

Continuity equation and vacuum regions in compressible flows

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Abstract

We investigate the creation and properties of eventual vacuum regions in the weak solutions of the continuity equation, in general, and in the weak solutions of compressible Navier–Stokes equations, in particular. The main results are based on the analysis of renormalized solutions to the continuity and pure transport equations and their inter-relations. The presentation is based on the paper Novotný, Pokorný: Continuity equation and vacuum regions in compressible flows, accepted to *J. Evol. Equ.*, <https://doi.org/10.1007/s00028-021-00704-3>.