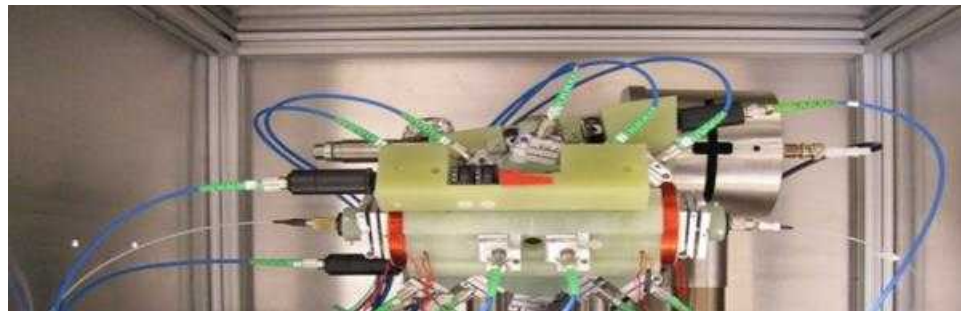
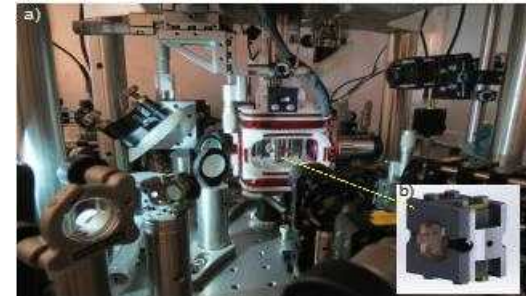
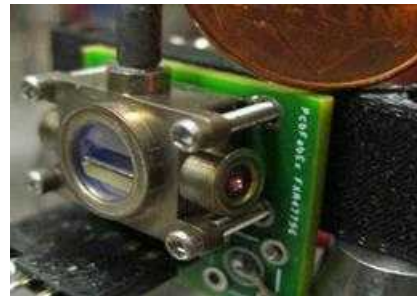


