

VARIABLE STAR
BULLETIN

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OBSERVATIONS OF THE ECLIPSE OF IP Peg
IN 1985

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During the maximum of IP Peg in the beginning of November, 1985, the eclipse was caught on November 3 by visual and photographic observations. Visual observations were made by Akita and Kato with 25cm and 20 cm reflectors respectively. Photographic observations were made by Fujino with 31cm Wright Schmidt telescope with Tri-X film and yellow-green filter which gives the brightness very close to visual magnitude.

The results are shown in Figure 1. The times of heliocentric minimum are obtained by respective observers as follows.

Observer	HJD 2446373+	$\theta - C$
Akita	0.066	-0 ^d .002
Kato	0.065	-0 .003
Fujino	0.066	-0 .002

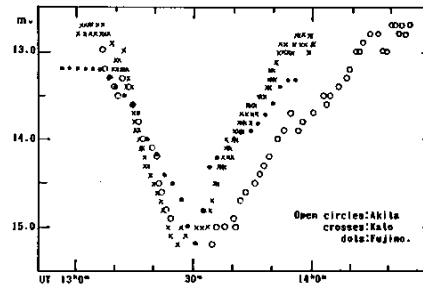


Fig. 1. Observed eclipse on Nov. 3, 1985.

$\theta - C$ is calculated using the following elements obtained by Goranskij, Orlovsky and Rahimov (1985).

$$m = \text{HJD } 2445933.4094 + 0^d.15820764E$$

The shapes of light curve are slightly different by observers, but it is almost certain that the decrease and increase are non-uniform as was shown in the paper above cited. However, there were not much difference in brightness at the beginning and the end of eclipse, contrary to the fairly large difference reported in the above paper.

Reference:

Goranskij, V.P., Orlovsky, E.I. and Rahimov, V.Yu., 1985, IBVS No. 2653.

OBSERVATIONS OF ECLIPSE OF IP Peg
IN 1986

S.Fujino (Hamamatsu)

During the maximum of IP Peg on November 29, 1986, an eclipse was caught by photographic observations. The instruments are same as described in the preceding paper.

The time of minimum is determined as

HJD 2446754.0203

and the O-C with the elements by Goranskij, Orlowsky and Rahimov (1985) becomes $-0^d.0119$. This value is greater than the O-C value obtained in November 1985 (preceding paper).

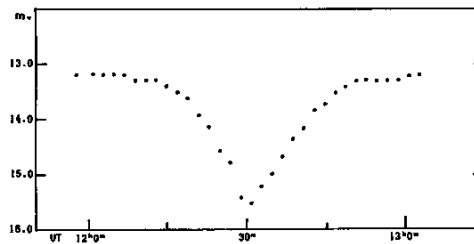


Fig. 1. Observed eclipse on Nov.29,1986.

Reference: see preceding paper.

A NEW RED VARIABLE IN CYGNUS

M.Huruhata (Gotenba)

On photographs taken around δ Cyg since 1978, a new red variable was found. The light variation is sometimes rather irregular, but it seems to be SRC type. The position is

α : $19^h50^m06^s$, δ : $+44^\circ 13' 9''$ (1950.0)

The star is measured on more than four hundred photos taken by the 18cm camera and Kodak Tri-X films with yellow green filter which gives the brightness very close to visual magnitude. The light curve in only recent years is shown in Figure 1. The elements in last eight years are,

Max. = J.D.2443820 + 198^dE

The range was $11^m.8 - 13^m.1(v)$ so far.

The O-C's for fifteen observed maxima are shown in Table 1 and Figure 2. The values are fairly large and have cyclic change which indicates the existence of overtones of not small amplitude.

