



# Berliner Physikalisches Kolloquium

im Magnus-Haus, Am Kupfergraben 7, 10117 Berlin

Eine gemeinsame Veranstaltung der Physikalischen Gesellschaft zu Berlin e.V. (PGzB), der Freien Universität Berlin (FUB), der Humboldt-Universität zu Berlin (HUB), der Technischen Universität Berlin (TUB) und der Universität Potsdam (UP), gefördert durch die Wilhelm und Else Heraeus-Stiftung.

Am Donnerstag, dem **09. Januar 2014**, um **18:30 Uhr**

spricht

**Prof. Dr. Bernard F. Schutz**  
**Max-Planck-Institut für Gravitationsphysik**  
**(Albert-Einstein-Institut), Potsdam-Golm**

über das Thema

**„Gravitational waves: A new kind of information  
about the universe“**

Moderation: Michael Müller-Preußker (HU Berlin)

The first direct detections of gravitational waves are confidently expected by 2017-18, and with luck could happen earlier. Regular observations will test general relativity stringently and will provide a wealth of information about black holes and neutron stars, about stellar evolution, and eventually about the extremely early universe. This information is of a different character than anything we have so far: gravitational wave detection is like listening to the universe rather than looking at it, and its sources are typically dark in electromagnetic waves. As with listening to everyday sounds, we may find that we can hear many things that we can't otherwise see. The talk will review current and planned detectors on the ground, in space, and using probes like pulsars and the cosmic microwave back-ground, and will describe the new physics and astronomy that might accompany the operation of these detectors.