

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

Number 5704

Konkoly Observatory  
Budapest  
23 May 2006

*HU ISSN 0374 – 0676*

**THE FIRST COMPLETE PHOTOMETRY  
OF THE SHORT-PERIOD ALGOL-TYPE BINARY BF Vel**

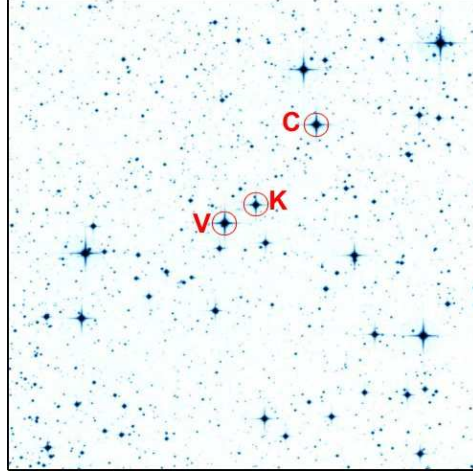
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<b>Name of the object:</b>	
BF Vel, CD-39°4980	
<b>Equatorial coordinates:</b>	<b>Equinox:</b>
R.A. = 08 <sup>h</sup> 56 <sup>m</sup> 24 <sup>s</sup> DEC. = -39°58'54"	2000
<b>Observatory and telescope:</b>	
South African Astronomical Observatory Sutherland Station, 1.0 m Cassegrain telescope	
<b>Detector:</b>	CCD camera, liquid nitrogen cooled at 180.5 K, 1024 × 1024 imaging pixels binned to 512 × 512, 5/3 × 5/3 FOV.
<b>Filter(s):</b>	BVRI
<b>Date(s) of the observation(s):</b>	
2006.01.11, 2006.01.12, 2006.01.13	
<b>Comparison star(s):</b>	Uncatalogued star 236" NW of the variable
<b>Check star(s):</b>	Uncatalogued fainter star 63" NW of the variable
<b>Transformed to a standard system:</b>	No
<b>Availability of the data:</b>	
Available at the IBVS website, after 2006.11.26	
<b>Type of variability:</b>	EA
<b>Remarks:</b>	
Apparently, no suitable times of minima of BF Velorum have been obtained for an accurate period of the system to be calculated. Budding et al. (2004) give a value of 0.7040 day. The heights of the two maxima are unequal in the R and I bands. The secondary minimum is very shallow and deepens considerably at longer wavelengths, indicating a large temperature difference between the components. BF Vel is known to have a spectral type of A3+[G4IV].	

**Acknowledgements:**

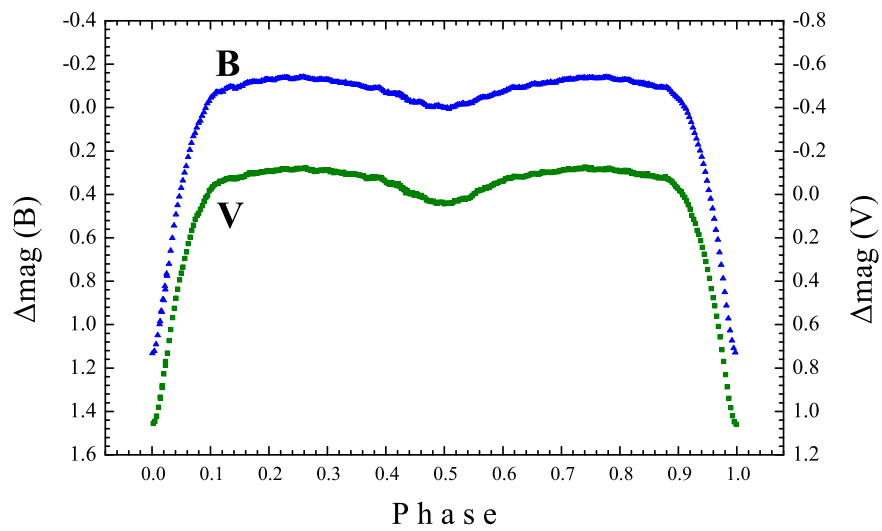
This research was included in the project for the support of research groups in the universities, co-funded by the European Social Fund (ESF) and National Resources (EPEAEK II) - *PYTHAGORAS*. This paper uses observations made at the South African Astronomical Observatory (SAAO).



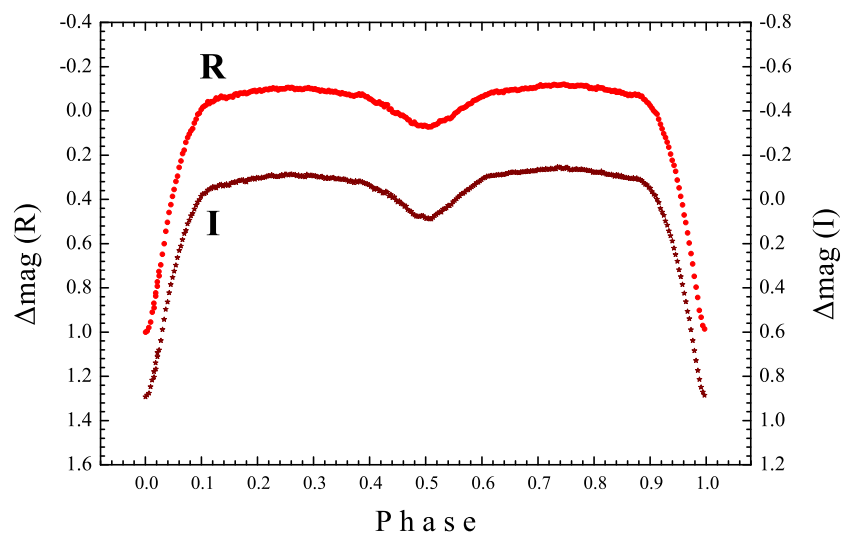
**Figure 1.**  $14' \times 14'$  finding chart with the comparison (C) and check (K) stars marked; BF Vel is marked with a V.

## Reference:

Budding, E., Erdem, A., Çiçek, C., Bulut, I., Soydugan, F., Soydugan, E., Bakis, V.; Demircan, O., 2004, *A&A*, **417**, 263.



**Figure 2.** The complete *B* (upper) and *V* (lower) light curves of BF Vel.



**Figure 3.** The complete *R* (upper) and *I* (lower) light curves of BF Vel.