



Turbulent transport processes at the ice-ocean interface

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We present a model to study the coupling between Arctic sea ice and the turbulent flow beneath it using numerical Lattice Boltzmann simulations in two-dimensions. The motivation is to understand the effects of sea ice roughness on the momentum, temperature and salinity fields, and ultimately on ablation and growth. The roughness elements used have both uniform and non-uniform distributions, with the latter having spectral properties derived from actual profiles of Arctic sea ice.