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STABILITY OF WEAK SOLUTIONS FOR COMPRESSIBLE BIPOLAR NAVIER-STOKES-POISSON EQUATIONS

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Abstract

The isentropic compressible bipolar Navier-Stokes-Poisson equations with density-dependent viscosities will be considered in this paper. Under certain assumptions imposed on the initial data, we show the L^1- stability of weak solutions on spatial multi-dimensional bounded or periodic domain. Some ideas and more delicate estimates are introduced to prove these results.

Keywords and phrases: bipolar Navier-Stokes-Poisson equations, density-dependent viscosity, stability.

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