

APR16-2016-000491

Abstract for an Invited Paper  
for the APR16 Meeting of  
the American Physical Society

**Listening to the low-frequency gravitational-wave band**

SCOTT HUGHES, Massachusetts Institute of Technology

Ground-based gravitational-wave detectors are beginning to explore the high-frequency band of roughly 10 to 1000 Hz. These three decades in frequency represent one of several astrophysically important wavebands. In this talk, I will focus on the astrophysics of the low-frequency band, from roughly 30 microhertz to 0.1 Hz. This band is expected to be particularly rich with very loud sources. I will survey what we expect to be important sources of low-frequency gravitational waves, and review the scientific payoff that would come from measuring them.