

The Effect of Positrons in Hot White Dwarfs

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White Dwarf stars are widely studied as being composed of a ion lattice embedded in a degenerate fermions gas. However, at the beginning of their lives these stars are subject to temperatures that can reach up to $T = 10^9 K$. In this limit there is no more total degeneracy and an equation of state (EOS) temperature dependent is needed to take in account the Fermi-Dirac occupation factor of fermion levels. In this work, we will study this regime, and in particular the positrons effect in the EOS, and in the hot White Dwarf structure.