*Exceptional service
in the national interest*

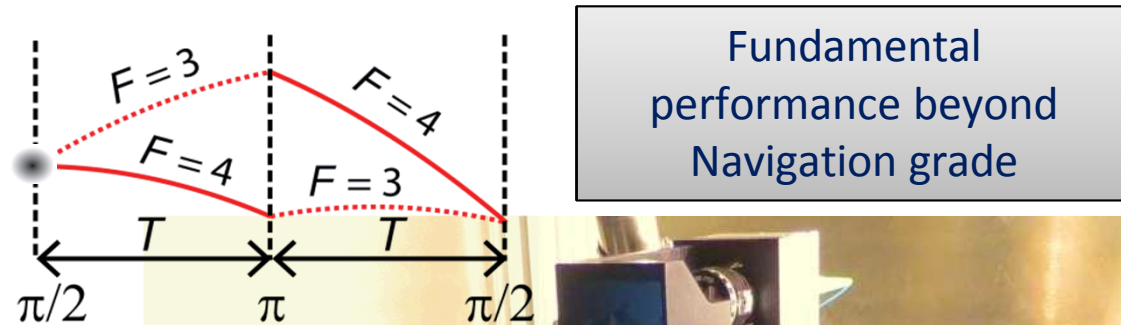


Deploying Quantum Sensors

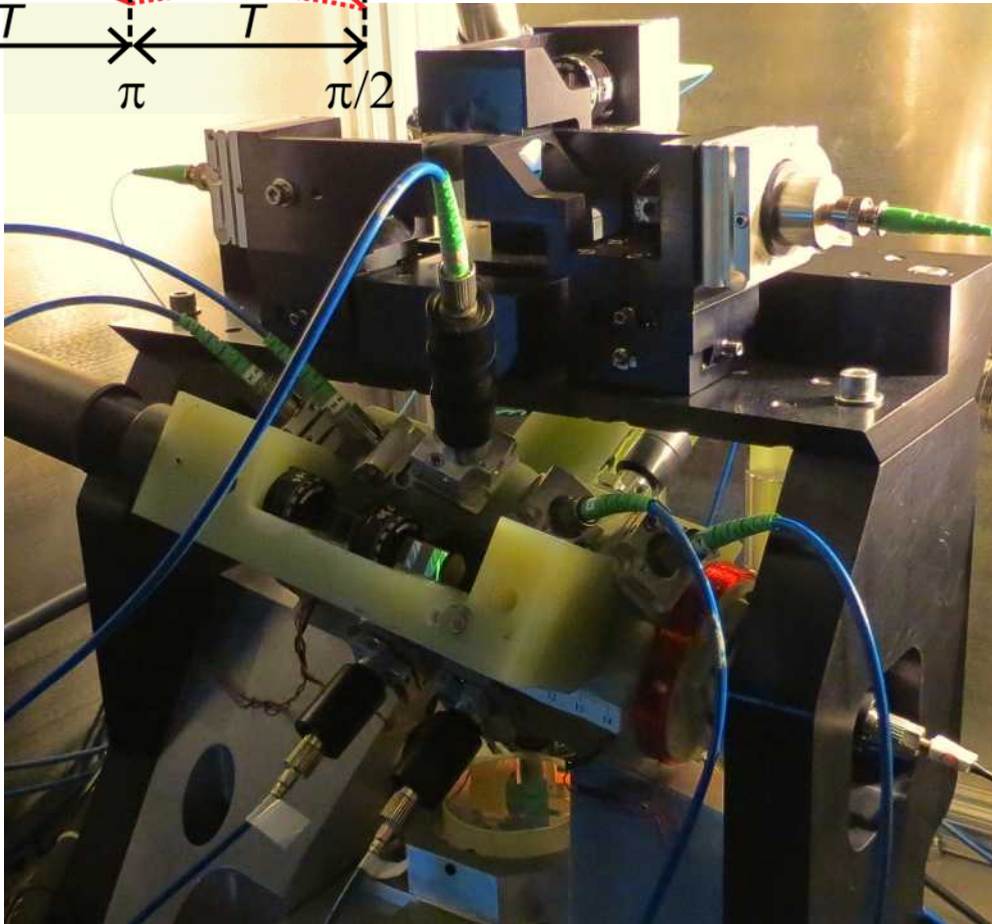


Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

Sandia atom interferometer inertial sensor

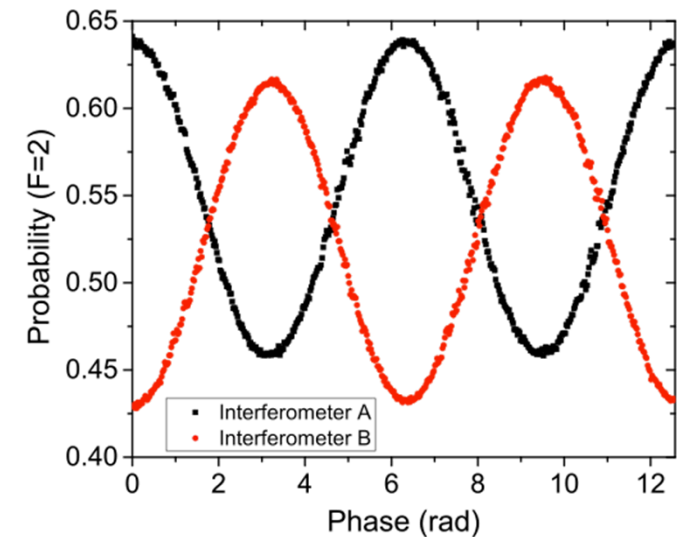


Fundamental
performance beyond
Navigation grade

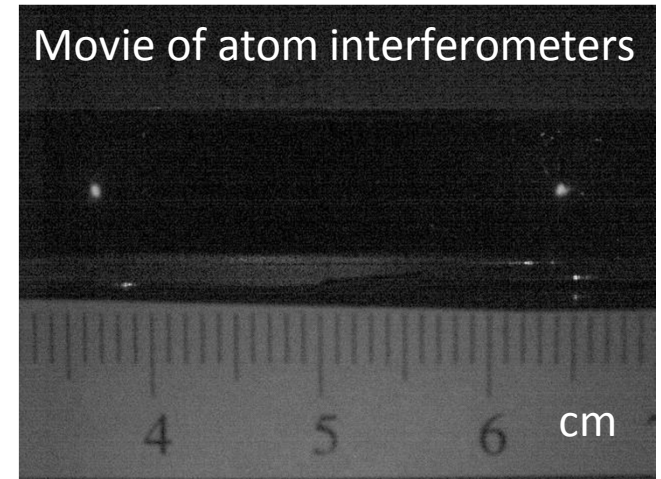


Picture of rotation/acceleration sensor

PI: Grant Biedermann



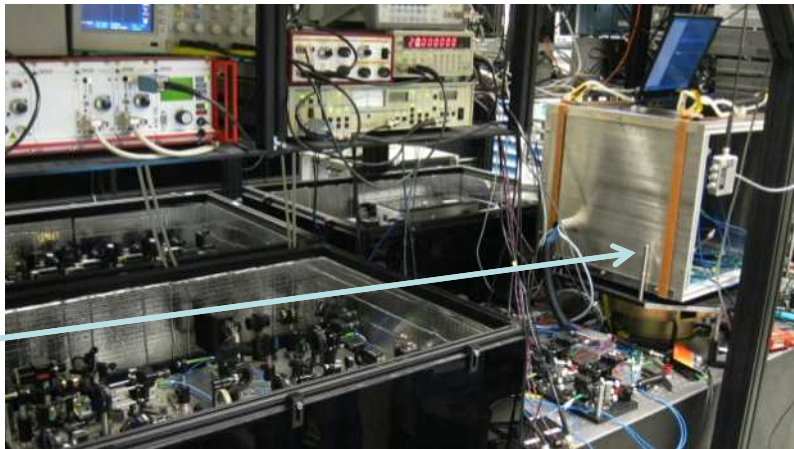
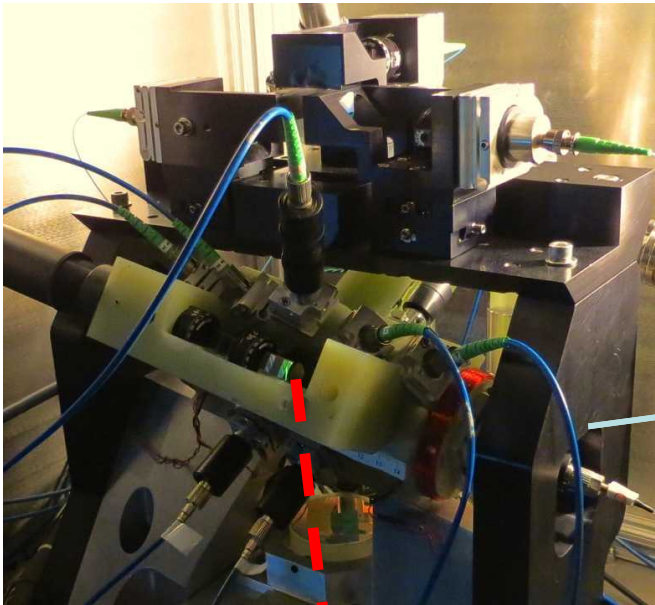
Movie of atom interferometers



Cycle repeats at ~ 50 Hz

