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MINIMA OF ECCENTRIC ECLIPSING SYSTEMS  
OBSERVED FROM MT. SUHORA

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**Observatory and telescope:**

Three different instruments from Mt. Suhora Observatory ([www.as.up.krakow.pl](http://www.as.up.krakow.pl)) were used. Tel-1: 60 cm Zeiss telescope (detector at primary focus), Tel-2: 20 cm Ritchey-Chrétien, and the portable Tel-3: 3 cm wide-field objective.

**Detector:**

Tel-1: Apogee Aspen C47, Tel-2: SBIG-ST10XME, Tel-3: Atik 314L

**Method of data reduction:**

Reduction of the CCD frames was made in the usual way using CMUNIPACK<sup>1</sup> package.

**Method of minimum determination:**

The minima times were computed with Kwee & van Woerden (1956) method and a digital implementation of the tracing paper method (Szafranec, 1948).

**Times of minima:**

Star name	Time of min. HJD 2400000+	Error	Type	Filter	Rem.
AG Ari	57267.5364	.0006	II	R	
BW Boo	57373.6051	.0003	I	V	
EQ Boo	56742.523 :		I	V	TP
EQ Boo	57128.4153	.0005	I	V	
WW Cam	57389.2219	.0001	I	V	
WW Cam	57390.3412	.0002	II	V	
AS Cam	57134.4299	.0004	II	V	
AS Cam	57345.6019	.0002	I	V	
OO Cam	56210.46 :		II	V	TP
OO Cam	56742.3389	.0023	I	V	
OO Cam	57091.4563	.0009	I	V	

<sup>1</sup>Webpage: ([c-munipack.sourceforge.net](http://c-munipack.sourceforge.net))

<b>Times of minima:</b>					
Star name	Time of min. HJD 2400000+	Error	Type	Filter	Rem.
V361 Cam	56496.5450		I	R	TP
V361 Cam	56522.504		I	R	TP
V361 Cam	56643.536		I	R	TP
V361 Cam	56980.253 :		I	R	TP
V469 Cam	56369.5266	.0010	II	V	TP
V469 Cam	56666.3427	.0002	II	V	
V469 Cam	56696.4014 :		I	V	TP
AR CMa	57391.4453	.0006	II	V	
DR CMi	56739.349 :		I	V	TP
OX Cas	56097.4406	.0001	II	V	
OX Cas	57368.2814		I	V	
PV Cas	56481.3943	.0001	II	V	
PV Cas	56571.5077	.0001	I	V	
PV Cas	57161.4176	.0003	I	V	
PV Cas	57266.4436	.0004	I	V	
PV Cas	57532.5135	.0003	I	V	
PV Cas	57658.5486	.0001	I	V	
V381 Cas	57354.5380	.0004	I	V	
V381 Cas	57388.5507	.0004	II	V	
V744 Cas	56482.4226	.0001	I	V	
V775 Cas	57185.4691	.0050	I	V	
V785 Cas	57331.5490	.0002	I	V	
V785 Cas	57335.4840	.0005	II	V	
V799 Cas	56997.5077	.0002	I	V	
V821 Cas	56985.3438	.0005	II	V	
V821 Cas	57176.4811	.0006	II	V	
V821 Cas	57376.4595	.0002	II	V	
V1018 Cas	55927.5371	.0001	I	V	
V1018 Cas	56581.4052	.0041	II	V	TP
V1018 Cas	56930.602 :		I	V	TP
V1066 Cas	56581.5534	.0036	II	V	TP
V1066 Cas	56585.3143	.0030	I	V	
V1103 Cas	57388.2775	.0004	I	V	
V1137 Cas	56441.4969	.0020	II	V	
V1137 Cas	56645.2754	.0089	II	V	
V1137 Cas	56938.4949	.0006	I	V	
V1141 Cas	56586.460		I	V	
CO Cep	56498.4453	.0012	II	R	TP
CO Cep	56587.1898	.0010	I	R	TP
CW Cep	56996.4418	.0002	I	V	
CW Cep	57299.3821	.0006	I	V	
EK Cep	57134.5466	.0002	I	V	
EK Cep	57267.381	.005	I	V	
EY Cep	56671.2250		II	V	
V397 Cep	57135.5546	.0050	II	V	
V397 Cep	57136.5084	.0008	I	V	
V397 Cep	57352.5742	.0003	II	V	
V731 Cep	56320.3967	.0001	II	V	DKW
V731 Cep	57376.2982	.0002	II	V	

