

COMMISSION 27 OF THE I. A. U.  
 INFORMATION BULLETIN ON VARIABLE STARS  
 NUMBER 379

Konkoly Observatory  
 Budapest  
 1969 September 15

FLARE PHOTOMETRY OF V1216 SAGITTARII

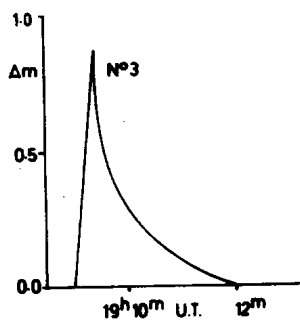
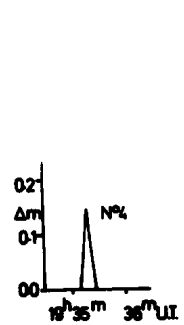
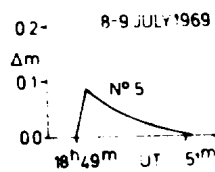
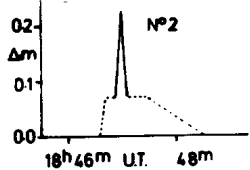
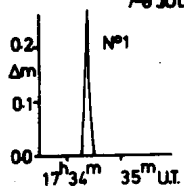
As part of the flare star observing programme at Boyden Observatory, observations were made on V1216 Sagittarii (R.A.  $18^{\text{h}}47^{\text{m}}.7$ , Decl.  $-23^{\circ}32'$ , visual magnitude 10.5) over the period 4th to 17th July, 1969. The monitoring time and flares are indicated in the following table, twelve flares being recorded over a monitoring time of  $25^{\text{h}}11^{\text{m}}$ .

MONITORING TABLE OF V1216 SAGITTARII

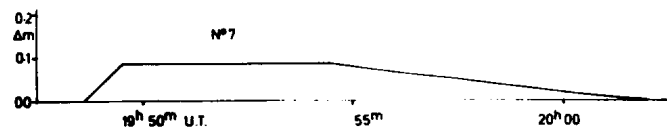
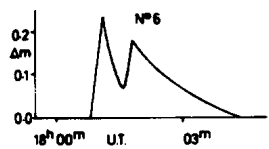
DATE 1969 July	U. T.	TOTAL HOURS PER NIGHT	FLARE NO.	U. T. OF FLARE	$\Delta_m$	DURATION (MINS)
4	$18^{\text{h}}53^{\text{m}}-19^{\text{h}}39^{\text{m}}$	$0^{\text{h}}46^{\text{m}}$	-	-	-	-
6	$19\ 42\ -20\ 19$	0 37	-	-	-	-
7	$17\ 28\ -21\ 57$	4 29	1	$17^{\text{h}}34^{\text{m}}25$	0.27	0.25
			2	18 46. 5	0.23	2.0
			3	19 09. 0	0.88	3.0
			4	19 35.25	0.15	0.25
8	$17\ 20\ -21\ 55$	4 35	5	18 48. 0	0.09	2.0
9	$17\ 51\ -20\ 08$	2 17	6	18 01.75	0.24	3.75
			7	19 48. 5	0.09	13.5
10	$17\ 25\ -20\ 27$					
	$20\ 37\ -20\ 55$	3 20	8	17 48. 0	0.24	3.75
11	$17\ 14\ -20\ 57$	3 43	9	18 23.54	0.10	0.5
			10	18 36. 1	0.13	0.3
16	$17\ 00\ -19\ 37$					
	$19\ 49\ -19\ 58$	2 46	-	-	-	-
17	$17\ 10\ -19\ 48$	2 38	11	19 35. 0	0.21	11.3
			12	18 31. 0	0.15	0.6
TOTAL		$25^{\text{h}}11^{\text{m}}$				

The instrument used in this work was the 40 cm. Nishimura Reflector fitted with a standard Johnson B. Filter. As a detector we used a solid CO<sub>2</sub> cooled E.M.I. 6256 photo-multiplier tube. The observing conditions were extremely good and particularly noteworthy are the relatively long duration low intensity minor flares, designated Nos. 7 and 11.

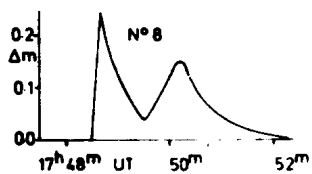
7-8 JULY 1969



9-10 JULY 1969



10-11 JULY 1969



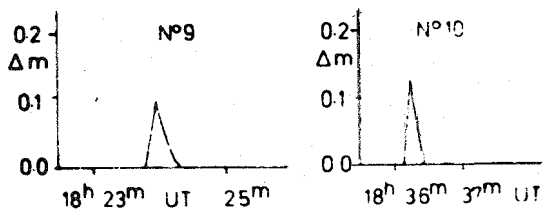
As previously remarked on by Andrews (1966), it is apparent that there is a tendency for flares to occur within a few hours of one another - also there is further evidence of the two day interval previously suspected from observations of V1216 Sagittarii.

For example - the interval between flares are as follows:

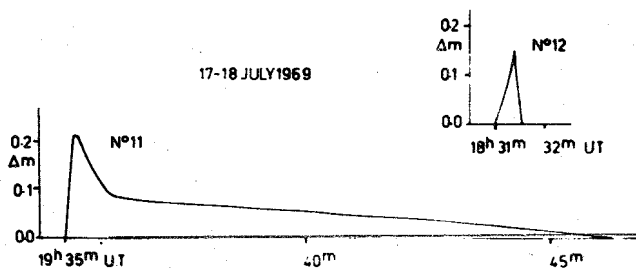
1 + 6 - 47 <sup>h</sup> 38 <sup>m</sup> 0 <sup>s</sup>	3 + 7 - 48 <sup>h</sup> 35 <sup>m</sup> 35 <sup>s</sup>	7 + 10 - 46 <sup>h</sup> 47 <sup>m</sup> 56 <sup>s</sup>
3 + 6 - 46 48 45	5 + 8 - 45 13 10	8 + 11 -145 47 1
		8 + 12 -144 43 0

(for the last two flare intervals, the difference is nearly 144 hrs. i.e. 3 x 48 hrs.)

11-12 JULY 1969



17-18 JULY 1969



Reference: Andrews, A.D. 1966. PASP 78, 542.

5th September, 1969

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