	13 17 19 + 6 24.4	Hoffmeister	1935	Sonneberg	*	*		

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
			URSA MAJOR				
TY	W	2427360.375	0.3011424	11.69	12.33	v	NNVS 42
TZ	Irr			9.2	10.0	v	NNVS 42
UU	Cl	2427572.434	0.644810	12.97	14.00	v	NNVS 42
UV	SR	2427305	57.85	10.2	11.5	v	NNVS 42
UW	Irr			11.0	11.9	v	NNVS 42
UX	Alg	2427341.22233	0.19667138	12.66	13.70	v	NNVS 42
UY	W	2427586.466	0.376016	12.87	13.05	v	NNVS 42
UZ	Irr			13	15.5	pg	MN 98.67; AN 6353
			URSA MINOR				
Y	L	2427892	293	11.2	[14.0	v	NNVS 46; Pulk Circ 13.27
			VELA				
AH	Cep	2426145.708	4.227172	6.1	6.6	pg	BAN 224
AI	SR			6.5	8.0	pg	BAN 224
AK	Alg	2426315.387	0.6409118	13.0	13.4	pg	BAN 270
AL	Alg	2417522.2	96.106	8.8	10.1	pg	BAN 258
AM	Cep	2426199.15	7.52296	12.9	13.9	pg	BAN 270
AN	Cl	2426359.346	0.3894846	12.7	14.0	pg	BAN 275; 289
AO	Alg	2421227.71	1.5846102	8.7	9.2	pg	BAN 275; 299
AP	Cep	2428254.08	3.127	10.81	11.76	pg	BAN 275; 278
AQ	Alg	2424358.145	1.042499	11.5	12.0	pg	BAN 275
AR	Alg	2424193.324	3.21275	12.0	12.6	pg	BAN 275
AS	Alg	2427473.28	1.55793	8.64	9.20	pg	AN 6168; Riverview Publ 1.6
AT	Alg	2426362.27	11.7971	12.1	12.6	pg	BAN 299
AU	Alg	2426166.420	5.67380	11.9	13.6	pg	BAN 299
AV	Alg	2426172.278	3.8805	11.9	14.6	pg	BAN 299
AW	Alg	2426176.139	1.99246	11.5	12.2	pg	BAN 299
AX	Cep	2416500.454	2.59254	8.54	9.06	pg	BAN 299
AY	β	2418655.749	1.617653	9.1	9.8	pg	BAN 299
AZ	Alg	2426175.344	0.77577765	12.7	13.6	pg	BAN 299
BB	U G			13.3	15.2	pg	BAN 300
BC	W	2426174.647	1.1735824	11.8	12.3	pg	BAN 299
BD	Alg	2426168.860	13.2290	12.0	13.0	pg	BAN 299
BE	β	2426173.489	0.6946717	12.4	13.0	pg	BAN 299
BF	Alg	2428253.07	0.70402	11.38	11.92	pg	AN 6320; Riverview Publ 1.52
BG	Cep	2428099.08	6.9235	8.25	9.00	pg	HC 151; AN 4363
			VIRGO				
AM	Cl	2426859.274	0.6150922	10.9	11.9	pg	AN 5655
AN	Irr			8.8	9.7	pg	AN 5655
AO	L	2425720	255	9.0	11.5	pg	AN 5657
AP	L			12.4	[14.0	pg	AN 5800
AQ	L	2423534	292.0	11.0	15.8	pg	AN 5655
AR	Cl			12.2	13.3	pg	AN 5800
AS	Cl	2426782.587	0.5534144	10.8	11.8	v	AN 5748
AT	Cl	2426831.367	0.525812	10.46	11.80	v	AN 5748
AU	Cl	2420243.18	0.34323	11.1	11.7	v	AN 5748
AV	Cl	2427871.611	0.656913	11.35	12.05	pg	AN 6118
AW	W	2427871.495	0.353998	11.35	12.00	pg	AN 6118
AX	β	2427570.444	0.7025277	10.32	10.94	v	AN 6118
AY	L	2427521	100.6	9.5	11	pg	AN 6118
AZ	W	2427926.589	0.349666	11.0	11.8	pg	AN 6118
BB	Cl	2425707.480	0.471093	10.68	11.40	pg	AN 6118
BC	Cl	2428305.313	0.56459	10.5	12.0	pg	AN 6118

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Name	Provisional Designation	Position 1900	Discoverer	Year	Place	Remarks R	C	S	L
			VIRGO						
BD	SVS 775	13h 21m 17s -15° 35.3'	Soloviev	1936	Stalinabad	*			
BE	..	14 24 51 - 5 17.8	Baade	1936	Mount Wilson	*	*	*	
BF	19.1935	13 42 44 - 0 6.0	Hoffmeister	1935	Sonneberg	*			
BG	32.1935	14 42 5 + 5 18.3	Hoffmeister	1935	Sonneberg	*			
			VULPECULA						
AL	251.1929	18h 55m 8s +24° 25.6'	Hoffmeister	1929	Sonneberg	*	*	*	
AM	255.1929	18 56 49 +25 8.5	Hoffmeister	1929	Sonneberg		*	*	
AN	259.1929	18 58 12 +25 10.2	Hoffmeister	1929	Sonneberg	*	*	*	
AO	260.1929	18 58 40 +24 24.8	Hoffmeister	1929	Sonneberg	*	*	*	
AP	265.1929	19 1 55 +24 51.3	Hoffmeister	1929	Sonneberg	*	*	*	
AQ	266.1929	19 2 53 +24 8.1	Hoffmeister	1929	Sonneberg	*	*	*	
AR	299.1929	19 31 38 +26 20.1	Hoffmeister	1929	Sonneberg		*	*	
AS	316.1929	19 43 42 +27 39.5	Hoffmeister	1929	Sonneberg		*	*	
AT	311.1930	19 49 42 +23 18.2	Hoffmeister	1930	Sonneberg	*			*
AU	Ross 81	20 13 56 +27 25.4	Ross	1926	Yerkes	*			
AV	Ross 82	20 21 45 +25 54.7	Ross	1926	Yerkes	*			
AW	314.1930	20 24 42 +24 28.1	Hoffmeister	1930	Sonneberg	*	*	*	*
AX	315.1930	20 28 51 +24 31.6	Hoffmeister	1930	Sonneberg	*	*		
AY	85.1931	20 31 14 +22 16.8	Hoffmeister	1931	Sonneberg	*	*		
AZ	SVS 301	20 26 37 +25 18.9	Beljawsky	1932	Simeis	*	*		*
BB	SVS 303	20 28 7 +27 19.3	Beljawsky	1932	Simeis	*	*	*	
BC	SVS 302	20 34 54 +25 18.5	Beljawsky	1932	Simeis	*	*	*	
BD	133.1928	20 33 2 +26 8.4	Graff	1928	Bergedorf	*	*	*	
BE	SVS 475	20 21 22 +27 2.5	Beljawsky	1933	Simeis	*	*	*	
BF	389.1933	20 39 46 +20 28.3	Morgenroth	1933	Sonneberg	*	*		
BG	HV 6117	21 14 55 +21 38.1	Hughes	1934	Harvard				
BH	HV 6119	21 16 41 +23 56.2	Hughes	1934	Harvard				
BI	HV 6120	21 18 25 +26 36.3	Hughes	1934	Harvard				
BK	HV 6124	21 21 1 +27 25.6	Hughes	1934	Harvard				
BL	HV 6127	21 23 22 +26 8.2	Hughes	1934	Harvard				
BM	HV 6131	21 26 18 +24 40.5	Hughes	1934	Harvard				
BN	114.1935	19 23 48 +24 8.7	Hoffmeister	1935	Sonneberg	*	*	*	*
BO	125.1935	19 52 13 +23 38.6	Hoffmeister	1935	Sonneberg	*	*	*	*
BP	134.1935	20 21 7 +20 42.4	Hoffmeister	1935	Sonneberg	*			
BQ	728.1933	20 27 0 +24 38.4	Morgenroth	1933	Sonneberg	*	*		
BR	366.1936	19 42 19 +22 38.5	Hoffmeister	1936	Sonneberg	*			
BS	120.1935	19 33 8 +21 42.2	Hoffmeister	1935	Sonneberg	*	*	*	
BT	SVS 471	20 18 54 +27 9.3	Beljawsky	1933	Simeis		*	*	
BU	SVS 484	20 42 5 +27 53.8	Beljawsky	1933	Simeis	*	*	*	
BV	733.1933	20 52 59 +28 57.0	Morgenroth	1933	Sonneberg	*	*	*	*

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Name	Type	Epoch	Period	Max.	Min.	Kind of obs.	References
				V I R G O			
BD	Alg	2428343.239	2.5485 d	9.90 m	11.28 m	v	NNVS 52; BZ 18.84; AN 6251; Tadjik Circ 17; 38
BE	Cl	2428285.716	0.587356	17.80	18.86	pg	ASP 48.274
BF	β	2428313.306	0.639496	9.50	10.07	v	AN 6118
BG	Irr?			9.5	10.5	pg	AN 6118
				V U L P E C U L A			
AL	L	2425507	270 d	13.0 m	[17.0 m	pg	AN 5655; Sonn Mitt 17
AM				14.5	[16	pg	AN 5655; Sonn Mitt 17
AN	L	2425313	263	13.4	16.5:	pg	AN 5655; Sonn Mitt 17
AO	L	2425320	456	13.8	[16.0	pg	AN 5655; Sonn Mitt 17
AP	Irr			14.4	15.5	pg	AN 5655; Sonn Mitt 17
AQ	L	2425447	191	13.0	17.0	pg	AN 5655; Sonn Mitt 17
AR				13.5	15	pg	AN 5655; Sonn Mitt 17
AS	Sh			13	15	pg	AN 5655; Sonn Mitt 17
AT	Alg	2426559.427	3.98039	9.09	9.76	v	AN 5748
AU				10	11	pg	AJ 856
AV	Irr			11.2	12.2	pg	AJ 856
AW	Alg	2426510.4725	0.80645	10.77	11.86	v	AN 5748
AX	Alg	2426593.398	2.02482	11.5	13	pg	AN 5748
AY	Alg	2426594.51	2.4105	11	12.9	v	AN 5791
AZ	Alg	2426953.340	1.122628	11.85	12.28	v	NNVS 37
BB	Alg			12.5	13.2	pg	NNVS 37
BC	Sh			13.2	14.7	pg	NNVS 37
BD	L	2425758	430	9.3	12.7	v	BZ 10.18
BE	Alg	2425742.508	1.55205	9.46	10.89	v	Inf Circ 1.5; NNVS 44
BF	L	2427688	143	11	14.5	pg	AN 5981
BG	W	2424767.70	0.403252	12.9	13.7	pg	HA 90.167
BH	L	2424800	409.0	12.6	[16.5	pg	HA 90.167
BI	W	2424759.70	0.251828	13.6	14.5	pg	HA 90.167
BK	W	2424767.70	0.45347	12.8	13.5	pg	HA 90.167
BL	L	2424800	414	12.7	[16.5	pg	HA 90.167
BM	W	2424769.66	0.377052	14.0	14.8	pg	HA 90.167
BN	Cl	2414815.759	0.5941295	11.0	12.2	pg	AN 6118
BO	Alg	2428065.651	1.94529	9.5	11	pg	AN 6118
BP	Cl		0.53	9.5	10	pg	AN 6118
BQ	Alg	2427976.565	4.4271	12.0	13.0	v	AN 6002
BR	Cep	2415264.62	5.19714	11.8	12.5	pg	AN 6195
BS	β	2415556.710	0.47597198	11.00	11.46	pg	AN 6118
BT	Alg		3.988?	12.1	13.2	pg	NNVS 44
BU	Alg	2428756.410	0.568988	10.6	11.4	pg	NNVS 44
BV	SR	2428228	102	10.5	11.5	v	AN 6002

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REMARKS

AN And = 9 Andromedae = BD +40°5043 ($6^m.3$) = AG Bo 17639 ($6^m.3$) = Boss 5996 = PD 13706 ($6^m.15$) = HR 8864 ($5^m.90$) = HD 219815 (A3). The star was found to be a spectroscopic binary by Adams [ASP 28.80]. The spectroscopic orbit was determined by Young who found a period of $3^d.2195$ [DO 4.83]. The photometric elements and orbit were derived by Huffer. $m_2 = 5^m.99$. 198 photoelectric obs. [Washb Publ 15.117]. New photometric orbit by Nekrassova [Engelh Bull 7]. Absolute dimensions by Colacevich [SAI 11.215]. +

AO And. Confirmed by Zessewitsch [AN 5911]. Elements by Brun. 55 obs. [BAF 4.162]. 1 obs. by Beljawsky [NNVS 51]. 2 max. by Zinner [AN 6102; 6388].

AP And. 254 obs. by Lassovszky [AN 5877]. Photometric orbit by Kopal [AN 5910] and Nekrassova [Engelh Bull 7].

AQ And = BD +34°56 ($8^m.1$) = AG Lei 133 ($7^m.0$) = KU 165 ($7^m.87$) = Prg Bab IV 153 ($7^m.94$) = HD 2342 (Nb). Observed by Mündler [AN 4469], Prager [VBB 4.5], Kanamori [Kyoto Bull 247], AS Jap [Mem Astr Soc Jap 5-6]. Elements by Rügemer. Photographic amplitude $11^m.8$ - $13^m.7$ [AN 6017; 6020]. Proper motion by Wilson [AJ 1105; ApJ 90.354]. Radial velocity by Sanford [ApJ 82. 206].

AR And. Rediscovered by Morgenroth [AN 5981]. 1 obs. by Whitney [Penn Publ 5,3.17].

AT And. Elements by Lange [Tadjik Circ 11].

AU And = BD +39°401 ($9^m.4$). Observed by Lause [BZ 20.25].

ζ And = BD +23°106 ($3^m.9$) = NFK 27 = Boss 164 = PD 419 ($4^m.34$) = HR 215 ($4^m.30$) = HD 4502 (K0). As Stebbins found, the ellipsoidal figure of the bodies would account for most of the light-change which takes place in the spectroscopic period. There is evidence that alternate maxima and minima are unequal, and that the variable may be slightly irregular in light [Washb Publ 15.29]. Ellipticity by Luyten [MN 98.464]. Mount Wilson spectrum G7 [ApJ 53.35]. The variability of the radial velocity was discovered by Hobe [Lick Bull 199]. Spectroscopic orbits by J.B. Cannon [DO 2.141] and Spencer Jones [Cape Ann 10, 8.35]. +

RT Ant. [Following of double.]

RY Ant. Indications of period around 65 days.

RZ Ant. Some irregularities.

SV Ant = CoD -27°6929 (10^m).

SW Ant. $m_2 = 14^m.6$.

SY Ant. Red.

TU Ant. Red.

Z Aps. The star is probably similar to Z Camelopardalis and RX Andromedae. In 1925 there is an indication of a period of $19^d.5$ [HB 883].

RT Aps. The period changed between 2418500 and 2420000. Elements before the change: Max. = 2415880 + $242^d \cdot E$ [HB 883].

RU Aps. Whether the star is really a long period variable is open to doubt [HB 883].

TW Aps. [Preceding of triple.]

TX Aps. The period changed between 2417800 and 2418400. Before the latter date the elements are: Max. = 2414375 + $241^d \cdot E$; after that date: Max. = 2423990 + $238^d \cdot E$ [HB 883].

UV Aps. [Companion at $15^m.6$.]

UW Aps. [Close companion.]

AE Aqr. Zinner derived the elements, which, however, do not fit all the earlier observations. The star, therefore, may belong to the U Geminorum type [AN 6358]. Spectrum Md according to Wachmann [AN 5805].

AI Aqr. First elements by Hughes [HB 883]. Improved elements by Zessewitsch [Leningrad Bull 4.11; 22; Tadjik Circ 2].

AM Aqr. W Ursae majoris type. The form of the light curve changes. The star showed one form of light curve in 1926 and 1929, and a different form in 1927 and 1928; the difference seems to be real [HB 883].

AO Aqr = 52.1913 = HV 4974 = CoD -23°17297 (10^m). Rediscovered by Hughes [HB 883]. Confirmed by Zessewitsch [AN 5838]. Spectrum F? according to Cannon [Mscr.].

AP Aqr = CoD -23°17306 (10^m).

AU Aqr = CoD -25°15882 (10^m).

BC Aqr. Some irregularity.

BH Aqr. Corrected position by Kanda [Tokyo Bull 463]. First elements by Hughes [HB 883]. Improved elements by Zessewitsch [Tadjik Circ 5; Tadjik Eph 1935-36, p. 17; 27].

BI Aqr = CoD -23°17544 (10^m). $m_2 = 13^m.1$.

BK Aqr = BD -5°5482 ($9^m.4$). Florja finds the light variation irregular, perhaps a period of 70^d is indicated [NNVS 37].

BL Aqr = BD -2°5485 ($9^m.7$) = AG Strb 7411 ($9^m.7$). Confirmed by Zessewitsch [AN 5911]. Elements derived by Florja. The light curve is smooth, the minima are pointed [NNVS 37].

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BM Aqr = BD -16°6021 ($9^m.4$) = HD 209879 (Ma). Confirmed by Florja [NNVS 37].

BN Aqr. [BD -8°5877 ($9^m.6$) 1!8 s.] Hoffmeister suspected U Geminorum type [AN 5791]. But Zessewitsch established Cluster type from his own and Parenago's observations and derived the elements [Leningrad Eph 1932, p. 23; 28; Leningrad Bull 3.10; 19; 4.28; Tadjik Eph 1935-36, p. 17; 36]. 51 obs. by Parenago [NNVS 41].

BO Aqr. Zessewitsch derived the elements from his own and Parenago's observations [Leningrad Eph 1932, p.23; 28; Leningrad Bull 3.10; 19; 4.28]. 44 obs. by Parenago [NNVS 41]. 60 obs. by Lange [Tadjik Ann 1,2.13].

BP Aqr. Position by Wolf [AN 5833]. Wolf observed an increase of about 1^m in one hour [AN 5833].

BQ Aqr. Elements by Zessewitsch [AN 5911; Inf Circ 1.7] which are confirmed by 4 min. observed by Rügemer [AN 6106].

BR Aqr = BD -10°6147 (10^m). Zessewitsch derived provisional elements from his own and Parenago's observations: Max. = 2426595.407 + $0^d.4816 \cdot E$ [Leningrad Eph 1932, p. 23; 28]. Several trials to improve the elements led him to the supposition of a variable period. His last elements are: Max. = 2426595.4079 + $0^d.4818834 \cdot E + 0^d.445 \cdot 10^{-9} \cdot E^2$ [Inf Circ 1.7; Leningrad Bull 3.10; 19; 20; 4.11; 22; Tadjik Eph 1935-36, p. 12; 17; 27; Tadjik Circ 5]. 37 obs. 5 max. by Parenago [NNVS 41]. 121 obs. 2 max. by Lange [Leningrad Bull 4.28; Tadjik Eph 1935-36, p. 36; Tadjik Ann 1,2.14]. 1 max. by Soloviev [Tadjik Circ 24]. Improved elements by Soloviev [Tadjik Circ 41].

BS Aqr = BD -8°6194 ($9^m.0$) = AG Ott 8408 ($9^m.2$) = HD 223338 (F2). Hoffmeister supposed the light variation to be irregular [AN 5791]. Florja found W Ursae majoris type [NNVS 37]. Andrews announced Cluster type and derived the elements. The maximum is very flat, nearly constant for $0^P.2$, the minimum rather pointed [HB 902]. Radial velocity by Joy [ASP 50.303].

BT Aqr. Rediscovered by Hoffmeister [AN 5919]. Elements by Kanda [BZ 16.27] and Zessewitsch [Leningrad Bull 4.11; 22; Tadjik Circ 2]. Improved elements by Kanda [BZ 17.34].

BU Aqr = HV 6214. Position by Neujmin [NNVS 38;Pulk Circ 4].37 obs. by Neujmin [NNVS 38]. Rediscovered by Hughes who also derived the elements [HA 90.169].

BV Aqr = 50.1913 = BD -22°5820 ($9^m.7$) = CoD -22° 15713 ($9^m.7$) = CPD -22°8131 ($9^m.8$). Rediscovered by Hoffmeister [AN 5919].

BW Aqr = 135.1908 = BD -16°6074 ($9^m.8$). Confirmed by Zinner [ErgAN 4, 3, Nr. 366]. Rediscovered by Hoffmeister [AN 5919]. 1 min. by Rügemer [AN 6020]. Elements by Jensch. $m_2 = 10^m.20$ at the phase $0^P.514$. $D_1 = D_2 = 0^d.18$, $d_1 = d_2 = 0^d.03$. Photographic range $9^m.77 - 10^m.33$. 10 min. [AN 6119]. Improved period by Zinner [AN 6388]. Spectrum F7 [Potsdam Publ 92.176].

BX Aqr. Zessewitsch supposed a period of $3^d.2524$ [Inf Circ 1.7]. The true period was found by Gurlev [Tadjik Circ 40] and improved elements were derived by Ahnert [BZ 21.137]. +

BY Aqr = HV 6213. Rediscovered by Hughes who also derived the elements [HA 90.169].

CD Aqr = BD -4°5421 ($9^m.9$). Elements by Pagaczewski. $D = 0^d.38$, $d = 0^d.14$ [BZ 16.3] and Rügemer [AN 6106]. Improved period by Zessewitsch [Tadjik Circ 1; SAC 13.54].

CE Aqr. Confirmed by Parenago who announced Cluster type [NNVS 41].

CI Aqr. Possibly the period should be doubled. The minimum magnitude fluctuates, being $15^m.7$ in 1926-1928, $15^m.0$ in 1928-1929, and $14^m.3$ in 1930-1931.

CK Aqr. [Preceding of pair.]

CN Aqr. Very red.

CP Aqr. Elements by Seliwanov. 10 max. [Tashk Circ 33; Tadjik Circ 2; 18; NNVS 51].

CR Aqr. $m_2 = 14^m.2$.

CS Aqr. [Following of pair.]

CV Aqr. Hughes has observed two maxima, 2426505 at $12^m.4$, and 2426205 at $15^m.3$ [HA 90.174].

CW Aqr = BD -17°6490 ($9^m.5$). Elements by Jensch. Photographic amplitude $10^m.7 - 11^m.0$. $A_2 = 0^m.1$. 14 min. [AN 6119].

CX Aqr. First elements by Jensch. The maximum following the primary minimum is $0^m.04$ fainter than the preceding, $m_2 = 10^m.25$ occurs at the phase $0^P.518$, and indicates, therefore, an eccentricity of the system which is strengthened by the different duration of m_1 and m_2, $0^d.09$ and $0^d.07$, respectively [AN 6021]. Improved elements by Soloviev [Tadjik Circ 18]. +

CY Aqr = BD +0°4900 ($9^m.3$). The variable is especially interesting because it has the shortest period of all known Cluster type stars and generally of all the variables known hitherto. It was discovered by Hoffmeister on Berlin-Babelsberg patrol plates 1934 July 29. A few days later Jensch in Sonneberg observed the star visually throughout the night in intervals of 15 to 20 minutes, but these observations were not sufficient to reveal the character of light change; they showed indeed only a scatter of about $0^m.35$ around a mean brightness. The next night, Jensch arranged the observations in intervals from 1 to 4 minutes and immediately found the star to be of the Cluster type with the unprecedentedly short period of less than 1.5 hours. From a large number of observations, continued through several years, he confirmed the first period and was able to improve the

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elements more and more, the latest being those given in the Table. The shape of the light curve was found by him as of subclass a, the constant part in the minimum lasting half the period. Other observers, however, found the form of the light curve of subclass b, without constant light in minimum, as did Jensch at the beginning of his observations. It may be that the light curve is really variable, but in spite of the large number of observations it is also possible that the influence of systematic errors has falsified its form at the critical points. A difference between visual and photographic epoch does not seem to be present; in any case it is very small. The suggestion of Seliwanow that the period is variable, corresponding to the elements: Max. = 2427685.1456 + $0^d.061029 \cdot E + 0^d.0028 \sin(1^\circ.0286 \cdot E + 162^\circ)$ was not confirmed. Jensch found that it was constant throughout the time from 2426159 to 2428865. It must be mentioned, however, that a long series of observations by Martinoff from 2427687-8508 needs the somewhat larger value of the period of $0^d.061038496$. The question of the variability of the period, therefore, still remains unsettled. The photographic epochs of earlier time are of relatively small value, because the long exposure plates are not appropriate for stars of such rapid light variation. The magnitudes for the maximum and minimum are determined as follows:

Visual	Max.	Min.
Jensch	$10^m.0$	$10^m.7$
Lause	9.95	10.85
Seliwanow	9.93	10.80
Parenago	10.18	10.97
Martinoff	10.44	11.19
Photographic		
Jensch	10.3	11.1
Balázs and Detre	10.27	11.25
Wachmann	10.50	11.35

For M-m the light curves yield rather discordant values, from $0^d.011$ to $0^d.024$, the former value being connected with the subclass a curves. The spectrum seems to be variable from B8 to A3, but the variation is uncertain, because good spectra cannot be obtained in the short time available for the single phases.

References: Hoffmeister, Discovery [BZ 16.45; AN 6051]. - Confirmation of Jensch's elements [BZ 16.45]. - General report [Sterne 15.21]. - Jensch, First elements [BZ 16.45; AN 6051]. - Improved elements [BZ 16.49; 17.57; AN 6070; 6153; 6330]. - 2 max. [BZ 17.34; Sterne 15.176]. - General report [Sterne 15. 270]. - Lause, 12 max. [BZ 17.51; AN 6072]. - Dawson, 1 max. [AN 6082]. - Balázs and Detre, 7 max. Elements [BZ 16.72]. - 183 obs. 9 max. Elements [AN 6124]. - Seliwanow, Elements [Tadjik Circ 2]. - 676 obs. 33 max. [NNVS 51]. - Gaposchkin, Light curves in blue and red light [AAS 8.113]. - Elements [HB 898]. - Parenago, 112 obs. Light curve [NNVS 49]. - Rabkin, 254 obs. 1 max. [NNVS 49]. - Lange, Elements [Tadjik Circ 5; Tadjik Eph 1935-36, p.17; 27]. - 2 max. [Tadjik Eph 1935-36, p.36]. - AOLU, 3127 obs. [Tadjik Eph 1935-36, p.12]. - Wachmann, 180 obs. 6 max. Elements [AN 6103]. - Müller, 1 max. [BZ 17.55]. - Kulikovsky, 200 obs. Elements [NNVS 52; Abast Bull 1.47]. - Schneller, 74 obs. Light curve [AN 6193]. - Graff, 4 max. [AN 6249]. - Miczaika, 57 obs. 2 max. [AN 6341]. - Martinoff, 597 obs. Elements [NNVS 55; Engelh Publ 20.48; 124; 168]. - Plaut and others, 40 obs. [BAN 331]. +

CZ Aqr = BD -16°6270 ($9^m.7$). The elements were derived by Kanda from observations made by Kanamori. $m_2 = 9^m.8$. 10 min. [BZ 16.27; Mem Astr Soc Jap 3.67; 78]. 1 min. [BZ 17.32; 34]. The elements are confirmed by Gurjew who determined three minima from observations made by Zessewitsch [Tadjik Circ 1; SAC 13.60]. Improved elements by Soloviev. 3 min. [Tadjik Circ 27]. Spectrum A5 [Potsdam Publ 92.180]. +

DD Aqr. Elements by Soloviev [BZ 18.80; Tadjik Circ 22].

DG Aqr. Perhaps irregular.

DI Aqr. Red.

DL Aqr. Elements by Esch [AN 6137; 6330].

DM Aqr. Elements by Soloviev. 4 max. [Tadjik Circ 27].

DN Aqr = CoD -24°17594 ($9^m.6$). Elements by Gurjev [Tadjik Circ 22].

HK Aql = BD +0°3995 ($8^m.7$) = AG Nic 4654 ($8^m.5$) = HD 172829 (K5). Perhaps long period.

HL Aql. Harwood derived two sets of elements: I. Max. = 2424712.399 + $0^d.4230 \cdot E$, valid for 2424700 to 5066, II. Max. = 2426153.640 + $0^m.4285 \cdot E$, valid for 2426150 to 6208 [HB 880]. Both of the periods are, however, doubtful [by letter].

HM Aql. Harwood derived the elements: Max. = 2424350.275 + $0^d.33500 \cdot E$ [HB 880]. Improved period, $0^d.344997$, by Dodson. Both periods, however, are doubtful [by letter].

HN Aql. Type of light variation determined by Harwood [HB 880].

HO Aql. Period determined by Harwood [HB 880].

HP Aql. Elements derived by Harwood [HB 880;893].

HQ Aql. Position by Lohnert [AN 4108]. Elements by Harwood [HB 880; 893];

HR Aql. Harwood at first suspected Cluster type variability with a period of $0^d.28$[HB 880], but later she found that the star is probably not variable [HB 908].

HS Aql. [HT Aquilae 3^s f.] Elements derived by Harwood [HB 880].

HT Aql. [HS Aquilae 3^s p.]

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HU Aql. [2** nf.]

HV Aql. Period derived by Harwood [HB 880].

HW Aql. [A0 Aquilae 0.9 n HX Aquilae 1.4 n.]

HX Aql. [Northernmost of 5** A0 Aquilae 0.5 s HW Aquilae 1.4 s.] The variability could not be confirmed by Harwood [HB 908].

HY Aql = HV 4951. [South following of a pair.] Rediscovered by Mohr on Harvard plates [HB 880]. Beljawsky derived the provisional elements: Min. = 2424740.30 + 8d.361·E [AN 5838]. Prager supposed the period to be about half of this, and gave the elements: Min. = 2423260.3 + 4d.011·E [AN 5838]. The elements given in the Table were derived by Harwood and confirmed Beljawsky's elements. There is no indication of a secondary minimum [HB 893].

II Aql. Elements derived by Harwood [HB 880].

IK Aql. [North following of a pair.] Elements derived by Harwood [HB 893].

IM Aql. Harwood first derived the elements: Max. = 2424045.144 + 0d.264190·E, M-m = 0p.58, subclass a [HB 880]. Later she gave the improved elements given in the Table. The star belongs to subclass c [HB 893].

IN Aql. [Southern of a pair.]

IO Aql. [IP Aquilae 2s f 0.1 s *15m np.]

IP Aql. [IO Aquilae 2s p 0.1 n.]

IQ Aql. Elements derived by Harwood [HB 880].

IR Aql. Position by Lohnert [AN 4108]. Elements derived by Harwood. The magnitude at maximum is usually 14m.0, but 1928 August it was 12m.8 [HB 880].

IS Aql. Probably RV Tauri type. The period was derived by Mohr [PA 38.21] and the improved elements were given by Harwood [HB 880].

IT Aql. [*12m sf.] Elements derived by Harwood [HB 893].

IU Aql. Harwood supposed the variable to be a Cepheid with 22d period [HB 880]. Later she suggested a period of less than one day [by letter].

IW Aql. Elements derived by Harwood [HB 880].

IY Aql. [Preceding a triangle of much brighter stars.]

IZ Aql. [*11m p.]

KK Aql = BD + 14°4043 (9m.4). Rediscovered by Plaut, who at first supposed long period type with 110d period [AN 5793]. Later he found that there is no contradiction with RV Tauri type of 90d period. 38 obs. [AN 5846]. Confirmed by Zessewitsch [AN 5838]. Zinner found the light variation not very regular [AN 6411]. The radial velocity, as determined by Joy, is 260 km/sec [ASP 51.216].

KL Aql. First elements by Nabokov [AN 5771]. Confirmed by Esch [BZ 13.40]. Improved elements by Parenago [NNVS 57-58]. Radial velocity by Joy [ApJ 86.403; 428; 89.357].

KN Aql = BD + 1°4304 (9m.2) = AG Alb 7142 (8m.9). Elements by Prager. Light curve of the form α_4 [AN 5830]. Zinner found that the star later presented larger irregularities [AN 6411].

KO Aql = BD +10°3655 (8m.2) = AG Lpz I 6809 (8m.5) = HD 173847 (A0). Zessewitsch supposed a period of 2d.9 [AN 5846]. This value was confirmed and improved by Plaut [AN 5846], Szczyrbak [SAC 10.44], Piegza [SAC 12.42], and Pagaczewski [AAc 2.52]. The last elements were derived by Lause. 24 min. D = 0d.38, d = 0d.04. There is some indication for a secondary minimum at 8m.23 [AN 6067; 6362]. +

KP Aql = BD +15°3667 (9m.1) = AG Berl A 7176 (9m.1). Confirmed visually by Zessewitsch [AN 5911]. 3 min. by Kukarkin [NNVS 35]. Elements by Plaut [AN 5846]. Improved period by Rügemer [AN 5921].

KQ Aql. Elements by Esch [AN 5911]. Observations by Parenago [NNVS 27-28].

KU Aql. Elements by Hoffleit [HB 887].

KX Aql. Hoffleit found the star visible only on 1927 September 28 and 1930 October 22. The day before, 1930 October 21, it was [15m.5 [HB 887]. In 1935 Koyama found the star invisible, [14m [AN 6207; Kyoto Bull 310]. +

LM Aql. Position by Wolf [AN 4005]. Confirmed by Hoffmeister [AN 5700; 5791]. Elements by Morgenroth [KVBB 19.13; 28].

LN Aql. RV Tauri type.

LR Aql = Ross 258. Position by Wolf [AN 3925]. Hoffleit supposes short period [HB 887]. Rediscovered by Ross [AJ 897].

LS Aql. [V 343 Aquilae 4s f 2.7 n.] 115 obs. by Olivier and others. Visual range 11m.45-12m.33 [Penn Publ 5,3.52].

LT Aql. Confirmed by Zessewitsch [AN 5911]. 5 min. by Morgenroth [KVBB 19.13; 28]. D = 6h.7.

LU Aql = BD +15°3891 (9m.2) = Kü 8702 (8m.94). Hoffleit's observations in 1930 indicate a period from 50 to 60 days. Spectrum M1 [HB 887]. Zinner finds rapid light variations within one day [AN 6358].

LW Aql. Position by Wolf [AN 4018]. Esch found the star always invisible [ErgAN 8.A75]. Elements by Hoffleit [HB 887].

LZ Aql. The period is still problematical.

MN Aql. Red.

MS Aql = AG Lpz I 7395 (9m.2). Not in BD. Position

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by Esch [BZ 18.37]. 8 obs. by Buser [AN 6001; 6036].

MU Aql. Confirmed by Zessewitsch on Moscow plates [AN 5911]. Elements by Hoffleit [HB 887]. Improved elements by Beyer. 36 obs. 3 max. Form of the light curve β_1 [BZ 17.75; AN 6199-6200].

MW Aql. Position by Wolf [AN 3925]. Elements by Hoffleit [HB 887].

NN Aql. Subclass b.

NO Aql = BD +4°4212 ($9^m.5$). Confirmed by Kukarkin [NNVS 35]. Dombrovsky supposed Cluster type with a period of $0^d.5033$ [Leningrad Bull 4.11; 23; Tadjik Circ 2]. Really the star is a semi-regular variable, perhaps of the RV Tauri or AF Cygni type, with a period of 70^d - 90^d, as first shown by Kanda, period 70^d, 36 obs. 1 max. 1 min. [AN 6088; Tokyo Astr Obs Rep 2. 223; Mem Astr Soc Jap 5-6], later by Jacchia, period 82^d [BZ 18.42], and Soloviev. 4 max. 2 min. 234 obs. [Tadjik Circ 23; 34; NNVS 53].

NP Aql. Position by Wolf [AN 4018]. Elements by Hoffleit [HB 887].

NV Aql. The star is red [HB 887]. Zinner found the star bright only once out of 17 obs.[AN 6358].

NW Aql. Position by Wolf [AN 3925]. Hoffleit supposes long period [HB 887].

NZ Aql. Position by Wolf [AN 4018]. Elements by Hoffleit [HB 887].

OO Aql = BD +8°4224 ($9^m.1$) = AG Lpz II 9562 ($9^m.0$) = HD 187183 (G5). Elements by Florja. 500 obs. 26 min. [Tashk Circ 5; NNVS 40], Miczaika [AN 6256], Bodokia. 244 obs. [Abast Bull 1.19]. 1 min. 208 obs. by Soloviev [Tadjik Circ 3; NNVS 49]. 13 min. by Lause [AN 6149]. Improved elements by Martinoff. 952 obs. 72 min. [NNVS 40; 55; Engelh Bull 1.4; Engelh Publ 20]. The light curve seems to be somewhat variable. Most of the observers find the second maximum a little brighter than the first, Bodokia even by $0^m.15$, while Lause finds the first maximum brighter. In the mean light curve of Martinoff whose observations cover the longest interval, no appreciable difference in the height of the maxima is indicated. The depth of both minima is surprisingly great and also their relative range differs for the light curves of different observers. According to Martinoff m_2 = $10^m.05$. The photometric orbit was computed by Florja and Slonim [NNVS 46].

OS Aql. Generally at minimum, two maxima have been observed.

PP Aql. Position by Wolf [AN 4056]. Hoffleit supposes short period [HB 887].

PS Aql. Position by Wolf [AN 4018]. Elements by Hoffleit [HB 887].

PV Aql. 26 obs. by Zinner confirm the irregular light variation [AN 6358]. 23 obs. by AS Jap [Mem Astr Soc Jap 5-6].

PW Aql. Position by Neujmin [NNVS 38; Pulk Circ 4].

PX Aql. [BD -9°5302 ($8^m.1$) 16^s p.] Perhaps RV Tauri type. The range in individual cycles is usually one magnitude or less. Cycles of 140-160 days were found; also some of 70-80 days. Perhaps the variation is irregular. Spectrum M? [HB 890].

PY Aql. Hoffmeister's elements do not fit Zessewitsch's observations on Simeis plates [Inf Circ 1.8].

PZ Aql. Radial velocity by Joy [ApJ 86.367; 428; 89.360].

QQ Aql. Position by Lohnert [AN 4108]. Elements by Harwood [HB 893].

QR Aql. Rediscovered by Morgenroth [AN 5974].

QS Aql = BD +13°4098 ($5^m.8$) = AG Lpz I 7396 ($6^m.4$) = PD 10906 ($6^m.08$) = HR 7486 ($5^m.84$) = HD 185936 (B3). J.S. Plaskett discovered that the star is a spectroscopic binary. Millman, although he used numerous observations of the radial velocity at Victoria, could not find a period [DAO 4.100]. Guthnick and Prager established variability by photoelectric observations at Berlin-Babelsberg, but also could not find a period [VJS 65.87]. Guthnick published and discussed these observations and the Babelsberg radial velocity measures [Berl Ber 1930, p.497]. Then, Plaskett found the approximate period of $2^d.5$ [PA 39.88]. Thereupon, Guthnick derived the elements from the photoelectric observations [AN 5775]. The Victoria radial velocities were published in full by Plaskett and Pearce [DAO 5.64], and Hill derived the spectroscopic orbit, supposing a period of $2^d.4968$ [DAO 6.11]. This period does not fit either the photoelectric or the radial velocity observations of Babelsberg, while Guthnick's elements represent the Victoria measures satisfactorily. The light curve seems to indicate β Lyrae type. The principal minimum is of $0^m.11$ depth, the secondary of $0^m.04$ depth. The scatter of the observations in both the photoelectric and the spectroscopic curves is considerable, and probably not due exclusively to the observational errors [Berl Ber 1934, p. 521]. +

QT Aql. Elements by Esch.4 max. [AN 6017; 6137]. Improved elements by Beyer. 36 obs. 4 max. Form of the light curve β_2? [BZ 17.75; AN 6199-6200].

QU Aql. Position by Wolf [AN 4018]. Rediscovered by Morgenroth [AN 6002].

QV Aql. Position by Götz [AN 3925]. Rediscovered by Morgenroth [AN 6002]. +

QW Aql. [GZ Aquilae 29^s p $3'.8$ s *$14^m.0$ $1'.3$ p *$14^m.3$ $1'.3$ f *$14^m.6$ $1'.3$ sf.] Position by Reinmuth [AN 5709]. Rediscovered by Hoffmeister [AN 6002].

QX Aql. Rediscovered by Hoffmeister [AN 6002].

QY Aql. Rediscovered by Morgenroth [AN 6021]. Elements by Zessewitsch [Tadjik Circ 1; SAC 12.42]. Confirmed by Hassler and Kitchens [AJ 1074].

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New epoch by Kordylewski [SAC 16.56].

QZ Aql. Rediscovered by Morgenroth [AN 5981]. Elements by van Schewick. 4 max. [AN 6309]. +

V 335 Aql. Rediscovered by Hoffmeister [AN 6002]. Zinner derived the elements: Max. = 2426649 + $349^d.E$ [AN 6358]. These elements, however, are not confirmed by Hassler and McKeehan who find irregular light variation. They observed in December, 1938 that the star rose from [14^m to 11^m (vis.) in 3 days, and then faded away more gradually in 22 days [AJ 1110].

V 336 Aql = BD -0°3627 ($9^m.4$). First elements by Beyer [BZ 17.40; AN 6184]. Improved elements by Harwood [AN 6179] and Seliwanow [Tashk Circ 33; 49; Tadjik Circ 2; NNVS 49]. The elements given in the Table were derived by Harwood [HB 908]. Radial velocity by Joy [ApJ 86.367; 428; 89.357].

V 337 Aql = BD -2°4840 ($8^m.5$) = AG Strb 6452 ($8^m.5$) = HD 177284 (B3). Confirmed by Harwood [AN 6179]. Elements by Seliwanov [Tashk Circ 33; 50; SAC 13.54; 60; Tadjik Circ 3]. Improved elements by Wright and Dugan. D_1 = $0^d.696$, d_1 = $0^d.066$. m_2 = $9^m.30$, at the phase $0^p.505$, shows no constancy of light. The period is not variable. Photometric orbit, based on darkened solution [AJ 1043; 1071; Princ Contr 19.52]. +

V 338 Aql. [*11^m 2^s p 0'.6 s.] The elements given by Kukarkin: Max. = 2422138 + $229^d.4$·E, range $10^m.5$ -$17^m.1$ [NNVS 46], defaced by a misprint, do not refer to this star 79.1933 Aql, but probably to 76.1933 Cnc. 73 obs. by Olivier and others indicate that the nf component of the double is the variable, and not the sp component as given in the chart of the discoverer [Penn Publ 5,3.48].

V 339 Aql. Elements by Esch [AN 6179].

V 340 Aql. Position by Wolf [AN 4079]. 7 obs. 3 min. by Wolf [AN 4079]. Parenago found eclipsing type. 4 min. [NNVS 45].

V 341 Aql. Elements by Seliwanov. 10 max. [Tashk Circ 33; Tadjik Circ 2; NNVS 51].

V 342 Aql = BD +9°4048 ($9^m.0$) = AG Lpz II 9142 ($8^m.7$) = ADS 12259 = HD 180639 (A). [BD +9°4047 ($8^m.5$) = HD 180660 (K0) $0^s.3$ p 18" s.] Lange found the approximate period of $3^d.3$ [Tadjik Circ 11]. The elements, given in the Table, were derived by Piegza. D = 13^h, d = $3^h.3$ [AAc 2.125; SAC 13.56; 14.56]. On the photographic plates the images of the variable and of the nearby star cannot be separated. The range of the combined light is therefore less than one magnitude [AN 6118]. +

V 343 Aql = BD +12°4003 ($9^m.5$). [LS Aquilae 4^s p 2'.7 s.] The elements were derived by Olivier from his own, Woods', and Watson's observations [PA 44.257]. New elements by Beyer. D = $8^h.0$. 134 obs. [AN 6295]. 9 obs. by Olivier and others [Penn Publ 5,3.52]. Improved elements by Taylor from 364 obs. by Olivier and others, and 675 obs. of his own. 42 min. m_2 = $10^m.92$. Photometric orbit [Penn Publ 6,1.10]. 104 obs. by Alexander. 3 min. Photometric orbit. Photographic amplitude $10^m.67$-$12^m.32$, m_2 = $10^m.72$ [Penn Publ 6,2.21]. Absolute dimensions and masses by Taylor and Alexander [Penn Publ 6,3.26].

V 344 Aql. Elements by Beyer. Light curve of the form α [BZ 17.75; AN 6199].

V 345 Aql. Rediscovered by Morgenroth [AN 6094]. Elements by Beyer. Light curve of the form β_1? [BZ 17.40; 75; AN 6199].

V 346 Aql = 621.1935 = BD +9°4425 ($9^m.0$) = AG Lpz II 9863 ($8^m.6$) = HD 191515 (A0). Elements by Kwiek. D = $5^h.6$ [BZ 17.55].

V 347 Aql. Observed by Morgenroth [KVBB 19.13; 28].

V 348 Aql. Observed by Morgenroth [KVBB 19.13; 28].

V 349 Aql. Observed by Morgenroth [KVBB 19.13; 28].

V 350 Aql. Elements by Morgenroth [KVBB 19.13; 28].

V 351 Aql. Elements by Morgenroth. 4 max. The light curve is very regular [KVBB 19.13; 28].

V 352 Aql. Morgenroth finds R Coronae Borealis type [KVBB 19.13; 29].

V 353 Aql. Observed by Morgenroth [KVBB 19.13; 29].

V 354 Aql. Observed by Morgenroth [KVBB 19.13; 29].

V 355 Aql. Elements by Morgenroth [KVBB 19.13; 29].

V 356 Aql. [dpl 16^m6^s sf.] Position by Van Biesbroeck [HAC 389], Bohrmann [AN 6237], Boyer [UAI Circ 632], Dick [AN 6237], Inaba and Takakura [Kyoto Bull 324], Koebcke [UAI Circ 617], Koslov [Tashk Circ 60], Krumpholz [UAI Circ 621], Lacchini [UAI Circ 621; AN 6285], Luther [AN 6237; 6281], Nakano and Hasimoto [Tokyo Bull 259-263, corr.269-270], Nicolini [JO 20.184]. Schmitt [UAI Circ 621], Stein and Zirwes [AN 6237], Vesselovsky [JO 20.184]. The Nova was discovered by Tamm on a photographic plate taken on September 18, 1936, two months later than the first outburst of the star had occurred [BZ 18.66; AN 6236; UAI Circ 616; HAC 388; JBAA 46.398]. The behavior of the light variation before the discovery could be followed from observations on photographic plates taken at Sonneberg. The outburst occurred between July 17 and 19, the Nova was seen the first time on this latter date at $9^m.7$, and increased slowly to its first maximum August 2, $7^m.3$ (vis.). With rapid oscillations of about 2 magnitudes, it reached 4 more maxima of about the same brightness on August 25, September 11, October 1 and 31, and a fainter

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one November 20. Minima were observed August 13, September 23, October 8, and November 7. In the years 1937 and 1938 the brightness decreased rather uniformly, it passed the 11^m at the end of May 1937, the 12^m at the beginning of November 1937, the 13^m in June 1938, and on October 20 it was [$13^m.4$ (vis). Finsen found very soon after the discovery, September 24, that the Nova was a double star, position angle and distance being 140° and 0".17 respectively. The relative position of both components remained unchanged until October 17, the last date of observation. The south preceding component seemed to be fainter by about $0^m.2$-$0^m.3$. These results were fully confirmed by van den Bos [UAI Circ 618; AN 6237; 6247]. A description of the light curve has been given by McLaughlin [PA 47.481; 539].

Observations are published by AAVSO [HA 104; 107], Ahnert [AN 6256; 6258], Beyer [AN 6237; 6240; 6430; BZ 19.18; 29; 63], Bielicki [Wars Circ 18], Van Biesbroeck [HAC 392], Bohlin [AN 6245], Böhme [AN 6244], Campa [SAI 10.156], Classen [AN 6237], Eriksson [AN 6293], Fedtke [AN 6237; 6244; 6249; 6258; 6269; BZ 18.80], Gadomski [UAI Circ 624; Wars Circ 17], Himpel [AN 6237; 6244; 6249], Hoffmeister [UAI Circ 621; AN 6237], Hoffmeister and Morgenroth [UAI Circ 618; AN 6237], Jacchia [UAI Circ 625; 626; AN 6244; Coelum 7.12], Kadavý [AN 6244; 6256], Kaiser [AN 6237; 6249], Kanda [Tokyo Bull 292; 344], Kanda and Kaho [Tokyo Bull 191-196; 221-222; 288-291], Kępiński [Wars Polyt 17], Kierulff [AN 6293], Kollross [AN 6286], Kozlov [UAI Circ 617], Krumpholz [AN 6244], Kvíčala [AN 6244], Lacchini [UAI Circ 617; 621; 627; AN 6237; 6249], Larsson [NAT 20.100], Lause [AN 6249; 6258; 6327], Liebermann [AN 6244], Lipiński [UAI Circ 622; 624], Loreta [AN 6237; 6244; 6249; 6256; 6258; BZ 18.76; 84; 88; 19.19], Luther [AN 6237; 6244; 6281; BZ 18.72], Nielsen [AN 6293; 270.291; NAT 20.100], Olivier [HAC 392; Penn Publ 5.3.49], Östergaard [AN 6293], Overhage and Zwicky [ASP 48.321], de Roy [UAI Circ 621; 624; 627; 630], Schmitt [UAI Circ 621], Selivanow [UAI Circ 617], Steavenson [MN 97.656; 98.673], Vrátník [AN 6244; 6256], Wilk [AN 6244; 6249].

Observations of the spectrum and remarks thereon by Beyer [AN 6237], Bohlin [AN 6245], Cherrington [ASP 52.121], Hinderer [AN 6237], Lindblad [UAI Circ 616], Lindblad and Öhman [UAI Circ 624], McLaughlin [AAS 9.12; ApJ 91.369], Petrie [HAC 389], Popper [ASP 49.128], Stein and Zirwes [AN 6237], Strohmeier [Sterne 16.236; AN 6237], Struve [HAC 389], Wachmann [AN 6237], Wyse [ASP 48.305].

V 357 Aql. Elements by Morgenroth [KVBB 19.13; 29]. Rediscovered by Luyten [AN 6263; Minn Publ 2.113].

V 358 Aql. Approximate elements by Morgenroth [KVBB 19.13; 29].

V 359 Aql. Observed by Morgenroth [KVBB 19.13; 29].

V 360 Aql. [*$15^m.3$ close.] Elements by Morgenroth [KVBB 19.13; 29].

V 361 Aql. Elements by Morgenroth. 4 max. [KVBB 19.13; 29].

V 362 Aql. Observed by Morgenroth. Short or irregular light change. Perhaps reddish [KVBB 19.14; 29].

V 363 Aql. Elements by Morgenroth. 3 max. [KVBB 19.14; 29].

V 364 Aql. Elements by Morgenroth [KVBB 19.14; 29].

V 365 Aql. Elements by Morgenroth [KVBB 19.14; 29].

V 366 Aql. Elements by Morgenroth [KVBB 19.14; 29].

V 367 Aql. Morgenroth supposes similarity with RW Aurigae. Maxima occur suddenly [KVBB 19.14; 29].

V 368 Aql. Position by Boyer [UAI Circ 632], Inaba and Takakura [Kyoto Bull 324], Koslov [BZ 18.78; Tashk Circ 62], Krumpholz [AN 6243], Lacchini [UAI Circ 627; AN 6243; 6285]. The Nova was discovered 1936 October 20 by Tamm on a photographic plate taken on October 7 [UAI Circ 625; HAC 396; AN 6241]. It seems to have been rediscovered independently by Kozloff [BZ 18.78]. As could be stated from plates taken at other places, the outburst occurred very suddenly. September 21 the Nova was [$12^m.4$, the next day already $6^m.5$, the well pointed maximum, $5^m.4$ was reached September 25.1 and was followed by a rapid decrease. So, at the time of discovery, the Nova had lost 3 magnitudes. The light curve shows rapid secondary waves whose amplitudes increase considerably as the mean brightness decreases. The latter dropped to the 10^m at the end of 1936 December, 12^m end of 1937 April, 13^m at the beginning of July and 14^m in November. No observations of 1938 are available. A description of the light curve has been given by McLaughlin [PA 47.539].

Observations are published by Ahnert [AN 6256; 6258], Beyer [BZ 19.18; 29; 63; AN 6243; 6250; 6430], Bielicki [UAI Circ 627; 629; Sterne 16.285; Wars Circ 18], Campbell [HAC 396], Fedtke [BZ 18.80; AN 6243; 6249; 6258], Gadomski [UAI Circ 627; 629; Wars Circ 17], Gaposchkin [HAC 396; UAI Circ 629], Hinderer [AN 6243; Sterne 16.277], Hoffmeister [AN 6243], Jacchia [UAI Circ 627; 633; BZ 18.88; Coelum 7.12], Kaho [UAI Circ 633; Tokyo Bull 191-196; 221-222; 288-291], Kaiser [AN 6249], Kanda [UAI Circ 633; Tokyo Bull 191-196; 221-222; 288-291], Krumpholz [AN 6243], Kwiek [UAI Circ 628], Lacchini [UAI Circ 626; 627; AN 6243, corr. 6246], Lause [AN 6249; 6258; 6327], Lipiński [UAI Circ 627; 629], Loreta [BZ 18.76; AN 6243; 6249; 6258], de Roy [UAI Circ 627], Rybka [UAI Circ 628], Samaha [UAI Circ 631], Satô [UAI Circ 633], Steavenson [MN 97.656; 98.673], Svenonius [UAI Circ 628], Wallenquist and Johansson [UAI Circ 626], Yamasaki [UAI Circ 633].

Observations of the spectrum and remarks

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thereon by Krumpholz [AN 6243], Lindblad [UAI Circ 625; AN 6243], McKellar [HAC 397], McLaughlin [AAS 9.12; ApJ 91.369], Vorontsov-Velyaminov [RAJ 14,2.113], Wyse [ASP 48.306].+

V 369 Aql. Elements by Morgenroth [KVBB 19.14; 30].

V 370 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 371 Aql. Approximate elements by Morgenroth [KVBB 19.14; 30].

V 372 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 373 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 374 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 375 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 376 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 377 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 378 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 379 Aql. Elements by Morgenroth [KVBB 19.14; 30].

V 380 Aql. The elements, derived by Morgenroth, fit the observations only between 2425410 and 6250. Later on the light variation seems to be irregular [KVBB 19.14; 30].

V 381 Aql. RV Tauri type. The elements, derived by Morgenroth, fit the observations tolerably well. The shape of the light curve is variable [KVBB 19.14; 30].

V 382 Aql. Elements by Morgenroth [KVBB 19.14; 30].

V 383 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 384 Aql. Elements by Morgenroth [KVBB 19.14; 30].

V 385 Aql. Observed by Morgenroth [KVBB 19.14; 30].

V 386 Aql. Elements by Morgenroth. A period of 320 days is also possible. Only 4 positive observations [KVBB 19.14; 30].

V 387 Aql. Elements by Morgenroth [KVBB 19.14; 30].

V 388 Aql. Elements by Morgenroth [KVBB 19.14; 31].

V 389 Aql. Observed by Morgenroth [KVBB 19.14; 31].

V 390 Aql. Provisional elements by Morgenroth [KVBB 19.14; 31].

V 391 Aql. Observed by Morgenroth [KVBB 19.14; 31].

V 392 Aql. Observed by Morgenroth [KVBB 19.14; 31].

V 393 Aql. Elements by Morgenroth. 2 max. [KVBB 19.14; 31].

V 394 Aql. Observed by Morgenroth [KVBB 19.14; 31].

V 395 Aql. Observed by Morgenroth. The light variation is rather abnormal [KVBB 19.14; 31].

V 396 Aql. Elements by Morgenroth [KVBB 19.14; 31].

V 397 Aql. Elements by Morgenroth. 3 max. [KVBB 19.14; 31].

V 398 Aql. Provisional elements by Morgenroth. The half period is also possible [KVBB 19.14; 31].

V 399 Aql. Elements by Morgenroth [KVBB 19.14; 31].

V 400 Aql. Observed by Morgenroth. All of the positive observations belong to one maximum 2425815. The variable, therefore, may be a Nova [KVBB 19.14; 31].

V 401 Aql. Elements by Morgenroth [KVBB 19.14; 32].

V 402 Aql. Observed by Morgenroth [KVBB 19.14; 32].

V 403 Aql. Elements by Morgenroth [KVBB 19.14; 32].

V 404 Aql. Elements by Morgenroth [KVBB 19.14; 32].

V 405 Aql. Elements by Morgenroth [KVBB 19.15; 33].

V 406 Aql. Confirmed by Morgenroth [AN 6195]. 7 min. [KVBB 19.15; 32].

V 407 Aql. 7 min. by Morgenroth [KVBB 19.15; 32]. Elements by Hoffmeister [BZ 21.136].

V 408 Aql. 4 min. by Morgenroth [KVBB 19.15; 32].

V 409 Aql. 6 min. by Morgenroth [KVBB 19.15; 32]. Elements by Hoffmeister [BZ 21.136].

V 410 Aql. 4 min. by Morgenroth [KVBB 19.15; 32].

V 411 Aql. 2 max. by Morgenroth [KVBB 19.15; 32].

V 412 Aql. 1 max. by Morgenroth [KVBB 19.15; 32].

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V 413 Aql. 3 min. by Morgenroth [KVBB 19.15; 32].

V 414 Aql. 3 min. by Morgenroth [KVBB 19.15; 33].

V 415 Aql. Elements by Piegza. D = 12^h [AAc 3. 92].

V 416 Aql. 5 min. by Morgenroth [KVBB 19.15; 33].

V 417 Aql = BD +5°4202 ($9^m.4$) = AG Lpz II 9371 ($10^m.0$). Elements by Solovjev [Tadjik Circ 22].

V 418 Aql. 4 min. by Morgenroth [KVBB 19.15; 33].

V 419 Aql. 3 obs. by Scott Barrett [AN 6059]. Morgenroth considers a short period possible [KVBB 19.15; 33].

V 420 Aql. 5 min. by Morgenroth [KVBB 19.15; 33].

V 421 Aql. Elements by van Schewick. 2 max. [AN 6309; 271.136].

V 422 Aql. Elements by van Schewick [AN 6309]. +

V 424 Aql. Elements by van Schewick [AN 6309]. +

V 425 Aql. Elements by Esch [AN 6330].

V 426 Aql. Elements by van Schewick [AN 6309]. +

V 427 Aql. Elements by van Schewick [AN 6309]. +

V 428 Aql. Elements by van Schewick [AN 6309]. +

V 429 Aql. Bigay calls the light variation semi-regular, with cycles between 66 and 113 days. The visual magnitude of the maxima and minima varies from $10^m.7$ to $11^m.4$ and from $11^m.1$ to $11^m.9$ respectively [BAF 5.123; 128]. According to van Schewick, the brightness varies irregularly between $11^m.5$ and $13^m.0$ (pg.) [AN 6309]. Esch calls the light curve very humpy. The length of the cycles is between 35 and 150 days [AN 6330].

V 430 Aql. Elements by van Schewick [AN 6309]. +

V 431 Aql. Elements by van Schewick [AN 6309]. +

V 432 Aql. Elements by van Schewick [AN 6309]. +

V 433 Aql = BD +14°4135 ($9^m.4$). Bigay calls the light variation semi-regular with cycles between 59 and 90 days. The visual magnitude of the maxima and minima varies from $9^m.9$ to $10^m.7$ and from $10^m.4$ to $11^m.0$ respectively [BAF 5.123; 128]. According to van Schewick, the brightness varies irregularly between $11^m.5$ and $13^m.5$ (pg.) [AN 6309]. Esch finds a mean period of 76^d, but not all predicted maxima have occurred. He calls the variable "not very regular" [AN 6330].

V 434 Aql. [*15^m p.]. Elements by van Schewick. 1 max. [AN 6309; 271.137].

V 435 Aql. Elements by van Schewick [AN 6309]. +

V 436 Aql. Elements by van Schewick [AN 6309]. +

V 437 Aql. Elements by van Schewick [AN 6309]. +

V 438 Aql. Elements by van Schewick [AN 6309]. +

V 439 Aql. Elements by van Schewick [AN 6309]. +

V 440 Aql. Elements by van Schewick [AN 6309]. +

V 441 Aql. Elements by Esch [AN 6330]. Rediscovered by Beljawsky [Pulk Circ 15, corr. 19; NNVS 47].

V 442 Aql = 231.1935. Confirmed by Morgenroth [AN 6153]. Elements by van Schewick [AN 6309]. +

V 443 Aql. Elements by van Schewick [AN 6309]. +

V 444 Aql. [Var (?) 723.1933 24^s p $0^p.2$ n.] Elements by van Schewick [AN 6309; 271.138].

V 445 Aql. Beljawsky supposes eclipsing type [NNVS 47]. Confirmed by van Schewick who finds 5 min. [AN 6309; 271.138].

δ Aql = BD +5°4225 ($5^m.0$) = Boss 5018 = AG Lpz II 9427 ($5^m.0$-$7^m.2$) = AG Alb 6780 ($5^m.3$) = PD 10878 ($5^m.30$) = HR 7474 ($5^m.17$) = ADS 12737 = HD 185507 (B3). The elements and the light curve were derived by Wylie from 97 photoelectric observations of Stebbins and Wylie. m_2 = $5^m.08$. There is continuous light variation between the minima, due to ellipticity. Photometric orbit [ApJ 56.232; JBAA 36.65]. Variability of the radial velocity was found at Mount Wilson, and spectroscopic orbits were derived by Jordan [Allegh Publ 3.189] and by Luyten, Struve, and Morgan, who also computed the absolute dimensions [Yerkes Publ 7.275]. Both components are visible in the spectrum. The half range of the primary reaches the high value of 164 km/sec. Ellipticity by Luyten [MN 98.464]. Mass and luminosity by McLaughlin [AJ 889] and Petrie [Mich Publ 5.173]. Temperature by Gaposchkin [AN 5939]. +

VW Ara. Elements derived by Kruytbosch [BAN 267].

VZ Ara. Hoffleit derived the first elements: Max. = 2424320.595 + $0^d.38443 \cdot E$, subclass a [HB 884]. The star was rediscovered by Oosterhoff [BAN 236], and the elements in the Table were derived by Kruytbosch. Hoffleit's period P' and Kruytbosch's period P are connected by the relation: 1/P = 1/P' - 1 [BAN 236].

XX Ara. Elements derived by Kruytbosch. The light curve shows a pronounced secondary minimum at the phase $0^p.501$ [BAN 267].

YY Ara. Hoffleit measured the star on over two hundred plates. It is generally at maximum, and may be either an eclipsing variable or irregular. At maximum the star has a spectrum of class K [HB 884].

YZ Ara. Hoffleit found that the period is changing. From the six maxima given by her [HB 884], the following instantaneous elements were derived:

I. Ep. 0 - 32: Max. = 2413760 + $258^d.E$,
II. Ep. 32 - 44: Max. = 2422030 + 280 $\cdot E$.

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ZZ Ara. Elements derived by Kruytbosch. D = $0^{P}.23$ [BAN 236].

AA Ara. Elements derived by Kruytbosch. D = $0^{P}.35$. $m_2 = 13^{m}.3$ at the phase $0^{P}.481$ [BAN 236].

AC Ara. Elements derived by Kruytbosch. D = $0^{P}.23$ [BAN 236].

AD Ara. Elements derived by Kruytbosch [BAN 236].

AE Ara. Cannon finds the spectrum faint. Bright Hγ and Hδ lines have narrow dark edges toward the violet, thus resembling the spectra of Novae. 300 observations by Boyd show somewhat sudden rises in brightness [HB 891].

AF Ara. m_2 at the phase $0^{P}.515$.

AG Ara = HV 8916. Rediscovered by Luyten [AN 6138; Minn Publ 2.99].

AH Ara. Elements derived by Oosterhoff and confirmed by Kruytbosch [BAN 267].

AM Ara = 513.1935. Rediscovered by Luyten [AN 6138; Minn Publ 2.117].

AN Ara. There appears to have been a shift of phase occurring between 2420050 and 2420250 which caused the maxima before the shift to fall 60 days earlier.

AO Ara = 515.1935. Rediscovered by Luyten [AN 6138; Minn Publ 2.117].

AR Ara. Observations on the ascending branch indicate a preliminary maximum.

AT Ara. There are observed 18 maxima between 1895 and 1930. The 1931 observations show more than usual irregularity. The duration of maximum is about 20^{d}, and a common difference between maxima is around 70^{d} [HA 90.185].

AW Ara. There was a change in period around 2417300. Elements before the change: Max. = 2412600 + 186^{d}·E [HA 90.185].

AX Ara = 521.1935. Rediscovered by Luyten [AN 6138; Minn Publ 2.117].

AZ Ara = 522.1935. Rediscovered by Luyten [AN 6138; Minn Publ 2.117].

BQ Ara. Large magnitude scattering at maximum which gives some indication that the variable may have a double maximum, the second occurring ten days after primary maximum with a secondary minimum at $12^{m}.8$ half way between [HA 90.186].

BR Ara = 532.1935. Rediscovered by Luyten [AN 6138; Minn Publ 2.117].

BX Ara. [* sp.]

BY Ara. [Middle star of three.]

CC Ara. [* $15^{m}.9$ sf.]

CD Ara = HV 6850. Elements derived by Boyd [HB 901].

CE Ara = HV 6853. Luyten's declination must be corrected by -8'. Rediscovered by Boyd who also derived the elements [HB 901].

CH Ara = HV 6704. Rediscovered by Swope who also derived the elements [HA 90.208].

CI Ara = HV 6705. Rediscovered by Swope who also derived the elements [HA 90.208].

CN Ara = HV 6709. Rediscovered by Swope who also derived the elements [HA 90.208].

CP Ara = HV 6711. Rediscovered by Swope who also derived the elements [HA 90.208].

CQ Ara = HV 6712. Rediscovered by Swope who also derived the elements [HA 90.208].

CT Ara = HV 6713. Rediscovered by Swope who also derived the elements. There was a change in period between 2420400 and 2425000. Elements before the change: Max. = 2413080 + $215:^{d}$·E [HA 90.208].

DI Ara = HV 6722. Rediscovered by Swope who also derived the elements [HA 90.208].

DL Ara. [North of $14^{m}.2$ star.]

DM Ara. Period of 176^{d} unlikely.

DN Ara. The star is possibly a Cepheid. It has a typical Cepheid light curve and has shown no irregularity during the 45 years it has been observed. Light curve [HA 90.211].

DP Ara = CoD -58°6754 ($9^{m}.6$) = CPD -58°7072 ($9^{m}.6$) = HD 156477 (Mb).

DQ Ara = HV 6730. Rediscovered by Swope who also derived the elements [HA 90.208].

DU Ara. Swope finds that for the time between 1889 and 1918 the observations are best satisfied by the elements: Max. = 2418145.560 + $1^{d}.63999$·E. On the assumption of a secular variation of the period, she derives the elements: Max._{E} = 2421667.030 + $1^{d}.64031$·E + $0^{d}.35 \cdot 10^{-7} \cdot E^2$ [HA 90.213].

DX Ara. [Star $13^{m}.0$ np.]

DZ Ara = HV 6738. Rediscovered by Swope who also derived the elements [HA 90.208].

EE Ara = HV 6739. Rediscovered by Swope who also derived the elements [HA 90.208].

EH Ara. [Star $14^{m}.2$ nf.]

EK Ara. [Close 15^{m} star.]

EL Ara. There was a change in period between 2420400 and 2425000. Elements before the change: Max. = 2415140 + 332^{d}·E [HA 90.211].

EM Ara = HV 6745. Rediscovered by Swope who also derived the elements [HA 90.208].

ER Ara. $m_2 = 14^{m}.2$.

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EV Ara. There was a change in period between 2420400 and 2425000. Elements before the change: Max. = 2413750 + 277^d.E [HA 90.211].

EW Ara = HV 6756. Rediscovered by Swope who also derived the elements [HA 90.209].

EZ Ara. There is a secular variation of the period.

FH Ara = 795.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

FI Ara = HV 6762. Rediscovered by Swope who also derived the elements [HA 90.209].

