

General Relativity and Quantum Cosmology

Dynamics of Viscous Dissipative Plane Symmetric Gravitational Collapse

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We present dynamical description of gravitational collapse in view of Misner and Sharp's formalism. Matter under consideration is a complicated fluid consistent with plane symmetry which we assume to undergo dissipation in the form of heat flow, radiation, shear and bulk viscosity. Junction conditions are studied for a general spacetime in the interior and Vaidya spacetime in the exterior regions. Dynamical equations are obtained and coupled with causal transport equations derived in context of Misner and Sharp Israel Stewart theory. The role of dissipative quantities over collapse is investigated.

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