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**Global well-posedness for a Boussinesq-Navier-Stokes system with critical dissipation.** (English) [Zbl 1200.35228](#)

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Summary: We study a fractional diffusion Boussinesq model which couples a Navier-Stokes type equation with fractional diffusion for the velocity and a transport equation for the temperature. We establish global well-posedness results with rough initial data.

**MSC:**

- [35Q35](#) PDEs in connection with fluid mechanics
- [35Q30](#) Navier-Stokes equations
- [35R11](#) Fractional partial differential equations
- [76D05](#) Navier-Stokes equations for incompressible viscous fluids
- [35S50](#) Paradifferential operators as generalizations of partial differential operators in context of PDEs

Cited in **86** Documents

**Keywords:**

[Boussinesq system](#); [Riesz transforms](#); [Besov spaces](#); [paradifferential calculus](#)

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