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NINE NEW VARIABLES IN THE 66 OPHIUCHI FIELD

This paper continues the study begun in my previous publication (Antipin, 1996). Nine more new variables were discovered in the field 10° × 10° centered on 66 Oph (Var 34–42). This study is based on Moscow collection plates taken with the 40 cm astrograph in Crimea.

The data in Tables 1–4 contain information on the new variables. Figures 1, 2 and the photometric standard are as in the previous paper.

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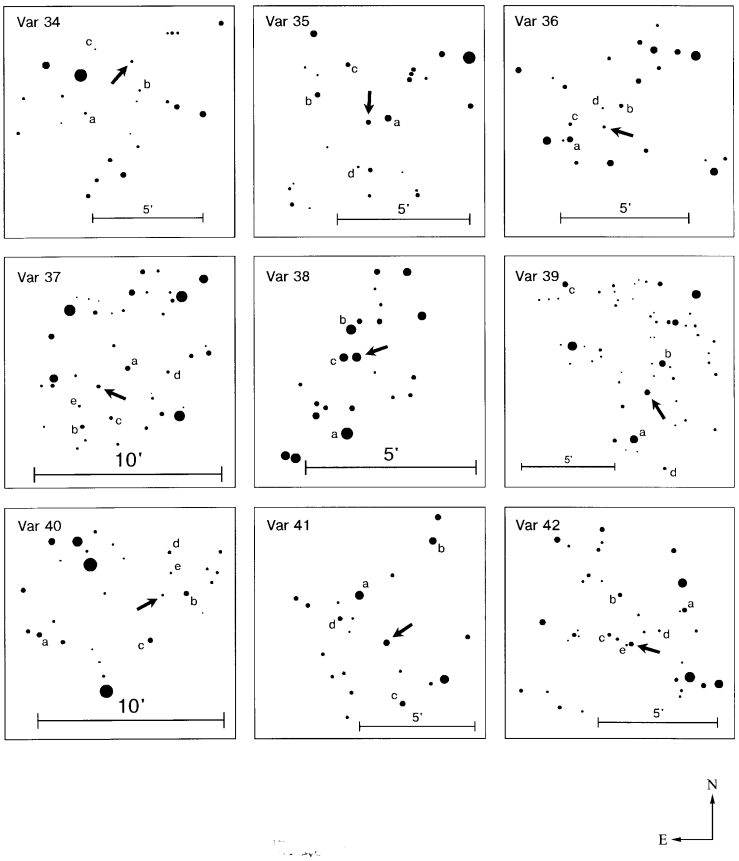

