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UBV PHOTOMETRY OF THE W UMa STAR V839 OPHIUCHI

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Name of the object:						
V839 Oph = HD $166231 = BD + 09^{\circ}3584$						
Equatorial coordinat	es:	Equinox:				
R.A. = $18^{h}09^{m}21.27$ DEC. = $+09^{\circ}09'03.6$		2000.0				
Observatory and telescope:						
51-cm Cassegrain telescope of Biruni Observatory at Shiraz University, Shiraz, Iran						
Detector:	Unrefrigerated RCA4509 photomultiplier tube					
Filter(s):	U, B and V filters of Johnson system					
Transformed to a standard system: No						
Comparison star(s):	$BD + 09^{\circ}3589 = HD \ 166414$					
Check star(s):	$BD + 09^{\circ}3573 = HD \ 166015$					
Availability of the data:						
Upon request						
Type of variability:	W UMa					

Remarks:

In this paper we present UBV light curves of V839 Oph, which was discovered to be a W UMa type system by Rigollet (1947). The observations were made during the summer of 2000 (for five nights) with U, B and V filters. The phases of the observations were calculated using the linear part of the light elements given by Akalin & Derman (1997):

 $HJD_{min I} = 2449536.38555 + 0.4090041886 \times E.$

Times of minima were determined by Kwee and Van Woerden (1956) method. Table 1 presents the derived times of minima in Heliocentric Julian Date (I for primary and II for secondary) and also O - C were calculated with respect to linear (l), quadratic (q) and sinusoidal (s) ephemeris. The derived light and color curves for U, B and V filters are illustrated in Figure 1.



Figure 1. The light and color curves of V839 Oph

Minima times and $O - C$ of V839 Oph						
JD Hel.	Min	Error	$(O-C)_l$	$(O-C)_q$	$(O-C)_s$	
2400000 +			. ,	. , 1	. ,	
51745.4208	Ι	± 0.0004	-0.0076	-0.0015	-0.0033	
51783.2533	II	± 0.0021	-0.0081	-0.0020	-0.0030	

Inima times and $O - C$ of V839 Op

Acknowledgements:

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References:

Akalin, A., Derman, E., 1997, A&AS, 125, 407 Kwee K.K., van Woerden H., 1956, Bull. Astr. Inst. Neth., 12, 327 Rigollet, A., 1947, *l'Astronomie*, **61**, 54