Abstract Submitted
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Quantum Simulation of Turbulence with Cold Atoms[1] MICHAEL FORBES, Washington State Univ — The flexibility of cold atom experiments allows them to be used as analogue quantum computers for modelling other physical systems. In this talk I will discuss how cold atoms can be used to simulate quantum turbulence, solving the dynamical quantum many-body problem in cases that exceed the capability of classical computation. The results of these simulations can thus be used to tune the density functional theories and hydrodynamic models, and I will discuss how these inform us about dynamics in nuclear systems, specially in neutron stars.

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