An analytical model of accretion onto white dwarfs

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Abstract

The analytical model of Frank et al. (2002) has been used to investigate the structure of the accretion stream onto white dwarfs (WD). In particular, the post-shock region (temperature, density and gas velocity distributions) and X-ray spectrum emitted by this region. We have obtained the temperature, density and gas velocity distributions of the emission region for different masses of white dwarfs and at different positions in the shock coordinate. Also, we calculated the emitted spectrum for different WD masses and at different positions of the shock with the principal objective of study the accretion at different points of the emission region.