FQ Ara. Erroneously named. The star is identical with RV Arae.

FS Ara. [*$15^m.0$ n.]

FU Ara = CoD -58°6828 ($9^m.5$) = CPD -58°7173 ($9^m.8$).

FV Ara = HV 6770. Rediscovered by Swope [HA 90.209]. The star was not seen on 47 plates taken from 1889 to 1918 which showed stars fainter than $14^m.5$ or $16^m.0$. It was seen only three times, viz: 2426810 ($14^m.7$), 2427168 ($13^m.0$), 2427181 ($13^m.9$) [HA 90.211; PA 44.99].

GG Ara = HV 6778. Rediscovered by Swope who also derived the elements [HA 90.209].

GH Ara = HV 6780. Rediscovered by Swope who also derived the elements [HA 90.209].

GK Ara. There was a change in period between 2417800 and 2418400. Elements before the change: Max. = 2414050 + 237^d.E [HA 90.211].

GM Ara. $m_2 = 12^m.8$.

GT Ara = HV 6788. Rediscovered by Swope who also derived the elements [HA 90.209].

HH Ara = HV 6793. Rediscovered by Swope who also derived the elements [HA 90.209].

HM Ara = 810.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.103].

HQ Ara = 830.1935. Rediscovered by Luyten [AN 6176: Minn Publ 2.103].

HT Ara. [Several close stars.]

HU Ara = 839.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

HV Ara = 845.1935. This designation was assigned to the variable erroneously [AN 6303]. The star is identical with AN Pavonis.

IW Ara. [*15^m close.]

RU Ari = SVS 239. The elements by Parenago were confirmed by Prager. 31 obs. [AN 5830].

RV Ari. Lange supposed a light variation similar to that of AC Andromedae. His results were confirmed by Gurjew [Tadjik Circ 4]. But Detre showed that this is a regular Cluster type star of very short period, viz. $0^d.085$ [BZ 18.2; 8; 67]. Improved elements. 16 max. 318 obs. [AN 6270]. 10 max. by Gurjew [Tadjik Circ 38].

RW Ari. [*$12^m.6$ 2^s f $0^v.1$ s.] Elements by Detre. 293 obs. 8 max. The maximum is flat and nearly constant through $0^p.164$ [AN 6270].

RX Ari = BD +21°306 ($9^m.2$). Elements by Lause. D = $0^d.24$. 15 min. [BZ 20.25; AN 6375].

AP Aur. Elements by Stanley Williams [MN 91.698]. Confirmed by Kukarkin [AN 5838]. 2 min. by Zessewitsch [Inf Circ 1.7]. Improved elements by Nikonov and Bodokia. 118 obs. [Abast Bull 1.15].

AQ Aur. Rediscovered by Hoffmeister [AN 5748]. Confirmed by Esch. 1 max. [AN 5911]. He also derived the preliminary elements [by letter]. Böhme found the star always [$12^m.7$, even at the times of predicted maxima [AN 6262].

AR Aur = 17 Aurigae = BD +33°1002 ($6^m.5$) = AG Lei 1966 = PD 3198 ($6^m.41$) = HR 1728 ($6^m.11$) = HD 34364 (B9). Confirmed by Schneller [AN 5911]. Steensgaard and Pedersen assumed a period of $2^d.0672$ [BZ 14.71], but the spectroscopic and later photometric observations showed that this value must be doubled. Elements by Nassau. 308 obs. Photometric orbit [AJ 1051]. Improved elements by Fracastoro. Monochromatic light curves [SAI 11.241]. Spectroscopic orbit by Harper [JRASC 29.413; AAS 8.213; 279; 9.91; MN 96.326; 97.316; DAO 6.311] and Wyse [AAS 8.229; ASP 48.24, corr. 131]. Absolute dimensions by Colacevich [SAI 11.216]. +

AS Aur. Confirmed by Zessewitsch [AN 5911]. Observed by Jensch [KVBB 19.25; 81]. Parenago supposed Cluster type, but failed to find a period [NNVS 57-58]. Radial velocity by Joy [ApJ 86.403; 428; 89.358].

AT Aur. Elements by Parenago. 3 max. [AN 5967; NNVS 41].

AU Aur. Burwell and Merrill found this star to have a class N spectrum with emission lines [ASP 45.45]. The variability was discovered by Morgenroth [AN 6002]. According to Kukarkin, the period is > 400^d. Visual amplitude $10^m.4$-$13^m.5$ [NNVS 55].

AV Aur = SVS 221 = BD +38°1227 ($9^m.2$). β Lyrae type according to Parenago [NNVS 41]. Observed by Koyama [Kyoto Bull 222]. Lause doubts the variability [AN 6293].

AX Aur. [BD +31°1087 ($9^m.3$) 10^s f $0^v.9$ s.] Rediscovered by Shajn [Pulk Circ 7; NNVS 40]. Observed by Jensch. 4 min. [KVBB 19.25; 81].

AY Aur. Rediscovered by Morgenroth [AN 6002].

AZ Aur. Mayall discovered the star on a red-sensitive objective-prism plate. Attention was first attracted by the bright Hα line and the practical absence of the violet end of the

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spectrum which he estimated as Se. The variability was confirmed on Harvard plates with a period of 417^d. The photographic range is from 12^m to 17^m at least; the color index 5 magnitudes [Mt Wils Rep 1930-31, p. 203; ASP 45.45]. Merrill, Sanford, and Burwell classified the spectrum later as Ne [ASP 45.307]. Rediscovered by Morgenroth [AN 5981]. Elements by Rügemer [AN 6106] and, nearly identical, by Kukarkin [NNVS 43; 46]. 1 max. by Ahnert [BZ 20.52]. Radial velocity by Merrill, who finds the rather large value of +88 km/sec [ASP 45.45] and Sanford. The D-lines are very strong [ApJ 82.207]. The light curve is variable and rather irregular.

BB Aur = BD +31°1177 ($9^m.4$). Observed by Parenago [NNVS 43]. Elements by Jensch. 3 max. [KVBB 19.25; 81].

BC Aur. Confirmed by Morgenroth [BZ 17.35]. +

BE Aur. Elements by Piotrowski [AAc 2.132]. Improved elements by Ahnert. D = $5^h.6$ [BZ 22.87].

BF Aur = BD +41°1051 ($8^m.8$) = AG Bo 4100 ($8^m.9$) = HD 32419 (A0). Confirmed by Zessewitsch [Tadjik Circ 11]. Nearly identical elements were derived by Piegza [AAc 2.125; SAC 14.56; 15.56] and Zonn, who also computed the photometric orbit [AN 6168; Wilno Bull 19]. Piegza finds the phase of the secondary minimum at $0^P.513$, Zonn at $0^P.489$ [SAC 16.63]. These deviations relative to the normal value $0^P.500$ seem, however, not to be real, as Dugan and Wright pointed out; they established the constancy of the period from Harvard observations extended over more than 10000 epochs. 34 min. Improved elements [Princ Contr 19.56]. 34 min. by Lause [AN 6404].

BI Aur. Rediscovered by Hoffleit who also derived the elements [HB 901].

BK Aur = BD +49°1316 ($9^m.0$) = AG Bo 4164 ($9^m.0$). Elements by Kaho [Tokyo Bull 209; Tokyo Astr Obs Rep 5,2; Astr Herald 31.42]. Improved elements by Kukarkin. M-m = $0^P.33$ [NNVS 52; 55].

BL Aur. Observed by Jensch [KVBB 19.25; 81].

BM Aur. [*13^m $0^d.2$ f $0^d.3$ s.] Elements by Jensch. 5 max. [KVBB 19.25; 81].

BN Aur. Elements by Jensch. 7 max. [KVBB 19.25; 81].

BO Aur = BD +29°1068 ($9^m.5$). Elements by Jensch. 3 max. Sometimes short oscillations with a period of 60 days are superposed on the long period variation [KVBB 19.25; 82].

BP Aur. Observed by Jensch [KVBB 19.25; 82].

BQ Aur. Observed by Jensch [KVBB 19.25; 82].

BR Aur. Observed by Jensch [KVBB 19.25; 82].

BS Aur. [*14^m $0^d.3$ f $0^d.2$ n.] Elements by Jensch. 3 max. [KVBB 19.25; 82]. The star could not be found by Parenago [NNVS 43].

BT Aur. Elements by Jensch [KVBB 19.25; 82].

BU Aur = BD +31°1212 ($9^m.5$). Elements by Jensch. 6 max. [KVBB 19.25; 82].

BV Aur. [*15^m $0^d.1$ f $0^d.2$ s.] Elements by Jensch. 4 max. [KVBB 19.25; 82]. The star could not be found by Parenago [NNVS 43].

CC Aur. Spectrum F5p: [Bergedorfer Spektral-Durchmusterung 2.142].

CF Aur. Confirmed by Ahnert [BZ 22.87].

CG Aur. 11 obs. 6 min. by Hoffleit [HB 901]. Elements by Kanda. D = 7^h: [Tokyo Bull 393; Tokyo Astr Obs Rep 7.16].

CH Aur. 11 obs. 4 min. by Hoffleit [HB 901].

CI Aur. 11 obs. 7 min. by Hoffleit [HB 901].

CL Aur. [BD +33°975 ($9^m.5$) 3^s p $2^d.5$ n.] 11 obs. 6 min. by Hoffleit [HB 901]. Rediscovered by Parenago [NNVS 52]. Elements by Kanda. m_2 = $12^m.2$. D = 6^h, d = 1^h. The supposed identity with BD + 33°975 is wrong [Tokyo Bull 284; Tokyo Astr Obs Rep 6.9].

CM Aur = BD +43°1278 ($9^m.5$).

CN Aur = BD +51°1105 ($9^m.5$). Elements by Kukarkin. The light variation is semiregular, with a stable period, but very variable shape of the light curve. M-m = 39^d. Maximum brightness $10^m.0$-$10^m.7$, minimum brightness $10^m.3$-$11^m.1$ [NNVS 52; 55].

CO Aur = BD +35°1304 ($7^m.3$) = AG Lu 3045 ($7^m.8$) = PD 3671 ($7^m.91$) = HD 40457 (F5). Confirmed by Guthnick who assumes irregular light variation [AN 5981].

CQ Aur = BD +31°1179 ($9^m.0$) = AG Lei 2422. Elements by Lause. m_2 = $9^m.17$. D = $1^d.2$ [BZ 20.29; AN 6375].

CX Aur. Confirmed by Bigay [NNVS 56].

ζ Aur = BD +40°1142 ($3^m.6$) = Boss 1190 = AG Bo 4062 = PD 3048 ($3^m.85$) = HR 1612 ($3^m.94$) = HD 32068-69 (KO+B1). The first remark about the variability of this binary, which may be considered as one of the most interesting of all variable star systems, is due to Argelander who mentions that he found a note in the manuscripts of Kirch that the star was observed fainter 1709, December 9 [Bonn Beob 7.394]. Another observation of lowered brightness was made by Lotte in 1897 [BSAF 11.100]. Neither of these observations, however, seems to relate to actual minima, if checked with the elements now known. The first impulse for further study of the star was given by Maury, 1897, who in her classification of the spectra of bright stars called the star "one of the most beautiful examples of composite spectra found among stars not known to be double" and ascribed it to the groups XV+V [HA 28.99, Nr.

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147]. The discovery of spectroscopic duplicity was made by Wright 1908 [Lick Bull 146], the first spectroscopic orbit computed by Harper 1924. Harper found that nearly all of his spectra showed the "washed-out" appearance, only one which was taken 1924 January 18, when the K-type component was nearest to the sun, was markedly different from the others in that its absorption lines are particularly intense. This different character of the spectrum would be explained by an eclipse of the B-type by the K-type star, he estimated the probability of such an eclipse, however, as very small [DAO 3.151; PA 32.552; JRASC 19.2]. Bottlinger, two years later, emphasized more decidedly such a probability [AN 5415], but only in the winter 1931-1932 was the variability shown to behave in the way predicted by Bottlinger, simultaneously and independently by Hopmann at Leipzig and Schneller at Babelsberg. The determination of the light curve offered considerable difficulties because of the short duration of the decreasing and increasing branches for which, in the eclipses of 1932, 1934 and 1937, a sufficient number of observations could not be provided. The 1939-1940 eclipse finally yielded the reliable value of $1^d.35$ [ApJ 92.392]. The period was determined at first spectroscopically by Harper to be 973 days. Müller, who derived some older minima from observations of Epsilon Aurigae, for which ζ Aurigae was used as comparison star, made by Argelander, Heis, Schmidt, Schwab, and Luizet, derived a rather large variability of the period, not confirmed later [AN 5880]. Very reliable elements were derived from Harvard observations, extending from 1892-1934, and comprising 16 minima, by Swope: Min. = 2427692.61 + $972^d.15 \cdot E$ [AAS 8.125; HC 399]. These elements were improved only insignificantly by Christie whose values are given in the Table. The duration of the eclipse amounts to 39.50 days, the duration of the totality, 36.80 days [ApJ 92.392]. The amplitude is varying with the wave-length, from $2^m.14$ at λ3780 to $0^m.03$ at λ9280 [ApJ 90.320]. The spectrum is composite gK4 + B8:. The B8 component disappears during eclipse. In this time, therefore, only the K4 spectrum is visible. Before the beginning and after the end of eclipse, sharp Ca II lines are seen in the spectrum which indicate a large atmosphere around the K giant. The duration of the visibility of the Ca II lines is widely different for the different observed minima. The diameter of the atmosphere, therefore, undergoes large variations. The K component is perhaps somewhat variable; a long period, found by Gadomski, with a range of $0^m.66$ [Wars Publ 8.35], and a short period, found by Schaub and Hopmann, with a period of $0^d.1696$ [AN 6158; ZAp 14.189; Leipzig Veröff 6], however, have not been confirmed by other observers. Walter made evident a reflexion effect of the B component on the K component, dependent on the revolution. At the times of strongest reflexion the Ca II lines are in emission [ZAp 14.62], also the Si line λ3905, as found by Adams [ApJ 81.432]. Christie succeeded in proving that the B star is undarkened at the limb and that the limb of the K star can be considered a straight occulting edge [ApJ 92.392]. Roach discusses the consequences of the acceptance of a gradual extinction of the B star by the atmosphere of the K star as the mechanism of obscuration [ApJ 93.1].

Further References: Observations and remarks by Becker [AN 6278], Beer [MN 95.24], Brück and Green [UAI Circ 807], Bühler [BZ 16.54], Christie [ApJ 92.392], Ehl, Kahofer, and Kopal [AN 6285], Fedtke [BZ 16.48; AN 6278; VAP 45.169; Sterne 15.35], Ferrari [AN 6289], Gadomski [Wars Publ 8.32], Güssow [BZ 16.48;60; AN 6142], Guthnick [BZ 16.47; AN 6142], Guthnick and Schneller [BZ 22.4], Guthnick, Schneller, and Hachenberg [AN 6285], Hachenberg [BZ 16.49; 60; AN 6142], Hassenstein [AN 6134], Himpel [AN 6065], Hopmann [AN 5857], Huffer [HAC 308; AAS 8.115; ApJ 81.292], Huffer and Stebbins [AN 6142], Koyama [Kyoto Bull 305], Krat and Nekrasova [AN 6289], de Kort and others [BAN 331], Krebs [Sterne 14.278], Kron [ASP 52.124], Landwehr [VAP 45.34; 251; 47.144], Liebermann [AN 6294], Martinoff [AN 6285], Meyer [BZ 16.48; 62; AN 6142], Müller [BZ 16.48; 19.25; 36; AN 6067; 6278; 6300; Sterne 17.120; UAI Circ 655; 660], Oosterhoff [AN 6142; ApJ 81.461], Parenago [Sternb Publ 8,1.31], Plassmann [VAP 45.204], Roach [HAC 518; PA 48.94; ApJ 93.2], Rügemer [AN 5872], Schneller [BZ 16.48; 60; AN 5857; 6142], Smart and Green [AN 6142; MN 95.31; Obs 57.353], Stein [AN 6278], Stobbe [BZ 16.60], Swope [HC 399], Taylor [AN 6285], Tremblot [JO 18.176], Vyssotsky and Reno [AN 6142; AJ 1024], Walter [BZ 16.49; 22.4; AN 6066; 6142; ZAp 14.62], Wirtanen [AJ 1077], Wyse [ASP 46.350], Zonn [BZ 16.52; AN 6142; AAc 2.93; Wilno Bull 16; 21], Zverev [Sternb Publ 8,1.31].

Observations of the spectrum and remarks thereupon by Beer [UAI Circ 651], Beileke [BZ 16.48; 60; AN 6142], Brück [AN 6278], Christie [ASP 50.53], Christie and Wilson [AN 6155], Colacevich [SAI 11.165], Fracastoro [SAI 13.297], Guthnick [BZ 16.60; AN 5857; 6294], Guthnick, Schneller, and Hachenberg [AN 6285], Hynek [Perkins Contr 10.35], Kühlborn [AN 6142], Küstner [AN 4750], McLaughlin [HAC 413], Stobbe [BZ 16.60], Tremblot [CR 198.1977], Wellmann [BZ 22.4; Sterne 20.53], Wilson and Christie [Mt Wils Rep 1936-37, p.28]. Spectrophotometric observations in the Red and Infrared by Hall [ApJ 90.317]. Spectroscopic orbit by Hopmann [Leipzig Veröff 6.62].

Detailed discussion of their own and other observations, elements, light curve, constitution of the atmosphere by Guthnick and Schneller [AN 6142; 6155; Berl Ber 1932, p.57], Guthnick, Schneller, and Hachenberg [Abh Berl Akad 1935, Nr.1], Hopmann [Leipzig Ber 85.117], Hopmann and Schaub [Leipzig Veröff 6], Christie and Wilson [ApJ 81.426]. Elements by Florja [AN 6144], Müller [AN 6300], and Christie [ApJ 92.392]. Duration of the partial phase by Himpel [AN 6182]. Apsidal motion discussed by Krat [NNVS 43] and Luyten [Minn Publ 2.45]. Absolute dimensions by Krat [NNVS 51]. Extension and rotation of the chromosphere by Beer [MN 95.24; 100.693; Obs 57.354; 63.181].

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Structure of the atmosphere by Menzel [HC 417]. Mass and density of the atmosphere by Kozlov and Florja [RAJ 13.509] and Gaposchkin [HB 900]. Mass and temperature by Gaposchkin [Harv Repr 151]. +

UV Boo = BD +26°2559 ($8^m.0$) = AG Cbr E. 6810 ($8^m.0$) = HD 126030 (F5). Confirmed by the observations of Šafařík who used the variable as comparison star c for RX Bootis [Šaf-Pr p.65], by Kukarkin [NNVS 25-26], and by Kopal who at first supposed Cepheid type with the period of $36^d.8$ [BZ 13.11], but later found irregular light variation. 196 obs. [AN 5929]. Further observations by Miczaika [AN 6006], Rügemer [AN 6106], Parenago [Sternb Publ 12,1.40], and Tshernov [Tadjik Ann 1,2.33]. Proper motion by Palmér [Lund Medd II 103.162].

UW Boo = BD +47°2134 ($9^m.5$). Blažko supposed a period of 3^h [AN 5713]. Dombrovsky found W Ursae majoris type with the period of $0^d.4401$ [Tashk Circ 19]. Rediscovered by Rügemer who found Algol type and $5^d.27956$ to be a multiple of the period, in good agreement with Dombrovsky's period [AN 6020]. Nevertheless, both of the periods have been proved to be wrong by Payne-Gaposchkin. She derived the elements given in the Table. m_2 has a depth of only $0^m.09$; m_1 is being continuously displaced by nearly $0^P.1$. The amplitude of the primary, therefore, may be considerably greater than the value derived from the mean light curve. Spectrum near F [Harv Repr 170; PA 47.221]. According to Cannon, the lines of the spectrum are very wide and ill defined [Mscr.]. +

UX Boo = BD +47°2135 ($9^m.4$). Blažko supposed a period of 2-3^h [AN 5713]. Dombrovsky found eclipsing type with periods either $0^d.674$ or $0^d.504$ [Tashk Circ 19]. Rediscovered by Rügemer who supposes W Ursae majoris type [AN 6020]. +

UY Boo. Lange supposed a period P' = $0^d.2822$ [Tadjik Circ 11]. The true period P, which is connected with P' by the equation: $1/P = 1/P' - 2$, was derived by Gurjev [Tadjik Circ 40]. Prager found from Harvard observations extended from 1890 to 1938, that the period had undergone a rather sudden considerable change about 1928. The elements before this change were: Max. = 2411459.819 + $0^d.6508552 \cdot E$, the later elements are given in the Table [HB 911].

SX Cam. First elements by Haas [AN 5790]. Improved elements by Kukarkin [NNVS 25-26; 55].

SY Cam = BD +80°191 ($9^m.5$) = AG Kas 1031 (9^m) = PDP +80°191 ($9^m.78$). Observed by Kukarkin [NNVS 25-26], Böhme who finds slow, not very irregular light variations [AN 269.239], and Zverev who finds slow variation with the amplitude $1^m.5$. 1 min. [NNVS 55].

SZ Cam = BD +61°676 ($6^m.5$) np = AG Hels 3369 ($6^m.4$) = PD 2445 ($7^m.30$) = HR 1260 ($6^m.30$) = Σ 485 = ADS 2984 = HD 25638 (B0). [*$7^m.1$ 334° 20".] Guthnick and Prager derived the approximate elements: Min. = 2426030.40 + $1^d.1487 \cdot E$ [AN 5713]. Hertzsprung proved that this period P' was an apparent one, connected with the true period P by the relation: $2/P = 2/P' - 1$. He derived the elements: Min. = 2426030.49 + $2^d.7013337 \cdot E$ [AN 6017]. New elements were derived from 12479 photographic observations by Wesselink. His light curve, therefore, is of exceptional accuracy. The depths of the two minima are $0^m.28$ and $0^m.22$ respectively. He also calculates the photometric orbit, and, using Plaskett's radial velocities, a spectroscopic orbit [Pg Pm]. Plaskett had found the star to be a spectroscopic binary. Spectrum O 9.5 [DAO 2.304]. Absolute magnitude and temperature by Kuiper [ApJ 88.443]. +

TT Cam. Gitz' elements were doubted by Nekrasova [NNVS 51], but confirmed by Kukarkin. 2 max. Visual amplitude $11^m.0$-$14^m.0$ [NNVS 52; 55].

TU Cam = 31 Camelopardalis = BD +59°920 ($5^m.7$) = AG Hels 4237 ($5^m.3$) = Boss 1452 = PD 3581 ($5^m.42$) = HR 2027 ($5^m.26$) = HD 39220 (A0). The star was found to be a spectroscopic binary by Plaskett [DAO 1.168]. Harper derived the spectroscopic orbit with the period of $2^d.93317$ [DAO 3.159; 6.220; JRASC 19.2]. Stebbins found eclipsing type by his photoelectrical measures [PA 37.155; Washb Publ 15.55]. In spite of the small range Zverev derived a very reliable light curve by visual step estimations, and improved the elements. The variable is of the β Lyrae type, $A_1 = 0^m.10$, $A_2 = 0^m.04$. 166 obs. [Sternb Publ 8,1.34; 112]. The photoelectric range, according to Stebbins, is $0^m.20$ and $0^m.10$ respectively at the two minima [Washb Publ 15.55]. +

TV Cam. Observed by Nekrasova [NNVS 51]. Elements by Kukarkin. M-m = $0^P.29$. Visual amplitude $11^m.5$-$12^m.1$ [NNVS 52; 55].

TW Cam = BD +57°790 ($9^m.3$). First elements by Nekrasova who assumed Cepheid type: Max. = 2427588.47 + $42^d.22 \cdot E$ [NNVS 51]. Kukarkin found typical RV Tauri type and derived the elements. Visual maximum brightness $9^m.7$-$10^m.0$, minimum brightness $10^m.1$-$10^m.6$. Primary and secondary minima exchange places [NNVS 52; 55]. Rediscovered by Morgenroth [AN 6253; 6337].

TX Cam. Kukarkin at first supposed a period of $318^d.4$, later of 558^d [NNVS 52; 55]. The star was rediscovered by Nekrasova who also derived improved elements [NNVS 55].

TY Cam. Elements by Nekrasova [NNVS 51].

TZ Cam. Nekrasova supposed Cepheid type with the period $0^d.99689$ [NNVS 51]. Kukarkin proved this period to be wrong and derived the long period elements given in the Table. The brightness in maximum and minimum is variable, being $11^m.4$-$11^m.8$ and $12^m.2$-$12^m.5$ respectively. 3 max. 2 min. [NNVS 52; 55].

UV Cam = BD +61°667 ($7^m.5$) = AG Hels 3351 ($7^m.3$) = PD 2423 ($7^m.49$) = HD 25408 (R8). Rediscovered by Lehman-Balanowskaja [Pulk Bull 113.35; NNVS 40]. Confirmed by Böhme [AN 6330] and Kukarkin who finds indications of a period of 270^d to 290^d. 3 max. 2 min. [NNVS 52; 55].

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UX Cam = BD +68°368 ($8^m.8$) = AG Chri 830 ($8^m.5$) = HD 32730 (Ma). 9 obs. by Yendell who did not find variation [AJ 346]. The variability was later confirmed by Böhme, who found irregular light variation resembling that of η Geminorum [AN 6328].

UY Cam. Spectrum A3, according to Baker [MN 98.68].

UZ Cam. Elements by Brun. 65 obs. [BAF 6.3]. Zverev found the period of 230^d and observed one double maximum [NNVS 55].

SX Cnc = SVS 244.

SY Cnc = SVS 228 = BD +18°2101 ($9^m.5$). Confirmed by Prager. 31 obs. [AN 5830], Parenago. 36 obs. [NNVS 43], and Jacchia, who finds a light variation similar to that of RR Tauri. Visual range $10^m.5$-$13^m.1$; the color is white [BZ 18.33].

SZ Cnc. Elements by Brun. 66 obs. [BAF 1.132]. Improved elements by Parenago. 44 obs. Photographic amplitude $10^m.2$-$15^m.1$ [NNVS 43].

TT Cnc = SVS 514. Rediscovered by Koulikovsky [NNVS 45]. Approximate elements by Lange [Tadjik Circ 4; 5]. Improved elements by Jensch. 12 min. Photographic range $10^m.75$-$11^m.4$ [AN 6119].

TU Cnc = 117.1934 = BD +9°2072 ($9^m.5$) = AG Lpz II 4848 ($9^m.1$). Rediscovered by Hoffmeister [AN 6058]. Elements by Jensch. 11 min. D = $0^d.5$ [AN 6058]. The elements were confirmed by Rügemer [AN 6106].

TV Cnc. Elements by Soloviev [Tadjik Circ 18].

TW Cnc = BD +12°1853 ($8^m.8$) = AG Lpz I 3421 ($8^m.4$) = HD 71780 (G5). Observed by Jensch. 4 min. [AN 6059]. Provisional elements by Kordylewski [SAC 17.56]. +

TX Cnc = BD +19°2068 ($9^m.3$) = Bo VI +19°2068. The variable is a member of Praesepe. Both minima have the same depth. The rising branch after the first minimum is somewhat steeper than the other three branches. The rectified curve shows that the eclipse produces only a light variation of $0^m.05$, the remaining part must be attributed to the elliptic form of the components. The photovisual range is $9^m.86$ to $10^m.16$. Haffner also gives approximate values for the dimensions of the system [ZAp 14.285]. Tscherny determines the dimensions and derives the spectrum A6 from the period-spectrum relation [AJ 1130].

TY Cnc. Hassler and Kitchens find irregular light variation [AJ 1074], which is confirmed by Hassler and McKeehan [AJ 1110].

TZ Cnc = BD +21°1966 ($9^m.3$) = AG Berl B 3639 ($9^m.1$).

SW CVn. [*$12^m.88$ 1!5 300°.] Plaut supposed period of $0^d.410$ or $0^d.2245$. 80 obs. [AN 5846]. Elements by Zessewitsch [Leningrad Bull 3.13; 19; 21; 4.28; Pulk Circ 24]. Confirmed by Parenago [NNVS 45; 46]. 5 obs. by Malmquist [Stockh Ann 12,7.121].

SX CVn = BD +46°1872 ($9^m.3$). Confirmed by Kukarkin [NNVS 35].

RT CMa. Elements by Florja. D = $5^h.3$. A_2 = $0^m.11$. 264 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.57]. +

RU CMa = CoD -22°3014 ($9^m.7$). Elements by Florja. D = $5^h.5$. 201 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.57].

RV CMa = BD -14°1681 ($9^m.8$). Confirmed by Zessewitsch [AN 5911]. Elements by Florja. 121 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2]. McLeod, however, did not confirm Florja's results. He found semiregular light variation with cycles varying in length between 100 and 200 days [HB 901].

RW CMa. Elements by Florja. 159 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2]. Oosterhoff found the approximate period $5^d.7292$ from 10 max. observed on Harvard plates [HB 900]. The elements were confirmed by McLeod [HB 904]. Improved elements by Zakharin. Photographic amplitude $12^m.21$-$13^m.23$. From the variation of the color-index, he supposes a spectral variation G2-G9. 177 obs. [Abast Bull 3.21]. Radial velocity by Joy [ApJ 86.371; 428; 89.359].

RX CMa = BD -17°1859 ($9^m.8$). Elements by Florja. D = $7^h.0$, d = $1^h.0$. 236 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.57]. Confirmed by McLeod [HB 904] and Zakharin, who finds D = $8^h.8$, d = $1^h.7$. Photographic amplitude $11^m.00$-$12^m.04$, m_2 = $11^m.08$. 184 obs. Photometric orbit [Abast Bull 3.13]. Almost the same elements were derived by Pagaczewski [AAc 2.50; SAC 11.42].

RY CMa = BD -11°1867 ($8^m.5$) = AG Cbr M. 2514 ($8^m.3$) = HD 56450 (K0). First elements by Lause.11 min. Light curve [AN 5896] and Florja [Tashk Circ 1; 15; NNVS 38; 52]. Improved elements by Rügemer [AN 5921]. The definitive elements, given in the Table, are derived by Florja. 168 obs. [Sternb Publ 8,2]. Confirmed by McLeod [HB 904]. Radial velocity by Joy [ApJ 86.371; 428; 89.359].

RZ CMa = BD -16°1918 ($9^m.3$). First elements by Florja. 142 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2]. The improved elements, given in the Table, were derived by McLeod. Photographic range $9^m.5$-$10^m.3$ [HB 901]. Spectrum F6 [Potsdam Publ 92.58].

SS CMa = CoD -25°4516 ($9^m.5$) = CPD -25°2361 ($9^m.4$). Elements by Florja. 124 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2]. Oosterhoff found from 8 maxima, observed on Harvard plates, the elements: Max. = 2424916.21 + $12^d.3661 \cdot E$ [HB 900]. Radial velocity by Joy [ApJ 86.371; 428; 89.359].

ST CMa = 672.1936 = HV 8055. Rediscovered by Luyten [AN 6263; 6283; Minn Publ 2.82].

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Elements by Florja. 93 obs. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2].

SU CMa. [SV CMa 4^s f 0.7 n.] Elements by Florja. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2].

SV CMa = BD -18°1638 ($9^m.6$). [SU CMa 4^s p 0.7 s.] Hoffmeister holds that the star is possibly of the R Coronae Borealis type [AN 5791], Florja finds it irregular. 72 obs. [NNVS 38; 52; Sternb Publ 8,2].

SW CMa = BD -22°1712 ($9^m.0$) = CoD -22°4061 ($9^m.1$) = CPD -22°1791 ($8^m.8$) = AW 5116 (9^m) = Cord A 4490 ($9^m.1$) = HD 54520 (A0). The star is missing in AG Alg. Elements by Florja. D = $12^h.0$. 163 obs. [NNVS 38; 52; Sternb Publ 8,2; SAC 14.57]. +

SX CMa = BD -16°1808 ($9^m.3$). Confirmed by Zessewitsch [AN 5967]. Elements by Florja. 237 obs. [Tashk Circ 9; 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.57]. The elements were confirmed by McLeod [HB 904]. Perhaps the period should be doubled [SAC 17.63]. +

SY CMa = BD -19°1728 ($9^m.4$). [*$12^m.7$ 270° 10".] Elements by Florja. 76 obs. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2]. 51 obs. by Olivier and others [Penn Publ 5,3.31].

SZ CMa. Elements by Florja. D = $4^h.8$. 200 obs. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.57]. Confirmed by McLeod [HB 904]. Spectrum F8 [Potsdam Publ 92.47]. +

TT CMa. Approximate period by Florja. 73 obs. [NNVS 38; 52; Sternb Publ 8,2]. Elements by McLeod. 2 max. 5 min. [HB 901].

TU CMa = CoD -24°4125 ($9^m.6$) = CPD -24°1509 ($9^m.0$). Elements by Florja. m_2 = $10^m.12$. D = $4^m.3$. 241 obs. [Tashk Circ 7; 15; NNVS 38; 52; Sternb Publ 8.2].

TV CMa. Elements by Florja. 167 obs. [Tashk Circ 5; 15; NNVS 38; 52; Sternb Publ 8,2]. As McLeod stated, these elements do not fit the observations on Harvard plates [HB 904]. Radial velocity by Joy ApJ 86.372; 428; 89. 359].

TW CMa = BD -14°1863 ($9^m.1$). Elements by Florja. 161 obs. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2]. Confirmed by McLeod [HB 904]. Spectrum F6 [Potsdam Publ 92.59]. Radial velocity by Joy [ApJ 86.372; 428; 89.359].

TX CMa = BD -22°1347 ($9^m.2$) = CoD -22°2870 ($9^m.1$) = CPD -22°1115 ($8^m.8$) = Cord A 3363 ($9^m.2$). Elements by Zessewitsch [Tadjik Circ 1; SAC 13. 60]. Confirmed by Florja. D = $5^h.8$. 51 obs. [AN 6179; NNVS 52; Sternb Publ 8,2].

TY CMa. Elements by Jensch, who supposes a large range. 5 max. [AN 6135]. Confirmed by Florja [AN 6179; NNVS 52; Sternb Publ 8,2].

TZ CMa = BD -19°1526 ($9^m.5$) = CPD -19° 1403 ($9^m.1$). First elements by Zessewitsch [Tadjik Circ 1; SAC 13.60]. Improved elements by Florja. D = $7^h.8$. 49 obs. [AN 6179; NNVS 52; Sternb Publ 8, 2; SAC 14.57].

UU CMa. Elements derived by Zessewitsch who at first supposed a period of $8^d.72$ [Tadjik Circ 3; 8]. Confirmed by Florja who, however, found the visual range only $1^m.0$. D = $8^h.4$. 49 obs. [AN 6179; NNVS 52; Sternb Publ 8,2; SAC 14.57].

UV CMa. Elements by Jensch. 5 max. [AN 6135]. Confirmed by Florja. 14 obs. [AN 6179; NNVS 52; Sternb Publ 8,2]. Spectrum G [Potsdam Publ 91. 60].

UW CMa = 29 Canis majoris = CoD -24°5173 ($5^m.6$) = CPD -24°2210 ($5^m.4$) = Boss 1899 = HR 2781 ($4^m.90$) = HD 57060 (0e). m_2 = $4^m.80$. Gaposchkin calculated also the photometric orbit. With the inclination 68°.3 the masses of the components become 40.0⊙ and 31.0⊙ respectively [HB 902]. New photometric elements were determined by Elvey and Rudnick from photoelectric observations which are in good general agreement with those derived by Gaposchkin [ApJ 88.503]. Photographic light curve by Seyfert. Photometric orbit [ApJ 93.442]. The star was found to be a spectroscopic binary by Frost [ApJ 23.265]. Spectroscopic orbits have been calculated by Harper [DO 4.115], Pearce [DAO 6.50], Luyten and Ebbighausen [ApJ 82.246], and Struve and Sherman [ApJ 93. 84]. The spectrum was investigated by Struve and Swings [ApJ 75.171], Struve, Elvey, and Morgan [ApJ 82.95], and Rudnick [ApJ 83.439]. Apsidal motion discussed by Luyten [Minn Publ 2.30] and by Luyten, Struve, and Morgan [Yerkes Publ 7.297]. Remarks on ellipticity by Russell [ApJ 90.648; 650]. Mass and luminosity discussed by Kuiper [ApJ 88.503]. Spectrum O 8.5 according to Morgan [ApJ 88.503]. +

UX CMa. Elements by Florja. m_2 = $11^m.6$. 157 obs. [NNVS 38; 52; Sternb Publ 8,2; SAC 14.57].

UY CMa = BD -16°1430 ($9^m.8$). RV Tauri type. Elements by Florja. 94 obs. [NNVS 38; 52; Sternb Publ 8, 2].

UZ CMa. Elements by Florja. 164 obs. [NNVS 38; 52; Sternb Publ 8,2].

VW CMa = CoD -25°4197 ($9^m.5$) = CPD -25°2074 ($9^m.0$). Confirmed by Florja. 126 obs. 3 min. [NNVS 38; 52; Sternb Publ 8,2]. Rediscovered by Mergentaler who also derived the elements [BAN 296]. With these elements Florja's three minima are represented by the O-C: +$0^d.002$, $0^d.000$, -$0^d.004$, the latter being a secondary minimum.

VY CMa = CoD -25°4441 ($7^m.7$) = CPD -25°2286 ($8^m.8$) = Gou 9444 ($7\ 3/4^m$) = GZ 7^h1248 ($7\ 1/2^m$) = Cord A 4839 ($7^m.5$). Florja found the light variation to be irregular [NNVS 38; 52; Sternb Publ 8,2].

VZ CMa = CoD -25°4523 ($9^m.3$) = CPD -25°2368 ($9^m.2$). The variable was at first erroneously named AX Pup [AN 6303]. - Elements by Florja. 121 obs. [NNVS 38; 52; Sternb Publ 8,2]. O'Leary finds that the scattering of his observations is more than usual [Riverview Publ 1.61].

VZ CMi. Rediscovered by Morgenroth [AN 5974].

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Elements by Jensch. 5 max. [AN 6135].

WW CMi. Elements by Jensch. 7 max. [AN 6135].

WX CMi. Position by Delporte [UAI Circ 499]. Morgenroth supposed at first that the star was a Nova [BZ 16.72; 77; AN 6094]. But after the star was found on earlier plates of Moscow by Kukarkin [UAI Circ 498], of Uccle by Delporte [UAI Circ 499] and of Berlin-Babelsberg, he derived the elements of long period variation [AN 6119].

WY CMi. Elements by Jensch. 6 max. [AN 6135].

WZ CMi. Elements by Jensch. 7 max. [AN 6135].

XZ CMi = BD +4°1850 ($9^m.4$). First elements by Lause. $m_2 = 9^m.80$. D = $0^d.15$. 11 min. [BZ 20.25; AN 6375]. Improved elements by Kaho [Tokyo Bull 284; Tokyo Astr Obs Rep 6.11].

YY CMi = BD +2°1872 ($8^m.5$) = AG Alb 3187 ($8^m.6$) = HD 67110 (F5). Confirmed by Soloviev. 1 min. [Tadjik Circ 6]. Elements by Lause. $m_2 = 8^m.9$. 8 min. [BZ 20.25; AN 6375]. Improved period by Soloviev [Tadjik Circ 43]. +

TU Cap = BD -16°5534 ($9^m.5$). Confirmed by Zessewitsch [AN 5911]. Spectrum K4 [Potsdam Publ 92.162].

TV Cap = BD -12°5713 (10^m). Confirmed by Zessewitsch [AN 5911]. Elements by Kanda [AN 6088; Tokyo Astr Obs Rep 2.223].

TW Cap = BD -14°5679 ($9^m.5$). Morgenroth supposed Cluster type variation and derived the elements: Max. = 2426955.356 +$0^d.490080$·E. 10 max. [AN 5946]. His period P' seems to be an apparent one, and Zessewitsch found Cepheid type with the period P = $28^d.5778$, connected with P' by the equation: 1/P = 1/P' - 2 [Tadjik Circ 8]. Zessewitsch's elements were confirmed by Gurjev [Tadjik Circ 13; 28]. Spectrum F8 [Potsdam Publ 92.162].

TX Cap. Elements by Morgenroth [AN 5946].

TY Cap = BD -13°5664 ($9^m.5$). Elements by Pagaczewski. 6 min. 4 min. by Piotrowski [BZ 15.83], Morgenroth [BZ 16.3], and Rügemer [AN 6020]. Improved elements by Piotrowski [AAc 2. 61; 77]. 10 min. by Lause. D = $0^d.35$, d < $0^d.025$ [AN 6204].

UU Cap = BD -14°6077 ($9^m.0$) = AG Wa 8125 ($8^m.9$) = HD 205526 (Mb). Parenago finds irregular variation. 57 obs. [NNVS 43]. 6 obs. by AS Jap [Mem Astr Soc Jap 5-6].

UW Cap = BD -10°5354 ($9^m.8$). Elements by Piotrowski [AAc 2.61; 77]. +

UY Cap. The period probably should be doubled since the width of maximum appears to alternate between forty and sixty days.

XZ Cap. Perhaps semiregular.

YY Cap = BD -19°6003 ($9^m.4$) = CPD -19°7984 ($9^m.7$). Very red.

GM Car = CoD -58°3405 ($9^m.6$) = CPD -58°2404 ($8^m.7$) = GZ 10^h2350 (9^m) = La Plata B 2633 ($8^m.8$) = HD 92174 (B9). $m_2 = 9^m.0$.

GN Car. $m_2 = 12^m.1$. Photometric orbit by Fracastoro [SAI 10.267].

GO Car. [*$14^m.5$ 60° 15" *$14^m.5$ 250° 25".] Elements derived by van Hoof [BAN 256].

GP Car. The elements were derived by Hertzsprung from observations on 780 plates, made by both Hertzsprung and Kruytbosch. $A_2 = A_1$ [BAN 281].

GQ Car. The elements are derived by Hertzsprung from 605 observations made by Kruytbosch. $m_2 = 13^m.5$, and the following maximum perhaps $0^m.1$ fainter than the preceding [BAN 281].

GR Car. The elements were derived by Hertzsprung from 617 observations made by Kruytbosch [BAN 281].

GS Car. The elements were derived by Hertzsprung from 538 observations made by Kruytbosch [BAN 281].

GT Car. The elements were derived by Hertzsprung from 621 observations made by Kruytbosch. The light curve is nearly symmetrical, the maximum being somewhat more pointed than the minimum [BAN 281].

GU Car = CPD -56°4217 ($10^m.0$). The period was derived by Hertzsprung from 774 observations made by Kruytbosch on Johannesburg plates and additional observations made by Oosterhoff on earlier Harvard plates. The period being so nearly equal to 3.5 sidereal days, it was not possible to obtain a complete light curve and an accurate epoch of the minimum in the time-interval covered by observations [BAN 281].

GV Car = CoD -58°3798 ($9^m.3$) = CPD -58°3066 ($8^m.7$) = Gou 15191 (9 1/4^m) = La Plata B 3177 ($8^m.6$) = HD 96368 (A0). [In NGC 3522.] $m_2 = 9^m.25$ (pg). The photovisual magnitude in maximum is $8^m.89$ [BAN 245]. 19 min [BAN 283]. Observed by Martin and others [BAN 331].

AO Cas = BD +50°46 ($6^m.5$) = AG Cbr M. 98 ($7^m.1$) = Boss 46 = PD 134 ($6^m.22$) = HR 65 ($6^m.12$) = HD 1337 (B0). The star is a spectroscopic binary [Mt Wils Rep 1916-17, p.221; 1917-18, p.208] whose orbit was determined by Adams and Strömberg [ApJ 47.329]. Guthnick established the variability by photoelectric measures. The light curve was similar to a β Lyrae curve with pointed minima and maxima, so that Guthnick denied the eclipsing character. The light curve was also rather variable in different years, especially in the height and phase of the maxima [BZ 1.12; 2.17; AN 5061; Atti Pont Acc 76.220]. Pearce, however, showed that the statements of Guthnick were erroneous, because he had adopted the spectroscopic period of Adams and Strömberg, $3^d.5225$, and that with the improved period, $3^d.52341$, which

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he had derived from his new spectroscopic observations, the light curve remains constant and is of the β Lyrae type. He calculated a new spectroscopic and a photometric orbit [DAO 3.275]. The spectrum has been classified B3p by Adams and Strömberg [ApJ 47.329], and 08.5n by Pearce [DAO 3.276]. Further observations by Guthnick and Pavel [AN 5156], Stebbins [Washb Publ 15.62], Güssow [AN 5683], Bennett [AJ 1089]. Color-equivalent by Hertzsprung [BAN 329]. Temperature by Gaposchkin [AN 5939]. Rediscussion of the spectroscopic orbit elements, apsidal motion, and ellipticity by Luyten [Minn Publ 2.30; 45; MN 98.464; AAS 8.184]. Ellipticity discussed by Russell [ApJ 90.648; 650]. Apsidal motion by Krat [NNVS 43]. Mass and luminosity discussed by Kuiper [ApJ 88.501]. According to Cannon, the lines show very slight contrast to the continuous spectrum [HA 91.274]. +

AP Cas. [$\mathcal{H}$ Cas 2!5 np.] First elements by Nielsen [BZ 13.30]. Improved elements by Kukarkin [AN 5838; NNVS 35], Oosterhoff. 7 max. [HB 900], and Nielsen. M-m = $0^{p}.30$ [Aarhus Medd 1.145]. 45 obs. by Zverev [NNVS 55]. Radial velocity by Joy [ApJ 86.376; 428; 89.358]. +

AQ Cas = BD +61°242 ($9^{m}.5$). Confirmed by Kukarkin [NNVS 21-22]. Elements by Florja and Zessewitsch [AN 5771]. 103 obs. by Beyer. m_2 = $10^{m}.32$. D = $1^{d}.95$, d = $0^{d}.42$? [AN 6184].

AR Cas = 1 H. Cassiopeiae = BD +57°2748 ($5^{m}.7$) = AG Hels 14105 ($5^{m}.2$) = Boss 6046 = PD 13827 ($5^{m}.13$) = HR 8926 ($4^{m}.89$) = ADS 16795 = HD 221253 (B3). The variability was suspected already in 1913 by Lau [AN 4704]. It was then discovered by photoelectrical measures by Stebbins [PA 27.677; 29.276; Washb Publ 15. 56] who also derived the elements. The period is the same as that of the spectroscopic orbit which was determined by Baker [Allegh Publ 2.25]. The primary and secondary minima have ranges of $0^{m}.132$ and $0^{m}.032$, respectively. The eclipses last $0^{d}.41$ and $0^{d}.52$, the annular phases $0^{d}.16$ and $0^{d}.15$, respectively. Stebbins also has calculated the photometric orbit. The eccentricity is 0.25 and there is some indication that the line of apsides is rotating [ApJ 54.81]. That indication is strengthened by Luyten, Struve, and Morgan who computed a new spectroscopic orbit and absolute dimensions [Yerkes Publ 7.289]. The variability was rediscovered by Güssow photoelectrically [BZ 11.82; 87; VJS 64.151; 65.87] and by Kopal visually [BZ 13.39]. +

AS Cas = SVS 263. [B Cassiopeiae 44^{s} p 4!7 s.] Zverev supposes Cepheid or Cluster type with a period of $9^{d}.0$/n [NNVS 55].

AT Cas. First elements by Nielsen [BZ 14.28]. Improved elements by Kukarkin [NNVS 35; 38] and Rügemer [AN 5921]. Definitive elements by Nielsen [Aarhus Medd 1.169].

AU Cas = SVS 267.

AV Cas = SVS 268.

AW Cas = SVS 272. Beljawsky supposed Cluster type with the doubtful elements: Max. = 2426035.23 + $0^{d}.8965 \cdot E$ [Pulk Circ 6.23], while Lange found the star to be of the Cepheid type with the elements given in the Table [Leningrad Bull 2.9].

AX Cas = SVS 276.

AY Cas = SVS 280. Elements by Zverev [NNVS 55].

AZ Cas = SVS 282. Observations by Lange [Leningrad Bull 2.10]. Zverev did not find any light variation from more than 60 observations [NNVS 55].

BB Cas = SVS 253.

BC Cas = SVS 254. Observations by Lange [Leningrad Bull 2.9].

BD Cas = SVS 258. Elements by Zverev [NNVS 55].

BE Cas = SVS 259. Kukarkin finds slow variation. A = $0^{m}.5$ [NNVS 55].

BF Cas = SVS 260. The variability was also suspected by Balanowsky [AN 5815]. Elements by Zverev [NNVS 55].

BG Cas = SVS 261. The variability was also suspected by Balanowsky [AN 5815]. No light variation observed by Zverev from 52 observations extending over 4 months [NNVS 55].

BH Cas = SVS 262. Kukarkin supposes W Ursae majoris type [NNVS 55].

BI Cas = SVS 264.

BK Cas = SVS 265.

BL Cas = SVS 266. Zverev supposes Cepheid type [NNVS 55].

BM Cas = BD +63°110 ($9^{m}.0$) = AG Hels 746 ($9^{m}.0$). Confirmed by Kukarkin [NNVS 21-22; 55]. Elements by Beyer. m_2 = $9^{m}.16$. D~50^{d}. 300 obs. 6 min. [BZ 15.75; AN 6100]. +

BN Cas = SVS 269. Kukarkin finds rapid variation [NNVS 55].

BO Cas = SVS 270.

BP Cas = SVS 271. Beljawsky supposed a period of $1^{d}.5064$ [Pulk Circ 6] which was proved to be wrong by Zverev who found $6^{d}.201$ [NNVS 55]. Improved elements by Parenago. M-m = $2^{d}.3$ [NNVS 57-58]. Radial velocity by Joy [ApJ 86.403; 429; 89.358].

BQ Cas = SVS 273.

BR Cas = SVS 274.

BS Cas = SVS 275. Kukarkin supposes eclipsing type [NNVS 55].

BT Cas = SVS 277.

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BU Cas = SVS 278. According to Zverev, the star is constant or possibly a Cepheid with a small amplitude [NNVS 55].

BV Cas = SVS 279. Beljawsky supposed a period of $0^d.42238$ [Pulk Circ 6] which was proved to be wrong by Zverev, who derived the improved elements [NNVS 55].

BW Cas = SVS 281.

BX Cas = SVS 283. Beljawsky adopted a period of $11^d.1$ [Pulk Circ 6]. Lange supposed irregular light change. The star is probably red [Leningrad Bull 2.10]. Zverev found semiregular light change with rather rapid variation of brightness and an amplitude of $1^m.2$ [NNVS 55].

BY Cas = SVS 284. Elements by Lange [Leningrad Bull 2.10] and Zverev [NNVS 55]. Improved elements by Parenago. M-m = $1^d.5$ [NNVS 57-58]. Radial velocity by Joy [ApJ 86.376; 429; 89.358].

BZ Cas = SVS 285. Zverev supposes short period light variation [NNVS 55].

CC Cas = BD +59°609 ($7^m.4$) = AG Hels 2834 ($6^m.9$) = PD 1886 ($7^m.33$) = HD 19820 (B5). Photometric orbit by Gaposchkin. m_2 = $7^m.51$. D = $0^P.1$ [AAS 10.12; PA 48.97]. The star is a spectroscopic binary with the spectra 08 + 08, as found by Pearce. Color excess $0^m.53$ [DAO 4.67]. +

CD Cas = SVS 252.

CE Cas = SVS 255. [In the northern part of NGC 7790.] Observations by Lange [Leningrad Bull 2.9] and Brun [NNVS 55]. +

CF Cas = SVS 256. [In the northern part of NGC 7790.] Beljawsky supposed Cluster type with the elements: Max. = 2426589.28 + $0^d.52537 \cdot E$ [Pulk Circ 6.23], while Lange found Cepheid type with the approximate period of $4^d.88$ [Leningrad Bull 2.9]. Observed by Brun [NNVS 55]. +

CG Cas = SVS 257. Elements by Lange [Leningrad Bull 2.9]. Brun could not confirm the variability [NNVS 55]. Radial velocity by Joy [ApJ 86.376; 429; 89.358].

CH Cas. Confirmed by Morgenroth, who derived first elements. 5 max. [BZ 17.34; AN 6135]. Improved elements by Kukarkin [AN 6179]. Brun finds the period $15^d.0817$ [NNVS 55].

CI Cas. Observed by van Schewick. Sometimes a period of 110^d is indicated [KVBB 19.16; 36].

CK Cas. Observed by van Schewick [KVBB 19.16; 36].

CL Cas. Elements by van Schewick. 3 max. [KVBB 19.16; 37].

CM Cas. Elements by van Schewick. 2 max. [KVBB 19.16; 37].

CN Cas. Observed by van Schewick [KVBB 19.16; 37].

CO Cas. Observed by van Schewick [KVBB 19.16; 37].

CQ Cas = BD +62°461 ($9^m.4$). Rediscovered by Morgenroth [AN 5974]. Observed by Parenago [NNVS 46]. Zverev finds slow variation with the amplitude $0^m.7$. The star is red [NNVS 55]. Spectrum of the III. type according to Krüger [VAP 24.63; Spec Vat 7.16; 127].

CR Cas. D = $0^P.2+$.

γ Cas = BD +59°144 ($2^m.3$) = NFK 32 = Boss 199 = PD 519 ($2^m.46$) = HR 264 ($2^m.25$) = ADS 782 = HD 5394 (B0p). The star was considered quite constant until 1936, and trustworthy observations on changes in brightness do not seem to exist, according to the investigations of de Roy [BZ 18.81; UAI Circ 630; BSAF 50.513] and Zinner [AN 6296]. The first announcement of a considerable brightening is due to Baize who estimated the magnitude 1936 July 25 being $1^m.85$ [BSAF 50.395]. Rigollet had suspected an increase of brightness early in June, and was certain about it on July 13 [BSAF 50.513; 572]. The further behavior of the star was checked by continuous observations of numerous observers and may be described as follows: The rise is gradual and diminishing in slope up to the maximum at $1^m.57$ (photoelectric) on May 7, 1937, then a sudden drop to $2^m.44$ on November 22; then, together with nonperiodic fluctuations of about $0^m.1$, a new rise to $2^m.1$ July 20, 1938 followed by a slow decrease to $3^m.0$ which brightness was reached at the end of 1939 and was maintained until October 1940, so that the star was considerably fainter than it was before the outburst, viz. $2^m.2$. In the middle of October 1940 a new, sudden, rise began. The light changes produced also a quite extraordinary change of the color, according to the measures of Graff. He found the color b5 in the years of 1932-1935, a6 June 29, 1936, and f3 since 1937 April [AN 6307; 6321; 6346; Wien Ber 146.605; 147.63]. Greaves and Martin measured the color-temperature in 1926 being 16100° and 1937 being 9200° [MN 98.434; Obs 61.117]. A possible effect of the increase in brightness on the two near-by diffuse nebulosities was discussed by Morgan [ApJ 86.100].

γ Cassiopeiae was the first star in whose spectrum bright lines were found. They were discovered by Secchi in 1866 and confirmed by Huggins. In the epoch of visual spectroscopy, several observers claimed to have found variations of the visibility of these bright lines, but it is scarcely possible to decide on the reality of such variations. When spectra were photographed no variations were detected excepting a four year oscillation of V/R, the ratio between the intensities of the violet and red components of the emission lines, discovered by W.J.S. Lockyer and confirmed by him on older plates taken by N. Lockyer. These variations of V/R began to increase in 1929, and the ratio reached the value of 2 at the end of 1933. During the greater part of 1934 the emission lines appeared single, but at the end of this year they were clearly separated and V/R = 0.3. The same occurred in 1937; in this year Baldwin could see the hydrogen lines, normally visible until $H\tau$, until H_{32} and many Fe II lines. Whether the radial velocities are variable is not yet definitely decided; possibly they vary

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in correlation with V/R.

Further References: Observations and remarks by AAVSO [HA 107; 110], Andrenko and others [BZ 19.22; 36; 40; 54; 68; 20.3], Ashbrook [AJ 1125; PA 48.385], Baize [BSAF 50. 395; 513; UAI Circ 627], Baldwin and Tarp-Smith [HAC 546; UAI Circ 837; BZ 22.103], Bielicki [Wars Circ 18], Calder [HB 905], Campbell [HAC 394; HC 435], Cherrington [HAC 392; 394; UAI Circ 625], Fedtke [BZ 19.5; 14; 66; 80; 20.56; VAP 47.73], Flammarion [BSAF 50.396], Graff [BZ 19.10; 28; AN 6321], Huffer [ApJ 89.139], Jacchia [Coelum 6.236], Kaneko [Kyoto Bull 327], Koebcke [BZ 18.65], Lipiński [Wars Circ 17; 20], Loreta [BZ 18. 82; 84; 88; 19.4; 7; 14; 28; 34; 42; 58; 66; 78; 20.6; 11; 22; 26; 29; 34; 39; 45; 48; 59; 21.7; 37; 52; 72; 83; 95; 100; 117; 121; 130; 22.12; 23; 36; 43; 50; 57; 68; 78; 96; AN 6324], Miczaika [BZ 18.70; 86; 19.48; 63; 69; AN 6315; 6344], Mohorovičič [BZ 20.6; 23; 49; 21.27; 22.9; 39; 23.14], de Mottoni [Coelum 8.94], Nassau [HAC 396], Ostrowlew [BZ 18.64], Pagaczewski [BZ 18.65], Peltier [HAC 394], Plassmann [VAP 47.74], Quénisset [BSAF 50. 396], Richter [BZ 19.31; AN 6282], Rigollet [UAI Circ 630], Roy Marshall [HAC 394], Tschernow [Tadjik Circ 35], Witkowski [BZ 18. 65], Zaffi [UAI Circ 631; Coelum 6.236].

Observations of the spectrum and remarks thereupon by Secchi [AN 1612; Memorie della Società Italiana delle Scienze (3) 1,1.116; 2.131; Atti Pont Acc 25.222; Memorie della Società Italiana de'XL (3) 1.10], Huggins [MN 27.131], von Gothard [AN 2539; 2581], von Konkoly [AN 2548; Obs 6.332; O'Gyalla Beob 8. 5], Sherman [American Journal of Science (3) 30.475; AN 2707], Copeland [MN 47.92], Maunder [MN 49.300], Vogel [Bothkamp Beobachtungen 2.29], Vogel and Scheiner [Potsdam Publ 7.99], Hartmann [AN 4135], Maury [HA 28. 100], Cannon [HA 28.261], Belopolsky [Astronomy and Astrophysics 12.259], Keeler [ASP 1. 80], W.W. Campbell [ApJ 2.178; HA 56.184; Lick Bull 181], Merrill [Lick Bull 237; 246], Merrill, Humason, and Burwell [ApJ 76.171], J.N. Lockyer [Proceedings of the Royal Society 44.43; 57.173], Sidgreaves [MN 59.505], Percival [JBAA 16.319], Baxandall [Solar Physics Committee 1914, p.37], Curtiss [Mich Publ 2.1; 3.3; 16; 256], W.J.S. Lockyer [MN 84.412; 88.685; 93.362;619; 95.520; 96.2; 679; UAI Circ 418; 564], Arnulf, Barbier, Chalonge, and Canavaggia [CR 202.1488; JO 19.149], Chalonge [CR 203.362; BSAF 50.513], Chalonge and Safir [CR 203.1329], Baldwin [ApJ 87.573; 89.255; 90.204; 92.82; 93.333], Cherrington [AAS 9.4; 34; 218; ASP 49.91; Perkins Contr 11; 12], Cleminshaw [AAS 8.108; ApJ 83.495], McLaughlin [ApJ 84.235; 85.181; AAS 9.12; Mich Publ 4.177], Heard [JRASC 31.60; 32.353; ApJ 81.341], Koelbloed and Walraven [BAN 314], Mao-Lin and Dufay [CR 209.342], Frost, Barrett, and Struve [ApJ 64.11; 18], Struve and Swings [ApJ 75.161; HAC 545; UAI Circ 836; BZ 22.100], Struve and Elvey [ASP 52.140], Struve and Greenstein [HAC 551; UAI Circ 848], Swings and Edlén [ApJ 88.621], Wellmann [BZ 23. 13]. Color-Temperature by Vandekerkhove [Obs 60.329; 62.76] and Hunter and Martin [Obs 62. 237]. Color equivalent by Hertzsprung [BAN 329].+

IV Cen. D = $0^{P}.11$.

IW Cen. $m_2 = 12^{m}.1$.

IX Cen. D = $0^{P}.09$.

IY Cen. D = $0^{P}.18$.

KK Cen. Very sharp maximum. The light curve resembles that of Z Lacertae.

KL Cen. D only = $0^{P}.045$.

KM Cen. The even and odd minima show a slight difference in depth.

KQ Cen. Swope derived the following elements for this apparently semiregular variable:

I. Max. = 2412580 + 136^{d}·E	29 epochs
II. Max. = 2414740 + 159 ·E	8 epochs
III. Max. = 2415870 + 136 ·E	16 epochs
IV. Max. = 2423890 + 159 ·E	14 epochs

The variable may have a sinuous change but the observations are too scattered. Between 2418100 and 2423880 there are no observations. The observations for 1930 again indicate a shorter period [HB 883].

KS Cen. Elements derived by Martin [BAN 235].

KT Cen. The secondary minimum, being of the same depth as the primary, follows the primary by $2^{d}.604$ or $0^{P}.631$. The width of the latter is about 0.82 of the secondary. For the eccentricity and the longitude of periastron, Uitterdijk derives the values: $0.229 < e < 0.236$, $26° < \omega < 29°$ [BAN 237]. Photometric orbit by Krat and Tchudovitchev [NNVS 41]. Shapley and Swope have verified the elements of Uitterdijk from Harvard plates in the interval 1889-1931, but could find no certain indication for a rotation of the line of apsides, which, therefore, must be exceedingly slow [HB 909]. It was further discussed by Luyten, Struve, and Morgan [Yerkes Publ 7.298]. Remarks on ellipticity by Russell [ApJ 90.650].

KU Cen. Elements by Martin [BAN 232]. 54 short-exposure observations by Alden show that the longer exposures used by Martin have only a small influence in flattening the light curve [AJ 984].

KV Cen. Elements derived by Martin [BAN 235].

KW Cen. Elements derived by Martin [BAN 235].

KX Cen. Elements derived by Martin [BAN 235].

KY Cen. [KZ Cen 11^{s} f $0^{m}.1$ n.] The variability was found when the star was used as comparison star for KZ Centauri. Elements were derived by Martin. $m_2 = 13^{m}.3$ [BAN 235]. The improved elements given in the Table are determined by Mergentaler. 6 min. [Lwów Contr 5.13].

KZ Cen. [KY Cen 11^{s} p $0^{m}.1$ s.] The upper half of the light curve is nearly symmetrical. The slow

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rising which takes one third of the period is remarkable. There is no indication of a constant minimum [BAN 232]. 2 max. by Mergentaler [Lwów Contr 5.13].

LL Cen. Elements derived by Martin. D~7^h. The light curve shows a slight indication of a secondary minimum [BAN 235].

LM Cen. 1 max. by Mergentaler [Lwów Contr 5.17].

LO Cen. The brightness at maximum seems to be variable. The phase of a point with given brightness on the rising branch seems to oscillate over a range of about $0^P.1$.

LP Cen = CoD -41°7135 ($9^m.5$) = CPD -41°5839 ($9^m.2$) = HD 107622 (F0). The elements were derived by Martin. D~6^h. There is no indication of a secondary minimum [BAN 235]. 3 min. by Mergentaler [Lwów Contr 5.16].

LR Cen. A_2 = $0^m.13$. D = $0^P.17$.

LT Cen = CoD -60°3570 ($9^m.3$) = CPD -60°2983 ($8^m.7$) = GZ 11^h1626 (9 1/2^m) = La Plata B 3536 ($8^m.8$) = HD 99895 (A0). D = $0^P.28$. No secondary minimum is indicated. Accordingly, the adopted period has probably to be doubled.

LU Cen. D = $0^P.13$. The even and odd minima show no difference in depth. There is no indication of a secondary minimum. Possibly the period should be doubled.

LW Cen = CoD -62°546 ($9^m.2$) = CPD -62°2151 ($8^m.8$) = GZ 11^h2233 (9^m) = HD 101084 (B8). A_1 = A_2.

LX Cen. A_2 = $0^m.05$. D = $0^P.15$.

LY Cen. The brightness at different maxima seems to be variable.

LZ Cen = CoD -60°3794 ($8^m.4$) = CPD -60°3415 ($8^m.4$) = GZ 11^h3060 ($8^m.3$) = La Plata B 3794 ($8^m.4$) = HD 102893 (B5). m_2 = $8^m.3$ at the phase $0^P.5125$.

MM Cen. m_2 = $12^m.7$.

MN Cen = CoD -60°3559 ($9^m.0$) = CPD -60°2965 ($8^m.6$) = GZ 11^h1561 (9^m) = La Plata B 3528 ($8^m.6$) = HD 99769 (B8). [*$10^m.9$ 147° 7".0.] m_2 = $8^m.7$.

MO Cen = CoD -60°3692 ($9^m.8$) = CPD -60°3264 ($9^m.1$). Spectrum A2 [Potsdam Publ 89.58].

MP Cen = CoD -61°3165 ($9^m.8$) = CPD -61°2564 ($9^m.5$). m_2 = $10^m.2$. Spectrum A5 [Potsdam Publ 89.59].

MQ Cen = CoD -61°3171 ($9^m.5$) = CPD -61°2574 ($9^m.5$). D = $0^P.4$, d = $0^d.2$. Probably the period is to be doubled. Even and odd minima have the same depth. Spectrum F1 [Potsdam Publ 89.59].

MR Cen = CoD -60°3726 ($9^m.8$) = CPD -60°3305 ($9^m.4$). m_2 = $10^m.5$. Spectrum A8 [Potsdam Publ 89.60].

MT Cen. The observations of Uitterdijk do not show any trace of the Nova before 1931 May 7. It is seen the first time on May 9 as 11^m, whereafter it rises $1^m.5$ in 6^h. It is $8^m.5$ on May 11. Then it drops to 10^m on May 18. On the next plate, 1932 July 2, it is invisible. The maximum, therefore, occurred 1931 May 10, and the Nova may have been of the 7th or 8th magnitude [BAN 256]. Description of the light curve by McLaughlin [PA 47.539].

MU Cen. Rybka finds U Geminorum type from 248 observations of Johannesburg plates. 7 max. Intervals of the maxima are observed between 37^d and 471^d [Lwów Contr 2; 4; AAc 2.92].

MV Cen. Elements by Rybka derived from 273 observations on Johannesburg plates [Lwów Contr 2; 4; AAc 2.92]. 13 obs. by Opolski [Lwów Contr 6].

MW Cen. Rediscovered by van Gent [Lwów Contr 2.14]. Elements were at first derived by Rybka from 297 observations on Johannesburg plates [Lwów Contr 2; 4; AAc 2.92]. Improved elements by Opolski [Lwów Contr 6].

MX Cen. Elements derived by Rybka from 274 observations on Johannesburg plates [Lwów Contr 2; 4; AAc 2.92]. 8 obs. by Opolski [Lwów Contr 6].

NN Cen. Swope has observed 6 maxima [HA 90.180].

NO Cen. m_2 = $14^m.2$.

NP Cen = CoD -61°3718 ($9^m.9$) = CPD -61°3551 ($9^m.4$). Spectrum A5 [Potsdam Publ 89.80].

NU Cen. A fraction of the period will not fit the negative observations by Swope [HA 90.180].

NW Cen = HV 6449. Rediscovered by Swope who also derived the elements [HA 90.178].

NZ Cen = HV 6454. Rediscovered by Swope who also derived the elements [HA 90.178].

OP Cen. m_2 = $13^m.8$.

OS Cen.= HV 6459. Rediscovered by Swope who found the period changing. She derived the instantaneous elements:

I. Ep. 0 - 9: Max. = 2414100 + 436^d·E
II. Ep. 9 - 17: Max. = 2418024 + 415 ·E
III. Ep. 17 - 28: Max. = 2421344 + 433 ·E

[HA 90.180]. Spectrum M6e according to Mayall [Mscr].

