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FORTY ECLIPSING BINARIES PROBABLY WITHIN 100 PS FROM
 THE SUN WITH UNKNOWN TRIGONOMETRIC PARALLAXES

Dealing with the problem of distances of eclipsing binaries the writer found that forty eclipsing variables with so far unknown trigonometric parallaxes are within 100 ps of the Sun. The distances were found by using a new method of determination of photometric parallaxes of eclipsing binaries. The general idea of this new method is given in the writer's paper (Acta Cosmologica 2, 1973, in press).

The data necessary for the computations of photometric parallaxes were taken from the following sources: Eggen (MN 84, No.5, 1967) Koch, Plavec and Wood (Publ.Pennsylvania,Astr.Ser.X. 1970), Kordylewski (Roczn.Astr.Obs.Krakow,1973.Int.Suppl. 44.1972), Kukarkin et al. (GCVS 1969; First Suppl. 1971), Mauder (Astr.Aph.17,1) and Tschudovitshev (Kazan Bull. 28.1952). The stars are listed in the Table. The consecutive columns contain the name of the star, the photometric parallax with its mean error.

Name	π_f	m.e.	Name	π_f	m.e.	Name	π_f	m.e.	Name	π_f	m.e.
($\alpha\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)	($\alpha\alpha\alpha$)
RT And	10	± 2	RW Dor	35	± 10	AM Leo	10	± 3	SZ Psc	11	± 4
S Ant	10		BV Dra	16	5	TZ Lyr	13	2	UV Psc	12	6
OO Aql	10	2	CM Dra	16	4	FL Lyr	11	2	TY Pyx	18	8
WW Aur	13	1	YY Eri	18	2	TY Men	15	4	W Ser	13	3
HS Aur	11	5	BZ Eri	10	8	V502 Oph	11	1	TY Tau	10	4
ZZ Boo	12	3	Z Her	11	2	V566 Oph	13	2	CD Tau	15	2
WY Cnc	15	5	AW Her	12	2	V839 Oph	12	4	XY Uma	11	4
EX Car	10	4	GK Hya	14	5	V1010 Oph	12	3	AW Uma	13	2
RR Cen	11	1	AR Lac	19	3	LX Per	17	8	AH Vir	11	2
V636 Cen	11	4	XY Leo	16	4	AE Phe	16	5	ER Vul	17	2

In my opinion, trigonometric parallaxes for these 40 stars should be determined in the first term. This would allow to verify the calculated photometric parallaxes and, on the other hand, it would considerably amplify the material for further investigation of the physical properties of eclipsing systems.

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