

Continuous Data Assimilation for Compressible Temperature Driven Fluids

Eduard Feireisl

Institute of Mathematics, Czech Academy of Sciences, Praha, Czech Republic
FEIREISL@MATH.CAS.CZ

Abstract

We consider the Navier-Stokes-Fourier system describing the evolution of a compressible temperature driven rotating fluid arising in meteorology. We show convergence of a continuous data assimilation (CDA) method in the regime of low Mach/high Rossby numbers. This is the first result on convergence of CDA method for a system that is not (known to be) well posed.