OU Cen = CoD -61°3864 ($9^m.2$)= CPD -61°3817 ($9^m.2$).

OV Cen = CPD -62°3386 ($9^m.9$).

OW Cen = HV 6472. Rediscovered by Swope who also derived the elements [HA 90.179]. Spectrum M4e according to Mayall and Cannon [HB 913].

OX Cen. m_2 = $14^m.3$.

PQ Cen = CPD -63°2995 ($9^m.5$).

QT Cen. m_2 = $13^m.4$.

QU Cen. [Companion $12^m.0$.]

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QX Cen = HV 6506. Rediscovered by Swope who also derived the elements [HA 90.179].

QY Cen. [Close companion.]

QZ Cen = HV 6509. Rediscovered by Swope who also derived the elements. Apparently there are small fluctuations in either the period or shape of the light curve [HA 90.180].

V 336 Cen. Fluctuations in the light curve amount to $\pm 0^m.5$.

V 339 Cen = CoD -60°5157 ($8^m.7$) = CPD -60°5315 ($9^m.5$) = GZ 14^h797 ($8\ 3/4^m$).

V 342 Cen. Hertzsprung communicates 99 normal places derived from 236 observations made by Kruytbosch [BAN 281].

V 343 Cen. $m_2 = 13^m.5$ at the phase $0^P.515$ [BAN 289].

V 344 Cen. $A_2 = 0^m.07$.

V 345 Cen = HV 8379. RV Tauri type. The elements were derived by Mergentaler. For the minima he found: Min. = 2425645 + 79^d·E. The range varies between $0^m.5$ and $1^m.5$, the period between 69^d and 150^d. The larger the intervals between successive minima the smaller is the amplitude of the light variation [Lwów Contr 5]. The star was rediscovered by Luyten [AN 6138; 6337; Minn Publ 2.88].

V 346 Cen = CoD -61°3158 ($8^m.8$) = CPD -61°2551 ($8^m.3$) = La Plata B 3710 ($8^m.5$) = HD 101837 (B5). O'Connell's elements given in the Table are valid for the primary minimum. For the secondary, the elements are: Min. II = 2427982.536 + $6^d.322236$·E, $m_2 = 8^m.67$. Besides his own 1053 observations O'Connell used the preliminary results which Dugan derived from Wright's estimates on Harvard plates covering about 45 years. From these it appears clearly that the line of apsides is rotating. But the residuals following from the mentioned elements do not fit a sine curve; they may be represented by two straight lines which intersect about 2421340 = 1917.3, nearly midway in the whole series of observations. The elements derived from the Harvard material (1891-1938) are:

Min. I = 2421340.959 + $6^d.32184$·E,
Min. II = 2421337.798 + 6.32230·E.

A comparison of these elements with those derived from the Riverview observations alone (1932-1938) seems to indicate a bending of the residual curves towards the time-axis. O'Connell calculates also the photometric orbit and, from the values of $\omega = 305°.6$, resulting for 1935.5, and $\omega = 270°$ at the time when the minima were evenly spaced, he finds the period of rotation of the line of apsides to be about 180 years. The eccentricity is 0.205 [Riverview Publ 2.5]. Dugan and Wright whose final discussion of the Harvard observations was published at the same time as O'Connell's paper, derive practically identical results. Their elements are:

Min. I = 2421963.674 + $6^d.32227$·E,
Min. II = 2421966.835 + 6.32189·E.

It should be noticed that the designation of the minima is interchanged. The time of the intersection of the two residual straight lines is somewhat later, viz. 2421963 = 1919.0. They assume as the most probable value for the rotation period of the line of apsides between 100 and 200 years, and the corresponding eccentricities between 0.11 and 0.19. The amplitudes of the minimum II and minimum I in O'Connell's designation are $0^m.44$ and $0^m.41$ respectively, the maximum brightness being $8^m.32$ [Princ Contr 19.10]. Remarks on ellipticity by Russell [ApJ 90.648; 650].

V 347 Cen. Elements derived by Mergentaler [Lwów Contr 5].

V 348 Cen = CoD -43°7309 ($9^m.9$). Elements derived by Mergentaler. D = $5^h.7$, d = $0^h.5$. A secondary minimum of $0^m.2$ depth is indicated, but may be not real [Lwów Contr 5].

V 349 Cen. Elements derived by Mergentaler. $m_2 = 14^m.46$ [Lwów Contr 5].

V 350 Cen = CPD -62°2337 ($9^m.6$).

V 351 Cen = HV 8392. Elements derived by Opolski. Type of the light curve γ_2 [Lwów Contr 4]. Rediscovered by Luyten on Harvard plates [AN 6138; 6337; Minn Publ 2.88].

V 352 Cen. Elements derived by Opolski. The light curve is of the form β_4 [Lwów Contr 4].

V 353 Cen. Elements derived by Opolski [Lwów Contr 4; 6].

V 354 Cen = HV 8393. Elements derived by Opolski. The light curve is of the form β [Lwów Contr 4]. The star was rediscovered by Luyten on Harvard plates [AN 6138; 6337; Minn Publ 2. 88].

V 355 Cen = CoD -44°7645 (10^m). RV Tauri type. Elements derived by Opolski. The period is subject to considerable variations [Lwów Contr 4].

V 356 Cen. Elements derived by Mergentaler. $m_2 = 15^m.0$ [Lwów Contr 5, corr.6.24].

V 357 Cen. RV Tauri type. Elements derived by Opolski [Lwów Contr 4].

V 358 Cen. Elements derived by Opolski. The light curve is of the form α_3 [Lwów Contr 4].

V 359 Cen. Opolski found that the star was only visible between 1930 April 20 and 27. In this time the brightness decreased from $13^m.8$ to $15^m.0$. The star is probably a faint Nova. The exact date of the maximum cannot be fixed, since there are no observations during 22 days before the first visibility [Lwów Contr 4]. Description of the light curve by McLaughlin [PA 47.539].

V 360 Cen. Elements derived by Opolski. The light curve is of the form α_2 [Lwów Contr 4].

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V 361 Cen. Elements derived by Mergentaler. The light curve is of the form β_1-γ_2 [Lwów Contr 5].

V 362 Cen. Elements derived by Opolski. The light curve is of the form β [Lwów Contr 4].

V 363 Cen. Elements derived by Mergentaler. D = 9^h [Lwów Contr 5].

V 364 Cen. Elements derived by Mergentaler. The light curve is of subclass a [Lwów Contr 5].

V 365 Cen. Elements derived by Mergentaler. D = $1^d.15$, d = $0^d.38$ [Lwów Contr 5].

V 366 Cen = CoD -46°7710 (10^m) = CPD -46°5709 ($10^m.6$). Elements derived by Opolski. The light curve is of the form α_3 [Lwów Contr 4].

V 367 Cen. Elements derived by Opolski [Lwów Contr 4].

V 368 Cen = 181.1906 = CoD -49°6898 ($8^m.6$) = CPD -49°4965 ($9^m.2$) = GZ 12^h416 ($8\ 1/2^m$) = HD 106165 (Mb). Rediscovered by O'Connell who also derived the elements [AN 6168].

V 369 Cen = CoD -54°4654 ($8^m.1$) = CPD -54°5075 ($8^m.8$) = GZ 12^h545 (8^m) = La Plata A 3712 ($8^m.4$) = HD 106474 (Mb).

V 370 Cen. Elements derived by Mergentaler. The magnitude at maximum has considerable variation. The maxima are sharp [Lwów Contr 5].

V 371 Cen. Elements derived by Opolski. The light curve possesses a very peculiar form, the dropping after the maximum being extremely steep [Lwów Contr 4; 6].

V 372 Cen = HV 8434 = CoD -43°7609 ($9^m.9$). Elements derived by Opolski. The light curve is of the form β_2 [Lwów Contr 4]. Rediscovered by Luyten [AN 6138; 6337; Minn Publ 2.89].

V 373 Cen. 9 maxima of this star were observed by Opolski [Lwów Contr 4].

V 374 Cen. Elements derived by Opolski. The light curve is of subclass a [Lwów Contr 4; 6].

V 375 Cen. Elements derived by Mergentaler [Lwów Contr 5].

V 376 Cen. Elements derived by Opolski. The light curve is of subclass a [Lwów Contr 4; 6].

V 377 Cen = CoD -47°7979 ($9^m.0$) = CPD -47°5743 ($8^m.5$) = HD 112455 (A0). D = $8^h.9$, d = $0^h.5$. There is no indication of a secondary minimum.

V 378 Cen = 93.1907 = CoD -61°3735 ($9^m.1$) = CPD -61°3585 ($9^m.0$) = GZ 13^h666 ($8\ 1/2^m$) = La Plata B 4564 ($8^m.6$) = HD 115514 (G5). Rediscovered on Riverview plates by O'Connell who also derived the elements [AN 6216; Riverview Publ 1.23]. Spectrum F5 [Potsdam Publ 89.81].

V 379 Cen = CoD -59°4723 ($8^m.3$) = CPD -59°4971 ($8^m.4$) = GZ 13^h1046 (9^m) = La Plata B 4635 = HD 116507 (B9). m_2 = $9^m.03$. Photometric orbit by O'Connell [Riverview Publ 1.40].

V 380 Cen = CoD -61°3780 ($9^m.5$) = CPD -61°3704 ($9^m.0$) = La Plata B 4652 ($8^m.9$) = HD 116795 (B8). m_2 = $9^m.833$ at phase $0^P.5050$. Photometric orbit by O'Connell [Riverview Publ 1.45]. Absolute dimensions by Musafarov. Light curve [Tadjik Circ 46; Engelh Bull 18.35].

V 381 Cen = 95.1907 = CoD -56°5158 ($7^m.8$) = CPD -56°5960 ($8^m.4$) = Gou 18781 (8^m) = GZ 13^h2583 (7^m) = La Plata A 4379 ($7^m.9$) = HD 120400 (G5p). Rediscovered on Riverview plates by O'Connell, who also derived the elements [AN 6168; Riverview Publ 1.7]. According to Cannon, the spectrum between Hγ and Hδ resembles class G0, having Hγ even stronger than in that class. Between Hβ and Hγ the spectrum shows strong dark lines and very bright spaces. A bright band with a dark line superposed is situated at about λ 4600 [HC 221; HA 95.310]. The spectrum is found to be variable from F6 to G7 by Mayall and Baker [HC 436]. Proper motion by Wilson [ApJ 89. 224].

V 382 Cen. Elements derived by Prager from 451 observations on Johannesburg plates [BAN 286].

V 383 Cen. Elements derived by Uitterdijk from Bruna's, Oosterhoff's and his own observations. m_2 = $13^m.6$ at the phase $0^P.609$, wherefore the eccentricity of the eclipsing system must be $\geq$ 0.17. Min. II - Min. I = $4^d.13$ [BAN 288].

V 384 Cen. The elements were derived by de Kort from Oosterhoff's and his own observations. m_2 = $12^m.2$ at the phase $8^d.436$ or $0^P.668$. The duration of the primary and secondary minimum equals $0^P.0250$ and $0^P.0625$ respectively. Hence de Kort determines the eccentricity of the binary system to be 0.50 [BAN 292]. Observations by Martin and others [BAN 331].

V 385 Cen. A_2 = $0^m.06$.

V 386 Cen. The maximum brightness is probably not constant.

V 387 Cen. Elements derived by Uitterdijk from Bruna's, Oosterhoff's and his own observations. D only = $0^P.025$ or $0^d.3$. No indication of a secondary minimum [BAN 288].

V 388 Cen. Both of the minima have equal depth.

V 389 Cen. Maximum brightness varies.

V 392 Cen. Opolski finds the light variation irregular [Lwów Contr 4].

V 393 Cen. Secondary minimum indicated.

V 394 Cen. Subclass a.

V 396 Cen = CoD -60°4589 ($8^m.0$) = CPD -60°4568 ($9^m.0$) = GZ 13^h570 ($8\ 1/2^m$) = La Plata B 4544 ($8^m.0$) = HD 115283 (Mb). Spectrum dK4 [Potsdam Publ 89.80].

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V 401 Cen = CoD -59°4722 (10^m) = CPD -59°4970 ($10^m.1$). Spectrum M according to Shapley and Swope [HA 90.178].

V 402 Cen = CoD -62°729 ($9^m.2$) = CPD -62°3275 ($8^m.8$) = La Plata C 2221 ($8^m.9$) = HD 116908 (A0).

V 412 Cen = CoD -57°5333 ($7^m.8$) = CPD -57°6410 ($8^m.6$) = Gou 18925 (7 3/4^m) = GZ 13^h3015 (7 1/2^m) = La Plata B 4947 ($7^m.7$) = HD 121518 (Mb).

V 413 Cen = CoD -58°5430 ($9^m.6$) = CPD -58°5347 ($8^m.8$) = GZ 13^h3426 (10^m) = La Plata B 4997.

V 415 Cen. Elements derived by McLeod. The light curve is characterized by a broad, flat maximum of about a week's duration [PA 46.214].

V 418 Cen = CoD -63°957 ($8^m.0$) = CPD -63°3224 ($8^m.6$) = Gou 19361 (7 3/4^m) = GZ 14^h750 (7 3/4^m) = La Plata C 2527 ($8^m.0$) = HD 125332 (K5).

AA Cep. The star seems to be reddish.

AB Cep. Reddish.

AD Cep = BD +81°10 ($9^m.5$). Confirmed by Kukarkin and Florja [NNVS 43]. Semiregular, perhaps of the RV Tauri type, according to Rügemer. 9 max. 9 min. [AN 6106]. Zverev finds slow variation with an amplitude of about 3^m. The star is red [NNVS 55].

AE Cep. Confirmed by Kukarkin and Florja [NNVS 43]. Elements by Kukarkin [NNVS 46]. 2 max. by Zverev [NNVS 55].

AF Cep. Confirmed by Kukarkin and Florja [NNVS 43]. Elements by Zverev [NNVS 55].

AG Cep. First elements by Morgenroth [AN 5951]. Improved elements by Kukarkin and Florja [NNVS 43]. 1 max. by Zverev [NNVS 55].

AH Cep = BD +64°1717 ($7^m.0$) = AG Hels 13452 ($7^m.3$) = PD 13378 ($6^m.98$) = HD 216014 (B3). The star was discovered to be a spectroscopic binary by Plaskett, the spectroscopic orbit was derived by Pearce who found a period of $2^d.28754$ [JRASC 19.153; DAO 3.171]. The variability was discovered from photoelectric measures by Stebbins who stated eclipsing type with an amplitude of $0^m.2$ [PA 37.156; 388]; Zverev, however, proved Pearce's period P' to be an apparent one, connected with the true period P by the relation: $1/P = 1 - 1/P'$. $m_2 = 6^m.79$. Zverev calculated also the photometric orbit and made a redetermination of the spectroscopic orbit with the true period. Probably there is a rotation of the apsidal line amounting to $3^\circ.2$ a year [BZ 13.25; NNVS 42]. New spectroscopic orbit by Pearce [JRASC 29. 413]. Rediscussion of the spectroscopic orbit elements, apsidal motion and ellipticity by Luyten [Minn Publ 2.33; 45; MN 98.464]. Apsidal motion by Krat [NNVS 43]. Cannon suspects Hβ to be bright [HA 99.268]. +

AI Cep = BD +56°2640 ($9^m.0$) = AG Hels 12515 ($8^m.9$).+

AK Cep = 223.1935. Lavdovsky supposed a period of $14^d.5$ [Pulk Circ 11; NNVS 45; 47]. Confirmed by Morgenroth [AN 6153] and Beljawsky who found the period to be only a half of Lavdovsky's [Pulk Circ 16; NNVS 48]. The elements were derived by Zonn. M-m = $0^P.33$. [BZ 17.37; Wilno Bull 17.27]. Radial velocity by Joy [ApJ 86.404; 429; 89.357].

AL Cep. Rediscovered by Lavdovsky who determined the epoch [Pulk Circ 11; NNVS 45; 47] and by Gitz who derived the approximate period [NNVS 47]. Elements by Kanda [Tokyo Bull 393; Tokyo Astr Obs Rep 7.16].

AM Cep. Elements by Brun. 44 obs. [BAF 4.164].

AN Cep = BD +82°715 ($9^m.2$). Elements by Böhme. 5 max. [BZ 18.28; AN 6262]. 1 max. by Ahnert [BZ 20.52]. Zverev finds a very slow variation. 1 max. [NNVS 55]. Payne-Gaposchkin finds a mean period of $271^d.38$ fluctuating with a mean long period of 4570^d and a range of about $0^P.5$. These fluctuations could be described as a periodic interchange of "even" and "odd" maxima, once in every 17+ periods. The two actual periods which are producing this apparent long period change could however be 271 and 254 days. Color index $+1^m.23$ [by letter]. Spectrum M8e according to Vyssotsky [by letter]. +

AO Cep. Elements by Zonn [BZ 18.70].

AP Cep. Rediscovered by Deutsch [NNVS 56].

AQ Cep. Brun found Cluster type with the period $0^d.6514$. 263 obs. [BAF 6.1]. New elements were derived by Zverev. M-m = $0^P.1$ [NNVS 55]. Zverev's period P and Brun's period P' are connected by the relation: $1/P = 1/P' + 1$.

AR Cep = BD +84°516 ($8^m.0$) = AG Berl D 1528 ($7^m.5$) = HD 217158 (Mb). Confirmed by Rybka [AAb 2.72; Lwów Contr 7.21], Opolski [AAc 3.68], and Zinner, who gives the photographic amplitude $8^m.15$-$8^m.77$ [AN 6358]. Loreta supposes irregular light variation, similar to RV Tauri type stars with a period of 116^d [BZ 21.83; 105]. 3 max. 5 min. [BZ 22.50; 57; 67; 95; 23.8].

AS Cep = BD +59°2627 ($9^m.5$). Nielsen finds slow irregular variation [BZ 19.80; Aarhus Medd 1.171].

AT Cep. Reddish. Zverev finds irregular light variation with a period of about 100^d and amplitude $1^m.5$. 1 min. [NNVS 55].

β Cep = BD +69°1173 ($3^m.0$) = NFK 809 = Boss 5532 = PD 12476 ($3^m.48$) = HR 8238 ($3^m.32$) = ADS 15032 = HD 205021 (B1). β Cephei was the first variable discovered by means of the photoelectric cell. The star was suspected to be variable as early as 1856 by Schmidt, but the period of about one year he suspected, together with the extremely small range, established later, prove that this variability was not real, but merely an effect of the hour angle error, a fact which Schmidt himself held probable [AN 1069]. Gore entered the star in his catalogue of suspected stars on account of Schmidt's remarks and deviating values in several star catalogues [EM 37.241].

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Guthnick, in 1913, used the star as test object for the photoelectric method because its period was the shortest among the spectroscopic binaries. Very soon he established variability within a range of $0^m.05$, the resulting photometric period being exactly the same as the spectroscopic. The light curve was found to be Cepheid-like [AN 4701; 4903; Seel-Festschr p.392; Verh D Phys Ges 16.1023]. Later it was classified as belonging to the special class of β Canis majoris stars by Henroteau [DO 5.77; PA 30.614] and by Baker [ASP 38.93]. The variability was confirmed by Stebbins [Washb Publ 15.56]. Further photoelectric observations by Guthnick and Prager [VBB 1,1.23; 2,3.78; 151; Ntw 3.53], Cummings [Lick Bull 349], and Güssow [AN 5484; 5569; VJS 63.117]. Photographic observations by Henroteau [DO 9.47]. The shape of the light curve and the amplitude are rather variable as found by Cummings and later confirmed by Guthnick and Prager, Güssow, and Mendenhall. Mendenhall also found from spectroscopic observations that the range in the ultra-violet region at λλ 3300, 3600, and 3900A is about 50 percent greater than that found for the photoelectric region at λ 4500A [Lick Bull 418]. The photometric as well as the spectroscopic periods apparently remained constant $0^d.1904795$ from 1902 until 1918. Then they increased rather suddenly to $0^d.1904851$ as stated by Crump and later confirmed by several observers. The variability of the radial velocity was discovered in 1902 by Adams and Frost [ApJ 15.340] and Frost derived the period [ApJ 24.259]. Radial velocities were observed and spectroscopic orbits computed by Henroteau [DO 9.36], Crump [Mich Publ 2.144; ApJ 79. 246], Mendenhall [Lick Bull 418; ASP 41.251], Herassimovitch [Pulk Bull 80], Belopoliskij [Bulletin de l'Académie des Sciences de Russie, VI Série, 12.1783], Van Arnam [DAO 4. 171; PA 36.347], and Kohl [AN 5950]. Also the shape and range of the velocity curve are undergoing considerable variations, likewise the systemic velocity seems to oscillate between -5 and -36 km/sec. Crump supposed a secondary oscillation of about a third of the period. Wave-lengths are given by Albrecht [PA 33.535]. Absolute magnitude and variation of temperature by Struve and Ogrodnikoff [AAS 7.105]. Color-equivalent by Hertzsprung [BAN 329]. Temperature by Sampson [MN 85.230].

RT Cet = CoD -24°552 ($9^m.3$) = CPD -24°145 ($10^m.0$) = Cord A 604 ($9^m.4$).

RU Cet. Elements derived by Zessewitsch. The supposed variability of the period could not be established [Leningrad Eph 1932, p.24; Leningrad Bull 3.13; 19; 21; 4.9; 13; 22; 28; Tadjik Eph 1935-36, p.12; 20; 29; 36; Tadjik Circ 2; 5, corr.6]. Improved elements by Soloviev [Tadjik Circ 25; 41]. 1 max. by Gurjev [Tadjik Circ 26]. 1 max. by Nachapkin [Tadjik Circ 29]. 40 obs. by Lange [Tadjik Ann 1,2.15].

RV Cet = BD -11°427 ($9^m.5$). Confirmed by Zessewitsch and Parenago [AN 5911]. First elements by Lause [AN 5876]. Elements by Zessewitsch [Leningrad Eph 1932, p.24; Leningrad Bull 3.13; 19; 21; 4.9; 13; 22; 28; Tadjik Eph 1935-36, p.12; Tadjik Circ 2]. Improved elements by Rügemer [AN 5921]. 25 obs. by Lange [Tadjik Ann 1,2.15]. 1 max. by Nachapkin [Tadjik Circ 29, corr.41]. Spectrum F, according to Cannon [HB 897].

RW Cet = BD -12°419 ($9^m.2$). First elements by Zessewitsch [AN 5911; SAC 11.51; 13.55; 60; Tadjik Circ 1]. Improved elements by Pagaczewski. $A_2 = 0^m.1$, m_2 at the phase $0^P.483$. $D = 4^h.8$. 8 min. [BZ 16.67; AAc 2.149]. Photometric orbit by Fracastoro [SAI 10.268]. Spectrum A5, according to Cannon [HB 897].

RX Cet = BD -16°90 ($9^m.8$). Elements by Morgenroth [AN 5946]. Improved elements by Selivanow [Tashk Circ 43]. 1 max. by Soloviev [Tadjik Circ 24]. 56 obs. by Lange [Tadjik Ann 1.2.15].

RY Cet. Elements by Morgenroth [AN 5946]. Improved elements by Jensch [AN 6119]. Spectrum M5e, according to Cannon [HB 897].

RZ Cet. Elements by Zessewitsch [Leningrad Eph 1932, p.24; Leningrad Bull 3.19; 21; 4.9; 13; 22; 28; Tadjik Eph 1935-36, p.17; 36; Tadjik Circ 2]. 1 max. by Soloviev [Tadjik Circ 24]. 1 max. by Gurjev [Tadjik Circ 26]. 18 obs. by Lange [Tadjik Ann 1,2.15].

SS Cet = BD +1°491 ($9^m.3$). Rediscovered by Hoffmeister [AN 6002]. Observations by Rügemer [AN 6020; 6106]. Gurjew derived the elements: Min. = 2427718.292 $+2^d.969444 \cdot E$. But these elements do not fit a minimum observed by Rügemer as well as Pólit's elements which are given in the Table. $D = 0^d.13$, $d = 0^d.076$ [SAC 13.60; Tadjik Circ 1]. The photographic range is, according to Pólit, $8^m.8$-12^m [AN 6021].

SV Cet. The elements were derived by Hertzsprung from 139 observations made by Snelders and Kooreman. $m_2 = 15^m.2$ [BAN 293].

SW Cet. Hoffmeister supposes irregular or nova-like light variations [AN 6058]. Approximate elements by Soloviev [Tadjik Circ 18]. Three maxima observed by Ahnert seem to indicate a somewhat larger period of about 410^d which, however, is not compatible with Soloviev's observations [BZ 21.136].

SZ Cet = BD -3°147 ($9^m.9$).

TT Cet = BD -10°374 ($9^m.5$). Elements by Seliwanow [Tashk Circ 57].

TU Cet. Confirmed by Rügemer. 7 min. [AN 6020] and Martinoff [NNVS 55]. Elements by Kanda. $D = 14^h$ [Tokyo Bull 209; Tokyo Astr Obs Rep 5.68].

TV Cet = BD +2°502 ($8^m.5$) = AG Alb 932 ($8^m.4$) = HD 20173 (F0). Confirmed by Rügemer [AN 6058]. Elements by Lause. $D = 0^d.25$ [BZ 20.29; AN 6375].

Y Cir = CPD -64°2497 ($9^m.8$).

Z Cir. The observations from 2423900 through

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2426200 fit a period of 405^d. The light curve resembles that of an eclipsing type star. The early observations from 2411200 to 2423000 will fit a period of 366^d. But whether the variable is a long period, semiregular, or eclipsing is very uncertain [HB 883].

RS Cir. [Preceding of pair.]

RW Cir. [Southern of pair.]

RX Cir. [*$14^m.0$ f.]

RZ Cir. [Southern of pair.]

SU Cir. [Southern of triple.]

SY Cir. The light curve has the shape of a β Lyrae type curve, $m_2 = 14^m.4$. In both minima the rising branch is much steeper than the decreasing one, and the wide range likewise contradicts the eclipsing binary character which, therefore, remains doubtful.

TT Cir = 442.1933. Rediscovered by Luyten [AN 5991; Minn Publ 2.116].

TU Cir. [North following of pair.]

TW Cir. $m_2 = 13^m.3$.

TX Cir. [Companion star at $16^m.0$ and probably another at $16^m.4$.]

UW Cir. The period of $190^d.5$ fits approximately the observations since 1924. In 1929 the variable has irregular fluctuations during maximum.

UY Cir. Red.

UZ Cir. The period is variable. Swope derives the elements: Max. = 2411205 + 528^d·E + 60^d sin (18°·E + 90°), or, supposing a series of abrupt changes:

I. Ep. 0 - 10: Max. = 2411110 + 546^d·E
II. Ep. 10 - 18: Max. = 2416570 + 510 ·E
III. Ep. 18 - 28: Max. = 2420650 + 541 ·E

The latter elements do not only represent much better the observed maximum epochs, but also the light curve given by them is in better agreement with the earliest observations. The light curve is similar to those of R Centauri and R Normae. About 160 days before the principal maximum occurs a secondary one which is either $11^m.9$ or $13^m.1$, and is followed after 80 days by a secondary minimum of either $12^m.5$ or $13^m.3$. The observations show that either a high or a low secondary maximum can be followed by either a shallow or a deep secondary minimum, but however low the maximum is, it is always followed by a minimum. A periodicity in the fluctuations of the secondary maximum could not be determined, because it is seldom observed twice in succession [HB 883].

VW Cir. The star has been throughly investigated by Swope. The mean period is 206^d. The dispersion in maxima is from 150 to 260 days, in minima from 175 to 230 days. The minima are better defined. During the interval between 1889 and 1930 the actual period has changed three times, and every change of the period is accompanied by a remarkable change of the shape of the light curve. Swope derived the following elements:

I. Ep. 0 - 21: Min. = 2411160 + 204^d·E
II. Ep. 23 - 34: Min. = 2415890 + 195 ·E
III. Ep. 36 - 65: Min. = 2418410 + 206 ·E
IV. Ep. 66 - 73: Min. = 2424390 + 222 ·E

In the first interval the maximum is nearly level at $11^m.0$ through somewhat more than half a period. In the second interval the maximum is pointed at $10^m.7$ and is followed by a secondary minimum at $11^m.3$ and a secondary maximum at $11^m.1$. In the third interval the maximum is flat and the decreasing branch has two humps. Only between epochs 48 and 49 the light curve shows an almost perfect β Lyrae character, the secondary minimum being at $11^m.2$. In the fourth interval the light curve consists of two nearly identical waves; the secondary minimum has become as deep or deeper than the primary. The amplitude between primary maximum and primary minimum is nearly the same in all different light curves, viz. $10^m.7$-$11^m.8$. The spectrum was classified as M2 with possibly Hγ and Hδ bright [HB 883].

VX Cir. The period has changed between 2418000 and 2420200. Elements before the change: Max. = 2414360 + 427^d·E [HB 883].

WX Cir. [Middle of triple.]

XX Cir. [North preceding of triple.]

AA Cir. [Preceding of triple.]

AE Cir. Swope gives five intervals for the maxima and four intervals for the minima [HB 883].

AF Cir. [Faint companion.]

AI Cir. This Nova appears for the first time on a plate of 1914 May 29 at $10^m.9$, having probably passed its maximum brightness. It dropped with fluctuations and was seen for the last time at $11^m.8$ August 1. In June 1916 it was fainter than $14^m.5$ [HB 883]. Description of the light curve by McLaughlin [PA 47.539].

AN Cir = HV 6500. Rediscovered by Swope who also derived the elements [HA 90.179].

SU Com. 52 obs. by Baade. Distance 12300 Parsec. The star is situated near NGC 4147 [AN 5839].

SV Com. 51 obs. by Baade. Distance 26900 Parsec. The star is situated near NGC 4147 [AN 5839].

SW Com = BD +20°2687 ($9^m.4$). Confirmed by Kukarkin [NNVS 35].

SX Com. 51 obs. by Baade. Distance 24800 Parsec. The star is situated near NGC 4147 [AN 5839].

SY Com = BD +20°2690 ($9^m.4$). Confirmed by Kukarkin who finds an amplitude from $10^m.5$-$11^m.5$ [NNVS 35].

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SZ Com. 52 obs. by Baade. Distance 20000 Parsec. The star is situated near NGC 4147 and is probably a member of this cluster [AN 5839].

TT Com. 49 obs. by Baade. The double value of the period, $1^d.102$, is also possible. Distance 18700 Parsec. The star is situated near NGC 4147 and is perhaps a member of this cluster [AN 5839].

AN CrA. The period has shortened, the term of the second degree being about $-0^d.6 \cdot 10^{-8} \cdot E^2$.

AU CrA. The period has shortened, the term of the second degree being about $-0^d.26 \cdot 10^{-7} \cdot E^2$.

AV CrA. There is no indication of a secondary minimum. The primary is so deep that doubling the period is not possible.

BH CrA. The period has shortened, the term of the second degree being about $-0^d.23 \cdot 10^{-7} \cdot E^2$.

BK CrA. Improved period, derived from combined Harvard and Johannesburg observational material, by Hertzsprung [BAN 299].

BP CrA. With this U Geminorum type star there are long maxima which last about 8^d, and short maxima of one day only.

CM CrA. The period has shortened, the term of the second degree being about $-0^d.7 \cdot 10^{-8} \cdot E^2$.

CN CrA. Elements derived by Walton [HB 891]. Spectrum M1e according to Cannon [HB 891].

CT CrA. The period of 64^d represents all the observations satisfactorily, except those of 1925.

CY CrA. The period has shortened, the term of the second degree being about $-0^d.2 \cdot 10^{-8} \cdot E^2$.

DN CrA. The period has lengthened, the term of the second degree being about $+0^d.6 \cdot 10^{-8} \cdot E^2$.

EE CrA. The variable has an approximate period of $167^d \pm 5^d$ with a range of $1^m.5$ superposed on a longer variation of about two magnitudes from $13^m.5$ to $15^m.5$ that lasts 3000 to 5000 days. Typical ranges for the short period are $14^m.4$ to $15^m.3$ and $13^m.0$ to $14^m.6$. A maximum for both long and short variations occurs at 2426150 [HA 90.227].

EK CrA = HV 7085. Rediscovered by Swope who also derived the elements [HA 90.220]. There was a change in period between 2422600 and 2423800. Elements before the change: Max. = 2411870 + $421^d \cdot E$ [HA 90.226].

ES CrA = HV 7120. Rediscovered by Swope who also derived the elements [HA 90.221].

FF CrA. There was a change in period between 2423000 and 2423900. Elements before the change: Max. = 2411530 + $140^d.2 \cdot E$ [HA 90.226].

FK CrA. $m_2 = 14^m.5$.

FT CrA = HV 7180. Rediscovered by Swope who also derived the elements [HA 90.222]. There were two shifts in phase by about half the period, the first between 2412600 and 2413000, the second at 2422540. The period remained unchanged. The maximum epochs for the earlier time intervals are 2411510 and 2413020, respectively [HA 90.228].

FW CrA. There was a change in period at 2416600. Elements before the change: Max. = 2411190 + $112^d.2 \cdot E$ [HA 90.226].

GS CrA. There was a change in period between 2422600 and 2423900. Elements before the change: Max. = 2414070 + $284^d \cdot E$ [HA 90.226].

HQ CrA. The light curve is rather symmetrical [HA 90.229].

IT CrA. The elements were derived by Sterne [HA 90.229].

α CrB = BD +27°2512 ($2^m.0$) = NFK 578 = Boss 3961 = PD 8269 ($2^m.58$) = HR 5793 ($2^m.31$) = HD 139006 (A0). The variability was discovered by Stebbins with the selenium photometer [ApJ 39.478; AAS 2.110] and confirmed by photoelectric observations [PA 22.631; Washb Publ 15.56]. His period agrees completely with the spectroscopic period. D = $0^d.48$, $A_1 = 0^m.107$. No trace of a secondary minimum could be detected, either at the expected phase $11^d.64$ or at any other point of the light curve. Photometric orbit [Washb Publ 15.41]. The darkening-coefficient, supposed by Stebbins = 0.5, was derived by Krat = 0.80 [RAJ 10.272]. Photoelectric observations by Guthnick and Prager [VBB 1,1.61; VJS 51.79]. The star was found to be a spectroscopic binary by Hartmann [AN 3890; ApJ 67.269]. Spectroscopic orbits by J.B. Cannon [JRASC 3.152; 419], Jordan [Allegh Publ 1.85], and McLaughlin who also determines a rotation effect [Mich Publ 5.91]. Absolute dimensions by Colacevich [SAI 11.215]. Color-equivalent by Hertzsprung [BAN 329]. +

W Crv = BD -12°3565 (10^m). Elements derived by Lange. 245 obs. [Tadjik Circ 3; 5; Tashk Bull 9]. Seliwanow confirms the short period [Tashk Circ 60]. +

X Crv = BD -18°3471 ($9^m.3$). Elements derived by Seliwanow. RS Cancri type [Tashk Circ 43; 60; NNVS 52].

Y Crv. Seliwanow finds the light variation irregular [Tashk Circ 60; NNVS 52].

U Crt. [*13^m close south.] Confirmed by Esch, who at first supposed a period of about 346^d [AN 6137] but later found that this value must be halved [AN 6283]. Elements, adopting the double period, were also derived by Seliwanow [AN 6179; Tashk Circ 33; 48; 60; NNVS 52].

V Crt = BD -15°3260 ($9^m.3$). First elements were derived by Solovjev: Min. = 2427460.508 + $0^d.70224 \cdot E$ [NNVS 48], but do not fit well the observations of Seliwanov [Tashk Circ 33], who later gave the improved elements of the Table. $A_1 = 0^m.7$, $A_2 = 0^m.4$ [Tashk Circ 33; 60; SAC 15.

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57; NNVS 52]. Spectrum A6 [Potsdam Publ 92. 92]. +

W Crt. Elements by Zessewitsch [Tadjik Circ 2; Leningrad Bull 4.9; 13; Tadjik Eph 1935-36, p.13; 20; 36]. Improved elements by Seliwanow [Tashk Circ 60; NNVS 52]. 1 max. by Guriev [Tadjik Circ 32].

X Crt = BD -9°3371 ($9^m.8$). First elements by Lange [Tadjik Circ 3; 5]. Improved elements by Seliwanow. 1 max. Visual range $0^m.5$ [Tashk Circ 60; NNVS 52].

Y Crt = CoD -24°9682 ($9^m.5$). Seliwanow supposes that the star is an eclipsing one with very long period and considerable range, or that it belongs to the R Coronae Borealis type [Tashk Circ 60; NNVS 52]. Payne-Gaposchkin, however, finds it to be of long period, of strikingly regular behavior [PA 47.221].

Z Crt. Seliwanow found constant brightness from 81 observations [Tashk Circ 60; NNVS 52]. Pagaczewski confirmed the eclipsing type, suggested by Hoffmeister, and derived the elements [BZ 20.23].

TV Cru. D = $0^P.14$.

TW Cru. The even and odd minima show a slight difference in depth.

TX Cru. D = $0^P.20$. A much shorter period of, say, one day does not seem to be excluded.

TZ Cru. D = $0^P.15$. From the form of the light curve it may be assumed that the period should be doubled.

UU Cru. D = $0^P.11$.

UV Cru. D = $0^P.06$.

UW Cru. D = $0^P.07$. m_2 = $12^m.9$ at the phase $0^P.536$.

UX Cru. Bruna derived the first elements: Min. = 2424776.46 + $4^d.0987$·E. This period fitted satisfactorily the observed minima, but sometimes the star appeared bright at the time of a predicted minimum [BAN 207]. De Kort found that the true period is three times the adopted one, and that the secondary minimum precedes the primary by about one third of the corrected period, viz. $4^d.052$ [BAN 292]. Observations by Martin and others [BAN 331].

UY Cru. D = $0^P.15$.

UZ Cru. D = $0^P.05$.

VW Cru = CPD -62°2817 ($9^m.5$) = HD 109176 (K0).

VX Cru. The maximum is very sharp.

VY Cru. The light curve is approximately of the W Ursae majoris type, but not only the minima, but also the maxima show a well marked difference in brightness. m_2 = $12^m.90$, M_2 = $12^m.56$. The light curve, therefore, is similar to that of RT Sculptoris.

VZ Cru. D = $0^P.23$. The period should probably be doubled.

WW Cru. D = $0^P.11$. m_2 = $13^m.0$.

WX Cru. D = $0^P.060$, d = $0^P.040$.

WY Cru. D = $0^P.13$. No secondary minimum is indicated, perhaps the period should be doubled. The variable has probably a faint companion which disturbes the estimates at minimum.

XX Cru. D = $0^P.23$. No secondary minimum is indicated, the period probably has to be doubled.

XY Cru. D = $0^P.14$. A_2 = $0^m.1$.

XZ Cru. D = $0^P.21$. There is no indication of a secondary minimum, the period should probably be doubled.

YY Cru. There seems to be a slight difference in depth between the two minima.

YZ Cru. A_2 = $0^m.14$.

ZZ Cru = CoD -62°615 ($9^m.0$) = CPD -62°2575 ($8^m.8$) = GZ 11^h4044 (9^m) = La Plata C 1857 ($9^m.1$) = HD 105055 (B8). Elements derived by Oosterhoff [BAN 245]. The improved elements, given in the Table, were determined by Alden. m_2 = $9^m.75$ [AJ 1042].

AA Cru = CPD -61°3066 ($10^m.2$).

AB Cru = CoD -57°4397 ($8^m.8$) = CPD -57°5375 ($8^m.4$) = Gou 16762 (9^m) = GZ 12^h697 (9^m) = La Plata B 4063 = HD 106871 (B0). D = $0^P.4$, the period should probably be doubled. Even and odd minima are of the same depth.

AC Cru. Both minima are of the same depth.

AD Cru. The elements were derived by Uitterdijk from 380 observations made by Kluyver [BAN 280].

AE Cru = CoD -60°3877 ($9^m.1$) = CPD -60°3541 ($9^m.0$) = GZ 11^h3579 (9^m) = La Plata B 3873 ($8^m.9$) = HD 104012 (B9).

AF Cru = CPD -62°2682 ($9^m.3$). The elements were derived by Uitterdijk from 380 observations made by Kluyver and 50 observations made by Hertzsprung. D = $0^P.06$ [BAN 280].

AG Cru = 184.1906 = CoD -59°4358 ($8^m.7$) = CPD -59° 4388 ($8^m.6$) = Gou 17256 (8^m) = GZ 12^h2047 ($8^m.4$) = La Plata B 4250 ($8^m.4$) = HD 110258 (F5). Rediscovered on Riverview plates by O'Connell who also derived the elements [AN 6168; Riverview Publ 1.22]. These were fully confirmed by O'Herne from 664 Lembang plates [Lembang Ann 8.40].Proper motion by Wilson [AJ 1105; ApJ 89.223 (Read Cru instead Cen)].

AH Cru. The elements are valid only in the years 1928-1930. A similar period is indicated also in later years, but with other epochs. The star shows variations of a kind suggesting Cepheid variations, but without any strict

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periodicity. In 1924 and 1925 the variable seems to have varied more slowly [BAN 288].

AI Cru = CoD -60°3971 ($9^m.4$) = CPD -60°3723 ($9^m.2$) = GZ 11^h4064 (9^m). [In NGC 4103.] m_2 = $9^m.6$. $d \sim 2^h$.

AK Cru. Elements by van Hoof [BAN 289].

GZ Cyg. Period by Ahnert [BZ 21.137].

HH Cyg. Elements by Ahnert [BZ 21.137].

HI Cyg. Elements by Ahnert [BZ 21.137].

HM Cyg. Elements by Miczaika [BZ 16.24]. Improved period by Böhme [AN 6371].

HN Cyg. Hoffmeister observed two maxima [AN 5655]. Observed by Koyama [AN 6207; Kyoto Bull 310]. Elements by Kozawa. M-m = 37^d [BZ 23.19]. +

HP Cyg. 1 max. by Beljawsky [NNVS 51].

HR Cyg. Miczaika gave the elements: Max. = 2425743.3 + $339^d.5 \cdot E$ [BZ 16.24]. Improved elements by Ahnert [BZ 21.137].

HS Cyg. Elements by Miczaika [BZ 16.24]. 1 max. by Beljawsky [NNVS 51].

HT Cyg. Elements by Ahnert [KE 1939; BZ 21.137].

HU Cyg. Elements by Miczaika [BZ 16.24].

HV Cyg. The star is very red. Miczaika assigns R Coronae Borealis type [BZ 16.31].

HW Cyg. Elements by Ahnert [BZ 21.137].

HX Cyg. Elements by Ahnert [BZ 21.137].

HY Cyg. Elements by Ahnert [BZ 21.137].

II Cyg. Ahnert finds semiregular light variations with the periods 82^d and 93^d [BZ 21.137].

IK Cyg. Elements by Ahnert [BZ 21.137].

IM Cyg. Elements by Ahnert [BZ 21.137].

IO Cyg. Elements by Ahnert [BZ 21.137].

IP Cyg. 85 obs. by Böhme showed the star to be always [$13^m.4$ [AN 6371].

IQ Cyg. Elements by Ahnert [BZ 21.137].

IS Cyg. 1 max. by Beljawsky [NNVS 51].

IT Cyg. Period by Ahnert [BZ 21.137].

IX Cyg. Period by Ahnert [BZ 21.137].

IY Cyg. The variability was confirmed by visual observations [Sonn Mitt 20].

IZ Cyg = 262.1930. [*$12^m.5$ closely sp.] Rediscovered by Tamm [AN 5741]. 1 max. by Esch [BZ 12.88]. 5 max. by Zessewitsch [AN 5838]. 2 max. by Böhme [AN 6371].

KL Cyg. [*15^m close.] 7 obs. by Parenago [NNVS 45]. 117 obs. by Böhme [AN 6413]. Elements by Ahnert [BZ 21.137].

KN Cyg. Beljawsky finds only small variations around $14^m.5$ [NNVS 51].

KP Cyg. Parenago assigns Cluster type [NNVS 45].

KR Cyg = BD +30°3915 ($9^m.1$) = AG Lei 7989. Elements by Zessewitsch [AN 5838] and Lassovszky who also computed the photometric orbit [AN 6174]. Improved elements by Zessewitsch [SAC 12.43; 13.55; Tadjik Circ 1]. Photometric orbit and limb darkening by Hnatek [AN 6260].+

KT Cyg. The star is not reddish. Parenago assigns Cluster type [NNVS 45].

KU Cyg. [BD +46°2879 ($9^m.3$) 7^s p $1'.3$ n.] Period by Parenago. 10 min. [NNVS 45]. 1 min. by Beljawsky [NNVS 51].

KV Cyg. Böhme assigns W Ursae majoris type with a period of $1^d.986/n$ [AN 6413].

KY Cyg. Red.

KZ Cyg. Elements by Parenago. M-m = 180^d+. Form of the light curve β_2 [NNVS 45].

LN Cyg. Elements by Zessewitsch [AN 5771].

LO Cyg. m_2 = $13^m.25$. 15 min. 192 obs. by Wachmann [AN 6115]. Photometric orbit by Nekrasova [NNVS 50].

LP Cyg. [BD +47°3546 ($8^m.5$) $4'.3$ s *$12^m.5$ $0'.2$ n.] Rediscovered by Wachmann who derived the elements [AN 5805; 6115].

LQ Cyg. Red.

LR Cyg. Wachmann supposed at first a period of $2^d.00008$ which, however, could not be verified from further observations. 196 obs. [AN 6115].

LS Cyg. Elements by Wachmann. 4 max. [AN 6115].

LU Cyg. Elements by Wachmann. D = $0^d.7$. 192 obs. [AN 6115].

LV Cyg. Position by Wachmann [AN 5805]. The variability was confirmed by Wolf [AN 5838].

LW Cyg = BD +49°3673 ($9^m.1$) = PuMo 1269 = Du_4 257 ($8^m.8$-$9^m.0$) = AN 4514, Nr.156 = Lund Medd II 27, Nr.346 = AJ 1105, Nr.361 = HD 208512 (Nc). The spectrum Nc shows no light of shorter wave length than Hβ and resembles the spectrum of VX Andromedae [HA 99.265]. Observations by Böhme show only small variations between $11^m.3$ and $11^m.8$. The variability is somewhat doubtful [AN 6371]. Proper motion by Palmér [Lund Medd II 103.166] and Wilson [AJ 1105; ApJ 90. 355].

LX Cyg. [*12^m 340° 20".] Parenago supposed a period of 338^d? [NNVS 45]. Wachmann derived the elements given in the Table. 3 max. [AN 6115]. 16 obs. by Nekrasova [NNVS 54]. 73 obs.

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by Olivier and others. Visual maximum at $9^m.2$ [Penn Publ 5,3.62].

LY Cyg = 349.1929. [$*10^m.5$ nnf 2!7 $*12^m$ ssp 0.8 $*14^m$ 120° 15".] Rediscovered by Hoffmeister [AN 5655; Sonn Mitt 17]. Elements by Wachmann. 5 max. [AN 6115]. 65 obs. by Olivier and others [Penn Publ 5,3.62].

LZ Cyg = 350.1929. [BD +48°3553 ($9^m.3$) nnf 2!0 $*10^m.5$ s 1!1 $*13^m$ ssf 0!6 dpl 13^m nf 0!6 and 0!8.] Rediscovered by Hoffmeister [AN 5655; Sonn Mitt 17]. Elements by Wachmann [AN 6115-6116].

MN Cyg. Elements by Wachmann. 4 max. 5 min. [AN 6116].

MO Cyg. Elements by Wachmann. 4 max. [AN 6116].

MP Cyg. [$*13^m.0$ 180° 15".] Elements by Wachmann. 3 max. [AN 6116]. 11 obs. by Nekrasova [NNVS 54]. Rediscovered by Deutsch [NNVS 56]. 47 obs. by Olivier and others [Penn Publ 5.3.64].

MR Cyg = BD +47°3639 ($8^m.5$) = AG Bo 16204 ($8^m.9$). Elements by Rügemer. 177 obs. [AN 5859], Wachmann. 225 obs. $D_1 = 0^d.42$, $D_2 = 0^d.35$, $d < 0^d.01$, while Rügemer had found $d = 0^d.056$ [AN 6116], and Himpel [AN 6253]. Improved elements by Swope. $m_2 = 8^m.91$ [HB 914]. 2 min. by Parenago [NNVS 45]. 1 min. by Hurnik [SAC 17.64]. Limb darkening and color index by Himpel [AN 6028]. Photometric orbit by Johnson [AJ 997], Kopal [AN 5910], Nekrasova [NNVS 50; 54], and Fracastoro [SAI 10.263]. Spectrum A0 according to Wachmann [AN 5805]. Spectroscopic orbit by Pearce [JRASC 29.413; ASP 47.221; AAS 7.243; 8.167; MN 94.309]. Remarks on ellipticity by Russell [ApJ 90.650].+

MS Cyg. Elements by Wachmann. The light variation is not very regular. Both the maxima and the minima are sometimes broad (30^d-80^d), sometimes pointed. M-m = $96^d.6$ max. 4 min. [AN 6116]. 82 obs. by Olivier and others. Visual range $11^m.6$-$13^m.6$ [Penn Publ 5,3.64].

MT Cyg. Reddish.

MU Cyg. Elements by Wachmann. $m_2 = 14^m.45$. 6 min. 182 obs. [AN 6116].

MW Cyg = BD +32°3743 ($9^m.4$). Confirmed by Zessewitsch [AN 5911]. Elements by Lange. M-m = $1^d.7$. 136 obs. There is a considerable disagreement between the visual and photographic light curves [NNVS 35; Leningrad Bull 2.13]. Oosterhoff derived from 29 maxima, observed on Harvard plates, the elements: Max. = 2425173.40 + $5^d.9550 \cdot E$ [HB 900]. These elements were confirmed by Parenago [NNVS 57-58]. Radial velocity by Joy [ApJ 86.380; 429; 89. 357].

MX Cyg. Confirmed by Zessewitsch on Moscow plates [AN 5911]. Invisible, [$13^m.3$, on 86 plates examined by Böhme [AN 6328]. 20 obs. of Kaho show the star between $11^m.0$ and $11^m.3$ [Tokyo Bull 298]. Corrected position by Kaho [Tokyo Bull 322]. It seems doubtful if Böhme's observations refer to the same star.

MY Cyg = BD +33°3862 ($8^m.5$) = AG Lei 8157 = HD 193637 (A). Confirmed by Zessewitsch [AN 5911]. Elements by Rügemer. D = $0^d.28$. No secondary minimum indicated [BZ 14.46]. 1 max. by Szczyrbak [AAc 4.14]. Improved elements by Hurnik [SAC 17.64]. Color a4 by Graff [BZ 21. 90; Wien Ber 149.27]. +

MZ Cyg. Elements by Zessewitsch [Inf Circ 1.8] and Beyer. 210 obs. [BZ 17.75; AN 6184]. 1 max. by Jacchia [BZ 18.43]. Meshkova found that the period had changed suddenly in 1931 from $21^d.0655$ to $21^d.178$, but this result must be considered doubtful on account of the unreliability of the earlier maxima. 257 obs. [NNVS 57-58]. Radial velocity by Joy [ApJ 86.380; 429; 89. 357].

NO Cyg. Observed by Himpel [AN 270.186]. Spectrum G5 according to Baade [AN 5967]. Absolute magnitude by Palmér [Lund Medd II 103.128].

NP Cyg. Period probably variable. Spectrum A2 according to Baade [ApJ 79.477].

NR Cyg. Color index $+1^m.40$. Absolute magnitude by Palmér [Lund Medd II 103.128].

NU Cyg. $m_2 = 14^m.9$.

NY Cyg. Spectrum A1 according to Baade [ApJ 79. 477].

NZ Cyg. $m_2 = 14^m.2$.

OQ Cyg. Absolute magnitude by Palmér [Lund Medd II 103.128].

OR Cyg. Spectrum A4 according to Baade [ApJ 79. 477].

OS Cyg. Period variable. Spectrum A5 according to Baade [ApJ 79.477].

OT Cyg. Spectrum A1 according to Baade [ApJ 79. 477].

OU Cyg. $m_2 = 15^m.6$. Spectrum F3 according to Baade [ApJ 79.477].

OV Cyg. Spectrum A8 according to Baade [ApJ 79. 477].

OY Cyg. Absolute magnitude by Palmér [Lund Medd II 103.128].

PQ Cyg. Spectrum A8 according to Baade [ApJ 79. 477].

PR Cyg. Absolute magnitude by Palmér [Lund Medd II 103.128].

PU Cyg. Spectrum N according to Baade [AN 5967]. Absolute magnitude by Palmér [Lund Medd II 103.128].

PV Cyg. Spectrum A1 according to Baade [ApJ 79.477].

PX Cyg. Spectrum M5e according to Baade [AN 5967].

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PY Cyg. $m_2 = 15^m.2$.

PZ Cyg. Absolute magnitude by Palmér [Lund Medd II 103.128].

QR Cyg. Spectrum A3 according to Baade [ApJ 79. 477].

QS Cyg. $m_2 = 13^m.3$. Spectrum A0 according to Baade [ApJ 79.477].

QT Cyg. The period may be $3^d.33$. Spectrum A5 according to Baade [ApJ 79.477].

QU Cyg. $m_2 = 15^m.1$.

QX Cyg. $m_2 = 14^m.5$. +

QZ Cyg = BD +37°3710 ($9^m.4$). Spectrum M3 according to Baade [AN 5967]. Absolute magnitude and proper motion by Palmér [Lund Medd II 103. 128; 164].

V 335 Cyg. Spectrum M1 according to Baade [AN 5967]. Absolute magnitude by Palmér [Lund Medd II 103.128].

V 338 Cyg. Spectrum M5e according to Baade [AN 5967].

V 341 Cyg. Spectrum M5e according to Baade [AN 5967].

V 343 Cyg. Radial velocity by Joy [ApJ 86.404; 429; 89.357].

V 345 Cyg. Parenago found the star on all of his 29 plates at the normal brightness [NNVS 40].

V 346 Cyg. Confirmed by Parenago [NNVS 40]. Elements by Florja [Tashk Circ 19]. 210 obs. Photometric orbit by Florja. $m_2 = 11^m.71$. D = $0^d.593$, d = $0^d.030$ [NNVS 45]. 1 max. by Koyama [Kyoto Bull 275] belongs to V 363 Cygni. 21 obs. [OAAR 1.231].

V 347 Cyg. Confirmed by Parenago [NNVS 40].

V 348 Cyg. Confirmed by Parenago [NNVS 40].

V 349 Cyg. Confirmed by Parenago [NNVS 40].

V 350 Cyg. Confirmed by Parenago [NNVS 40].

V 352 Cyg. Confirmed by Parenago [NNVS 40].

V 353 Cyg. Confirmed as eclipsing star by Parenago [NNVS 40].

V 354 Cyg. Absolute magnitude by Palmér [Lund Medd II 103.128].

V 355 Cyg. Confirmed as eclipsing star by Parenago [NNVS 40].

V 356 Cyg. Variability not certainly confirmed by Parenago [NNVS 40].

V 357 Cyg. Confirmed by Parenago [NNVS 40].

V 358 Cyg. Confirmed by Parenago [NNVS 40].

V 359 Cyg. Confirmed by Parenago [NNVS 40].

V 360 Cyg. Confirmed by Parenago who at first supposed eclipsing type with a period of $6^d.96$ [NNVS 40]. Florja later found Cepheid type with a period of $32^d.03$. 183 obs. [NNVS 45; Tashk Circ 20]. Finally Parenago stated some irregularities, typical for the RV Tauri type, and derived two sets of elements with the periods $64^d.00$ and $63^d.26$ respectively, the latter of which fits the observed minima somewhat better. 15 min. 60 obs. The elements given in the Table refer to minima [NNVS 46]. Absolute magnitude by Palmér [Lund Medd II 103.128]. +

V 363 Cyg = SVS 307. Rediscovered by Beljawsky [NNVS 37]. Parenago found the star invisible on 19 plates. He suggests therefore that the period may be near to one year, or that the variable is a Nova [NNVS 40]. +

V 364 Cyg. Rediscovered by Morgenroth [AN 6002].

V 365 Cyg. Rediscovered by Morgenroth [AN 6002].

V 366 Cyg = BD +53°2479 ($9^m.1$). Elements by Beyer. 434 obs. $m_2 = 9^m.55$ at the phase $0^p.489$ [BZ 20. 46; AN 6408]. 1 min. by Zonn [BZ 21.10]. Parenago observed the star only in its normal light [NNVS 43].

V 367 Cyg = BD +38°4235 ($6^m.7$) = AG Lu 9669 ($7^m.0$) = PD 11879 ($7^m.04$) = ADS 14314 = HD 198287-88 (F5+A3). [*$13^m.7$ 256° 2".3.] Variation was previously suspected by Humason [ASP 44.125]. Confirmed by Kukarkin [Tashk Circ 1]. New elements by Lause. 10 min. [AN 6186]. Improved elements by Kukarkin and Parenago. Photographic amplitude $7^m.60$-$8^m.39$, $m_2 = 8^m.16$ [NNVS 57-58]. Description of the system by Pishmish. 2000 obs. [PA 47.511]. Cannon describes the spectrum as a blend of two spectra of nearly equal brightness [HA 98.258]. Merrill mentioned the bright Hα line [ASP 35. 263; 307]. Humason and Christie find bright hydrogen lines and strong enhanced lines of Ti and Fe. The radial velocities show a period of $18^d.60$, identical with the light variation period, and moreover a period of 12.3 years for the variation of the whole system. Christie classifies the spectrum as cF2ev [ASP 42.252; ApJ 78.200]. McLaughlin supposes an intrinsic variation of one component of the eclipsing pair [AAS 8.15; 118]. Color f7 by Graff [Wien Ber 149.27].

V 368 Cyg. Elements by Parenago. 7 min. [NNVS 45].

V 369 Cyg. Elements by Hoppe [AN 6094].

V 370 Cyg. Multiple of period derived by Parenago. 9 min. [NNVS 45].

V 371 Cyg = SVS 469. Rediscovered by Beljawsky, who found a multiple of the period to be $45^d.3$. 3 min. [NNVS 44]. Elements by Piotrowski. $D \sim 5^d$ [AAc 2.132].

V 372 Cyg. Elements by Hoppe [AN 6094].

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V 374 Cyg = 973.1935. [*14^m.4 sp.] First elements by Beljawsky [NNVS 40] and Zonn [BZ 18.2]. Improved elements by Zonn. D = 0^P.07, d = 0^P.03 [Wilno Bull 17.25].

V 376 Cyg. Rediscovered by Beljawsky who also derived the elements [NNVS 44], and by Deutsch [NNVS 56].

V 377 Cyg. Rediscovered by Beljawsky who also derived the elements [NNVS 44].

V 378 Cyg. Rediscovered by Deutsch [NNVS 56].

V 380 Cyg = BD +40°3902 (5^m.5) = AG Bo 13451 (6^m.1) = Boss 5070 = PD 11047 (5^m.85) = HR 7567 (5^m.62) = HD 187879 (B2). The elements were derived by Kron who also calculated the photometric orbit. m_2 = 5^m.71 at the phase 0^P.431 [ApJ 82.225]. Observed by Zverev [Sternb Publ 8,1.110]. Spectroscopic elements by Harper [PA 29.219; DAO 1.257; 6.244]. Hypothetical system constants by Gaposchkin [VBB 9,5.84]. The lines in the spectrum are narrow [HA 98.253]. Color b9 by Graff [BZ 21.90; Wien Ber 149.7; 27]. Remarks on ellipticity by Russell [ApJ 90.650]. Apsidal motion discussed by Luyten BAN 309]. A new determination of the orbital elements, the absolute dimensions, and the apsidal motion was carried out by Kopal [HC 441]. +

V 382 Cyg = BD +35°4062 (8^m.7) = AG Lu 9244 (8^m.6) = HD 228854 (B). Elements derived by Piegza. m_2 = 9^m.40 at the phase 0^P.497 [AAc 2.126; SAC 14.58; 15.58]. Improved elements by Kwiek [SAC 15.64]. Color g3 by Graff [BZ 21.90; Wien Ber 149.14; 27].

V 383 Cyg = 971.1935. Elements by Zonn [BZ 18.2; Wilno Bull 17.22]. Radial velocity by Joy [ApJ 89.357]. Absolute magnitude by Palmér [Lund Medd II 103.128].

V 384 Cyg = 972.1935. Elements by Zonn. 3 max. 3 min. [BZ 18.2; Wilno Bull 17.24]. Absolute magnitude by Palmér [Lund Medd II 103.128].

V 385 Cyg. D = 6^h.0. m_2 = 12^m.43.

V 386 Cyg = BD +41°4049 (9^m.1). [Following of a pair.] Morgenroth suspected Algol type [AN 6119], Gurjew assigned W Ursae majoris type [Tadjik Circ 13]. Piegza found Cepheid type and derived provisional elements [AAc 2.126] which were roughly confirmed by Seliwanow [BZ 18.22]. Improved elements by Parenago [NNVS 57-58]. Radial velocity by Joy [ApJ 86.405; 429; 89.357].

V 387 Cyg. First elements by Zessewitsch. 4 min. [Tadjik Circ 11]. Improved elements by Piotrowski. m_2 = 12^m.25 [AAc 2.126; SAC 14.58].

V 388 Cyg = BD +30°4051 (9^m.3). First elements by Piegza [AAc 3.30; SAC 15.58] which are nearly identical with the improved elements by Kwiek. m_2 = 9^m.7 [BZ 18.61]. 1 min. by Gurjew [Tadjik Circ 13]. Color a5 by Graff [Wien Ber 149.27].

V 389 Cyg = BD +29°4324 (6^m.1) = AG Cbr E. 12174 (6^m.1) = Boss 5442 = PD 12154 (5^m.98) = HR 8094 (5^m.57) = ADS 14682 = HD 201433 (A0). [*8^m.0 310° 3".5.] Guthnick found rather irregular light changes whose maxima could be represented sometimes by the elements: Max. = 2423298.460 + 1^d.12912·E, at other times by: Max. = 2429162.080 + 1^d.19328·E. The range is extremely variable and often reduced to zero. The spectroscopic period of this binary system was determined by Young, who found the spectrum B8, as 3^d.3137 [DAO 1.183; 319] and corrected by Guthnick to 3^d.31322, but Luyten calls this value in question, and indeed it does not satisfy the observations [ApJ 84.94; 101]. Observations by Guthnick and others [BZ 4.45; VJS 58.83; 60.65; 72.153; 73.88; 74.58; Seel-Festschr 395]. General discussion of photoelectric and spectrographic observations by Guthnick [AN 6252; Abh Berl Akad 1937, Nr.3; 1939, Nr.6]. 63 photoelectric obs. by Stebbins [Washb Publ 15.94]. +

V 392 Cyg. Elements by Hoppe [AN 6094].

V 393 Cyg = BD +42°3548 (8^m.9) = AG Bo 13623 (9^m.0) = HD 189548 (A0). Confirmed by Lause [AN 6420]. Color a3 by Graff [Wien Ber 149.27].

V 395 Cyg = BD +43°3505 (8^m.3) = AG Bo 13816 (8^m.2) = HD 191546 (G0). Color g0 by Graff [Wien Ber 149.27].

V 396 Cyg = SVS 734. Rediscovered by Beljawsky who gave the approximate period [NNVS 50; Pulk Circ 19].

V 397 Cyg. Zonn found irregular light change [Wilno Bull 17.23].

V 398 Cyg. Beljawsky assigned eclipsing type. 2 min. [NNVS 44]. This was confirmed by Zonn who gave 3 min. [Wilno Bull 17.24].

V 399 Cyg. RV Tauri type. Elements by Zonn. 5 max. 3 min. [BZ 20.30].

SY Del. Rediscovered by Plaut who finds a range from 10^m.5-[13^m.5 [AN 5793; 5846]. Confirmed by Zessewitsch [AN 5838]. Elements by Jensch who finds only a small range between 11^m.8 and 12^m.6. His epoch should be corrected by +4^d [KVBB 19.16; 38].

SZ Del. Confirmed by Esch who observed the maxima 2426331, 6587, 7059, 7286. He at first supposed the period to be 255^d, later 237^d [AN 5838; by letter]. Improved elements by Prager [KE 1934].

TT Del. Elements by Zessewitsch [Leningrad Bull 2.12].

TU Del. Confirmed by Zessewitsch [AN 5911]. Observations by Jensch who suggests RV Tauri type [KVBB 19.16; 38] and Kozawa [Mem Astr Soc Jap 6].

TV Del. [BD +12°4331 (8^m.5) 18^s f 1'.6 s.] Rediscovered by A. Beljawsky [NNVS 44]. 1 max. by S. Beljawsky [NNVS 47]. First elements by Esch: Max. = 2427590 + 225^d·E, visual amplitude 11^m-[13^m [AN 6137]. Improved elements by Jensch.

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6 max. [KVBB 19.16; 38].

TW Del = BD +7°4499 ($9^m.3$) Rediscovered by Hoffmeister [AN 6118]. Beljawsky [NNVS 47] and Seliwanow [Tashk Circ 50] suppose long period. The elements are derived by Miczaika from 9 max. [AN 6188]. 1 obs. by Kanda [Mem Astr Soc Jap 5-6].

TX Del = BD +3°4437 ($9^m.2$) = AG Alb 7291 ($8^m.9$). Elements by Gurjew [Tadjik Circ 13].

TY Del = BD +12°4539 ($9^m.4$). Miczaika supposed a period of $6^d.5/n$ [BZ 17.75]. The true period was found by Gurjev [Tadjik Circ 10; 13; 25]. New elements by Kwiek [BZ 18.61] and Miczaika [AN 6252]. Improved elements by Nachapkin [Tadjik Circ 30], who also, basing on 487 observations by Gurjev, calculates the photometric orbit [NNVS 56].

TZ Del. Observed by Beljawsky [NNVS 47]. Elements by Jensch. The minima are rather pointed. 4 min. [KVBB 19.16; 38].

UU Del. Elements by Jensch. 5 max. The light curve is sinusoidal [KVBB 19.16; 38].

UV Del. Jensch finds that the light variation may be semiregular with a period of 235^d [KVBB 19.16; 38].

UW Del. Elements by Jensch. 3 max. [KVBB 19.16; 38].

UX Del. Confirmed by Beljawsky [NNVS 47]. Elements by Jensch. 5 max. [KVBB 19.16; 39].

UY Del. Observations by Jensch [KVBB 19.17; 39].

UZ Del. Confirmed by Beljawsky [NNVS 47]. Elements by Jensch. 5 max. Light variation rather irregular [KVBB 19.17; 39].

VV Del. Elements by Jensch. 7 min. $D = 0^d.37$. A secondary minimum of $0^m.05$ is indicated [KVBB 19.17; 39].

VW Del. Elements by Jensch. 5 max. [KVBB 19.17; 39].

VX Del. Elements by Jensch. 6 max. Irregular waves in the decreasing branch [KVBB 19.17; 40].

VY Del. Observations by Jensch [KVBB 19.17; 40].

VZ Del. Observations by Jensch [KVBB 19.17; 40].

WW Del. Elements by Jensch. 7 max. [KVBB 19.17; 40].

WX Del. Not found by Beljawsky [NNVS 47]. Elements by Jensch. 3 max. [KVBB 19.17; 40].

WY Del. Elements by Jensch. 6 max. [KVBB 19.17; 40].

WZ Del. Elements by Jensch. 6 max. [KVBB 19.17; 40].

XX Del. Elements by Jensch. 5 min. $D = 0^d.2$. $m_2 = 13^m.1$ [KVBB 19.17; 40].

XY Del. Confirmed by Beljawsky. 1 max. [NNVS 47]. Elements by Jensch. 7 max. [KVBB 19.17; 41].

XZ Del. Confirmed by Beljawsky [NNVS 47]. Elements by Jensch. 6 max. [KVBB 19.17; 41].

