

Buoyancy storms in a zonal stream on the polar beta-plane: Experiments with altimetry

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ABSTRACT: Turbulence is usually thought to be a process where large-scale eddies break up into smaller ones. I will present an unusual micron-scale model system - a low-Reynolds number oil-in-oil emulsion in the presence of an external electric field - where we observe dynamical spatial structures that are characteristic of turbulence. Armed with a rheometer and a microscope objective, we can make quantitative correspondence between the energy carrying fluid parcels (eddies) and the cascade of experimentally visualizable droplet breakup processes.

ALL ARE WELCOME!!!