

COMMISSIONS 27 AND 42 OF THE IAU  
INFORMATION BULLETIN ON VARIABLE STARS  
Number 4691

Konkoly Observatory  
Budapest  
2 April 1999  
*HU ISSN 0374 – 0676*

**NEW OBSERVATIONS OF THE FUOR V1057 Cyg**

MANSUR A. IBRAHIMOV

Ulugh Beg Astronomical Institute, 33 Astronomical Str., Tashkent 700052, Uzbekistan,  
mansur@astrin.uzsci.net

<b>Name of the object:</b>	
V1057 Cyg	
<b>Equatorial coordinates:</b>	<b>Equinox:</b>
R.A. = 20 <sup>h</sup> 57 <sup>m</sup> 06 <sup>s</sup> .24    DEC. = +44°03'46".4	1950.0
<b>Observatory and telescope:</b>	
Mt. Maidanak High Altitude Observatory, 0.6-m Zeiss reflector	
<b>Detector:</b>	Single-channel pulse-counting photometer
<b>Filter(s):</b>	Johnson's UBVR
<b>Comparison star(s):</b>	BD +43°3781
<b>Check star(s):</b>	BD +40°4147
<b>Transformed to a standard system:</b>	Johnson system
<b>Standard stars (field) used:</b>	Selected Areas Nos. 104–112 by Landolt (1983)
<b>Availability of the data:</b>	
Upon request	
<b>Type of variability:</b>	FU (= FU Orionis type variable)
<b>Remarks:</b>	
Figure 1 shows that the star is still fading. There is no clear trend to recover the normal brightness so far. Color-magnitude diagrams of the star during decline in 1995–98 (Table 1) show that the smooth reddening of optical colors have been changed towards becoming bluer in last two years. Evolution of the U–B color differs from that of two other colors and proceeds slower (Fig. 1). The recent blueing of the colors of V1057 Cyg provides additional support for the dust condensation hypothesis.	
<b>Acknowledgements:</b>	
This work is partly supported by CRDF grant ZP1-341.	

Table 1: Yearly averaged brightness and color variations of V1057 Cyg during the recent decline

Year	JDH 24...	V	B-V	U-B	V-R	N <sub>V</sub>	N <sub>BV</sub>	N <sub>UB</sub>	N <sub>VR</sub>
1995	49882–50045	12.231	+2.030	+1.595	+1.868	56	56	36	56
		71	45	243	32				
1996	50209–50415	12.200	+2.091	+1.655	+1.885	72	72	23	71
		144	101	338	48				
1997	50596–50764	12.463	+2.053	+1.929	+1.868	74	73	17	73
		106	58	453	41				
1998	50995–51168	12.696	+1.983	+1.695	+1.786	68	68	21	68
		96	58	343	32				

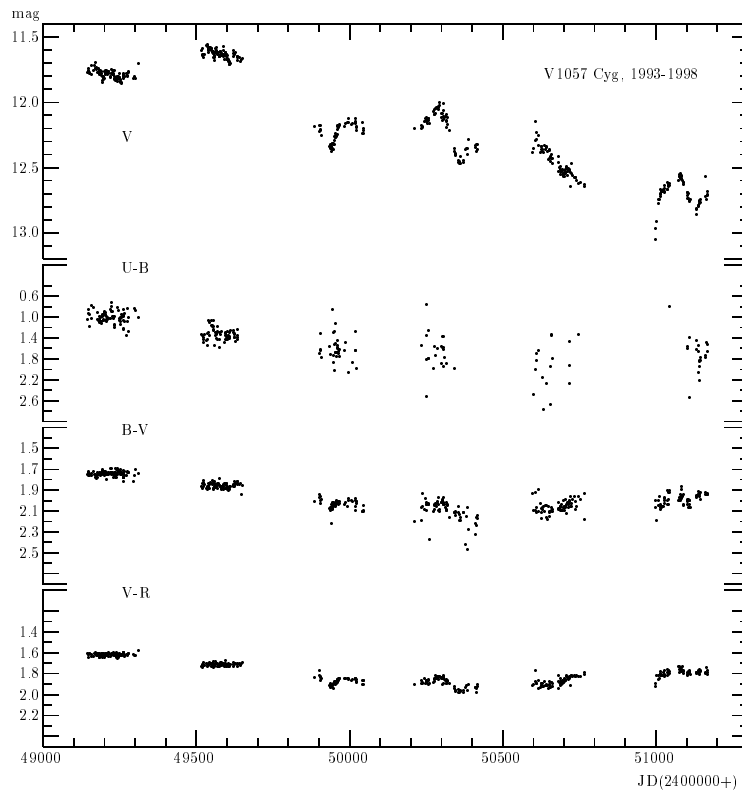


Figure 1. Brightness and color variations of V1057 Cyg in 1993–98.

## References:

- Hartmann, L., Kenyon, S.J., 1996, *ARA&A*, **34**, 207  
Herbig, G.H., 1977, *ApJ*, **217**, 693  
Ibrahimov, M.A., 1997, *Astr. Lett.*, **23**, 103  
Ibrahimova, V.M., Ibrahimov M.A., 1997, *IBVS*, No. 4479  
Kolotilov, E.A., Kenyon, S.J., 1997, *IBVS*, No. 4494  
Landolt, A.U., 1983, *AJ*, **88**, 439