

Contributed Talk

Splinter HotStars

SPECTRAL ANALYSIS OF FOUR VERY SIMILAR HOT HYDROGEN-RICH
SUBDWARF O STARS.

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Post-Extreme Horizontal Branch stars (post-EHB) are helium-shell burning objects evolving away from the EHB and contracting directly towards the white dwarf regime. While the stars forming the EHB have been extensively studied in the past, their hotter and more evolved progeny are not so well characterized. We performed a comprehensive spectroscopic analysis of four such bright sdO stars, namely Feige 34, Feige 67, AGK+81°266, and LS II+18°9, among which the first three are used as standard stars for flux calibration. By fitting high quality optical spectra with a grid of Non-LTE TLUSTY/SYNSPEC model atmospheres, we found the stars to have very similar atmospheric parameters. with $T_{\text{eff}} \sim 61\,000$ K and $\log g \sim 6.0$. This places them right on the theoretical post-EHB evolutionary tracks. In addition to having similar atmospheric parameters, the four stars also have almost identical FUSE and IUE spectra. We used the UV data to derive abundances of metallic elements and found the stars to be significantly enriched in iron and nickel. Fits of the photometric data were performed to derive spectroscopic distances that are in good agreement with the Hipparcos values available for our three brightest targets.