<b>Times of minima:</b>					
Star name	Time of min. HJD 2400000+	Error	Type	Filter	Rem.
V743 Cep	56177.560	.012	I	V	
V743 Cep	56219.595	.005	I	V	
V743 Cep	56892.4423	.0050	I	V	
V881 Cep	56967.3013	.0007	I	V	
V881 Cep	57373.3699	.0004	I	V	
V881 Cep	57387.3735	.0006	I	V	
V897 Cep	57099.307 :		II	V	TP
V898 Cep	56766.391		II	V	
V898 Cep	56858.373 :		II	V	TP
V898 Cep	57389.2621	.0003	I	V	
V919 Cep	56966.5539	.0007	I	V	
V919 Cep	57254.5283	.0002	II	V	
V919 Cep	57255.4670	.0002	I	V	
V922 Cep	56867.4754 :		II	V	TP
V922 Cep	56965.4884	.0002	I	V	
V922 Cep	57396.5752	.0003	II	V	
Y Cyg	56542.4057	.0001	II	R	
Y Cyg	56569.3803	.0001	II	R	
MY Cyg	57646.4763		II	V	
V477 Cyg	57267.3605	.0003	II	V	
V478 Cyg	57123.5766		II	V	
V490 Cyg	56246.3910	.0001	I	V	DKW
V490 Cyg	56889.4749	.0001	I	V	
V490 Cyg	57125.5026	.0005	I	V	
V796 Cyg	57122.5626	.0003	I	V	
V796 Cyg	57254.3589	.0003	I	V	
V2544 Cyg	57256.3846	.0002	II	V	
V2647 Cyg	57096.6573 :		I	V	TP
V2647 Cyg	57098.5856 :		II	V	TP
BY Del	56615.3340	.0060	I	V	
BF Dra	57097.236 :		I	V	TP
CM Dra	57391.6303	.0001	I	V	
NS Dra	56649.32	.61	I	V	
V410 Gem	57387.6370	.0009	II	V	
V410 Gem	57389.3844	.0002	I	V	
V994A Her	56188.3700	.0010	I	V	BD
KW Hya	56267.6201	.0001	I	V	DKW
OZ Hya	57388.6050	.0010	I	V	
CO Lac	56888.4539	.0003	I	V	
MZ Lac	56964.5589	.0001	I	R	
V340 Lac	56615.5438 :		I	V	TP
V398 Lac	56502.3980	.0034	I	V	TP
V398 Lac	56580.3261	.0056	II	V	TP
RU Mon	55142.9028	.0007	I	V	IU
AO Mon	57364.5876	.0007	I	V	
AO Mon	57365.5506	.0003	II	V	
V521 Mon	57388.5675	.0003	I	V	

<b>Times of minima:</b>					
Star name	Time of min. HJD 2400000+	Error	Type	Filter	Rem.
V451 Oph	57137.4936	.0007	I	V	
BK Peg	57648.4353 :	.0001	II	V	
AG Per	57639.5209	.0005	I	R	
AG Per	57641.5486	.0001	I	V	
AG Per	57642.5134	.0001	II	V	
IM Per	57332.4937	.0006	I	V	
IM Per	57643.5776	.0002	I	V	
IQ Per	51912.3225	.0001	II	V	DKW
IQ Per	51932.4087	.0004	I	V	
IQ Per	57297.3766	.0004	I	V	
IQ Per	57332.2478	.0003	I	V	
NO Per	57390.5915	.0007	I	V	
V751 Per	57386.5054	.0003	I	V	
V370 Sge	56826.367 :		II	V	TP
V370 Sge	57139.573 :		I	V	TP
V413 Ser	56160.4185		II	V	
V1260 Tau	57388.2578	.0004	I	V	
V1260 Tau	57391.2628	.0006	II	V	
PS UMa	56431.516 :		I	V	SZ
BP Vul	56175.4753	.0001	II	V	DKW
BP Vul	57246.5443	.0001	II	V	
DR Vul	56483.4675	.0001	II	V	
DR Vul	57220.4809	.0005	I	V	
DR Vul	57352.2874	.0005	II	V	
FQ Vul	56499.5237	.0020	II	V	TP
FW Vul	57221.4807	.0003	II	V	
V491 Vul	56857.3449 :		I	V	TP
V495 Vul	57246.4241	.0002	I	V	
V495 Vul	57391.1996	.0001	II	V	

<b>Explanation of the remarks in the table:</b>
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Times of minima determined by the digital tracing paper method are marked by 'TP'. ':' marks uncertain. 'DKW', 'BD', 'IU' and 'SZ' mark observations made by D. Koziel-Wierzbowska, B. Dyduch, I. Ulman and S. Zola respectively.
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