A treecode-accelerated vortex method with remeshing and adaptive refinement [1,2] is applied to simulate an elliptic vortex [3] in an incompressible inviscid fluid using the Lagrangian Biot-Savart formulation.

**Color figures** show vorticity evolution on logarithm scale; thin filaments develop; entrained fluid forms a tripole structure; vortex core and outer bands become axisymmetric.

**B/W figures** show the adaptive computational grid using a refinement criterion based on local vorticity variation.


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