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NEW TIMES OF MINIMA
AND REVISED EPHEMERIS OF BC ERIDANI

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Name of the object:	
BC Eri = HIP 22234	
Equatorial coordinates:	Equinox:
R.A. = 04 ^h 46 ^m 59 ^s .00 DEC. = -14°37'23".3	2000.0
Observatory and telescope:	
10-cm Reflector (fl = 600 mm) (KN)	
25-cm Schmidt-Cassegrain (fl = 1600 mm) (SK)	

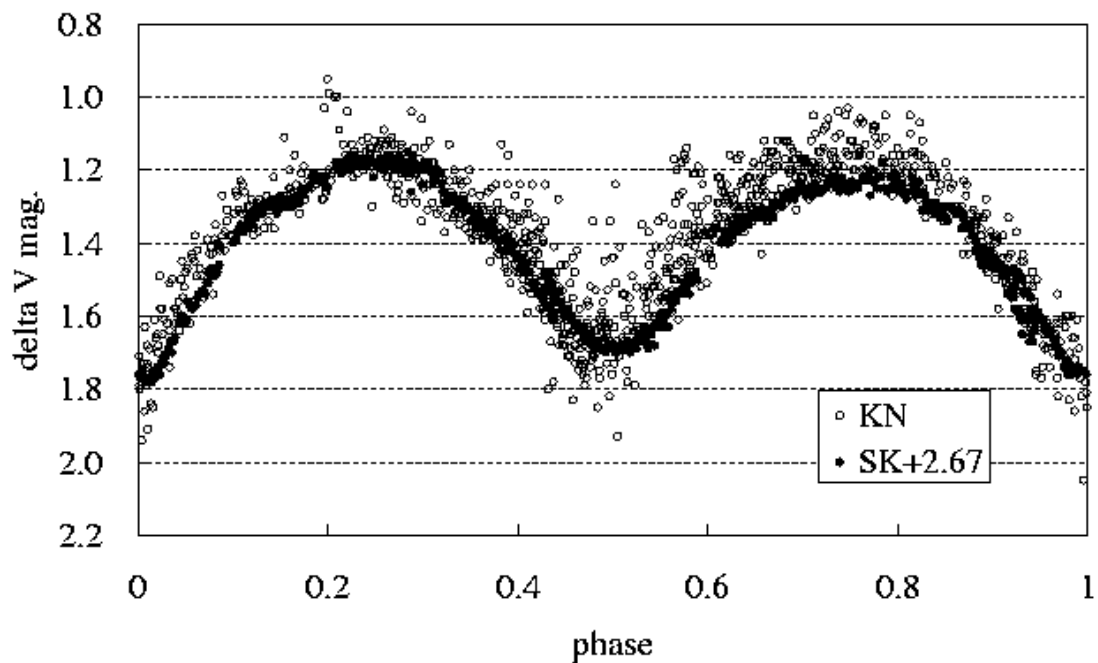


Figure 1.

Detector:	SBIG ST-5 CCD camera (KN); Apogee AP-7 CCD camera (SK)																																																						
Filter(s):	Johnson V (KN); Johnson–Cousins V and I_c (SK)																																																						
Comparison star(s):	GSC 5328:1509 = SAO 149875 (KN) GSC 5328:1449 (SK)																																																						
Check star(s):	GSC 5328:1765 (SK)																																																						
Transformed to a standard system:	No																																																						
Availability of the data:																																																							
Upon request																																																							
Type of variability:	EW																																																						
Remarks:																																																							
<p>BC Eri was discovered by Hoffmeister (1936). Guriev (1938) assigned it as a cluster variable ($\text{Max} = \text{HJD } 2428869.791 + 0^{\text{d}}26393 \times E$). Ashbrook & Gossner (1945) gave improved ephemeris ($\text{Max} = \text{HJD } 2428869.791 + 0^{\text{d}}26389458 \times E$) from their observations and Harvard plates archives. Fitch (1966) assigned this star as an EW type variable with period of $0^{\text{d}}528$ from his multicolor photoelectric photometry. The fourth edition of General Catalogue of Variable Stars (Kholopov et al. 1986) listed its period as $0^{\text{d}}52778916$ with no epoch of minimum. The period in HIPPARCOS catalog (ESA 1997) is $0^{\text{d}}527242$. We observed this star from 1998 to 2000 and got the following new moments of minima.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Min (HJD)</th> <th>Type of min.</th> <th>Filter</th> <th>Observer</th> </tr> </thead> <tbody> <tr><td>2451138.10010</td><td>II</td><td>V</td><td>KN</td></tr> <tr><td>2451176.06170</td><td>II</td><td>V</td><td>KN</td></tr> <tr><td>2451477.11570</td><td>II</td><td>V</td><td>SK</td></tr> <tr><td>2451493.19719</td><td>I</td><td>I_c</td><td>SK</td></tr> <tr><td>2451501.10729</td><td>I</td><td>V</td><td>SK</td></tr> <tr><td>2451502.15987</td><td>I</td><td>I_c</td><td>SK</td></tr> <tr><td>2451515.08101</td><td>II</td><td>V</td><td>SK</td></tr> <tr><td>2451525.09784</td><td>II</td><td>I_c</td><td>SK</td></tr> <tr><td>2451526.14810</td><td>II</td><td>V</td><td>SK</td></tr> <tr><td>2451529.05185</td><td>I</td><td>I_c</td><td>SK</td></tr> <tr><td>2451538.01430</td><td>I</td><td>V</td><td>KN</td></tr> <tr><td>2451548.03010</td><td>I</td><td>V</td><td>SK</td></tr> </tbody> </table> <p>We calculated the following new ephemeris from our observations.</p> $\text{Min} = \text{HJD } 2451501.10674970 + 0^{\circ}5272429 \times E.$				Min (HJD)	Type of min.	Filter	Observer	2451138.10010	II	V	KN	2451176.06170	II	V	KN	2451477.11570	II	V	SK	2451493.19719	I	I_c	SK	2451501.10729	I	V	SK	2451502.15987	I	I_c	SK	2451515.08101	II	V	SK	2451525.09784	II	I_c	SK	2451526.14810	II	V	SK	2451529.05185	I	I_c	SK	2451538.01430	I	V	KN	2451548.03010	I	V	SK
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References:

- Ashbrook, J. and Gossner, J., 1945, *Astronomical Journal*, **52**, 56
 ESA, 1997, The Hipparcos & Tycho Catalogues, ESA SP-1200
 Fitch, W.S., 1966, *IBVS*, No. 132
 Guriev, N., 1938, *Tadjik Circ.*, No. 36
 Hoffmeister, C., 1936, *Astronomische Nachrichten*, **258**, 39
 Kholopov P.N. et al., 1986, General Catalog of Variable Stars 4th ed.