

# Boston University Physics Colloquium



## Searches for gravitational waves with the LIGO interferometers

The Laser Interferometer Gravitational-wave Observatory (LIGO) uses kilometer-scale Michelson interferometry to measure local spacetime distortion- this is the gravitational wave itself. The instruments are aiming to make the first direct observations of gravitational waves. LIGO, together with GEO600 and Virgo in Europe completed in October 2007 their most recent science run. This presented the most sensitive, longest in duration and first coordinated observation by the global network of gravitational wave detectors. The instruments are currently undergoing upgrades that will improve their sensitivity by a factor of two by mid-2009. This will be followed by the advanced instruments that will bring an order of magnitude sensitivity improvement by the middle of the next decade. In this talk I will review the status of the instruments and the searches for gravitational waves performed with data from the 2005-07 run of the detectors.

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November 18, 2008 (Tuesday) at 3:30pm (Refreshments at 3:15pm)

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