Hamburg COMMODORE conference



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New forecast model for rotating shallow water dynamics in spherical geometry based on Hough functions decomposition

Tuesday 28 January 2020 17:11 (6 minutes)

We present a new forecast model for rotating shallow water equations in spherical geometry. The model is a horizontal component of numerical weather prediction system currently under development in theoretical meteorology group at the University of Hamburg. In contrast to the majority of spectral schemes, which employ spherical harmonics, our model uses Hough functions as the expansion basis. This represents the motion as a system of interacting waves that have a clear geophysical interpretation.

In the talk we discuss advantages and disadvantages of the model, present the convergence rates on analytical solutions, and model's performance on geophysically important complex flows.

Do you need an official invitation letter?

No

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