

1086-76-120

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Understanding flow patterns in atmospheric boundary layer is important for study and prediction of thunderstorm behavior that includes tornado formation. Specifically, turbulent properties of rotating air can determine scale and other characteristics of the flow near the ground. In this work, we apply delay equations that capture coherence patterns of the atmospheric flow near the boundary in Boussinesq approximation of the governing equations. We examine numerical delay in space and time. First we address one space dimension using the Burgers equation. We analyze both viscous and inviscid cases, with the eventual goal of applying this to the full three-dimensional case as well. (Received July 25, 2012)