

# HST/COS SPECTROSCOPY OF H1504+65

K. Werner, T. Rauch

*Institute for Astronomy and Astrophysics, Kepler Center for Astro and Particle Physics, Eberhard Karls University,  
Tübingen, Germany*

H 1504+65 is the hottest known white dwarf ( $T_{\text{eff}} = 200,000$  K). It has an extraordinary surface composition. The surface is devoid of hydrogen and helium. It is mainly composed of carbon and oxygen (by equal amounts) and neon (2–5%). We obviously see the exposed core of a former red giant. The evolutionary history of this unique object is unknown. Some time ago we have identified magnesium absorption lines in the soft X-ray photospheric *Chandra* spectrum, which suggests that H 1504+65 may be an O-Ne-Mg white dwarf. It is our aim to test this hypothesis by an abundance determination of Mg from UV spectra taken with the *HST Cosmic Origins Spectrograph*. If confirmed, then H 1504+65 would be the most compelling case for the existence of single O-Ne-Mg white dwarfs. We present first results of our on-going analysis.