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

Number 4344

Konkoly Observatory
Budapest
20 May 1996

HU ISSN 0374 – 0676

NEW VARIABLE STARS IN THE 66 OPHIUCHI FIELD

This paper continues the series of studies dealing with the search of new variables based on Moscow collection of plates. Nine new variables were discovered in the field $10° \times 10°$ centered on 66 Oph (Var 25–33).

The variables were estimated on plates taken on JD 2442812–2448092. The data on the new variable stars are presented in Tables 1–3. Finding charts and phased light curves are shown in Figures 1 and 2. The standard sequence near NGC 6426 was used to obtain the magnitudes of comparison stars (Shugarov, unpublished).

Remarks on individual stars

Var 25. Not present or very faint on the Palomar blue print. The star was seen on 14 plates. Three outbursts were observed. Their duration is more than 6 but less than 28 days (Figure 3). Outbursts (JD 24...):

1	42957.338	15.40	42957.499	15.14	2	44131.297	15.68
	42957.370	15.35	42961.323	15.35			
	42957.403	15.35	42961.499	15.46	3	48090.305	14.93
	42957.437	15.40	42963.332	15.63		48091.305	15.29
	42957.469	15.14	42963.505	15.57		48092.427	15.32

Var 30. Periods about 486 and 242 days are possible (Figure 2 for Var 30). Epoch JD 2443282. Red on Palomar prints. The star is a strong enough IRAS source.

Var 31. Double. Very close, non-coloured southwestern component is present on Palomar prints, but the image on our plates is single. It is possible that the neighbouring star was estimated in minima.

Var 32. RRb type.

Var 33. The cycle of variability is about $70-80^d$. Minimum brightness varies (Figure 4).

Table 1. Coordinates and Identifications of Variable Stars

Var	α(2000.0)	δ(2000.0)	GSC	IRAS
Var 25	$18^h04^m17^s.3$	$4°43'44''$		
Var 26	18 12 30.1	8 36 35	1009.1098	18101+0835
Var 27	18 13 26.6	8 52 28	1009.0361	18110+0851
Var 28	18 04 15.0	6 04 13		
Var 29	17 50 56.0	7 18 27		
Var 30	18 07 07.9	8 22 46	1008.1326	18047+0822
Var 31	18 02 16.6	8 56 56	1008.0492	
Var 32	18 04 34.4	8 19 49		
Var 33	18 05 25.1	8 15 09	1008.1491	

Table 2. Data on New Variable Stars

Var	N	Type	Max	Min	$M-m$	Max, JD	Period
Var 25	234	UG	15.00	< 21.0			
Var 26	225	M	13.80	< 17.3		2448090.3	$269^{d}.1$
Var 27	229	SRa	13.40	15.60	0.35	2445203.3	156.8
Var 28	228	RRab	14.90	16.50	0.12	2443726.32	0.438655
Var 29	223	RRab	15.20	17.10	0.12	2442951.35	0.438333
Var 30	231	SRa	14.30	16.50			
Var 31	233	M	13.30	16.10:		2443987.5	200.0
Var 32	229	RRab	14.00	15.00	0.30	2444397.41	0.638544
Var 33	234	SRb	13.90	16.50			

