24th Australian Institute of Physics Congress



Contribution ID: 369 Type: Talk (preferred)

Mutual friction and diffusion of two-dimensional quantum vortices

Monday 12 December 2022 14:30 (15 minutes)

We present a microscopic theory of thermally-damped vortex motion in oblate atomic superfluids, providing a microscopic origin for the damping and Brownian motion of quantized vortices in two-dimensional atomic superfluids, which has previously been limited to phenomenology.

Author: MEHDI, Zain (The Australian National University)

Co-authors: BRADLEY, Ashton (University of Otago); HOPE, Joseph (The Australian National University); SZIGETI,

Stuart (The Australian National University)

Presenter: MEHDI, Zain (The Australian National University)Session Classification: AIP: Atomic and Molecular Physics

Track Classification: AIP Congress: AIP: Atomic and Molecular Physics