

COMMISSION 27 OF THE I. A. U.
 INFORMATION BULLETIN ON VARIABLE STARS

Number 2509

Konkoly Observatory
 Budapest
 27 April 1984
 HU ISSN 0374-0676

EPSILON AURIGAE: B V R I J H K PHOTOMETRY

We have made photometric measurements of the peculiar binary system ϵ Aurigae at a number of epochs during the current eclipse. The B,V,R,I measurements were made with a 14" Celestron telescope using a solid state photometer from Thaltej near Ahmedabad ($23^{\circ}03'$ N, $72^{\circ}30'$ E). Measurements in the infrared J, H, K bands were made with the 40" telescope of the Uttar Pradesh State Observatory at Nainital using a liquid nitrogen cooled InSb photometer. Results are listed in Table I.

Table I

Epsilon Aurigae: Photometry

Date	B	V	R	I	J	H	K
March 15, 1982	3.46	3.06	-	-	-	-	-
Feb. 7, 1983	-	-	-	-	2.45	2.22	2.11
Nov. 26, 1983	-	-	-	-	2.35	2.09	2.01
Jan. 16, 1984	4.30	3.68	3.15	2.70	-	-	-
Jan. 30, 1984	4.39	3.78	3.22	2.76	-	-	-
Feb. 10, 1984	4.33	3.73	3.19	2.68	-	-	-
Feb. 12, 1984	4.35	3.66	3.15	2.71	-	-	-
Feb. 25, 1984	4.39	3.60	3.13	2.64	-	-	-
March 1, 1984	-	-	-	-	2.36	2.11	-
March 5, 1984	4.40	3.65	3.07	2.65	-	-	-
Apr. 7, 1984	-	3.22	2.74	2.34	-	-	-

Errors in the magnitude measurements in all the filters are of the order of 0.05 mag.

We note from Table I that the eclipse depths in the infrared are similar to those in the visible and the third contact occurred much later than the predicted date January 9, 1984. These results are in agreement with those reported in Hopkins and Stencel (1984).

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Reference:

Hopkins, J.L. and Stencel, R.E. (ed.): 1984, Epsilon Aurigae Campaign
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