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Title: Continuous data assimilation methods for compressible fluids

Abstract: We apply a continuous data assimilation method to the Navier–Stokes–Fourier system governing the evolution of a compressible, rotating, and thermally driven fluid. A rigorous proof of the tracking property is given in the asymptotic regime of low Mach and high Rossby and Froude numbers. Large data in the framework of weak solutions are considered.