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Stochastic Large Eddy Simulation of geostrophic turbulence

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While a stochastic model of climate variability itself is certainly not new and dates back to Hasselmann, 1976, attempts to use stochastic models for closure of the turbulence in large scale flows are far fewer and more recent. We first analyse (fine-scale) eddy-resolving simulations of different instances of turbulent quasi-geostrophic ocean circulation and then go on to describe our attempts to model the effects of neglected subgrid degrees-of-freedom in coarse-scale simulations using stochastic processes