

WIENER PHYSIKALISCHES KOLLOQUIUM

TU-WIEN - UNIVERSITÄT WIEN

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Einladung zum Vortrag von

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The first direct detection of Gravitational Waves and beyond.

The direct detection of Gravitational Waves opens a new windows to look at the Universe. This great success is the result of a long experimental effort ended with the construction of the second generation of GW detectors.

These advanced instruments, installed in USA and Europe, employ high sensitive laser interferometry to probe the fundamental nature of gravity and the history and future of the Universe. LIGO in USA, and Virgo in Europe are the backbone of a network, which will be expanded soon with the addition of the Japanese interferometer KAGRA.

In this talk we report the results obtained during the first scientific run of the network when just the two LIGO interferometers were running. Then, we will review the scientific perspectives of the network paying attention on the noise sources limiting its sensitivity.

The scientific community has already started a study aimed to a further increase of the detector sensitivity for the next (3rd) Earth-based generation detector (ET). Thus, we will conclude by reporting the new ideas for the second phase of advanced detectors and for the ET project.

13. Juni 2016, 17:30 hrs

(ab 17 Uhr Kaffee)

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