YY Del. Confirmed by Beljawsky [NNVS 47]. Elements by Jensch. $D = 0^d.12$. 9 min. [KVBB 19.17; 41].

YZ Del. Confirmed by Beljawsky [NNVS 47]. Elements by Jensch. 6 max. [KVBB 19.17; 42].

ZZ Del. Confirmed by Beljawsky [NNVS 47]. Elements by Jensch. 14 max. [KVBB 19.17; 42].

AA Del. Observations by Jensch. Perhaps RV Tauri type [KVBB 19.17; 42].

AB Del. Elements by Jensch. 5 max. [KVBB 19.17; 43].

AC Del. Observations by Jensch [KVBB 19.17; 43].

AD Del. Elements by Jensch. 6 max. Similar to RV Tauri type [KVBB 19.17; 43].

AE Del. Elements by Jensch. 5 max. [KVBB 19.17; 43].

AF Del. Elements by Jensch. 4 max. [KVBB 19.17; 43].

AG Del. Elements by Jensch. 4 max. [KVBB 19.17; 44].

AH Del. Elements by Jensch. Perhaps RV Tauri type [KVBB 19.17; 44].

AI Del. Observations by Jensch [KVBB 19.17; 44]. Beljawsky finds only small variations of not more than $0^m.4$ [NNVS 47].

AK Del. Observations by Jensch [KVBB 19.17; 44]. Beljawsky finds only small variations of not more than $0^m.4$ [NNVS 47].

AL Del. Elements by Jensch. $m_2 = 11^m.7$. 6 min. [KVBB 19.17; 44].

AM Del. Observations by Jensch [KVBB 19.17;44].

AN Del. Confirmed by Beljawsky [NNVS 47]. Elements by Jensch. 4 max. [KVBB 19.17; 44].

AO Del. Observations by Jensch [KVBB 19.17; 45].

AP Del. Observations by Jensch [KVBB 19.17; 45].

AQ Del. Observations by Jensch. Some of the expected maxima did not occur [KVBB 19.17; 45].

AR Del. Observations by Jensch [KVBB 19.17; 45].

AS Del. Observations by Jensch [KVBB 19.17; 45].

AT Del. Confirmed by Beljawsky [NNVS 47]. Observations by Jensch [KVBB 19.17; 45].

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AU Del. Observations by Jensch [KVBB 19.17; 45].

AV Del. Rediscovered by Beljawsky. 2 min. [Pulk Circ 15, corr.19; NNVS 47]. Elements by Jensch. 5 min. D = $0^d.4$ [KVBB 19.17; 45].

AW Del. Observations by Jensch [KVBB 19.17; 46].

AX Del. Confirmed by Beljawsky [NNVS 47]. Elements by Jensch. 8 max. [KVBB 19.17; 46].

AY Del. [*close.] Confirmed by Beljawsky [NNVS 47]. Observations by Jensch [KVBB 19.17; 46].

AZ Del. Elements by Jensch. 4 max. [KVBB 19.17; 46].

BB Del. Elements by Jensch [KVBB 19.17; 46].

BC Del. Elements by van Schewick [AN 6309]. +

BD Del. Elements by van Schewick [AN 6309]. +

BE Del. Observations by Jensch. 3 min. [KVBB 19. 18; 47].

BF Del. Observations by Beljawsky [NNVS 47] and Jensch. 7 min. [KVBB 19.18; 47].

BG Del. Observations by Jensch. 6 min. [KVBB 19. 18; 48].

BH Del. Rediscovered by Beljawsky [NNVS 44]. Observations by Jensch. 5 min. [KVBB 19.18; 48]. Elements by Kordylewski. D = 7^h. A_2 = $0^m.1$ [AAc 3.91; SAC 15.58]. Jensch's minima suggest to increase the period to $1^d.61411$.

BI Del. Elements by Kordylewski. D = 12^d [AAc 3. 91; SAC 15.58].

BK Del. Rediscovered by Beljawsky who finds Cluster type and observes 4 max. [Pulk Circ 15, corr.19; NNVS 47]. Jensch, however, assumes eclipsing type with a range between $11^m.7$ and $13^m.5$ and observes 6 min. [KVBB 19.18; 48].

BL Del. Observations by Jensch. 3 min. [KVBB 19. 18; 48].

BM Del. Observations by Jensch. 2 max. [KVBB 19. 18; 48].

BN Del. Observations by Beljawsky [NNVS 47] and Jensch. 3 min. [KVBB 19.18; 49];

BO Del. Observations by Jensch. 4 min. [KVBB 19. 18; 49].

BP Del. Observations by Jensch. 2 min. [KVBB 19. 18; 49].

BQ Del. Observations by Jensch. 5 min. [KVBB 19. 18; 49].

BR Del. [*13^m np.] Elements by Esch. Possibly the period may be halved [AN 6330].

BS Del. Observations by Jensch. 5 min. [KVBB 19. 19; 50].

BT Del. Observations by Jensch. 4 min. [KVBB 19. 19; 50].

XZ Dra = BD +64°1332 ($9^m.5$). Elements by Beyer. 153 obs. 7 max. 7 min. [BZ 14.4; 15.7; AN 6030] and Charadse [NNVS 40; Leningrad Bull 2.8; 3.14; 19; 21; 4.9; 28; Tadjik Eph 1935-36, p.13; 37]. Improved elements by Soloviev. 200 obs. 3 max. [NNVS 47; Tadjik Circ 3; 15; 17; 31; 41; Tadjik Ann 1.18]. Beyer found the maxima scattering between $9^m.2$ and $9^m.75$, the variability of the light curve was confirmed by Detre and Lassovszky [Budapest Mitt 9.9]. 97 obs. by Lange [Tadjik Ann 1,2.16]. Radial velocity by Joy [ASP 50.303].

YZ Dra. [BD +71°952 ($9^m.5$) 25^s f 1.5 s.] Confirmed by Rügemer [AN 6106]. Elements by Brun. 49 obs. [BAF 5.145].

ZZ Dra. Elements by Brun. The rising branch has an indentation 30 days before the maximum. 36 obs. [BAF 5.146].

AA Dra. Elements by Brun. The decreasing branch has a hump 35 days after maximum. 40 obs. [BAF 5.147].

TT Eri = CoD -24°1292 (10^m).

TW Eri = HV 4866 = CoD -24°1488 ($9^m.0$) = Cord A 1488 ($9^m.1$). Rediscovered by Hughes, who derived the elements [HB 877].

TZ Eri = BD -6°880 ($9^m.0$) = AG Ott 1087 ($9^m.0$). Elements by Pagaczewski [AAc 1.149; 2.28; AAb 2.20]. Improved value of the epoch by Kordylewski [SAC 16.58]. D = $0^d.28$, d = $0^d.040$. Spectrum F according to Cannon [HB 897].

UU Eri = 211.1907 = CoD -27°1800 ($9^m.0$) = CPD -27°581 ($9^m.4$) = Cord B 1887 ($9^m.0$). Rediscovered by Hoffmeister [AN 5791]. Spectrum M7 according to Cannon [Mscr.].

UV Eri. Hoffmeister at first believed the star to be a Nova, because it was invisible on all of the plates before 1930 October 19 in Sonneberg, Heidelberg, and Bamberg [BZ 12. 96; 101; 13.11; Sonn Mitt 20]. A new maximum was found by Esch, 1932 January 14 [BZ 14.6]. The elements are derived by Morgenroth [BZ 16.44].

UW Eri = BD -14°596 ($9^m.1$) = HD 19084 (Mb). Perhaps long period star. Confirmed by Florja [NNVS 37].

UX Eri = BD -7°553 ($9^m.8$). Elements by Zessewitsch [AN 5911; SAC 11.52; Inf Circ 1.7; Tadjik Circ 1]. 1 min. by Soloviev [Tadjik Circ 25]. Improved elements by Bodokia. 323 obs. m_2 = m_1 = $11^m.20$ [Abast Bull 2.1]. Spectrum G5? according to Cannon [Mscr.].

UY Eri = BD -10°639 ($9^m.9$). Confirmed by Florja [NNVS 37].

UZ Eri. Zessewitsch supposed at first a period of $0^d.393$ [Leningrad Eph 1932, p.24], but

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later derived improved elements [Tadjik Circ 2; Leningrad Bull 3.19; 4.14; 24; 29].

VV Eri. Confirmed by Florja who gives one minimum epoch [NNVS 37]. Elements by Zessewitsch. 7 min. [Tadjik Circ 4]. Improved elements by Pagaczewski. 8 min. D = $5^h.3$ [AAc 2.152; SAC 14.58].

VW Eri = BD -21°613 ($9^m.0$) = CPD -21°350 ($9^m.4$) = AG Alg 934 ($8^m.8$). Confirmed by Florja who finds the light variation irregular [NNVS 37]. Spectrum K0, according to Cannon [HB 897].

VX Eri = BD -12°649 ($9^m.0$) = AG Cbr M. 778 ($8^m.7$) = HD 21231 (Mb). Confirmed by Florja [NNVS 37]. Elements by Zinner [AN 6358].

VY Eri = BD -11°712 ($9^m.1$) = HD 23001 (Mb). Confirmed by Zessewitsch [AN 5911]. Zinner found irregular light variation [AN 6358].

VZ Eri. Provisional elements derived by Esch [AN 5911].

WW Eri. Elements by Zessewitsch [Inf Circ 1.7]. Improved period by Bodokia. m_2 = $11^m.60$. 147 obs. [Abast Bull 3.1].

WX Eri = 201.1907 = BD -1°484 ($9^m.3$) = HD 21102 (A5). Rediscovered by Hoffmeister [AN 6002; Sonn Mitt 20]. 6 min. by Rügemer [AN 6020]. Elements by Jensch. D = $0^d.12$ [AN 6021]. Observations by Pračka [Bulletin International, Académie des Sciences de Prague 17.88; Nižbor Ber (1) 3.12] and Zinner [ErgAN 4, 3, Nr.41].+

XZ Eri. Hughes observed 3 maxima. The rise and fall of the star, from the time of its first appearance to disappearance below the plate limit, do not occupy more than thirteen days [HA 90.174].

YY Eri = BD -10°858 ($8^m.6$) = AG Cbr M. 997 ($8^m.4$) = HD 26609 (G5). Tremblot found W Ursae majoris type with the elements: Min. = 2427119.312 + $0^d.47430 \cdot E$, and a strongly asymmetrical light curve [CR 196.1162; BSAF 47.339]. His period P', however, proved to be an apparent one, which has the relation with the true period P, found by Jensch: $1/P = 1/P' + 1$. Jensch's elements yield a symmetrical light curve with m_2 = $8^m.45$ [AN 6021]. 5 min by Lause [AN 6293]. Improved period by Bodokia. Photographic amplitude $8^m.37$-$9^m.24$. m_2 = $9^m.01$. 179 obs. [Abast Bull 3.9]. +

ZZ Eri. m_2 = $14^m.4$.

AH Eri. Hughes observed 12 maxima. The rise and fall of this star occupy not more than ten days [HA 90.174]. Obs. by Kibe [OAAR 1.2].

AM Eri. There is a difference of $0^m.15$ between successive maxima of the star, probably due to some periastron effect [HA 90.174].

AN Eri. m_2 = $14^m.9$.

AO Eri = 628.1935. Rediscovered by Hoffmeister [AN 6171]. 5 min. by Guriev [Tadjik Circ 25; SAC 17.64]. Improved elements by Kaho. D = 18^h, d = 10^h [Tokyo Bull 463; Tokyo Astr Obs Rep 7.141]. The star has erroneously received a second designation AZ Eridani [AN 6419].

AQ Eri. Elements by Hoppe [AN 6094]. +

AS Eri = BD -3°570 ($8^m.2$) = AG Strb 858 ($8^m.2$) = HD 21985 (A0). Elements derived by Kanda from observations by himself, Kaho, T. Kanamori, and Z. Kanamori. D = 9^h, d = $1^m.3$. m_2 = $8^m.5$. [Tokyo Bull 209; Tokyo Astr Obs Rep 5.71].

AT Eri = BD -19°816 ($9^m.4$).

AU Eri = CoD -25°1818 ($9^m.7$).

AZ Eri. See AO Eridani.

BB Eri. Elements by Gurjev [Tadjik Circ 22].

X For = CoD -26°987 ($8^m.6$) = Gou 2881 (8 1/4^m) = GZ 2^h1034 (8 1/4^m) = Cord A 1233 ($8^m.6$). The position given in HB 877 is wrong. Variability confirmed by Hoffmeister [AN 5791] and Florja [AN 5838].

RS For = CoD -27°1020 (10^m).

RT For = CoD -25°1164 (10^m).

RU For = CoD -27°1064 ($9^m.9$).

RX For. Variability confirmed by Hoffmeister [AN 5791]. Improved elements by Florja. M-m = $0^p.20$ [Tashk Publ 4,2.39].

RY For = CoD -25°1334 ($9^m.2$) = Cord A 1517 ($9^m.0$).

RZ For = 202.1907 = CoD -26°1336 ($8^m.2$) = CPD -26°388 ($8^m.6$) = Gou 3875 (8^m) = GZ 3^h807 (8^m) = Cord A 1638 ($8^m.0$) = HD 22053 (Mc). Confirmed by Hoffmeister who suspects RV Tauri type between the limits $9^m.0$ and $9^m.6$ [AN 5919]. In the spectrum the edges of the absorption bands resemble bright-lines [HA 91.288].

SS For = CoD -27°737 ($8^m.9$) = CPD -27°208 ($9^m.4$) = Cord B 804 ($9^m.2$). Elements derived by Zessewitsch [Tadjik Circ 2; 5; Leningrad Bull 4.14; 24; 29; Tadjik Eph 1935-36 p.21; 31; 37]. 1 max. by Gurjev [Tadjik Circ 26].

AT Gem. Nielsen finds that the star has a long period of about 800^d or is irregular [Aarhus Medd 1.153].

AU Gem. Confirmed by Kukarkin [NNVS 25-26; 35]. Elements by Koyama [AN 6207; Kyoto Bull 310].+

AV Gem. [BD +13°1374 ($9^m.4$) 5^s p $0^!.3$ n *$13^m.6$ $0^s.4$ f $0^!.2$ s.] Confirmed by Morgenroth [BZ 15.12] and Rügemer who supposed a period of $7^d.338$ [BZ 15.26]. Nielsen found the true period to be a sixth of Rügemer's one and derived the final elements. m_2 = $12^m.8$ [BZ 17.14; Aarhus Medd 1.156].

AW Gem. Position by Delporte and Arend [BZ 15.20; UAI Circ 430; HAC 264; Bull Cl Sci 19.437]

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and Van Biesbroeck [HAC 266]. Delporte and Arend believed at first that the star was a Nova. But soon it was found on older Moscow and Babelsberg plates, so that it probably belongs to the U Geminorum type. Observations by Delporte and Arend, Vinter Hansen, Möller, Van Biesbroeck, Mündler, Beyer, Lause, Kukarkin, Guthnick, and AAVSO [BZ 15.20; 21; 23; 24; 26; UAI Circ 430; 431; 432; 434; 435; HAC 264; 265; 266; HA 104; 107; NNVS 41; Bull Cl Sci 19.437; Gaz astr 20.57; 176; BSAF 47; 178]. 2 max. by Koyama [AN 6207; Kyoto Bull 310]. 1 max. by Kanda [Mem Astr Soc Jap 5-6].+

AX Gem = BD +21°1305 ($9^m.3$). Rügemer at first supposed a period of 450^d [BZ 15.18]. Later he found the light variation irregular or perhaps of the RV Tauri type [AN 6106]. The variability was confirmed by Esch [AN 6017].

AY Gem. Elements by Rügemer [BZ 16.30]. Soloviev suggested at first a period of $1^d.5311$, but later derived improved elements with the double period, in agreement with Rügemer. 6 min. 102 obs. [Tadjik Circ 8; NNVS 54].

AZ Gem. [BL Gem 13^s p 3'.0 s.] Elements by Zonn. $m_2 = 12^m.35$. 7 min. 95 obs. [BZ 16.58; Wilno Bull 16.17]. 14 obs. by Meshkova [NNVS 57-58].

BB Gem. Elements by Zonn. 97 obs. [BZ 16.54; Wilno Bull 16.12]. Improved elements by Soloviev [Tadjik Circ 43].

BC Gem. Elements by Jensch. 4 max. [AN 6135].

BD Gem = HD 259888 (A). Elements by Zonn. D = $7^h.5$, $m_2 = 11^m.95$ [BZ 17.65; Wilno Bull 17.21].

BE Gem. Elements by Miczaika. 3 max. [AN 6188]. 28 obs. by Olivier and others [Penn Publ 5, 3.34].

BF Gem. [*$12^m.5$ 0'.4 f 0'.2 n.] Elements by Jensch. 6 max. [KVBB 19.25; 82].

BG Gem. [BD +27°964 ($9^m.2$) 3^s p 1'.3 n.] Jensch supposes RV Tauri type [KVBB 19.25; 82].

BH Gem. Observed by Jensch. 4 min. [KVBB 19.25; 85].

BI Gem. Jensch supposes β Lyrae type. 12 min. [KVBB 19.25; 86].

BK Gem = BD +13°1279 ($8^m.0$) = AG Lpz I 2296 ($8^m.6$). Zonn supposed at first that the star belongs to the W Ursae majoris type with the elements: Min. = 2425292.30 + $0^d.6704 \cdot E$ [BZ 16.8, corr.10; AN 6008]. Later he found, however, irregular light variation [Wilno Bull 17.20].

BL Gem. [AZ Gem 13^s f 3'.0 n.] Confirmed by Morgenroth [BZ 17.30]. 15 obs. by Meshkova [NNVS 57-58].

BM Gem = BD +25°1643 ($9^m.2$) = HD 57160 (Nb). Observations by Kruger [VAP 24.63; Spec Vat 7.128] and Graff [AN 4050]. Böhme found irregular light variation. The brightness remains constant $11^m.5$ (phot.) for a very long time, and occasionally also, for a long time, $12^m.1$ [AN 6328].

BN Gem = BD +17°1623 ($8^m.0$) = AG Berl A 2935 ($7^m.6$) = HD 60848 (Oe5). Confirmed by Miczaika [AN 6058]. Not confirmed by Loreta [BZ 20.2; 21. 60; 22.96]. The photographic brightness, as given by Hoffmeister, is 2^m brighter than the visual magnitude of the BD. +

CC Her = BD +9°3179 ($9^m.4$). Elements by Blažko [NNVS 31]. Confirmed by Prager. D < $7^h.7$. Photographic amplitude $10^m.0$ - [$11^m.8$ [AN 5830]. Improved period by Piotrowski. 12 min. [AAc 2. 62; 124; SAC 12.44]. +

CD Her = BD +46°2308 ($9^m.5$). Confirmed by Nabokov [AN 5771] and Prager who supposes short periodic light variation [AN 5830].

CE Her. Nielsen at first called attention to this Cepheid star which has the quite uncommon period of $1^d.2$. He derived the elements: Max. = 2426398.25 + $1^d.20944 \cdot E$ [BZ 13.50]. The variability was rediscovered by Plaut on Babelsberg plates, and his and Prager's observations were well fitted by these elements [AN 5830]. New elements with the period of $1^d.209426$ were derived by Parenago and Florja [NNVS 38], and confirmed by 1000 visual observations of Florja [NNVS 42]. A somewhat larger period, viz. $1^d.2094318$, was found by Nielsen [Aarhus Medd 1.49; 197]. A further normal maximum was determined by Kleissen from 52 observations [AN 6393-94]. The elements given in the Table were calculated by Prager from all available normal maxima. The mean light curve is quite smooth and equals the subclass a form of the Cluster type stars. The nearly constant minimum lasts $0^P.4$, the very steep rising branch scarcely more than $0^P.1$. In its steepest part the brightness of the star increases by one magnitude in 65 minutes. +

CF Her. [*0'.5 sf.] Confirmed by Esch, who gives the approximate period of 270^d [BZ 13.40; AN 5838]. Improved elements by Parenago. M-m = 80^d+. Photographic range only $11^m.6$-$13^m.5$ [NNVS 45]. 1 max. by Miczaika [BZ 15.70].

CG Her. Rediscovered by Hoffmeister [AN 5791]. Elements by van Schewick. 9 max. [KVBB 19.19; 50].

CH Her. [*$15^m.0$ near by.] In 1935 Koyama found the star invisible [$14^m.9$ [AN 6207; Kyoto Bull 310].+

CI Her. Elements by Ahnert [BZ 22.98].

CK Her. Elements by Ahnert. M-m = $0^d.083$. Subclass a [BZ 22.99].

CL Her. Elements by Ahnert. RV Tauri type [BZ 22. 98].

CM Her. Elements by Ahnert. M-m = $0^d.18$. Subclass b [BZ 22.99].

CN Her. Elements by Ahnert. M-m = $0^d.061$. Subclass a [BZ 22.99].

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CR Her. Elements by Ahnert. M-m = $0^d.083$. Subclass a [BZ 22.99].

CT Her = BD +18°3160 ($9^m.5$). Confirmed by Zessewitsch [AN 5911]. Elements by Pagaczewski [SAC 10.44]. Improved period by Piotrowski. D = $4^h.5$, d = $0^h.7$ [AAc 2.62; 78]. 1 max. by Himpel [AN 6253].

CU Her. The variable decreases by more than 1^m within a few minutes [AN 5833].

CV Her. Esch supposed irregular light variation [AN 5911] which was confirmed by Böhme [AN 6413].

CW Her. Confirmed by Zessewitsch [AN 5911]. Elements by Jacchia [BZ 18.43].

CX Her = BD +27°2771 ($9^m.5$). Confirmed by Zessewitsch, who suggested a period of 90^d [AN 5911] which, however, could not be confirmed by Böhme [AN 6413] or by Parenago [NNVS 55].

CY Her = BD +16°3355 ($9^m.4$). Confirmed by Parenago [NNVS 55].

CZ Her. First elements by Plaut [BZ 13.65; AN 5846]. Improved elements by Parenago [AN 5911; NNVS 45; 55].

DD Her. Elements by Zessewitsch [AN 5911; Tadjik Circ 1; SAC 13.56]. These elements, however, could not be confirmed by Parenago [NNVS 55].

DE Her. Confirmed by Parenago [AN 5911; NNVS 45]. Kanda supposed RV Tauri type with the period of $151^d.6$ [AN 6088] which was concluded to be correct by Parenago [NNVS 55]. Beyer, however, found long period light variation and derived the elements. There are many irregularities in the light curve, short secondary waves are superposed and form strong humps on the rising branch which produce deformations, shifts, and sometimes bisections of the maxima. The form of the light curve is β_3-γ_1. 166 obs. [AN 6278]. 21 obs. 1 max. 1 min. by ASJap [Mem Astr Soc Jap 5-6].

DF Her. Confirmed by Parenago [AN 5911; NNVS 55]. 1 obs. by Kozawa [Mem Astr Soc Jap 6].

DG Her. 2 obs. by ASJap [Mem Astr Soc Jap 5-6]. Spectrum Me, according to Cannon [HB 897].

DH Her. Confirmed by Zessewitsch [AN 5911]. Elements by Zessewitsch [Tadjik Circ 1] and Pagaczewski [SAC 11.44; BZ 15.39]. Improved elements by Lause. m_2 = $9^m.85$. D = $0^d.72$ [AN 6149; SAC 14.59]. Photometric orbit by Fracastoro [SAI 10.266].

DI Her = BD +24°3568 ($8^m.3$) = AG Berl B 6721 ($8^m.3$) = HD 175227 (A). Confirmed by Zessewitsch [AN 5911]. Zinner found no minimum on 76 plates [AN 6186], nor Zverev on 100 plates [NNVS 52]. Lause observed several minima, but could not find a satisfactory period [AN 6293]. He adopted the value of $5^d.27507$ [BZ 19.82] which is half of the true one [BZ 20.2]. Only Kordylewski succeeded in deriving the elements, with the result that the secondary minimum is situated very eccentrically, viz. at the phase $0^P.767$. His elements are: Min_I = 2428370.44 + $10^d.5506 \cdot E$, $\text{Min}_I - \text{Min}_{II}$ = $2^d.46$ [AAc 3.72]. Lause improved the elements, and derived the period of the primary minimum to be $10^d.550223$, of the secondary $10^d.550252$. With regard to their mean errors the difference does not seem real. $\text{Min}_I - \text{Min}_{II}$ = $2^d.446$. The phase of the secondary minimum therefore results = $0^P.768$. Its magnitude is $8^m.64$. The primary eclipse lasts $0^d.36$, the secondary $0^d.26$, both of them are partial. The resulting eccentricity of the system is 0.45. During the primary minimum the color of the variable becomes reddish. 613 obs. [AN 6343]. Recently Jacchia has shown from observations on 2090 Harvard plates that the difference between the periods for the primary and secondary minima is not real, the period is constant during the interval from 1898 to 1939, and no appreciable shift of the secondary minimum could be detected. His improved elements are given in the Table. m_2 = $8^m.85$ at the phase $0^P.7682$. D_1 = $0^P.040$, D_2 = $0^P.030$. Photometric orbit [HB 912]. +

DK Her. Elements by Zessewitsch [Leningrad Bull 2.12; Tadjik Circ 10]. Hoffmeister finds the period $1^d.94233$ [BZ 16.44].

DL Her. First elements by Charadse [Leningrad Bull 2.8; NNVS 40]. Improved elements by Soloviev. 11 max. [Tadjik Circ 25]. +

DM Her. Elements by Blažko. 5 max. [NNVS 39]. 7 obs. by Hoffmeister [Sonn Mitt 20].

DO Her. [*$11^m.5$ sp **14^m s.]

DP Her. Elements by Piotrowski. D = $4^h.6$ [AAc 2. 78; SAC 13.56; 14.59].

DQ Her. Position by Acton [BAA Circ 153; BZ 16. 77; AN 6078; Obs 58.3], Van Biesbroeck [HAC 319], Delporte [UAI Circ 504; AN 6078; Ciel et Terre 51.77], von der Heide [AN 6155], Inaba [AN 6125; Kyoto Bull 302], Jeffers [ASP 47.60], Jensch [AN 6078], Koebcke [AN 6102], Koslov [Tashk Circ 46], Lambert and Dubois Chevallier [JO 17.194], Larink [AN 6155], Luther [AN 6078; 6083], Mündler [AN 6085], Reinmuth [AN 6085], Sourovzev [Tashk Circ 46], Taffara [AN 6123; SAI 9.201], Warmbier [AN 6102], Zverev and Tolgsky [AN 6159].

The Nova was discovered by Prentice 1934 December 12, at 16^h30^m, and he immediately gave notice by telephone to the Royal Observatory, Greenwich, so that spectra of the new star could be obtained the very same morning. In spite of the considerable brightness of the Nova, $3^m.4$ at the time of discovery, Prentice remained the sole discoverer. On account of the bad weather in the weeks before the discovery, apparently over the whole northern hemisphere, no photographic record of this part of the sky is available between November 14 and the date of discovery.

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Earlier plates show a star at the position of the Nova, somewhat variable, whose minimum brightness was determined to be $14^m.6$ on Harvard plates, $15^m.5$ on Heidelberg plates, but which never reached the 12th magnitude. After the discovery the Nova increased slowly with fluctuations to the visual maximum on December 22.0, magnitude 1.4, dropped within 5 days to 3^m, remained between 2^m and 3^m until 1935 January 27, decreased gradually to the 5^m April 1, then suddenly to 8^m April 4. In these three days the color changed from a7 to k5 [Graff, AN 6108]. The dropping continued until May 2, at which date the minimum, $13^m.1$, was reached. A new gradual increase brought it to 7^m on July 5 and to a flat secondary maximum August 30, at $6^m.62$ [Beyer, AN 6430]. Since that time the magnitude has decreased very slowly, less than $1^m.0$ annually, with only small fluctuations not exceeding $+0^m.15$, and was of 11^m at the end of 1940. 1935 January 19 Vogt found the remarkable result that photographically the Nova was $0^m.1$, equalling Vega, while the visual magnitude at the same time was $2^m.1$ [AN 6085].

During the first years no nebulosity was observed around the Nova, and on a plate, exposed 10 hours on four consecutive nights in April 1935, Koslov could not find traces of any nebular formations [Tashk Circ 44]. Aureoles, seen by Hall [AN 6176] and Stobbe [AN 6231] were due to the concentration of the star light in a few bright lines. Luminous condensations of stellar appearance, observed by Kerolyr and Esclangon, were later proved to be unreal [UAI Circ 513; CR 200.274; BSAF 49.21]. The separation of the Nova into two components was observed for the first time 1935 July 3 by Kuiper, after a careful watch had shown the Nova single on earlier dates. The position angle was 131° and has not changed since; the distance at that time was $0''.21$ and, according to Van Biesbroeck, increased at the rate of $0''.27$ per year, if the separation is supposed to have taken place at the time of the outburst. The magnitude difference between the components was $0^m.5$ at the time of first observation. Steavenson could not see the companion in June 1938, when the Nova appeared single and perfectly stellar. In May 1939 he found that the Nova had the appearance of a planetary nebula, nearly uniformly bright and about 2" in diameter. On the other hand, Van Biesbroeck stated that both components, nearly alike in brightness, were always seen when conditions were favorable. In 1939, however, the two nuclei appeared less sharp, as centrally condensed discs about $0''.4$ in diameter. And in 1940 August photographs of the nebulosity were obtained by Baade and by Hubble. The nebulosity is shown as an elliptical disk with a very smooth and symmetrical intensity distribution. The axes at that time were 3.5 and $2''.7$ respectively, the position angle of the major axis was the same as that of the double star. The two condensations must have coincided closely with the centers of gravity of the preceding and following halves of the nebula because the rate of the expansion of the nebula along the major axis, $0''.61$ per year, was approximately twice the rate of increasing separation between the two components. From these data Baade derives the distance of the Nova as between 202 and 260 Parsecs, and hence its absolute magnitude at maximum as between $-5^m.2$ and $-5^m.8$ [ASP 52. 386].

The spectrum was observed with greater completeness than that attained for any previous Nova. From 1934 December 12 to 1935 April 21 there is available at least one spectrum for every day (except April 8 and 14). Reproductions are collected in an Atlas prepared by Stratton and Manning [Atlas of Spectra of Nova Herculis 1934, Cambridge 1939]. The spectra are contributed from 26 observatories and include the wave-lengths between λλ3600 and 6600. They are all reduced to the same (prismatic) scale [ApJ 85.252; 87.588; Obs 62.240].

References: Announcement of the discovery by Prentice [BAA Circ 152; UAI Circ 500, corr. 502; HAC 318; BZ 16.77; AN 6078; JBAA 45.98; 120; Obs 58.2; 41]. Remarks on the Praenova by Shapley [HAC 321; AN 6082], Morgenroth [AN 6078]; Reinmuth [AN 6085], McLaughlin [PA 43. 93], and from the Observatory at Moscow [Obs 58.30].

Observations and remarks by AAVSO [HB 898; PA 43; HA 104; 107; 110], AFOEV [BAF 3.123; 4. 99], Ahnert [BZ 18.37; 57; 74; 84; 19.28; 44; 66; 20.2; 15; 23; AN 6078; 6091; 6125; 6258], Andrenko [AN 6091; Gaz astr 22.23; BSAF 49.211; 472], Andrissi [AN 6085], Archenhold [BZ 16.77; AN 6078; 6085; 6091; 6098; 6103; 6119; 6123; 6125], Armellini [AN 6085], BAA [JBAA 45.145], Baker and Swann [HB 903], Baldet [BSAF 49.302], Bappu [AN 6155], Barabascheff [Kharkov Bull 1], Beljawsky [Pulk Circ 20], Bernheimer [AN 6231; SAI 9.339], Bernheimer and Reimer [UAI Circ 503; AN 6078], Bernson [BSAF 49.128; 172; 50. 565; Astr Nord 8.126; 9.15; 25; 67; 80; 98; 125; 10.13; 85], Beyer [BZ 16.77; 18.6; 11; 40; 19.18; 29; 63; AN 6078; 6082; 6085; 6098; 6102; 6108; 6119; 6128; 6168; 6231; 6430], Bhaskaran [AN 6095], Bielicki [AN 6091], Blottiau [BSAF 49.129], Blum [BSAF 49.29; 85], Boda [AN 6078], Bohlin [AN 6119], Bouricand [BSAF 49.211], Boyd [HAC 319; 321], Bruneau [BSAF 49.129], Brunner [AN 6176], Buchar [AN 6102], Buser [AN 6085; 6098; 6176], Butler [Obs 58.5], Campbell [HAC 319; HC 432; 435; PA 47.448; 48.269; 508], Cap [Gaz astr 22.20], Clarkson [BSAF 49.30], Classen [AN 6098; 6108], Date [Kyoto Bull 299], Delporte [UAI Circ 504; AN 6078], Dermul [Gaz astr 22.19], Dhalluin [BSAF 49.128; 172; Astr Nord 8.126; 9.25; 67], Dobronravin [UAI Circ 509], Dos [BSAF 49.172; 210; 472], Duncan [HAC 319], Dziewulski [Wilno Bull 17.30; 19.6], Einbu [AN 6078], Ellsworth [UAI Circ 509; BAF 5.1], Esch [AN 6078], Fedtke [BZ 17.2; 18.11; 47; AN 6078; 6082; 6085; 6091; 6098; 6103; 6108; 6119; 6123; 6125; 6131; 6139; 6258; Weltall 34.85], Fischer [AN 6125; 6145; 6176], Flammarion and Quénisset [UAI Circ 506; 543; BSAF 49.25], Florja [Tashk Circ 36], Florja and Slonim [AN 6085; Tashk Circ 38; NNVS 47], FPANN [NNVS 47; 48; 50; 52], Fracastoro [AN 6082], Franz [BZ 18.6; AN 6078;

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6082; 6085; 6091; 6095; 6098; 6139; 6145; 6160], Fresa [UAI Circ 532; 534; 535; 540; 545; 552; AN 6085; 6108; 6119; 6123; 6131; 6139; NAT 16.66], Gadomski [UAI Circ 506; 507; 508; 509; 513; 516; 533; 540; AN 6091; 6108; 6168; 6238; NAT 16.66; Wars Circ 15; 16; 17], C.P. Gaposchkin [HAC 319], S. Gaposchkin [HAC 319], Gerasimovič [AN 6082], Gialanella [AN 6085], Graff [UAI Circ 514; 517; 532; AN 6078; 6082; 6091; 6103; Wien Mitt 4.202; Wien Zirk 1], Grouiller [UAI Circ 509; BSAF 49.24], Gurjew [Tadjik Circ 3; 8; 23], Guyot [AN 6078; 6082; 6085], Hall and Delaplaine [AJ 1056], Hamon [BSAF 49.30], Henz [AN 6098; 6125], Himpel [BZ 17.44; AN 6085; 6091; 6102; 6108; 6119; 6123; 6125; 6136; 6155; 6160; 6168; 6231; 6318; 270.183], Hoffmeister [AN 6078], Hopmann [BZ 16.77; AN 6078], Horn [AN 6078], Howells [HB 899], Huffer [ApJ 85.44], Jacchia and others [Coelum 5.14], Jäger [AN 6082; 6091; 6108], Jaschek [AN 6078; 6082; 6091; 6108; 6208], Jose [PA 43.94], Jóźwiak [AN 6078; 6085; 6102; 6132; 6282], Kadavý [AN 6078; 6082; 6091], Kaho [Mem Astr Soc Jap 3. 351; 4.107; 112; Tokyo Bull 191-196; 221-222; 288-291; 292; 344; 452; 465; 516], Kaiser [BZ 18.8; 10; 14; 20; 22; 37; 43; AN 6078; 6091; 6098; 6108; 6119; 6123; 6139; 6145; 6155; 6160], Kančéev [Sternb Card 2], Kanda [AN 6082; 6091; 6098; 6103; 6123; 6136; Tokyo Astr Obs Rep 3.30; 91; 187; Tokyo Bull 191-196; 221-222; 288-291; 292; 344; 393; 452; 465; 516], Kato [Kyoto Bull 299], Kharadse [UAI Circ 521; 522; 527], Kibe [Kyoto Bull 299], Kierulff [AN 270.292], Klumak [AN 6124], Knox Shaw [Obs 58.5], Kobold [BZ 16.79; 17.46], Koebcke [AN 6078; 6085; 6102; 6131; 6282], Kollross [AN 6091; 6108], Kotsakis [UAI Circ 521; AN 6091; 6108; 6124; 6125; 6132], Koyama [Kyoto Bull 305], Kravzev [BSAF 49.129; AN 6102], Krebs [AN 6145], Kronlachner [AN 6091], Krug [Sterne 16.206], Kuiper [ASP 47.99; 165], Kwiek [AN 6085; 6102; 6131; 6282], Lacchini [AN 6078; 6082], Lange [Tadjik Circ 3; 8], Larsson [AN 270.292], Lause [BZ 17.51; 67; AN 6095; 6098; 6119; 6207; 6249; 6327; 6406], Lavdovsky [AN 6133], Lebedinsky [Kharkov Bull 1], Leutenegger [AN 6078; 6085], Lipiński [AN 6078; 6082; 6091; 6108; Wars Circ 15; 17; Wars Repr 39], Loreta [BZ 16.77; 17.2; 48; 50; 53; 61; 18.2; 8; 17; 22; 26; 31; 43; 50; 57; 59; 70; 76; 82; 84; 88; 19.28; 34; 42; 53; 58; 66; 78; 20.2; 8; 17; 22; 26; 29; 34; 39; 45; 59; 21.7; 37; 52; 60; 83; 100; 117; 130; 22. 12; 23; 43; 57; 68; 96; AN 6078; 6082; 6085; 6091; 6095; 6102; 6103; 6108; 6125; 6127; 6131; 6133; 6136; 6139; 6145; 6155; 6160; 6168; 6258; 6269; 6324; SAI 9.81; Gaz astr 22.21], Lundmark [UAI Circ 514], Luplau Janssen [AN 6082; 6091], Luther [AN 6078], Malsch [AN 6082; 6102; 6108; 6119], Markov [UAI Circ 509; 539; Tashk Circ 44], Martinoff [Engelh Bull 12.18], Materna [AN 6091; 6108], McLaughlin [HAC 334; PA 43.94; 329], Mémery [BSAF 49.128], Mergentaler [UAI Circ 514; Lwów Contr 5.23], Meyer [AN 6108], Miczaika [BZ 18.62; 86; AN 6082; 6091; 6098; 6132; 6145; 6155; 6176; 6207; 6231; 6238], Miette [BSAF 49.30], Moissejev [Gaz astr 22.24], Moriyasu [Kyoto Bull 299], Muller [UAI Circ 503; BSAF 49.128; 209; 282; 472], NAS [AN 6131; 6254; 6293; NAT 16.65; 20.101], Nekrasova [Engelh Bull 12.16], Nielsen [UAI Circ 532; 544; 548; AN 6123; 270.292], Nikonov [UAI Circ 509], Nijland [AN 6078; 6085; 6103], Norlind [AN 6078; 6082; 6085; 6091; 6123; 6197], Novopachenny [Odessa Bull 1.11], Opalski [AN 6091; Belgrad Bull 2.11; Wars Polyt 18], Oriano [BSAF 51.379], Pagaczewski [AN 6078; 6085; 6102; 6131; 6282], Petersen [AN 270.292], Petrie [PA 43.94], Plakidis [AN 6124], Plakidis and Adamopoulos [UAI Circ 511], Popovici [AN 6082; 6091], Przybyllok [AN 6078; 6123], Putilin [AN 6085], Quénisset [BSAF 49.363], Quignon [UAI Circ 504; AN 6078; Ciel et Terre 51.62], Robach [BSAF 49.29; 128], Rosenhagen [UAI Circ 532; 534; NAT 16.66], de Roy [BSAF 49.211; Gaz astr 22.17], Ruddy [BSAF 49.282], Rybka [UAI Circ 513; 514], Sasabe [Kyoto Bull 299], Saugère [BSAF 49.30], de Saussure [BSAF 49. 210], Sawron [Kharkov Bull 1; Kharkov Publ 6.47], Schaetti [AN 6082; 6098], Schembor [AN 6078; 6082; 6091; 6108; 6208], Schiffner [AN 6082], Schiller [AN 6078], Schingareff [Kharkov Bull 1], Schlöss [AN 6091; 6108; 6208], Schlumberger [BSAF 49.128], Schneller [AN 6078; 6085; 6091; 6125; KVBB 17.33; Sterne 15.176], Schroth [AN 6091], Schwiecker [AN 6078], Seliwanow [UAI Circ 509; Tashk Circ 48; 49], Shapley [HAC 320], Siadbey [AN 6091; 6102], Smirnova [UAI Circ 509], von Socher [AN 6078; 6082; 6085; 6095; 6102; 6108], Soloviev [Tadjik Circ 3; 8; 10; 15; 20; 23], Steavenson [Obs 58.5; MN 95.641; 96.699; 97. 658; 98.675; 99.698], Stobbe [UAI Circ 502; AN 6078; 6082], Stoilov [AN 6091], Strobel [AN 6085], Stroobant [AN 6078], Swope [HAC 319], Taffara [AN 6078; 6082; 6085; 6091; 6095; 6102; 6108; 6119; SAI 10.347], Takai [Kyoto Bull 299], Terwangne [Gaz astr 22. 19], Tshernov [Gaz astr 22.22; BSAF 49.172; Tadjik Ann 1,2.30], Tukuda [Kyoto Bull 299], Vogt [AN 6085], Walter [AN 6123; 6281], Warmbier [AN 6085; 6102; 6131; 6282], Weber [AN 6078], Wendl [AN 6082; 6091], Witkowski [AN 6078; 6085; 6102; 6131; 6282], Wolff [AN 6102; 6123], Zessewitsch [Tadjik Circ 8], Zurbuchen [AN 6082].

Description of the light curve by Wilson [PA 44.20], Campbell [AAS 8.138], McLaughlin [ApJ 85.362; PA 47.481; 539].

Observations of the spectrum and remarks thereupon by Adams and Joy [ApJ 84.14], Adams and others [ASP 47.205], Aller and others [ASP 47.327], Archenhold [AN 6123], Balanovsky [Pulk Circ 16], Barabascheff [Kharkov Bull 1], Barbier, Chalonge and Vassy [CR 201.128, corr.244], Beer [Obs 58. 35; 144; 59.40; MN 95.538; 96.236], Beer and Stratton [Nat 135.346; 433], Beileke [AN 6078], Beller [AN 6131], Beljawsky [AN 6091], Belorizky [CR 200. 528; 204.413; JO 19.204; 20.95; BSAF 49.393; 51.243], Belorizky and Jasse [UAI Circ 538], Bertaud [CR 199.1585; BSAF 49.20], Beyer [AN 6078; 6082; 6085; 6098; 6102; 6119; 6168; 6231], Bobrovnikoff [AAS 8.137; Perkins Contr 2; 4], Bobrovnikoff and McQueen [ApJ 86.446], Bohlin [AN 6119], Bohrmann and Thüring [AN 6085], Bosler [UAI Circ 505], Brück [AN 6078], Brück and Strohmeyer [AN 6123], Cecchini and Gratton

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[UAI Circ 511; SAI 9.29; Milano-Merate Pubblicazioni, Nuova Serie, Nr.1], Cherrington [ASP 52.121], Dobbie [Obs 58.4; 34], Dufay [UAI Circ 509], Dufay and Bloch [UAI Circ 528; CR 200.217; BSAF 49.24; 126; ZAp 13.36], C.P. Gaposchkin, Menzel, and Whipple [HAC 319; AAS 8.112], Gerasimovič [AN 6082], Greaves [Obs 58.36], Greaves and Martin [Obs 59.114; 60.65; MN 96.425], Green [MN 95.694], Grotrian and Rambauske [ZAp 10.209], Guthnick [AN 6078], Guthnick and Kühlborn [AN 6078; 6082; 6085], Harper [JRASC 29.49; 30.124], Hopmann [BZ 16.77; 6078], Humason [ASP 52.389], Illigner and Oehler [AN 6123], Krinov [UAI Circ 509], Krug [AN 6231], Kühlborn [AN 6078], Kukarkin and Vorontsov-Velyaminov [UAI Circ 506], Kukarkin, Vorontsov-Velyaminov, and Vsessviatsky [UAI Circ 504], Lindblad [UAI Circ 507], Lindblad and Öhman [UAI Circ 511], Lockyer [Obs 58.34], McLaughlin [HAC 334; AAS 8.145; PA 43.265; 323; ApJ 84.110; 91.369; Mich Publ 6.107], McLaughlin and Petrie [AAS 8.118], Merrill [ApJ 82.413; 85.62; ASP 47.209], Meyermann [AN 6082], Meyermann and Wellmann [ZAp 11.76], Mohler [Cook Obs 1], Müller [AN 6078], Oehler [ZAp 10.323], Okuda [Astr Herald 31.1], Popovici [AN 6082; 6091], Popper [ASP 51.168], Righini [AN 6082; SAI 9.224], Rosenhagen [AN 6108], Rossier [Genève Publ 4.380], Rowland [Obs 58.36], Sampson [Obs 58.34], Sanford [ASP 47.209], Schaetti [BSAF 49.366], Schaub and Richter [AN 6078], Schembor [AN 6078], Schneller and Kühlborn [AN 6078], Slipher [HAC 319; AAS 8.123], Stobbe [UAI Circ 502; BZ 16.77; AN 6078; 6082], Stoy and Wyse [ASP 47.50; 61; 103], Stratton [Obs 58.36; 76; 101; 173; 178; 60.197; 62.236; Ann Solar Phys Obs 4, 4], Stratton and Beer [MN 95.432], Stratton and Williams [Nat 135.657], Struve [HAC 320], Struve and Morgan [AAS 8.124], Swings and Struve [ApJ 92.295], Tai [MN 100.435], Vashakidse [Leningrad State University Annals 22.79; Abast Bull 4.77], Vorontsov-Velyaminov [UAI Circ 536; Sternb Card 4; RAJ 14.113; 16,2.17; 3.9], Vorontsov-Velyaminov and Kukarkin [UAI Circ 505], Vorontsov-Velyaminov and Vsessviatsky [UAI Circ 508], Vsessviatsky and Bugoslavsky [UAI Circ 507], Wachmann [AN 6123], Whipple and C.P. Gaposchkin [HC 412; 413; 414; 433; AAS 8.227; Obs 60.46], Williams [Obs 58.165; 59.331; 60.188; 61.214; 62.12; MN 95.573; 97.612; 99.91], Williams and Green [Obs 59.115], Wilson and Merrill [ASP 47.53], Wright [ASP 47.47], Wyse [ASP 47.204; 48.303]. Color measures by Graff [Wien Mitt 4.223] and by Flammarion and Quénisset [BSAF 50.224]. Temperature by Petrie [ApJ 81.482], Williams and Green [MN 96.434], Beileke and Hachenberg [ZAp 10.366], Oehler [ZAp 12.281, corr. Abast Bull 4.97; AN 270.284], Tchudovitchev [Engelh Bull 12], Vashakidse [Abast Bull 4.87],

Measures of the duplicity and remarks thereon by Kuiper [HAC 339; UAI Circ 546; AN 6131; ASP 47.228; 267; ApJ 86.102], Baldet [UAI Circ 546], Van Biesbroeck [HAC 369; UAI Circ 581; AAS 8.257; ApJ 82.433; Obs 62.236], Simonow [AN 6136; 6197], Dick [AN 6183], Morgan [AAS 8.309; ApJ 83.252], Voûte [ASP 47.270], Aitken [ASP 48.340], Steavenson [Obs 62.178; MN 99.698],

A possible connection of the Nova with cosmic rays is discussed by Kolhörster [Zeitschrift für Physik 93.429], Hess and Steinmaurer [Nat 135.617], Barnóthy and Forró [Zeitschrift für Physik 94.773; Nat 135.618; 136.680], Das [Nat 136.29]. Parallax by Vorontsov-Velyaminov [NNVS 48] and Williams [MN 95.573]. Mass and parellax by McLaughlin [AJ 1052]. Dimensions by Beer [MN 97.231]. Motion of masses of gas by Russell [ASP 48.29] and Stratton [Obs 59.325]. Physical interpretation of the light curve and energy balance by Grotrian [ZAp 13.215; 14.129]. On the amount of energy liberated during the outburst by Gordeladse [Abast Bull 2.99]. +

DS Her. Rediscovered by Hoffmeister who also derived the elements [AN 6058].

DY Her = BD +12°3028 ($9^m.5$). Soloviev supposed at first W Ursae majoris type [Tadjik Circ 11], but later found Cluster type and derived the elements [BZ 18.47; Tadjik Circ 17; 20; 30]. +

DZ Her = BD +17°3447 ($9^m.4$). From 9 max. Miczaika derived the elements: Max. = 2425747 $+122^d.3 \cdot E$ [AN 6188; 6413]. These elements, however, do not satisfy 15 observations by Grigorieva [NNVS 54] or 18 observations by Parenago who suggests RV Tauri type [NNVS 55].

EE Her. Elements by Soloviev [BZ 18.80].

EF Her. Position by Schembor [AJ 952]. Piotrowski derived the elements from 110 of his own observations and 54 made by Pagaczewski. D = 10^h [AAc 3.31; SAC 15.59].

EG Her. Observed by van Schewick. 6 max. [KVBB 19.19; 50].

EH Her. Elements by van Schewick. 5 max. [KVBB 19.19; 50].

EI Her. Elements by van Schewick. Perhaps RV Tauri type [KVBB 19.19; 51].

EK Her. Observed by van Schewick. 3 max. Sometimes a period of about 200^d is indicated [KVBB 19.19; 51]. The star could not be located by Parenago [NNVS 55].

EL Her. Elements by van Schewick. 8 max. [KVBB 19.19; 51].

EM Her. Observed by van Schewick. 3 max. Sometimes a period of 245^d is indicated [KVBB 19.19; 51].

EN Her. Observed by van Schewick. Perhaps RV Tauri type. Sometimes a period of 160^d, at other times of 185^d is indicated [KVBB 19.19; 51].

EO Her. Elements by van Schewick. 8 max. [KVBB 19.19; 51]. Confirmed by Parenago [NNVS 55].

EP Her. Elements by van Schewick. 16 max. [KVBB 19.19; 51]. Observed by Parenago [NNVS 55].

EQ Her. Observed by van Schewick [KVBB 19.19; 52].

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ER Her. Elements by van Schewick. 8 max. [KVBB 19.19; 52].

ES Her. Elements by van Schewick. m_2 = 13^m.7. 10 min. [KVBB 19.19; 53].

ET Her. Elements by van Schewick. 5 max. [KVBB 19.19; 53].

EU Her. Elements by van Schewick. 7 max. [KVBB 19.19; 53].

EV Her. Observed by van Schewick [KVBB 19.19; 53].

EW Her. Elements by van Schewick. 5 max. [KVBB 19.19; 53].

EX Her. Elements by van Schewick. 6 max. [KVBB 19.19; 53].

EY Her. Elements by van Schewick. 3 max. 6 min. [KVBB 19.19; 54].

EZ Her. Elements by van Schewick. 7 max. [KVBB 19.19; 54]. Parenago found only small variations, the amplitude not exceeding 2 steps [NNVS 55].

FF Her. Elements by van Schewick. 4 max. [KVBB 19.19; 54].

FG Her. Elements by van Schewick. Perhaps RV Tauri type. 6 max. [KVBB 19.19; 54].

FH Her. Elements by van Schewick. Perhaps RV Tauri type. 12 max. [KVBB 19.19; 54].

FI Her. Elements by van Schewick. 4 max. [KVBB 19.19; 55].

FK Her. Observed by van Schewick [KVBB 19.20; 55].

FL Her. Observed by van Schewick [KVBB 19.20; 55].

FM Her. Elements by van Schewick. 3 max. [KVBB 19.20; 55].

FN Her. Elements by Piotrowski. D = 6^h.8 [AAc 3. 67]. 2 min. by Soloviev [Tadjik Circ 30; NNVS 55] who gives also an improved period [Tadjik Circ 43].

FO Her. Jacchia finds the light variation similar to that of AF Cygni. 2 max. 2 min. The mean period is 84^d [BZ 18.88]. Confirmed by Parenago who found the period about 93^d. 3 max. [NNVS 55].

FP Her. First elements by Esch [AN 6330]. Improved elements by Parenago [NNVS 55].

FR Her. First elements by Bigay [BAF 6.30]. Improved elements by Parenago [NNVS 55].

FS Her. Observed by van Schewick [KVBB 19.20; 55].

FT Her. Observed by van Schewick. 4 min. [KVBB 19.20; 55].

FU Her = 622.1936. Rediscovered by Esch [AN 6241; 6283]. Elements by Bigay [BAF 6.32]. 19 obs. by Parenago [NNVS 55].

FW Her. Elements by van Schewick. Perhaps β Lyrae type. 9 min. [KVBB 19.20; 56].

FX Her. Elements by Esch [AN 6330]. Parenago found the star always invisible (22 obs.) [NNVS 55].

FY Her. Observed by van Schewick [KVBB 19.20; 56].

GL Her. Elements by Kordylewski. D = 10^h.3 [AAc 3. 91; SAC 15.59]. Rediscovered by Morgenroth [AN 6070].

VV Hya. Rediscovered by Hoffmeister [AN 5791]. Elements derived by Zinner. The maxima differ greatly in form and brightness [AN 6358].

VW Hya. Elements by Pagaczewski. 6 min. D = 0^d.32. Visual range > 2^m.5 [AAc 2.28; AAb 2.21; SAC 10. 44].

VX Hya. The star shows a light variation which may be considered as similar to the Cluster type. For the recurrence of the maxima a certain period may perhaps be effective, but many of the maxima do not occur, or are shifted by a considerable amount relative to the predicted time, or do not reach the usual brightness. Apparently the variable behaves in the same way as AC Andromedae. These facts have been stated by Lause and fully confirmed by Oosterhoff. Lause adopted several values for the period, viz. 0^d.175881, 0^d.208881, and 0^d.1825046. None of these fitted all of his 516 observations satisfactorily [AN 5896; 6066; 6320], or the 323 observations by Oosterhoff [BAN 310], or 5 maxima observed by Lange [Tadjik Circ 4]. +

VY Hya = BD -22°2897 (9^m.0) = CoD -22°8114 (8^m.8) = CPD -22°4685 (8^m.4) = AG Alg 4598 (9^m.0) = Cord A 8104 (8^m.9) = HD 89639 (A3). Elements by Morgenroth. 5 min. D = 3^h. No secondary minimum [BZ 14.83; AN 5946].

VZ Hya = BD -5°2564 (9^m.1) = AG Strb 3275 (9^m.1) = HD 72257 (F5). A secondary minimum was not detected. D = 3^h, d = 25 ^{m}, but it may be that the minimum is fainter, and the duration of totality shorter. +

WW Hya. Confirmed by Esch who observed one maximum [AN 6017].

WX Hya. [*12^m.5 15^s f 1$'$ n.] Elements by Esch [AN 6017; 6137].

WY Hya. Elements by Jensch. Photographic range 10^m.4-11^m.25. Probably the minimum is actually somewhat fainter, taking into account the long exposure time of 30 minutes compared with the short period. D = 0^d.08 [AN 6048].

WZ Hya = BD -12°3114 (9^m.7). Lange derived at first the elements: Max. = 2427513.173 + 0^d.3462·E [Tadjik Circ 2; Leningrad Bull 4.16; 24; 29]. Later he gave the elements of the Table [Tadjik Circ 5; Tadjik Eph 1935-36, p.13; 23; 31; 37]. 1 max. by Guriev [Tadjik Circ 32]. The variability is doubted by Tshernov [NNVS 56].

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XX Hya. Confirmed by Lange [Tadjik Circ 3]. Elements by Jacchia. Visual range $0^m.93$ [BZ 18.33].

XY Hya = CoD -23°8313 ($9^m.5$) = CPD -23°4446 ($10^m.3$).

XZ Hya. Indications of a secondary minimum at $15^m.0$.

AD Hya. Some regularity around 200 days.

AE Hya. $m_2 = 14^m.6$.

AF Hya. $m_2 = 13^m.8$.

AG Hya. 11 max. observed by Boyce [HB 903].

AH Hya. Some regularity around 110 days.

AI Hya = BD +0°2259 ($9^m.3$). Elements by Lause. $m_2 = 9^m.40$ at the phase $0^p.435$ [BZ 20.29; AN 6375].

AK Hya = BD -16°2541 ($6^m.5$) = AG Wa 3487 ($7^m.8$) = HD 73844 (Mb). 1 max. by Loreta [BZ 22.29].

AL Hya. Confirmed by Hassler and Kitchens [AJ 1074]. Hassler and McKeehan find the light variation irregular [AJ 1110].

AO Hya = CoD -23°8282 ($9^m.4$) = CPD -23°4421 ($10^m.8$). Confirmed by Boyce [HB 903].

AP Hya = CPD -21°4275 ($10^m.7$).

AR Hya = CoD -23°8363 ($9^m.3$) = CPD -23°4481 ($9^m.4$).

AU Hya = CPD -21°4369 ($10^m.8$).

AW Hya. Red.

AY Hya. Red.

BC Hya = BD -22°2733 ($9^m.6$) = CoD -22°7638 ($9^m.6$) = CPD -22°4503 ($9^m.4$).

Y Hyi = CoD -79°24 ($9^m.5$) = CPD -79°16 ($9^m.0$) = GiZ 416 ($9^m.5$).

RS Hyi = HV 6346. Rediscovered by Hughes who also derived the elements [HA 90.172].

RU Hyi. RV Tauri type.

RV Hyi. $m_2 = 12^m.4$ at the phase $0^p.612$. Throughout the 2243 epochs, covered by the Harvard plates, the period is constant. The star therefore shows an orbital eccentricity but no apparent rotation of the apsides.

RY Hyi = CPD -75°103 ($10^m.9$).

RZ Hyi = HV 6355. Rediscovered by Hughes who also derived the elements [HA 90.172].

ST Hyi = HV 6357. Rediscovered by Hughes who also derived the elements [HA 90.172].

SY Hyi. Perhaps R Coronae Borealis type.

TU Hyi = CPD -76°150 ($10^m.4$).

RW Ind = GiZ 15480 ($10^m.0$). Not in CPD (see Cape Ann 5.68, Nr.934).

BI Lac. Wachmann adopts a period of about 14^d [AN 6116].

BK Lac. The star is very red. Wachmann found the star permanently [$14^m.5$ [AN 6116].

BN Lac. Parenago found the star invisible [14^m on 17 plates [NNVS 45].

BU Lac. Böhme found irregular light variation [AN 6413].

BV Lac. Parenago found the star invisible [$13^m.5$ on 19 plates [NNVS 45],

BY Lac. Parenago supposes irregular light variation between $12^m.5$ and $13^m.0$ [NNVS 45, p.315, line 11; read BY instead of BV].

CE Lac. Elements and observations of Nekrasova [NNVS 54] refer to CE Cygni.

CL Lac. Parenago supposes irregular light variation between $12^m.8$ and [$13^m.8$ [NNVS 45].

CM Lac = BD +43°4106 ($7^m.6$) = AG Bo 16223 ($8^m.3$) = HD 209147 (A2). Elements by Wachmann. 13 min. 240 obs. Photometric and spectroscopic orbits [AN 6116; 6212], Hadik. 4 min. [BZ 15.64], and Himpel [AN 6253]. Improved elements by Dugan and Wright [AJ 1071; Princ Contr 19.57]. 2 min. by Parenago [NNVS 45]. 28 obs. by Nekrasova [NNVS 54]. Spectroscopic orbit by Sanford [Mt Wils Rep 1932-33, p.156; ApJ 79.95]. $m_2 = 8^m.54$. D = $0^d.174$. Spectrum of the brighter component A2, according to Sanford, A0 according to Wachmann. The latter estimates the spectrum of the fainter component A8.

CN Lac. [NGC 7209 nearby.] Position by Wachmann [AN 5698]. Wachmann assumed at first Cepheid type, but later he found the β Lyrae type and derived the elements. $m_2 = 12^m.58$ [AN 6116]. The variability was confirmed by Parenago [NNVS 45]. Photometric orbit by Nekrasova [NNVS 50].

CO Lac = BD +56°2857 ($9^m.5$). Zonn assumed at first a period of $0^d.771106$, which he derived from 118 observations and 7 minima [Wilno Bull 14]. Uitterdijk found from 315 observations on Leiden, Potsdam, and Harvard plates that the phases of the odd minima shift periodically around the even minima, that therefore the period must be doubled, and that the system, whose eccentricity is 0.03, carries out an apsidal motion, the period of revolution being of the order of 40 years. The mean period of the light variation is $1^d.5422105$ [BAN 255; see also HB 909]. This result was fully confirmed by Zonn who derived the period of $1^d.5422082$. Both of the minima are of equal depth. D = $5^h.5$. 276 obs. Photometric orbit [Wilno Bull 17; AAc 2.93]. Dugan and Wright derive improved elements. They suppose that the motion of the apse operates in combination with some other cause. 580 obs. 33 min. [AJ 1071; Princ Contr 19.12; Yerkes Publ 7.298].

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Remark on ellipticity by Russell [ApJ 90.650]. Spectrum near F, according to Cannon [Mscr.].

CP Lac. Position by Van Biesbroeck [HAC 381], Bourgeois and Vandekerkhove [UAI Circ 598, corr.599; AN 6213], de Caro and Sconzo [AN 6240], Cunningham [HAC 381], Duncan [AJ 1055; Mt Wils Rep 1936-37, p.22], Fedtke [BZ 18.45], Inaba [Kyoto Bull 320], Kwiek [AN 6213], Luther [AN 6213; 6281], Nakano [Tokyo Bull 259-263], Orkisz [UAI Circ 596], Schmitt [UAI Circ 603], Schneider [AN 6213], Schorr and Dieckvoss [AN 6213], Stobbe [UAI Circ 598; AN 6213], Thüring [AN 6213], Tscherny [AN 6213; 6217; 6240], W.H.S. [JBAA 46.346].

Announcements of independent discoveries of this Nova were made by very many observers, most of whom saw it at the beginning of darkness on the eighteenth of June 1936, the day before a total solar eclipse. On this occasion the sky, apparently cloudless over the whole northern hemisphere, enjoyed an especially careful watch, and indeed some of the discoverers were members of eclipse expeditions. The observers in more eastern places, obviously, were in a position to perceive it earlier. The first was Gomi at the Japanese eclipse station Horonobe, who observed it June 17, 23^h40^m [Kyoto Bull 316; 321; UAI Circ 603; AN 6221], the second Gurjew in Stalinabad, June 18, 4^h13^m [UAI Circ 595; 608; AN 6213; Tadjik Circ 23]. Other discoverers were Zonn [UAI Circ 599], Loreta [BZ 18.41; UAI Circ 594; AN 6213; BAA Circ 172], Nielsen, on board the steam-boat Strathaird which was making a cruise in the Mediterranean for the totality zone [BZ 18.41; UAI Circ 594; AN 6213; BAA Circ 172], Wendl [UAI Circ 601], Krebs [AN 6213], Norman [UAI Circ 595; AN 6213], Hoffmeister [BZ 18.41; UAI Circ 596; AN 6213], Himpel [BZ 18.41; UAI Circ 594; AN 6213], Richter [AN 6213], Bochníček [UAI Circ 595; AN 6213], Peltier [HAC 380], Upjohn [HAC 381], Bernasconi [UAI Circ 596], Szalay [AN 6213], Ryves [UAI Circ 596], Svenonius [UAI Circ 598].

The Nova was identified on earlier plates as a faint star which varied, according to Hoffleit, irregularly from $15^m.1$ to $15^m.6$ on Harvard plates taken between 1917 and 1933 [HB 904]. It appears also on Bernard's Atlas of the Milky Way, Plate 50, and Kukarkin and Parenago estimated it at $15^m.8$ [UAI Circ 600; NNVS 51]. Other observers found somewhat different brightnesses, but the deviations may be attributed to the magnitude system used for the comparison stars: Becker, on the Carte du Ciel [AN 6213], corr. by Rabe [AN 6213], van Schewick [AN 6213], Wachmann [AN 6213], Beljawsky [AN 6265], Spencer Jones [UAI Circ 598], Flammarion and Quénisset [UAI Circ 601], Duncan [AJ 1055]. Of special significance is a plate of Böhme, taken at Bamberg, 1936 June 17, 11^h53^m - 12^h23^m, which shows the Nova in the same brightness as before [AN 6213], but less than twelve hours later, at the time of the discovery by Gomi, it was already of the fourth magnitude. Also Gurjev who observed the field visually about an hour earlier than Böhme, did not find any suspicious object [AN 6217]. The outburst of the Nova, therefore, occurred with unparalleled speed, rising by about eleven magnitudes in less than twelve hours.

After the discovery the light increased, perhaps with a little stillstand during the first hours of the nineteenth of June, to the maximum, magnitude $1^m.95$, at the epoch June 20.05. Then it dropped, at first very quickly, later with decreasing speed, almost without fluctuations, reached 3^m at June 21, 4^m June 25, 5^m June 30, 6^m July 8, 7^m July 31, 8^m September 3, 9^m November 14, 10^m 1937 January 21, 11^m 1937 June, 12^m 1937 December, 13^m 1938 November, and was $14^m.0$ at the end of 1940. Also the color changed rapidly during the first days. It was observed by Graff f6 June 29, g3 July 1, k4 July 4 [AN 6217]. Description of the light curve by McLaughlin [PA 47.481; 540].

The spectrum was thoroughly studied by many investigators and showed the development essentially common to all Novae. Remarkable, however, was the rapidity with which the changes took place in agreement with the light variations, and the magnitude of the velocities and accelerations of the expanding gases. Some velocities amounted to nearly -3500 km/sec, the highest velocity ever observed in a galactic Nova. Another outstanding feature was the presence of strong lines due to Calcium and Sodium gas scattered throughout interstellar space.

Duncan could not find any nebulosity around the star on a plate of two hours exposure, 1936 June 25 [AJ 1055; Mt Wils Rep 1936-37, p.22]. Pearce predicted such a nebulosity assuming spherical expansion, a distance of 900 Parsecs, derived from the strength of the interstellar K line, and a rate of linear radial expansion of 2550 km/sec which he computed from one set of absorption lines. He predicted an angular expansion of $1''.2$ per year for the diameter of the disk [ASP 49.148]. Wyse reduced this amount by 20 per cent to $1''.0$. But he and Jeffers found the image of the Nova perfectly sharp and stellar in July and August 1937 [ASP 49.289]. On the other hand, 1937 August 15 Steavenson described the Nova as appearing like a small planetary nebula, about 1" in diameter, and as being greenish in color [MN 98.675]. A division of the Nova into components has not been observed. Temperature by Petrie [AAS 8.252; DAO 6.338] and Stratton [Obs 61.162]. Distance and absolute magnitude by Merrill and Wilson [Mt Wils Rep 1935-36, p.181; ASP 48.230] and Pearce [AAS 8.250; ASP 49.148]. Barnóthy and Forró found no sign of Cosmic Rays from the Nova [Nat 138.544].

