

COMMISSIONS 27 AND 42 OF THE IAU  
INFORMATION BULLETIN ON VARIABLE STARS

Number 4491

Konkoly Observatory  
Budapest  
13 June 1997

*HU ISSN 0374 - 0676*

**MORE FLARES OF HY ANDROMEDAE**

The flare star HY And was found by Sharov and Alksnis (1975) on two plates taken on 1973 September 7/8 with the 80 cm Schmidt telescope of the Radioastrophysical Observatory and with the 50 cm Maksutov telescope of the Sternberg Astronomical Institute (Crimean Laboratory).

We inspected about 250 and 1100 plates obtained during 1975–1996 with the Schmidt and the Maksutov telescope, respectively.

On 42 best plates taken with the Schmidt telescope, HY And was identified and its brightness in quiescent state was estimated in the range  $B = 19.5 - 20.3$ , with the average value  $B = 19.9$ . The scatter can be attributed to the random error of estimates near the limiting magnitude of the plates used.

The variable in quiescent state is not seen on plates taken with the Maksutov telescope (limiting magnitude  $B = 18.5 - 19.5$ ).

Three more flares of HY And were found. Data on all of them, including slightly revised data for the first one, are listed in Table 1.

Table 1

Date	JD	$B$
1973 Sep 7-8	2441933.484	18.8
	.505	18.2
	.545	(18.6
1982 Sep 26-27	2445239.310	18.8
1984 Nov 17-18	2446022.344	(19.5
	.377	18.8
1996 Jul 14-15	2450279.490	18.9

For light estimates of HY And, magnitudes of comparison stars based on photoelectric sequences for Nova 30 (Arp, 1956) and for the Field IV of M31 (Baade and Swope, 1963) were used. Equatorial coordinates (from the Schmidt plate taken on JD 2441933.505) and magnitudes of six comparison stars are given in Table 2.

The position of HY And was measured on the same plate and on film copies made from glass copies of POSS O- and E-plates. The coordinates of HY And are  $\alpha = 0^{\text{h}}39^{\text{m}}47^{\text{s}}.87$ ,  $\delta = 41^{\circ}23'49''.2$  (1950.0, for the mean epoch 1963.7).

Table 2

No.	$\alpha_{1950}$	$\delta_{1950}$	$B$
1	0 <sup>h</sup> 9 <sup>m</sup> 56 <sup>s</sup> .10	41°23'09".5	17 <sup>m</sup> 1
2	0 39 56.68	41 22 29.7	18.0
3	0 39 56.17	41 23 21.9	18.2
4	0 39 53.37	41 24 07.8	18.5
5	0 39 45.86	41 23 09.3	18.9
6	0 39 50.98	41 23 54.0	19.6

The available plates with the images of HY And do not, however, provide reliable proper motion of the star.

Positions of comparison stars given in Table 2 might be useful for future efforts to determine the proper motion of HY And.

This study was supported in part by the Russian Foundation for Basic Research through grant 95-02-03942.

A. ALKSNIS  
 Radioastrophysical Observatory  
 Latvian Academy of Sciences  
 Akademijas laukums 1  
 Riga LV-1050, Latvia

A.S. SHAROV  
 Yu.A. SHOKIN  
 N.M. EVSTIGNEEVA  
 Sternberg Astronomical Institute  
 13, Universitetskii prospect  
 Moscow 119899, Russia

#### References:

- Arp, H.C., 1956, *Astron. J.*, **61**, 15  
 Baade, W., Swope, H.H., 1963, *Astron. J.*, **68**, 435  
 Sharov, A.S., Alksnis, A.K., 1975, *Astron. Tsirk.*, No. 873, 3