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PHOTOMETRY OF α ORIONIS (OCTOBER 1994 TO APRIL 1996)

We present another two year summary of V-band photometry of α Orionis (Betelgeuse). For previous data see Krisciunas (1994) and references therein. The comparison star, as before, was ϕ^2 Ori ($V = 4.09$, $B - V = 0.95$). Transformation to the UBV system was accomplished by means of observations of red-blue pairs (Hall 1983).

In Table 1 and Figure 1 we give the data points. The nightly means are typically the mean of three differential measures. Luedeke's data were taken with a 25-cm reflector situated at Albuquerque, New Mexico, and an Optec SSP-3 photometer. Krisciunas's data of November 1994 (Julian Dates 2449675 and 2449680) were obtained with the Lowell 0.6-m reflector at Cerro Tololo, stopped down to a smaller aperture, and using a dry ice cooled photometer, standard V filter and a 4.5 magnitude neutral density filter. His data of Julian Dates 2450128 to 2450191 were obtained with a 15-cm reflector at the 2800-m elevation of Mauna Kea, Hawaii, using the system described by Krisciunas (1996).

Table 1. Photometry of Betelgeuse. Observers: L = Luedeke, K = Krisciunas. The given internal errors do not include the uncertainties attributable to the adopted extinction coefficients or the transformation coefficient

Julian Date	V	$\pm$	Observer	Julian Date	V	$\pm$	Observer
2449656.7973	0.452	0.011	L	2449802.6947	0.831	0.006	L
666.7642	0.461	0.002	L	803.6323	0.831	0.006	L
671.7731	0.487	0.001	L	808.6166	0.830	0.004	L
675.6942	0.493	0.001	K	819.6496	0.841	0.006	L
680.7669	0.498	0.001	K	820.6159	0.791	0.005	L
684.7434	0.518	0.001	L	832.6117	0.814	0.002	L
685.7564	0.520	0.001	L	2450017.7919	0.353	0.004	L
687.7012	0.502	0.004	L	18.8099	0.371	0.003	L
696.7644	0.543	0.004	L	28.7748	0.405	0.001	L
736.6483	0.663	0.005	L	30.7372	0.389	0.003	L
746.6263	0.683	0.002	L	54.7179	0.452	0.001	L
748.5894	0.682	0.005	L	103.5812	0.509	0.002	L
750.6193	0.702	0.006	L	106.5515	0.537	0.004	L
752.6095	0.701	0.001	L	128.8424	0.562	0.016	K
754.5968	0.709	0.001	L	129.6139	0.533	0.003	L
755.5713	0.702	0.003	L	153.8236	0.556	0.029	K
761.6019	0.723	0.003	L	163.7917	0.460	0.019	K
765.5867	0.735	0.001	L	191.7604	0.503	0.002	K
791.7196	0.813	0.006	L				

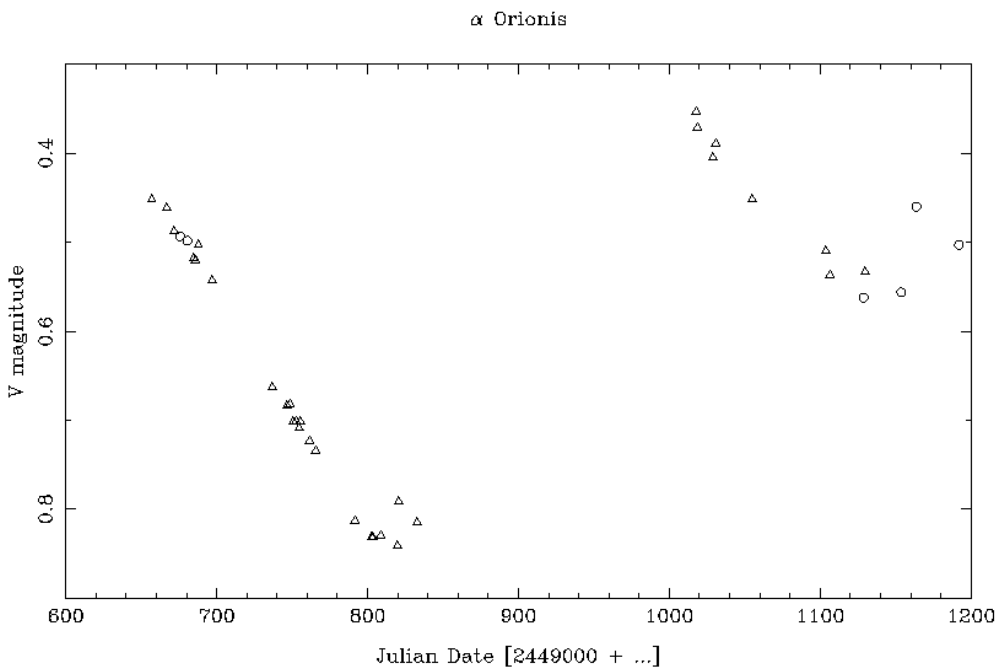

Figure 1. V-band photometry of Betelgeuse. Triangles: data of Luedeke. Circles: data of Krisciunas. Except for the Krisciunas data at the right hand side, the internal errors of the individual points are on the order of, or smaller than, the size of the points

Krisciunas also observed γ Ori as a check star, in spite of the fact that it appears to be slightly variable. The mean of those measurements gives $V = 1.635 \pm 0.010$ for γ Ori.

Bester *et al.* (1996) have recently correlated this and previous photometry of Betelgeuse with mid-infrared measurements of the diameter of the star. Further photometric monitoring is warranted.

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