

New Times of Minima of Some Eclipsing Binary Systems

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We present photometric and CCD photometric minima observations of 6 eclipsing binary systems as shown in Table 1. Table 2 presents the derived minima times computed using Kwee and Van Woerden method (1956).

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Table 1. Observational instruments

Observer	Telescope	Detector
Waki	7.5cm refractor	CCD (SBIG ST7E)
Narusawa (a)	60cm Cassegrain reflector ¹⁾	PMT (AES PCPA-2)
Narusawa (b)	60cm Cassegrain reflector ¹⁾	CCD (SBIG ST6)
Ishitsuka	60cm Cassegrain reflector ¹⁾	The Near Infrared Camera ²⁾

1): Nishi-Harima Astronomical Observatory, 2): cf. Ishitsuka et al. (2000)

Remarks; 1) U Cep has been well-known for the changes in the shape of light curve at primary minima (e.g. Olson 1980). We did not observe such anomalies at this night.

2) cf. Waki and Narusawa (2000).

References

Kwee K.K., Van Woerden H. 1956, BAN 12, 327

Ishitsuka J.K., Wada T., Ieda F., et al. 2000, Annu. Rep. Nishi-Harima Astron. Obs. 10, 21

Olson E.C., 1980, ApJ241, 257

Waki Y., Narusawa S. 2000, Proceedings of Workshop on Binary and Variable Star Study (held at Shiga, Japan) p.76 (Text in Japanese)

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Table 2. Estimated times of the observed primary minima

Star	Min.HJD (2450000+)	Error(\pm)	Type of Minimum	Filter Name	Observer(s) Star(s)	Comparison	Remarks
U Cep	1734.1531	1	I	V	Waki	SAO 179	1), 2)
VW Cep	1747.0622	9	II	B	Waki	SAO 9837	2)
	.0628	7		V			
	.061	1		R			
	1747.1994	4	I	B	Waki	SAO 9837	2)
	.198	1		V			
	.1993	5		R			
AI Dra	0976.0395	9	I	U	Narusawa(a)	SAO 30200	
	.0398	7		B			
	.040	2		V			
XZ UMa	1643.1406	6	I	V	Waki	GSC 3429:621	2)
DN UMa	0177.220	1	II	B	Narusawa (b)	SAO 43946	
	.228	1		V			
	.225	3		no			
	0197.133	6	I	B	Narusawa (b)	SAO 43946	
	.140	4		V			
	.142	3		I			
RS Vul	1668.1833	5	I	V	Waki	SAO 87027	2)
	.186	1		H	Ishitsuka	SAO 87027	