



Dynamics of oceanic multiple zonal jets, waves, and vortices

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Multiple alternating jets, co-existing with planetary waves and transient coherent vortices are well known in the atmospheres of giant gas planets, such as Jupiter.

However, similar but much less pronounced jets have been recently discovered in nearly all parts of the global ocean.

Many properties of the oceanic jets, as well as the underlying dynamical mechanisms, remain a mystery.

Our work employs cutting-edge numerical model to analyse phenomenology and physical mechanisms of the jets, waves, and vortices in high-Reynolds-number solutions of baroclinic turbulence.