Abstract Submitted
for the DAMOP05 Meeting of
The American Physical Society

Direct, non-destructive imaging of transverse and longitudinal magnetization in a bose gas: II SHIN INOUYE, JAMES HIGBIE, LORRAINE SADLER, ANANTH CHIKKATUR, SABRINA LESLIE, KEVIN MOORE, VERONIQUE SAVALLI, DAN STAMPER-KURN — The behavior of transverse and longitudinal magnetization of an ultracold thermal cloud was studied using polarization sensitive phase-contrast imaging. The decay time of the transverse magnetization signal was 65ms. This was more than factor of 10 shorter than the one equivalent decay time for the BEC, and was sensitive to magnetic field gradient across the cloud. This result can be understood with a simple kinetic model.

Shin Inouye
University of California, Berkeley

Date submitted: 28 Jan 2005 Electronic form version 1.4