Abstract Submitted
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Passive scalar statistics and its dependence on Lagrangian coherent structures in stochastic flows[1] WENBO TANG, PHILLIP WALKER, Arizona State University, MICHAEL ALLSHOUSE, Massachusetts Institute of Technology, DIEGO DEL-CASTILLO-NEGRETE, Oak Ridge National Lab — In recent years, various mathematical tools have been developed to identify the organizing mixing patterns in deterministic aperiodic dynamical systems. In this talk we will discuss the dependence on different identification methods, (Lagrangian Okubo-Weiss, Finite-time Lyapunov exponents, ergodicity partition and geodesic theory), of Lagrangian statistics associated with stochastic aperiodic dynamical systems (e.g. fluid flows with subgrid-scale uncertainties). Gaussian and Lévy type noises will be considered.

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