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HD 174237 (MWC 608)

Recently Merlin (1975) disclosed that the bright B emission star HD 174237 (α : $18^{\text{h}}44^{\text{m}}4^{\text{s}}$, δ : $+52^{\circ}53'$, 1900) displays variations in U,B,V larger than 0.1 mag. These changes were reported to have no true periodicity, only 7-12 days cycle. In the past radial velocities of this star were measured by Plaskett et al. (1920). The amplitude of the radial velocity was about 95 km/sec, but no period has been established. Lacoarret (1965) studied the hydrogen emission profiles of MWC 608. She described two types of variations: long term (3 years) and short term (5-7 days). Merlin (1975) pointed out that the photometric changes in U,B,V might be correlated to short term line profile variations.

HD 174237 was observed with the 2 m telescope of the Ondřejov Observatory during May - October 1975 and April-July 1976. About 30 coudé spectrograms (8 and 16 $\text{\AA}/\text{mm}$) were obtained. The spectra have been taken on IIAOb emulsion and cover the wavelength region from 3600 to 4970 \AA .

Radial velocities of seven helium lines (3819.6, 4009.3, 4026.2, 4143.8, 4387.9, 4471.5, and 4921.9 \AA) were measured on 28 plates taken within the interval of 400 days. Velocities derived from the position of the He I lines were checked by a program for finding periods. The best fit is 6.691 days. The observations are assembled in a velocity/phase diagram in Figure 1.

The periodicity of the helium radial velocities strongly supports the idea that Be star MWC 608 is a spectroscopic binary.

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