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A remark about global existence for the Navier-Stokes-Poisson system. (English)

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Summary: We show, by an elementary scaling argument, that a result of Solonnikov about global existence under a small coupling hypothesis can be extended into a global result with the physical coupling for the 3D Navier-Stokes-Poisson system with an exterior pressure.

MSC:

35Q30 Navier-Stokes equations

85A30 Hydrodynamic and hydromagnetic problems in astronomy and astrophysics

76N10 Existence, uniqueness, and regularity theory for compressible fluids and gas dynamics

Cited in **21** Documents

Keywords:

free-boundary problem for a self-gravitating barotropic fluid; compressible Navier-Stokes-Poisson system

Full Text: [DOI](#)

References:

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