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EMISSION LINES IN THE FLARE STAR YZ CMI

This star has displayed flare activity in 1943 (Schneller, 1960), in 1958 (Roques, 1961), and recently last month (Andrews, 1966), when three flares of about 1 magn. were detected between February 21 and 23 during only 8 hours of monitoring. According to L.H. Solomon (1966) radio-optical observations did not reveal any burst larger than $0^m.4$ between February 26 and March 1 inclusive, during 20 hours of observation. Two spectra of the star were obtained at Asiago on February 27, 1966 at 20^h35^m U.T. and 21^h55^m U.T. (exposure 55^m and 40^m respectively) and another one on March 13, 1966, 22^h14^m U.T. On the first two spectra, taken with the newtonian spectrograph with dispersion of 280 Å/mm at $H\gamma$ on Kodak 103a0 plates, emission lines of $H\beta$, $H\gamma$, $H\delta$, $H\epsilon$, H8 and Ca II 3933A have been identified on a fairly strong continuum. Other features appear in emission, but He II 4686 is absent. The spectrum in March was taken with the Cassegrain spectrograph with 70 Å/mm at $H\gamma$ on Kodak 103aF emulsion. With two hours of exposure, only the $H\alpha$ region has been recorded and a fairly strong $H\alpha$ emission appears over an intense continuum. Two Schmidt plates taken March $13^d22^h01^m$ and $14^d19^h21^m$ U.T., 1966, do not show any variation in the photographic magnitude of the variable.

Astrophysical Observatory, Asiago
March 29, 1966

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