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Viscosity and drag measurements in quasi-two-dimensional fluid flows EDWARD TITMUS, PAUL W. FONTANA, Seattle University — Many fluid flows in nature and the laboratory exhibit quasi-two-dimensional (Q2D) dynamics. Accurate measurements of viscosity and surface friction in Q2D flows are critical for comparing experiments with theoretical and numerical models, but have proven elusive. We demonstrate precise, independent measurements of both quantities in a Q2D experiment using soap films. The measurements are being used to test the theoretical linear stability threshold in 2D vortex arrays.

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