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Brownian Motion of Topological Point Defects in Smectic C Films[1] KATE WACHS, CHEOL PARK, ZHIYUEN QI, JOSEPH MACLENNAN, NOEL CLARK, University of Colorado — We observe the diffusive motion of topological point defects in the c-director field of freely-suspended smectic C liquid crystals films using reflected polarized light microscopy. Racemic films two layers thick were created and placed within a vacuum chamber. The diffusion of defects confined to islands of different thickness and diameter was measured as a function of air pressure. As the pressure decreases, the diffusion coefficient increases until it reaches the limit that results from pure 2D confinement.

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