

Abstract Submitted
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Relaxation of Anisotropy in Superfluid Turbulence RENA ZIEVE,
OWEN DIX, University of California - Davis — We simulate superfluid turbulence on a 3-sphere rather than using the more common periodic boundary conditions. We find that our topology naturally leads to anisotropy in a steady-state vortex tangle. A fundamental assumption in turbulence studies is that any large-scale anisotropy due to a driving velocity can be ignored at small length scales. However, there are practical concerns over how quickly the anisotropy decreases with length scale, and whether isotropic turbulence is attained above the dissipation scale. Here we examine how the anisotropy decreases upon moving from large to small length scales.

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