

The electron screening effect on the nuclear burning stages of stars

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We discuss the electron screening effects on the nuclear burning stages of stars. There is a dense electron cloud in the environment of fully ionized stellar plasma. The nucleus, which has a positive charge, streams in the electron cloud. This nucleus seems to have smaller charge than the original one. This phenomenon is called the electron screening effect. In this situation, the reaction rate could increase due to the lowered Coulomb barrier. In this work, we investigate the effect of electron screening using the network calculation of nuclear burning stages.

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