Abstract Submitted
for the DAMOP10 Meeting of
The American Physical Society

Detection of Small Spinor Condensates in Optical Traps EVA BOOKJANS, CHRIS HAMLEY, MICHAEL S. CHAPMAN, Georgia Institute of Technology — We are interested in studying spinor physics of small BECs beyond the mean field regime. We investigate ^{87}Rb Bose-Einstein condensates (BECs) with less than <100 atoms that are created in the optical lattice of a CO_2 laser. Measuring small numbers of atoms requires state of the art atomic detection techniques. We have explored the limits of absorption and fluorescence imaging techniques for observing small condensates. We will present the results of our investigation and discuss the applications to studies of small condensates and their spinor interactions.

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Date submitted: 26 Jan 2010 Electronic form version 1.4