COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS

Number 2913

Konkoly Observatory
Budapest
8 July 1986

HU ISSN 0374-0676

UBV PHOTOMETRY OF HR 8752. II

HR 8752 (=HD 217476=V509 Cas) is a highly luminous G-type hypergiant. Recent photoelectric photometry was done by Halbedel (1985, 1986) and Zsoldos and Olah (1985).

This paper presents observations made between December 1984 and January 1986 with the 50-cm and 1-m telescopes of Konkoly Observatory in Piszkéstető. The comparison star was HR 8761 (V=6.20, B-V=1.50 and U-B=1.53). It did not show any variation during the last three years (Halbedel, 1986). Reductions and transformations into the UBV system were made by the usual way. The observations are listed in Table I.

Table I

J.D.	V	B-V	U-B
2446038.355	4.885	1.295	0.985
6039.276	4.882	1.292	
6181.590	4.983	1.340	
6182.560	4.990	1.360	1.012
6196.577	4.947	1.395	
6198.553	4.968	1.383	1.049
6228.536	4.947	1.354	1.094
6276.554	4.843	1.271	1.081
6281.392	4.840	1.252	1.042
.548	4.836	1.251	1.030
6283.468	4.826	1.241	0.975
6299.397	4.801	1.197	
6300.438	4.793	1.202	0.942
6301.485	4.795	1.213	1.011
6302.467	4.792	1.204	0.985

Table I (cont.)

J.D.	V	B-V	U-B
6303.471	4.791	1.205	1.020
6311.527	4.772	1.200	0.981
6315.427	4.785	1.191	
6318.478	4.777	1.199	
6319.395	4.776	1.200	
6327.444	4.738	1.184	
6364.418	4.804	1.235	1.046
6452.253	4.956	1.322	1.115

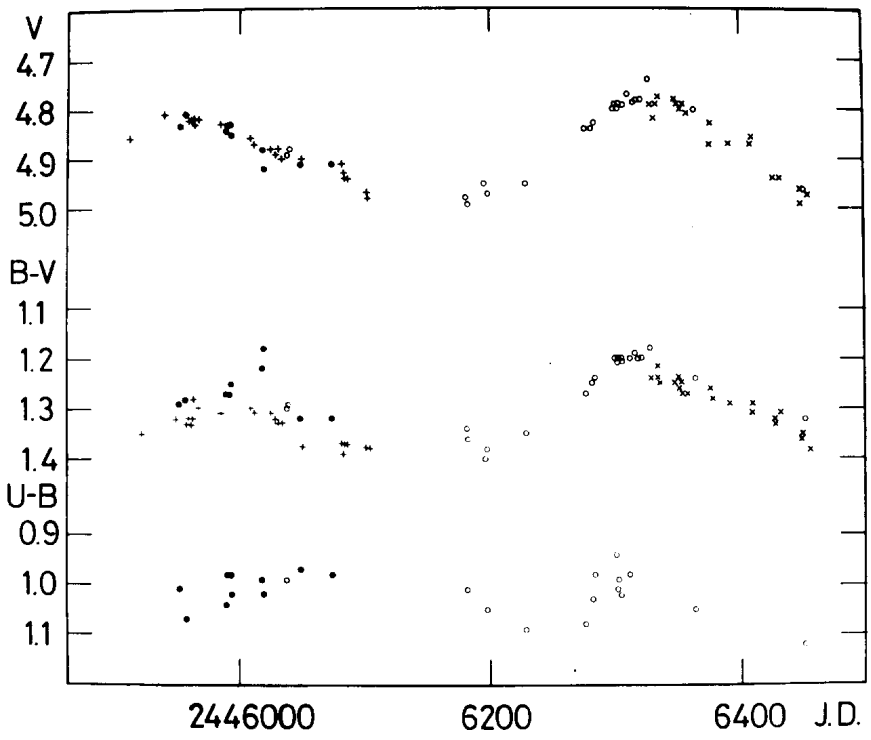

Figure 1: Light and colour curves of HR 8752 in 1984-85. Symbols: plus signs - Halbedel (1985), crosses - Halbedel (1986), dots - Zsoldos and Olah (1985), circles - present paper.

Figure 1 shows the light and colour curves since 1984 (for the light curve between 1979 and 1985 see Zsoldos and Oláh (1985)). Period analysis by neither the Lafler-Kinman nor the Deeming method yielded any period, though a characteristic timescale of about 1 year is present. The cycle length seems to become shorter, this, however, is not certain because of the small number of observed cycles.

HR 8752 shows alternating brighter and fainter maxima (see Figure 1 here and that in Zsoldos and Oláh (1985)). This may be the result of the interaction of pulsation and mass loss in the star (Zsoldos, 1986). Further photometric and spectroscopic observations are needed to have a better understanding of the behaviour of HR 8752.

I wish to thank Dr. K. Oláh, Mr. A. Mizser and Mr. I. Tóth for obtaining some of the observations presented here.

E. ZSOLDOS

Konkoly Observatory
Budapest XII., P.O.Box 67
H - 1525, Hungary

References:

Halbedel, E., 1985, I.B.V.S. No. 2718
Halbedel, E., 1986, I.B.V.S. No. 2876
Zsoldos, E., 1986, in preparation
Zsoldos, E., Oláh, K., 1985, I.B.V.S. No. 2715