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vations based on stars in the Astronomische Gesellschaft catalogs were reduced by first obtaining the star places for 1936.0, using the catalog precessions and secular variations, and then solving for the position of the comet. The position was then corrected for the available proper motions of the reference stars, and, where AG stars were used, a small correction for the differential precession was added to the position in the sense NEWCOMB minus catalog.

The method of reduction was that described by L. J. COMRIE in *B. A. A. Journal*, Vol. 39, pp. 203-209.

U. S. Naval Observatory,
Washington, D. C.

TRIGONOMETRIC PARALLAXES

DERIVED FROM PHOTOGRAPHS TAKEN WITH THE TWENTY-INCH REFRACTOR OF THE VAN VLECK OBSERVATORY

(Third List)

BY CARL L. STEARNS

These parallaxes were determined from photographs taken with the 51-cm. (20-inch) visual refractor of the Van Vleck Observatory of Wesleyan University, using a Wratten number 12 "minus blue" filter. Until November, 1930, Cramer Isochromatic plates were used; from November, 1930, to January, 1936, Wratten and Wainwright Panchromatic plates; and after January, 1936, Eastman I-G plates.

No.	Name	R. A. (1900)	Decl. (1900)	Magn.	Proper Motion			Relative Parallax and P. E.		No. of Plates	Comp. Stars
					Catalogue		Obs. in X				
					Total	In X					
		h m	° ′		″	″	″	″	″		
101	BD+2°348	2 7.4	+ 3 10	10.8	2.58	−1.89	−1.756	+0.100	±0.007	41	3
102	Ross 34	3 22.3	+37 3	10.6	1.58	+1.12	+1.127	+ .032	7	27	5
103	BD+41°750A	3 40.2	+41 9	8.2	1.40	+0.70	+0.604	+ .027	8	27	6
104	BD+41°750B	3 40.2	+41 9	8.8	1.40	+0.70	+0.588	+ .029	8	27	6
105	Ross 587	4 2.2	+33 22	*10*	0.58	+0.56	+0.524	+ .067	5	30	6
106	Ross 592	4 13.4	+36 15	*10*	0.59	+0.13	+0.215	+ .003	9	22	6
107	BD+18°734	4 42.8	+18 33	6.79	0.44	+0.19	+0.184	+ .015	11	24	6
108	BD+34°927	4 51.3	+34 7	8.0	0.60	+0.57	+0.566	+ .046	13	25	4
109	Ross 794	4 55.1	+24 44	*11*	0.44	+0.19	+0.217	+ .029	14	23	6
110	Ross 48	5 36.8	+ 7 22	*10*	0.48	−0.38	−0.342	+ .023	7	32	5
111	BD+2°1085	5 49.3	+ 2 8	9.1	0.66	+0.063	+0.037	+ .062	7	24	4
112	BD+19°1185	5 57.3	+19 23	9.0	0.91	+0.66	+0.682	+ .022	7	34	3
113	*η Geminorum*	6 8.8	+22 32	Var.	0.064	−0.062	−0.063	+ .010	9	24	4
114	Ross 614	6 24.3	− 2 44	*11*	0.97	+0.73	+0.734	+ .250	12	23	4
115	BD−0°1520	6 53.5	− 0 20	9.3	0.72	+0.37	+0.326	+ .024	6	31	4
116	Ross 390	7 30.1	−10 10	*10*	0.63	+0.32	+0.434	+ .018	7	27	5
117	9 *Puppis*	7 47.1	−13 38	5.34	0.344	−0.060	−0.053	+ .066	10	29	3
118	Wolf 1059	7 54.3	+29 18	*11*	0.53	0.00	−0.007	+ .041	11	27	6
119	BD−15°2546	8 36.2	−15 59	9.4	0.63	+0.39	+0.357	+ .037	12	34	5
120	BD+7°2031	8 43.1	+ 6 51	10.3	0.56	+0.21	+0.258	+ .034	9	24	4
121	BD−12°2889	9 20.2	−12 31	9.1	0.93	+0.76	+0.571	+ .001	8	33	4
122	BD−11°2741	9 46.2	−11 49	9.8	1.85	+1.19	+1.131	+ .084	13	21	6
123	BD−0°2326	10 15.7	− 0 58	8.9	0.68	−0.66	−0.632	− .010	14	29	4
124	BD+46°1635	10 25.5	+46 3	8.8	0.84	−0.60	−0.549	+ .071	10	25	3
125	BD+40°2442	11 31.3	+39 45	*10.1*	0.59	+0.43	+0.432	+ .029	9	32	4
126	BD+2°2538	12 20.5	+ 1 51	8.8	0.48	0.00	−0.014	+ .047	10	28	5
127	Ross 484	13 13.9	− 2 33	*10*	0.71	−0.67	−0.637	+ .039	14	26	4
128	BD−7°3856	14 25.6	− 8 12	9.3	1.26	−1.25	−1.283	+ .004	11	34	4
129	BD+6°2932	14 38.4	+ 6 15	10.2	0.92	−0.92	−0.891	− .049	9	29	4
130	BD+32°2547	15 3.6	+32 48	10.8	0.51	−0.17	−0.141	+ .016	12	35	4