Figure 1. Finding charts

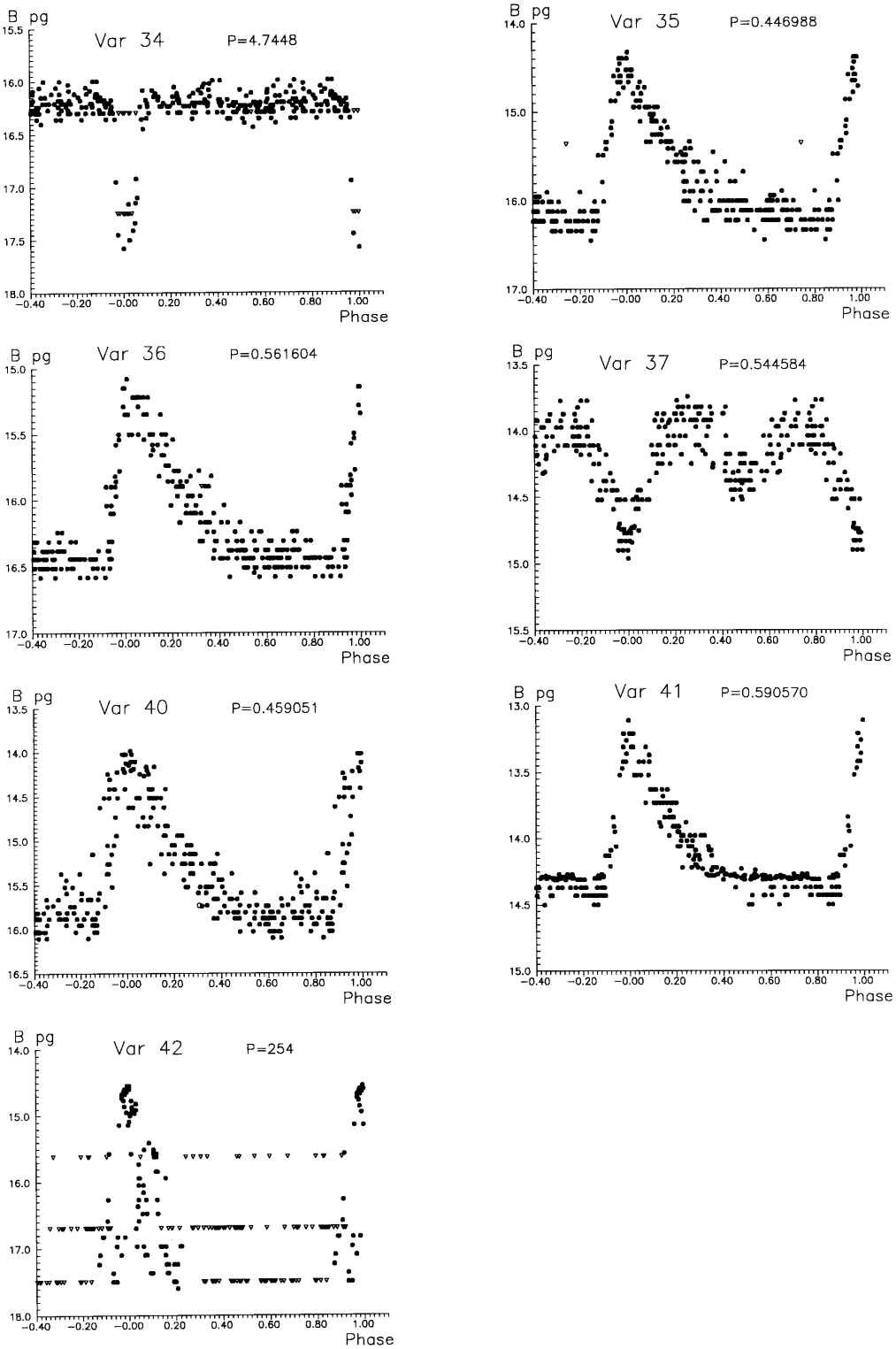

Figure 2. Light curves

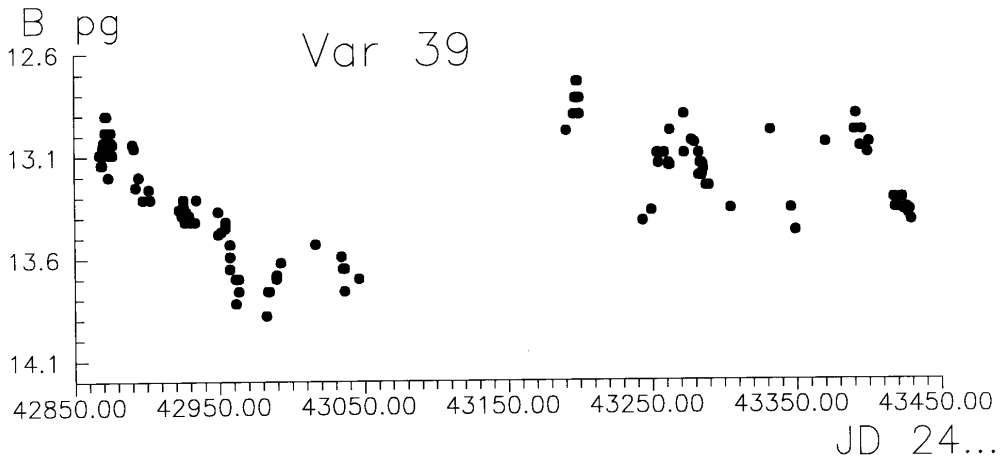

Figure 3. Light curve of Var. No. 39

Remarks on individual stars

Var 37. *Min II* 14.50.

Var 38. Red, fast enough, irregular variable.

Var 39. Red on Palomar prints. The fragment of the light curve is given in Figure 3.

Var 42. Very unstable light curve. Maximum brightness varies. The identification with IRAS catalog is uncertain. The difference between coordinates from IRAS and those based on GSC stars is about 16″.

Table 1. Coordinates and Identifications of Variable Stars

Var	α(2000.0)	δ(2000.0)	GSC	IRAS
Var 34	$17^h52^m19^s.5$	3°37′49″		
Var 35	17 59 44.7	8 31 50		
Var 36	18 01 02.5	8 43 36		
Var 37	18 01 48.9	8 35 45	1008.1752	
Var 38	18 05 48.5	7 27 40	442.0118	18033+0727
Var 39	18 07 09.4	7 20 10	442.0113	18047+0719
Var 40	18 13 52.5	9 04 40		
Var 41	18 18 34.6	8 05 41	1010.2541	
Var 42	18 12 48.3	7 52 31		18103+0751 ?

Table 2. Data on New Variable Stars

Var	N	JD24...	Type	Max	Min	$M-m$ or D
Var 34	217	42867–48091	EA	16.10	17.50	0.12
Var 35	228	42812–48092	RRab	14.40	16.30	0.15
Var 36	222	42867–48092	RRab	15.10	16.50	0.09
Var 37	232	42812–48092	EB	13.80	14.90	
Var 38	231	42812–48092	Isb	13.50	14.30	
Var 39	235	42812–48092	Lb	12.80	13.80	
Var 40	226	42812–48092	RRab	14.00	16.00	0.15
Var 41	230	42812–48092	RRab	13.20	14.50	0.12
Var 42	233	42812–48092	M:	14.60	< 17.5	

Table 3. Light Elements

Var	Max (Min), JD	Period
Var 34	2443272.38	$4^{\mathrm{d}}.7448$
Var 35	2443197.62	0.446988
Var 36	2444102.27	0.561604
Var 37	2443729.30	0.544584
Var 40	2442869.52	0.459051
Var 41	2443696.32	0.590570
Var 42	2446979	254:

Table 4. Comparison Stars

Var	a	b	c	d	e
Var 34	16.00	16.30	17.25		
Var 35	14.13	14.80	15.36	16.45	
Var 36	14.16	15.50	15.90	16.58	
Var 37	13.72	13.97	14.66	14.77	15.40
Var 38	13.38	13.49	14.34		
Var 39	12.18	12.98	13.53	14.11	
Var 40	13.32	14.11	14.30	15.37	16.10
Var 41	12.80	13.84	14.20	14.31	
Var 42	14.64	15.09	15.62	16.70	17.50

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Reference:
Antipin, S.V., 1996, *Inf. Bull. Var. Stars*, No. 4344