

Abstract Submitted
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Improved apparatus for the study of sodium spinor Bose-Einstein condensates JAMIE LUSKIN, DONALD FAHEY, ALEXANDER IMPERTRO, ZACHARY GLASSMAN, PAUL LETT, Joint Quantum Institute, National Institute of Standards and Technology and the University of Maryland — We present the design of a sodium BEC apparatus optimized to perform below-SQL spin interferometric measurements and study coherent spinor dynamics in condensates at finite temperature. One of the features of this apparatus is an improved imaging capability due to re-entrant windows in a planar chamber geometry designed for a custom high NA objective that will allow for in situ and single atom detection. Design details and preliminary results will be discussed.

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