References: Observations and remarks thereon by AAVSO [HA 104; 107; 110], Ahnert [AN 6229; 6240; 6256; 6258], Barabachoff [Kharkov Publ 6.133], Beyer [BZ 19.18; 29; 63; AN 6214; 6217; 6249; 6430], Bernheimer [AN 6213], Bernson [BSAF 50.565; Astr Nord 10.84], von Bezold [AN 6213], Bieth [BSAF 50.333; 409], Blum [BSAF 50.333], Bochníček [AN 6229], Brunner [AN 6213], Calder [HAC 381; HB 904], Campa [SAI 10.151], Campbell [HC 432; 435;

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PA 47.448; 48.269; 508], Classen [AN 6213; 6214], Dermul [Gaz astr 23.98], Dziewulski [AN 6213; 6217; Wilno Bull 19], Ellsworth [BSAF 51.320], Fedtke [BZ 18.45; 61; 76; 80; 19.18; 27; 36; 40; AN 6213; 6217; 6221; 6229; 6240; 6244; 6249; 6258; 6269], Filippoff [UAI Circ 603], Flammarion and Quénisset [UAI Circ 600; 601; BSAF 50.333], Franz [AN 6214], Fresa [UAI Circ 613], Gadomski [UAI Circ 596; 600; 603; AN 6217; 6229; 6240; 6249], Gomi [AN 6221; 6229], Gurjew [AN 6217; Tadjik Circ 23; 28], Güssow [AN 6229], Hartwig [AN 6213], Hassenstein [AN 6229], Hellerich [AN 6213], Himpel [AN 6213; 6229; 6240; 6318], Hjerting [UAI Circ 596; 598; 599; 600; 601], Hoffmeister [UAI Circ 596], Huffer [ApJ 85.43], Huruhata [AN 6221; 6229], Iwanowska [AN 6213; 6217], Jaschek [AN 6229], Jensch [AN 6213], Kadavý [UAI Circ 596; AN 6213; 6229; 6244; 6256], Kaho [Tokyo Bull 191-196; 221-222; 288-291; 292; 344; 516], Kanda [Tokyo Bull 191-196; 221-222; 288-291; 292; 344;393; 452], Kępiński [Wars Polyt 17.14], Kierulff [UAI Circ 595; 596; 599], Kollross [AN 6286], Korn [AN 6213], Kotsakis [AN 6221], Krebs [AN 6213], Krug [AN 6213], Kuroiwa [AN 6221; 6229], Kvíčala [AN 6244], Kwiek [AN 6213], Lacchini [UAI Circ 600; AN 6213; 6229], Lagrula [UAI Circ 603; JO 20.120], Lassovszky [AN 6213; 6221], Lause [AN 6213; 6217; 6249; 6258; 6327; 6406], Lipiński [UAI Circ 596; 600; AN 6240; Wars Repr 41], Loreta [BZ 18.45; 70; 76; 82; 84; 88; 19.19; 34; 38; 42; 53; 58; 66; AN 6213; 6217; 6221; 6229; 6240; 6249; 6256; 6258; 6269; JBAA 46.321; Gaz astr 23.93], Luther [AN 6213; 6281], Marshall [AAS 8.249], Meyer [AN 6244], Miczaika [BZ 18.62; 86; AN 6213; 6240], Mitin [Tadjik Circ 23], Moisseiev [Gaz astr 23.99], Mykietka [UAI Circ 601], NAS [AN 6254; 6293; 270.293; NAT 20.101], Nielsen [Aarhus Medd 1.175], Novopachenny [Odessa Bull 1.15], Observers aboard S.S. Strathaird [JBAA 46.320], Opalski [Belgrad Bull 2.11; Wars Polyt 18], Oriano [BSAF 50.408], Pagaczewski [AN 6213], Parenago [UAI Circ 600], Parenago and others [NNVS 51; 54], Plakidis [AN 6221], Quignon [Ciel et Terre 52.216], Rabe [AN 6213], Richter [AN 6249], Rigollet [BSAF 50.409], de Roy [Gaz astr 23.96], Rudkjöbing [UAI Circ 596], Rudski [NNVS 54], Rybka [UAI Circ 601; AN 6240], Rybka and Mergentaler [Lwów Contr 8], Sandig [AN 6229], Savron [Kharkov Publ 6.51], Schmitt [UAI Circ 603], Schneller [AN 6213], Soloviev [AN 6217; Tadjik Circ 23], Steavenson [MN 97.658; 98.675; 99.699], Stobbe [BZ 18.41; AN 6213], Svenonius [UAI Circ 598], Terwangne [Gaz astr 23.98], Tshernov [Tadjik Ann 1,2.30], Vand [AN 6229], Vlček [AN 6229], Vrátník [AN 6213; 6229; 6244; 6256], Waldmeier [AN 6213], Wendl [AN 6286], Wilk [AN 6213; 6214; 6217; 6229; 6240; 6249], Witkowski [AN 6249], Zessewitsch [AN 6217; Tadjik Circ 23], Zonn [UAI Circ 598, corr. 613; Wilno Bull 19].

Observations of the spectrum and remarks thereon by Adams, Sanford, and Wilson [ASP 48.325], Baldet [BSAF 50.332], Barabachoff [Kharkov Publ 6.133], Beals [AAS 8.239; DAO 6.333], Behr [ZAp 13.108], Belorizky [UAI Circ 596; CR 203.397; BSAF 50.409], Beyer [AN 6214; 6217; 6249], Bloch [CR 204.1055], Bobrovnikoff [Perkins Contr 6], Bobrovnikoff and Hynek [AAS 8.239], Brück [UAI Circ 595; BZ 18.41; AN 6213], Camichel [CR 203.1130; BSAF 50.332], Cecchini and Gratton [SAI 10. 13], Cecchini, Gratton and Krüger [UAI Circ 598; AN 6213], Cherrington [ASP 52.121], Edwards and Barber [MN 98.42], Guthnick [AN 6213], Harper [AAS 8.242; ASP 49.222; DAO 6.318], Hellerich [AN 6213], Lindblad and Öhman [UAI Circ 596; 598], McKellar [AAS 8.247; DAO 6.347], McLaughlin [HAC 380; AAS 8.247; ApJ 91.369], Merrill and Wilson [ASP 48.230], Pearce [AAS 8.250; DAO 6.330], Popper [ASP 49.112; 50.304], Spencer Jones [UAI Circ 598], Stobbe [AN 6213], Struve [HAC 380], Vogt and Bohrmann [AN 6213], Vorontsov-Velyaminov [RAJ 14.113], Wachmann [AN 6213], Wyse [ASP 48.234], Young [JRASC 30.209]. +

CQ Lac. Elements by Zessewitsch [Tadjik Circ 11].

CR Lac = 98.1927. Rediscovered by Hoffmeister who ascribes eclipsing type [AN 5528; 5553; Sonn Mitt 12]. Seliwanow could represent the observed minima with the elements: Min. = 2425121.56 + $2^d.00088 \cdot E$, but the behavior of the star outside the minima induced him to ascribe it to the Z Camelopardalis type [Tashk Circ 54].

CS Lac = BD +41°4399 ($9^m.1$) = AG Bo 16217 ($8^m.8$). D = $0^d.4$. A_2 = $0^m.06$ [AN 6253].

CT Lac. Very red.

CW Lac = 224.1935. Confirmed by Morgenroth [AN 6153] and Zonn [Wilno Bull 17.28].

TW Leo. Spectrum Md according to Wachmann [AN 5805].

TX Leo = 49 Leonis = BD +9°2374 ($6^m.2$) = AG Lpz II 5521 ($6^m.4$) = Boss 2817 = PD 6077 ($5^m.94$) = HR 4148 ($5^m.70$) = ADS 7837 = HD 91636 (A0). $A_2 \geq 0^m.02$, m_2 probably at the phase $0^p.54$. D = $0^d.2$ [AN 5951], The elements also fit well with the 10 photoelectric observations of Stebbins who had rejected one minimum on account of its deviation [Washb Publ 15.81]. The variability of this star was already announced by Schmidt in 1867 [AN 1635]. It seems doubtful, however, considering the small amplitude established by Meyer photoelectrically if Schmidt's visual observations can be considered to indicate real variations. Neither he [AN 1832], nor Heis [AN 1642], could confirm the variability. The variability of the radial velocity was discovered by Harper just before Meyer's announcement of the light variation. The spectroscopic orbit was derived by Mohler [AJ 1039; AAS 7.224; Cook Obs 2]. 1 spectrum at Babelsberg [VJS 74.57]. +

TY Leo. Elements by Rügemer [AN 5933].

TZ Leo. Elements by Hoffmeister. 5 max. [AN 6118].

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UU Leo. Elements by Jensch. D = 4^h [AN 6153]. 1 min. by Soloviev [Tadjik Circ 19].

UV Leo = BD +15°2230 ($8^m.9$) = AG Berl A 4212 ($9^m.0$) = AG Lpz I 4073 ($8^m.8$) = HD 92109 (G5). Jensch supposed a period of $0^d.3000$. 20 min. [AN 6153]. Similar elements were derived by Kwiek [SAC 14.59] and Soloviev. 75 obs. 3 min. [Tadjik Circ 19; 20; NNVS 52]. Schneller found the even and odd minima of different depth, $0^m.65$ and $0^m.45$ respectively, so that the period should be doubled [AN 6238]. Improved elements by Pierce. 14 min. [AJ 1113; AAS 9.196; 290]. Obs. by Plaut and others [BAN 311; 331].

UW Leo = BD -4°3038 ($9^m.5$). Confirmed by Lange [Tadjik Circ 3]. Elements by Seliwanow [Tashk Circ 60; NNVS 52].

UX Leo. Confirmed by Lange [Tadjik Circ 3]. Elements by Seliwanow [Tashk Circ 60; SAC 15. 59; NNVS 52].

UY Leo = BD +23°2234 ($9^m.3$) = Bo VI +23°2234 ($9^m.2$) = Kü 4640 ($9^m.45$). Confirmed by Esch [AN 6330].

UZ Leo = BD +14°2280 ($9^m.2$) = AG Lpz I 4082 ($9^m.3$) = Kü 4730 ($9^m.44$). Elements by Kaho [Tokyo Bull 209; Tokyo Astr Obs Rep 5,2; Astr Herald 31.45].

VV Leo = BD +9°2413 ($9^m.0$) = AG Lpz II 5598 ($8^m.7$). Elements by Esch [AN 6330].

Y Lep = CoD -24°2849 ($8^m.8$) = CPD -24°828 ($9^m.5$) = Gou 5898 (8 3/4^m) = Cord A 2512 ($9^m.1$). Confirmed by visual observations of Florja who finds A = $0^m.6$ [NNVS 37].

Z Lep. Chart by Hoffmeister [AN 5791]. Elements by Zessewitsch [SAC 11.52; 13.61; Inf Circ 1.7; Tadjik Circ 1].

RR Lep = BD -13°1086 ($9^m.0$) = AG Cbr M. 1355 ($9^m.2$) = HD 33789 (A0). Zessewitsch supposed at first a period of 12^d [SAC 11.52], but later found the elements given in the Table [Tadjik Circ 1; SAC 13.56].

RS Lep = BD -20°1245 ($9^m.2$) = CPD -20°1069 ($9^m.1$) = $Mill_2$ 469 = HD 40640 (A0). First elements by Zessewitsch [Tadjik Circ 1; SAC 13.57]. Improved elements were derived by Soloviev from 139 observations by Zessewitsch. D = $0^d.290$, d = $0^d.019$ [NNVS 54]. +

RT Lep. Probably identical with CoD -23°3008 (10^m). Elements derived by Jensch. The light variation is apparently very regular [AN 6135].

UW Lib = BD -16°3882 ($9^m.2$) = AG Wa 5385 ($9^m.0$). Confirmed by Parenago [NNVS 27-28; 33-34]. Period by Thomas. The star is an intermediate one between Cepheids and long period variables. According to Payne-Gaposchkin, the variability of the light curve may be an indication for its belonging to the latter class. Spectrum K5 [Harv Repr 170].

UX Lib = SVS 247.

UY Lib = SVS 248.

UZ Lib = BD -8°3999 ($9^m.4$). Confirmed visually by Ahnert and Hoffmeister [AN 5655; Sonn Mitt 20]. Elements by Parenago. 5 max. [NNVS 27-28; 33-34].

VV Lib = SVS 250.

VW Lib. Elements by Soloviev. 3 max. [Tadjik Circ 25].

VY Lib. Elements by Jensch. Photographic range $10^m.60$-$11^m.61$ [AN 6059]. Confirmed by Lange [Tadjik Circ 4]. 25 obs. 3 max. by Soloviev [Tadjik Circ 19].

BR Lup. Swope and Caldwell found eight maxima of this U Geminorum star between 2411187 and 2425689 [HB 879].

CD Lup. [Companion $15^m.0$.]

CH Lup. Broad maxima, narrow minima.

CC Lyr. Confirmed by Kukarkin [NNVS 35]. Elements by Zverev [NNVS 46; 52].

CD Lyr. Elements by Ahnert. D = $10^h.8$ [BZ 22.99].

CE Lyr. Confirmed by Kukarkin [NNVS 35]. Elements by Ahnert [BZ 22.98].

CF Lyr. Confirmed by Kukarkin [NNVS 35].

CH Lyr. Elements by Ahnert [BZ 22.99].

CI Lyr. Elements by Ahnert. M-m = $0^d.183$. Subclass b [BZ 22.99].

CK Lyr. [*13^m f $0^m.4$.] Elements by Ahnert [BZ 22. 99].

CL Lyr. Elements by Ahnert. M-m = $0^d.074$. Subclass a [BZ 22.99].

CM Lyr. Red. Zverev finds cycles of 180^d or 90^d indicated [NNVS 46; 52].

CN Lyr. Confirmed by Parenago [NNVS 45]. Elements by Zverev [NNVS 46; 52], confirmed by Parenago. M-m = $0^p.55$. Photographic amplitude $11^m.0$-$11^m.6$ [NNVS 57-58]. Radial velocity by Joy [ApJ 86.405; 428; 89.357].

CP Lyr. [VX Lyrae 2^s p $3^m.4$ s.] Elements by Ahnert. Perhaps semiregular [BZ 22.99].

CQ Lyr. The star did not change its brightness from 1928 May to August, then it decreased rapidly [AN 5655].

CR Lyr. Elements by Ahnert. M-m = $0^d.084$. Subclass a [BZ 22.99].

CS Lyr. Elements by Ahnert. M-m = $0^d.100$. Subclass a [BZ 22.99].

CT Lyr. Elements by Ahnert. M-m = $0^d.078$. Subclass a [BZ 22.99].

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CV Lyr. Elements by Zverev. The light variation is similar to that of RS Cancri [NNVS 46; 52].

CW Lyr. Elements by Ahnert [BZ 22.99].

CX Lyr. Elements by Zverev. The period apparently is somewhat variable. In the years 1934-1935 the observations are fitted better by the period $0^d.616641$. The elements, given in the Table, are mean elements [NNVS 46.52].

CY Lyr. [*15^m np closely.] 8 max. are observed by Hoffmeister [AN 5655]. Zverev found that the variable undoubtedly belongs to the U Geminorum type. The cycles last between 10^d and 20^d, the maxima between 1^d and 7^d. The magnitude at maximum is between $12^m.9$ and $13^m.8$ [NNVS 46; 52]. 21 max. by Koyama [AN 6207; Kyoto Bull 310]. Observed by Lause. The mean interval between maxima is $13^d.8$ [AN 6251]. +

CZ Lyr. Elements by Ahnert [BZ 22.99].

DD Lyr. Elements by Zverev [NNVS 46; 52].

DE Lyr. Reddish.

DF Lyr. Elements by Zverev. $m_2 = 13^m.38$ at the phase $0^P.51$ [NNVS 46; 52].

DG Lyr. Confirmed by Ahnert [BZ 22.99]. The star seems to be reddish.

DH Lyr. Elements by Ahnert. M-m = $0^d.085$. Subclass a [BZ 22.99].

DK Lyr. Reddish.

DL Lyr. The star rose slowly from 16^m to 14^m between 1928 February and April, underwent only small changes until June, and then decreased to $16^m.5$ which magnitude was reached in September.

DM Lyr. The star was fainter than 16^m from 1928 February 21 to August 24, and from September 16 to October 10. It was only visible from September 2 to 13. It reached the maximum of 13^m September 4 and 5. The quick rise seems to exclude long period type. Hoffmeister therefore supposes that the star is either a Nova or of the U Geminorum type [AN 5655].

DP Lyr. Reddish. Elements by Zverev. The range of the mean light curve is $0^m.71$ [NNVS 46; 52].

DS Lyr. Elements by Ahnert. M-m = $0^d.070$. Subclass a [BZ 22.99].

DU Lyr. Confirmed by Parenago [NNVS 45]. Elements by Ahnert. $m_2 = 13^m.28$ [BZ 22.99].

DV Lyr. Elements by Ahnert. M-m = $0^d.139$. Subclass b [BZ 22.99].

DW Lyr. Reddish. Approximate elements by Zverev [NNVS 46; 52].

DX Lyr. Reddish.

EE Lyr. [*$10^m.5$ closely north.] Reddish. Elements by Zverev The range of the mean light curve is $0^m.88$ [NNVS 46; 52].

EF Lyr. Reddish. Elements by Zverev [NNVS 46; 52].

EG Lyr. Reddish. Approximate elements by Zverev. The even minima are deeper than the odd ones. Brightness of the maxima $11^m.1$-$11^m.8$, of the even minima $12^m.7$-$13^m.1$, of the odd minima $12^m.0$-$12^m.2$ [NNVS 46; 52].

EH Lyr. Somewhat reddish.

EK Lyr. Reddish. Zverev found indication of cycles of about 180^d [NNVS 46; 52].

EL Lyr. Elements by Parenago. Form of the light curve β_2? [NNVS 45].

EM Lyr. Elements by Ahnert [BZ 22.99].

EN Lyr. Elements by Zverev [NNVS 46; 52].

EP Lyr = BD +27°3334 ($9^m.5$). Confirmed by Parenago [NNVS 45]. The first elements were derived by Lause who adopted Cepheid type with a period of 40^d [BZ 15.9]. Zverev gave the improved value of the period of $41^d.86$ [NNVS 46], but found later that the star belongs to the RV Tauri type. $m_2 = 10^m.25$. The phases for m_1, M_1, m_2, M_2 are $0^P.00$, $0^P.14$, $0^P.54$, and $0^P.76$ respectively [NNVS 52].

EQ Lyr. Observed by Beljawsky [NNVS 51].

ES Lyr. Elements by Ahnert [KE 1939; BZ 21.138].

EU Lyr. Reddish.

EW Lyr. [*14^m closely north.] Confirmed by Zessewitsch [AN 5911]. First elements by Pagaczewski [AAc 2.28; SAC 10.44]. 11 min. [AAb 2.24; SAC 13.61]. Improved elements by Zverev. D = $0^P.11$ [NNVS 46; 52].

EX Lyr. Confirmed by Kukarkin [NNVS 35]. Elements by Zverev. $m_2 = 12^m.38$ [NNVS 46; 52].

EY Lyr.= BD +31°3328 ($9^m.0$) = AG Lei 6796 = HD 172785 (Mb). Confirmed by Zessewitsch [AN 5911]. Zverev found irregular light variation, at some times the star was constant [NNVS 46; 52]. Böhme confirmed this result; he found the photographic amplitude $9^m.6$-$10^m.6$ [AN 6371].

EZ Lyr. [*11^m np closely.] Elements by Jacchia. 105 obs. [BZ 13.55; SAI 9.151]. Improved elements by Parenago. 11 max. [NNVS 45]. 1 max. by Zverev [NNVS 52]. 1 max. by Soloviev [Tadjik Circ 24].

FF Lyr. Position by Wolf [AN 4046]. Elements by Florja [NNVS 38]. 9 max. 116 obs. by Florja [Tashk Bull 1.11].

FG Lyr. Confirmed by Parenago [NNVS 45]. First elements by Piotrowski: Min. = 2427619.612 +$2^d.8717 \cdot E$ [AAc 2.79; SAC 13.57]. Improved elements by Zverev. D = $0^P.17$, d = $0^P.03$ [NNVS 46; 52].

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FH Lyr. Rediscovered by Morgenroth [AN 6135]. Zverev at first adopted a period of $4^d.79$ [NNVS 46], but later found that the period is only one third of this, and derived the elements given in the Table. D = $0^P.19$ [NNVS 52].

FI Lyr = BD +28°3059 ($9^m.2$) = Bo VI +28°3059 ($9^m.1$). Elements by Zverev [NNVS 46; 52].

FK Lyr. Zverev found semiregular light variation with the mean period of 43^d [NNVS 46; 52].

FL Lyr = BD +46°2641 ($8^m.7$) = AG Bo 12716 ($8^m.9$) = HD 179890 (G5). Elements by Piegza. D = $3^h.8$. A secondary minimum is indicated [AAc 3.30; SAC 15.59].

FM Lyr = BD +35°3340 ($9^m.5$). Confirmed by Parenago [NNVS 45].

FO Lyr. Confirmed by Parenago, 3 min. [NNVS 45]. Elements by Zverev. D = $0^P.11$ [NNVS 46; 52]. Improved elements by Ahnert [BZ 21.138].

AN Mon. Confirmed by Zessewitsch [AN 5911]. At first Florja supposed the multiple of the period to be $9^d.432$ [Tashk Circ 1; NNVS 38; SAC 11.52], but later found the true period. 132 obs. [NNVS 52; Sternb Publ 8,2; SAC 14. 59]. Improved elements by McLeod. 6 min. Photographic range $11^m.6$-$12^m.8$ [HB 901]. +

AO Mon = BD -4°1826 ($9^m.4$) = HD 54003 (A0). As Florja stated [Sternb Publ 8,2.18], the position, BD-number, and HD-number, as given in the discovery announcement [AN 5791] and the Benennungsliste [AN 5911], are erroneous. Confirmed by Florja [Tashk Circ 1; NNVS 38] and Zessewitsch [AN 5911]. Elements by Lause. D = $0^d.275$. 18 min. [AN 5911; 5977; 6233]. Lause's elements fit the 210 observations of Florja [NNVS 52; Sternb Publ 8,2].

AP Mon = BD -6°1954 ($9^m.0$) = AG Ott 2463 ($8^m.7$). Confirmed by Zessewitsch [AN 5911]. Florja finds only small irregular light variations of this strongly colored star which he estimates not sufficient for ascertaining the variability. 90 obs. [NNVS 38; 52; Sternb Publ 8,2].

AQ Mon. The first elements were derived by Lause who found the period of the primary minimum = $8^d.90989$, the period of the secondary minimum = $8^d.878$. The phase of the secondary, therefore, shifted by a considerable amount during the time of his observations. D_1 = $0^d.295$, D_2 = $0^d.415$. From these results he concluded that the system should have a large eccentricity, a rapid motion of the line of apsides, and a great distance of both components each from another. 254 obs. [AN 6043]. Jensch, however, showed that the system is a quite normal system with a period of $2^d.54558$. A_1 = $0^m.8$, A_2 = $0^m.45$. 193 obs. 23 min. [BZ 16. 47; AN 6059]. At the same time, Gaposchkin found the same result, only that he supposed the period half that of Jensch, viz. $1^d.2729244$, because he did not find a difference in the depth of odd and even minima. He determined also the photometric orbit [HB 897]. The double period, however, should be preferred, because Florja also found two minima of very different depth, $0^m.5$ and $0^m.1$ respectively. 186 obs. [NNVS 38; 52; Sternb Publ 8,2]. The newest elements, given in the Table, were derived by Lause. 13 min. [AN 6094; 6318; VAP 44.241]. +

AR Mon = BD -4°1915 ($8^m.8$) = AG Strb 2635 ($8^m.8$) = HD 57364 (K0). Confirmed by Zessewitsch [AN 5911]. Elements by Florja. m_2 = $9^m.34$. 210 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.59]. Improved period by Lause. 7 min. [AN 6318; SAC 16.59].

AS Mon. Confirmed by Zessewitsch [AN 5911]. First elements by Lause [AN 5911; 5977]. Improved elements by Florja. D = $8^h.8$. 215 obs. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.59]. +

AT Mon. Confirmed by Zessewitsch [AN 5911] and Florja who adopts W Ursae majoris type with a period of about $0^d.64$. 209 obs. [NNVS 38; 52; Sternb Publ 8,2]. +

AU Mon = BD -1°1449 ($8^m.5$) = AG Nic 1909 ($8^m.8$) = HD 50846 (B5). Confirmed by Zessewitsch [AN 5967] and Rügemer, who supposes a period of $21^d.93/n$ [AN 5921]. Elements derived by Florja. D = $25^h.1$. 158 obs. [Tashk Circ 10; 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.59]. Lause finds the period $11^d.1126$ [SAC 16.59].

AV Mon. Rediscovered by Morgenroth [AN 5974; 6008]. Elements by Florja. 198 obs. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.59]. +

AW Mon = BD -10°2233 ($9^m.1$). First elements by Morgenroth. D = 36^h. 5 min. [AN 5946]. Improved elements by Florja. 49 obs. [NNVS 52; Sternb Publ 8,2; SAC 14.60]. +

AX Mon = BD +5°1267 ($7^m.1$) = AG Lpz II 2962 ($7^m.8$) = PD 4006 ($7^m.02$) = HD 45910 (B3). Guthnick and Prager found rapid variations of the brightness [AN 5713]. Hoffleit found that Harvard plates seem to confirm the variation [HB 892]. Remarks on the spectrum by Humason and Merrill [ASP 33.112], Merrill [ASP 35. 303], Merrill, Humason, and Burton [ApJ 61. 389], Plaskett, who found the spectrum variable between B0 and A2 [ASP 35.145; DAO 4. 18], Hoffleit [HB 892]. +

AY Mon. Rediscovered by Morgenroth [AN 5974]. Elements by Jacchia. D = $0^d.36$ [HB 912]. +

AZ Mon. Rediscovered by Morgenroth [AN 6002]. Elements by Jensch. 6 max. [AN 6135]. +

BB Mon. Lause supposed at first Cluster type with the mean period $0^d.49883$ [AN 5902]. Later he found eclipsing type and derived the elements. m_2 = $10^m.02$. 40 min. [AN 5977; 6233; 6404]. Observations on Harvard plates by McLeod do not confirm Lause's period [HB 904].

BC Mon. Elements by Esch [AN 6017; KE 1935].

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Confirmed by Florja. 14 obs. [NNVS 52; Sternb Publ 8,2].

BD Mon. Visually confirmed by Esch [AN 6017]. Elements by Florja. 14 obs. [NNVS 52; Sternb Publ 8,2].

BE Mon = BD +7°1394 ($9^m.5$). Confirmed by Morgenroth [AN 6058]. Elements by Lange. 5 max. [Tadjik Circ 5]. Improved elements by Soloviev [Tadjik Circ 19; 20].

BF Mon. Elements by Jensch. 5 max. [AN 6135].

BI Mon. [$*4^s$ p $0^m.2$ s. Possibly variable $12^m.2$-$14^m.4$, according to Olivier, Penn Publ 5,3.30]. Elements by Jensch [AN 6135]. 24 obs. by Olivier and others [Penn Publ 5,3.30].

BL Mon. Elements by Jensch. 7 max. [AN 6135].

BM Mon. Elements by Piotrowski. D = $4^h.1$ [AAc 2.69].

BN Mon. From plates taken in blue and yellow light, Edmondson and Rogers found the color index $+4^m.80$ [ASP 47.192]. The spectral type N, derived from objective-prism spectrograms some years before by Merrill, Sanford, and Burwell [ASP 45.307], was confirmed by two slit spectrograms taken by Sanford [ASP 47.273]. +

BO Mon = BD -3°2158 ($9^m.5$). Elements by Soloviev. D = $0^d.50$. 174 obs. [Tadjik Circ 6; 16; 30; NNVS 55]. +

BP Mon. Rediscovered by Morgenroth [AN 5981] and by Nekrasova [NNVS 55].

BQ Mon. Reddish. Long stillstands in maximum.

BS Mon = BD -3°1879 ($9^m.3$). Confirmed by Jensch [AN 6135]. Florja finds the light variation irregular. 19 obs. [NNVS 52; Sternb Publ 8, 2]. Spectrum M0p according to Mayall and Cannon [HB 913].

VW Mus. D = $0^P.11$. m_2 = $13^m.9$.

VX Mus. D = $0^P.18$.

WY Mus. The elements: Max. = 2424173.06 + $0^d.60562 \cdot E$ + $0^d.35 \sin 0.12 \cdot E$ fit for the observed interval, though probably a small parabolic term should be added [HB 883].

XY Mus. The period of 193 days fits the majority of the observations. The variable is irregular, particularly at minimum during several intervals of time [HB 883].

XZ Mus. The period changed between 2419200 and 2423900. Elements before the change: Max. = 2412590 + $113^d \cdot E$ [HB 883].

AA Mus. The period changed between 2418600 and 2423900. Elements before the change: Max. = 2415130 + $269^d \cdot E$ [HB 883].

AD Mus. [Following of triple.]

AE Mus. The range is from $12^m.0$ to $12^m.8$ before 2415960. After 2416000 the range is from $12^m.0$ to $14^m.4$ with an extreme scatter at minimum of $\pm 0^m.7$. At maximum the scatter is less than $\pm 0^m.2$ [HB 883].

AH Mus. The period may possibly have half the value given, though it is unlikely [HB 883].

AK Mus. [South following of pair.]

AN Mus. [Northern of pair.] The light curve is anomalous. It has a constant maximum for 60 days, a stillstand on the descending branch for 30 days at $15^m.7$, and a constant minimum for 40 days [HB 883].

AS Mus. Resembles X Puppis.

AV Mus. [Southern of pair.]

AX Mus. A change of period is indicated: from 2412550 through 2419200 the period is 99^d; from 2423900 through 2426100 the period is $97^d.3$ [HB 883].

AY Mus = CPD -64°1669 ($9^m.2$). D = $0^P.08$. m_2 = $10^m.5$ at the phase $0^P.482$.

AZ Mus. [BB Muscae 15^s f $1^m.8$ n.] D = 8^h. Three minima, given by Uitterdijk [BAN 240] can be represented by the elements given in the Table.

BB Mus. [AZ Muscae 15^s p $1^m.8$ s.] D = $0^P.15$. There is no indication of a secondary minimum. The period should possibly be doubled.

BC Mus. D = $0^P.12$.

BD Mus. D = $0^P.20$. m_2 = $0^m.05$.

BE Mus. [BF Muscae 9^s f $0^m.3$ s.] Elements by Hertzsprung [BAN 240].

BF Mus. [BE Muscae 9^s p $0^m.3$ n.]

BH Mus = HV 6451. Rediscovered by Swope who also derived the elements [HA 90.178].

BI Mus. Elements derived by Prager from 400 observations on Johannesburg plates [BAN 286].

BK Mus. From 448 Johannesburg plates, Prager found that between 1924 and 1936 there was only one minimum of duration at least 42 and at most 408 days, which occurred in 1930. The period may be several hundred or even a few thousand days. The brightness outside the eclipse seems to undergo small and irregular oscillations [BAN 286].

BL Mus = CPD -64°2200 ($9^m.6$).

WX Nor. Hoffleit derived the first elements: Min. = 2424710.659 + $0^d.63572 \cdot E$ [HB 884]. Kruytbosch found that the period must be doubled and gave the elements of the Table. m_2 at the phase $0^P.433$ [BAN 267].

WY Nor. Elements by Hoffleit. Subclass b

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[HB 884]. Improved period by Hertzsprung [BAN 327].

WZ Nor. Elements by Kruytbosch. m_2 at the phase $0^P.471$ [BAN 267].

XY Nor. The elements were derived by Hertzsprung from 293 observations made by Kruytbosch and 265 observations made by Kooreman on Johannesburg plates. $A_2 = 0^m.16$ [BAN 281].

YY Nor. Hoffleit derived the first elements: Min. = 2424298.734 + $1^d.25333 \cdot E$ [HB 884]. The star was rediscovered by Kruytbosch who derived the elements given in the Table. D = $0^d.25$. Hoffleit's period P' and Kruytbosch's period P are connected by the relation: $1/P = 1 - 1/2P'$ [BAN 236].

YZ Nor. Subclass b.

AA Nor. First elements by Hoffleit [HB 884]. Improved elements by Kruytbosch [BAN 267].

AB Nor. Swope and Caldwell found 2 maxima of this star which is probably of the U Geminorum type [HB 879].

AC Nor. The elements by Hoffleit: Min. = 2423992.546 + $0^d.7845 \cdot E$ [HB 884] proved to be erroneous. The correct elements were derived by Kruytbosch [BAN 267]. Hoffleit's period P' and Kruytbosch's period P are connected by the relation: $2/P = 2/P' - 1$.

AT Nor. Hoffleit assumed a period of $2^d/n$ [HB 884]. The final elements were derived by Kruytbosch and fit exactly the six minima observed by Hoffleit [BAN 267].

AU Nor. The maximum is broad.

BE Nor. Hoffleit derived the first elements: Min. = 2424320.695 + $1^d.6723 \cdot E$ [HB 884]. Kruytbosch found these elements to be wrong, and derived the correct ones. m_2 at the phase $0^P.352$ [BAN 267]. Hoffleit's period P' and Kruytbosch's period P are connected by the relation: $5P = 4P'$.

BH Nor. First elements by Hoffleit [HB 884]. Improved elements by Kruytbosch [BAN 267].

BP Nor. [Close companion.]

BQ Nor. The star is visible only on six plates taken on one day [HB 884].

BY Nor. Rediscovered by van Gent [BAN 236]. Elements by Kruytbosch [BAN 236].

CD Nor. 3 max. by Kruytbosch [BAN 267].

CE Nor. Rediscovered by Kruytbosch who also derived the elements. D = $0^P.10$, d = $0^P.05$ [BAN 236].

CH Nor. Elements by Hertzsprung (by letter).

CI Nor. Subclass a.

CL Nor. Hoffleit derived the first elements: Min. = 2424294.717 + $0^d.61948 \cdot E$ [HB 884]. Kruytbosch found this period to be wrong and derived the correct elements. Hoffleit's period P' and Kruytbosch's period P are connected by the relation: $1/P = 1/P' - 1$ [BAN 267].

CM Nor. Elements by Kruytbosch [BAN 267].

CO Nor. Hoffleit found a short period satisfying the observations of the years 1924-1926 in Milky Way Field 175, the field on which the variable was discovered, but plates from an overlapping region showed the period to be erroneous, and eventually a long period was derived [HB 884].

CP Nor. Hoffleit derived the first elements: Min. = 2424320.663 + $3^d.906 \cdot E$ [HB 884]. The star was rediscovered by Oosterhoff [BAN 236], and Kruytbosch derived the correct elements. D = $0^P.29$ [BAN 236]. Hoffleit's period P' and Kruytbosch's period P are connected by the relation: $2/P = 2/P' + 3$. ?

CR Nor. [Close companion.]

CS Nor. 1 max. by Kruytbosch [BAN 267].

CX Nor. Elements by Kruytbosch [BAN 267].

CY Nor. For fourteen early observations, from 2412900 to 2415000, a period of 250^d is not satisfactory unless an abrupt change in epoch of about one hundred days is introduced. The type of variation may still be doubtful because of insufficiency of material [HB 884].

DI Nor. The type of variation may still be doubtful because of insufficiency of material [HB 884].

DO Nor. Elements by Kruytbosch. m_2 at the phase $0^P.518$ [BAN 267].

DV Nor. [Close companion.]

DY Nor. Elements by Kruytbosch [BAN 267].

EI Nor. Elements by Kruytbosch [BAN 267]

EK Nor. Elements by Kruytbosch [BAN 267].

EM Nor. Elements derived by Oosterhoff, and confirmed by Kruytbosch. The light curve is nearly sinusoidal [BAN 267].

EO Nor. [Close companion.] Elements by Kruytbosch [BAN 267].

ER Nor. 2 max. by Kruytbosch [BAN 267].

ET Nor. Elements by Mergentaler. D = $3^h.7$, d = $0^h.6$ [BAN 296].

EX Nor. Elements by Hoffleit [HB 884]. Improved elements by Kruytbosch. m_2 at the phase $0^P.450$ [BAN 267]. The values given for the declination in HB 884 and in BAN 267, p.255, are wrong.

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EY Nor. Subclass a.

EZ Nor. Sharp rise to maximum. The type of variation may still be doubtful because of insufficiency of material [HB 884].

FK Nor. Elements by Kruytbosch. m_2 at the phase $0^P.680$ [BAN 267].

FQ Nor. Hoffleit finds the periods $0^d.6827$ and $0^d.6813$ alternating. The former fits the observations for 1925, 1928, and 1929; the latter those for 1924 and 1926 [HB 884]. Hertzsprung, on the other hand, finds, from a discussion of 275 observations made by Kruytbosch on Johannesburg plates the period so nearly two sidereal days that only two groups of observations separated in phase by about half the period could be obtained in the time-interval covered by the Johannesburg observations. Consequently the character of the light variation is still uncertain. Hertzsprung gives 28 normal points [BAN 281].

FW Nor. Elements by Kruytbosch. m_2 at the phase $0^P.515$ [BAN 267].

FX Nor. Subclass a.

GL Nor = CPD -51°8479 ($10^m.0$). Elements by Kruytbosch. D = $0^P.15$ [BAN 236]. 1 min. by Alden [AJ 1035].

GM Nor = CoD -54°6427 ($10\ 1/2^m$) = CPD -54°6718 ($9^m.8$). Elements by Kruytbosch. D = $0^P.56$ [BAN 236].

GN Nor. [*14^m closely.] Elements by Kruytbosch. D_1 = $0^P.15$, D_2 = $0^P.14$. m_2 = $13^m.3$ at the phase $0^P.577$ [BAN 236]. Improved period by Shapley and Swope who do not find any appreciable shift of the spacing of the successive minima, so that the apsidal rotation must require more than a thousand years. The eccentricity probably exceeds 0.2 [HB 909; Yerkes Publ 7. 298]. Oosterhoff derives new elements, but of less weight than those by Shapley and Swope [BAN 326]. Remarks on ellipticity by Russell [ApJ 90.650].

GO Nor. D = $0^P.31$. There is an indication of a secondary minimum midway between the primaries.

GP Nor. D = $0^P.15$.

GQ Nor. Elements by Kruytbosch. D = $0^P.21$. m_2 at the phase $0^P.518$ [BAN 236].

GR Nor. The elements were derived by Kruytbosch from his own and Oosterhoff's observations. The resulting light curve is nearly sinusoidal [BAN 236].

GS Nor. D = $0^P.22$.

GT Nor. Elements by Kruytbosch. D = $0^d.17$ [BAN 236].

GU Nor = CoD -53°6508 ($11\ 1/2^m$) = CPD -53°7517 ($10^m.2$). Elements by Kruytbosch [BAN 236].

GV Nor = CoD -53°6563 ($10\ 1/2^m$) = CPD -53°7685 ($9^m.6$). Elements by Kruytbosch. D = $0^P.11$ [BAN 236].

GW Nor. Elements by Kruytbosch [BAN 236].

GX Nor. Elements by Kruytbosch [BAN 236].

GY Nor. Elements by Kruytbosch. D = $0^P.16$ [BAN 236].

HH Nor = CoD -51°9412 (10^m) = CPD -51°8448 ($8^m.2$) sf = Gou 21260 ($9\ 1/2^m$) = GZ 15^h2375 ($9\ 1/2^m$). [CoD -51°9411 ($9^m.5$) = HD 139966 (F0) 328° 12".6.] Elements by Kruytbosch. m_2 at the phase $0^P.443$ [BAN 267]. Improved elements by Alden. 36 obs. D = $0^d.86$, d = $0^d.43$ [AJ 1035].

HI Nor = CoD -56°6123 ($9^m.9$) = CPD -56°7083 ($9^m.2$) = GZ 15^h3322 ($9\ 1/2^m$). Elements derived by Kruytbosch from 301 of his own observations on Johannesburg plates and 506 observations made by Oosterhoff on Harvard plates. The minima seem to occupy an unusually small part of the period [BAN 267].

HK Nor. m_2 at the phase $0^P.517$.

HM Nor = CPD -53°7149 ($9^m.8$).

HN Nor. m_2 at the phase $0^P.466$.

HO Nor. m_2 at the phase $0^P.390$.

HP Nor = HV 8865. Broad as well as sharp minima occur in the light curve, but they do not seem to alternate. The star may be a variable of the U Geminorum type. Kruytbosch gives 245 observations [BAN 267]. Rediscovered by Luyten [AN 6176; 6337; Minn Publ 2.98].

HR Nor. Normal places for 55 nights, derived from 293 observations made by Kruytbosch, are given by Hertzsprung [BAN 281].

HS Nor. [CPD -57°7480 ($10^m.4$) 34^s f 0'.2 n.] D = $0^P.12$. No indication of secondary minimum [BAN 296].

HT Nor. D = $0^P.14$.

HU Nor. D = $0^P.16$. There is some indication of a secondary minimum [BAN 296].

HV Nor. D = $0^P.12$.

HW Nor. D = $0^P.17$, d = $1^h.5$. There is a doubtful indication of a slightly eccentric secondary minimum [BAN 296].

HX Nor = CPD -51°9551 ($10^m.0$). D = $0^P.04$.

TU Oct. The star is of the XX Ophiuchi type.

V 413 Oph. Confirmed by Parenago, who adopted a period of $0^d.448$. 34 obs. [NNVS 27-28; 33-34]. Zessewitsch gave the correct elements [Leningrad Eph 1932, p.25; Leningrad Bull 3.17; 19; 23; 4.9; Tadjik Eph 1935-36, p.13; 37]. These elements fit also Parenago's observations, as Rügemer stated [AN 5921]. Parenago's period P' and Zessewitsch's period P are connected by

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the relation: $1/P = 1/P' + 1$.

V 414 Oph. 8 max. by Hoffmeister. Rising and decreasing branches rather steep, nearly constant from phase $0^P.45$ to $0^P.8$ [KVBB 19.22; 70].

V 415 Oph. 4 min. by Hoffmeister [KVBB 19.22; 70].

V 416 Oph. Elements by Hoppe. 6 max. The pointed maxima are of shorter duration than the minima [KVBB 19.21; 61].

V 417 Oph. Elements by Hoppe. 5 max. Maximum brightness is variable. The flat maximum lasts about 100 days; increasing and decreasing branches are steep [KVBB 19.21; 61].

V 418 Oph. Reddish. Elements by Hoffmeister. 7 max. The light curve is somewhat variable [KVBB 19.22; 70].

V 419 Oph. Hoppe could not find a period [KVBB 19.21; 61].

V 420 Oph. [*$15^m.8$ nf closely.]

V 421 Oph. [*12^m $0^m.2$ f $0^m.3$ s.] Elements by Hoppe. 5 max. Maximum brightness apparently variable [KVBB 19.21; 62].

V 422 Oph. [*15^m $0^m.1$ p $0^m.2$ n.] Elements by Hoppe. 8 max. The maxima are pointed [KVBB 19.21; 62].

V 423 Oph. Elements by Piotrowski [AAc 2.63; KVBB 19.21; 62].

V 424 Oph. Elements by Hoppe. 3 max. [KVBB 19.21; 62].

V 425 Oph. [*$12^m.5$ $0^m.2$ f.] Elements by Hoppe. 4 max. [KVBB 19.21; 62].

V 426 Oph = SVS 83. Rediscovered by Hoffmeister who finds irregular light variations, similar to RW Aurigae and RR Tauri [AN 5791; KVBB 19.22; 70].

V 427 Oph. Elements by Hoppe. 6 max. The minima last about twice the time of the pointed maxima, whose brightness is apparently variable [KVBB 19.21; 62].

V 428 Oph. Elements by Hoffmeister. 6 max. [KVBB 19.22; 70].

V 429 Oph. Elements by Hoffmeister. 8 max. The star is apparently not red [KVBB 19.22; 71].

V 430 Oph. [*$13^m.7$ $0^m.3$ p $0^m.1$ s.]

V 431 Oph. Elements by Hoffmeister. 3 max. [KVBB 19.22; 71].

V 432 Oph. [*13^m $0^m.3$ f $0^m.2$ s]. 9 min. by Hoffmeister [KVBB 19.22; 71].

V 433 Oph. Elements by Hoppe. 8 max. [KVBB 19.21; 63].

V 434 Oph. Elements by Hoppe. 5 max. [KVBB 19.21; 63].

V 435 Oph. Hoppe could not find a period [KVBB 19.21; 63].

V 436 Oph. Elements by Hoppe. 4 max. The brightness of the pointed maxima is variable [KVBB 19.21; 63].

V 437 Oph. Elements by Hoppe. 5 max. [KVBB 19.21; 63].

V 438 Oph = BD +11°3139 ($9^m.2$) = AG Lpz I 6026 ($9^m.1$). Esch observed four maxima: 2426258, 6545, 6786, 7668 [AN 5911; by letter]. Provisional elements by Prager [KE 1935].

V 439 Oph. Zessewitsch adopted Algol type with $1^d.9$ period [AN 5911]. Hoffmeister found Cluster type and derived the elements. 12 max. [KVBB 19.71].

V 440 Oph. Provisional elements by Esch who observed the maxima 2427309, 7590, 7854 [AN 6017; by letter].

V 441 Oph. D = 8^h. +

V 444 Oph. [*$14^m.8$ nnp $1^m.0$ **16^m sp $0^m.5$ *16^m np $1^m.2$.] Position by Reinmuth [AN 5709]. Rediscovered by Hoffmeister who supposed long period [AN 5748].

V 445 Oph. Elements by Jensch. Photographic range $10^m.22$-$11^m.31$ [AN 6059].

V 446 Oph = SVS 672. Rediscovered by Beljawsky who also derived the elements [NNVS 47; Pulk Circ 15].

V 447 Oph. Morgenroth suspected long period variation [AN 5981]. Seliwanov could not confirm the variability at first [Tashk Circ 33]. Hoppe found the light variation to be irregular between $9^m.5$ and $13^m.5$ (phot.), and only small fluctuations of not more than $0^m.5$ for the interval of Seliwanov's observations [AN 6094] which have now been confirmed by Seliwanov who suggested that the star might be of the R Coronae Borealis type [Tashk Circ 43]. Jacchia observed one pointed maximum and one pointed minimum in 1936; the range was $1^m.6$. The form of the light curve was very irregular [BZ 18.88].

V 449 Oph. Elements by Piotrowski. D = $4^h.2$ [AAc 2.79; SAC 13.57; 14.60].

V 450 Oph. [*13^m close sf.] 11 obs. by Grigorieva [NNVS 54].

V 451 Oph = BD +10°3528 ($8^m.2$) = AG Lpz I 6637 ($8^m.0$) = HD 170470 (A0). D = $0^d.20$. 25 min. by Lause [AN 6362]. +

V 452 Oph. Elements by Soloviev. 4 max. [Tadjik Circ 11; 19].

V 453 Oph = BD -2°4354 ($9^m.5$). Elements derived by Seliwanow from 303 visual observations. The light curve has a double maximum whose high

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points are separated by $0^{p}.135$. The epoch given in the Table refers to the first maximum. The secondary minimum, between the two maxima, is at $10^{m}.72$ [Tashk Circ 48; AN 6179].

V 454 Oph = BD +12°3429 ($9^{m}.5$). Elements by Miczaika. 4 max. 3 min. [AN 6188; 6413]. These elements do not fit 16 scattered observations by Grigorieva [NNVS 54].

V 455 Oph. Elements by Jacchia [BZ 18.55]. 10 obs. by Grigorieva [NNVS 54].

V 456 Oph. Jacchia at first ascribed Cepheid type with the period of $14^{d}.6$ [BZ 18.55], but later found Algol type and derived the elements. $A_1 = 0^{m}.7$, $A_2 = 0^{m}.3$. $D = 0^{d}.2$ [AN 6251; HB 912].

V 457 Oph. Elements by Hoppe. 7 max. [KVBB 19.21; 63].

V 458 Oph. Elements by Hoppe. 8 max. [KVBB 19.21; 64].

V 459 Oph. Elements by Hoppe. 3 max. [KVBB 19.21; 64].

V 460 Oph. 9 max. by Hoffmeister [KVBB 19.72].

V 461 Oph. Elements by Hoppe. 10 max. [KVBB 19.21; 64].

V 462 Oph. Elements by Hoppe. 5 max. [KVBB 19.21; 64].

V 463 Oph. 5 max. by Hoffmeister [KVBB 19.72].

V 464 Oph. Reddish [KVBB 19.72].

V 465 Oph. 9 max. by Hoffmeister [KVBB 19.72].

V 466 Oph. The maxima are flat [KVBB 19.73].

V 467 Oph. 5 max. by Hoffmeister [KVBB 19.73].

V 468 Oph. The period is only sometimes valid. Amplitude variable [KVBB 19.73].

V 469 Oph. Long, flat waves of about 200^{d}, but without certain periodicity [KVBB 19.73].

V 470 Oph. The light varies in long flat waves [KVBB 19.73].

V 471 Oph. 3 max. by Hoffmeister which differ widely in length [KVBB 19.74].

V 472 Oph. 6 max. by Hoffmeister. The period shows great irregularities. The amplitude varies between $0^{m}.3$ and $1^{m}.0$ [KVBB 19.74].

V 473 Oph. 3 max. by Hoffmeister [KVBB 19.74].

V 474 Oph. From 2425300 to 5800 a period of 190^{d} is indicated, but this is not valid for the later time [KVBB 19.74].

V 475 Oph. 6 max. by Hoffmeister. Stillstand 20^{d} after maximum [KVBB 19.74].

V 476 Oph. Flat waves within $0^{m}.4$ with a period between 70^{d} and 150^{d} [KVBB 19.74].

V 477 Oph. M-m = $0^{d}.91$ [KVBB 19.74].

V 478 Oph. 14 max. by Hoffmeister. The maxima are flat, the minima rather pointed. M-m = $8^{d}.2$ [KVBB 19.74].

V 479 Oph. 1 max. 5 min. by Hoffmeister [KVBB 19.75].

V 480 Oph. Long flat waves and stillstands [KVBB 19.75].

V 481 Oph. Moderately long waves with stillstands [KVBB 19.75].

V 482 Oph. Mostly flat waves [KVBB 19.75].

V 483 Oph. Elements by Hoppe. 5 max. [KVBB 19.21; 64].

V 484 Oph. Provisional elements by Hoppe. 8 max. [KVBB 19.21; 65].

V 487 Oph. 4 min. by Hoffmeister. $D \leqq 0.45$ [KVBB 19.75].

V 488 Oph. Provisional elements by Hoppe. 12 max. [KVBB 19.21; 65].

V 489 Oph. Elements by Hoppe. 3 max. [KVBB 19.21; 65].

V 490 Oph. Intervals of about 120^{d} sometimes occur between maxima [KVBB 19.76].

V 491 Oph. 4 maxima can be represented by a period of 340^{d}, but other observations contradict it [KVBB 19.76].

V 492 Oph. Elements by Hoppe. 5 max. [KVBB 19.21; 65].

V 493 Oph. Period doubtful [KVBB 19.76].

V 494 Oph. The period of 67^{d} is only sometimes valid [KVBB 19.76].

V 495 Oph. Elements by Hoppe. 3 max. [KVBB 19.21; 65].

V 496 Oph. [*$15^{m}.0$ close.] Shallow secondary minimum is indicated. D = $0^{d}.36$ [KVBB 19.77].

V 499 Oph. Elements by Hoppe. 6 max. [KVBB 19.21; 66].

V 500 Oph. Provisional elements by Hoppe. 4 max. [KVBB 19.21; 66].

V 501 Oph. Elements derived by Soloviev. D = $0^{d}.120$. 3 min. [BZ 18.80, corr.84; Tadjik Circ 22]. 16 obs. by Grigorieva [NNVS 54].

V 502 Oph = BD +0°3562 ($8^{m}.8$) = AG Nic 4188 ($8^{m}.8$) = HD 150484 (G0). Elements by Lause. 10 min. [AN 6318; SAC 16.60].

V 503 Oph = HV 8965. RV Tauri type. Preliminary elements by Solovjev. 3 max. [Tadjik Circ 27].

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V 504 Oph = HV 8969. Probable elements by Solovjev. 36 obs. 4 max. [Tadjik Circ 27; NNVS 55].

V 505 Oph. Elements by Dombrovsky [Pulk Circ 13].

V 506 Oph. Elements by Soloviev [Tadjik Circ 22]. Improved elements by Miczaika. 104 obs. 11 min. [AN 6430].

V 507 Oph. Type and multiple of period by Dombrovsky [Pulk Circ 13].

V 508 Oph = BD +13°3496 ($9^m.5$). Elements by Jacchia. Visual range $0^m.48$ [AN 6251].

V 509 Oph. 4 min. by Hoppe [KVBB 19.22; 66].

V 510 Oph. 4 min. by Hoppe [KVBB 19.22; 66].

V 512 Oph. Perhaps of R Coronae Borealis type [AN 5748].

V 513 Oph = BD +5°3652 ($9^m.5$). Jacchia found the light variation to be similar to the AF Cygni type, with the mean period of 58^d. Visual range $1^m.3$. Two maxima and two minima, both pointed [BZ 18.88].

V 515 Oph. [BD +11°3546 ($9^m.0$) 4'.2 s.] Jacchia supposes the light variation to be similar to the AF Cygni type with a mean period of $\geq 200^d$. Visual range $1^m.4$ [BZ 18.88].

EP Ori. Rediscovered by Hoffmeister [AN 5748]. Elements by Seliwanow [NNVS 27-28].

EQ Ori = BD -3°945 ($9^m.1$). Elements derived by Pagaczewski from his own and Kordylewski's observations. D = $0^d.29$ [AAc 1.150; CRM Acad Pol 1930, 5].

ER Ori = BD -8°1050 ($9^m.0$) = AG Oct 1369 ($9^m.2$). Elements by Florja [BZ 13.25; NNVS 32; 37; AN 5838; SAC 10.44]. 1 min. by Soloviev [Tadjik Circ 8]. Improved elements by Taylor. m_2 = $10^m.11$. 412 obs. 11 min. Photometric orbit [Penn Publ 6,1.13]. 183 obs. 10 min. by Alexander. Photographic amplitude $9^m.59$-$10^m.33$, m_2 = $10^m.31$. Photometric orbit [Penn Publ 6,2.23]. Absolute dimensions and masses by Taylor and Alexander [Penn Publ 6,3.26]. Spectra are observed by Wyse [Penn Publ 6.1.13].

ES Ori = BD +5°758 ($9^m.5$). Confirmed by Zessewitsch [AN 5911] and Böhme [AN 6413]. +

ET Ori. Confirmed by Zessewitsch [AN 5911]. Elements by Pagaczewski. 9 min. [AAc 2.51; SAC 11.49]. Improved elements by Lause. 18 min. [AN 6067; 6233; 6318].

EU Ori. [BD +3°825 ($9^m.2$) 7^s p 0'.9 n.] Elements by Esch [AN 5911].

EV Ori = BD +9°780 ($9^m.4$). Confirmed by Esch [AN 5911] and Florja [AN 5911]. Hoffmeister supposes long period [AN 5700], Seliwanow short period [BZ 13.2], Parenago irregular light variation [AN 5911; NNVS 43]. Beyer observed 1 max. [BZ 15.14].

EW Ori = BD +1°976 ($9^m.5$). Confirmed by Florja [AN 5911]. Elements by Lause. 8 min. D = $0^d.29$ = $0^p.042$ [BZ 19.2; AN 6293]. +

EX Ori = BD -6°1167 ($9^m.0$) = AG Ott 1474 ($9^m.1$). Confirmed by Florja [NNVS 37]. Irregular according to Böhme [AN 6413].

EY Ori = BD -5°1281 ($9^m.0$) = AG Strb 1612 ($9^m.0$) = HD 36412 (F8). Confirmed by Florja, who gives one minimum epoch [NNVS 37]. Lause suggested at first a period of $1^d.042 \cdot E$ [AN 5902]. The actual elements were derived by Morgenroth. 6 min. D = $1^d.2$ [AN 5911; 5913], and confirmed by Lause. A_2 = $0^m.1$ [AN 5977]. +

EZ Ori. Confirmed by Zessewitsch [AN 5911].

FF Ori. Elements by Kordylewski. D = 7^h [SAC 10.44; 16.60; CRM Acad Pol 1929, 10].

FG Ori. Rediscovered by Morgenroth [AN 5981]. The period is given in KE 1938.

FH Ori. Elements by Kordylewski. D = $7^h.5$ [CRM Acad Pol 1929, 10; SAC 11.49; 16.60].

FI Ori = BD +14°1268 ($9^m.5$) = ADS 5003. [*12.0 323° 4".4.] Confirmed by Parenago. 1 min. [NNVS 41]. Elements by Zonn. D = $8^h.5$. 8 min. by Zonn and Kordylewski [Wilno Bull 17.20; AAc 3.15. In the latter publication read BD +14°1268 instead of +13°1279].

FK Ori. Elements by Piotrowski. D = 6^h [AAc 2.97].

FL Ori. Elements by Piotrowski. D = $4^h.1$ [AAc 2.79; SAC 13.57]. 80 obs. by Rügemer [AN 6106].

FM Ori. Elements by Jensch. 8 min. D = $1^d.5$, d = $0^d.3$: [AN 6048].

FN Ori. Elements by Jensch. 5 max. [AN 6135].

FO Ori = BD +3°912 ($9^m.2$) = AG Alb 1737 ($8^m.8$). 229 obs. by Jensch [AN 6048]. Soloviev deduced Cluster type and observed one max. [Tadjik Circ 4]; perhaps his remarks refer to another star. The elements were derived by Rügemer. D = $0^d.40$ = $0^p.021$. 7 min. [AN 6106; SAC 13.57].+

FP Ori. Elements by Jensch. 6 max. [AN 6135].

FQ Ori. Confirmed by Beljawsky [AN 5504] and Selivanow who supposed it to be of U Geminorum type with long period, or of nova-like type [Mirov Bull 24; Tashk Circ 43]. Esch at first supposed a period of 238^d [BZ 17.45], but later he derived the elements given in the Table [AN 6283].

FR Ori. Elements by Soloviev who at first derived a period of $1^d.7654$ [Tadjik Circ 5] but found later that this value must be halved. 8 min. [Tadjik Circ 25].

FS Ori = BD +8°797 ($9^m.5$).

FT Ori = BD +21°1159 ($9^m.2$) = AG Berl B 2252 ($9^m.1$) = HD 42858 (A0). Confirmed by Soloviev [Tadjik

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Circ 4] and Lause [BZ 20.29].

δ Ori = BD -0°983 (var?) = NFK 206 = Boss 1339 = Gou 6401 ($2^m.3$) = HR 1852 ($2^m.48$) = ADS 4134 = HD 36486 (B0). The star is especially interesting from the fact that it is the first in which it was found that the velocity shown by the Ca II lines K and H is constant and therefore does not agree with that of the other lines of the spectrum which reveal an orbital motion of large range.

The first suspicion that the brightness of the star is also variable was pronounced by John Herschel 1839 [MN 4.196; AN 1231], and later Auwers thought he had found a period of about 16^d [AN 1183]. This result was rejected by Osthoff on the ground that the youth of the observer rendered his observations unreliable [AN 5071-72 p.118], but Guthnick criticised this idea [AN 5076]. Most of the other observers were not able to confirm the variability, but Wendell supposed irregular light changes [HA 69.114; 164]. The star was observed by Winnecke [Bamb Veröff 3. 86], Schönfeld [Heid Veröff 1.153; 268], Sulzer [Jahn, Unterhaltungen 8.53], Pickering [HA 24.253], Plassmann [AN 5931; VAP 43.120, 45.205; 50.182], Krüger [Beobachtungen veränderlicher Sterne von Heis und Krüger, herausgegeben von J.G. Hagen, Berlin 1903, p.218], Gemmill [EM 59.108], Sawyer [AN 2591; 2660], Chandler and Yendell [AJ 300; 379], Markwick [EM 59.154; 61.557; 65.386; JBAA 1.237], Besley [JBAA 9.22], Schiller [Heid Publ 2. 100], Hornig [AN 5879]. The discovery of the true light variation is due to Stebbins who found an eclipsing light variation from 190 observations with the selenium photometer in the years 1910-1912. There are two minima, the period being the same as the spectroscopic one, and the minima occurring at the predicted time, $m_2 - m_1 = 3^d.20$. The depths of the minima are $0^m.10$ and $0^m.07$ respectively. Stebbins also derived the photometric orbit [ApJ 34.111; 42.133; AAS 2.49; Washb Publ 15.56]. Photoelectric observations were made by Storer who found a periodic shift of the rising branches in 4 periods with an amplitude of $\pm 0^d.23$, but considering the scantiness of the observations this result needs further confirmation [PA 36.28; 38.411; ASP 42.291]. After the period was known, Miczaika succeeded in constructing a light curve from 1344 visual estimations of Plassmann in the years 1880-1938, which closely resembles Stebbins' light curve [AN 6404]. 2 min. by Skoberla [ZAp 11.22].

The first radial velocities were measured by Vogel and Scheiner in 1888 [Potsdam Publ 7,1.100; 7,2.221], their variability was discovered 1900 by Deslandres who suggested a period of $1^d.92$ [CR 130.379; PA 8.210; Obs 23. 148; BSAF 14.188]. The first spectroscopic orbit was computed by Hartmann, who with this opportunity discovered the Ca II line K to be stationary [Berl Ber 1904, p.527; ApJ 19.268]. That also the Sodium D lines are stationary was proved by Heger [Lick Bull 326]. Spectroscopic orbits also were derived by Curtiss [ApJ 42.135; Mich Publ 1.118], Jordan [Allegh Publ 3.125], Hnatek who gave an improved period value of $5^d.732585$ [AN 5090], and Luyten, Struve, and Morgan who derived another value of the period, viz. $5^d.732476$, and found an indication for apsidal rotation of the order of one degree in 50 orbital revolutions, corresponding to a period of 280 years. They also computed the absolute dimensions [Yerkes Publ 7.256]. Visual spectrum observations by von Konkoly [O'Gyalla Beob 8,1.5]. Julius rejected the hypothesis that the variable is a spectroscopic binary and found the reason for the shift of the lines in anomalous dispersion [ApJ 21.286]. Temperature by Gaposchkin [AN 5939]. Absolute dimensions by Gaposchkin [Harv Repr 151]. Mass and luminosity by McLaughlin [AJ 889]. Color equivalent by Hertzsprung [BAN 329]. +

π^5 Ori = BD +2°810 ($3^m.5$) = NFK 180 = Boss 1159 = PD 2982 ($3^m.99$) = HR 1567 ($3^m.87$) = HD 31237 (B3). As Stebbins found, the star is a continuous variable with a double period equal to the time of revolution in the spectroscopic orbit. No eclipses are apparent, the variation is due entirely to the ellipsoidal shape of the components. The elongation by mutual attraction is something more than 5 per cent [ApJ 51.218]. Ellipticity discussed by Luyten [MN 98.459]. The variability of the radial velocity was discovered by Frost and Adams [ApJ 17.151]. Spectroscopic orbit by Lee [ApJ 38.175; see also ApJ 64.20; 40] which is well fitted also by 3 observations of Henroteau [DO 5.62]. Broadening of the lines by Westgate [ApJ 77.143]. Color-equivalent by Hertzsprung [BAN 329]. Helium intensity by Payne [HC 365].

SY Pav. Elements by Walton [HB 891]. Spectrum M1e according to Cannon [HB 891].

TW Pav. [*$12^m.9$ sp.] There was a shift in phase of -148^d or $+249^d$ between 2420400 and 2425000. Elements before the shift: Max. = 2417760 + 397^d·E. The period does not seem to have changed [HA 90.211].

YY Pav. The range is very inconstant. The period should possibly be doubled; in that case, there is a secondary wave halfway between maxima at $14^m.4$ [HA 90.211].

YZ Pav = 853.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

ZZ Pav = 854.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.118].

AA Pav. The light curve shows considerable scatter. The period is somewhat irregular. Magnitude range for the observations from 1889 to 1918 is $10^m.8$: to $12^m.5$ [HA 90.211].

AB Pav = 856.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.118].

AC Pav = 862.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.118]. Swope finds the light change unusually irregular for a star which appears to be a typical long period variable. The period of 226^d is only approximate [HA 90.211].

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AD Pav. [*14^{m}.5 nf.]

AE Pav. [Near 15^{m}.0 star.]

AF Pav = HV 6840. Rediscovered by Swope who also derived the elements [HA 90.210].

AG Pav = CPD -62°5803 (9^{m}.9).

AH Pav = HV 6842. Rediscovered by Swope who also derived the elements [HA 90.210].

AN Pav. The variable was at first erroneously named HV Ara [AN 6303]. It was rediscovered by Luyten [AN 6176; Minn Publ 2.117].

AR Pav. The star is investigated by Mayall who made 900 observations on Harvard plates covering the years from 1889 to 1936. The variable has a P Cygni type spectrum. The range is extremely variable, the maximum varies between 8^{m}.5 and 11^{m}.5, the minimum between 11^{m}.7 and 13^{m}.8. There is no correlation between the brightness at maximum and at minimum. The range within any one epoch is generally about three magnitudes, but the range varies and a bright minimum does not always follow a bright maximum. The change in maximum light at various epochs seems to be produced by a seven-year wave and also by a still longer one of about thirty-five years which are superimposed on the 605-day period [HA 105. 491]. Gaposchkin determined the absolute dimensions of the eclipsing system. His values for the masses: 113 ⊙ and 49.7 ⊙ for the brighter and fainter component respectively indicate that the system is the most massive hitherto known [Harv Repr 151].

AT Peg = BD +7°4824 (8^{m}.6) = AG Lpz II 11164 (8^{m}.5) = HD 210892 (A0). Confirmed by Zinner [AN 5793]. Elements by Rügemer. 10 min. [AN 5921; 6020], Zessewitsch [AN 5838; Tadjik Circ 1] and Lassovszky. Photometric orbit [AN 6128; Budapest Mitt 9.10]. Improved elements by Lause. D = 0^{d}.24, d = 0^{d}.025. 22 min. [AN 6149; 6293; SAC 14.60].

AU Peg = BD +17°4572 (9^{m}.0) = AG Berl A 8730 (9^{m}.2). Confirmed by Zessewitsch [AN 5911]. First elements by Lause [AN 5876; 5974], Florja. 170 obs. [Tashk Circ 5; NNVS 43], and Kukarkin [NNVS 55]. Improved elements by Parenago. Photographic amplitude 9^{m}.22-9^{m}.66. 28 obs. [NNVS 46].

AV Peg = HV 6181 = BD +21°4633 (9^{m}.5). Confirmed by Zessewitsch [AN 5911]. Rediscovered by Hughes, who also derives elements [HA 90.168]. Similar elements by Florja. 488 obs. [NNVS 37; Leningrad Eph 1932, p.25; Leningrad Bull 4.9; 17; 26; 29; Tashk Publ 4,2.35; Tashk Circ 27], Okunev [Leningrad Bull 2.1; 3.17; 19], and Balázs. 217 obs. 3 max. [AN 6077]. Dombrovsky supposes the period to be variable and gives elements with a quadratic term: Max. = 2426582.3015 + 0^{d}.39037167·E - 0^{d}.72·10^{-9}·E^{2} [Tadjik Circ 14]. 2 max. by Soloviev. 170 obs. [Tadjik Eph 1935-1936, p.14; 38; NNVS 47; Tadjik Circ 3; 15; 17; Tadjik Ann 1.25].

AW Peg = BD +23°4415 (7^{m}.0) = AG Berl B 8435 (7^{m}.7) = PD 12717 (7^{m}.86) = HD 207956 (A2). First elements by Jacchia. D = 0^{d}.82, d = 0^{d}.43. m_2 = 7^{m}.35 at the phase 0^{P}.480 [BZ 13.55, corr.60; 18.34]. Improved elements by Rügemer who finds a much greater range 7^{m}.54-8^{m}.80. D = 0^{d}.86, d = 0^{d}.24 [BZ 14.74].

AX Peg = BD +22°4515 (9^{m}.3). Zessewitsch supposed eclipsing type [AN 5911]. Piotrowski found long period light variation with the elements: Max. = 2427749.5 + 143^{d}.7·E. Light curve of the form β_3 [AAc 2.124]. These elements, however, are not confirmed by Zinner who found the range of the variable to be not more than 0^{m}.5 [AN 6186]. 1 max. 1 min. by Kukarkin [NNVS 55].

AY Peg. Confirmed by Zessewitsch [AN 5911], by Hassler and Kitchens [AJ 1074], and by Böhme who supposes Cluster type variation [AN 6371].

