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A SMALL AMPLITUDE VARIABLE STAR, HD 164615

HD 164615 = BD + 11° 3315 was chosen as a comparison star in a UBV photometric study of the Ap star, HD 165474 = BD + 12° 3383. It was observed for 17 nights in May and June 1975 at Kitt Peak National Observatory using the two 41-cm. telescopes and shows a variation of $0^m.04$ in V with a probable period of 4.4 days. The amplitude variation in the other colors is approximately $0^m.05$. Each point represents the mean of 5 measures taken within a 30 minute period on that night. Standard deviations are smaller than $^m.005$.

The amplitude of the variation and shape of the light curve suggest that variablility is caused by the same mechanism which causes variation of an Ap star. The spectral classification is approximately F_2. One spectrogram was obtained in June of 1976 by Dr. Nancy Morrison, of the Joint Institute for Laboratory Astrophysics in Boulder, Colorado, but peculiarity is not apparent. The magnitude differences HD 165910 - HD 164615 versus phase are plotted in the Figure from the ephemeris for maximum brightness in V:

$$JD_{\odot} = 2442564.876 + 4^d.4 \cdot E$$

Observation of this star is continuing.

EDWARD W. BURKE, Jr. *
EDWARD W. BURKE, III *
SUSAN LADY *
Dept. of Physics
King College
Bristol, TN 37620

* Visiting Astronomer, Kitt Peak National Observatory which is operated by the Association of Universities for Research in Astronomy, Inc. under contract with the U.S. National Science Foundation.

HD 165910 - HD 164615 (1975)