

# Variable Star Bulletin

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## Outburst of BF Eri

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BF Eri is listed as a semiregular-type pulsating star (196 days period, 13.5-15.5p magnitude range) in GCVS (Kholopov86). However, this star is identified with the X-ray source 1ES 0437-046 (Elvis et al.92) and pointed out to be a cataclysmic variable by spectroscopy (Schachter et al. 1996). Two outbursts were detected by VSOLJ member's monitoring. The light curve is shown in Figure 1. The observation data are listed in Table 1. The light curve demonstrates that BF Eri is a dwarf nova with a period of 40-50 days. The observed magnitude range is 13.2- $<14.7v$ , which is consistent with the GCVS value. Further observations are strongly encouraged to get more detail of outburst characteristic and physical parameters.

Table 1: Magnitude estimates of BF Eri

Date(UT)	Mag.	Obs.	Date(UT)	Mag.	Obs.	Date(UT)	Mag.	Obs.
981024.720	$<14.7$	Wnt	990120.604	$<13.8$	Wnt	990213.432	$<14.1$	Wnt
981107.624	$<13.6$	Wnt	990122.555	$<14.6$	Wnt	990214.578	$<14.1$	Wnt
981117.703	14.7	Wnt	990128.474	$<13.6$	Wnt	990215.585	$<13.6$	Wnt
981219.647	$<13.8$	Wnt	990128.560	$<14.0$	Wnt	990217.529	$<13.9$	Wnt
990108.546	13.3	Wnt	990129.620	$<12.4$	Wnt	990220.605	$<13.2$	Wnt
990109.576	13.2	Wnt	990130.474	$<13.6$	Wnt	990221.419	13.6	Wnt
990110.572	13.3	Wnt	990131.426	$<13.4$	Wnt	990222.431	13.92V	Kis
990111.520	13.4	Wnt	990204.469	$<14.6$	Wnt	990222.441	14.02V	Kis
990112.551	13.5	Wnt	990206.549	$<14.6$	Wnt	990222.523	$<13.6$	Wnt
990115.570	13.9	Wnt	990207.481	$<14.6$	Wnt	990228.389	14.40V	Kis
990116.443	14.6	Wnt	990208.547	$<14.1$	Wnt	990228.535	$<12.7$	Wnt
990118.565	14.7	Wnt	990212.565	$<14.6$	Wnt			

Mag. (Magnitude)

The prefix  $<$  indicates the upper limit (the variable was not seen)

V : Johnson V other : visual

Magnitude was estimated by GSC magnitude.

Obs. (Observer)

Kis: Seiichiro Kiyota (25cm Schmidt Cassegrain + Apogee AP-7 + Optec Max-lter 2)

Wnt: Tsutomu Watanabe (32cm reflector + visual)

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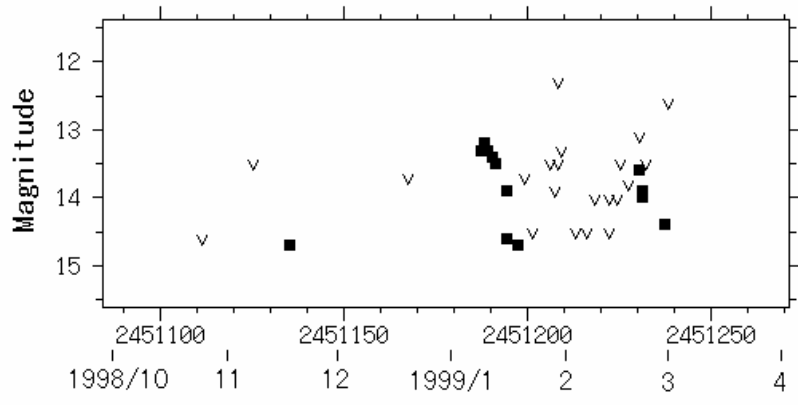


Figure 1. Light curve of BF Eri

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#### Outburst of TmzV34 (= RXJ0915.8+0900)

