

DAMOP14-2014-000966

Abstract for an Invited Paper
for the DAMOP14 Meeting of
the American Physical Society

Quantum Limits in Gravitational Wave Detectors

NERGIS MAVALVALA, Massachusetts Institute of Technology

The sensitivity of a new generation of laser interferometer gravitational wave detectors is expected to be predominantly limited by the quantum fluctuations of light. I will explore the origins and implications of this quantum limit, and describe experimental progress toward circumventing it using sub-quantum (squeezed) states of light.