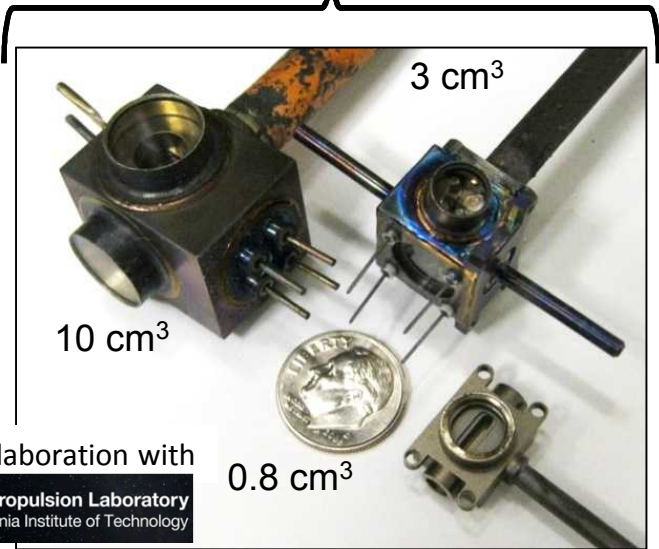
Sandia enabling capabilities

Picture of system hardware

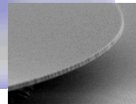
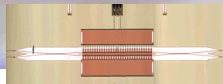
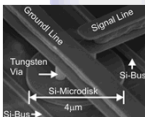
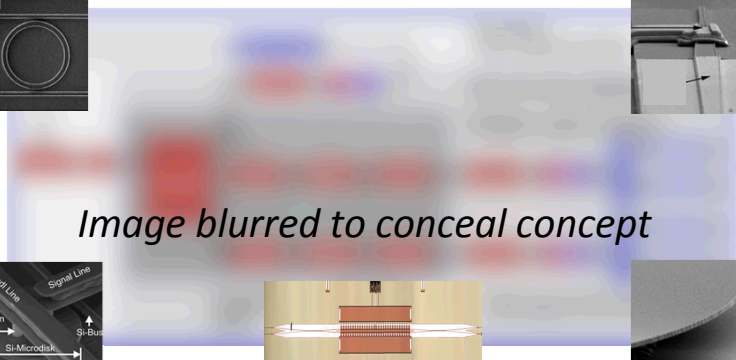
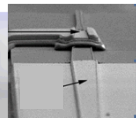


Existing SOA laser system: Optical Table sized

Next step: Miniature vacuum cell



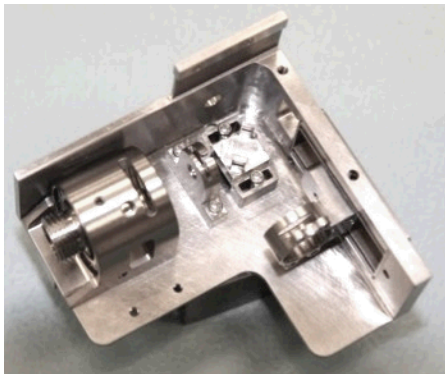
Next step: Chip Scale Laser System



Successful integration of atomic physics technology: DARPA IMPACT clock

PI: Peter Schwindt

Integrated Optics



Physics Package Interface



Vacuum Package

