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# Global existence of weak solutions for Navier-Stokes Equations with thermodynamically unstable pressure and anisotropic viscous stress

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## Abstract

We provide global existence of weak solutions for the compressible Navier-Stokes equations for more general stress tensor than those covered by P.-L. Lions and E. Feireisl's theory. More precisely we focus on more general pressure laws which are not thermodynamically stable and on anisotropy in the viscous stress tensor. Considering these two cases is important in practical situations for instance to describe solar events (virial pressure law), geophysical flows (eddy viscosity) or biological situations (anisotropy).

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