

Abstract Submitted
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A Lagrangian Vortex Method for the Barotropic Vorticity Equation on a Rotating Sphere¹ ROBERT KRASNY, LEI WANG, University of Michigan — We present a Lagrangian vortex method for the barotropic vorticity equation on a rotating sphere. The method solves for the flow map using Lagrangian particles and panels. The velocity is computed by evaluating the Biot-Savart integral on the sphere. An adaptive refinement strategy is implemented to maintain accuracy over long times. Results are presented for propagating Rossby-Haurwitz waves and localized vortex interactions.

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Robert Krasny
University of Michigan

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