

VARIABLE STAR BULLETIN

No. 4

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SOME NEW IN VARIABLES IN ORION NEBULA

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During the study of nebular variables in Orion, three new variables were found. Their positions are as follows.

	R. A. (1950)	Decl.
No.1 (Par. No.2033)	5 ^h 32 ^m 59 ^s	-5° 29'.4
No.2 (NSV 2378)	5 33 24	-5 10 .0
No.3	5 34 58	-5 35 .7

Positions of No.1 and No. 2 are taken from respective catalogs. Par No. is from P. Parenago (1954).

Observations were made by 18 cm and 25 cm Schmidt cameras with Tri-X film and yellow-green filter to get v magnitude.

Star No.1 is measured on nearly 250 photos taken from 1982 to 1987, and the range was 11.5 - 12.9 m_v.

Star No.2 is also measured on nearly 250 photos and the range was 12.2 - 12.9 m_v.

Star No.3 is measured on about 130 photos taken in 1984 - 87, and the range was 14.5 - <15.5 m_v.

In Figure 1 and 2 are shown the variation of stars No.1 and No.2 respectively in recent three observational years. Figure 3 is of star No.3 in the same years.

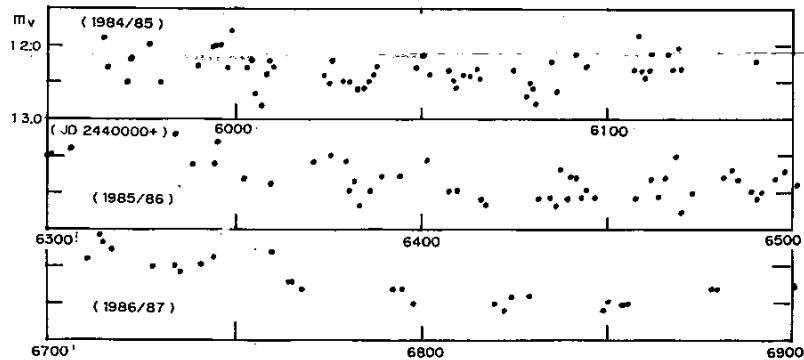


Fig.1. Par.No.2033

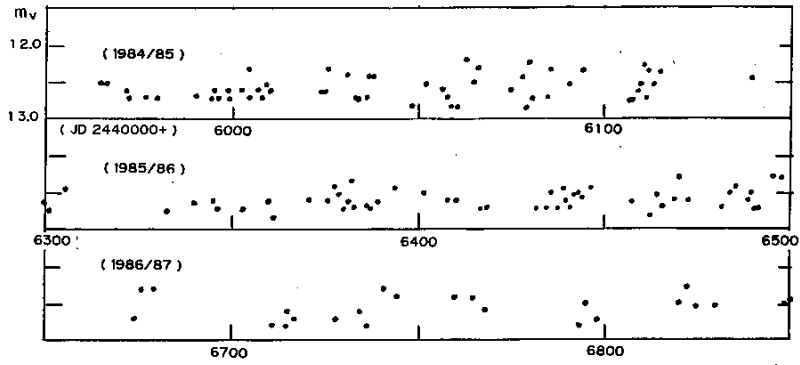


Fig.2. NSV 2378

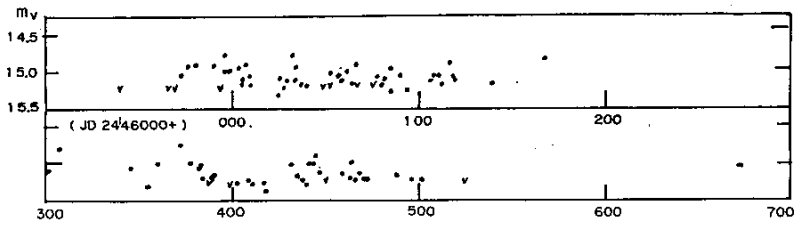


Fig.3. Star No.3 in 1984-87.

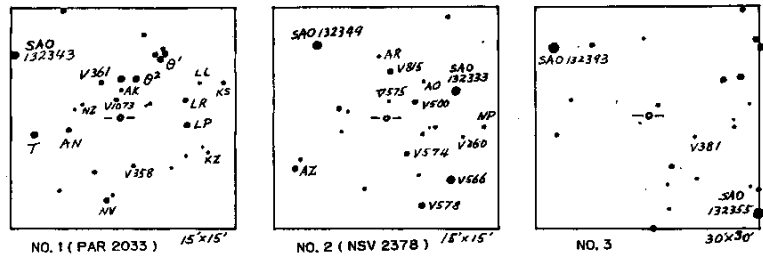


Fig.4. Finding charts.