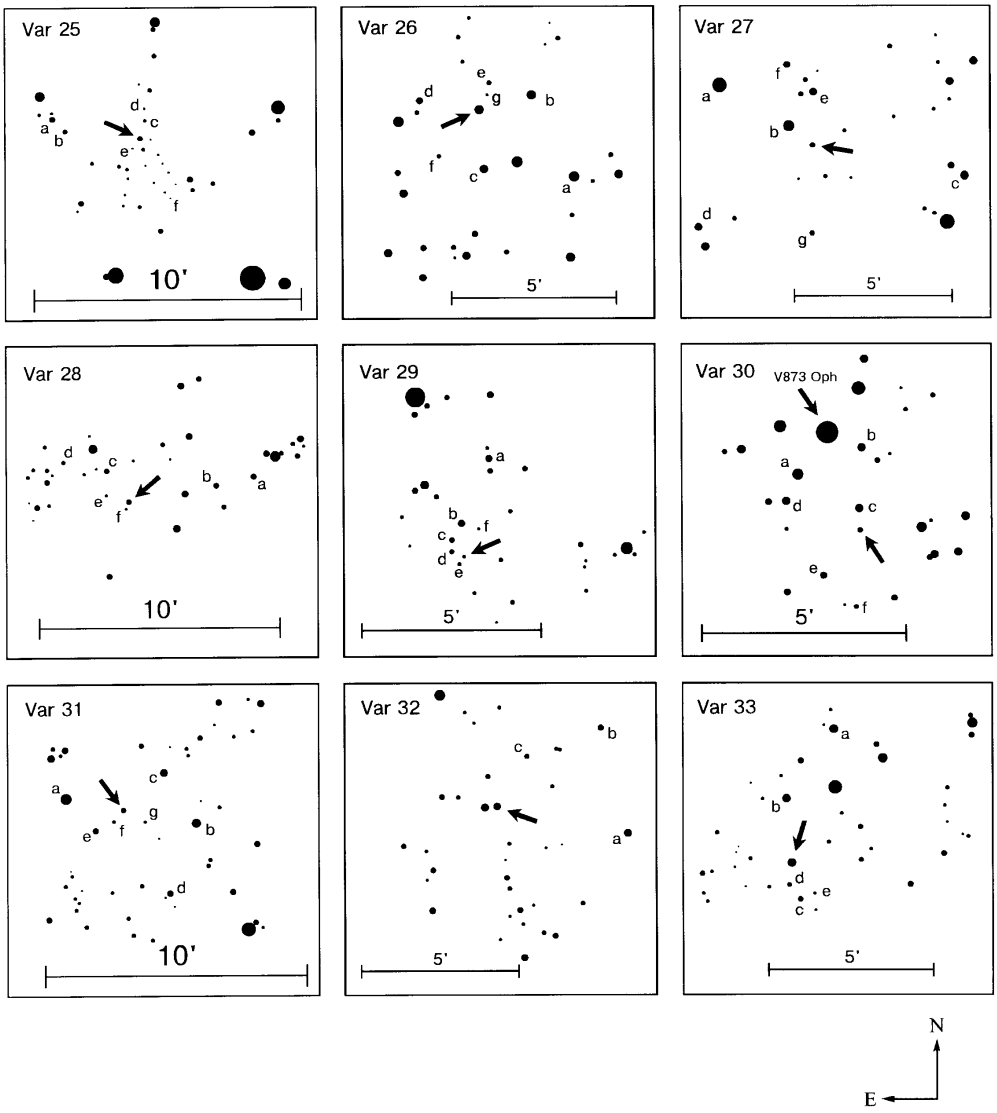

Figure 1. Finding charts

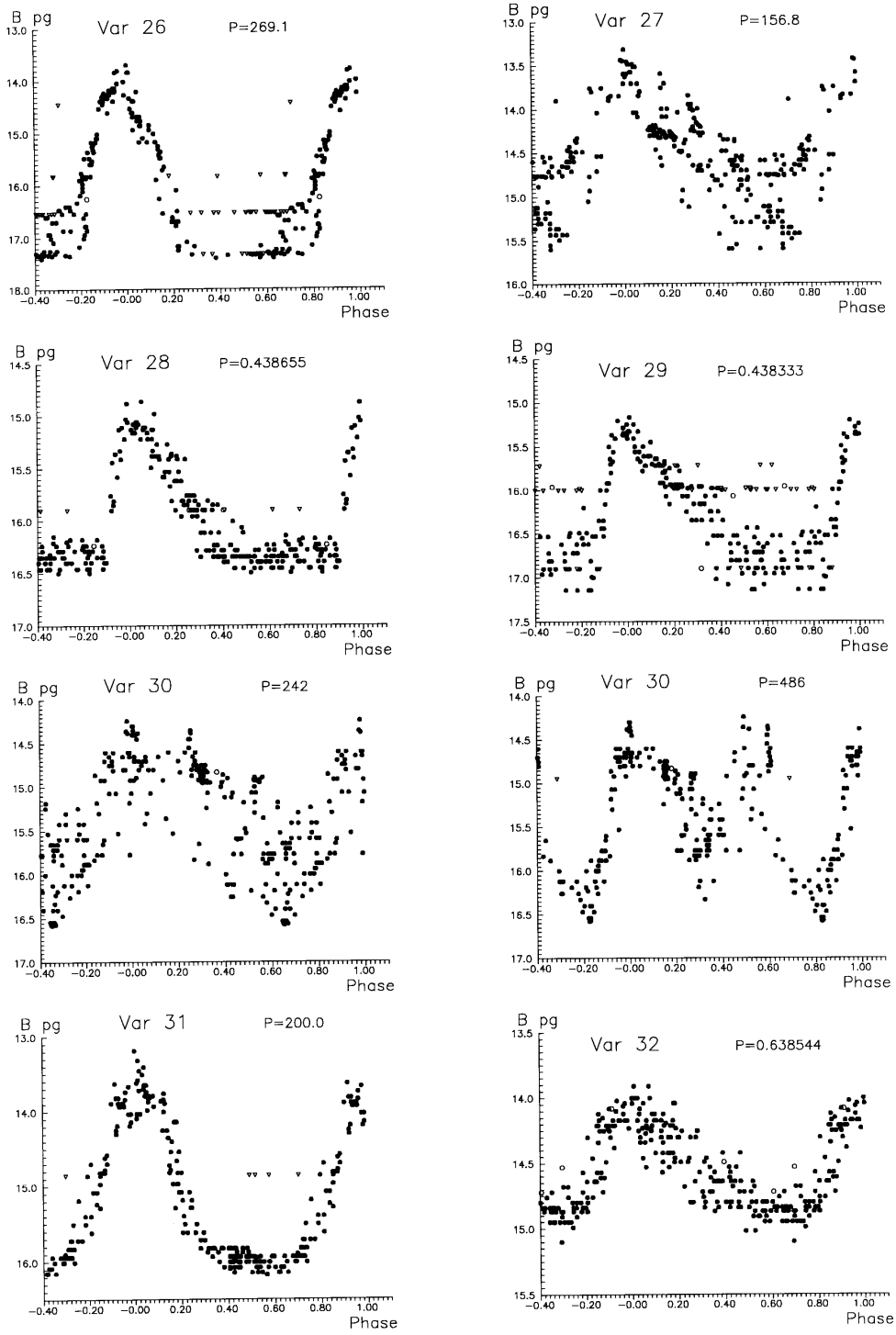

Figure 2. Light curves

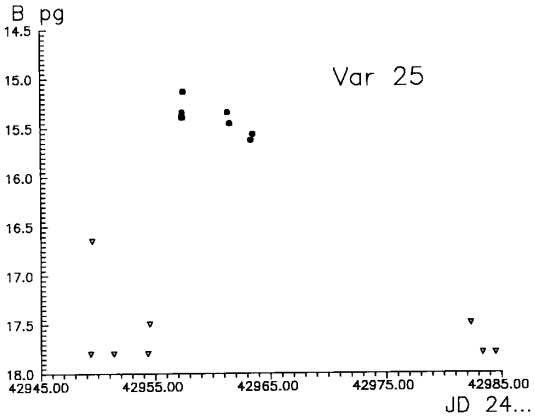

Figure 3. Light curve of Var. No. 25

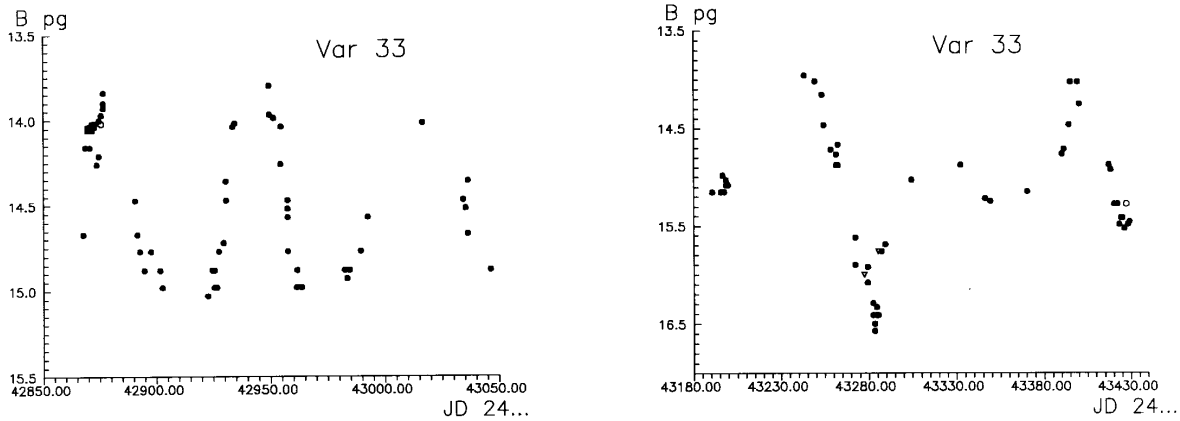

Figure 4. Light curve of Var. No. 33

Table 3. Comparison Stars

Var	a	b	c	d	e	f	g
Var 25	14.82	15.18	15.74	16.65	17.50	17.82	
Var 26	13.71	13.84	14.45	15.26	15.83	16.54	17.33
Var 27	12.82	13.38	13.66	14.14	14.38	14.93	15.55
Var 28	14.88	14.98	15.16	15.44	15.90	16.46	
Var 29	15.05	15.45	15.72	15.98	16.90	17.50	
Var 30	13.80	14.43	14.85	14.94	16.12	16.82	
Var 31	12.80	13.46	13.93	14.46	14.86	15.94	16.16
Var 32	13.91	14.34	15.10				
Var 33	13.84	14.06	15.08	15.76	16.57		

S.V. ANTIPIN
Sternberg Astronomical Institute
13, Universitetskij Prosp.,
Moscow 119899, Russia