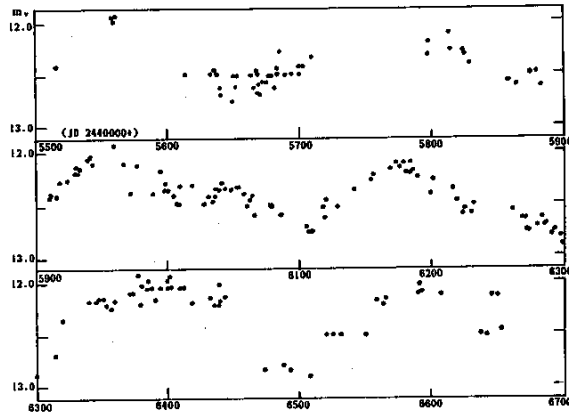


Figure 1. Light variation since 1983.

Max.	E	O-C	Max.	E	O-C
JD 2440000+			JD 2440000+		
3810	0	-10 ^d	5430:	8	+26 ^d :
4010	1	- 8	5560	9	-42
4220	2	+ 4	5810:	10	+10:
4460	3	+48	5960	11	-38
4650	4	+38	6175	12	-21
4850	5	+40	6390	13	- 4
5010	6	+ 2	6590	14	- 2
5220	7	+14			

Table 1. O-C values.

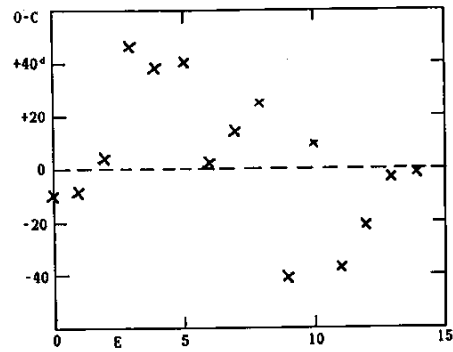


Figure 2. O-C values.

The finding chart is shown in Figure 3, with visual magnitudes (decimal points omitted) of comparison stars measured by the writer. Another red variable at 7' south of this star is V1767 Cyg which was discovered by the writer (IBVS No.2400, 1983).

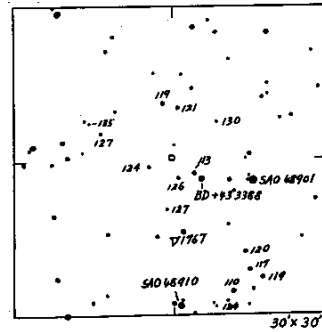


Figure 3. Finding chart.

PERIODICITY OF V1152 CYGNI

M.Huruhata (Gotenba)

This star was detected by W.J.Miller (1967), and was classified as Lb type with amplitude 13.0 - 14.3p. The star was in the field of 280 photos taken since 1979, centered at CI Cyg with f50 and f85cm cameras. Tri-X films with yellow-green filter were used to get v magnitude.

The results are shown in Figure 1. The variation is fairly irregular, but the periodicity of about 170 days can be recognized. The star would be SR type, and the following elements are obtained.

$$\text{Max.} = \text{J.D.}2444150 + 170^d \text{ E}$$

The range was 11.0 - 12.3(v) so far, having almost same amplitude as the photographic results by Miller. The colour index is thus as big as +2m. The star would possibly be late type around M.

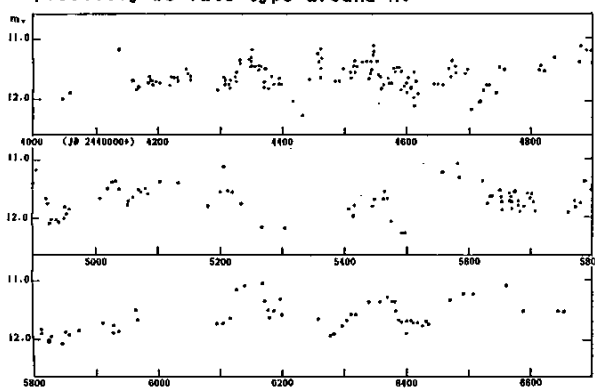


Figure 1. Variation of V1152 Cyg in 1979-1986.

Reference:

Miller, W.J., 1967, Rich. Astr., 7, 7, 10.

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