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ELEMENTS OF RV CRATERIS = BV 442

The eclipsing binary RV Crt = BV 442 = HD 98412 ($9^m.3/10^m.3$; F8) was discovered by Strohmeier et al. (IBVS 62, 1964). Strohmeier also published light elements (IBVS 217, 1967).

The star has been observed photoelectrically in UBV filters with the 50 cm photometric telescope at the European Southern Observatory in La Silla/Chile in May 1975. Due to bad observing conditions only primary minimum and part of the maximum could be observed.

The photoelectric measurements are in good agreement with the light elements given by Strohmeier. Best fit of the photographic times of minima published by him and the photoelectric data yield the new light elements

$$\text{Min} = \text{JD } 244\,2537.7087 + 1^d.170494 \cdot E \ .$$

Although only primary minimum was observed a solution of the photoelectric light curve is possible since the observed minimum is a total occultation.

No rectification was carried out because of the lack of sufficient coverage of the maximum light phase. The data suggest only little light variation outside eclipses indicating an Algol type light curve.

The following (tentative) elements were derived:

	V	B	UV
i	90°(ass.)	90°(ass.)	90°(ass.)
r_g	0.301	0.302	0.301
r_s	0.226	0.228	0.223
L_g	0.556	0.528	0.510
L_k	0.444	0.472	0.490

The limb darkening coefficients were assumed as $x_g = x_s = 0.6$.
It should be noted that the surface brightness of the smaller star is larger than for the greater component by a factor of about 1.7 in B. The colour indices, however, of the smaller star ($(B-V)_s = 0^m.59$, $(U-B)_s = 0^m.09$) indicate a later spectral type of this component than of the larger star ($(B-V)_g = 0^m.51$, $(U-B)_g = -0^m.04$).

Gratefully acknowledged is the allocation of observing time to one of us (J.R.) by the European Southern Observatory (ESO).

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