AZ Peg = BD +28°4289 (8^{m}.6) = AG Cbr E. 13186 (8^{m}.6). Confirmed by Zessewitsch [AN 5911] and Böhme [AN 269.239].

BB Peg. Hoffmeister supposed a period of 4^{d}.3 [AN 5791]. Approximate elements were derived by Zessewitsch [AN 5911; SAC 12.45], Dobronravin [NNVS 48], Nikonov and Dobronravin from 110 obs. [Abast Bull 1.11]. All these periods do not fit a normal minimum observed by Piotrowski from 154 observations [AAc 2.157; Belgrad Bull 1.9]. All known minima are represented with the period 0^{d}.3615435. The light curve is somewhat asymmetrical, the increase of both maxima is slower than the decrease. $A_2 = A_1$.

BC Peg = BD +20°5207 (9^{m}.3) = Bo VI +20°5207 (9^{m}.2). Confirmed by Zessewitsch [AN 5911]. Elements by Florja [NNVS 37].

BD Peg = BD +27°4389 (8^{m}.6) = AG Cbr E. 13658 (8^{m}.9) = HD 25162 (Mc). Florja observed only small fluctuations 1931 August to November [NNVS 37]. Lause supposed at first RV Tauri type with a period of about 75 days [AN 5911], but later found the light variation to be irregular [BZ 15.9]. Böhme likewise found irregular variation [AN 6371]. Proper motion by Palmér [Lund Medd II 103.166].

BE Peg = BD +22°4701 (9^{m}.1). [Close pair.] Confirmed by Florja [NNVS 37] and Böhme [AN 6371].

BF Peg. First elements by Zessewitsch: Max. = 2426589.294 + 0^{d}.49637·E [Leningrad Eph 1932, p.25; Leningrad Bull 3.17; 19; 23]. Using these elements Martinoff thought he had found a great variability of the period, but later he stated that the numbering of the epochs was wrong, and that a somewhat shorter period fitted all the observed maxima quite well [Inf Circ 1.5; Engelh Bull 1.7; Leningrad Bull 4. 9; 18; 26; 30; Tadjik Eph 1935-36, p.14; 38]. In a later discussion, however, he added the quadratic term: +0^{d}.28·10^{-8}·E^{2} to the elements given in the Table. M-m = 0^{P}.13. Also the light curve seems to be variable. 449 obs. 12 max. [NNVS 55; Engelh Publ 20.99; 151; 168].

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38 obs. by Lange [Tadjik Ann 1,2.17].

BG Peg. First elements by Zessewitsch [AN 5911; Tadjik Circ 1]. Improved elements by Piotrowski. D = $6^h.2$. A secondary minimum is indicated [AAc 2.63; 80]. +

BH Peg = BD +15°4721 ($9^m.5$). Confirmed by Zessewitsch [AN 5911]. Elements by Florja. 200 obs. [NNVS 37; Tashk Publ 4,2.38; Leningrad Eph 1932, p.25; Leningrad Bull 3.19; 4.9; 18; 29], Lause [AN 5876; 5974], Rügemer [AN 5921; 6020], and Balázs. 245 obs. [AN 6285]. Improved elements by Nachapkin [Tadjik Circ 33]. 1 max. by Soloviev [Tadjik Circ 15; 17; Tadjik Eph 1935-1936, p.14; 38]. 1 max. by Guriev [Tadjik Circ 26]. 90 obs. by Lange [Tadjik Ann 1,2.17].

BI Peg = BD +17°4841 ($8^m.5$) = AG Berl A 9387 ($9^m.2$). Confirmed by Zessewitsch [AN 5911]. Elements by Florja [NNVS 37].

BK Peg = BD +25°5003 ($9^m.1$) = AG Cbr E. 14271 ($9^m.1$). Confirmed by Florja [NNVS 37]. Elements by Lause. 20 min. D = $0^d.35$, d = $0^d.065$ [AN 6149; 6293; SAC 14.60].

BN Peg = BD +4°4680 ($9^m.5$). Elements by Jensch. 15 min. D = $0^d.125$. Photographic amplitude $10^m.45$-$11^m.50$ [AN 6119].

BO Peg. Elements by Jensch. 12 min. D = $0^d.1$. m_2 = $11^m.65$. [AN 6119].

BP Peg. The first elements by Hughes: Min. = 2424850.74 + $0^d.246078 \cdot E$ + $0^d.18 \sin 0.034 \cdot E$ [HA 90.174], proved to be wrong. Kukarkin assumed Cluster type with the period $0^d.10944$ [NNVS 55]. But this period must be doubled as shown by Jacchia [HB 915]. +

BS Peg. The period gives an anomalous light curve. M_1 = $13^m.0$ at phase 0^d, m_1 = $14^m.7$ at phase 50^d, M_2 = $12^m.9$ at phase 90^d, m_2 = $15^m.1$ at phase 125^d. At phase 150^d there is a hump, the star drops from $14^m.2$ to $14^m.4$. The second maximum is much narrower than the first [HA 90.174].

BT Peg. [Companion $13^m.4$ p.]

BU Peg. Red. The period does not fit several observations fifty days after maximum on the descending branch which are $0^m.5$ brighter than the mean light curve [HA 90.174].

BX Peg. Elements confirmed by Kukarkin [NNVS 55]. Spectrum G5 according to Cannon [Mscr.].

CC Peg. m_2 = $12^m.9$.

CG Peg = 151.1935. First elements by Hughes [HA 90.167]. The star was rediscovered by Hoffmeister [AN 6118]. Improved elements by Jensch, derived from 16 maxima found from visual and photographic observations. Visual range $10^m.55$-$11^m.18$, photographic range $10^m.62$-$11^m.20$ [AN 6119]. Obs. by Balázs [VJS 73.219].

CK Peg. The period gives an anomalous light curve. The minimum occurs already 60 days after the maximum, and fifty days later begins a still-stand at $12^m.7$ for 100 days [HA 90.174].

CU Peg. First elements by Hughes [HA 90.168]. Improved elements by Kukarkin. D = $10^h.1$, d = $0^h.6$. Visual amplitude $12^m.06$-$14^m.76$ [NNVS 55].

CW Peg. First elements by Hughes [HA 90.168]. Improved elements by Kukarkin. D = $6^m.8$. Visual amplitude $11^m.90$-[$14^m.6$ [NNVS 55].

CX Peg = HV 6178. Rediscovered by Hughes who also derived the elements [HA 90.168].

CZ Peg. m_2 = $13^m.9$.

DD Peg. Kukarkin did not find any variation from 29 observations during three months [NNVS 55].

DF Peg = BD +13°4806 ($8^m.8$) = AG Lpz I 8725 ($8^m.6$). Elements by Jensch. 5 min. D = $0^d.6$ = $0^P.041$. Photographic amplitude $9^m.77$-$11^m.25$ [AN 6119].

DG Peg. Observations by Lambrecht. Elements by Hoffmeister. 6 max. [AN 6118].

DH Peg = BD +6°4990 ($9^m.1$). Elements by Jensch. 12 max. [AN 6119]. Improved elements by Balázs. 233 obs. [AN 6285]. 1 max. by Guriev [Tadjik Circ 33]. Radial velocity by Joy [ASP 50.303].

DI Peg = BD +14°5006 ($8^m.9$) = AG Lpz I 9342 ($8^m.7$) HD 220619 (K0). Elements by Jensch. D = $0^d.1$. A secondary minimum is indicated [AN 6048]. Improved elements by Opalski. 121 obs. 7 min. [Belgrad Bull 1.47; Wars Polyt 18].

DK Peg = BD +9°5262 ($9^m.0$) = AG Lpz II 11735 ($8^m.8$) = HD 222558 (A5). [*11^m nf.] Confirmed by Lange [Tadjik Circ 3]. Elements by Piegza. [AAc 2.80; SAC 14.60]. Improved period by Soloviev. D = $0^d.653$. A_2 = $0^m.15$ [Tadjik Circ 46]. Obs. by Ferrari [VJS 72.228].

DL Peg = BD +14°5059 ($9^m.5$). Jensch's provisional elements: Max. = 2425563 + $363^d \cdot E$ [AN 6048] are not confirmed either by the observations of Pickering [HA 70.58] or those of Zinner, who rediscovered the star and derived the improved elements [AN 6186]. 1 max. 1 min. by Soloviev [NNVS 55].

DM Peg = BD +17°5020 ($9^m.5$). Elements by Jensch. [AN 6048]. Improved period by Soloviev. D = $0^m.52$. A_2 = $0^m.2$ [Tadjik Circ 46].

DN Peg. Rediscovered by Hoffmeister [AN 6118]. Confirmed by Zessewitsch [NNVS 5; 21-22]. Elements by Miczaika. 6 max. [AN 6188].

DO Peg = BD +5°4952 ($9^m.5$). First elements by Zessewitsch [Tadjik Circ 11; 15]. Improved elements by Guriev. 4 min. [Tadjik Circ 40].

DQ Peg. Red.

DR Peg = 148.1935. Rediscovered by Hoffmeister [AN 6118]. Irregular light variation confirmed by Kukarkin [NNVS 55].

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DS Peg = BD +34°4500 ($6^m.2$) = AG Lei 9087 = PD 12611 ($6^m.13$) = HR 8297 ($6^m.38$) = HD 206570 (Nb).
The name of the variable assigned by Guthnick and Schneller [AN 6419-20] should be changed, the star being situated in Cygnus.
Rediscovered by Wendell [HA 55.94; 69. 121; 165]. Observations by Gore [Proc Amer Acad 22.394], Dreyer [Duns Obs 4.71; 84; AN 4705], Loreta [Gaz astr 16.10], Tschernow [NNVS 29-30; Tadjik Ann 1,2.56]. Spectrum by d'Arrest [AN 2009]. Color by Krüger [VAP 24. 64; Spec Vat 7.129]. Proper motion by Wilson [AJ 796; 814; 1105; ApJ 90.355]. Radial velocity by Moore [Lick Bull 342] and Sanford [ApJ 59.349].

DT Peg. Red.

DU Peg. Elements by Esch [AN 6330]. These elements fit well a maximum by Soloviev who derives the period of 314^d [Tadjik Circ 46].

AX Per. [BD +53°340 ($9^m.1$) 21^s f l' s.] Merrill and Humason had found that in the spectrum of this star bright hydrogen lines and a bright line of ionized helium, λ4686, were superposed on a continuous background showing dark titanium bands whose intensities were about equal to those regularly found in class M4. [ASP 44.56]. Thereupon Lindsay observed the star on Harvard plates and found a peculiar irregular light variation. From 1887 to 1932 the main features were: (a) 1887: $9^m.4$. (b) 1890-1904: oscillations of 650 days period with a maximum range $10^m.8$-$13^m.2$. (c) 1904-1918: nearly constant at $13^m.0$. (d) 1924-1929: oscillations of 600 days period with a maximum range $9^m.4$-$13^m.4$. (e) 1929-1932: nearly constant at $12^m.2$ [HB 888]. According to Böhme the last behavior (e) continued at least until 1938 [AN 6371]. 236 obs. by Himpel [AN 270.184]. 1 obs. by Houston [HA 110.5]. Further remarks on the spectrum by Merrill, Humason, and Burwell [ApJ 76.156], Merrill [ApJ 77.44], Swings and Struve [ApJ 91.607].

AY Per = BZ +50°710 ($9^m.0$) = AG Cbr M. 1395 ($8^m.7$). 8 obs. by Kukarkin [NNVS 21-22]. Elements by Beyer. D = $0^d.69$, d = $0^d.11$. 251 obs. [BZ 15. 26; AN 6091]. Spectrum B9, according to Cannon [HB 897]. 7 min. by Lause [AN 6233].

BB Per. The notes about BB Persei, as given by Guthnick and Schneller [AN 6303-6305] refer to BN Persei.

BC Per. Observed by Miczaika [KVBB 19.24; 79].

BD Per. Observed by Miczaika [KVBB 19.24; 79].

BE Per. Elements by Miczaika. 3 min. [KVBB 19.24; 79].

BF Per. Elements by Miczaika. 4 max. [KVBB 19.24; 79].

BH Per. Elements by Miczaika. 5 max. [KVBB 19.24; 80].

BI Per. Observed by Miczaika [KVBB 19.24; 80].

BK Per. Observed by Miczaika [KVBB 19.24; 80].

BM Per. Elements by Kukarkin. M-m = $2^d.5$. Visual amplitude $10^m.3$-$11^m.5$ [NNVS 52; 55].

BN Per. The variable was at first erroneously named BB Persei [AN 6303-6305].

BO Per. Observed by Miczaika. 3 min. [KVBB 19.24; 80].

BP Per. Observed by Miczaika. 4 min. [KVBB 19.24; 81].

b^1 Per = BD +49°1150 ($4^m.8$) = Boss 986 = AG Cbr M. 1790 ($5^m.3$) = AG Bo 3514 ($5^m.1$) = PD 2575 ($4^m.86$) = HR 1324 ($4^m.57$) = HD 26961 (A2). The star was suspected to be variable already by Lau [AN 4704]. The variability was substantiated by 140 photoelectric observations by Stebbins who found elliptical light variation with the spectroscopic period [ApJ 57.1; PA 29.276; Washb Publ 15.56]. The star was found to be a spectroscopic binary by Curtis [Lick Bull 173]. Spectroscopic orbit by J.B. Cannon DO 1.285] and Harper who found the period $1^d.52738$, and considerable variation of the velocity curve [DAO 4.309]. Rediscussion of spectroscopic orbit elements and ellipticity by Luyten [Minn Publ 2.37; MN 98.464]. Mass and luminosity by Petrie [Mich Publ 5.172]. Remarks on rotational broadening by Westgate [ApJ 78.47]. Color-equivalent by Hertzsprung [BAN 329]. +

RZ Psc. Confirmed by Zessewitsch and Parenago [AN 5911]. Parenago supposes β Lyrae type and derives a multiple of the period. 6 min. [NNVS 41]. Obs. by Rügemer [VJS 70.90].

SS Psc. Confirmed by Zessewitsch who supposes eclipsing type [AN 5911]. Short period variation was confirmed by Parenago [NNVS 41] and Rügemer [AN 6106]. Spectrum F0 according to Cannon [HB 897].

ST Psc = BD +15°214 ($9^m.4$). Confirmed by Florja [NNVS 37]. Rediscovered by Rügemer who finds irregular light variation [AN 6106]. Olivier and others find from 23 obs. a visual range from $9^m.9$ to $10^m.8$ [Penn Publ 5,3.17]. +

SU Psc. Confirmed visually by Florja [NNVS 37]. Parenago supposed β Lyrae type. 39 obs. [AN 5911; NNVS 41]. Elements by Zessewitsch [Inf Circ 1.7]. Improved elements by Rügemer. 4 min. m_2 = $12^m.26$ [AN 6106]. Spectrum B5 according to Cannon [HB 897].

SV Psc = BD +18°234 ($9^m.1$) = Kü 736 ($8^m.83$). Confirmed by Florja [NNVS 37]. Parenago supposed β Lyrae type [AN 5911; NNVS 41]. The light variation, however, is irregular, as stated by Lause [AN 6293]. Spectrum M5 according to Cannon [HB 897]. +

SX Psc. Elements by Piotrowski [AAc 2.98].

SZ Psc = BD +1°4695 ($8^m.2$) = AG Alb 8015 ($8^m.1$) = Kü 10281 ($7^m.67$) = HD 219113 (G5). First elements by Jensch: Min. = 2425509.375 + $3^d.9663 \cdot E$

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[BZ 16.22; AN 6048]. Improved elements by Rügemer. D = 0^d.6 [AN 6106]. +

TT Psc = BD +4°336 (9^m.5). Elements by Miczaika. 6 max. [AN 6188]. 12 obs. by Tshernov [NNVS 56]. 22 obs. by Olivier and others [Penn Publ 5,3.18].

TU Psc. Hassler and Kitchens find no certain evidence of periodicity [AJ 1074], but later, from more ample material, Hassler and McKeehan derived elements [AJ 1110]. Tshernov found the star invisible [NNVS 56].

TV Psc = 47 Piscium = BD +17°55 (5^m.4) = AG Berl A 109 (5^m) = Kü 171 (5^m.29) = Boss 81 = PD 236 (5^m.26) = HR 103 (5^m.33) = HD 2411 (Mb). Schwarzschild supposed a variability of 0^m.3 [Gött Mitt 14.44] which was confirmed by photoelectric observations of Stebbins and Huffer who found a range of 0^m.25. Spectrum M3 [Proc NA 14.493; Washb Publ 15.147]. Kukarkin finds a photographic amplitude 6^m.3-7^m.0 [NNVS 25-26], Tshernov a visual one of 5^m.7-6^m.1 [NNVS 56].

UZ Pup = BD -13°2170 (9^m.0) = AG Cbr M. 2793 (9^m.1). First elements by Mergentaler [AAc 1.148; SAC 10.44; 11.45]. New elements by Florja. m_2 = 10^m.30. 260 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.60]. 6 min. by Lause [AN 6233]. Improved period by Tschernov. 93 obs. [Tadjik Circ 47].

VV Pup. This star whose period was the shortest of all known variables at the time of its discovery, and is now surpassed only by CY Aquarii, was observed at first by Hertzsprung and Wesselink on photographic plates taken with the Franklin-Adams camera with an average exposure time of 30 minutes. From these observations Wesselink derived the almost exact elements: Max. = 2425843.762 + 0^d.069746·E. Improved elements were given by Mayall: Max. = 2425843.7622 + 0^d.06974683·E; by Oosterhoff: Max. = 2426441.703 + 0^d.06974689·E and finally the elements given in the Table. The light curve, as derived by Wesselink and Hertzsprung, seemed to be a nearly perfect sinusoid. But visual observations by Hertzsprung, van den Bos, and van Gent showed a quite asymmetrical light curve with a rapid drop after the maximum and a slow rise. This result was confirmed by Alden's photographic observations with short exposure times, 2 minutes during the maximum. His light curve had a rather flat minimum of 0^p.4 duration after the rapid dropping of less than 0^p.1, before the rising branch, which occupies 0^p.5, began. Later observations, by Alden, Mayall, Oosterhoff, and Wesselink, however, showed that the light curve is extremely variable, in its shape as well as in its amplitude; only the rapid decrease of brightness after the maximum, sometimes two magnitudes in eleven minutes, apparently is a permanent phenomenon. The color index +0^m.5 in maximum, as supposed by Mayall, may be spurious, as his photovisual and photographic observations do not refer to the same epoch. The irregularities of the light curve concern especially the shape of the maximum and the rising and decreasing branches. The minimum brightness is subject to considerable secular changes. From 2425507 to 5758 it sank from 14^m.3 to 15^m.3, from 5922 to 6272 it rose from 15^m.4 to about 14^m.8, and from 6364 to 8160 it sank from 15^m.4 to 16^m.5, the total change being 2^m.2.

References: Van Gent, Discovery. Elements. Different forms of the light curve. 247 photographic observations by Hertzsprung and Wesselink. 99 visual observations by Hertzsprung, van den Bos, and van Gent [BAN 214]. - Alden, 132 observations [AJ 958; 984; 1028]. - Mayall, 30 photographic and 5 photovisual obs. Elements. Color Index [Mt Wils Rep 1930-31, p.203; ASP 43.304]. - Oosterhoff, Variability of the light curve. Elements [ASP 47.322]. - 62 photographic obs. New elements [BAN 285]. - Wesselink, New reduction of 240 photographic obs. Variability of the mean brightness [BAN 318].

VW Pup. Elements by Florja. 131 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2]. Improved elements by Parenago [NNVS 57-58]. Oosterhoff found from 9 maxima, observed on Harvard plates, the elements: Max. = 2425184.67 + 4^d.28405·E [HB 900]. Radial velocity by Joy [ApJ 86.406; 430; 89.359].

VX Pup = BD -21°1997 (8^m.5) = CPD -21°2316 (8^m.6) = AG Alg 3054 (8^m.7) = HD 60219 (F5). First elements by Florja: Max. = 2426629.28 + 3^d.696·E, M-m = 1^d.37, visual range 8^m.2-8^m.8. This period later proved to be wrong [Tashk Circ 1; NNVS 38; 52]. Rediscovered by O'Leary [Riverview Publ 1.15]. Improved elements by O'Connell who found from 958 observations on Harvard, Lembang, and Riverview plates, that even with this period the scattering of the observations is abnormally great, as is the case for some other Cepheids whose period is about three days [Riverview Publ 1.15; 28; 53; 61]. Florja, however, could not get a satisfactory light curve from his own 148 observations either with O'Connell's period or with any other he tried [Sternb Publ 8,2]. And Parenago was unable to find a period which fitted both the magnitude and the radial velocity observations [NNVS 57-58]. Radial velocity by Joy [ApJ 86.406; 430; 89.359].

VY Pup. Florja at first supposed Algol type with the elements: Min. = 2425590.7 + 31^d.36·E, D = 44^h [Tashk Circ 1; NNVS 38]. Later he found β Lyrae type with a shallow secondary minimum and derived improved elements. 153 obs. [NNVS 52; Sternb Publ 8,2; SAC 14.60].

VZ Pup = CoD -28°4645 (9^m.3) = CPD -28°2273 (9^m.6). Elements by Florja. 116 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2]. Radial velocity by Joy [ApJ 86.391; 430; 89.359].

WW Pup = BD -20°2125 (9^m.8) = CPD -20°2835 (10^m.5). First elements by Florja. 130 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2]. Oosterhoff found from 14 maxima, observed on Harvard plates, the elements: Max. = 2424497.73

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+ $5^d.5159 \cdot E$ [HB 900]. Improved elements by Hertzsprung [BAN 293]. Radial velocity by Joy [ApJ 86.391; 430; 89.359].

WX Pup = CoD -25°4923 ($9^m.0$) = CPD -25°2705 ($9^m.0$) = Cord A 5338 ($8^m.8$). Elements by Florja. 116 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2]. Improved period by Hertzsprung [by letter]. Radial velocity by Joy [ApJ 86.392; 430; 89.359].

WY Pup = CoD -23°6586 ($9^m.9$) = CPD -23°3203 ($9^m.9$). The first elements were derived by Florja: Max. = 2426780.2 + $6^d.29 \cdot E$, M-m = $0^p.32$, visual amplitude $11^m.3$-$12^m.0$ [Tashk Circ 1; 15; NNVS 38]. The elements, however, later proved to be wrong, as was shown by Wesselink who also derived the correct elements. Photographic range about $1^m.4$. The light curve has a very sharp minimum [BAN 265]. Kruytbosch found a somewhat longer period than Wesselink. The light curve is nearly symmetrical round a point halfway up the rising or falling branch [BAN 281]. Improved elements by Florja whose period agrees exactly with that of Wesselink [NNVS 52; Sternb Publ 8,2]. Oosterhoff found from 41 maxima, observed on Harvard plates, the elements: Max. = 2424164.70 + $5^d.2509 \cdot E$ [HB 900]. Radial velocity by Joy [ApJ 86.392; 430; 89.359].

WZ Pup = CoD -23°6645 ($9^m.5$) = CPD -23°3242 ($9^m.6$). The star CoD -23°6648 ($9^m.8$) = CPD -23°3245 ($10^m.2$) 7^s f 3' s, which was identified with the variable in the discovery announcement by Hoffmeister and in the chart by Florja, is constant according to Hertzsprung [BAN 293]. Elements by Florja: Max. = 2426780.66 + $5^d.0264 \cdot E$. 115 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2]. Oosterhoff found from 26 maxima, observed on Harvard plates, the elements: Max. = 2423538.46 + $5^d.0270 \cdot E$ [HB 900]. Improved elements by Hertzsprung [BAN 293]. Radial velocity by Joy [ApJ 86. 392; 430; 89.359].

XX Pup. Elements derived by Florja from his own 299 and Lange's 70 observations [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2].

XY Pup = BD -11°2261 ($9^m.0$) = AG Cbr M. 3080 ($8^m.8$) = HD 67862 (A3). Elements derived by Florja. D = $33^h.0$, d = $11^m.6$. A_2 = $0^m.05$. 161 obs. [Tashk Circ 1; 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.60]. Lause finds a somewhat smaller period, $13^d.7778$ and d = $0^d.65$. 8 min. [AN 6318; SAC 16.60]. +

XZ Pup = CoD -23°6977 ($8^m.4$) = CPD -23°3476 ($7^m.5$) = Gou 10942 (8^m) = GZ 8^h666 ($7\ 1/2^m$) = Cord A 6106 ($8^m.2$) = HD 68884 (A0). The elements were derived by Wesselink from 324 observations. D = $0^p.2$, a secondary minimum is perhaps indicated. Wesselink also calculated approximate photometric orbital elements [BAN 228].

YY Pup = BD -19°1960 ($9^m.0$) = CPD -19°2377 ($8^m.5$) = AG Alg 3089 ($8^m.8$) = HD 60876 (A0). Elements by Florja. D = $13^h.1$. 155 obs. [NNVS 38; 52; Sternb Publ 8,2; SAC 14.60].

YZ Pup. Rediscovered by Hoffmeister [AN 5919].

ZZ Pup = BD -18°2026 ($9^m.0$) = AG Alg 3239 = HD 63482 (B9). Elements by Florja. m_2 = $9^m.28$. D = $15^m.2$. 183 obs. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2; SAC 14.60]. Improved elements by Hertzsprung [by letter]. 1 min. by Mergentaler [AAc 2.63; SAC 13.62].

AA Pup = CoD -24°6331 ($9^m.3$) = CPD -24°3220 ($9^m.3$) = HD 66226 (F8). Elements by Florja. D = $17^h.0$. 125 obs. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2]. Improved elements by Hertzsprung [by letter].

AB Pup. Elements by Florja. 68 obs. [Tashk Circ 15; NNVS 38; 52; Sternb Publ 8,2].

AC Pup = BD -15°2405 ($8^m.8$) = AG Wa 3320 ($8^m.4$). Florja found the light variation irregular. The star is red. 74 obs. [NNVS 38; 52; Sternb Publ 8,2]. Spectrum N [KE 1938].

AD Pup = CoD -25°5079 (10^m) = CPD -25°2879 ($9^m.6$) = HD 63446 (F8). Florja supposed a period of about $7^d.5$. 36 obs. [NNVS 52; Sternb Publ 8,2]. Rediscovered by Hertzsprung. Elements by Wesselink. 15 max. [BAN 265]. Radial velocity by Joy [ApJ 86.393; 430; 89.359].

AE Pup. Elements by Zagar [BAN 270]. Improved elements by van Hoof [BAN 289].

AG Pup = CPD -21°2641 ($9^m.8$). The elements were derived by Hertzsprung from 322 observations made by Kruytbosch. m_2 = $10^m.9$ [BAN 281].

AH Pup. The elements were derived by Hertzsprung from 323 observations made by Kruytbosch. A_2 = $0^m.05$ [BAN 281].

AI Pup. The elements were derived by Hertzsprung from 317 observations made by Snelders [BAN 293].

AK Pup. The elements were derived by Hertzsprung from 313 observations made by Snelders [BAN 293].

AL Pup. The elements were derived by Hertzsprung from 267 observations made by Kruytbosch [BAN 281].

AN Pup = BD -21°1971 ($9^m.8$) = CPD -21°2250 ($9^m.6$). Florja at first supposed Cepheid type [NNVS 38], but later he found the variable to be an eclipsing star and derived the elements. m_2 = $10^m.8$. D = $10^h.2$. 138 obs. [NNVS 52; Sternb Publ 8,2; SAC 14.61].

AO Pup = HV 8100 = 607.1936. Rediscovered on Riverview plates by O'Leary [AN 6216] who found a period of 392^d [Riverview Publ 1. 31]. A least square solution of the 7 maxima determined by O'Leary yielded the elements given in the Table.

AP Pup = CoD -39°3831 ($7^m.7$) = CPD -39°1894 ($8^m.0$) = Gou 10499 ($7\ 3/4^m$) = GZ 7^h3998 ($7\ 1/2^m$) = HD 65592 (G0). Radial velocity by Joy [ApJ 86.407; 430; 89.359].

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AQ Pup = CoD -28°5196 ($8^m.8$) = CPD -28°2629 ($9^m.3$) = GZ 7^h3989 ($8^m.7$) = Cord B 4627 ($8^m.7$) = HD 65589 (K5). Florja supposed a period of $15^d.0$. 38 obs. [NNVS 52; Sternb Publ 8,2]. Rediscovered on Riverview plates by O'Leary who also derived the elements [AN 6216; Riverview Publ 1.17]. Spectrum KO [Potsdam Publ 91.74]. Radial velocity by Joy [ApJ 86.407; 430; 89.359].

AR Pup = CoD -36°4137 ($9^m.4$) = CPD -36°1854 ($9^m.1$). O'Leary at first supposed RV Tauri type with variable mean magnitude [AN 6216]. Later he found that the star behaves similarly to the AI Scorpii type. The short period is $74^d.58$, usually halved by a secondary minimum. The two "long" maxima, observed hitherto, are separated by about 1200 days. The amplitude of the short variation is about $10^m.1$-$10^m.7$ during the long minimum and $8^m.7$-$9^m.9$ during the long maximum. 713 obs. [Lembang Ann 8.17].

AS Pup = CoD -37°4307 ($8^m.9$) = CPD -37°1932 ($8^m.8$).

AT Pup = CoD -36°4319 ($8^m.3$) = CPD -36°2067 ($8^m.1$) = GZ 8^h639 (8^m) = Cord C 3483 ($8^m.2$). There is a well pronounced secondary wave on the descending branch and a stillstand just before the minimum [Riverview Publ 1.1]. Radial velocity by Joy [ApJ 86.407; 430; 89.359].

AU Pup = CoD -41°3957 ($9^m.0$) = CPD -41°2337 ($8^m.8$) = GZ 8^h1097 (9^m) = HD 69951 (A0). First elements by O'Leary. m_2 = $9^m.14$ [Riverview Publ 1.5]. Improved elements by Hertzsprung [BAN 299].

AV Pup. Elements by Florja. m_2 = $10^m.7$. 200 obs. [NNVS 38; 52; Sternb Publ 8,2; SAC 14.61]. Spectrum F8 [Potsdam Publ 92.76].

AW Pup = CoD -28°5985 ($9^m.4$) = CPD -28°3116 ($9^m.2$). Rediscovered on Riverview plates by O'Leary who also derived the elements. The minimum is broad, $0^d.24$, and is not symmetrical, the descending branch being steeper than the rising. There is perhaps an indication of a shallow secondary minimum [AN 6216; Riverview Publ 1.29].

AX Pup. This designation was assigned to the variable erroneously [AN 6303]. The star is identical with VZ Canis majoris.

AY Pup. Elements by Florja. 42 obs. [NNVS 52; Sternb Publ 8,2]. Improved elements by Hertzsprung [by letter].

AZ Pup = CoD -34°4600 ($8^m.9$) = CPD -34°2232 ($9^m.0$) = Cord C 3582 ($9^m.3$). m_2 = $9^m.70$.

BB Pup. Elements by Florja. 62 obs. [NNVS 52; Sternb Publ 8,2]. Rediscovered by Morgenroth [AN 6135].

BE Pup. Rediscovered by Mergentaler who also derived the elements. The brightness at maximum shows large fluctuations [BAN 296].

BG Pup = BD -20°2396 ($8^m.9$) = CPD -20°3386 ($9^m.2$) = AG Alg 3453 ($8^m.6$). Florja found the light variation irregular. 62 obs. [NNVS 38; 52; Sternb Publ 8,2].

BH Pup = CoD -41°3793 ($8^m.7$) = CPD -41°2162 ($8^m.6$) = HD 67889 (B9).

BI Pup. Elements by Hertzsprung [BAN 299].

BK Pup = CoD -39°4075 ($9^m.3$) = CPD -39°2166 ($9^m.7$).

W Pyx = BD -17°2578 (10^m). Elements derived by Morgenroth [AN 5946].

Y Pyx. Some regularity around 60 days [HB 903].

Z Pyx = 859.1936. Rediscovered by Luyten [AN 6263; 6283; Minn Publ 2.116].

RR Pyx. [Double star. Northern component $14^m.5$.]

RS Pyx = 860.1936. Rediscovered by Luyten [AN 6263; 6283; Minn Publ 2.116].

RU Pyx. The declination given in the discovery announcement must be corrected by -1'. Some regularity around 135 days [HB 903].

RW Pyx = CoD -29°7467 (10^m). Some regularity around 240 days.

RZ Pyx = CoD -27°6009 ($8^m.3$) = CPD -27°3452 ($8^m.7$) = Gou 12046 (9^m) = GZ 8^h 3825 (9^m) = Cord B 5568 ($8^m.7$) = HD 75920 (B9). Elements derived by Kaho [Tokyo Bull 209; Tokyo Astr Obs Rep 5,2; Astr Herald 31.44].

UV Sge. Position by Wolf [AN 4079]. Elements derived by Hoffleit [HB 887].

UX Sge. Elements by Jensch. 4 max. [KVBB 19.17; 47].

UY Sge. Observations by Jensch [KVBB 19.17; 47].

UZ Sge. Elements by Kordylewski. D = 3^h. A_2 = $0^m.2$ [AAc 3.91].

V 363 Sgr. [CoD -30°16736 ($9^m.8$) 3^s p 3:1 n **$14^m.2$ and $15^m.0$ follow closely.] Becker suspected the star to be a Nova from an examination of the spectrum on 1927 September 30 which is continuous without absorption lines and shows two intense emission bands, probably Hγ and Hδ, of 80A width and a faint one near λ 4640A [ZAp 1.66]. Walton examined 94 Harvard plates and proved that Becker's suspicions were correct. Between 1892 and 1927 June 30 the star was invisible, [$11^m.0$ on the last date. On the next plate, August 3, it had its maximum observed brightness, $8^m.8$, then it dropped until 1927 October 25 to $11^m.8$, from 1928 February 25 to August 20 it fell from $13^m.4$ to $15^m.5$, and was about 16^m 1929 October 7 [HB 878]. Description of the light curve by McLaughlin [PA 47.541].

V 366 Sgr. Provisional elements by Innes: Max. = 2420330 + $264^d.E$ [UOC 37.302]. The variable was rediscovered by van Gent who found that the star belongs to the Cluster type and derived the elements [BAN 227; Diss].

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V 367 Sgr. Rediscovered by van Gent who also derived the elements [BAN 227; Diss].

V 377 Sgr. The light curve resembles that of W Virginis which has about the same period [BAN 235]. Radial velocity by Joy [ApJ 86.408; 431; 89.360].

V 383 Sgr. Rediscovered by van Gent who also derived the elements [BAN 227; Diss].

V 386 Sgr. [*15^m closely.] Rediscovered by Ferwerda who also derived the elements [BAN 231].

V 394 Sgr. Elements by Ferwerda [BAN 231].

V 397 Sgr. The period has shortened, the term of the second degree being about $-0^d.9 \cdot 10^{-8} \cdot E^2$. The light curve is approximately a sine curve. For the earlier observations, 1924 and 1925, the mean maximum was 2423996.287 [BAN 227; Diss].

V 401 Sgr. D~15^h. A slight secondary minimum is indicated.

V 403 Sgr. The period has shortened, the term of the second degree being about $-0^d.13 \cdot 10^{-7} \cdot E^2$ [BAN 227; Diss].

V 410 Sgr. Radial velocity by Joy [ApJ 86.408; 431; 89.360].

V 411 Sgr. Rediscovered by van Gent who also derived the elements [BAN 227; Diss].

V 413 Sgr. First elements by Ferwerda [BAN 231]. Improved elements by van Gent [BAN 243].

V 415 Sgr. D~20^h.

V 416 Sgr. Elements by Ferwerda. D~6^h [BAN 231].

V 423 Sgr. Elements by Ferwerda [BAN 231].

V 424 Sgr. Rediscovered by van Gent who also derived the elements [BAN 227; Diss].

V 426 Sgr. D~13^h. m_2 = $13^m.0$ [BAN 231].

V 429 Sgr. Elements by Ferwerda [BAN 231].

V 433 Sgr. Elements by Ferwerda [BAN 231].

V 436 Sgr. First elements by Ferwerda [BAN 231]. Improved elements by van Gent [BAN 243].

V 437 Sgr. m_2 = $12^m.8$.

V 440 Sgr = CoD -24°15398 (10^m) = CPD -24°6751 ($10^m.0$). Elements by Zessewitsch [Leningrad Eph 1932, p.26; Leningrad Bull 4.9; 18; 26; Tadjik Eph 1935-1936, p.14; Inf Circ 1.7] and Mustel. M-m = $0^p.12$. 260 obs. [NNVS 44]. 2 max. by Guriev [Tadjik Circ 26; 33].

V 441 Sgr. Hoffleit examined 370 Harvard plates between 1898 and 1930. Normally the Nova is 16^m, and remained so until 1930 August 28. The next plate, September 12, gives the maximum observed brightness, $8^m.7$. Between 1930 September 12 and 24 there are 4 observations brighter than $10^m.7$, 1931 April 20 until September 30 there are 88 observations indicating a fairly uniform decrease from $13^m.8$ to $15^m.5$. Two spectra, 1931 April 20 and May 18 show Hγ bright [HB 890]. Description of the light curve by McLaughlin [PA 47.481; 541].

V 444 Sgr. Rediscovered by van Gent [BAN 243]. Spectrum Me according to Cannon [HB 897].

V 446 Sgr. The star is perhaps identical with a variable of short period, discovered by Innes, the position of which, however, deviates by $+8^s$ and $-2'.7$ [UOC 20.152; 31.244; 37.302].

V 453 Sgr. The period has lengthened, the term of the second degree being about $+0^d.3 \cdot 10^{-8} \cdot E^2$ [BAN 243].

V 457 Sgr. Rediscovered by van Gent, who also derived the elements. The period has shortened, the term of the second degree being about $-0^d.6 \cdot 10^{-8} \cdot E^2$ [BAN 243].

V 466 Sgr. The period has lengthened, the term of the second degree being about $+0^d.3 \cdot 10^{-7} \cdot E^2$ [BAN 243].

V 468 Sgr. Innes supposed a period of about 60^d. The star was rediscovered by van Gent who found Cluster type variation and derived the elements [BAN 243].

V 481 Sgr. [Faint star close.]

V 485 Sgr. The star is perhaps identical with a variable announced by Innes, whose position deviates by $+0^m.2$, and for which Innes supposed a period of about 90^d [UOC 37.304].

V 495 Sgr. Rediscovered by van Gent who also derived the elements [BAN 243].

V 498 Sgr. The maxima are unequal in brightness.

V 505 Sgr = BD -14°5578 ($6^m.8$) = AG Wa 7476 ($8^m.0$) = HD 187949 (A2). Elements by Hoffmeister. D = $4^h.2$. 402 obs. 8 min. [AN 6021]. Improved elements by Lause. 21 min. [AN 6186; 6362]. 5 min. by Rügemer [AN 6020]. Photometric orbit by Slonim [AN 6066]. +

V 510 Sgr. Elements by Hoffleit [HA 90.187].

V 515 Sgr. The published period P = 246^d may be an apparent period because all the observations, a few of which extend back as far as 1900, are satisfied also by the period P' = 750^d. The two periods are well correlated with an observational period of one year by the equation: $1/P - 1/P' = 1/365^d$ [HA 90.187].

V 522 Sgr. Ferwerda examined 350 Franklin Adams plates and found the star invisible on all plates on and before 1931 August 15. Sixteen plates on August 16 show part of the rising branch, while on the three nights following

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thereupon the Nova is decreasing in brightness. The next plate is taken only 1933 October 21. This plate and those taken since do not show any trace of the Nova. The observed maximum brightness was $12^m.9$, but it seems likely that the brightness may have been still higher between August 16 and 17 [BAN 269]. Description of the light curve by McLaughlin [PA 47.541].

V 523 Sgr = CoD -29°15641 ($9^m.2$) = CPD -29°5846 ($8^m.8$) = Cord B 12424 ($9^m.2$) = HD 176754 (A5). Elements were derived by Ferwerda. He found that the secondary minimum follows the primary by $0^P.414$, and indicates therefore an eccentricity of at least 0.14 [BAN 256]. The star was further studied on 1650 Harvard plates, covering the years 1889 to 1936, by E. Jones who derived the improved period. The phase difference m_2-m_1 varies from 0.523 in 1893 through 0.500 in 1901 to 0.401 in 1935, showing a rotation of the line of apsides in a period greater than 120 years. The eccentricity of the orbit is $\geq$ 0.15. Both minima are partial, $m_2 = 10^m.41$ [HB 909; AAS 9.125]. Apsidal motion discussed by Luyten, Struve, and Morgan [Yerkes Publ 7.298] and Sterne [MN 99.668]. +

V 524 Sgr = BD -15°5498 ($9^m.3$). Elements derived by Jensch. D = $0^d.48$. A shallow secondary minimum is indicated. 8 min. [AN 6059]. 2 min. by Seliwanow [Tashk Circ 33; Tadjik Circ 1].

V 525 Sgr = CoD -30°16665 ($8^m.2$) = CPD -30°5841 ($8^m.6$) = Cord B 12481 ($8^m.2$) = HD 177768 (A2). $m_2 = 8^m.78$. The second maximum is perhaps $0^m.04$ fainter than the first [Riverview Publ 1.10].

V 526 Sgr = CoD -31°16374 ($9^m.0$) = CPD -31°5894 ($8^m.8$) = Cord B 12496 ($9^m.1$) = HD 177994 (A0). O'Connell derived the following elements:

Min. I = 2427639.642 + $1^d.919426 \cdot E$,
Min. II = 2427256.560 + $1.919401 \cdot E$.

The secondary therefore changes its position between the primaries, the difference Min. II-Min. I being $0^d.844 = 0^P.440$ in 1925.0, and $0^d.791 = 0^P.412$ in 1936.0. The durations of the primary and secondary minimum are $0^d.153$ and $0^d.208$ respectively with constant light of $0^d.004$ and $0^d.040$ respectively. These figures indicate that the orbit is eccentric and the line of apsides is rotating. $m_2 = 10^m.18$ [Riverview Publ 1.11]. Further investigation of this behavior was made by Dugan and Wright. From 783 Harvard plates they derived the elements:

Min. I = 2421785.366 + $1^d.919435 \cdot E$,
Min. II = 2421786.326 + $1.919379 \cdot E$.

The time-residuals arising from calculated values by using the mean period $1^d.919407$ are represented by two straight lines whose intersection took place at the epoch of the elements or 1918.5. Dugan and Wright adopt a probable rotation period of 24000 light change periods or 126 years, and an eccentricity of 0.18. They also calculate rough dimensions of the system [AJ 1071; Princ Contr 19.7]. Remarks on ellipticity by Russell [ApJ 90.647; 650].

V 527 Sgr. Elements by Uitterdijk [BAN 273].

V 532 Sgr. The light curve given by Swope is rather symmetrical [HA 90.227].

V 540 Sgr = CoD -35°12140 ($9^m.0$) = CPD -35°7616 ($9^m.2$) = GZ 17^h3484 ($8^m.8$) = Cord C 9877 ($8^m.7$). Spectrum M2 according to Swope [HA 90.220].

V 542 Sgr. Deep and shallow minima [HA 90.220].

V 551 Sgr. 5 max. by Swope [HA 90.227].

V 552 Sgr = HV 9179. Elements by Swope [HA 90.220]. There was a change in period before 2418400 [HA 90.226].

V 554 Sgr. $m_2 = 14^m.5$.

V 555 Sgr = HV 7098. Rediscovered by Swope who also derived the elements [HA 90.221].

V 557 Sgr. There was a change in period between 2422000 and 2423900. Elements before the change: Max. = 2415110.5 + $16^d.233 \cdot E$. Light curve [HA 90.227].

V 558 Sgr. Perhaps RV Tauri type. Deep and shallow minima alternate. Between 2422000 and 2423000 occurred a shift in phase of -14^d though no change in period. Elements before the shift: Min. = 2412605 + $64^d.1 \cdot E$. Light curve [HA 90.228].

V 559 Sgr = HV 9184. Elements by Swope [HA 90.221].

V 561 Sgr = HV 7107. Rediscovered by Swope who also derived the elements [HA 90.221].

V 564 Sgr. There was a shift of phase between the observations in 1930 and 1931 of $+7^d$. Elements before the shift: Max. = 2424056 + $27^d.8$. Light curve [HA 90.228].

V 567 Sgr. The spectrum is given as Pd in HC 231, where the object is called a gaseous nebula. The image on the photographic plate is often distinctly different from the ordinary stellar image. The variation is real and apparently irregular with no distinctive character [HA 90.228].

V 568 Sgr = HV 7119. Rediscovered by Swope who also derived the elements [HA 90.221].

V 569 Sgr = HV 9190. Elements by Swope [HA 90.221].

V 573 Sgr. $m_2 = 13^m.0$.

V 574 Sgr. $m_2 = 15^m.1$.

V 585 Sgr = HV 7152. Rediscovered by Swope who also derived the elements [HA 90.222].

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V 587 Sgr = HV 7159. Rediscovered by Swope who also derived the elements [HA 90.222].

V 589 Sgr = HV 9226. Swope supposes R Coronae Borealis type [HA 90.222].

V 593 Sgr = HV 9229. Elements derived by Swope [HA 90.222]. There was a change in period between 2422900 and 2423900. Elements before the change: Max. = 2414150 + 230^d·E [HA 90. 226].

V 611 Sgr. There was a change in period between 2419000 and 2420250. Elements before the change: Max. = 2414150 + 123^d·E. It is possible that the period should be doubled. The later elements would then be: Max. = 2426180 + $233\overset{d}{.}6$·E, and the star would be of the RV Tauri type, with the second maximum slightly displaced. Magnitudes and phases then become for M_1: $14\overset{m}{.}2$, $0\overset{P}{.}000$; m_1: [$16\overset{m}{.}5$, $0\overset{P}{.}320$; M_2: $14\overset{m}{.}5$, $0\overset{P}{.}540$; m_2: $16\overset{m}{.}2$, $0\overset{P}{.}780$ [HA 90.228].

V 612 Sgr. There was a change in period between 2417900 and 2418800. Elements before the change: Max. = 2413750 + $107\overset{d}{.}9$·E [HA 90.226].

V 618 Sgr = HV 7203. Rediscovered by Swope who finds that the star is a typical R Coronae Borealis variable [HA 90.222]. The first observation is $14\overset{m}{.}0$ at 2411200. Brightest observed maximum, $11\overset{m}{.}0$, at 2413000, then the brightness diminished to $15\overset{m}{.}8$ at 2414200. From this date to 2423000 it is never seen brighter than $16\overset{m}{.}0$, and is usually [$16\overset{m}{.}5$. Since 2424000 it has fluctuated around $13\overset{m}{.}0$, with three deep sharp minima at 2425800, 2426500, and 2427200, when the star reaches $16\overset{m}{.}0$ [HA 90.228].

V 620 Sgr = HV 7212. Rediscovered by Swope who also derived the elements [HA 90.223].

V 622 Sgr = HV 9253. Elements by Swope [HA 90. 223].

V 624 Sgr = HV 7218. Rediscovered by Swope who also derived the elements [HA 90.223].

V 626 Sgr. Typical Cepheid light curve with a secondary maximum on the descending branch, $0\overset{P}{.}15$ after the primary [HA 90.228].

V 630 Sgr. Position by Koslov [UAI Circ 624; AN 6244; Tashk Circ 61]. The Nova was first seen by Okabayasi in Kobe 1936 October 3, 22^h, and confirmed by Watson October 6. There are only a few observations by Jacchia, Jackson, Kaho, Kanda, Lacchini, and Madwar [HAC 392; 393; UAI Circ 622; 625; 626; 627; 633; Tokyo Bull 191-196; 221-222; Kyoto Bull 322; 327; BZ 18.72; AN 6244; Coelum 6.201; 218]. The brightness was of $4\overset{m}{.}5$ on the day of the discovery, and decreased regularly, first very fast, then somewhat slower, until 10^m on November 12. Gaposchkin found it $12\overset{m}{.}87$ on 1937 April 7 [HB 907], and Wyse about 15^m on 1937 August 2 [ASP 49.290]. A description of the light curve has been given by McLaughlin [PA 47.541]. The spectrum was studied by Joy, Adams, and Duncan [Mt Wils Rep 1936-37, p.25; ASP 48.328], Cannon [HB 907], Wyse [ASP 48. 306; 49.290], and McLaughlin [ApJ 91.369]. In October 1936 the hydrogen lines Hδ, Hγ, and Hβ were represented by very broad emission bands, each with two wide hazy absorption lines greatly displaced towards the violet, corresponding to radial velocities of -3590 and -2130 km/sec, respectively. The first is one of the highest velocities ever observed in the case of Novae. Strong interstellar sodium lines, as seen on October 8, indicate the distance of the Nova of 2000 Parsecs. The bright bands, of which λλ 3869 and 3968 A [Ne III] were the strongest, had a width of 50 to 60 A. In August 1937 the spectrum showed the emission lines λλ 4959, 5007 A [O III]; λλ 3869, 3968 A [Ne III]; λ 3426 A [Ne V]; and possibly λ 4686 A (He II). Hydrogen and various other emissions were absent. Such a spectrum is rather peculiar, even for the nebular stage of a Nova. That of Nova Persei 1901 was very like it. The forbidden lines were discussed by Vorontsov-Velyaminov [RAJ 14.113]. +

V 631 Sgr. $m_2 = 14\overset{m}{.}2$.

V 632 Sgr. There was a change in period between 2419000 and 2420200. Elements before the change: Max. = 2413350 + 263^d·E [HA 90.226].

V 633 Sgr = HV 7234. Rediscovered by Swope who also derived the elements [HA 90.223]. There was a change in period between 2418800 and 2420000. Elements before the change: Max. = 2415110 + $224:^d$·E [HA 90.226].

V 638 Sgr. There was a shift in phase of $+22^d$ between 2414540 and 2414800. Elements before the shift: Max. = 2412670 + $73\overset{d}{.}1$·E [HA 90. 228].

V 643 Sgr = HV 7253. Rediscovered by Swope who also derived the elements [HA 90.223].

V 646 Sgr. There was a change in period between 2415900 and 2423900. Elements before the change: Max. = 2413350 + 95^d·E [HA 90.226].

V 652 Sgr = HV 7269. Rediscovered by Swope who also derived the elements [HA 90.224].

V 661 Sgr = HV 7286. Rediscovered by Swope who also derived the elements [HA 90.224].

V 672 Sgr = HV 7300. Rediscovered by Swope who also derived the elements [HA 90.224].

V 675 Sgr = CoD -34°12600 ($9\overset{m}{.}9$) = CPD -34°7672 ($9\overset{m}{.}6$). Elements by Swope [HA 90.224]. Improved epoch by O'Leary [Riverview Publ 1. 56]. Rediscovered by Gurjev [Tadjik Circ 28; BZ 19.82].

V 676 Sgr = HV 7306. Rediscovered by Swope who also derived the elements [HA 90.224]. There was a shift in phase of +76 days between 2422600 and 2423900. Elements before the shift: Max. = 2414140 + 181^d·E [HA 90.228].

V 679 Sgr. There was a change in period between

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2422200 and 2422500. Elements before the change: Max. = 2415900 + 225^d·E [HA 90.226].

V 682 Sgr = HV 7318. Rediscovered by Swope who also derived the elements [HA 90.224].

V 683 Sgr. $m_2 = 12^m.5$.

V 687 Sgr. $m_2 = 12^m.2$.

V 688 Sgr = HV 7327. Rediscovered by Swope who also derived the elements [HA 90.225].

V 704 Sgr = HV 9333. Elements by Swope [HA 90. 225].

V 705 Sgr. $m_2 = 12^m.2$.

V 713 Sgr = HV 9343. Elements by Swope [HA 90. 225].

V 715 Sgr = HV 7360. Rediscovered by Swope who also derived the elements [HA 90.225].

V 717 Sgr = HV 7364. Rediscovered by Swope who also derived the elements [HA 90.225].

V 721 Sgr. Perhaps RV Tauri type. Deep and shallow minima alternate. The variation is sometimes similar to that of a β Lyrae star. The minima are narrower than the maxima. The difference between times of deep minima is frequently about 120^d, but is not regular. The magnitude of the shallow minima is around $12^m.5$ [HA 90.229].

V 725 Sgr = 419.1937. [*$14^m.6$ close.] The behavior of this quite unique semiregular variable has been studied by Swope on 967 Harvard plates between 1889 and 1935. The main features she found are the following. The mean brightness rose from 1889 ($13^m.05$) to 1915 ($12^m.45$) and then decreased to 1926 ($12^m.8$) and continued so to 1935 ($13^m.3$). There was also a short-term fluctuation in brightness from 1895 to 1926 of about $0^m.4$. In 1928 the range suddenly increased to nearly 2 magnitudes and it has continued ever since until 1935 to be over a magnitude, but the maximum brightness remained unchanged. From 1928 to 1935 the light variation has been periodic, but the period has continuously changed, from 14^d in 1928, increasing each year by one day, until it was 21^d in 1935. The elements may be expressed in the form: Min. = 2426087 + $15^d.933$·E + $0^d.0233$·E^2. These elements satisfy the observations from 1928 to 1932 rather well. After 1933 the quadratic term becomes so large and changes so rapidly that it is difficult to use. The color of the variable at minimum was judged to be yellowish red, possibly the spectrum belongs to class K [HA 105.499].

V 726 Sgr = 18.1938. [*$16^m.5$ 1^s p.] The Nova was invisible until 1936 April 30, was seen on a plate of May 13 in the maximum observed brightness of $10^m.8$, and decreased rather gradually to $14^m.8$ on September 6. Later plates did not show the star. The spectrum, taken on May 29 is of the nebular type and shows emission lines about 40A wide. In order of intensity they are Hγ + λ4363, Hδ, Hζ + λ3869, and Hε + λ3968. On June 22 Hζ + λ3869 was the strongest band. Extremely faint emission lines are seen on July 17 [HB 907]. Rediscovered by Luyten [AN 6315; Minn Publ 2.108]. A description of the light curve has been given by McLaughlin [PA 47.541] who also discussed the radial velocity [ApJ 91.369].

V 727 Sgr. [V 728 Sagittarii 2^s f $0^m.1$ s.] Uitterdijk found irregular light variation [BAN 288].

V 728 Sgr. [V 727 Sagittarii 2^s p $0^m.1$ n.] Elements by Uitterdijk [BAN 288].

V 729 Sgr. Ferwerda found that the light variation is comparable with Cepheid variations, but that the maxima do not occur periodically. It seems, however, that the interval in time between two successive maxima is always between 12 and 17 days. The rise from minimum to maximum lasts between 2 and 6 days [BAN 256].

V 730 Sgr. Ferwerda found that the light variation is comparable with Cepheid variations, but that the maxima do not occur periodically. The observed 7 maxima are fairly well represented by a period of about $19^d.6$, but sometimes minima occur at a time of predicted maximum. The brightness of all the observed maxima is the same, but not the shape. The variable may belong to the U Geminorum type [BAN 256]. Rediscovered by Luyten [AN 6263; Minn Publ 2.113].

V 731 Sgr. Elements by Soloviev. 5 max. [Tadjik Circ 30].

μ Sgr = BD -21°4908 ($4^m.0$) = CPD -21°6771 ($4^m.2$) = NFK 682 = Boss 4604 = Gou 24812 ($4^m.3$) = HR 6812 ($4^m.01$) = ADS 11169 = HD 166937 (B8p). The variability was suspected by Morgan who found that the intensity of certain lines in the spectrum was varying. The He I line λ4471 had a maximum nine days after periastron, and at the same time the Mg II line λ4481 had a minimum [ApJ 75.407]. Photoelectric measures of Elvey confirmed the variability and revealed Algol type; the epoch of mid-eclipse corresponds to the time of superior conjunction of the brighter star [ApJ 88.110]. The variability of the radial velocity was announced by Frost and Adams [ApJ 19.351]. Spectroscopic orbits by Ichinohe [ApJ 26.157] and Kohl [AN 5245; 5903]. Radial velocities by Wright [ApJ 13.99].

KQ Sco. Spectrum K2 [Potsdam Publ 90.138].

KR Sco. [CoD -32°11534 (10^m) 7^s p $0^m.9$ s.] Elements by Walton [HB 891]. Spectrum M3e according to Cannon [HB 891].

KS Sco. Elements by Boyd [HB 891]. Spectrum M2e according to Cannon [HB 891].

LL Sco = 793.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

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LO Sco = 794.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117]. There was a change in period between 2419150 and 2423900. Elements before the change: Max. = 2411500 + 450^d·E [HA 90.185].

MM Sco. There are observed 7 maxima between 1895 and 1930 [HA 90.185].

MT Sco. Semiregular.

NX Sco = 806.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

NY Sco = 807.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

PR Sco = 812.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

PW Sco = 815.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

QX Sco = 819.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

QZ Sco. There was a change in period between 2420400 and 2423900. Elements before the change: Max. = 2412640 + 158^d·E [HA 90.185].

V 335 Sco. The period is valid from 1924 to 1931. The star shows considerable irregularity in time of rise to maximum [HA 90.186].

V 339 Sco = 821.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

V 342 Sco = 826.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

V 347 Sco. There was a change in period between 2418700 and 2423900. Elements before the change: Max. = 2411500 + 198^d·E [HA 90.185].

V 351 Sco = 831.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

V 352 Sco. The period gives a light curve which shows large scatter on the ascending branch [HA 90.186].

V 368 Sco = 838.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

V 379 Sco = 851.1935. Rediscovered by Luyten [AN 6176; Minn Publ 2.117].

V 380 Sco = 239.1935 = CoD -30°13620 ($8^m.9$) = CPD -30°4525 ($9^m.8$) = GZ 16^h3421 ($9^m.2$) = Cord B 10645 ($8^m.9$) = HD 152699 (Ma). Photographic amplitude $10^m.6$-$11^m.3$ [HB 825]. Rediscovered by Bateson, who also determined the approximate elements from 207 observations of the NZAS [AN 6190]. 10 obs. by Okabayasi [Mem Astr Soc Jap 6].

V 381 Sco. The variable has the second longest known period among eclipsing stars. Three minima are observed, 1890, 1908, and 1926. D = 670^d, d = 300^d. The star is situated in a part of the Milky Way obscured by dark nebulosity. Spectrum F5? [HB 902].

V 382 Sco. This Nova was first seen 1901 September 3, when it had the maximum brightness actually observed. Until October 5 the brightness decreased to $11^m.8$. Before 1901 August 22 and after October 8 the Nova was invisible on all existing Harvard plates [HB 902]. Description of the light curve by McLaughlin [PA 47.541].

V 383 Sco = CoD -38°12283 (10^m) = CPD -38°7136 ($10^m.1$). The variable has the third longest known period among eclipsing stars. Three minima are observed 1901, 1914, and 1928. The eclipse lasts 590^d and is partial [HB 902].

V 384 Sco. This Nova was first seen on two plates of 1893 May 1, being $13^m.0$ on the first and $12^m.3$ on the second plate. 18 days later it was $12^m.6$. The Nova is invisible on all Harvard plates before 1890 October 1 and after 1893 June 8 [HB 902]. Description of the light curve by McLaughlin [PA 47.541].

V 386 Sco. Improved elements by Hertzsprung [by letter].

V 387 Sco. $m_2 = 12^m.2$.

V 390 Sco. There was a change in period between 2422500 and 2423900. Elements before the change: Max. = 2420330 + 466^d·E [HA 90.226].

V 393 Sco = CoD -34°12102 ($7^m.7$) = CPD -35°7282 ($7^m.8$) = Gou 24151 ($7\ 1/2^m$) = GZ 17^h2738 ($7\ 1/2^m$) = Cord C 9702 ($7^m.8$) = HD 161741 (A2). Elements by Swope. $m_2 = 7^m.90$. The light curve shows abnormalities at maximum. Light curve [HA 90. 226]. O'Leary, who derived an improved epoch, could not confirm these anomalies from his 338 observations between 1932 and 1936 [Riverview Publ 1.58]. Improved elements by Hertzsprung [by letter].

V 394 Sco. There was a change in period between 2420360 and 2422540. Elements before the change: Max. = 2411550 + 415^d·E [HA 90.226].

V 396 Sco = HV 6999. Rediscovered by Swope who also derived the elements [HA 90.219].

V 400 Sco. RV Tauri type. Shallow minimum at $15^m.0$ [HA 90.219].

V 403 Sco. $m_2 = 13^m.2$.

V 411 Sco. RV Tauri type. The star has alternating deep and shallow minima, the magnitude of the shallow minima is around $14^m.0$. The epoch given in the Table refers to a minimum [HA 90.226].

V 412 Sco. $m_2 = 14^m.8$.

V 421 Sco. There was a change in period between 2418000 and 2423900. Elements before the change: Max. = 2413830 + 293^d·E [HA 90.226].

V 423 Sco. $m_2 = 14^m.8$. Light curve [HA 90.227].

V 425 Sco = HV 9145. The declination in Luyten's discovery announcement [AN 5991] is in error,

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it must be changed by +3°. Elements by Swope [HA 90.219].

V 429 Sco = HV 9153. Elements by Swope [HA 90. 219].

V 431 Sco. Spectrum M3e, according to Cannon [Mscr.].

V 437 Sco. $m_2 = 13^m.5$.

V 438 Sco. There was a change in period between 2416400 and 2419900. Elements before the change: Max. = 2411200 + 395^d·E [HA 90.226]. O'Leary gives 4 maxima and finds for the years 1932-1936 the mean period of 396^d [Riverview Publ 1.57].

V 439 Sco. There was a change in period between 2418200 and 2419900. Elements before the change: Max. = 2413350 + $166^d.5$·E [HA 90.226].

V 441 Sco = HV 7047. Rediscovered by Swope who also derived the elements [HA 90.220].

V 444 Sco. The light variation is rather irregular.

V 446 Sco. Light curve [HA 90.227].

V 449 Sco = CoD -32°13005 ($7^m.2$) = CPD -32°4643 ($7^m.7$) = Gou 23854 ($7^m.2$) = GZ 17^h1957 (7^m) = HD 159595 (A0). Confirmed by O'Connell. D ~ 2^d [AN 6330].

V 450 Sco = CoD -35°11829 ($9^m.9$) = HD 160591 (Nb). [*10^m 2^s p.] Roberts could not confirm the variability [AJ 491-492]. But that was done by Swope [HA 90.216]. Spectrum N according to Cannon [HB 907]. Radial velocity by Joy [ApJ 82.210].

μ^1 Sco = CoD -37°11033 ($3^m.6$) = CPD -37°6761 ($3^m.9$) = Boss 4277 = Gou 22761 ($3^m.6$) = GZ 16^h3042 ($3\ 1/2^m$) = HR 6247 ($3^m.09$) = HD 151890 (B3p). The star is the third which was recognized as spectroscopic binary. As early as 1894 the duplicity was suspected by Fleming, and 1896 was independently found by Bailey. Both components are visible in the spectrum, the lines show some difference in brightness and a very approximate period could easily be derived [HC 11; ApJ 4.235]. The spectroscopic orbit was determined by Maury from objective prism plates. And from the variations of the brightness of the spectrum, compared with the neighboring star μ^2 Scorpii, spectrum B2, Maury derived the elements of the light variation from 184 objective-prism plates, taken in the Harvard Southern Station at Arequipa [HA 84.157]. These elements were fully confirmed from 128 photoelectric observations by Elvey, who also computed the photometric orbit [ApJ 87.553], and slightly improved by van Gent from 7889 photovisual observations. These latter are given in the Table. Photometric orbit [BAN 322]. Observations by Martin and others [BAN 331]. A spectroscopic orbit from slit-spectrograms was derived by Struve. The semi-amplitude of the radial velocity is 465 km/sec, the total mass 22.4 ⊙, the inclination of the orbit 61:1 [Strömgren-Festschrift 1940, p.258]. Remarks on the spectrum by Cannon [HA 28. 179; 96.234]. Radial velocity [Lick Publ 16. 247]. Remarks on apsidal motion by Luyten [Minn Publ 2.37; AAS 8.184]. Limb-darkening by Nekrassova and Volkov [Pulk Circ 29]. Temperature, mass, and luminosity by Kuiper [ApJ 88.443; 499].

RV Scl = CoD -27°435 ($9^m.5$) = CPD -27°114 ($10^m.4$).

SU Scl = CoD -30°586 ($9^m.7$).

SV Scl = CoD -30°599 ($9^m.5$). Elements by Zessewitsch [Leningrad Bull 4.9; 18; 26; 29; Tadjik Circ 2].

SW Scl = CoD -33°16843 ($8^m.2$) = CPD -33°6441 ($8^m.4$) = Gou 32447 (8^m) = GZ 23^h1637 (8^m) = Cord C 7 ($8^m.1$). Rediscovered by Hughes who also derived the elements [HA 90.173]. Spectrum Md3 according to Fleming [HA 90.174].

SY Scl = HV 6425. Rediscovered by Hughes who also derived the elements [HA 90.173].

SZ Scl = CoD -31°76 ($9^m.5$).

UU Scl = 82.1937. Rediscovered by Luyten [AN 6297; 6337; Minn Publ 2.118].

UV Scl. Elements and light curve were derived by Hertzsprung from 160 estimates made by Snelders [BAN 293].

UW Scl. Elements and light curve were derived by Hertzsprung from 155 estimates made by Snelders and Kleibrink [BAN 293].

BT Sct. Harwood at first suspected Cluster type variability [HB 880], but later she found that the star probably is not variable [HB 908].

BU Sct. Mohr derived a period of $0^d.459745$ [PA 38. 21]. Improved elements by Harwood [HB 880; 893]. Subclass a.

BV Sct. Mohr derived the elements: Max. = 2425804.622 + $0^d.130761$·E [PA 38.21] which were confirmed by Harwood [HB 880]. The period, however, is doubtful [by letter].

BW Sct. Approximate period by Mohr [PA 38.21]. Improved elements by Harwood [HB 880]. Radial velocity by Joy [ApJ 86.408; 431; 89.360].

BX Sct. The first elements, derived by Mohr [PA 38.21] and adopted by Harwood, were: Max. = 2413752.53 + $4^d.5924$·E [HB 880]. Improved elements by Harwood [HB 893; by letter]. Oosterhoff found from 11 maxima, observed on Harvard plates, the elements: Max. = 2425388.43 + $6^d.4099$·E [HB 900]. Radial velocity by Joy [ApJ 86.399; 431; 89.360].

BY Sct. Mohr found that the star appears to have two periods. Sometimes the elements are: Max. = 2425804.780 + $0^d.153207$·E [PA 38.21]. This result was confirmed by Harwood [HB 880].

BZ Sct. Harwood supposed at first eclipsing type

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with a period of $24^d/n$ [HB 880]. Later she found RV Tauri type, the half period varying from 35 to 42 days [HB 893].

CC Sct. The star is identical with AL Scuti.

CF Sct. No indication of a secondary minimum.

CG Sct. Elements by Harwood [by letter].

CI Sct. Confirmed by visual observations by Esch [AN 6017].

δ Sct = BD −9°4796 ($5^m.0$) = Boss 4731 = AG Ott 6279 ($5^m.2$) = Gou 25551 ($5^m.1$) = HR 7020 ($4^m.74$) = HD 172748 (F0). The variable belongs to the β Canis majoris class. Fath found that besides the main period of $0^d.193770$ a secondary period of $0^d.20120$ might be effective. Later, when Sterne had shown the incompatibility of this secondary period with the pulsation theory, and had indicated a possible alternative period, Fath established that the variable has three incommensurable periods, viz. $0^d.193770$, $0^d.157382$, and $0^d.095156$ with mean amplitude of $0^m.167$, $0^m.033$, and $0^m.011$ respectively. Besides these periods there appear for a time periods of about $0^d.08$ and $0^d.11$, but the latter do not persist throughout. There is also a certain amount of irregular variation superposed on these other variations. The amplitude of the individual light curves ranges from $0^m.123$ to $0^m.245$. 937 photoelectric obs. [ASP 47.232; AAS 9.260; Lick Bull 479; 487; 501]. 86 photoelectric obs. by Nikonov [Abast Bull 3.27]. The variability of the radial velocity was discovered by Wright [ApJ 12.256; Lick Publ 16.272]. Radial velocities by Meyer [ASP 39.261]. Spectroscopic orbit by Colacevich [ASP 47. 231; Lick Bull 478]. Absolute magnitude $1^m.4$ by Adams, Joy, Humason, and Brayton [ApJ 81. 267]. Spectrum F5 (Lick), F4s (Mount Wilson). A careful analysis of the different periods and amplitudes from theoretical point of view which led him to the discovery of the true secondary period, later confirmed by Fath, was carried out by Sterne [ApJ 87.133; Harv Repr 206].

