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1989 LIGHT CURVES OF BH VIRGINIS

BH Virginis (BD-0°2769, HD121909) is a double-lined spectroscopic eclipsing binary with cool components. The spectral types of the components have been determined as G0V+G2V by Abt (1965) and as F8IV-V+G2V by Koch (1967). Having late type magnetically active components, the system's total light at maxima and/or minima is expected to vary in time (Hoffmann, 1982; Budding and Gimenez, 1982). It has been observed photometrically by Kitamura et al. (1957), Koch (1967), Sadik (1978), Hoffmann (1982) and Scaltriti et al. (1985). In addition to ellipticity and reflection effects outside the eclipse phases, an irregular fluctuation as a characteristic property of RS CVn type systems has been noted as early as 1957 by Kitamura et al. (1957). Scaltriti et al. (1985) have noted by comparing the existing observations that the distortion wave is variable and migrates in time, while Budding and Zeilik (1987) found a distortion wave of about same shape with two minima at about the same phases from Sadik (1978) and Scaltriti et al.'s (1985) data. True interpretation of the light variations at different time scales requires a continuous monitoring of the binary. Thus, we have included BH Vir in our program of the photometric observations of short period binaries.

The present observations of BH Vir were made on seven nights in 1989 using an EMI 9789QB photomultiplier attached to the 30 cm Maksutov telescope of the Ankara University Observatory. The differential observations in U, B and V colors were made with respect to the comparison star BD-0°2770. Altogether 188, 190 and 187 differential magnitudes of BH Vir in V, B and U bandpass, respectively,

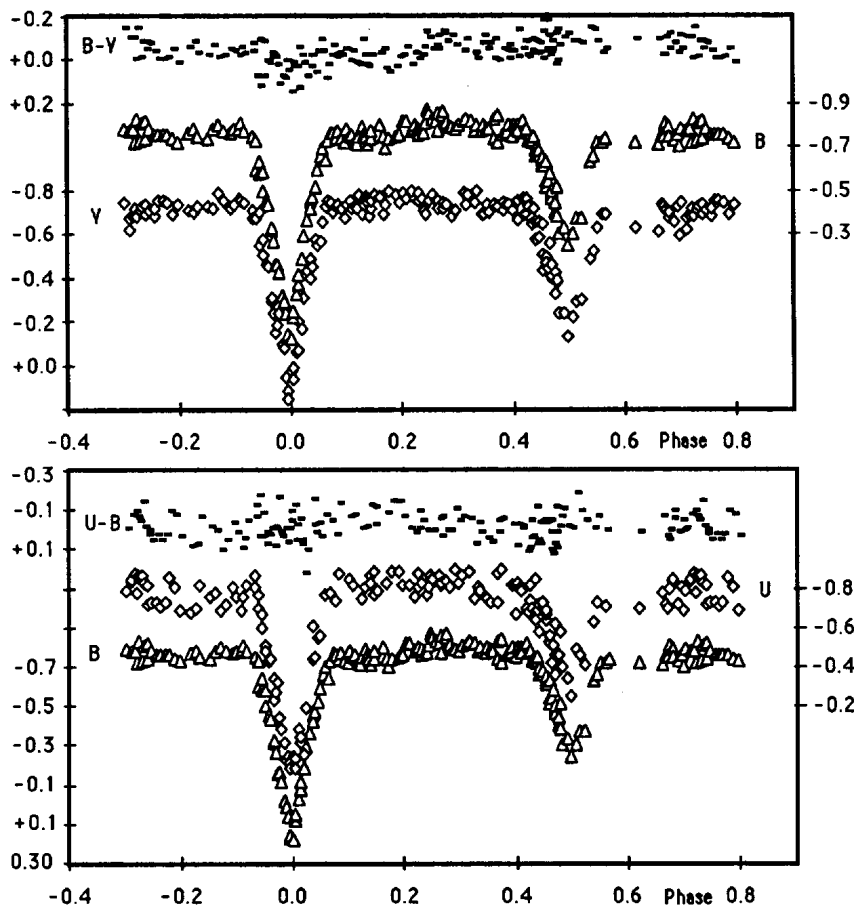


Figure 1. The UB observations of BH Vir in 1989

were obtained. The individual differential magnitude determinations were corrected for differential atmospheric extinction. The observations (in the sense variable minus comparison) are shown in Figure 1 together with the color curves. The phases were calculated by using the light element from GCVS (1985), as

$$\text{Hel. JD Min I} = 2443230.609 + 0.816877161 * E$$

Two primary and one secondary eclipse minima have been secured during the observations. The new times of the minima are given in Table 1.

Table 1. The new times of minima of BH Vir

Hel. Min. 2447600+	Filter	E	O-C	Remark
15.5743 \pm 0.0006	U	11640	0.0093	Min. I
15.5732 \pm 0.0005	B	11640	0.0082	Min. I
15.5734 \pm 0.0013	V	11640	0.0084	Min. I
20.4754 \pm 0.0018	U	11646	0.0092	Min. I
20.4738 \pm 0.0004	B	11646	0.0076	Min. I
20.4738 \pm 0.0013	V	11646	0.0076	Min. I
58.4604 \pm 0.0027	U	11692	0.0097	Min. II
58.4580 \pm 0.0018	B	11692	0.0073	Min. II
58.4579 \pm 0.0013	V	11692	0.0072	Min. II

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