

Talk at Splinter Meeting

Splinter I

RE 0503-289 - A UNIQUE STELLAR LABORATORY

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Due to very low contamination by interstellar reddening and line absorption, the DO-type white dwarf RE 0503-289 was discovered in the all-sky EUV survey performed by ROSAT two decades ago. High-resolution and high-signal-to-noise spectroscopy in the extreme and far ultraviolet wavelength range allowed to identify many lines of metals up to the trans-iron elements. Thus, RE 0503-289 may be a rosetta stone to understand the AGB nucleosynthesis and the post-AGB stellar evolution.

The abundance determinations of trans-iron elements required new calculations of transition probabilities that were then verified by the reproduction of the observations.

We present a state-of-the-art spectral analysis of RE 0503-289 by means of non-local thermodynamic equilibrium model-atmosphere techniques and discuss its evolution.