XX Ser. Elements by Prager. Form of the light curve β_1 [AN 5830]. Elements confirmed by Hassler and Kitchens [AJ 1074].

XY Ser. Elements by Hoppe. 7 max. [KVBB 19.22; 67].

XZ Ser. Elements by Hoppe. 5 max. Maximum brightness is variable [KVBB 19.22; 67].

YZ Ser. Elements by Hoppe. 2 max. Maximum pointed, minimum broad [KVBB 19.22; 67].

ZZ Ser. Harwood suspected at first Cluster type variability with a period of $0^d.49$ [HB 880], but later she found that the star probably is not variable [HB 908].

AA Ser. Harwood supposed at first eclipsing type with very short period, $0^d.0962$ [HB 880; AN 5838]. Later she found that the variable is of the Cepheid type, and derived the elements [HB 893]. Improved elements by Parenago [NNVS 57-58]. Oosterhoff derived from 9 maxima the elements: Max. = 2425475.68 + $17^d.155$·E [HB 900]. Radial velocity by Joy [ApJ 86.408; 431; 89.360].

AB Ser. One maximum was observed by Esch [AN 6017]. Rediscovered by Shajn. 34 obs. [NNVS 44; 45]. Obs. by Kibe [OAAR 1.2].

AD Ser = SVS 340. Rediscovered by Shajn [NNVS 40; 41; Pulk Circ 7].

AE Ser = SVS 342. Rediscovered by Shajn [NNVS 40; 41; Pulk Circ 7].

AG Ser = 219.1930. [BD + 3°3741 ($9^m.5$) $8^s.5$ spp BD +3°3743 ($9^m.5$) $5^s.0$ f *$11^m.0$ $1^s.2$ sp *$12^m.7$ $1^s.5$ sf.] Position by Reinmuth [AN 5709]. Rediscovered by Reinmuth. 8 obs. [AN 5709].

AL Ser. Elements by Kukarkin [NNVS 46].

AM Ser = BD +0°3361 ($9^m.5$). First elements by Jensch. 7 max. [AN 6153]. 1 max. 1 min. by Lause [AN 6251]. Improved elements by Bigay. 3 max. 2 min. [BAF 6.29].

AN Ser. Elements by Soloviev. 3 max. [Tadjik Circ 10, corr.16; 19; 20; 43].

AO Ser = BD +17°2942 ($9^m.5$). Elements by Soloviev. 6 min. $m_2 = 10^m.82$. D = $0^d.193$. 165 obs. [Tadjik Circ 10, corr.16; 19; 41; NNVS 52; 55].

AP Ser. Elements by Soloviev [AN 6232; Tadjik Circ 21; NNVS 55].

AQ Ser = BD +3°3015 ($9^m.5$). Soloviev supposed at first a period of $5^d.06$ [AN 6232], but found later, that the true value is one sixth of this, viz. $0^d.84368$ [Tadjik Circ 25; NNVS 55]. Lause found that the period should be doubled and derived improved elements. $m_2 = 10^m.98$ at the phase $0^P.491$. 9 min. [AN 6318; SAC 16.61]. Later also Soloviev confirmed this double value of the period [Tadjik Circ 46].

AR Ser. Elements by Soloviev [Tadjik Circ 10; 17; BZ 18.80; NNVS 55].

AS Ser. Elements by Soloviev. 5 min. 165 obs. [AN 6232; NNVS 52; 55].

AT Ser. Elements by Soloviev [AN 6232; Tadjik Circ 21]. Soloviev gave the preliminary elements: Max. = 2428337.296 + $0^d.7407$·E, M−m = $0^d.129$ [AN 6232; Tadjik Circ 21] which, however, could not be confirmed by his later observations [NNVS 55].

AU Ser. [*$11^m.5$ npp.] Elements by Soloviev [AN 6232; Tadjik Circ 21; NNVS 55].

AV Ser. Soloviev at first adopted a period P' = $0^d.322608$ [BZ 18.80]. Later he derived new elements with the period P = $0^d.5382$ [NNVS 55]. The periods are approximately connected by the relation: $1/P = 5 - 1/P'$.

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AW Ser. Elements by Soloviev [AN 6232; Tadjik Circ 21; NNVS 55].

AX Ser. Elements by Hoppe. 4 max. Sometimes irregular. Red. [KVBB 19.22; 67].

AY Ser. Elements by Hoppe. 5 max. [KVBB 19.22; 68]. Rediscovered by Luyten [AN 6263; Minn Publ 2.106].

AZ Ser. Elements by Hoppe. 5 max. [KVBB 19.22; 68].

BC Ser. [*$12^m.5$ 3^s spp.] Elements by Esch [AN 6330].

BD Ser = 740.1936 = HV 9071. Elements by Dombrovsky [Pulk Circ 13]. Rediscovered by Luyten [AN 6263; Minn Publ 2.102].

BE Ser = 753.1936 = HV 9236. Elements by Dombrovsky [Pulk Circ 13]. Rediscovered by Luyten [AN 6263; 6337; Minn Publ 2.105]. 1 max. by Graff. Visual brightness in max. = $9^m.0$ [BZ 21.117]. Color m2 [Wien Ber 149.227].

X Sex = BD -6°3138 ($9^m.3$). Confirmed visually by Esch [AN 6017]. 25 obs. by Olivier and others show small variations not exceeding 1^m [Penn Publ 5,3.39].

AB Tau = BD +28°847 ($9^m.5$) = AG Cbr E. 2588 ($9^m.5$). Plaut finds irregular light variations [AN 5911]. Krüger calls the star very red [Spec Vat 7.34; 122]. Florja did not find any variability [NNVS 38]. Nielsen found from the observations of the NAS a semiregular light variation, the period seems to decrease steadily; the range varies between $2^m.0$ to $0^m.2$; also the form of the light curve is extremely variable. 335 obs. 8 max. 13 min. [AN 6069; 6239; 6328; 6383; 270.42].

AC Tau = BD +1°779 ($9^m.5$). Elements by Kordylewski [SAC 11.49; 12.45; AAc 2.59; CRM Acad Pol 1929, 9]. Improved elements by Lause. D = $0^d.40$. 14 min. [AN 5977; 6404; SAC 17.61].

AD Tau. 31 obs. by Olivier and others [Penn Publ 5,3.23].

AE Tau. [*14^m $0^v.3$ f $0^v.15$ n.] Confirmed by Parenago [NNVS 41]. Elements by Jensch. 13 max. [KVBB 19.25; 83].

AH Tau. Spectrum G0 and absolute magnitude by Gratton [Stockh Ann 13,3.67].

AK Tau = BD +20°688 ($8^m.8$) = AG Berl B 1300 ($8^m.7$).

AL Tau. Elements derived by Piotrowski [AAc 2.69; 80]. Jensch gave a somewhat improved value of the period [KVBB 19.25; 83]. Rediscovered by Hoffleit [HB 901].

AM Tau. [Southern star of a small group.] Elements by Jensch. 9 min. D = $0^d.16$ [AN 6058].

AN Tau = BD +29°645 ($9^m.5$). Confirmed by Kukarkin [NNVS 25-26]. Elements by Beyer. m_2 = $10^m.50$ at the phase $0^P.528$. The period seems to be somewhat variable [BZ 18.8; AN 6217].

AS Tau. Rediscovered by Hoffleit who derives also the period [HB 901].

AT Tau. Observed by Jensch [KVBB 19.25; 83].

AU Tau. Elements by Jensch. 11 max. [KVBB 19.25; 83].

AV Tau. Elements by Jensch. 8 max. [KVBB 19.25; 84].

AW Tau. Confirmed by Parenago [NNVS 43]. Elements by Jensch. 3 max. [KVBB 19.25; 84].

AX Tau = 44.1936. Rediscovered by Hoffmeister [AN 6195]. Elements by Jensch [KVBB 19.25; 84].

AY Tau. Observed by Jensch [KVBB 19.25; 84].

AZ Tau. Observed by Jensch [KVBB 19.25; 84].

BB Tau. [*15^m nf closely.] Observed by Jensch [KVBB 19.25; 85].

BC Tau. [*15^m $0^v.2$ f $0^v.1$ s.] Observed by Jensch [KVBB 19.25; 85].

BD Tau. Observed by Jensch [KVBB 19.25; 85].

BE Tau. Observed by Jensch. Small variation with a period of 500^d with short shallow waves superposed [KVBB 19.25; 85].

BF Tau. Elements by Jensch. 5 max. Sometimes a low secondary maximum is observed [KVBB 19.25; 85].

BL Tau = BD +19°607 ($8^m.8$) = AG Berl A 1030 ($8^m.9$). Perhaps semiregular.

BT Tau. Observed by Jensch. 6 min. [KVBB 19.25; 85].

RS Tri = BD +28°258 ($9^m.1$) praec. austr. = AG Cbr E. 877 ($9^m.1$) = Kü 655 com. ($9^m.88$) = ADS 1236. Confirmed by Schneller [AN 5791]. Elements by Zessewitsch and by Parenago. 3 min. [AN 5911; NNVS 41]. Improved elements by Lause. m_2 = $10^m.0$. D = $0^d.28$, d = $0^d.03$. 17 min. [AN 6404; SAC 17.61]. Spectrum A5 according to Cannon [HB 897].

SS TrA = CPD -60°5965 ($9^m.6$).

TW TrA. [Close companion.]

VV TrA. Type of variation doubtful because of insufficiency of material. A long period, however, is impossible [HB 884].

XX TrA. [Following of a pair.]

AP TrA. Subclass a.

AS TrA. m_2 = $15^m.7$.

AT TrA. Subclass a.

AV TrA. Subclass a.

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AW TrA. Subclass a.

BC TrA. Subclass a.

BE TrA. The elements are valid only for observations between 1924 and 1930 [HB 884].

BH TrA. Subclass a.

BI TrA. Subclass a.

BK TrA. Subclass a.

BQ TrA. Subclass a.

CE TrA. [Close companion.] Subclass a.

CI TrA. Period probably less than $0^d.3$ [HB 884].

CO TrA. [Close companion.]

CS TrA. [Close companion.]

CU TrA. Subclass a.

CV TrA. Subclass b.

DS TrA. Hump on descending branch of the light curve [HB 884].

DV TrA. The period of $34^d.3$ is the sum of three cycles of approximately 8, 12, and 14 days. The magnitudes for the three maxima are roughly $14^m.2$, $13^m.5$, and $13^m.2$, respectively. The three minima all reach $16^m.0$. The period fits the 1925 and 1926 observations. Other observations indicate some irregularity in period, but are too much scattered to give more definite information [HB 884].

UX Tuc = HV 6323. Rediscovered by Hughes who also derived the elements [HA 90.171].

UY Tuc = 183.1907 = CoD -60°22 ($9^m.7$). [Companion np.] Rediscovered by Hughes who also derived the elements. There are irregularities in the light variation [HA 90.173].

VV Tuc. The variable perhaps belongs to the XX Ophiuchi type [HA 90.171].

VW Tuc. The variable perhaps belongs to the U Geminorum type [HA 90.171].

VZ Tuc. Nova. Out of 553 observations on Harvard plates, covering the years 1890 to 1933, the star is visible only in 1927 and 1928. On October 3, 1927, it is still [$16^m.0$, becomes visible for the first time October 22, rises slowly to maximum at $11^m.4$ on December 15 and decreases within 14 days to $14^m.6$. 1928 July 11 - August 20 it drops from $15^m.5$ to $16^m.2$, and then disappears below the plate limit [HB 898; HA 90.174].

WX Tuc = HV 6403. Rediscovered by Hughes who also derived the elements [HA 90.173].

XX Tuc. $m_2 = 14^m.2$.

XZ Tuc = CoD -74°6 ($9^m.7$) = CPD -74°14 ($10^m.0$) = HD 847 (Mb). Red.

TX UMa = BD +46°1659 ($7^m.0$) = AG Bo 7746 ($7^m.0$) = PD 6129 ($7^m.25$) = HD 93033 (B8). Rediscovered by Schneller [AN 5793]. Elements by Rügemer [AN 5793; VAP 41.189; Sterne 11.127], Ahnert. 2 min. [BZ 13.41; AN 5838; 5998], Mohr. 23 min. [HB 885]. The period is variable, Rügemer therefore derived elements with a periodic term: Min. = $2416426.784 + 3^d.0633175 \cdot E + 0^d.021 \sin (0^\circ.09474 \cdot E + 64^\circ.42)$. $D = 0^d.34$. 462 obs. Photometric and spectroscopic orbit [AN 6106; 6166]. O'Keefe confirmed these elements from Harvard observations back to 1900. Three earlier minima, however, indicate that it is likely that both the period of the variation and its amplitude are greater. 352 obs. $A_1 = 1^m.79$, $A_2 = 0^m.05$. Photometric orbit [HB 908]. Himpel finds constancy in minimum $d = 1^h.2$. 1 min. [AN 6253]. 1 min. by Nijland [SAC 13.62]. 2 min. by Kukarkin [NNVS 35]. 8 min. by Kwiek [AAc 2.137]. Spectroscopic orbit by Pearce. He determines the period of the apsidal motion as 35.6 years [ASP 47.221; 52.287; JRASC 26.382; 29.411; AAS 8.251]. Absolute dimensions by Colacevich [SAI 11.216]. +

TY UMa. Elements by Zverev. $m_2 = 12^m.29$ at the phase $0^P.48$. Color index + $0^m.4$ [NNVS 43; 52]. Spectrum G according to Cannon [Mscr.].

TZ UMa = BD +59°1423 ($9^m.0$) = AG Hels 7038 ($8^m.6$) = HD 105630 (Ma). Observed by Zverev who found irregular light variation with well pronounced minima which follow each other by 120·n days (n = 1, 2, 3, or 4) [NNVS 43; 52]. Proper motion by Palmér [Lund Medd II 103.162].

UU UMa. Elements by Zverev. Color index $+0^m.2$ [NNVS 43; 52].

UV UMa = BD + 53°1584 ($9^m.4$). Elements by Zverev. Mean amplitude $0^m.83$. Color index $+1^m.4$ [NNVS 43; 52].

UW UMa = BD +57°1422 ($9^m.5$) = AG Hels 7475 ($9^m.6$). Observed by Zverev. Color index = $+1^m.5$ [NNVS 43; 52]. Proper motion by Palmér [Lund Medd II 103. 162].

UX UMa. Position by Zverev and Kukarkin [NNVS 53]. Elements by Zverev and Kukarkin. $D = 0^P.14$. $A_2 = 0^m.08$. 693 obs. 21 min. Photometric orbit. Spectrum A2. The variable has the shortest period of orbital motion known in astronomy. The density of the brighter and fainter components being 21.6 ⊙ and 13.6 ⊙ respectively, both of them occupy an intermediate position between the main sequence stars and white dwarfs [NNVS 43; 52; 53]. From a series of 249 observations Krat derives improved elements, a new photometric orbit, and a density of 54 ⊙ and 28 ⊙ for the U-solution, 31 ⊙ and 31 ⊙ for the D-solution, respectively, making evident that both of the components are white dwarfs. Spectrum of the companion F [Pulk Circ 30]. 1 min. 9 obs. by Parenago [Sternb Publ 12,1.38; 97]. Absolute dimensions by Colacevich [SAI 11.216]. +

UY UMa. Elements by Zverev. $m_2 = 13^m.02$. Color index = $+0^m.5$ [NNVS 43; 52].

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UZ UMa. The star is perhaps semiregular [MN 98. 68].

Y UMi. Elements by Brun 79 obs. [BAF 6.4].

AH Vel = CoD -46°3902 ($6^m.3$) = CPD -46°2254 ($7^m.4$) = Boss 2184 = CpZ_{oo} 5532 ($6^m.2$) = HR 3232 ($5^m.68$) = HD 68808 (F8p). Elements derived by Hertzsprung from 517 observations. The light curve is practically symmetrical which is surprising while for other Cepheids with similar periods the rise is markedly quicker than the fall [BAN 224; 327]. Proper motion by Wilson [ApJ 89.223]. Cannon describes the lines of the spectrum as being narrow and sharply defined [HA 93.268].

AI Vel = CoD -44°4192 ($7^m.2$) = CPD -44°2376 ($7^m.8$) = CpZ_{oo} 5593 ($7^m.0$) = HD 69213 (F0). Hertzsprung at first believed the variable to be of the Cluster type with the elements: Max. = 2426142.210 + $0^d.111574 \cdot E$. This period was also confirmed by Oosterhoff [BAN 224]. Later on it was deduced from additional observations carried out by Zagar and by van Hoof, that the star is semiregular and that the validity of the period is doubtful. 834 obs. [BAN 300].

AL Vel = CoD -47°4047 ($9^m.0$) = CPD -47°2347 ($8^m.8$). $D \sim 8^d$, $d \sim 7^d$. The transition between maximum and minimum is extremely quick and takes at most $0^p.008$ [BAN 258]. Observations by Martin and others [BAN 331]. Spectrum A3p according to Cannon [Mscr.].

AO Vel = CoD -48°3586 ($9^m.5$) = CPD -48°1553 ($8^m.8$) = HD 68826 (B9). The period has been determined by Hertzsprung separately for the primary and secondary minima. He finds for the primary $1^d.5846102$, for the secondary $1^d.5845853$. $A_2 = A_1$ [BAN 299].

AP Vel = CoD -43°4530 (10^m) = CPD -43°2847 ($9^m.8$) = GZ 8^h2934 ($9\ 1/2^m$). Hertzsprung supposed semiregular light variation with a period of $3^d.13$. 378 obs. [BAN 278]. The star was rediscovered on Riverview plates by O'Leary who derived improved elements and established Cepheid type with abnormally large scattering [Riverview Publ 1.53]. Spectrum F9 [Potsdam Publ 90.57].

AQ Vel. The elements were derived by Hertzsprung from 757 observations made by Kruytbosch. There may be a constant minimum lasting for nearly $0^p.05$ [BAN 281].

AR Vel. The elements were derived by Hertzsprung from 104 of his own observations and 676 observations made by Kruytbosch. No trace of a secondary minimum was noted [BAN 281].

AS Vel = CoD -38°4504 ($8^m.4$) = CPD -38°2338 ($8^m.3$) = GZ 8^h1982 ($8\ 1/2^m$) = HD 71872 (A3). D = $2^h.5$.

AT Vel. d = $0^p.03$.

AU Vel = CPD -44°2221 ($10^m.4$).

AW Vel = CoD -43°3970 (10^m) = CPD -43°2229 ($9^m.8$).

AX Vel = CoD -47°3670 ($8^m.7$) = CPD -47°1944 ($8^m.4$) = GZ 8^h573 (8^m) = La Plata F 1311 ($8^m.9$) = HD 68556 (F8). Hertzsprung established the variability of the period and derived the elements: Max. = 2416500.454 + $2^d.59254 \cdot E$ + $0^d.71 \cdot 10^{-7} \cdot E^2$, range $8^m.48$-$8^m.84$. The light curve is nearly sinusoidal [BAN 299]. The star was rediscovered by O'Leary who confirmed the variability of the period. He found, however, that the increase of the period was not as great as that given by Hertzsprung's elements [Riverview Publ 1.51]. A least square solution yields the coefficient of the secular term as $0^d.64 \cdot 10^{-7} \cdot E^2$, but even with this value there remain improbable residuals. The behavior of the residuals indicates rather a periodical change of the period which may be represented by the elements: Max. = 2416500.51 + $2^d.592767 \cdot E$ + $0^d.23 \sin (0^\circ.05 \cdot E + 192^\circ.5)$.

AY Vel = CoD -43°4187 ($9^m.3$) = CPD -43°2476 ($9^m.1$) = GZ 8^h1324 (9^m) = HD 70448 (B9). $m_2 = 9^m.5$.

AZ Vel. $m_2 = 13^m.0$.

BB Vel. [*$15^m.2$ 15".]

BC Vel = CoD -44°4732 (10^m) = CPD -44°2970 ($9^m.8$).

BD Vel. d = $0^p.04$.

BE Vel. $m_2 = 12^m.5$.

BF Vel = CoD -39°4980 ($9^m.4$) = CPD -39°3039 ($9^m.7$). D = $3^h.4$. $A_2 = 0^m.04$.

BG Vel = 28.1909 = CoD -50°3870 ($8^m.2$) = CPD -50°2085 ($8^m.6$) = Gou 12456 ($7\ 1/2^m$) = GZ 9^h358 ($7\ 1/2^m$) = La Plata F 1626 ($7^m.9$) = HD 78801 (G5). Rediscovered by O'Leary who also derived the provisional elements. The light curve is typically Cepheid, showing a hump on the descending branch and a slight stillstand toward minimum. The observations are difficult because of a very close companion [AN 6320; Riverview Publ 1.50].

AM Vir. Confirmed by Parenago [NNVS 27-28; 33-34]. Elements by Florja. 280 obs. [Tashk Circ 2; 18; NNVS 44]. Improved elements by Soloviev. 2 max. [NNVS 49; Tadjik Circ 18; 41]. Spectrum G0 [Potsdam Publ 92.100].

AN Vir = BD -14°3917 ($8^m.5$) = AG Cbr M. 5032 ($8^m.6$) = AG Wa 5327 ($9^m.0$) = HD 125146 (Mc). Confirmed by Parenago [NNVS 27-28; 33-34]. Spectrum M [Potsdam Publ 92.103].

AO Vir = BD +4°2853 ($9^m.5$). Elements by Prager. Light curve of the form α_1. 28 obs. [AN 5830].

AP Vir = SVS 245.

AQ Vir. Elements by Parenago [NNVS 27-28; 33-34].

AR Vir = SVS 246.

AS Vir. Elements by Lause. 7 max. [AN 5911; 6003] and Zessewitsch [Leningrad Bull 4.9;

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20; 26; 30; Tadjik Eph 1935-36, p.14; 26; 33; 38; Tadjik Circ 5]. Improved elements by Soloviev. 5 max. 20 obs. [Tadjik Circ 18; 19].

AT Vir. Elements by Lause. 7 max. [AN 5902, corr. 5904]. Improved elements by Zessewitsch [Leningrad Bull 4.9; 20; 26; 30; Tadjik Eph 1935-36, p.14; Tadjik Circ 2]. 1 max. by Soloviev [Tadjik Circ 10; 18; NNVS 51].

AU Vir. Elements by Lause. The maximum is flat. 8 max. [AN 5902, corr. 5904]. Improved elements by Zessewitsch [Leningrad Bull 4.9; 20; 26; 30; Tadjik Eph 1935-36, p.14; Tadjik Circ 2]. 1 max. by Soloviev [Tadjik Circ 15; 18].

AV Vir. Confirmed by Lange [Tadjik Circ 11]. Elements by Jensch. 11 max. [AN 6135]. 1 max. by Soloviev [Tadjik Circ 24].

AW Vir. [BD +3°2776 ($9^m.2$) 8^s f 1'.0 s.] Elements by Jensch. 14 min. [AN 6135].

AX Vir = BD +4°2748 ($9^m.3$). Elements by Jensch. $A_2 = 0^m.2$. 15 min. [AN 6135]. Improved period by Lause. 9 min. [AN 6318].

AY Vir = BD -2°3749 ($9^m.3$) = AG Strb 4960 ($9^m.3$) = HD 120806 (Mb).

AZ Vir. Soloviev derived elements with the period $P' = 0^d.297284$ [Tadjik Circ 17; 20; BZ 18.47]. The period P, found by Jensch, is connected with P' by the equation: $2/P = 2/P' - 1$. $m_2 = 11^m.6$ [BZ 19.10]. As the observations have not been published it cannot be decided which period is right.

BB Vir = BD +7°2708 ($9^m.4$). Elements by Jensch. 20 max. [AN 6153].

BC Vir. [*12^m nf closely.] Elements by Soloviev. 4 max. [Tadjik Circ 17; 21; AN 6232].

BD Vir = 669.1936 = BD -15°3666 ($9^m.0$) = AG Wa 5086 ($9^m.4$). $m_2 = 10^m.02$. $D = 0^d.639$. Spectrum A2 [Potsdam Publ 92.100].

BE Vir. The variable is situated near the globular cluster NGC 5634, but is not a member of it. Its distance from the Sun equals 39800 Parsecs, from the galactic center 34200 Parsecs, and from the galactic plane 29700 Parsecs, which is the largest on record [ASP 48.274].

BF Vir = BD +0°3102 ($9^m.0$) = AG Nic 3636 ($9^m.2$) = HD 120166 (A0). Elements by Soloviev. 11 min. [Tadjik Circ 25]. Observed by Lause. 3 min. $m_2 = 9^m.63$ [AN 6318].

BG Vir = BD +5°2920 ($9^m.0$) = AG Lpz II 6804 ($9^m.0$) = HD 130254 (Mb).

AL Vul. Elements by Ahnert [BZ 22.99].

AN Vul. Elements by Ahnert [BZ 22.99].

AO Vul. [*$14^m.3$ 1'.3 ssf dpl 15^m 1'.5 ssf dpl 15^m 1'.5 sf *13^m 3'.2 sf.] Position by Reinmuth [AN 5709]. Rediscovered by Reinmuth. 5 obs. [AN 5709]. Elements by Ahnert [BZ 22.99].

AP Vul. Confirmed by Ahnert [BZ 22.99].

AQ Vul. Elements by Ahnert [BZ 22.99].

AT Vul = BD +23°3826 ($9^m.2$) = AG Berl B 3745 ($9^m.0$). Confirmed by Zessewitsch [AN 5911]. First elements by Szczyrbak [SAC 10.44; 11.49] and Štsins [SAC 12.47]. Improved elements by Lause. 13 min. $m_2 = 9^m.35$. $D = 0^d.139$, $d = 0^d.075$. The period is perhaps not constant [AN 5977; 6293]. Photometric orbit by Slonim [Tashk Bull 2.35]. +

AU Vul. Confirmed by Lange [AN 5465] and Zessewitsch [AN 5911]. Böhme could not get reliable observations [AN 6262].

AV Vul. Confirmed by Lange [AN 5465], Zessewitsch [AN 5911], and Böhme who found irregular light variation [AN 6262].

AW Vul. First elements by Jacchia: Min. = 2426577.404 + $2^d.4198 \cdot E$ [BZ 13.55]. The true period, however, is only a third of this, as shown by Zessewitsch [AN 5911] and Pagaczewski who derived improved elements. $D = 0^d.20$, $d = 0^d.012$ [SAC 10.44; JO 15.70; AAb 2.24]. One min. was observed by Himpel, who found also $A_2 = 0^m.13$ [AN 6253]. +

AX Vul. Confirmed by Zessewitsch [AN 5911]. First elements by Jacchia [BZ 13.55]. Improved elements by Pagaczewski. 9 min. $D = 0^d.18$, $d = 0^d.03$ [SAC 10.44; 11.46; AAc 2.50]. +

AY Vul. Elements by Jacchia. $D = 0^d.37$, $d = 0^d.065$ [BZ 13.55; 58].

AZ Vul. Confirmed by Parenago who adopted a period of $0^d.98$ [NNVS 40]. Elements by Florja. $D = 6^h.2$. 230 obs. Photometric orbit [Tashk Circ 19; NNVS 45]. 1 min. by Koyama. 23 obs. [Kyoto Bull 275; OAAR 1.233].

BB Vul. Confirmed by Parenago [NNVS 40].

BC Vul. Confirmed by Parenago [NNVS 40].

BD Vul = SVS 480. [BD +25°4302 ($6^m.0$) 14^s p 1'.3 s.] Confirmed by Morgenroth [AN 5981]. Approximate period by Koyama. The light variation seems rather irregular [Kyoto Bull 222; 275]. Elements by Kozawa. M-m = 228^d [BZ 23.19]. Rediscovered by Beljawsky [NNVS 44]. Spectrum N according to Graff [BZ 10.18]. +

BE Vul = BD +26°3896 ($9^m.0$) = AG Cbr E. 11282 ($9^m.2$). Beljawsky supposed at first a period of $8^d.84$ [Inf Circ 1.5], later of $2^d.2476$ [NNVS 44]. Corrected elements by Rügemer. $D = 0^d.24$, $d = 0^d.06$ [AN 6106]. Beljawsky's second period P' and Rügemer's period P are connected by the relation: $5/P = 5/P' + 1$. 23 min. by Lause [AN 6204]. 1 min. by Szafraniec [SAC 13.62]. 1 min. by Tecza [AAc 3.131]. 1 min. by Lange [Tashk Circ 107]. +

BF Vul. Elements by Beyer [BZ 17.40].

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BN Vul = BD +24°3754 ($9^m.5$). Elements by Lange [Tadjik Circ 11] and Grigorieva [NNVS 54]. Improved elements by Jacchia [AN 6251; HB 912].

BO Vul. Elements by Piegza. D = 6^h [AAc 2.125; SAC 14.61] and Grigorieva [NNVS 54]. Improved elements by Nassau. Photometric orbit [AJ 1109; AAS 9.202].

BP Vul = BD +20°4557 ($9^m.2$). Period by Gurjew [Tadjik Circ 13].

BQ Vul. Elements by Piotrowski. D = 8^h [AAc 2. 126]. The notes about BQ Vulpeculae, as given by Guthnick and Schneller [AN 6303-6305] refer to BR Vulpeculae.

BR Vul. The star was at first erroneously named BQ Vul [AN 6303-6305]. Elements by Jacchia. Irregularities in the light curve, the period, and the height of maxima [AN 6251; HB 912].

BS Vul = BD +21°3850 ($9^m.4$). Confirmed by Gurjew [Tadjik Circ 13] and Grigorieva [NNVS 54]. Observed by Hilberry [AAS 8.157]. Elements by Piotrowski [AAc 3.68]. Improved elements by Jacchia. $m_2 = 11^m.14$ [HB 912].

BU Vul. Elements by Lange. D = $2^h.7$ [Tashk Circ 107].

BV Vul = BD +28°3944 ($9^m.4$). Bigay found semi-regular light variation with the mean period of 79^d. Maxima $10^m.5$-$11^m.0$, minima $10^m.9$-$11^m.5$, mean amplitude $0^m.4$ [BAF 5.124]. Elements by Esch. 6 max. 4 min. [AN 6330].

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ADDENDA

AN And. Obs. by Schneller [VJS 68.129; 69.179] and Mündler and Wempe [VJS 72.258; 73.231; 74.176; 75.119]. Spectroscopic parallax by Adams and Joy. Spectrum A7s [ApJ 56.259]. Rediscussion of the orbital elements by Luyten [ApJ 84.94; 102].

ζ And. Obs. by Mündler and Wempe [VJS 73.231; 74.176; 75.119]. Rediscussion of the orbit by Luyten [ApJ 84.90; 94].

BX Aqr. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

CX Aqr. Obs. by Rügemer [VJS 70.90].

CY Aqr. Obs. by Balázs and Detre [VJS 70.142; 71.179; 72.246].

CZ Aqr. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

KO Aql. Obs. by Terkán [VJS 69.271].

KX Aql. Obs. by Kibe [OAAR 1.2].

QS Aql. Kuiper found a companion, $6^m.0$ $137^\circ.1$ $0''.18$ [ASP 46.359]. Obs. by Guthnick and Prager [VJS 66.127], Schneller [VJS 71.88], and Mündler [VJS 72.258]. Spectrographic obs. by Hogg and Millman [MN 96.327; 97.313]. Color by Stebbins, Huffer, and Whitford [ApJ 91.42; Washb Publ 15.234]. Rediscussion of the orbit by Luyten [ApJ 84.92; 101].

QV Aql. RV Tauri type. Elements by van Schewick. 6 max. [AN 271.134].

QZ Aql. 1 max. by van Schewick [AN 271.136].

V 337 Aql. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III]. Color by Stebbins, Huffer, and Whitford [ApJ 91.41].

V 342 Aql. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

V 356 Aql. Light curve by Campbell [PA 45.219]. Comparison stars by OAA. 118 obs. [OAAR 1.187]. Obs. by Lassovszky and Dezső [VJS 72.246]. Absolute magnitude by McLaughlin [ApJ 93.418].

V 368 Aql. Comparison stars by OAA. 84 obs. [OAAR 1.189].

V 422 Aql. Improved elements by van Schewick. 2 max. [AN 271.136].

V 424 Aql. Improved elements by van Schewick. 4 max. [AN 271.136].

V 426 Aql. Improved elements by van Schewick. 3 max. [AN 271.136].

V 427 Aql. Improved elements by van Schewick. 2 max. [AN 271.136].

V 428 Aql. Improved elements by van Schewick. 9 max. [AN 271.136].

V 430 Aql. Improved elements by van Schewick [AN 271.137].

V 431 Aql. 1 max. by van Schewick [AN 271.137].

V 432 Aql. 1 max. by van Schewick [AN 271.137].

V 435 Aql. 1 max. by van Schewick [AN 271.137].

V 436 Aql. 1 max. by van Schewick [AN 271.137].

V 437 Aql. Improved elements by van Schewick. 1 max. [AN 271.137].

V 438 Aql. Improved elements by van Schewick. 1 max. [AN 271.137].

V 439 Aql. Elements confirmed by van Schewick [AN 271.137].

V 440 Aql. Improved elements by van Schewick. 2 max. [AN 271.137].

V 442 Aql. Improved elements by van Schewick [AN 271.138].

V 443 Aql. Elements confirmed by van Schewick [AN 271.138].

δ Aql. Light curve by Wylie [BSAF 39.73]. Photometric orbit by Wylie [PA 31.93]. Obs. by Mündler [VJS 72.258]. Remarks on calcium clouds by Evershed [Obs 42.85]. Color by Stebbins, Huffer, and Whitford [ApJ 91.42; Washb Publ 15.234]. Velocity of axial rotation by Kreiken [ZAp 10.201]. Parallax by Bottlinger [Atti Pont Acc 77.148] and Rimmer [Canberra Mem 1,2.37].

AR Aur. Obs. by Schneller [VJS 70.106; 71.88; 72.152]. Spectrographic obs. by Hogg and Millman [MN 97.313].

BC Aur. Obs. by Lassovszky [VJS 75.96].

ζ Aur. Chart of the surroundings by von Hoff [VAP 47.111]. Light curve by Schneller [Ntw 23.293] and Wirtanen [ApJ 92.125]. Observation of the minimum in 1924 by van de Kamp. A = $0^m.35$ [AJ 1014]. Obs. by Martin and others [BAN 311] and Järnefelt [Ann Fenn 53, 1]. Spectrographic obs. by Brück [Vat Com 10], Walraven and Koelbloed [Obs 63.108], and Wirtanen [ApJ 92.122]. Color by Stebbins and Huffer [Washb Publ 15.227]. Absolute magnitude by Adams, Joy, Humason, and Brayton [ApJ 81.216]. Mass by Beileke [ZAp 14.33] and Christie [Mt Wils Rep 1938-39, p.21; ASP 51.216]. Atmosphere by Wellmann [VBB 12, 4]. Remarks on the surface gravity by Pannekoek [BAN 301].

UW Boo. Obs. by Blaauw and others [BAN 311]. Spectrographic obs. by Hogg and Millman [MN 97.313].

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UX Boo. Obs. by Blaauw and others [BAN 311].

SZ Cam. Spectrographic obs. by Hogg [MN 97.313; 99.352; AAS 9.185] and Wesselink [AAS 9.303]. Color by Stebbins, Huffer, and Whitford [ApJ 91.29; Washb Publ 15.226].

TU Cam. Obs. by Mündler and Wempe [VJS 74.176; 75.119]. The spectroscopic duplicity independently was found by Campbell [ASP 34.168].

TW Cnc. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

RT CMa. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

SW CMa. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

SX CMa. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

SZ CMa. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

UW CMa. Rediscussion of the elements by Gaposchkin [AAS 9.152]. Color by Stebbins, Huffer, and Whitford [ApJ 91.35]. It should be mentioned that the existence of a secondary spectrum is considered by Struve and Sherman not to be well established. The values that have been deduced for the masses are therefore to be regarded as doubtful [ApJ 93.88].

YY CMi. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

UW Cap. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III] and Rügemer [VJS 69.165; 70.90]. New elements by Guriev [Tadjik Circ 40]. The probable value of the period is around $0^d.69956$.

AO Cas. Obs. by Mündler and Wempe [VJS 73.231; 74.176; 75.119]. Color by Stebbins, Huffer, and Whitford [ApJ 91.26; Washb Publ 15.224]. Remarks by Pearce [ASP 38.264; MN 87.281; PA 35.90].

AP Cas. The elements, given in the Table, were derived by Kukarkin. Light curve. 111 obs. [Sternb Publ 13,1.120; 132; 145; 156].

AR Cas. Photoelectric obs. at Cambridge [MN 95.357; 96.313; 97.301] and by Mündler and Wempe [VJS 73.231; 74.176]. Color by Stebbins, Huffer, and Whitford [ApJ 91.47; Washb Publ 15.238]. Velocity of axial rotation by Kreiken [ZAp 10.201]. Computed contours of lines during central phase by Struve and Elvey [MN 91.672].

BM Cas. Comparison stars and light curve by Beyer. The duration of the minima is subject to considerable fluctuations between 38^d and 55^d. Beyer, therefore, does not consider that the eclipsing character of the light variation has been established [AN 6100]. Spectrographic obs. by Hogg and Millman [MN 97.313].

CC Cas. Color by Stebbins, Huffer, and Whitford [ApJ 91.28; Washb Publ 15.225]. Rediscussion of the orbit by Luyten [ApJ 84.90; 95].

CE Cas. The elements: Min. = 2425893.22 + $0^d.4797 \cdot E$, given by Beljawsky [Pulk Circ 6.22], are wrong, as shown by Kukarkin. Chart of the surroundings. 51 obs. The brightness of the variable varies from day to day, but Kukarkin was not able to find a period [Sternb Publ 13,1.133; 156].

CF Cas. Improved elements by Kukarkin. Chart of the surroundings. Light curve. 180 obs. [Sternb Publ 13,1.120; 133; 144; 156].

γ Cas. Light curve by Sommer [Weltall 41.21] and Rigollet. 43 obs. [BZ 23.51]. Obs. by Mündler [VJS 72.258] and Kibe and Nisikawa [OAAR 1.2]. Obs. of the spectrum by Belorizky [JO 23.139]. Spectrum described by Wellmann [Sterne 21.57]. Temperature by Hiltner [ApJ 93.505].

AH Cep. Obs. by Schneller [VJS 72.152; 73.90]. Spectrographic obs. by Pearce [MN 94.309; AAS 7.243; 8.167]. Color by Stebbins, Huffer, and Whitford [Washb Publ 15.237; ApJ 91.47].

AI Cep. Spectrographic obs. by Hogg and Millman [MN 97.313].

AN Cep. Spectroscopic orbit by Pearce [ASP 47.221].

α CrB. Obs. by Mündler and Wempe [VJS 73.231; 74.176; 75.119]. Spectrum by McLaughlin [PA 38.275; AAS 7.68; 148] and Williams [AAS 9.71; HC 438; Mich Publ 7.147]. Contours of Hγ by Krieger [ApJ 91.476]. Temperature by Sampson [MN 85.228]. Velocity of axial rotation by Kreiken [ZAp 10.201].

W Crv. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

V Crt. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

HN Cyg. Comparison stars by OAA. 109 obs. 5 max. 4 min. [OAAR 1.241].

KR Cyg. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III; IV].

MR Cyg. Obs. by Walter [VJS 74.139]. Apsidal motion by Luyten [BAN 309].

MY Cyg. Spectrographic obs. by Hogg and Millman [MN 97.313].

QX Cyg. Spectrum F1, according to Baade [ApJ 79.477].

V 337 Cyg. Obs. by Kibe [OAAR 1.2].

V 360 Cyg. Comparison stars by Koyama. 28 obs. [OAAR 1.81].

V 363 Cyg. 1 max. by Koyama [Kyoto Bull 275, corr. OAAR 1.231]. Comparison stars by OAA. 34 obs. 3 max. [OAAR 1.13; 37].

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V 380 Cyg. Photoelectric obs. by Güssow [VJS 65.87]. Color by Stebbins, Huffer, and Whitford [ApJ 91.42; Washb Publ 15.234].

V 389 Cyg. Rediscussion of the orbit by Luyten [ApJ 84.94; 101].

BC Del. 1 max. by van Schewick [AN 271.138].

BD Del. Improved elements by van Schewick. 1 max. [AN 271.138]. Rediscovered by Beljawsky [Pulk Circ 15, corr. 19; NNVS 47].

WX Eri. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III] and Pierce [AAS 9.290].

YY Eri. Obs. by de Sitter [BAN 311].

AQ Eri. Obs. by Kibe [OAAR 1.2].

AU Gem. Comparison stars by OAA. 105 obs. 2 max. [OAAR 1.13; 41].

AW Gem. Comparison stars by OAA. 206 obs. [OAAR 1.143].

BN Gem. Color by Stebbins, Huffer, and Whitford [ApJ 91.35].

CC Her. Obs. by Leiner [VJS 66.201].

CE Her. Obs. by Leiner [VJS 66.201]. Comparison stars and light curve by Kukarkin. 180 obs. 1 max. [Sternb Publ 13,1.120; 136; 143; 162].

CH Her. Obs. by Kibe [OAAR 1.2].

DI Her. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

DL Her. Obs. by Balázs, Detre, and Dezső [VJS 74.95].

DQ Her. Comparison stars by OAA. 1490 obs. [OAAR 1.7; 191]. Obs. by Rügemer [VJS 70.90] and Lassovszky and Dezső [VJS 72.246; 74.95].

DY Her. Obs. by Balázs, Detre, and Dezső [VJS 73.219].

VX Hya. Obs. by Dunst [VJS 69.272].

VZ Hya. Obs. by Pierce, Wood, and Roach [AAS 8.296; 9.196; 293].

AS Hya. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

CP Lac. Comparison stars by OAA. 233 obs. [OAAR 1.218]. Obs. by Mündler [VJS 72.258].

TX Leo. Obs. by Meyer [VJS 70.105; 71.161], Schneller [VJS 70.107; 71.88], and Mündler [VJS 72.258]. Spectrographic obs. by Hogg and Millman [AAS 8.275; MN 97.313; 99.352].

RS Lep. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

CY Lyr. Comparison stars by OAA. 244 obs. [OAAR 1.151].

AN Mon. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

AQ Mon. Obs. by Nijland [AN 6197; VJS 71.237].

AS Mon. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

AT Mon. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

AV Mon. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III]. Chart of the surroundings, comparison stars, and light curve by Khabibullin. 100 obs. D_1 = 22^h.3. A_1 = 1^m.30, A_2 = 0^m.05 [Engelh Bull 19.20].

AW Mon. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

AX Mon. Color by Stebbins, Huffer, and Whitford [ApJ 91.33; Washb Publ 15.230].

AY Mon. Obs. by Rügemer [VJS 69.165; 70.90].

AZ Mon. Chart of the surroundings and comparison stars by Khabibullin. 72 obs. 3 max. [Engelh Bull 19.22].

BN Mon. Continued observations by Edmondson and Giclas indicate a variability of the color index between 4 and 5 magnitudes. The red index averages about 6 magnitudes [AAS 9.259; 10.124].

BO Mon. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

BR Mon. Chart of the surroundings and comparison stars by Khabibullin. 94 obs. 3 max. [Engelh Bull 19.22].

V 441 Oph. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

V 451 Oph. Spectrographic obs. by Hogg and Millman [MN 97.313].

ES Ori. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

EW Ori. Obs. by Pierce and Wood [AAS 9.196; 290].

EY Ori. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

FO Ori. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

δ Ori. Photoelectric observations by Elvey and Rudnick [AAS 9.99]. Spectrum by Adams, Joy and Strömberg [ASP 32.195]. Spectrographic obs. by Hogg and Millman [MN 97.313]. Helium intensity by Payne [HC 365]. Color by Stebbins, Huffer, and Whitford [ApJ 91.31; Washb Publ 15.228]. Effective wave-length by Gramatzki [AN 5314]. Temperature by Sampson [MN 85.227] and Brill [AN 5335]. Photovisual magnitude by King [HA 85.58]. Red magnitude by Becker [ZAp 9.88]. Velocity of axial rotation by Kreiken [ZAp 10.201]. Parallax by

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Alden [AJ 823], Lundmark and Luyten [PA 31.457], Edwards [MN 84.371], and Rimmer [Canberra Mem 1,2.32].

BG Peg. Obs. by Balázs and Detre [VJS 70.142; 71.179; 72.246].

BP Peg. Jacchia derived the improved elements given in the Table, and reestablished W Ursae Majoris type. Hughes' period P' and Jacchia's period P are connected by the relation: $2/P = 2/P' + 1$. The star has the shortest period known for any W Ursae Majoris star [HB 915]. Spectrum F8 according to Cannon [Mscr].

b^1 Per. Photoelectric obs. at Cambridge [MN 95.357; 96.313; 97.301].

ST Psc. Spectrum M5 according to Cannon [HB 897].

SV Psc. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

SZ Psc. Spectrographic obs. by Hogg and Millman [MN 97.313].

XY Pup. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

RY Pyx. Obs. by Rügemer [VJS 69.165].

V 505 Sgr. 6 min. by OAA [OAAR 1.227]. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III]. Spectrographic obs. by Hogg and Millman [MN 97.313].

V 523 Sgr. Remarks on ellipticity by Russell [ApJ 90.646; 650].

V 630 Sgr. Comparison stars by OAA. 33 obs. [OAAR 1.223].

μ^1 Sco. Obs. by de Sitter and van Gent [BAN 311], Elvey and Roach [AAS 8.306], and Elvey and Rudnick [AAS 9.99; 132]. Parallax by Rimmer [Canberra Mem 1,2.36].

TX UMa. Obs. by Nijland [AN 5953; 6029; 6197; VJS 67.320; 68.277; 71.237], Wood [AAS 9.293], Christie [Mt Wils Rep 1931-32, p. 157], Kanamori [Kyoto Bull 247], Schneller [VJS 74.62]. Spectrographic obs. by Pearce [AAS 7.243; 8.67; 9.91; MN 93.256; 95.368; 97.316] and Joy [Mt Wils Rep 1931-32, p. 157]. Huffer finds from photoelectric obs. partial limb-darkening [AAS 8.244].

UX UMa. Obs. by Nijland [AN 6197; VJS 71.237] and Kühlborn [VJS 69.178; 70.106]. Absolute magnitude by Gaposchkin [PA 45.571].

AT Vul. Obs. by Pagaczewski and Kwiek [Poznań Publ 2,4.III].

AW Vul. Obs. by Lassovszky [VJS 75.96].

AX Vul. Obs. by Lassovszky [VJS 75.96].

BD Vul. Comparison stars by OAA. 79 obs. 1 min. [OAAR 1.14; 72].

BE Vul. Spectrographic obs. by Hogg and Millman [MN 97.313].

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APPENDIX I
CHARTS OF THE SURROUNDINGS

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CHARTS

Name	Author	References
AO And	Brun	BAF 4.161
AP And	Lassovszky	AN 5831
AS And	Beljawsky	NNVS 50
AT And	Morgenroth	AN 6119
AV And	Morgenroth	AN 6119
X Aps	Shapley and Swope	HB 885
Y Aps	Shapley and Swope	HB 885
Z Aps	Shapley and Swope	HB 885
RR Aps	Shapley and Swope	HB 885
RS Aps	Shapley and Swope	HB 885
RT Aps	Shpaley and Swope	HB 885
RU Aps	Shapley and Swope	HB 885
RW Aps	Shapley and Swope	HB 885
RX Aps	Shapley and Swope	HB 885
RY Aps	Shapley and Swope	HB 885
RZ Aps	Shapley and Swope	HB 885
SS Aps	Shapley and Swope	HB 885
ST Aps	Shapley and Swope	HB 885
SU Aps	Shapley and Swope	HB 885
SV Aps	Shapley and Swope	HB 885
SW Aps	Shapley and Swope	HB 885
SX Aps	Shapley and Swope	HB 885
SY Aps	Shapley and Swope	HB 885
SZ Aps	Shapley and Swope	HB 885
TT Aps	Shapley and Swope	HB 885
TU Aps	Shapley and Swope	HB 885
TV Aps	Shapley and Swope	HB 885
TW Aps	Shapley and Swope	HB 885
TX Aps	Shapley and Swope	HB 885
TY Aps	Shapley and Swope	HB 885
TZ Aps	Shapley and Swope	HB 885
UU Aps	Shapley and Swope	HB 885
UV Aps	Shapley and Swope	HB 885
UW Aps	Shapley and Swope	HB 885
UX Aps	Shapley and Swope	HB 885
UY Aps	Shapley and Swope	HB 885
UZ Aps	Shapley and Swope	HB 885
VV Aps	Shapley and Swope	HB 885
VW Aps	Shapley and Swope	HB 885
AF Aqr	Shapley and Swope	HB 885
AG Aqr	Shapley and Swope	HB 885
AH Aqr	Shapley and Swope	HB 885
AI Aqr	Shapley and Swope	HB 885
AK Aqr	Shapley and Swope	HB 885
AL Aqr	Shapley and Swope	HB 885
AM Aqr	Shapley and Swope	HB 885
AN Aqr	Shapley and Swope	HB 885
AO Aqr	Shapley and Swope	HB 885
AP Aqr	Shapley and Swope	HB 885
AQ Aqr	Shapley and Swope	HB 885
AR Aqr	Shapley and Swope	HB 885
AS Aqr	Shapley and Swope	HB 885
AT Aqr	Shapley and Swope	HB 885
AU Aqr	Shapley and Swope	HB 885
AV Aqr	Shapley and Swope	HB 885
AW Aqr	Shapley and Swope	HB 885
AX Aqr	Shapley and Swope	HB 885
AY Aqr	Shapley and Swope	HB 885
AZ Aqr	Shapley and Swope	HB 885
BB Aqr	Shapley and Swope	HB 885
BC Aqr	Shapley and Swope	HB 885
BD Aqr	Shapley and Swope	HB 885
BE Aqr	Shapley and Swope	HB 885
BF Aqr	Shapley and Swope	HB 885
BG Aqr	Shapley and Swope	HB 885
BH Aqr	Shapley and Swope	HB 885
BI Aqr	Shapley and Swope	HB 885
BN Aqr	Hoffmeister	AN 5791
BO Aqr	Hoffmeister	AN 5791
" "	Lange	Tadjik Ann 1,2.6
BP Aqr	Wolf	AN 5833
BQ Aqr	Hoffmeister	AN 5791
BR Aqr	Lange	Tadjik Ann 1,2.6
BT Aqr	Hoffmeister	AN 5919
BU Aqr	Neujmin	NNVS 38, Tafel IV
BX Aqr	Hoffmeister	AN 5919
BY Aqr	Shajn	NNVS 39
BZ Aqr	Shajn	NNVS 39
CC Aqr	Shajn	NNVS 39
CE Aqr	Hoffmeister	AN 5791
CP Aqr	Hoffmeister	AN 6002
" "	Seliwanow	NNVS 51
CX Aqr	Hoffmeister	AN 6002
CY Aqr	Hoffmeister	Sterne 15.21
" "	Jensch	AN 6070
" "	Gaposchkin	HB 898
" "	Parenago	NNVS 49
" "	Seliwanow	NNVS 51
" "	Kulikovsky	NNVS 52; Abast Bull 1.48
" "	Martinoff	Engelh Publ 20.10
CZ Aqr	Kanda and Kanamori	Mem Astr Soc Jap 3.68
DD Aqr	Hoffmeister	AN 6118
DL Aqr	Hoffmeister	AN 6002
KQ Aql	Hoffmeister	Sonn Mitt 22
LM Aql	Wolf	AN 4005
LR Aql	Wolf	AN 3959
LW Aql	Wolf	AN 4018
MS Aql	Buser	AN 5833
MW Aql	Wolf	AN 3959
NP Aql	Wolf	AN 4018
NW Aql	Wolf	AN 3959
NZ Aql	Wolf	AN 4018
00 Aql	Martinoff	Engelh Publ 20.9
PP Aql	Wolf	AN 4056
PS Aql	Wolf	AN 4018
PV Aql	Plaut	AN 5846
PW Aql	Neujmin	NNVS 38, Tafel III
PY Aql	Hoffmeister	AN 5919
QT Aql	Hoffmeister	Sonn Mitt 22
QU Aql	Wolf	AN 4018
QV Aql	Wolf	AN 3959
V 337 Aql	Wright	HA 89.173
V 338 Aql	Morgenroth	AN 5974
V 340 Aql	Wolf	AN 4079
V 341 Aql	Hoffmeister	AN 6002
" " "	Seliwanow	NNVS 51
V 343 Aql	Morgenroth	AN 5974
V 347 Aql	Hoffmeister	Sonn Mitt 22
V 349 Aql	Hoffmeister	Sonn Mitt 22
V 350 Aql	Hoffmeister	Sonn Mitt 22
V 351 Aql	Hoffmeister	Sonn Mitt 22
V 354 Aql	Hoffmeister	Sonn Mitt 22

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Name	Author	References
V 356 Aql	Beyer	AN 6240; Coelum 6.221
" "	Hinderer	Sterne 16.277
" "	Jacchia	Coelum 6.181
" "	Kępiński	Wars Polyt 17
V 357 Aql	Hoffmeister	Sonn Mitt 22
V 358 Aql	Hoffmeister	Sonn Mitt 22
V 359 Aql	Hoffmeister	Sonn Mitt 22
V 360 Aql	Hoffmeister	Sonn Mitt 22
V 361 Aql	Hoffmeister	Sonn Mitt 22
V 362 Aql	Hoffmeister	Sonn Mitt 22
V 363 Aql	Hoffmeister	Sonn Mitt 22
V 364 Aql	Hoffmeister	Sonn Mitt 22
V 366 Aql	Hoffmeister	Sonn Mitt 22
V 367 Aql	Hoffmeister	Sonn Mitt 22
V 368 Aql	Beyer	AN 6250
" "	Hinderer	Sterne 16.277
" "	Jacchia	Coelum 6.217; 218
V 369 Aql	Hoffmeister	Sonn Mitt 22
V 370 Aql	Hoffmeister	Sonn Mitt 22
V 371 Aql	Hoffmeister	Sonn Mitt 22
V 374 Aql	Hoffmeister	Sonn Mitt 22
V 375 Aql	Hoffmeister	Sonn Mitt 22
V 377 Aql	Hoffmeister	Sonn Mitt 22
V 378 Aql	Hoffmeister	Sonn Mitt 22
V 379 Aql	Hoffmeister	Sonn Mitt 22
V 384 Aql	Hoffmeister	Sonn Mitt 22
V 387 Aql	Hoffmeister	Sonn Mitt 22
V 388 Aql	Hoffmeister	Sonn Mitt 22
V 389 Aql	Hoffmeister	Sonn Mitt 22
V 390 Aql	Hoffmeister	Sonn Mitt 22
V 393 Aql	Hoffmeister	Sonn Mitt 22
V 394 Aql	Hoffmeister	Sonn Mitt 22
V 395 Aql	Hoffmeister	Sonn Mitt 22
V 396 Aql	Hoffmeister	Sonn Mitt 22
V 397 Aql	Hoffmeister	Sonn Mitt 22
V 399 Aql	Hoffmeister	Sonn Mitt 22
V 400 Aql	Hoffmeister	Sonn Mitt 22
V 401 Aql	Hoffmeister	Sonn Mitt 22
V 402 Aql	Hoffmeister	Sonn Mitt 22
V 403 Aql	Hoffmeister	Sonn Mitt 22
V 404 Aql	Hoffmeister	Sonn Mitt 22
V 405 Aql	Hoffmeister	Sonn Mitt 22
V 407 Aql	Hoffmeister	Sonn Mitt 22
V 408 Aql	Hoffmeister	Sonn Mitt 22
V 409 Aql	Hoffmeister	Sonn Mitt 22
V 411 Aql	Hoffmeister	Sonn Mitt 22
V 413 Aql	Hoffmeister	Sonn Mitt 22
V 414 Aql	Hoffmeister	Sonn Mitt 22
V 415 Aql	Hoffmeister	AN 6118
V 418 Aql	Hoffmeister	Sonn Mitt 22
V 419 Aql	Hoffmeister	Sonn Mitt 22
V 421 Aql	Morgenroth	AN 6070
V 422 Aql	Hoffmeister	AN 6058
V 424 Aql	Morgenroth	AN 6002
V 425 Aql	Morgenroth	AN 6002
V 426 Aql	Hoffmeister	AN 6058
V 427 Aql	Morgenroth	AN 5981
V 428 Aql	Hoffmeister	AN 6058
V 429 Aql	Morgenroth	AN 6002
V 430 Aql	Hoffmeister	AN 6058
V 431 Aql	Morgenroth	AN 5981
V 432 Aql	Morgenroth	AN 5981
V 433 Aql	Bigay	BAF 5.122
V 434 Aql	Hoffmeister	AN 6058
V 435 Aql	Morgenroth	AN 6002
V 436 Aql	Morgenroth	AN 5981
V 437 Aql	Hoffmeister	AN 6058
V 438 Aql	Morgenroth	AN 5981
V 439 Aql	Morgenroth	AN 6002
V 440 Aql	Hoffmeister	AN 6058
V 441 Aql	Morgenroth	AN 6002
V 442 Aql	Beljawsky	NNVS 47
V 443 Aql	Morgenroth	AN 6002
V 444 Aql	Hoffmeister	AN 6058
V 445 Aql	Morgenroth	AN 5981
VW Ara	Kruytbosch	BAN 267
VZ Ara	Kruytbosch	BAN 267
XX Ara	Kruytbosch	BAN 267
ZZ Ara	Kruytbosch	BAN 236
AA Ara	Kruytbosch	BAN 236
AB Ara	Kruytbosch	BAN 236
AC Ara	Kruytbosch	BAN 236
AD Ara	Kruytbosch	BAN 236
AF Ara	Kruytbosch	BAN 267
AH Ara	Kruytbosch	BAN 267
IP Ara	Mergentaler	BAN 296
IQ Ara	Mergentaler	BAN 296
RU Ari	Prager	AN 5830
RV Ari	Hoffmeister	AN 6058
RW Ari	Detre	AN 6270
AS Aur	Hoffmeister	Sonn Mitt 22
AT Aur	Hoffmeister	Sonn Mitt 22
AU Aur	Morgenroth	AN 6002
AV Aur	Blažko	AN 5655
AW Aur	Shajn	NNVS 40
AX Aur	Hoffmeister	Sonn Mitt 22
" "	Shajn	NNVS 40
BC Aur	Pedersen and Steensgaard	AN 6128
BD Aur	Morgenroth	AN 6048
BE Aur	Hoffmeister	Sonn Mitt 22
BF Aur	Wright	HA 89.173
BI Aur	Hoffmeister	Sonn Mitt 22
BM Aur	Hoffmeister	Sonn Mitt 22
BN Aur	Hoffmeister	Sonn Mitt 22
CK Aur	Morgenroth	AN 6119
CO Aur	Morgenroth	AN 5981
CP Aur	Morgenroth	AN 5981
ζ Aur	von Hoff	VAP 47.111
UY Boo	Hoffmeister	AN 6118
SX Cam	Haas	AN 5676
SZ Cam	Wesselink	Pg Pm, p.5
TT Cam	Gitz	NNVS 49
TV Cam	Gitz	NNVS 49
TW Cam	Gitz	NNVS 49
TX Cam	Parenago	NNVS 52
" "	Nekrasova	NNVS 55
TY Cam	Gitz	NNVS 49
TZ Cam	Gitz	NNVS 49
UU Cam	Baker	MN 98.69
UW Cam	Baker	MN 98.70
UY Cam	Baker	MN 98.71
UZ Cam	Beljawsky	NNVS 46

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CHARTS

Name	Author	References
UZ Cam	Brun	BAF 6.2
SZ Cnc	Brun	BAF 1.132
TT Cnc	Hoffmeister	AN 6058
" "	Koulikovsky	NNVS 45
TV Cnc	Morgenroth	AN 6048
TZ Cnc	Koulikovsky	NNVS 45
SW CVn	Plaut	AN 5846
RT CMa	Hoffmeister	AN 5791
" "	Florja	Sternb Publ 8,2.21
RU CMa	Hoffmeister	AN 5655
" "	Florja	Sternb Publ 8,2.20
RV CMa	Florja	Sternb Publ 8,2.21
RW CMa	Hoffmeister	AN 5791
" "	Florja	Sternb Publ 8,2.20
RX CMa	Florja	Sternb Publ 8,2.21
RY CMa	Florja	Sternb Publ 8,2.20
RZ CMa	Florja	Sternb Publ 8,2.20
SS CMa	Florja	Sternb Publ 8,2.21
ST CMa	Hoffmeister	AN 5791
" "	Florja	Sternb Publ 8,2.20
SU CMa	Hoffmeister	AN 5791
" "	Florja	Sternb Publ 8,2.20
SV CMa	Hoffmeister	AN 5791
" "	Florja	Sternb Publ 8,2.20
SW CMa	Florja	Sternb Publ 8,2.21
SX CMa	Florja	Sternb Publ 8,2.21
SY CMa	Florja	Sternb Publ 8,2.21
SZ CMa	Hoffmeister	AN 5791
" "	Florja	Sternb Publ 8,2.21
TT CMa	Hoffmeister	AN 5791
" "	Florja	Sternb Publ 8,2.22
TU CMa	Florja	Sternb Publ 8,2.21
TV CMa	Hoffmeister	AN 5655
" "	Florja	Sternb Publ 8,2.20
TW CMa	Florja	Sternb Publ 8,2.20
TX CMa	Florja	Sternb Publ 8,2.100
TY CMa	Hoffmeister	AN 5919
" "	Florja	Sternb Publ 8,2.100
TZ CMa	Florja	Sternb Publ 8,2.100
UU CMa	Hoffmeister	AN 5919
" "	Florja	Sternb Publ 8,2.100
UV CMa	Hoffmeister	AN 5919
" "	Florja	Sternb Publ 8,2.100
UW CMa	Gaposchkin	HB 902
UX CMa	Hoffmeister	AN 5655
" "	Florja	Sternb Publ 8,2.22
UY CMa	Hoffmeister	AN 5791
" "	Florja	Sternb Publ 8,2.21
UZ CMa	Hoffmeister	AN 5791
" "	Florja	Sternb Publ 8,2.21
VW CMa	Mergentaler	BAN 296
" "	Florja	Sternb Publ 8,2.20
VX CMa	Mergentaler	BAN 296
VY CMa	Florja	Sternb Publ 8,2.21
VZ CMa	Florja	Sternb Publ 8,2.21
VZ CMi	Morgenroth	AN 5974
WW CMi	Morgenroth	AN 5974
WX CMi	Morgenroth	AN 6094
WY CMi	Morgenroth	AN 5974
WZ CMi	Morgenroth	AN 5974
XX CMi	Morgenroth	AN 6048
XY CMi	Morgenroth	AN 6048
TX Cap	Hoffmeister	AN 5919
TZ Cap	Shajn	NNVS 39
UV Cap	Shajn	NNVS 39
GN Car	Oosterhoff	BAN 245
GO Car	van Hoof	BAN 256
GP Car	Hertzsprung	BAN 281
GQ Car	Hertzsprung	BAN 281
GR Car	Hertzsprung	BAN 281
GS Car	Hertzsprung	BAN 281
GT Car	Hertzsprung	BAN 281
GU Car	Hertzsprung	BAN 281
AP Cas	Nielsen	Aarh Medd 1.145
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CHARTS

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CHARTS

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V 375 Cyg	Zonn	Wilno Bull 17.26
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V 385 Cyg	Zonn	AN 6175; Wilno Bull 17.27
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CHARTS

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1941AnHar.111....1P

CHARTS

Name	Author	References
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" "	Oriano	BSAF 51.380
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" "	Kępiński	Wars Polyt 17.15
" "	Kolbow	VAP 46.209
" "	Müller	Sterne 16.205
" "	Northcott	JRASC 30.210
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CHARTS

Name	Author	References
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CHARTS

Name	Author	References
BF Mus	Uitterdijk	BAN 240
BI Mus	Prager	BAN 286
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WX Nor	Kruytbosch	BAN 267
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BF Peg	Hoffmeister	AN 5791
" "	Martinoff	Engelh Publ 20.10
" "	Lange	Tadjik Ann 1,2.6

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CHARTS

Name	Author	References
BH Peg	Florja	Tashk Publ 4,2.40
" "	Lange	Tadjik Ann 1,2.6
CG Peg	Hoffmeister	AN 6118
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CHARTS

Name	Author	References
V 416 Sgr	Ferwerda	BAN 231
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V 503 Sgr	Shajn	NNVS 40
V 504 Sgr	Neujmin	NNVS 40
V 522 Sgr	Ferwerda	BAN 269
V 526 Sgr	Wright	HA 89.175
V 527 Sgr	Uitterdijk	BAN 273
V 725 Sgr	Swope	HA 105.499
V 727 Sgr	Uitterdijk	BAN 288
V 728 Sgr	Uitterdijk	BAN 288
V 729 Sgr	Ferwerda	BAN 256
V 730 Sgr	Ferwerda	BAN 256
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KU Sco	Shajn	NNVS 39
KV Sco	Beljawsky	NNVS 47
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RY Scl	Shapley and Swope	HB 885
RZ Scl	Shapley and Swope	HB 885
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AE Ser	Shajn	NNVS 40
AF Ser	Shajn	NNVS 40
AH Ser	Hoffmeister	AN 6118

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CHARTS

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AL Ser	Shajn	NNVS 43	BB Vel	de Kort	BAN 300
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AG Tau	Lehman-Balanowskaja	NNVS 49	AN Vul	Hoffmeister	Sonn Mitt 17
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APPENDIX II
SEQUENCES OF COMPARISON STARS