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The plates were taken by F. SLOCUM, B. W. SITTERLY, N. W. STORER, and the writer. The measuring for fifteen fields was done by H. M. FRENCH, for one field by C. H. KNAPP, and for fourteen fields by the writer. The computing was done by RACHEL E. BULKLEY, H. M. FRENCH, C. H. KNAPP, and C. T. VAN VLIET.

The magnitudes in the fifth column are taken from the Henry Draper Catalogue when possible, and italics in this column indicate photographic magnitudes. For stars No. 113 and 117, the catalogue proper motions in the sixth and seventh columns are taken from Boss' *Preliminary General Catalogue;* for No. 111, from a list published by BOHRMANN and SCHLIER in *Astronomische Nachrichten*, volume 242, page 57; and for the others, from *Publications of the Cincinnati Observatory* No. 20.

This list of parallaxes is a continuation of those published in *Astronomical Journal*, volume 40, page 143, and volume 44, page 148.

Van Vleck Observatory, Wesleyan University,
Middletown, Conn.,
May 25, 1937.

PRELIMINARY REPORT ON LIGHT ELEMENTS OF CERTAIN ECLIPSING VARIABLES.

RAYMOND S. DUGAN AND FRANCES W. WRIGHT

Some preliminary results of an investigation of variable periods of eclipsing variables with the aid of the Harvard Photographic library may be given. Variation of period has been confirmed in eighteen out of twenty-six cases studied, but the published sine terms and parabolic terms are found to be of only temporary applicability. Elements that should serve well for prediction of minima of some of these stars in the near future are:

XZ *And*	2426480.038+1.35728 E
SV *Cam*	26949.375+0.593076 E
ZZ *Cas*	27951.061+1.243527 E
SV *Cen*	27567.796+1.659948 E
WW *Cyg*	26270.838+3.317692 E
RR *Dra*	28209.419+2.831109 E
SW *Lac*	23372.780+0.3207156 E
RS *Sgr*	23477.968+2.41568 E
V526 *Sgr*	27639.642+1.919435 E
	27256.561+1.919379 E
RW *Tau*	26313.483+2.768814 E

For the following stars with variable periods the elements published in *SAC* No. 15 will suffice: WZ *And*, R *CMa*, TW *Cas*, U *CrB*, SW *Cyg*, CO *Lac*, RV *Lyr*, TY *Peg*. No sure evidence of variation of period has been found for AR *Lac* or for the following stars for which, however, new elements are suggested:

WY *Cep*	2425123.076+1.249056 E
UZ *Dra*	19429.300+1.630652 E
SZ *Her*	18495.407+0.8180963 E
CM *Lac*	27026.316+1.6046917 E
Z *Vul*	25456.117+2.454926 E

There is some evidence that the period of UZ *Dra* is to be doubled.

SS *Lac*, as reported on in *Astronomical Journal* No. 1031, shows no sensible variation from the elements 2415900.76+14.41629 E, although there is a difference of two days between the intervals primary to secondary and secondary to primary minima.

The elements 2418110.788+2.73389 E (*A. J.* No. 1043) satisfy the observations of V337 *Aql* over the interval covered by the plates.

In only two cases, V526 *Sgr* and CO *Lac*, has it been possible to establish any difference in the periods of the primary and secondary minima. In CO *Lac* the secondary minimum is coming at present so near the half-period point that separate elements are not necessary. On the other hand, it is clearly established in a number of cases that the secondary minimum remains sensibly fixed in position relative to the primary minimum.

Princeton University Observatory,
June 29, 1937.

CONTENTS

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