

# The 2008/2009 eclipse of EE Cep - short guide for photometric observations.

Basic informations according to "SIMBAD Astronomical Database".

$\alpha$ :  $22^h 09^m 22.^s7570$ ;  $\delta$ :  $+55^\circ 45' 24.''184$  and Johnson's magnitudes:  $B = 11.1$ ;  $V = 10.9$

**When, how often and in which photometric passbands to observe.**

The mid-eclipse moment should take place on about 14 January 2009 ( $JD_{mid-eclipse} = 2454846$ ). The longest, observed in 1969 eclipse had duration about 60 days so the photometric campaign should begin at least 5 weeks before (7 Dec 2008) and finish 5 weeks after (22 Feb 2009) the mid-eclipse. We focus on photometric observations in standard Johnson-Cousins  $UBV(RI)_C$  systems, but additional observations especially in infrared ( $JHKLM$ ) could be very useful. At least one measurement per night for each photometric passband is needed. As the one measurement we mean the one value of brightness, obtained on the basis of a few or more pictures in relatively short time interval (not longer than about  $\sim 0.5$  hour) and in amount, which allow to achieve accuracy near to about  $0.^m01$  in  $BVRI$  passbands. The most important should be a period between 2 and 27 Jan 2009 because of interesting colour evolution. Some multicolour observations far from the eclipse should be very valuable for finding the systematic differences between particular observatories.

**Which comparison stars to use.**

We recommend the same sequence of comparison stars as during the previous campaign: BD+55°2690, GSC 3973 2150 and BD+55°2691 (IBVS 5412 - <http://www.konkoly.hu/cgi-bin/IBVSpdf?5412>). The Fig. 1 presents appropriate finding charts (field  $10' \times 10'$ ).

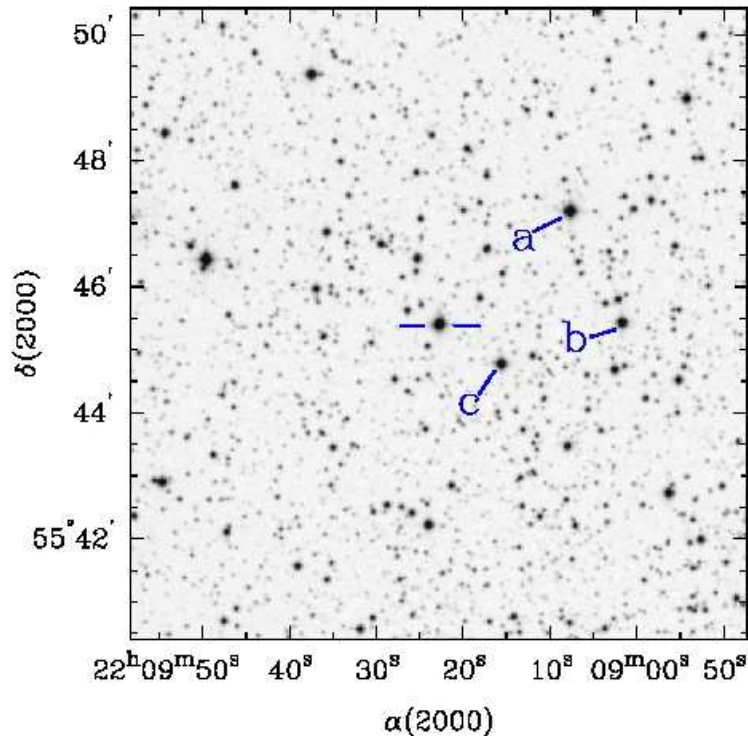


Figure 1:  $10' \times 10'$  DSS-2-red finding chart for EE Cep (IBVS 5412).

Johnsons magnitudes of comparison stars, obtained using a diaphragm cooled photometer attached to the 60 cm reflector at Toruń observatory (IBVS 5412), are:

Signature	Star Name	U	B	V	R	I
a	BD+55°2690	10.86	10.68	10.38	10.09	9.87
b	GSC 3973 2150	11.31	11.47	11.23	10.99	10.81
c	BD+55°2691	11.59	11.47	11.22	10.96	10.75

*Have a clear sky,*

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