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Small-scale intermittency in anisotropic stably stratified turbulence[1] SABA ALMALKIE, STEPHEN DE BRUYN KOPS, University of Massachusetts, Amherst — The statistical characteristics of small scale turbulence in the presence of large-scale anisotropies are examined using high-resolution direct numerical simulation of stably stratified turbulence. The effects of stratification and residual anisotropy at smaller scales on turbulence intermittency is of primary interest. The scale dependency of intermittency in stratified turbulence is quantified using statistics of the locally averaged energy dissipation rate and the scaling exponents of its moments over a range of Froude numbers. The results are compared to the corresponding statistics from simulations of isotropic homogeneous turbulence with comparable numerical resolution and Reynolds numbers. The reliability of conventional surrogates of energy dissipation rate in estimating intermittency of flows dominated by large scale anisotropy is also discussed.

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