

Abstract Submitted
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Towards the observation of a Dicke type phase transition in spin-orbit coupled BECs¹ PETER ENGELS, CHRIS HAMNER, JIAJIA CHANG, Washington State University — Spin-orbit coupling plays a major role in many condensed matter systems. Utilizing Raman coupling between two hyperfine states it is possible to add spin-orbit coupling to atomic systems as well. This is an important step toward investigating condensed matter physics with ultra cold atoms. Motivated by recent theoretical results we experimentally investigate a Dicke-model type phase transition in spin-orbit coupled ^{87}Rb BECs. We report on recent and ongoing work.

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