



The fingerprint of a star: μ Her

μ Herculis (μ^1 Her = 86 Her = HD 161797A) is the primary or A component of a wide quadruple system. It has been classified as a G5 subgiant class IV and is the brightest of its components, whose parameters are precisely determined from astroseismology. It was suspected to be a close binary with a low-mass stellar or a large substellar companion. This was confirmed when the low-mass companion was resolved using near-infrared spectroscopy. The companion star is a red dwarf with a spectral type of M4V and a mass of 0.32 $M_{\odot}$. This poster shows the op-

tical spectrum of μ Her obtained with the Potsdam Echelle Polarimetric and Spectroscopic Instrument (PEPSI) of the Large Binocular Telescope (LBT). It plots the normalized intensity as a function of wavelength λ in Angströms (1Å =0.1nm) from the top left corner to the bottom right corner. The PEPSI spectrum covers the wavelengths between 3820 Å (top left) and 9130 Å (bottom right) with an average spectral resolution of $R=\lambda/\Delta\lambda=220,000$ or approximately 1.4 km/s. Its average dispersion is 0.012 Å/pixel. Integration time with the LBT was 1 min and consists of 5-10 exposures in all six cross dispersers. The signal-to-noise ratio (S/N) of the spectrum peaks at 1730:1

at 8250 Å and has a low of 520:1 near the blue cutoff. The exposure was obtained on June 3, 2016. A subset of spectral absorption lines is identified in the graphics and marked with dashes beneath the spectrum. The annotation indicates the chemical element (e.g., Fe for iron), the ionization state (I for a neutral line, II for an ionized line), and the wavelength in Angström. The original spectrum has been published in *Astronomy & Astrophysics* (Strassmeier, K. G., Ilyin, I., & Weber, M. 2018, *A&A*, **612**, A45; see <https://pepsi.aip.de/>).

