

## Global well-posedness for the fractional Boussinesq–Coriolis system with stratification in a framework of Fourier–Besov type

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**Resumo:** We establish the global well-posedness of the 3D fractional Boussinesq–Coriolis system with stratification in a framework of Fourier type, namely spaces of Fourier–Besov type with underlying space being Morrey spaces (FBM-spaces, for short). Under suitable conditions and rescaled density fluctuation, the result is uniform with respect to the Coriolis and stratification parameters. We cover the critical case of the dissipation, namely half-Laplacian, in which the nonlocal dissipation has the same differential order as the nonlinearity and balances critically the scaling of the quadratic nonlinearities. As a byproduct, considering trivial initial temperature and null stratification, we also obtain well-posedness results in FBM-spaces for the fractional Navier–Stokes–Coriolis system as well as for the Navier–Stokes equations with critical dissipation. Moreover, since small conditions are taken in the weak norm of FBM-spaces, we can consider some initial data with arbitrarily large  $H^s$  – norms for  $s \geq 0$ . Thus we partially extend results in the works [2], [3] and [4]. This is a joint published work with prof. Lucas C. F. Ferreira (Imecc-Unicamp) .

## Referências

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