Reference:
 Parenago, P., TRUDY, Sternberg Astr. Inst., 25, 1954.

OBSERVATIONS OF ECLIPSE OF IP PEGASI

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An eclipse during the super maximum of UGSS star IP Peg was observed on Nov. 16, 1987, by Koshiro visually with 30 cm reflector and by Fujino photographically with 31 cm Schmidt camera. The both results are in good agreement as are shown in Figure 1, and the time of minima is determined as HJD 2447115.9993. The O-C with the elements by Goranskij et al. (1985) is $-0^d.0119$. (The elements were cited in Bulletin No.2,5.)

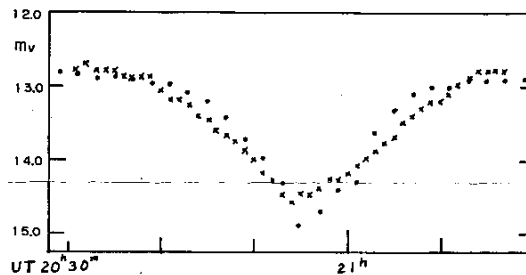


Fig.1. Eclipse of IP Peg on Nov.16,1987.
(Crosses by Koshiro and dots by Fujino.)

Reference:

Goranskij,V.P.,Orlowsky,E.I., and Rahimov,V.Yu.,1955, IBVS No.2653.

VISUAL OBSERVATIONS OF MINIMA OF IP PEGASI

M.Iida (Nagano)

During the supermaximum of IP Peg in November, 1987, the following minima of eclipsing were observed by visual observations. Each minimum is determined with more than 40 estimations. In the table, heliocentric times of minima and the O-C's with elements by Goranskij et. al.,(1985) are shown.

Date	Obs. Min.	O - C

	HJD 2440000+	
Nov. 16	7115.9987	$-0^d.0129$
17	7117.1063	$-0 .0127$
20	7119.9545	$-0 .0122$
22	7122.0114	$-0 .0120$
23	7122.962	$-0 .011$

Reference:

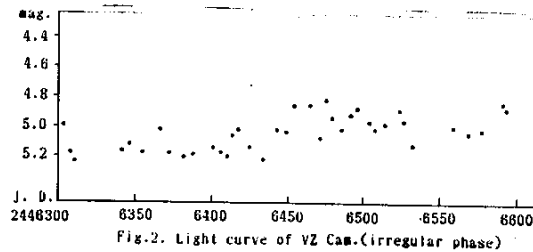
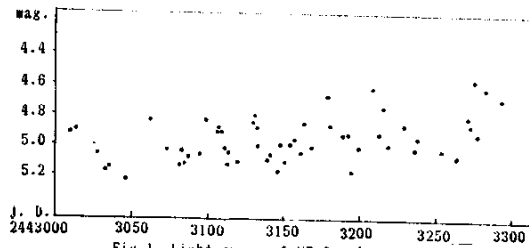
Goranskij,V.P.,Orlowsky,E.I., and Rahimov,V.Yu.,1985, IBVS No.2653.

VISUAL OBSERVATIONS OF VZ Cam

S.Sakuma (Kawasaki)

The variability of VZ Cam was found by Stebbins and Huffer (1930). Visual observations of brightness in 1943 - 1945 were reported by Ashbrook (1948). He found the semiregular variation having the amplitude from 4.8 to 5.2 and the cycles 19 to 36, average 23.7 days. He pointed out that so short a mean cycle for the M-type semiregular variable is very unusual - only rho Per and EY Car are known.

I made visual observations in 1967 -1968, and I continued to observe since 1975 till 1986. According to my 692 estimations, I obtained almost the same with the Ashbrook's observation. That is, this star exhibits two types of light variation. In Figure 1 is shown rather clear cyclic variation of almost same period given by Ashbrook, while in Figure 2 are shown irregular and smaller variations.



References:

- Stebbins and Huffer, 1930, Washburn Obs. Pub. 15, 148, 160.
- Ashbrook, J., 1948, Astr. J., No. 1173, pp 14-16.

VARIABLE STAR OBSERVERS LEAGUE
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