

KPD0005+5106: HOTTEST DO WHITE DWARF MUCH HOTTER THAN ASSUMED

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We have identified Ne VIII absorption lines in the FUSE spectrum of the hottest known helium-rich white dwarf KPD0005+5106. Line profile fits show that its effective temperature is much higher than hitherto assumed, namely 200 000 K instead of 120 000 K. This is confirmed by a re-analysis of the optical/UV He II line spectrum. We further show that a number of optical/UV emission lines which were assigned to ultrahigh ionized (i.e. non-thermally excited) O VIII can be explained by photospheric Ne VIII as well.

The deposition of the ultrahigh ionized O VIII lines is in accordance with the deposition of the idea of a corona about KPD0005+5106. We had shown by *Chandra* observations that the soft X-ray emission (in the range 20–80 Å) detected by ROSAT is of purely photospheric origin. A hard X-ray emission component (around 12 Å), however, remained unexplained. It needs to be seen whether it can also be explained by photospheric emission with a 200 000 K model.

Concerning its evolutionary state we suggest that KPD0005+5106 cannot be a PG1159 descendant but that it is linked to the hot, almost He-pure O(He) stars and to RCrB stars.