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SEQUENCES

Name	Author	References
AP And	Lassovszky	AN 5877
AR And	Olivier	Penn Publ 5,3.17
AS And	Beljawsky	NNVS 50
ζ And	Stebbins	Washb Publ 15.30
BN Aqr	Parenago	NNVS 41
BO Aqr	Parenago	NNVS 41
BR Aqr	Parenago	NNVS 41
BW Aqr	Jensch	AN 6119
BY Aqr	Shajn	NNVS 39; Pulk Circ 6
BZ Aqr	Shajn	NNVS 39; Pulk Circ 6
CC Aqr	Shajn	NNVS 39; Pulk Circ 6
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CP Aqr	Seliwanow	NNVS 51
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CX Aqr	Jensch	AN 6021
CY Aqr	Jensch	AN 6070
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" "	Gaposchkin	HB 898
" "	Parenago	NNVS 49
" "	Seliwanow	NNVS 51
" "	Kulikovsky	NNVS 52; Abast Bull 1.48
" "	Wachmann	AN 6103
" "	Graff	AN 6249
" "	Miczaika	AN 6341
" "	Martinoff	Engelh Publ 20.13; 32
CZ Aqr	Soloviev	Tadjik Circ 27
DM Aqr	Soloviev	Tadjik Circ 27
KK Aql	Plaut	AN 5846
KL Aql	Parenago	NNVS 57-58
KO Aql	Plaut	AN 5846
KP Aql	Plaut	AN 5846
LS Aql	Olivier	Penn Publ 5,3.52
MU Aql	Beyer	AN 6199-6200
NO Aql	Plaut	AN 5846
OO Aql	Martinoff	NNVS 40; Engelh Publ 20.16; 33
" "	Florja	NNVS 40
" "	Florja and Slonim	NNVS 46
" "	Bodokia	Abast Bull 1.19
PV Aql	Plaut	AN 5846
PX Aql	O'Connell	HB 890
QT Aql	Beyer	AN 6199-6200
V 336 Aql	Beyer	AN 6184
V 337 Aql	Wright and Dugan	AJ 1043
" " "	Wright	HA 89.172
V 338 Aql	Olivier	Penn Publ 5.3.48
V 340 Aql	Parenago	NNVS 45
V 341 Aql	Seliwanow	NNVS 51
V 343 Aql	Beyer	AN 6295
" " "	Olivier	Penn Publ 5,3.52
V 344 Aql	Beyer	AN 6199
V 345 Aql	Beyer	AN 6199
V 356 Aql	Beyer	AN 6240; Coelum 6.221
" " "	Lause	AN 6249; 6258; 6327
" " "	Ahnert	AN 6256
V 356 Aql	Kollross	AN 6286
" " "	Kanda and Kaho	Tokyo Bull 191-196; 221-222
" " "	Kanda	Tokyo Bull 292;344
" " "	Olivier	Penn Publ 5,3.49
V 368 Aql	Beyer	BZ 18.78; AN 6250
" " "	Hinderer	AN 6243
" " "	Lause	AN 6258
" " "	Kanda and Kaho	Tokyo Bull 191-196; 221-222;288-291
V 429 Aql	Bigay	BAF 5.123
V 433 Aql	Bigay	BAF 5.124
V 442 Aql	Beljawsky	NNVS 47
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VZ Ara	Kruytbosch	BAN 267
XX Ara	Kruytbosch	BAN 267
ZZ Ara	Kruytbosch	BAN 236
AA Ara	Kruytbosch	BAN 236
AB Ara	Kruytbosch	BAN 236
AC Ara	Kruytbosch	BAN 236
AD Ara	Kruytbosch	BAN 236
AF Ara	Kruytbosch	BAN 267
AH Ara	Kruytbosch	BAN 267
IP Ara	Mergentaler	BAN 296
IQ Ara	Mergentaler	BAN 296
RU Ari	Parenago	AN 5761
" "	Prager	AN 5830
RV Ari	Detre	AN 6270
RW Ari	Detre	AN 6270
RX Ari	Lause	AN 6375
AP Aur	Stanley Williams	MN 91.698
" "	Nikonov and Bodokia	Abast Bull 1.16
AR Aur	Nassau	AJ 1051
" "	Fracastoro	SAI 11.244
AS Aur	Parenago	NNVS 57-58
AT Aur	Parenago	NNVS 41
AV Aur	Parenago	NNVS 41
AW Aur	Shajn	NNVS 40
AX Aur	Shajn	NNVS 40
AZ Aur	Kukarkin	NNVS 43
BB Aur	Parenago	NNVS 43
BF Aur	Zonn	AN 6168; Wilno Bull 19
" "	Lause	AN 6404
" "	Wright	HA 89.172
CQ Aur	Lause	AN 6375
ζ Aur	Christie	ApJ 92.393
" "	Oosterhoff	ApJ 81.462
" "	Swope	HC 399
" "	Vyssotsky and Reno	AJ 1024
" "	Zonn	Wilno Bull 16.5
UV Boo	Kopal	AN 5929
SY Cam	Haas	AN 5790
TT Cam	Gitz	NNVS 49
" "	Nekrasova	NNVS 51
TU Cam	Zverev	Sternb Publ 8,1.34
TV Cam	Gitz	NNVS 49
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TW Cam	Gitz	NNVS 49
" "	Nekrasova	NNVS 51
TX Cam	Parenago	NNVS 52
" "	Nekrasova	NNVS 55

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SEQUENCES

Name	Author	References
TY Cam	Gitz	NNVS 49
" "	Nekrasova	NNVS 51
TZ Cam	Gitz	NNVS 49
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UV Cam	Böhme	AN 6330
UW Cam	Baker	MN 98.70
UY Cam	Baker	MN 98.71
UZ Cam	Beljawsky	NNVS 46
SY Cnc	Prager	AN 5830
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SZ Cnc	Parenago	NNVS 43
TT Cnc	Koulikovsky	NNVS 45
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TU Cnc	Jensch	AN 6058
TZ Cnc	Koulikovsky	NNVS 45
SW CVn	Plaut	AN 5846
RT CMa	Florja	Sternb Publ 8,2.45
RU CMa	Florja	Sternb Publ 8,2.43
RW CMa	Florja	Sternb Publ 8,2.46
RX CMa	Florja	Sternb Publ 8,2.43
" "	Zakharin	Abast Bull 3.14
RY CMa	Lause	AN 5896
" "	Florja	Sternb Publ 8,2.46
SS CMa	Florja	Sternb Publ 8,2.44
SX CMa	Florja	Sternb Publ 8,2.45
SY CMa	Olivier	Penn Publ 5,3.32
SZ CMa	Florja	Sternb Publ 8,2.45
TU CMa	Florja	Sternb Publ 8,2.45
TV CMa	Florja	Sternb Publ 8,2.43
UW CMa	Gaposchkin	HB 902
VW CMa	Mergentaler	BAN 296
VX CMa	Mergentaler	BAN 296
XZ CMi	Lause	AN 6375
YY CMi	Lause	AN 6375
TW Cap	Morgenroth	AN 5946
TX Cap	Morgenroth	AN 5946
TZ Cap	Shajn	NNVS 39; Pulk Circ 6
UU Cap	Parenago	NNVS 43
UV Cap	Shajn	NNVS 39; Pulk Circ 6
GM Car	Oosterhoff	BAN 245
GN Car	Oosterhoff	BAN 245
GO Car	van Hoof	BAN 256
GP Car	Kooreman	BAN 281
GR Car	Kooreman	BAN 281
GU Car	Kooreman	BAN 281
GV Car	Wallenquist	Lembang Ann 3.C35; BAN 245
" "	Martin	BAN 244; 245
AP Cas	Nielsen	Aarh Medd 1.146
AQ Cas	Beyer	AN 6184
AT Cas	Nielsen	AN 5782; Aarh Medd 1.169
BP Cas	Parenago	NNVS 57 58
BX Cas	Gaposchkin	HA 108.2
BY Cas	Parenago	NNVS 57-58
CS Cas	Beljawsky	NNVS 50
IV Cen	Bruna	BAN 207
IW Cen	Bruna	BAN 207
IX Cen	Bruna	BAN 207

Name	Author	References
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IZ Cen	Bruna	BAN 207
KK Cen	Bruna	BAN 207
KL Cen	Bruna	BAN 207
KM Cen	Bruna	BAN 207
KS Cen	Martin	BAN 235
KT Cen	Uitterdijk	BAN 237
KU Cen	Martin	BAN 232, corr. AJ 984
" "	Alden	AJ 984
KV Cen	Martin	BAN 235
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KX Cen	Martin	BAN 235
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LL Cen	Martin	BAN 235
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V 342 Cen	Kooreman	BAN 281
V 343 Cen	van Hoof	BAN 289
V 344 Cen	Bruna	BAN 280
V 345 Cen	Mergentaler	Lwów Contr 5
V 346 Cen	O'Connell	Riverview Publ 2.5
" " "	Wright	HA 89.172
V 347 Cen	Mergentaler	Lwów Contr 5
V 348 Cen	Mergentaler	Lwów Contr 5
V 349 Cen	Mergentaler	Lwów Contr 5
V 351 Cen	Opolski	Lwów Contr 4
V 352 Cen	Opolski	Lwów Contr 4
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V 354 Cen	Opolski	Lwów Contr 4
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V 361 Cen	Mergentaler	Lwów Contr 5

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SEQUENCES

Name	Author	References
V 362 Cen	Opolski	Lwów Contr 4
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V 374 Cen	Opolski	Lwów Contr 4
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V 376 Cen	Opolski	Lwów Contr 4
V 377 Cen	O'Connell	Riverview Publ 1.8
V 378 Cen	O'Connell	Riverview Publ 1.20
V 379 Cen	O'Connell	Riverview Publ 1.40
V 380 Cen	O'Connell	Riverview Publ 1.45
V 381 Cen	O'Connell	Riverview Publ 1.7
V 382 Cen	Prager	BAN 286
V 383 Cen	Uitterdijk	BAN 288
V 384 Cen	de Kort	BAN 292
V 385 Cen	Mergentaler	Lwów Contr 6
V 386 Cen	Mergentaler	Lwów Contr 6
V 387 Cen	Uitterdijk	BAN 288
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DP CrA	van Gent	BAN 243
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AC Cru	Oosterhoff	BAN 245
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AF Cru	Uitterdijk	BAN 280
AG Cru	O'Connell	Riverview Publ 1.20
AH Cru	Uitterdijk	BAN 288
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IT Cyg	Hoppe	Sonn Mitt 25
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IV Cyg	Hoppe	Sonn Mitt 25

Name	Author	References
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" "	Olivier	Penn Publ 5,3.63
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" "	Olivier	Penn Publ 5,3.64
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" "	Olivier	Penn Publ 5,3.66
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" "	Swope	HB 914
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" "	Olivier	Penn Publ 5,3.65
MU Cyg	Wachmann	AN 6116
MW Cyg	Parenago	NNVS 57-58
MX Cyg	Kaho	Tokyo Bull 298
MZ Cyg	Beyer	AN 6184
" "	Meshkova	NNVS 57-58
V 345 Cyg	Parenago	NNVS 40
V 346 Cyg	Parenago	NNVS 40
" " "	Florja	NNVS 45
V 357 Cyg	Parenago	NNVS 40
V 360 Cyg	Parenago	NNVS 40; 46
" " "	Florja	NNVS 45
V 363 Cyg	Parenago	NNVS 40
V 366 Cyg	Beyer	AN 6408
V 367 Cyg	Kukarkin and Parenago	NNVS 57-58
V 368 Cyg	Parenago	NNVS 45
V 370 Cyg	Parenago	NNVS 45
V 371 Cyg	Beljawsky	NNVS 44
V 373 Cyg	Beljawsky	NNVS 44
V 374 Cyg	Beljawsky	NNVS 44
" " "	Zonn	Wilno Bull 17.25
V 375 Cyg	Zonn	Wilno Bull 17.26
V 378 Cyg	Beljawsky	NNVS 44
V 379 Cyg	Beljawsky	NNVS 50
V 380 Cyg	Kron	ApJ 82.226
V 381 Cyg	Beljawsky	NNVS 50
V 383 Cyg	Beljawsky	NNVS 44
" " "	Zonn	Wilno Bull 17.22
V 384 Cyg	Beljawsky	NNVS 44
" " "	Zonn	Wilno Bull 17.25
V 385 Cyg	Zonn	Wilno Bull 17.27
V 386 Cyg	Parenago	NNVS 57-58
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V 394 Cyg	Beljawsky	NNVS 50
V 396 Cyg	Beljawsky	NNVS 50

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SEQUENCES

Name	Author	References
V 397 Cyg	Beljawsky	NNVS 44
" " "	Zonn	Wilno Bull 17.24
V 398 Cyg	Beljawsky	NNVS 44
V 399 Cyg	Beljawsky	NNVS 44
SY Del	Plaut	AN 5846
TT Del	Plaut	AN 5846
TW Del	Beljawsky	NNVS 44
TY Del	Gurjev	NNVS 56
BI Del	Beljawsky	NNVS 44
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WW Eri	Bodokia	Abast Bull 3.2
WX Eri	Jensch	AN 6021
" "	Wright	HA 89.204
YY Eri	Jensch	AN 6021
" "	Bodokia	Abast Bull 3.9
AT Gem	Nielsen	Aarh Medd 1.153
AV Gem	Nielsen	Aarh Medd 1.156
AW Gem	Kukarkin	NNVS 41,Tafel VIII
" "	Delporte and Arend	Bull Cl Sci 19.439
AX Gem	Rügemer	AN 6106
AZ Gem	Zonn	Wilno Bull 16.17
BB Gem	Zonn	Wilno Bull 16.13
BD Gem	Zonn	Wilno Bull 17.21
BE Gem	Olivier	Penn Publ 5,3.34
BK Gem	Zonn	Wilno Bull 17.20
BL Gem	Zonn	Wilno Bull 17.21
CC Her	Prager	AN 5830
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" "	Parenago and Florja	NNVS 38
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DI Her	Lause	AN 6343
" "	Jacchia	HB 912
DQ Her	Beljawsky	AN 6210; Pulk Circ 20
" "	Bernheimer	SAI 9.340
" "	Beyer	BZ 17.28; Coelum 5.115; AN 6108; 6119; Jahresbericht 1935
" "	Brunner	AN 6176
DQ Her	Campbell	HB 898
" "	Fischer	AN 6145
" "	C.P. Gaposchkin	HB 898
" "	C.P. Gaposchkin, S. Gaposchkin, Whipple	HAC 332; UAI Circ 534; HB 899; BZ 17.28; BSAF 51.378; NAT 16.66
" "	Himpel	AN 6155
" "	Kanceieff	Coelum 5.20
" "	Kukarkin	NNVS 47
" "	Lause	AN 6131; 6207; 6249; 6327; 6406
" "	Lipiński	Wars Repr 39
" "	Martinoff	Engelh Bull 12
" "	Mitchell and Wirtanen	AJ 1038; Virg Publ 9.79
" "	Przybyllok	AN 6123
" "	Schembor	AN 6208
" "	Seliwanow	Tashk Circ 48
" "	Walter	AN 6281
" "	Zverev and Kukarkin	NNVS 53
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FR Her	Bigay	BAF 6.31
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GL Her	Lohmann	Sonn Mitt 21
VX Hya	Lause	AN 5896; 6320
" "	Oosterhoff	BAN 310
VY Hya	Morgenroth	AN 5946
VZ Hya	Wright	HA 89.204
WY Hya	Jensch	AN 6048
AI Hya	Lause	AN 6375
CM Lac	Wachmann	AN 5846; 6116; NNVS 54
" "	Wright	HA 89.174
CN Lac	Wachmann	AN 5698; 6116
CO Lac	Zonn	Wilno Bull 14; 17
" "	Uitterdijk	BAN 255
" "	Wright	HA 89.174
CP Lac	Beyer	AN 6249
" "	Himpel	AN 6318
" "	Kanda and Kaho	Tokyo Bull 191-196; 221-222; 292; 344
" "	Kolbow	VAP 46.209
" "	Lagrula	JO 20.120
" "	Lause	AN 6249; 6258; 6327; 6406
" "	Lipiński	Wars Repr 41
" "	Mitchell and Wirtanen	MN 99.40; Virg Publ 9.89
" "	Parenago	NNVS 51
" "	Rudski	NNVS 54
" "	Rybka and Mergentaler	Lwów Contr 8
" "	Zonn	Wilno Bull 19.10
CR Lac	Hoffmeister	Sonn Mitt 12
CU Lac	Hoffmeister	Sonn Mitt 12

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SEQUENCES

Name	Author	References
CV Lac	Hoffmeister	Sonn Mitt 12
CW Lac	Gitz	NNVS 47
UU Leo	Jensch	AN 6153
UV Leo	Jensch	AN 6153
" "	Wright	HA 89.204
UW Lib	Parenago	NNVS 33-34
UZ Lib	Parenago	NNVS 33-34
VW Lib	Shajn	NNVS 39; Pulk Circ 6
VX Lib	Shajn	NNVS 39; Pulk Circ 6
VY Lib	Jensch	AN 6059
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" "	Jacchia	SAI 9.151
FF Lyr	Florja	Tashk Bull 1.11
FG Lyr	Lohmann	Sonn Mitt 21
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FP Lyr	Beljawsky	NNVS 50
AQ Mon	Lause	AN 6043
" "	Jensch	AN 6059
AR Mon	Florja	Sternb Publ 8,2.46
AS Mon	Florja	Sternb Publ 8,2.46
AU Mon	Florja	Sternb Publ 8,2.45
AV Mon	Florja	Sternb Publ 8,2.44
AW Mon	Morgenroth	AN 5946
BB Mon	Lause	AN 5902; 6404
BI Mon	Olivier	Penn Publ 5,3.30
BN Mon	Edmondson and Roberts	ASP 47.191
BO Mon	Wright	HA 89.204
BP Mon	Nekrasova	NNVS 55
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VX Mus	Bruna	BAN 207
AY Mus	Uitterdijk	BAN 240
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XY Nor	Kooreman	BAN 281
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FQ Nor	Kooreman	BAN 281
FW Nor	Kruytbosch	BAN 267
GL Nor	Kruytbosch	BAN 236
GM Nor	Kruytbosch	BAN 236
GN Nor	Kruytbosch	BAN 236
GO Nor	Kruytbosch	BAN 236
GP Nor	Kruytbosch	BAN 236

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SEQUENCES

Name	Author	References	Name	Author	References
GQ Nor	Kruytbosch	BAN 236	V 457 Oph	Hoppe	Sonn Mitt 24
GR Nor	Kruytbosch	BAN 236	V 458 Oph	Hoppe	Sonn Mitt 24
GS Nor	Kruytbosch	BAN 236	V 459 Oph	Hoppe	Sonn Mitt 24
GT Nor	Kruytbosch	BAN 236	V 460 Oph	Hoppe	Sonn Mitt 24
GU Nor	Kruytbosch	BAN 236	V 461 Oph	Hoppe	Sonn Mitt 24
GV Nor	Kruytbosch	BAN 236	V 462 Oph	Hoppe	Sonn Mitt 24
GW Nor	Kruytbosch	BAN 236	V 463 Oph	Hoppe	Sonn Mitt 24
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" "	Alden	AJ 1035	V 468 Oph	Hoppe	Sonn Mitt 24
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HR Nor	Kooreman	BAN 281	V 477 Oph	Hoppe	Sonn Mitt 24
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HT Nor	Mergentaler	BAN 296	V 479 Oph	Hoppe	Sonn Mitt 24
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V 431 Oph	Hoppe	Sonn Mitt 24	V 501 Oph	Grigorieva	NNVS 54
V 432 Oph	Hoppe	Sonn Mitt 24	V 504 Oph	Solovjev	Tadjik Circ 27
V 433 Oph	Hoppe	Sonn Mitt 24	V 509 Oph	Hoppe	Sonn Mitt 24
V 434 Oph	Hoppe	Sonn Mitt 24	V 510 Oph	Hoppe	Sonn Mitt 24
V 435 Oph	Hoppe	Sonn Mitt 24	V 511 Oph	Hoppe	Sonn Mitt 24
V 436 Oph	Hoppe	Sonn Mitt 24	EV Ori	Parenago	NNVS 43
V 437 Oph	Hoppe	Sonn Mitt 24	EW Ori	Wright	HA 89.204
V 439 Oph	Hoppe	Sonn Mitt 24	EY Ori	Lause	AN 5902
V 442 Oph	Shajn	NNVS 40	" "	Morgenroth	AN 5913
V 443 Oph	Shajn	NNVS 40	FM Ori	Jensch	AN 6048
V 445 Oph	Jensch	AN 6059	FO Ori	Rügemer	AN 6106
V 446 Oph	Shajn	NNVS 44	FQ Ori	Beljawsky	AN 5504
" " "	Beljawsky	NNVS 47	δ Ori	Pickering	HA 64.57
V 448 Oph	Shajn	NNVS 44	AR Pav	Mayall	HA 105.492
V 450 Oph	Grigorieva	NNVS 54	AT Peg	Lassovszky	AN 6128
V 453 Oph	Seliwanow	AN 6179	AU Peg	Lause	AN 5876
V 454 Oph	Grigorieva	NNVS 54	" "	Florja	NNVS 43
V 455 Oph	Grigorieva	NNVS 54	" "	Parenago	NNVS 46

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SEQUENCES

Name	Author	References
AV Peg	Balázs	AN 6077
BB Peg	Nikonov and Dobronravin	Abast Bull 1.11
BF Peg	Martinoff	Engelh Publ 20.23; 39
BH Peg	Balázs	AN 6285
BN Peg	Jensch	AN 6119
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SU Psc	Parenago	NNVS 41
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SV Psc	Parenago	NNVS 41
SZ Psc	Jensch	AN 6048
TT Psc	Olivier	Penn Publ 5,3.18
UZ Pup	Florja	Sternb Publ 8,2.44
" "	Tschernov	Tadjik Circ 47
VV Pup	Alden	AJ 958
" "	Mayall	ASP 43.305
" "	Oosterhoff	ASP 47.322; BAN 285
" "	Wesselink	BAN 318
VW Pup	Florja	Sternb Publ 8,2.46
VZ Pup	Florja	Sternb Publ 8,2.44
WW Pup	Florja	Sternb Publ 8,2,44
" "	Hertzsprung	BAN 293
WY Pup	Wesselink	BAN 265
" "	Kruytbosch	BAN 281
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XX Pup	Florja	Sternb Publ 8,2.44
XY Pup	Florja	Sternb Publ 8,2.45
XZ Pup	Wesselink	BAN 228
ZZ Pup	Florja	Sternb Publ 8,2.46
AD Pup	Wesselink	BAN 265
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AF Pup	Zagar	BAN 270
AG Pup	Kooreman	BAN 281
AH Pup	Kooreman	BAN 281
AL Pup	Kooreman	BAN 281
AM Pup	van Hoof	BAN 289
AO Pup	O'Leary	Riverview Publ 1.31
AP Pup	O'Leary	Riverview Publ 1.4
AQ Pup	O'Leary	Riverview Publ 1.17
AR Pup	O'Leary	Lembang Ann 8.17
AS Pup	O'Leary	Riverview Publ 1.6
AT Pup	O'Connell	Riverview Publ 1.1
AU Pup	O'Leary	Riverview Publ 1.5
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AZ Pup	O'Leary	Riverview Publ 1.30
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V 418 Sgr	Martin	BAN 235
V 419 Sgr	Ferwerda	BAN 231

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SEQUENCES

Name	Author	References
V 420 Sgr	Ferwerda	BAN 231
V 421 Sgr	Ferwerda	BAN 231
V 422 Sgr	van Gent	BAN 227
V 423 Sgr	Ferwerda	BAN 231
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V 502 Sgr	van Gent	BAN 243
V 503 Sgr	Shajn	NNVS 40
V 505 Sgr	Hoffmeister	AN 6021; Kyoto Bull 281
V 523 Sgr	Ferwerda	BAN 256
" " "	Jones	HB 909
V 524 Sgr	Jensch	AN 6059
V 525 Sgr	O'Connell	Riverview Publ 1.10
V 526 Sgr	Wright	HA 89.174
" " "	O'Connell	Riverview Publ 1.10
V 527 Sgr	Uitterdijk	BAN 273
V 630 Sgr	Kanda	Tokyo Bull 221-222
V 675 Sgr	O'Leary	Riverview Publ 1.56
V 725 Sgr	Swope	HA 105.499
V 727 Sgr	Uitterdijk	BAN 288
V 728 Sgr	Uitterdijk	BAN 288
V 729 Sgr	Ferwerda	BAN 256
V 730 Sgr	Ferwerda	BAN 256
V 731 Sgr	Soloviev	Tadjik Circ 30
KT Sco	Shajn	NNVS 39; Pulk Circ 6
KU Sco	Shajn	NNVS 39; Pulk Circ 6
V 380 Sco	Bateson	AN 6190
V 393 Sco	O'Leary	Riverview Publ 1.58
V 438 Sco	O'Leary	Riverview Publ 1.57
CC Sct	Martin	BAN 235
CD Sct	Martin	BAN 235
δ Sct	Fath	Lick Bull 501
XX Ser	Prager	AN 5830
XY Ser	Hoppe	Sonn Mitt 24
XZ Ser	Hoppe	Sonn Mitt 24
YY Ser	Hoppe	Sonn Mitt 24
YZ Ser	Hoppe	Sonn Mitt 24
AB Ser	Shajn	NNVS 44
AC Ser	Shajn	NNVS 40
AD Ser	Shajn	NNVS 40
AE Ser	Shajn	NNVS 40
AF Ser	Shajn	NNVS 40
AK Ser	Shajn	NNVS 44
AL Ser	Shajn	NNVS 43
AM Ser	Jensch	AN 6153

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SEQUENCES

Name	Author	References	Name	Author	References
AX Ser	Hoppe	Sonn Mitt 24	AU Vel	Hertzsprung	BAN 299
AY Ser	Hoppe	Sonn Mitt 24	AV Vel	Hertzsprung	BAN 299
AZ Ser	Hoppe	Sonn Mitt 24	AW Vel	Hertzsprung	BAN 299
BB Ser	Hoppe	Sonn Mitt 24	AX Vel	Hertzsprung	BAN 299
BD Ser	Shajn	NNVS 46	" "	O'Leary	Riverview Publ 1.51
BE Ser	Shajn	NNVS 46	AY Vel	Hertzsprung	BAN 299
X Sex	Olivier	Penn Publ 5,3.39	AZ Vel	Hertzsprung	BAN 299
AB Tau	Beyer	AN 6328	BC Vel	Hertzsprung	BAN 299
AC Tau	Lause	AN 6404	BD Vel	Hertzsprung	BAN 299
AD Tau	Shajn	NNVS 40	BE Vel	Hertzsprung	BAN 299
" "	Olivier	Penn Publ 5,3.24	BF Vel	O'Leary	Riverview Publ 1.52
AE Tau	Parenago	NNVS 41	BG Vel	O'Leary	Riverview Publ 1.50
AM Tau	Jensch	AN 6058	AM Vir	Parenago	NNVS 33-34
AN Tau	Beyer	AN 6217	AN Vir	Parenago	NNVS 33-34
" "	Wright	HA 89.205	AO Vir	Prager	AN 5830
AS Tau	Shajn	NNVS 40	AQ Vir	Parenago	NNVS 33-34
AW Tau	Parenago	NNVS 43	AT Vir	Lause	AN 5902, corr.5904
RS Tri	Parenago	NNVS 41	AU Vir	Lause	AN 5902, corr.5904
" "	Lause	AN 6404	AV Vir	Jensch	AN 6135
TX UMa	Rügemer	AN 6166	AW Vir	Jensch	AN 6135
TY UMa	Beljawsky	NNVS 42	AX Vir	Jensch	AN 6135
TZ UMa	Beljawsky	NNVS 42	BB Vir	Jensch	AN 6153
UU UMa	Beljawsky	NNVS 42	BE Vir	Baade	ASP 48.275
UV UMa	Beljawsky	NNVS 42	AL Vul	Lohmann	Sonn Mitt 21
UW UMa	Beljawsky	NNVS 42	AM Vul	Lohmann	Sonn Mitt 21
UX UMa	Beljawsky	NNVS 42	AN Vul	Lohmann	Sonn Mitt 21
" "	Zverev and Kukarkin	NNVS 53	AO Vul	Lohmann	Sonn Mitt 21
			AP Vul	Lohmann	Sonn Mitt 21
" "	Wright	HA 89.205	AQ Vul	Lohmann	Sonn Mitt 21
" "	Krat	Pulk Circ 30	AR Vul	Hoppe	Sonn Mitt 25
UY UMa	Beljawsky	NNVS 42	AS Vul	Hoppe	Sonn Mitt 25
UZ UMa	Baker	MN 98.73	AW Vul	Pagaczewski	AAb 2.24
Y UMi	Beljawsky	NNVS 46	BB Vul	Parenago	NNVS 40
AH Vel	Hertzsprung	BAN 327	BC Vul	Parenago	NNVS 40
AK Vel	Zagar	BAN 270	BD Vul	Beljawsky	NNVS 44
AM Vel	Zagar	BAN 270	BE Vul	Beljawsky	NNVS 44
AN Vel	van Hoof	BAN 289	BN Vul	Grigorieva	NNVS 54
AO Vel	Hertzsprung	BAN 299	BO Vul	Grigorieva	NNVS 54
AP Vel	Hertzsprung	BAN 278	" "	Nassau	AJ 1109
" "	O'Leary	Riverview Publ 1.54	BS Vul	Grigorieva	NNVS 54
AQ Vel	Kooreman	BAN 281	BT Vul	Beljawsky	NNVS 44
AR Vel	Kooreman	BAN 281	BU Vul	Beljawsky	NNVS 44
AS Vel	O'Leary	Riverview Publ 1.6	BV Vul	Bigay	BAF 5.125
AT Vel	Hertzsprung	BAN 299			

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APPENDIX III
DIAGRAMS OF LIGHT CURVES

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LIGHT CURVES

Name	Author	References
AN And	Huffer	Washb Publ 15.124
AP And	Lassovszky	AN 5877
ζ And	Stebbins	Washb Publ 15.29
AK Aqr	Hughes	HB 883
AR Aqr	Hughes	HB 883
AT Aqr	Hughes	HB 883
AY Aqr	Hughes	HB 883
BD Aqr	Hughes	HB 883
BI Aqr	Hughes	HB 883
BO Aqr	Lange	Tadjik Ann 1,2.10
BR Aqr	Lange	Tadjik Ann 1,2.10
BS Aqr	Andrews	HB 902
BW Aqr	Jensch	AN 6119
CP Aqr	Seliwanow	NNVS 51
CW Aqr	Jensch	AN 6119
CX Aqr	Jensch	AN 6021
CY Aqr	Jensch	AN 6070
" "	Balázs and Detre	AN 6124
" "	Schneller	AN 6193
" "	Gaposchkin	HB 898
" "	Parenago	NNVS 49
" "	Rabkin	NNVS 49
" "	Seliwanow	NNVS 51
" "	Kulikovsky	NNVS 52; Abast Bull 1.49
" "	van Schewick	Sterne 16.280
" "	Martinoff	Engelh Publ 20.120
CZ Aqr	Kanda and Kanamori	Mem Astr Soc Jap 3.68
KO Aql	Lause	AN 6067
NO Aql	Soloviev	NNVS 53
OO Aql	Martinoff	NNVS 40; Engelh Publ 20.118;132
" "	Florja	NNVS 40
" "	Florja and Slonim	NNVS 46
" "	Lause	AN 6149
" "	Bodokia	Abast Bull 1.21
QS Aql	Guthnick	Berl Ber 1930, p.501; 1934, p.528
V 336 Aql	Seliwanow	NNVS 49
" " "	Beyer	ApJ 86.409
V 341 Aql	Seliwanow	NNVS 51
V 343 Aql	Beyer	AN 6295
V 356 Aql	Beyer	AN 6430
" " "	Jacchia	Coelum 6.199; 215
" " "	Kanda and Kaho	Tokyo Bull 191-196
" " "	Koyama	Kyoto Bull 327; Sterne 17.118
" " "	Wyse	ASP 48.304
" " "	Overhage and Zwicky	ASP 48.322
V 368 Aql	Beyer	AN 6430
" " "	Hinderer	Sterne 16.277
" " "	Jacchia	Coelum 6.216
" " "	Kanda and Kaho	Tokyo Bull 191-196
" " "	Koyama	Kyoto Bull 327; Sterne 17.118
" " "	Wyse	ASP 48.304
V 429 Aql	Bigay	BAF 5.125
V 433 Aql	Bigay	BAF 5.125
δ Aql	Wylie	ApJ 56.239
VW Ara	Kruytbosch	BAN 267
VZ Ara	Kruytbosch	BAN 267
XX Ara	Kruytbosch	BAN 267
ZZ Ara	Kruytbosch	BAN 236
AA Ara	Kruytbosch	BAN 236
AB Ara	Kruytbosch	BAN 236
AC Ara	Kruytbosch	BAN 236
AD Ara	Kruytbosch	BAN 236
AF Ara	Kruytbosch	BAN 267
AH Ara	Kruytbosch	BAN 267
IP Ara	Mergentaler	BAN 296
IQ Ara	Mergentaler	BAN 296
RV Ari	Detre	AN 6270
RW Ari	Detre	AN 6270
RX Ari	Lause	AN 6375
AP Aur	Stanley Williams	MN 91.698
" "	Nikonov and Bodokia	Abast Bull 1.17
AR Aur	Nassau	AJ 1051
" "	Fracastoro	SAI 11.245
BF Aur	Zonn	AN 6168; Wilno Bull 19
" "	Lause	AN 6404
BK Aur	Kaho	Astr Herald 31.43
CQ Aur	Lause	AN 6375
ζ Aur	Beer	MN 95.27
" "	Christie	ApJ 92.394
" "	Christie and Wilson	ApJ 81.437; Canton Rev 6.135
" "	Florja	AN 6144
" "	Gadomski	Wars Publ 8.36
" "	Guthnick and Schneller	AN 6142; VAP 45.244
" "	Guthnick, Schneller and Hachenberg	Abh Berl Akad 1935, Nr.1, p.7; 39; Sterne 15.186
" "	Hopmann	Leipzig Ber 85.122; 126; Leipzig Veröff 6.61; 80
" "	Huffer	ApJ 81.293; Canton Rev 6.137; Weltall 34.122
" "	Kron	ASP 52.128
" "	Müller	AN 5880; 6300
" "	Oosterhoff	ApJ 81.433; 464
" "	Roach	ApJ 93.4; 6; 7
" "	Schaub	ZAp 14.194; Leipzig Veröff 6.27; 30; 34; 35
" "	Swope	HC 399
" "	Tremblot	JO 18.176
UW Boo	Payne-Gaposchkin	Harv Repr 170
SZ Cam	Wesselink	Pg Pm, p.25;37;58
TU Cam	Zverev	Sternb Publ 8,1.34
UZ Cam	Brun	BAF 6.3
TT Cnc	Jensch	AN 6119
TU Cnc	Jensch	AN 6058
TX Cnc	Haffner	ZAp 14.288
SW CVn	Zessewitsch	Pulk Circ 24
RT CMa	Florja	NNVS 38, Tafel II; Sternb Publ 8, 2.27

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LIGHT CURVES

Name	Author	References
RU CMa	Florja	NNVS 38, Tafel II; Sternb Publ 8,2.28
RV CMa	Florja	NNVS 38, Tafel I; Sternb Publ 8,2.25
RW CMa	Florja	NNVS 38, Tafel I; Sternb Publ 8,2.24; ApJ 86.411
" "	Zakharin	Abast Bull 3.23
RX CMa	Florja	NNVS 38, Tafel II; Sternb Publ 8,2.28
" "	Zakharin	Abast Bull 3.16
RY CMa	Lause	AN 5896; ApJ 86.411
" "	Florja	NNVS 38, Tafel I; Sternb Publ 8,2.23
RZ CMa	Florja	NNVS 38, Tafel I; Sternb Publ 8,2.23
SS CMa	Florja	NNVS 38, Tafel I; Sternb Publ 8,2.25; ApJ 86.411
ST CMa	Florja	Sternb Publ 8,2.33
SU CMa	Florja	Sternb Publ 8,2.32
SV CMa	Florja	Sternb Publ 8,2.35
SW CMa	Florja	Sternb Publ 8,2.30
SX CMa	Florja	Sternb Publ 8,2.27
SY CMa	Florja	Sternb Publ 8,2.32
SZ CMa	Florja	Sternb Publ 8,2.29
TU CMa	Florja	Sternb Publ 8,2.27
TV CMa	Florja	Sternb Publ 8,2.23
TW CMa	Florja	Sternb Publ 8,2.24
UW CMa	Gaposchkin	HB 902
UX CMa	Florja	Sternb Publ 8,2.26
UY CMa	Florja	Sternb Publ 8,2.34
UZ CMa	Florja	Sternb Publ 8,2.35, Fig.19
VW CMa	Mergentaler	BAN 296
VX CMa	Mergentaler	BAN 296
VZ CMa	Florja	Sternb Publ 8,2.23
XZ CMi	Lause	AN 6375
YY CMi	Lause	AN 6375
TW Cap	Morgenroth	AN 5946
UU Cap	Parenago	NNVS 43
GM Car	Oosterhoff	BAN 245
GN Car	Oosterhoff	BAN 245
GO Car	van Hoof	BAN 256
GP Car	Hertzsprung	BAN 281
GQ Car	Hertzsprung	BAN 281
GS Car	Hertzsprung	BAN 281
GT Car	Hertzsprung	BAN 281
GV Car	Oosterhoff	BAN 245
AO Cas	Guthnick	AN 5061; Atti Pont Acc 76.220
" "	Pearce	DAO 3.287
" "	Bennett	AJ 1089
AP Cas	Nielsen	Aarh Medd 1.148
AR Cas	Stebbins	ApJ 54.85
AT Cas	Kukarkin	NNVS 38
" "	Nielsen	Aarh Medd 1.170
AW Cas	Lange	Leningrad Bull 2.9
BY Cas	Lange	Leningrad Bull 2.10
CC Cas	Gaposchkin	PA 48.98
CG Cas	Lange	Leningrad Bull 2.9; ApJ 86.414
CH Cas	Morgenroth	AN 6135
γ Cas	Huffer	ApJ 89.141; 257; 92.93
" "	Campbell	PA 45.569; 48.385
" "	Miczaika	BZ 21.89
" "	Jacchia	Coelum 7.213
" "	Cherrington	PA 46.185; Sterne 18.137
" "	Wellmann	Sterne 17.268
" "	Ashbrook	AJ 1125
IV Cen	Bruna	BAN 207
IW Cen	Bruna	BAN 207
IX Cen	Bruna	BAN 207
IY Cen	Bruna	BAN 207
IZ Cen	Bruna	BAN 207
KK Cen	Bruna	BAN 207
KL Cen	Bruna	BAN 207
KM Cen	Bruna	BAN 207
KN Cen	Swope	HB 883
KS Cen	Martin	BAN 235
KT Cen	Uitterdijk	BAN 237
KU Cen	Martin	BAN 232
" "	Alden	AJ 984
KV Cen	Martin	BAN 235
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LN Cen	Martin	BAN 235
LO Cen	Martin	BAN 235
LP Cen	Martin	BAN 235
LQ Cen	Martin	BAN 235
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LU Cen	Uitterdijk	BAN 240
LV Cen	Uitterdijk	BAN 240
LW Cen	Uitterdijk	BAN 240
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LZ Cen	Uitterdijk	BAN 240
MM Cen	Uitterdijk	BAN 240
MN Cen	Oosterhoff	BAN 245
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MP Cen	Oosterhoff	BAN 245
MQ Cen	Oosterhoff	BAN 245
MR Cen	Oosterhoff	BAN 245
MS Cen	Oosterhoff	BAN 245
MT Cen	Uitterdijk	BAN 256
MV Cen	Rybka	Lwów Contr 2
MW Cen	Rybka	Lwów Contr 2
MX Cen	Rybka	Lwów Contr 2

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LIGHT CURVES

Name	Author	References
V 343 Cen	van Hoof	BAN 289
V 344 Cen	Bruna	BAN 280
V 346 Cen	O'Connell	Riverview Publ 2.13
V 348 Cen	Mergentaler	Lwów Contr 5
V 349 Cen	Mergentaler	Lwów Contr 5
V 353 Cen	Opolski	Lwów Contr 4
V 356 Cen	Mergentaler	Lwów Contr 5
V 361 Cen	Mergentaler	Lwów Contr 5
V 363 Cen	Mergentaler	Lwów Contr 5
V 364 Cen	Mergentaler	Lwów Contr 5
V 365 Cen	Mergentaler	Lwów Contr 5
V 371 Cen	Opolski	Lwów Contr 4
V 374 Cen	Opolski	Lwów Contr 4
V 376 Cen	Opolski	Lwów Contr 4
V 378 Cen	O'Connell	Riverview Publ 1.23
V 379 Cen	O'Connell	Riverview Publ 1.42
V 380 Cen	O'Connell	Riverview Publ 1.45
V 381 Cen	O'Connell	Riverview Publ 1.7; HC 436
V 382 Cen	Prager	BAN 286
V 383 Cen	Uitterdijk	BAN 288
V 384 Cen	de Kort	BAN 292
V 385 Cen	Mergentaler	Lwów Contr 6
V 386 Cen	Mergentaler	Lwów Contr 6
V 387 Cen	Uitterdijk	BAN 288
V 388 Cen	Mergentaler	Lwów Contr 6
V 393 Cen	Mergentaler	Lwów Contr 6
V 394 Cen	Mergentaler	Lwów Contr 6
V 395 Cen	Mergentaler	Lwów Contr 6
AH Cep	Zverev	NNVS 42.188; Tafel IX
AK Cep	Zonn	Wilno Bull 17.28
AQ Cep	Brun	BAF 6.1
AR Cep	Opolski	AAc 3.69
AS Cep	Nielsen	Aarh Medd 1.172
β Cep	Guthnick	AN 4701; 4903, Tafel V; Mich Publ 2.154; Verh D Phys Ges 16.1024
" "	Guthnick and Prager	VBB 1, 1, Tafel 5; 6; 2, 3, Tafel 5; Ntw 3.54; Lick Bull 349; 418
" "	Henroteau	DO 9.47
" "	Cummings	Lick Bull 349
" "	Mendenhall	Lick Bull 418
" "	Güssow	AN 5484; 5569
RU Cet	Lange	Tadjik Ann 1,2.10
RV Cet	Lange	Tadjik Ann 1,2.10
RW Cet	Pagaczewski	AAc 2.151
RX Cet	Morgenroth	AN 5946
" "	Lange	Tadjik Ann 1,2.10
SV Cet	Hertzsprung	BAN 293
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SY Cir	Swope	HB 883
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VW Cir	Swope	HB 883
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Name	Author	References
DP CrA	van Gent	BAN 243
W Crv	Lange	Tashk Bull 9
V Crt	Solovjev	NNVS 48
TV Cru	Bruna	BAN 207
TW Cru	Bruna	BAN 207
TX Cru	Bruna	BAN 207
TY Cru	Bruna	BAN 207
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UW Cru	Bruna	BAN 207
UX Cru	Bruna	BAN 207
" "	de Kort	BAN 292
UY Cru	Bruna	BAN 207
UZ Cru	Bruna	BAN 207
VV Cru	Bruna	BAN 207
VW Cru	Bruna	BAN 207
VX Cru	Bruna	BAN 207
VY Cru	Bruna	BAN 207
VZ Cru	Bruna	BAN 207
WW Cru	Uitterdijk	BAN 240
WX Cru	Uitterdijk	BAN 240
WY Cru	Uitterdijk	BAN 240
WZ Cru	Uitterdijk	BAN 240
XX Cru	Uitterdijk	BAN 240
XY Cru	Uitterdijk	BAN 240
XZ Cru	Uitterdijk	BAN 240
YY Cru	Uitterdijk	BAN 240
YZ Cru	Uitterdijk	BAN 240
ZZ Cru	Oosterhoff	BAN 245
AA Cru	Oosterhoff	BAN 245
AB Cru	Oosterhoff	BAN 245
AC Cru	Oosterhoff	BAN 245
AD Cru	Uitterdijk	BAN 280
AF Cru	Uitterdijk	BAN 280
AG Cru	O'Connell	Riverview Publ 1.22
" "	O'Herne	Lembang Ann 8.41
AI Cru	Oosterhoff	BAN 245
KR Cyg	Lassovszky	AN 6174; Budap Mitt 9.10
MR Cyg	Rügemer	AN 5859
" "	Johnson	AJ 997
" "	Himpel	AN 6253
" "	Swope	HB 914
MW Cyg	Lange	Leningrad Bull 2.13
MZ Cyg	Beyer	ApJ 86.416
" "	Meshkova	NNVS 57-58
V 346 Cyg	Florja	NNVS 45
V 366 Cyg	Beyer	AN 6408
V 367 Cyg	Lause	AN 6186
" " "	Christie	ApJ 78.209
" " "	Kukarkin and Parenago	NNVS 57-58
V 374 Cyg	Zonn	Wilno Bull 17.25
V 375 Cyg	Zonn	Wilno Bull 17.26
V 380 Cyg	Kron	ApJ 82.226
" " "	Kopal	HC 441
V 383 Cyg	Zonn	Wilno Bull 17.22
V 384 Cyg	Zonn	Wilno Bull 17.24
V 385 Cyg	Zonn	Wilno Bull 17.27
V 389 Cyg	Guthnick	Abh Berl Akad 1937, 3; 1939,6
V 397 Cyg	Zonn	Wilno Bull 17.23
TY Del	Miczaika	AN 6252
" "	Nachapkin	NNVS 56
VV Del	Jensch	KVBB 19.39
XX Del	Jensch	KVBB 19.41
YY Del	Jensch	KVBB 19.42
ZZ Del	Jensch	KVBB 19.43
AL Del	Jensch	KVBB 19.44
AV Del	Jensch	KVBB 19.45
AX Del	Jensch	KVBB 19.46
XZ Dra	Beyer	AN 6030
" "	Soloviev	NNVS 47
" "	Lange	Tadjik Ann 1,2.10
YZ Dra	Brun	BAF 5.145
ZZ Dra	Brun	BAF 5.147
AA Dra	Brun	BAF 5.147
UX Eri	Bodokia	Abast Bull 2.4
VV Eri	Pagaczewski	AAc 2.153
WW Eri	Bodokia	Abast Bull 3.3
WX Eri	Jensch	AN 6021
YY Eri	Tremblot	CR 196.1163
" "	Jensch	AN 6021
" "	Bodokia	Abast Bull 3.11
AS Eri	Kanda	Tokyo Astr Obs Rep 5.76
RX For	Florja	Tashk Publ 4,2.40
AT Gem	Nielsen	Aarh Medd 1.153
AV Gem	Nielsen	Aarh Medd 1.156
AW Gem	Delporte and Arend	Bull Cl Sci 19.441
AY Gem	Soloviev	NNVS 54
AZ Gem	Zonn	Wilno Bull 16.17
BB Gem	Zonn	Wilno Bull 16.13
BD Gem	Zonn	Wilno Bull 17.21
CE Her	Parenago and Florja	NNVS 38
" "	Florja	NNVS 42
" "	Nielsen	Aarh Medd 1.51;199
CT Her	Himpel	AN 6253
DH Her	Lause	AN 6149
DI Her	Lause	AN 6343
" "	Jacchia	HB 912; PA 48.444
DQ Her	Adams and others	ASP 47.207
" "	Archenhold	Weltall 34.51
" "	Baker and Swann	HB 903
" "	Beer	MN 95.539; Plate 8; 96.238
" "	Beljawsky	Pulk Circ 20
" "	Bernheimer	SAI 9.344
" "	Bernson	Bull Astr Nord 8.129; 9.24; 28; 66; 80; 100;125; BSAF 49.278;279, corr.444
" "	Beyer	AN 6231; Sterne 16.111; Jahresbericht 1935
" "	Boyd	HC 433
" "	Brück and Müller	Sterne 15.6
" "	Campbell	HB 898
" "	Ellsworth	BAF 5.2; 4
" "	Fresa	Coelum 5.160
" "	Graff	Wien Mitt 4.224; Wien Zirk 1

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LIGHT CURVES

Name	Author	References
DQ Her	Grotrian	ZAp 13.216; 229; Sterne 15.194
" "	Grouiller	BSAF 50.222; BAF 4.96
" "	Himpel	AN 6155
" "	Jacchia	Coelum 5.16; 41; 85; 114; 134; 186; 6.73
" "	Kanda and Kaho	Tokyo Bull 191-196
" "	Krumpholz	Wien Mitt 4.214
" "	Kuiper	ASP 47.100; 165; 229; 270
" "	Kukarkin	NNVS 48; Sternb Card 3
" "	Kukarkin and Gitz	RAJ 14.220
" "	Lipiński	Wars Repr 39
" "	Loreta	SAI 9.84
" "	McLaughlin	PA 47.416
" "	Muller	BSAF 49.281; 365; 50.49
" "	Quénisset	BSAF 49.84; 135; 275
" "	Rougier	BSAF 49.185
" "	de Roy	JBAA 45.148
" "	Ryves	MN 95.536
" "	Schneller	Sterne 15.177
" "	Taffara	SAI 10.352
" "	Wilson	PA 44.21
EP Her	van Schewick	KVBB 19.52
ES Her	van Schewick	KVBB 19.52
FR Her	Bigay	BAF 6.31
FU Her	Bigay	BAF 6.32
VX Hya	Lause	AN 5896; 6066
" "	Oosterhoff	BAN 310
WY Hya	Jensch	AN 6048
CM Lac	Himpel	AN 6253
CO Lac	Zonn	Wilno Bull 14; 17
" "	Uitterdijk	BAN 255
CP Lac	Beileke	AN 6269; Sterne 16.264
" "	Böhme	VAP 46.203
" "	Ellsworth	BSAF 51.321
" "	Fracassini	BSAF 50.407
" "	Grouiller	CR 204.956
" "	Himpel	AN 6283
" "	Jacchia	Coelum 6.136; 219
" "	Koyama	Kyoto Bull 327
" "	Lipiński	Wars Repr 41
" "	Loreta	BSAF 50.407
" "	Marshall	BSAF 50.538
" "	McLaughlin	PA 47.413
" "	Nielsen	NAT 17.93
" "	Rybka and Mergentaler	Lwów Contr 8
" "	W.H.S.	Obs 59.294
" "	Wyse	ASP 48.304
" "	Zonn	Wilno Bull 19.11
UU Leo	Jensch	AN 6153
UV Leo	Jensch	AN 6153
" "	Soloviev	NNVS 52
UZ Leo	Kaho	Astr Herald 31.46
RS Lep	Soloviev	NNVS 54
UW Lib	Payne-Gaposchkin	Harv Repr 170
VY Lib	Jensch	AN 6059
EZ Lyr	Parenago	NNVS 45
AN Mon	Florja	Sternb Publ 8,2.29
AO Mon	Lause	AN 5977
AP Mon	Florja	Sternb Publ 8,2.35
AQ Mon	Lause	AN 6043
" "	Jensch	AN 6059
" "	Gaposchkin	HB 897
" "	Florja	Sternb Publ 8,2.29
AR Mon	Florja	NNVS 38, Tafel II; Sternb Publ 8,2.31
" "	Lause	AN 6318
AS Mon	Lause	AN 5977
" "	Florja	Sternb Publ 8,2.27
AU Mon	Florja	Sternb Publ 8,2.30
AV Mon	Florja	Sternb Publ 8,2.30
BB Mon	Lause	AN 5902; 5977
BO Mon	Soloviev	NNVS 55
VW Mus	Bruna	BAN 207
VX Mus	Bruna	BAN 207
WY Mus	Swope	HB 883
AB Mus	Swope	HB 883
AC Mus	Swope	HB 883
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DO Nor	Kruytbosch	BAN 267
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FK Nor	Kruytbosch	BAN 267
FW Nor	Kruytbosch	BAN 267
GL Nor	Kruytbosch	BAN 236
GM Nor	Kruytbosch	BAN 236
GN Nor	Kruytbosch	BAN 236
" "	Oosterhoff	BAN 326
GO Nor	Kruytbosch	BAN 236
GP Nor	Kruytbosch	BAN 236

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LIGHT CURVES

Name	Author	References
GQ Nor	Kruytbosch	BAN 236
GR Nor	Kruytbosch	BAN 236
GS Nor	Kruytbosch	BAN 236
GT Nor	Kruytbosch	BAN 236
GU Nor	Kruytbosch	BAN 236
GV Nor	Kruytbosch	BAN 236
GW Nor	Kruytbosch	BAN 236
GX Nor	Kruytbosch	BAN 236
GY Nor	Kruytbosch	BAN 236
GZ Nor	Kruytbosch	BAN 236
HH Nor	Kruytbosch	BAN 267
" "	Alden	AJ 1035
HK Nor	Kruytbosch	BAN 267
HL Nor	Kruytbosch	BAN 267
HM Nor	Kruytbosch	BAN 267
HN Nor	Kruytbosch	BAN 267
HO Nor	Kruytbosch	BAN 267
HS Nor	Mergentaler	BAN 296
HT Nor	Mergentaler	BAN 296
HW Nor	Mergentaler	BAN 296
V 413 Oph	Parenago	NNVS 33-34
V 439 Oph	Hoffmeister	KVBB 19.72
V 445 Oph	Jensch	AN 6059
V 451 Oph	Hoffmeister	AN 6118
V 453 Oph	Seliwanow	AN 6179
V 454 Oph	Miczaika	AN 6188
V 465 Oph	Hoffmeister	KVBB 19.73
V 478 Oph	Hoffmeister	KVBB 19.75
V 496 Oph	Hoffmeister	KVBB 19.76
V 502 Oph	Lause	AN 6318
V 506 Oph	Miczaika	AN 6430
ER Ori	Florja	NNVS 32
EW Ori	Lause	AN 6293
EY Ori	Lause	AN 5902; 5977
" "	Morgenroth	AN 5913
FM Ori	Jensch	AN 6048
δ Ori	Stebbins	ApJ 42.135
" "	Storer	ASP 42.293
" "	Miczaika	AN 6404
π^5 "	Stebbins	ApJ 51.219
AR Pav	Mayall	HA 105.496
AT Peg	Lassovszky	AN 6128; Budapest Mitt 9.10
" "	Lause	AN 6149
AU Peg	Lause	AN 5876
" "	Florja	NNVS 43
AV Peg	Florja	Tashk Publ 4,2.40
" "	Zessewitsch	Tashk Publ 4,2.40
" "	Balázs	AN 6077
" "	Soloviev	NNVS 47
BB Peg	Piotrowski	AAc 2.160; Belgrad Bull 1.13
" "	Nikonov and Dobronravin	Abast Bull 1.13
BF Peg	Lange	Tadjik Ann 1,2.11
" "	Martinoff	Engelh Publ 20.121
BH Peg	Florja	Tashk Publ 4,2.40
" "	Balázs	AN 6285
" "	Lange	Tadjik Ann 1,2.11
BK Peg	Lause	AN 6149; 6293
BN Peg	Jensch	AN 6119
BO Peg	Jensch	AN 6119

Name	Author	References
CG Peg	Jensch	AN 6119
DF Peg	Jensch	AN 6119
DH Peg	Jensch	AN 6119
" "	Balázs	AN 6285
DI Peg	Jensch	AN 6048
" "	Opalski	Belgrad Bull 1.51; Wars Polyt 18
DM Peg	Jensch	AN 6048
AX Per	Lindsay	HB 888
AY Per	Beyer	AN 6091
b^1 Per	Stebbins	ApJ 57.4
SZ Psc	Jensch	AN 6048
X PsA	Hughes	HB 883
UZ Pup	Florja	NNVS 38; Sternb Publ 8,2.26
VV Pup	van Gent	BAN 214
" "	Alden	AJ 958
" "	Mayall	ASP 43.307
" "	Oosterhoff	ASP 47.323; BAN 285
VW Pup	Florja	Sternb Publ 8,2.23
VY Pup	Florja	Sternb Publ 8,2.26
VZ Pup	Florja	NNVS 38, Tafel I; Sternb Publ 8, 2.25; ApJ 86.421
WW Pup	Florja	NNVS 38, Tafel I; Sternb Publ 8, 2.24; ApJ 86.421
" "	Hertzsprung	BAN 293
WX Pup	Florja	NNVS 38, Tafel I; Sternb Publ 8, 2.25; ApJ 86.422
WY Pup	Wesselink	BAN 265
" "	Kruytbosch	BAN 281; ApJ 86.422
" "	Florja	NNVS 38, Tafel I; Sternb Publ 8, 2.24
WZ Pup	Florja	NNVS 38, Tafel I; Sternb Publ 8, 2.24; ApJ 86.422
" "	Hertzsprung	BAN 293
XX Pup	Florja	NNVS 38, Tafel II; Sternb Publ 8, 2.23
XY Pup	Florja	NNVS 38, Tafel II; Sternb Publ 8, 2.31
XZ Pup	Wesselink	BAN 228
YY Pup	Florja	Sternb Publ 8,2.28
ZZ Pup	Florja	Sternb Publ 8,2.30
AB Pup	Florja	Sternb Publ 8,2.33
AC Pup	Florja	Sternb Publ 8,2.35
AD Pup	Wesselink	BAN 265; ApJ 86.422
AE Pup	Zagar	BAN 270
AF Pup	Zagar	BAN 270
AG Pup	Hertzsprung	BAN 281
AH Pup	Hertzsprung	BAN 281
AI Pup	Hertzsprung	BAN 293
AK Pup	Hertzsprung	BAN 293
AL Pup	Hertzsprung	BAN 281
AM Pup	van Hoof	BAN 289
AN Pup	Florja	Sternb Publ 8,2.29
AP Pup	O'Leary	Riverview Publ 1.4

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LIGHT CURVES

Name	Author	References
AQ Pup	O'Leary	Riverview Publ 1.18
AR Pup	O'Leary	Lembang Ann 8.18
AT Pup	O'Connell	Riverview Publ 1.1
AU Pup	O'Leary	Riverview Publ 1.5
" "	Hertzsprung	BAN 299
AV Pup	Florja	Sternb Publ 8,2.26
BB Pup	Florja	Sternb Publ 8,2.104
BC Pup	Mergentaler	BAN 296
BD Pup	Mergentaler	BAN 296
BG Pup	Florja	Sternb Publ 8,2.34
BI Pup	Hertzsprung	BAN 299
BK Pup	Hertzsprung	BAN 299
RZ Pyx	Kaho	Astr Herald 31.45
V 364 Sgr	van Gent	BAN 227; Diss
V 365 Sgr	van Gent	BAN 227; Diss
V 366 Sgr	van Gent	BAN 227; Diss
V 367 Sgr	van Gent	BAN 227; Diss
V 368 Sgr	van Gent	BAN 227; Diss
V 369 Sgr	van Gent	BAN 227; Diss
V 370 Sgr	van Gent	BAN 227; Diss
V 371 Sgr	van Gent	BAN 227; Diss
V 372 Sgr	van Gent	BAN 227; Diss
V 373 Sgr	van Gent	BAN 227; Diss
V 374 Sgr	van Gent	BAN 227; Diss
V 375 Sgr	van Gent	BAN 227; Diss
V 376 Sgr	Ferwerda	BAN 231
V 377 Sgr	Martin	BAN 235
V 378 Sgr	van Gent	BAN 227; Diss
V 379 Sgr	van Gent	BAN 227; Diss
V 380 Sgr	van Gent	BAN 227; Diss
V 381 Sgr	Ferwerda	BAN 231
V 382 Sgr	van Gent	BAN 227; Diss
V 383 Sgr	van Gent	BAN 227; Diss
V 384 Sgr	van Gent	BAN 227; Diss
V 385 Sgr	Ferwerda	BAN 231
V 386 Sgr	Ferwerda	BAN 231
V 387 Sgr	van Gent	BAN 227; Diss
V 388 Sgr	van Gent	BAN 227; Diss
V 389 Sgr	van Gent	BAN 227; Diss
V 390 Sgr	Ferwerda	BAN 231
V 391 Sgr	van Gent	BAN 227; Diss
V 392 Sgr	van Gent	BAN 227; Diss
V 393 Sgr	van Gent	BAN 227; Diss
V 394 Sgr	Ferwerda	BAN 231
V 395 Sgr	Ferwerda	BAN 231
V 396 Sgr	van Gent	BAN 227; Diss
V 397 Sgr	van Gent	BAN 227; Diss
V 398 Sgr	Martin	BAN 235
V 399 Sgr	Ferwerda	BAN 231
V 400 Sgr	van Gent	BAN 227; Diss
V 401 Sgr	Martin	BAN 235
V 402 Sgr	van Gent	BAN 227; Diss
V 403 Sgr	van Gent	BAN 227; Diss
V 404 Sgr	van Gent	BAN 227; Diss
V 405 Sgr	Martin	BAN 235
V 406 Sgr	Ferwerda	BAN 231
V 407 Sgr	van Gent	BAN 227; Diss
V 408 Sgr	Ferwerda	BAN 231
V 409 Sgr	van Gent	BAN 227; Diss
V 410 Sgr	Martin	BAN 235
V 411 Sgr	van Gent	BAN 227; Diss
V 412 Sgr	van Gent	BAN 227; Diss
V 413 Sgr	Ferwerda	BAN 231
" " "	van Gent	BAN 243
V 414 Sgr	Martin	BAN 235
V 415 Sgr	Ferwerda	BAN 231
V 416 Sgr	Ferwerda	BAN 231
V 417 Sgr	Martin	BAN 235
V 418 Sgr	Martin	BAN 235
V 419 Sgr	Ferwerda	BAN 231
V 420 Sgr	Ferwerda	BAN 231
V 421 Sgr	Ferwerda	BAN 231
V 422 Sgr	van Gent	BAN 227; Diss
V 423 Sgr	Ferwerda	BAN 231
V 424 Sgr	van Gent	BAN 227; Diss
V 425 Sgr	Martin	BAN 235
V 426 Sgr	Ferwerda	BAN 231
V 427 Sgr	Martin	BAN 235
V 428 Sgr	van Gent	BAN 227; Diss
V 429 Sgr	Ferwerda	BAN 231
V 430 Sgr	Martin	BAN 235
V 431 Sgr	van Gent	BAN 227; Diss
V 432 Sgr	van Gent	BAN 227; Diss
V 433 Sgr	Ferwerda	BAN 231
V 434 Sgr	Ferwerda	BAN 231
V 435 Sgr	Ferwerda	BAN 231
V 436 Sgr	Ferwerda	BAN 231
" " "	van Gent	BAN 243
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V 439 Sgr	Ferwerda	BAN 231
V 440 Sgr	Mustel	NNVS 44
V 442 Sgr	van Gent	BAN 243
V 443 Sgr	van Gent	BAN 243
V 445 Sgr	van Gent	BAN 243
V 446 Sgr	van Gent	BAN 243
V 447 Sgr	van Gent	BAN 243
V 448 Sgr	van Gent	BAN 243
V 449 Sgr	van Gent	BAN 243
V 450 Sgr	van Gent	BAN 243
V 451 Sgr	van Gent	BAN 243
V 452 Sgr	van Gent	BAN 243
V 453 Sgr	van Gent	BAN 243
V 454 Sgr	van Gent	BAN 243
V 455 Sgr	van Gent	BAN 243
V 456 Sgr	van Gent	BAN 243
V 457 Sgr	van Gent	BAN 243
V 458 Sgr	van Gent	BAN 243
V 459 Sgr	van Gent	BAN 243
V 460 Sgr	van Gent	BAN 243
V 461 Sgr	van Gent	BAN 243
V 462 Sgr	van Gent	BAN 243
V 463 Sgr	van Gent	BAN 243
V 464 Sgr	van Gent	BAN 243
V 466 Sgr	van Gent	BAN 243
V 467 Sgr	van Gent	BAN 243
V 468 Sgr	van Gent	BAN 243
V 469 Sgr	van Gent	BAN 243
V 470 Sgr	van Gent	BAN 243
V 471 Sgr	van Gent	BAN 243
V 472 Sgr	van Gent	BAN 243
V 473 Sgr	van Gent	BAN 243

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LIGHT CURVES

Name	Author	References	Name	Author	References
V 474 Sgr	van Gent	BAN 243	CD Sct	Martin	BAN 235
V 475 Sgr	van Gent	BAN 243	δ Sct	Fath	Lick Bull 479; 487; 501
V 476 Sgr	van Gent	BAN 243			
V 477 Sgr	van Gent	BAN 243	AM Ser	Bigay	BAF 6.29
V 478 Sgr	van Gent	BAN 243	AO Ser	Soloviev	NNVS 52
V 479 Sgr	van Gent	BAN 243	AQ Ser	Lause	AN 6318
V 480 Sgr	van Gent	BAN 243	AS Ser	Soloviev	NNVS 52
V 481 Sgr	van Gent	BAN 243	AB Tau	Nielsen	AN 6328
V 482 Sgr	van Gent	BAN 243	AE Tau	Jensch	KVBB 19.83
V 483 Sgr	van Gent	BAN 243	AM Tau	Jensch	AN 6058
V 484 Sgr	van Gent	BAN 243	AN Tau	Beyer	AN 6217
V 485 Sgr	van Gent	BAN 243	AV Tau	Jensch	KVBB 19.84
V 486 Sgr	van Gent	BAN 243	RS Tri	Lause	AN 6404
V 487 Sgr	van Gent	BAN 243	TX UMa	Rügemer	AN 6166
V 488 Sgr	van Gent	BAN 243	" "	O'Keefe	HB 908
V 489 Sgr	van Gent	BAN 243	UX UMa	Zverev and Kukarkin	NNVS 53; Coelum 8.90
V 490 Sgr	van Gent	BAN 243			
V 491 Sgr	van Gent	BAN 243			
V 492 Sgr	van Gent	BAN 243	Y UMi	Brun	BAF 6.1
V 493 Sgr	van Gent	BAN 243	AH Vel	Hertzsprung	BAN 224
V 494 Sgr	van Gent	BAN 243	AI Vel	Hertzsprung	BAN 224
V 495 Sgr	van Gent	BAN 243	" "	Zagar	BAN 300
V 496 Sgr	van Gent	BAN 243	" "	van Hoof	BAN 300
V 497 Sgr	van Gent	BAN 243	AK Vel	Zagar	BAN 270
V 498 Sgr	van Gent	BAN 243	AL Vel	Hertzsprung	BAN 258
V 499 Sgr	van Gent	BAN 243	AM Vel	Zagar	BAN 270
V 500 Sgr	van Gent	BAN 243	AN Vel	van Hoof	BAN 289
V 501 Sgr	van Gent	BAN 243	AP Vel	O'Leary	Riverview Publ 1.53
V 502 Sgr	van Gent	BAN 243	AQ Vel	Hertzsprung	BAN 281
V 505 Sgr	Hoffmeister	AN 6021	AR Vel	Hertzsprung	BAN 281
" " "	Slonim	AN 6066	AT Vel	Hertzsprung	BAN 299
V 522 Sgr	Ferwerda	BAN 269	AU Vel	Hertzsprung	BAN 299
V 523 Sgr	Ferwerda	BAN 256	AV Vel	Hertzsprung	BAN 299
" " "	Jones	HB 909	AW Vel	Hertzsprung	BAN 299
V 524 Sgr	Jensch	AN 6059	AX Vel	Hertzsprung	BAN 299
V 525 Sgr	O'Connell	Riverview Publ 1.10	" "	O'Leary	Riverview Publ 1.51
V 526 Sgr	O'Connell	Riverview Publ 1.13	AY Vel	Hertzsprung	BAN 299
V 527 Sgr	Uitterdijk	BAN 273	AZ Vel	Hertzsprung	BAN 299
V 630 Sgr	OAA	Kyoto Bull 327	BC Vel	Hertzsprung	BAN 299
" " "	Jacchia	Coelum 6.219	BD Vel	Hertzsprung	BAN 299
" " "	Wyse	ASP 48.304	BE Vel	Hertzsprung	BAN 299
V 675 Sgr	O'Leary	Riverview Publ 1.56	BG Vel	O'Leary	Riverview Publ 1.50
V 725 Sgr	Swope	HA 105.499	AM Vir	Florja	NNVS 44
V 726 Sgr	Mayall	HB 907	AT Vir	Lause	AN 5902, corr. 5904
V 728 Sgr	Uitterdijk	BAN 288	" "	Soloviev	NNVS 51
μ Sgr	Morgan and Elvey	ApJ 88.111	AU Vir	Lause	AN 5902, corr. 5904
KQ Sco	Millman	HB 881	AV Vir	Jensch	AN 6135
V 381 Sco	Swope	HB 902	AW Vir	Jensch	AN 6135
V 383 Sco	Swope	HB 902	AX Vir	Jensch	AN 6135
V 393 Sco	O'Leary	Riverview Publ 1.58	BB Vir	Jensch	AN 6153
μ^1 Sco	Leavitt	HA 84.169	AT Vul	Lause	AN 5977
" "	Maury	HA 84.169	" "	Slonim	Tashk Bull 2.34
" "	Elvey	ApJ 87.555	AW Vul	Pagaczewski	AAb 2.24
" "	van Gent	BAN 322	" "	Himpel	AN 6253, Tafel 3
UV Scl	Hertzsprung	BAN 293	AZ Vul	Florja	NNVS 45
UW Scl	Hertzsprung	BAN 293	BN Vul	Grigorieva	NNVS 54
BX Sct	Harwood	ApJ 86.425	BO Vul	Nassau	AJ 1109
CC Sct	Martin	BAN 235	BV Vul	Bigay	BAF 5.125

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