



The fingerprint of a star: HD 140283

HD 140283 = BD-10°4149 is an F-type subgiant reference star from the *Gaia* benchmark list. It has been classified as a peculiar weak-lined star with F9V indexed with a Ca *IT* K line of an A5 and metal lines of an A1 star. It may even be a dG0 halo star. This poster shows the optical spectrum of HD 140283 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 10 min and consists of two exposures except in the CD-VI cross dispersers where four spectra were taken. The signal-to-noise ratio (S/N) of the spectrum peaks at 660:1 at 8250 Å and has a low of 110:1 near the blue cutoff. The exposure was obtained on May 25, 2015. 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/>).

