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ULTRAVIOLET OBSERVATIONS OF THE SILICON STAR HD 179 761

Between July 21 and August 15, 1979 I obtained photoelectric observations on the silicon star HD 179 761 (Searle and Sargent, 1964) at the Shemakha Observatory, Azerbaijan SSR. The one-channel integrating photometer was attached to a 35-cm Cassegrain telescope. The 18 measurements of this star were made in ultraviolet light with a FEU 79 photomultiplier and UG1 2 mm filter, close to the U band of the UBV photometric system.

HD 180 482 (C1) and HD 179 343 (C2) served as comparison stars. The differential magnitudes have been obtained by averaging the results of five measurements of the program and comparison stars, made in the order of C1 - PR - C2. The standard deviation between the averaged and individual values of the differential magnitudes was less than $0^m.008$ at every night.

The differential magnitudes corrected for the extinction in usual way, are given in instrumental system in Table I.

Table I			
J.D.	PR-C1	PR-C2	PR- $\frac{C1+C2}{2}$
2444000+			
76.295	-1.019	-2.114	-1.566
78.312	-1.028	-2.125	-1.576
79.250	-1.009	-2.110	-1.559
80.303	-1.036	-2.127	-1.581
81.297	-1.019	-2.121	-1.570
83.236	-1.018	-2.119	-1.568
84.268	-1.022	-2.114	-1.568
85.275	-1.023	-2.123	-1.572
88.238	-1.010	-2.113	-1.561
90.281	-1.025	-2.120	-1.572
92.316	-1.039	-2.126	-1.582
94.355	-1.024	-2.117	-1.570
95.243	-1.023	-2.116	-1.569
96.261	-1.021	-2.122	-1.575
97.249	-1.035	-2.125	-1.579
99.231	-1.043	-2.130	-1.586
100.246	-1.030	-2.125	-1.577
101.236	-1.018	-2.118	-1.567

The period of light variation of HD 179 761 is determined by the method of Fourier analysis of unequally spaced data (Deeming, 1975), using a small computer KSR 4100 of the Astrophysical Observatory at Potsdam. The value of the period is found to be $1^d.73 \pm 0^d.01$ in agreement with the result of Stepien (1968), who observed this star in UBV photometric system and found a period of $1^d.71$.

The observations are plotted against phase calculated with the period $P=1^d.73$ in Figure 1.

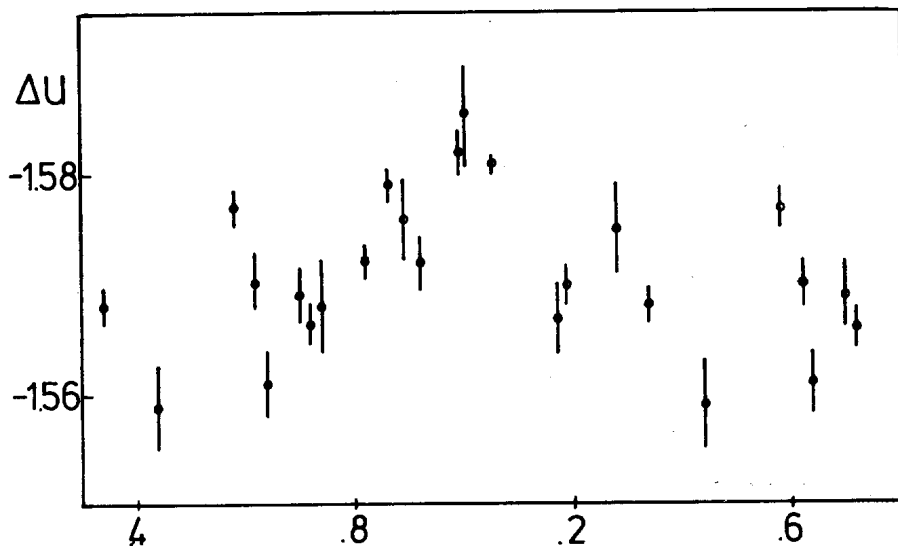


Figure 1. The differential magnitudes of HD 179 761 - $\frac{C1+C2}{2}$ plotted against phase (Hel.Max.=J.D.2444099.23+E·1^d.73)

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