

1064-37-395

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*Attractor Dimension Estimates for 2D Boussinesque System with Low Fractional Dissipation.*

2D Boussinesque equations make up an important system modeling geophysical fluid motions. Mathematically, this system for incompressible fluid flows is an interesting one possessing some of the essential properties of the well know Navier-Stokes equations, while at the same time reflecting its own special geophysical properties. In the talk, the long time dynamical behavior, especially dimension estimates for the attractor of the solutions of this system with low fractional dissipation will be discussed in details. (Received September 14, 2010)