

SES05-2005-020025

Abstract for an Invited Paper
for the SES05 Meeting of
the American Physical Society

Gravitational Wave Detection in Space: The LISA Mission

JEFFREY LIVAS, Gravitational Astrophysics Laboratory, Goddard Space Flight Center

Gravitational wave sources are expected to be plentiful in the 0.1 to 0.001 Hz region of the spectrum, but ground motion makes it impractical to build a good detector on Earth. The Laser Interferometric Space Antenna (LISA) Mission is a joint NASA/ESA project to develop a sensitive space-based gravitational wave detector that will complement the existing ground-based detectors of the Laser Interferometric Gravitational Wave Observatory (LIGO). This talk will review some of the expected sources of gravitational waves and general detection principles and then focus on some of the unique challenges for a space-based antenna.