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NOTES ON THE Be-STAR HR 1508 AND THE ECLIPSING
 BINARIES AA CETI AND BT ERI

The following observations have been obtained with the Copenhagen 50cm telescope and a four-channel ubvy-photometer at Cerro La Silla, Chile.

HR 1508 (= K3II 6131).

This star was found to be variable from observations made on six nights in November 1973, when it was used together with HR 1545 as a comparison star for RZ Eri.

HJD	V*	b-y
42000.79-.83	5.800	+0.13
001.74-.80	5.765	+0.23
002.67-.82	5.794	+0.24
003.75	5.780	+0.17
004.67	5.760	+0.23
005.76	5.792	+0.15

* derived from differences to HR 1545 with $V=6.261$ for this star.

Afterwards it was found that the star is included in the Second Catalogue of Suspected Variables Stars (1965) as No.6131, with a range in V from 5.9 to 5.99. It is classified as B5ne. The brightness difference between the new observations and the values $V=5.92$ and $B-V=-.10$ given in the Bright Star Catalogue seems to be significant only in the V-band and absent in B.

AA CETI

A secondary minimum was observed on Feb. 14, 1972. The light-curve shows a constant phase of about 50 minutes duration (0^d07). From the b-lightcurve the following time of mid-eclipse was derived:

Min II: HJD 41330.6166
 \pm 10 m.e. (estimated)

which is in good agreement with the ephemeris given by Bloomer, $O-C = 0^d0017$ (1972).

A diaphragm of 30 seconds of arc was used, so that the light of the secondary component ($m_V=7.7$, distance 8'5) was included in the measurements.

Reference:

Bloomer, R.H., 1972: IBVS No.745.

BT ERI

A minimum was observed on Nov.5,1973 giving the following time as the mean for all four colors:

Min I: HJD 41991.60389
± 10 m.e.

Combined with the photographic times of minima given by Deurinck and Goossens (IBVS No.792, 1973), this leads to an improved period of $2.112269 \pm .000010$ days.

On the previous night a few observations were obtained at phase OP_{55} and OP_{58} without any indication of an eclipse. Assuming these observations to represent maximum light, the amplitudes are .92,.92, .90 and .89 in u,v,b and y resp. Transforming y to V we obtain $V=9.56$ in maximum and $V=10.45$ in Min I. The duration of the primary minimum was observed to be longer than OP_{08} .

Cerro La Silla,
May 4, 1974.

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