

**Plenarvortrag**

PV VI Do 9:00 Audimax

**Neutron star mergers and the begin of multi-messenger astrophysics** — ●STEPHAN ROSSWOG — The Oskar Klein Centre, Department of Astronomy, Stockholm University, Stockholm, Sweden

Neutron star mergers had long been suspected to produce gravitational wave "chirps", gamma ray bursts and produce r-process elements.

While overall convincing, all these conjectures were based on indirect arguments and none was proven directly. This changed on August 17, 2017: a gravitational wave signal from a merging neutron star binary was detected, closely followed by a short gamma-ray burst and week-long transients accross the electromagnetic spectrum coming from the radioactive decay of freshly synthesised r-process elements. In this talk I will give an overview over these recent developments.