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This object was first discovered by ROSAT(= RX J0915.8+0900). Bade et al.(1998) identified it as a cataclysmic variable. Takamizawa (1998) independently discovered this star as a new variable star, TmzV34 (initially reported as an irregular variable with a range of 13.1-15.0p), and detected one outburst at 13.1 mag. on 1994 Nov. 30.715 from his patrol films. On 1999 Apr. 8.596 UT, I detected a further outburst at 13.6 mag. visually. On 1999 Apr. 7.616 UT, the object seemed slightly fainter than 13.7 mag. On 1999 Apr. 13.564 UT, it was not seen. (upper limit 13.1 mag.) Further observations are strongly encouraged.

#### Acknowledgments

I wish to thank Dr.Taichi Kato (Kyoto University) for his helpful suggestions and reading the manuscript.

#### Remarks

This outburst detection was announced in vsnet-alert (Kato 1999)

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## Outburst of Goranskij's variable near GM Sgr

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Goranskij's variable (= GSC 6848.03786 = USNO0600.16547317, R.A.18h 19m 21s.64 DEC.-25°24' 25".7 (J2000) ) was discovered as a candidate of GM Sgr(Luyten's variable) (Granskij 1990). Original GM Sgr (Luyten's variable) was classified as a long period variable (Lutyen 1927) and observed late-type spectrum (Hoard 1995). Goranskij's variable was classified as a possible novalike variable (Granskij 1990). On 1999 Aug. 8.610 UT, I detected a further obvious outburst of this object at 12.9 Mag. visually. This outburst was confirmed by other observer (Stubbings 1999a,b). The chart which I was used is stored at the publicly available ftp-site, [ftp : ==ftp:kusastro:kyoto ; u:ac:jp=pub=vsnet=charts=GM<sub>S</sub>gr:ps;](ftp://ftp.kusastro.kyoto-u.ac.jp/ftp/pub/vsnet/charts/GMSgr.ps) and this object is marked " = GMSgr?". Further observations are strongly encouraged.

Remarks This outburst detection was announced in vsnet-alert (Kato 1999).

Acknowledgments I wish to thank Dr.Taichi Kato (Kyoto University) for his helpful advice.

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## Detection of the second historical decline of VY-Scl type variable LQ Peg

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LQ Peg (= PG 2133+115, R.A.21h 36m 19s.13, DEC.+11° 40' 54".68 (J2000)) was discovered as an ultraviolet-excess object and spectroscopically confirmed to be a cataclysmic variable (Green et al. 1982, 1986; Ferguson et al. 1984). A decline was found between 1969 and 1970 by photographic observation in 1960-1995 (Sokolov et al. 1996), then this star was listed in 73th Name list (Kazarovets & Sumus 1997). The star has been considered as a likely VY Scl-type variable.

I detected the first-ever decline since the discovery of the VY Scl-type nature. LQ Peg had been seen at 14 and a half Mag., though on 1999 Jul. 9.716 UT, this star could not be seen at a limiting magnitude of 14.6, moreover on 1999 Aug. 17.717 UT, this star was fainter than 15.3 Mag.(see Table 1). This decline was confirmed by CCD observation (Kato 1999a). Further observation is encouraged to get a more detailed characteristics and physical parameters.

Table 1:Recent observation of LQ Peg

Date (UT)	Date (JD)	Magnitude
1998 September 16.642	2451073.142	14.6
1998 November 7.558	2451125.058	fainter than 13.7
1998 November 15.474	2451132.974	14.6
1999 July 9.716	2451369.216	fainter than 14.6
1999 August 11.701	2451402.201	fainter than 14.9
1999 August 14.726	2451405.226	fainter than 15.2
1999 August 17.613	2451408.113	fainter than 15.2
1999 August 17.717	2451408.217	fainter than 15.3

Instrument: 32cm re°ector + visual  
 Magnitude was estimated against neighboring GSC stars

Acknowledgments This decline detection was announced in vsnet-alart (Kato 1999b).

Remarks I wish to thank Dr.Taichi Kato ( Kyoto University ) for his helpful suggestions and reading the manuscript.

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