

INCORPORATING XENOMORPH HYDROGEN LINE SHAPES INTO WHITE DWARF MODEL SPECTRA

Bryce Hobbs¹, Thomas Gomez^{1,2}, Zethran Berbel¹, Michael Montgomery¹, Don Winget¹

¹*Department of Astronomy, The University of Texas at Austin, Austin, TX 78712, USA*

²*Sandia National Laboratories, Albuquerque, NM 87123, USA*

Accurate spectral Line shapes are needed in order to determine $\log g$ and T_{eff} of white dwarfs. This work aims to quantify the change in derived spectroscopic temperature and surface gravity of DA white dwarfs when substituting standard Hydrogen α , β , and γ line profiles in the synthetic spectra with new Xenomorph profiles (Cho et al. 2022). Future work will examine how these new model atmospheres revise the discrepancy between spectroscopic and photometric parameter estimations.