

[WN] CENTRAL STARS OF PLANETARY NEBULAE

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Hydrogen-deficient central stars are commonly considered as the progenitors of H-deficient white dwarfs. Spectroscopically, many H-deficient central stars resemble massive Wolf-Rayet stars of the carbon sequence and are therefore classified as [WC] stars. The massive WR stars of the nitrogen sequence (WN), however, have no spectroscopic counterpart among the central stars. By our analysis of PB 8 we found for the first time a central star with a WR-type emission line spectrum that belongs to the nitrogen sequence with only a slight enrichment of carbon, and therefore we classified this star as [WN/C]. Its chemical composition is very different from other Wolf-Rayet type central stars, containing mainly helium, some hydrogen, and only small amounts of carbon, nitrogen, and oxygen. In this context, we will also discuss the status of the central star of PMR 5, which is another candidate for a [WN] spectral type. The results of our analyses, especially the chemical composition, strongly constrains possible scenarios for the formation of PB 8. For the time being, we don't know any path of single-star evolution that could explain this enigmatic central star.