

Theoriekolloquium

Am **7. April 2016** um **14.15 Uhr** in **W2 1-143** hält

Herr Dr. Roman Konoplya (Frankfurt)

einen Vortrag mit dem Titel

**Detection of gravitational waves from black holes:
Is there a window for alternative theories?**

Recently the LIGO and VIRGO collaborations reported the observation of gravitational-wave signal corresponding to the inspiral and merger of two black holes, resulting into formation of the final black hole. It was shown that the observations are consistent with the Einstein theory of gravity with high accuracy, limited mainly by the statistical error.

Angular momentum and mass of the final black hole were determined with rather large allowance of tens of percents. Here we shall show that this indeterminacy in the range of the black-hole parameters allows for some non-negligible deformations of the Kerr spacetime leading to the same frequencies of the black-hole ringing. This means that at the current precision of the experiment there remains some possibility for alternative theories of gravity.

Interessierte sind herzlich eingeladen.

gez. Prof. Dr. Claus Lämmerzahl