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Evolution of Spin Textures in a Spinor Bose Einstein Condensate

JENNIE GUZMAN, MUKUND VENGALATTORE, SABRINA LESLIE, DAN STAMPER-KURN, Department of Physics, UC Berkeley — We study the evolution of spin textures in a $F=1$ spinor Bose Einstein condensate of ^{87}Rb atoms. We do so by allowing the magnetization profile of the condensate to evolve in an inhomogeneous magnetic field. Utilizing in-situ magnetization sensitive imaging, we spatially and temporally resolve the resulting vector magnetization profile. These experiments are performed at low quadratic Zeeman shift where a ^{87}Rb condensate is known to be ferromagnetic.

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