PHYSIKALISCHES KOLLOQUIUM
Wintersemester 2017/18
Montag, 20.11.2017, 12 Uhr c.t. H-NB

Kolloquium zum Nobelpreis für Physik 2017:
Gravitationswellen - Vorhersage,
Herausforderungen und neue Einblicke

Prof. Dr. Rainer Grauer, Prof. Dr. Daniel Hägele und
Priv.-Doz. Dr. Dominik Bomans
Ruhr Universität Bochum

During the past few decades, new kinds of telescopes have been developed, leading to unexpected breakthroughs. These detectors exploit other forms of radiation: cosmic rays, neutrinos and gravitational waves. The existence of gravitational radiation is linked to the general theory of relativity and was predicted by Einstein a century ago. Gravitational waves are travelling ripples in space-time. They arise when heavy objects accelerate and hence generate disturbances in the gravitational fields. These distortions, described as waves, move outward from the source at the speed of light and give rise to effects that, in principle, are measurable when they reach Earth given sufficiently sensitive detectors. The effects are minuscule, even in the case of black holes spiralling ever closer to each other or exploding stars. This challenges experimental precision and requires specific techniques and effort.

Einführung: Prof. Dr. A. von Keudell

Die Fakultät lädt alle Interessierten herzlich ein.

Ab 11.45 Uhr Kaffee/Tee im Hörsaal