

**PHYSIKALISCHES KOLLOQUIUM**  
**EINLADUNG**

---

Monday, 08.06.2015, 16.15 p.m., W2-1-148

speaks

**Prof. Dr. Philippe Jetzer**

**Institute of Physics,**

**University of Zürich, Switzerland**

about

**“Gravitational wave detection from space”**

I will present the proposed satellite eLISA (evolved Laser Interferometer Space Antenna), which is a space-based mission designed to measure gravitational waves over a broad band of frequencies ranging from  $\sim 0.1$  mHz to  $\sim 1$  Hz.

Possible sources of gravitational waves are a variety of systems and events throughout the Universe, including the coalescences of massive black holes brought together by galaxy mergers; the inspirals of stellar-mass black holes and compact stars into central galactic black holes; several millions of ultracompact binaries, both detached and mass transferring, in the Galaxy; and possibly unforeseen sources such as the relic gravitational-wave radiation from the early Universe. eLISA's high signal-to-noise measurements will provide new insight into the structure and history of the Universe, and it will test general relativity in its strong-field dynamical regime. This year LISA-Pathfinder, an ESA mission, will be put in orbit and test several of the needed technologies for eLISA.

All interested persons are cordially invited.

Gez. Prof. Dr. Claus Laemmerzahl