

Großes Physikalisches Kolloquium an der Universität zu Köln

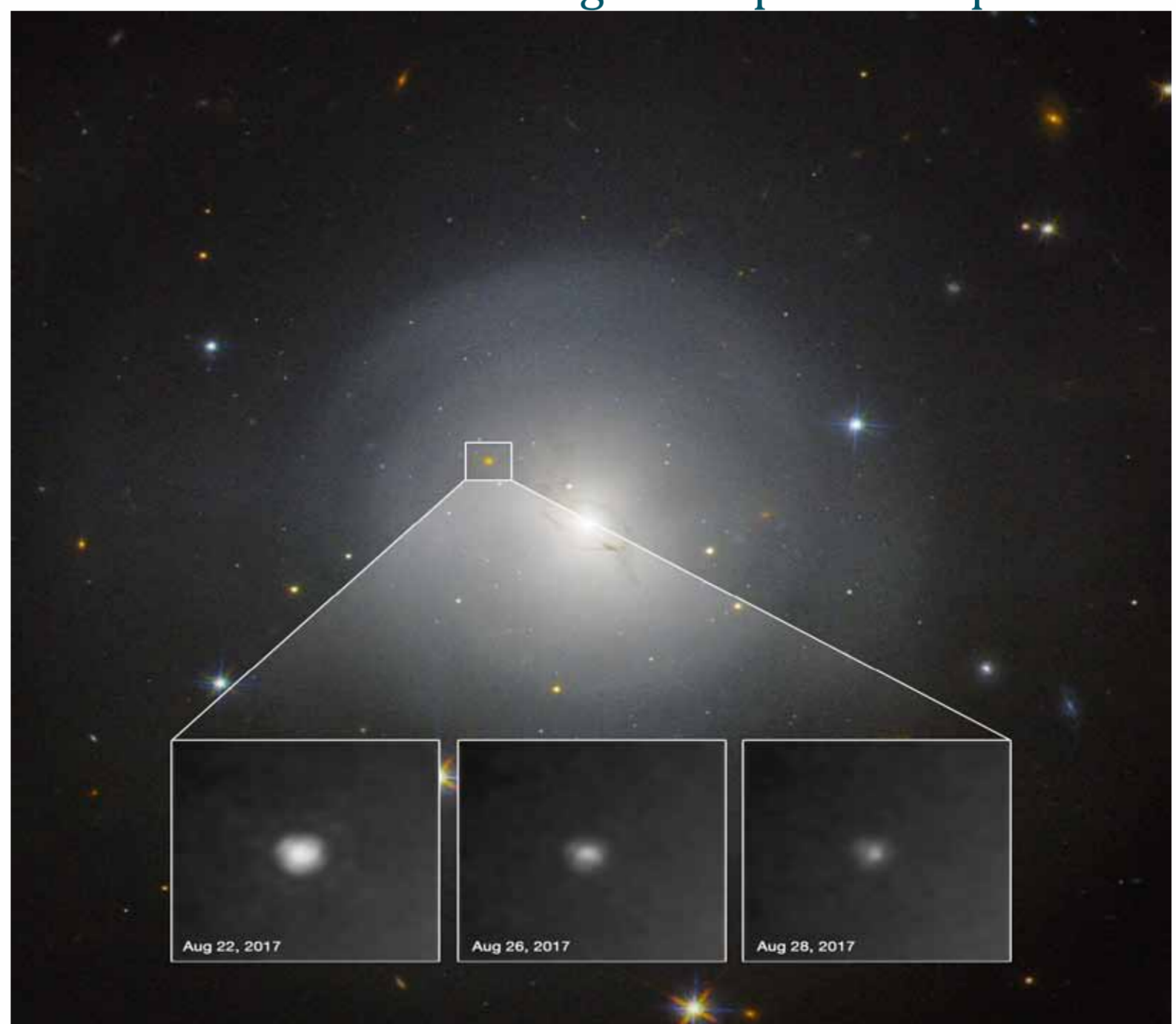
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Kilonova: an electromagnetic signal of heavy element nucleosynthesis

On August 17th 2017, the LIGO/VIRGO collaborations detected the gravitational signal GW170817 originating from a merger of two neutron stars. Shortly after an electromagnetic signal with an intrinsic brightness corresponding to thousand novae was detected by several telescopes worldwide lasting around a week. This kilonova signal has been predicted by theory long before and originates from the radioactive decay of freshly synthesized radioactive heavy nuclei produced by the r process. Hence, it answers one of the long lasting questions in nuclear astrophysics related to the astrophysical site of the r process. In this talk, I will summarize our current understanding of the r process, the answers provided by the recent observations and the remaining open questions.



16.10.2018
16⁴⁵ Uhr / HS III

