

COMMISSION 27 OF THE I. A. U.
 INFORMATION BULLETIN ON VARIABLE STARS
 Number 943

Konkoly Observatory
 Budapest
 1974 November 15

MULTI-COLOUR PHOTOMETRY OF V1216 SAGITTARII

The flare star V1216 Sgr was observed photoelectrically using the 24" Cassegrain reflector of the Ruhr-University of Bochum at La Silla (ESO), Chile. The photometer used is a one channel type with computer controlled filter switching. Since the switching time lowered the detection efficiency, the instrument has been operated just in two colours. In practice this is accomplished by two subsequent observations, the first measurement is done with an U-filter followed by an observation either in B, or V, or H_β respectively.

Once each five seconds data from the blue-sensitive photomultiplier are stored in the computer's memory which has been adjusted of retaining up to 45 minutes of data. After this time the data are subject to be printed when the maximum of the intensity shows a departure from the steady level of greater than 0.1 magnitudes.

The transformation from the instrumental to standard UBV-system has been determined by differential measurements.

The mean standard magnitude of one recommended comparison star of Andrews (1968, IBVS No.265) has been used. This star with the code letter d has nearly the same colour as V 1216 Sgr, thus extinction does not affect seriously the amount of

$$m_{\text{Sgr}} - m_d,$$

whereas the difference of the differences

$$\Delta m = (m_{\text{Sgr}} - m_d)_{\text{UBV-Standard}} - (m_{\text{Sgr}} - m_d)_{\text{Instrument}}$$

contains the transformation to the standard system.

Thus, we have

		U	B	V
Andrews (IBVS No.265,1968)	$m_{\text{Sgr}} - m_d$	= 0.2	0.2	-0.15
this report		= 0.3	-0.2	-0.06

Except in B the deviation from the standard system is equal or less than 0^m.1.

The result that may be drawn can be summarized as

V 1216 Sgr		U	B	V
	m	= 12.8	12.1	10.1

Error rate : ± 0^m.1

Below the peak magnitudes of the total number of events are listed and presented along with four light curves (Fig.1 and Fig.2) of the most significant events.

Table
Flares of V1216 Sgr

Date June, 1974	U.T. Max	U Δm	B Δm	H β Δm	V Δm
14.	3 ^h 21 ^m	>1			<0.1
15.	2 57	1.45			<0.1
17.	4 08	1.34	0.13		
21.	2 36	0.67	0.09		
	5 23	1.07	0.11		
22.	2 55	1.43	0.17		
23.	4 17	1.20		0.18	
28.	7 32	1.77		0.89	

Total Observing Time : 54^h

G. FEIX
Ruhr - Universität
Bochum, Astron. Inst.
463 Bochum, FRG

Fig. 1.

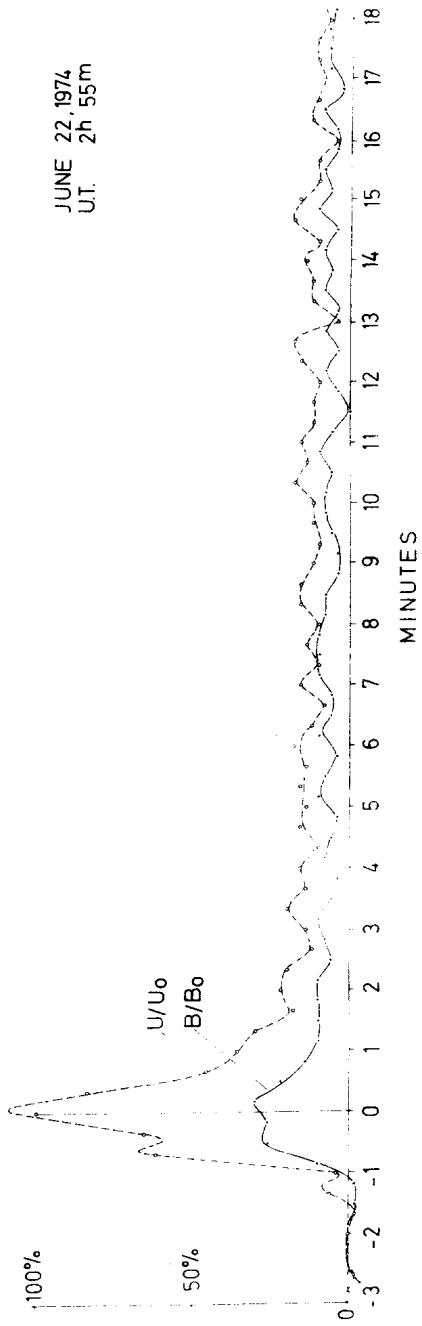


Fig. 2.

