C20-1(33)

Multi-messenger signals from merging neutron stars.

Tuesday, 22 November, 2022 Auditorium & Webcast 16:00 h

Prof. Dr. Stephan Rosswog (Univ. Hamburg)

Neutron star mergers are related to a large number of (astro-) physical questions. For example, they had long been suspected to produce gravitational waves, gamma ray bursts and -by some- to produce heavy "rapid neutron capture" elements. While overall convincing, all these conjectures were only based on indirect arguments and none was proven by direct observations. The situation changed dramatically on August 17, 2017 when the first ever neutron star merger was detected in both gravitational and electromagnetic waves. It confirmed many expectations, but also raised a number of new questions. In this colloquium I will discuss our current understanding of the merger process and its multi-messenger signatures (e.g. gravitational waves, formation of heavy elements and resulting kilonova emission) together with some of the open issues.



<u>Please note</u>: This is a HYBRID colloquium!

Meeting ID: 996 1652 8733 Meeting Password: 733220





CLUSTER OF EXCELLENCE QUANTUM UNIVERSE