Global large solutions for the Navier-Stokes equations with the Coriolis forc

Jinlu Li¹, Jinyi Sun², and Minghua Yang³

¹School of Mathematics and Computer Sciences ²Northwest Normal University ³Jiangxi University of Finance and Economics

May 8, 2020

Abstract

In this paper, we construct a class of global large solution to the three-dimensional Navier-Stokes equations with the Coriolis force in critical Fourier-Besov space $dt{FB}^{2-\frac{3}{p}}_{p,r}(\mathbb{R}^3)$. In fact, our choice of special initial data u_0 can be arbitrarily large in $dt{FB}^{s}_{p,r}(\mathbb{R}^3)$ for any $s\in\mathbb{R}^3$ and $leq p,r eq \in\mathbb{R}^3$.

Hosted file

lsy2020nsc.pdf available at https://authorea.com/users/319813/articles/449509-global-largesolutions-for-the-navier-stokes-equations-with-the-coriolis-forc