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THE SPECTRUM OF WX HYDRI

WX Hyi is now classified as a U Gem star in accord with its photometric behavior (IBVS 1185) and color indices (IAUC 2348). Philip (IAUC 2308) first correctly noted its blue color, rapid light variations and emission-line spectrum on a low-dispersion objective-prism plate. More recently, on J.D. 2442742.6, we observed the spectrum using the Carnegie image-tube Cassegrain spectrograph on the 1 meter Yale telescope at the Cerro Tololo Inter-American Observatory. The dispersion was 125 \AA mm^{-1} and the coverage from about $\lambda 3500$ to $\lambda 6700$. The star appeared to be near minimum light ($m_B \sim 13$), requiring an exposure of 94 minutes on baked Kodak IIa-O emulsion.

On this low-resolution spectrogram, the Balmer series is seen in emission down to H_β with the lines having a width of about 12 \AA and giving no indication of duplicity. The emission is only moderately strong relative to the continuum and the decrement is nearly flat, a common spectral characteristic of dwarf novae. However, a peculiarity is that H_α appears much weaker than expected from the strength of the other Balmer lines and the known wavelength response of the image-tube. No emission lines other than those of hydrogen are evident and no strong absorption features are present.

The broad lines preclude an accurate radial velocity measurement, but we can conclude that the radial velocity probably does not exceed 50 km sec^{-1} and may be much smaller. This dispels any lingering suspicion that WX Hyi could be associated with the nearby Small Magellanic Cloud. The star does not appear in the BPM catalog of Luyten, suggesting a small proper motion. If one assumes that WX Hyi (galactic latitude $b = -51^\circ 6'$) has a z distance comparable to the average shown by the brighter U Gem

stars ($\bar{z} = 37$ pc according to Kraft in Advances in Astron. and Astrophys. 2, 43, 1963), its distance would be about 50 pc. The presumably small proper motion would obviously yield a low tangential velocity at this distance. Thus, it appears likely that this star has a comparatively low space velocity, consistent with the disk-population kinematics shown by the dwarf novae.

N. SANDULEAK
Warner and Swasey Observatory
E. Cleveland, OH U.S.A.