



NITheP cordially invites you to a seminar by:

**Prof. Kip Thorne**

Feynman Professor of Theoretical Physics Emeritus, California Institute of Technology

Date: Monday 22<sup>nd</sup> of November 2010

Time: 15:00

Venue: NITheP Stellenbosch Seminar room

**TITLE: Gravitational-Wave Observatories, and the Quantum Mechanics of Human-Sized Objects**

ABSTRACT: The gravitational-wave window onto the universe will likely be opened, in the coming decade, in four different frequency bands. Thorne will briefly describe the astrophysical motivations for the current large effort to open this window, and will then discuss in the various technologies and techniques that underlie that effort, with special emphasis on LIGO, the Laser Interferometer Gravitational Wave Observatory, which he co-founded. Thorne will also describe plans for using LIGO technology to carry out quantum mechanics experiments on human-sized objects, including creating quantum correlations between 40kg mirrors 4km apart, and putting them into Schrodinger-cat states.

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