Abstract Submitted
for the DAMOP16 Meeting of
The American Physical Society

Superradiance on the mHz linewidth clock transition in 87Sr MATTHEW NORCIA, MATTHEW WINCHESTER, JULIA CLINE, JAMES THOMPSON, JILA, University of Colorado at Boulder — In this talk, I will discuss our recent experimental explorations of superradiant emission from the mHz linewidth clock transition in an ensemble of cold ^{87}Sr atoms confined within a high-finesse optical cavity. Recent proposals suggest that superradiant lasers based on such dipole-forbidden transitions in alkaline earth atoms could achieve linewidths below the current state of the art, with reduced sensitivity to environmental perturbations.

Matthew Norcia
JILA, University of Colorado at Boulder

Date submitted: 28 Jan 2016 Electronic form version 1.4