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OPTICAL BEHAVIOR OF EZ PEGASI

The unique variable EZ Pegasi at position  $\alpha = 23^{\text{h}}14^{\text{m}}26^{\text{s}}$ ,  $\delta = 25^{\circ}26'8$  (1950), and of spectrum G5 (General Catalogue of Variable Stars, 3rd Ed.), underwent a flare in November 1943 when its G5 spectrum was observed to have changed to B (Vyssotsky and Balz 1958). Examination of Harvard Observatory photographic plates by G. Mumford showed irregular variation from magnitude 9.5 to 10.5 (Alden 1958).

Spectroscopic observations by Irvine between October 1971 and January 1972 showed normal G5 V spectra in the blue except for H $\beta$  that appeared as a "very broad, weak absorption with possible core emission." Spectra in the visual region revealed short-term fluctuations in the intensity of H $\alpha$  emission (Irvine 1972). Irvine concluded that the 1943 B spectrum represented a flare, and as the star lacks characteristics of an ordinary flare star, he suggested it to be a probable U Geminorum-type system.

As a result of recent requests to the American Association of Variable Star Observers (AAVSO) from several astronomers concerning the behavior of EZ Peg, the long-term AAVSO observations of this star were compiled. Figure 1 is an AAVSO finder chart and Figure 2 is the AAVSO visual light curve composed of individual observations of EZ Peg. The visual light curve shows an apparent constant brightness at  $9.6 \pm 0.2$

magnitudes. Analysis of 30-day means of these observations did not show conclusive evidence of periodic variation. Also, a survey of the long-term observations of individual observers confirmed the constancy of its light behavior.

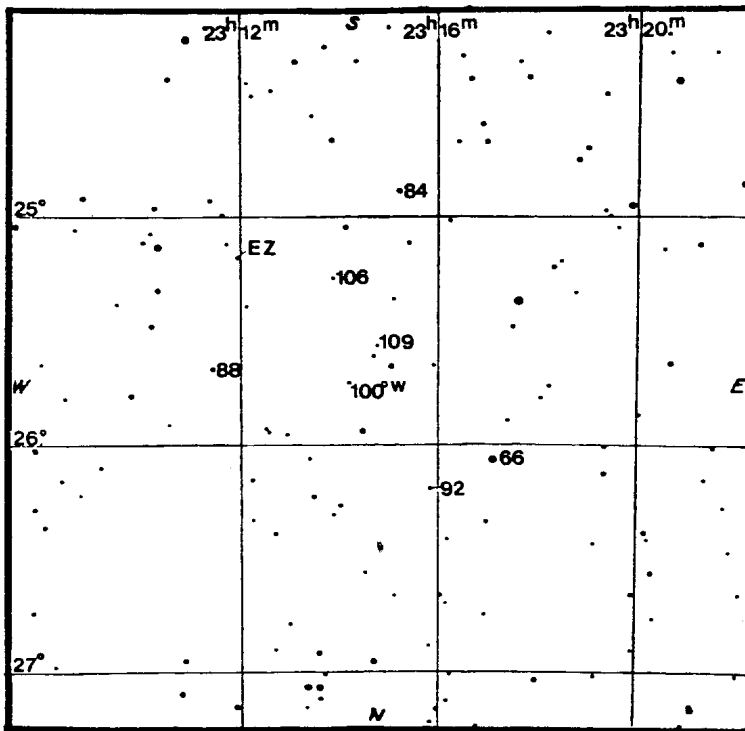


Figure 1

AAVSO finder chart of EZ Peg. The variable W Peg also appears on the chart.

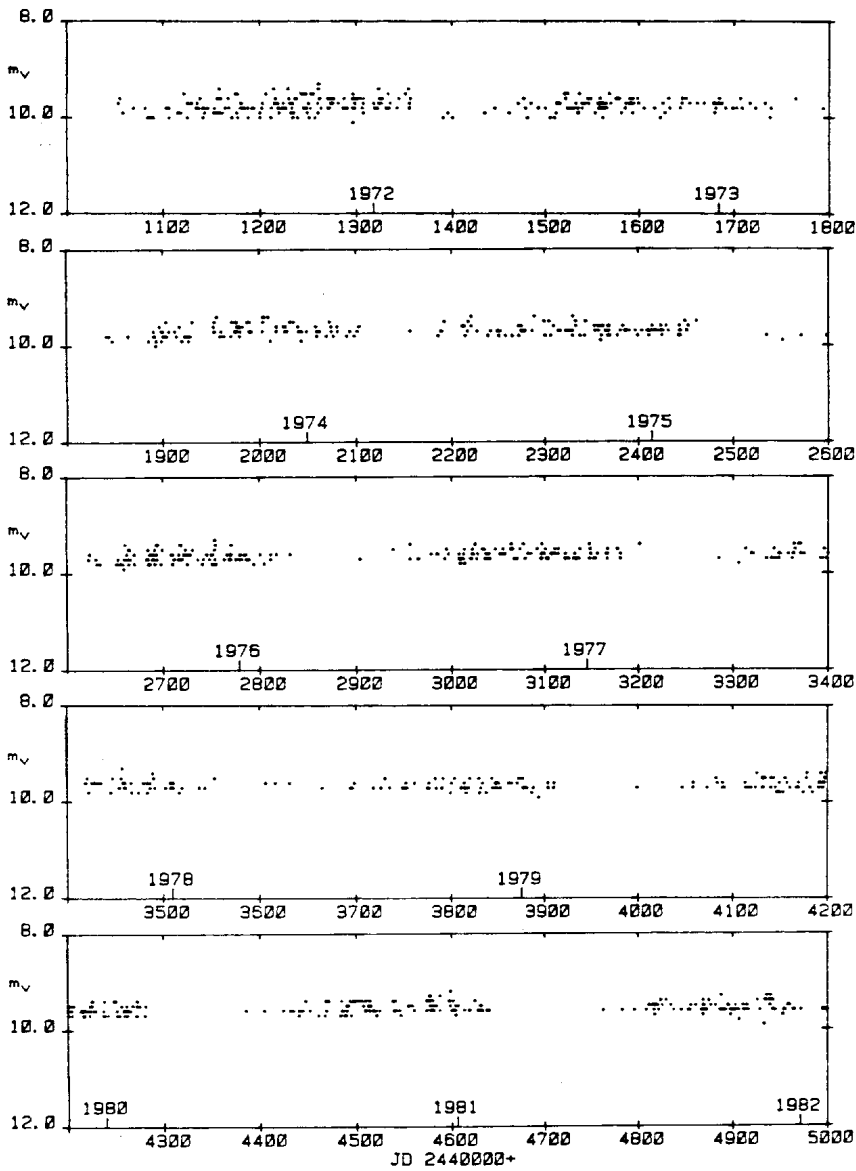


Figure 2

AAVSO visual light curve from 1972 to 1982. Each point represents one observation.

Continued optical monitoring along with spectroscopic observations are needed to further determine the nature of this interesting star. The author wishes to acknowledge the contribution of the observers of the AAVSO.

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