

Geometry, Equation of State and the Collapse of a Star

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Abstract

We examined the evolution of the gravitational collapse of a spherically symmetric star accompanied with heat flux on the background of space times of Vaidya-Tikekar ansatz prescribing 3-spheroidal geometry for the physical 3-space of the collapsing configuration. It is found that initially static configurations having same mass and size proceed towards the ultimate end-state almost at the same rate irrespective of their material compositions or equation of state (EOS).