

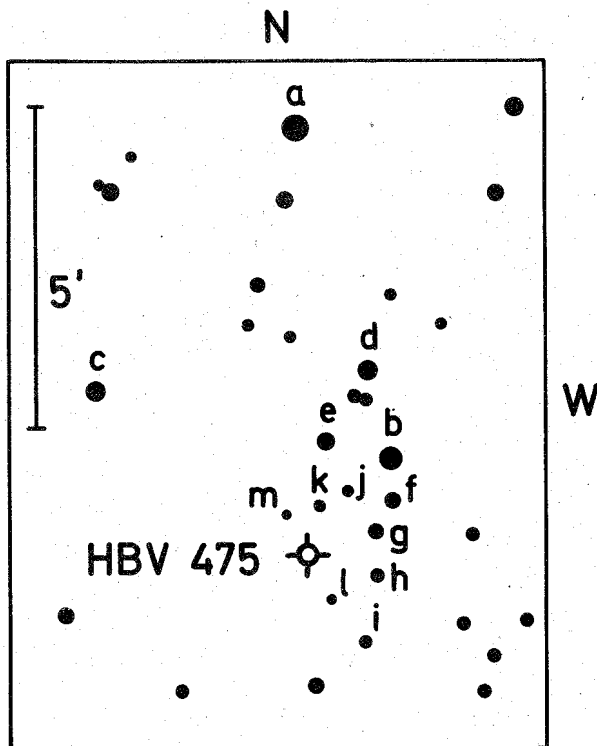
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HBV 475: A NEW PECULIAR EMISSION OBJECT IN CYGNUS

On an objective-prism plate (Schmidt-camera, 800/1200/2400, 4°-prism, 580 Å/mm at H_{γ}) obtained on Aug.10/11, 1969, a star with very bright $H\alpha$ -line has been found. Its coordinates are:

$$RA_{50} = 20^h49^m02^s.56, \quad D_{50} = +35^{\circ}23'36.8''.$$



Direct photographs in August and September show that this object is about 2 mag. brighter, both in the blue and red region, compared with the Palomar Sky Atlas prints (see Table 1). Blue magnitudes were estimated using the photoelectric sequence in NGC 6913 (Ref. 1). The preliminary

Table 1

Plate No.	Date	B
PSA 0 279	1951 July 8/9	14 ^m 5
PSA 0 288	1951 July 12/13	14.2
GS 4364	1969 Aug. 22/23	12.4
GS 4433	1969 Sep. 19/20	12.6

Table 2

Star	B	Star	B
a = BD +35°4294	11 ^m 1	g	14 ^m 5
b = BD +35°4290	11.5	h	15.9
c	12.1	i	16.2
d	12.7	j	16.2
e	13.5	k	16.6
f	14.4	l	17.6:
		m	17.7:

examination of old plates indicates that before 1951 this star could have been fainter than 14^m5. Other measurements of its brightness would be therefore desirable. For that reason the identification chart with comparison stars, blue magnitudes of which have also been referred to NGC 6913, is presented.

Objective-prism spectra of HBV 475 in the region $\lambda\lambda$ 3600-6600 Å show a very strong H α line, strong Balmer series H β - H γ and He I 5876, moderate [O III] 5007 and [Ne III] 3869, and faint He II + [Fe II] 5412-14, He I + [Fe II] 4471, perhaps also He I 3820 and O III 3444. The continuum is rather strong in red and violet.

There exist some similarities in the increase of brightness and in spectral characteristics between HBV 475 and the well-known emission object V 1016 Cyg (MH α 328-116), which lead to the suspicion that both stars could belong to the same type of objects.

REFERENCE

1/ A.A. Hoag, H.L. Johnson, B. Iriarte, R.I. Mitchell, K.L. Hallam, S. Sharpless, Publ. Naval Obs. Vol XVII, Part VII (1961).

Hamburg-Bergedorf Observatory
25 September, 1969

L. KOHOUTEK

(on leave from the Astronomical Institute
of the Czechosl. Academy of Sciences,
Praha)