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IS CD HERCULIS = BD+46^o 2308 VARIABLE?

To clarify the behaviour of the variable star CD Her = BD+46^o2308 Dr. Samus' (Moscow) asked us to observe this star photoelectrically and on the Sonneberg plate material.

Discrepancies in the existing papers concerning both the identification and the spectral type were already discussed by Samus' (1984).

Previous observations made on the photographic plates of the Babelsberg Observatory by Prager (1931) showed irregular variations in the range of 11.^m2 ... 12.^m5 . To confirm these observations Kroll (1983) estimated the star on the same plates used by Prager (which are now at Sonneberg) and on plates of the Sonneberg Sky Patrol. He also found variations between 11.^m3 and 12.^m5 . A search for a hidden period was not successful.

In order to get more accurate data I observed CD Her photoelectrically in U, B and V with the Sonneberg 60 cm mirror II during 17 nights in 1984. Only small variations of some hundredth of a magnitude were visible (see the Table). If these are real, they are nevertheless too small to confirm the estimations by Prager and Kroll. The cause of this discrepancy is as yet unclear.

Table. Photoelectric observations of CD Her

J.D.	ΔV	ΔB	ΔU
244 5780	-0. ^m 02	-0. ^m 10	-
5782	0.00	-0.01	-
5783	-0.05	-	-
5810	-0.01	-	-
5822	-0.01	-	-
5890	-0.02	-0.09	-0. ^m 16
5903	-0.03	-0.08	-
5912	-0.01	-0.10	-
5913	-0.04	-0.07	-
5916	-0.04	-0.10	-0.13
5925	-0.02	-0.07	-0.15
5926	-0.02	-0.10	-0.17
5930	-0.02	-0.10	-
5935	-0.05	-0.09	-0.10
5936	-0.05	-0.11	-
5944	-0.03	-0.05	-
5946	-0.03	-0.03	-

The magnitude differences are in the sense CD Her minus comparison star, which is situated 7.7 NW of the variable (see the finding chart given by Samus' (1984)). In addition, the red star Z of that chart has been checked occasionally; 10 observations also do not point to any significant variability.

R. LUTHARDT

Sternwarte Sonneberg
Zentralinstitut für
Astrophysik der
Akademie der Wissen-
schaften der DDR

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