ABSTRACT. The paper reports the results of spectral and photometrical observations of AM Her obtained on September 17 1990. The star was investigated using the scans obtained with the TV-scanner of the 6 m telescope within the range 3600-5100 Å with a spectral resolution of ~4 Å. UBVR photometry was obtained with the Nasmyth photometer installed in the secondary focus (NI). Parallel spectral observations of the system were carried out with the TV-scanner. That night AM Her was observed in the filter $v=15.013 \pm 0.021$, i.e. at the low state. Using the absorption spectrum of Zeeman hydrogen splitting in the white dwarf atmosphere its magnetic field was estimated.