

# A Multimessenger Picture of Binary Neutron Star Mergers

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With the detection of the binary neutron star merger GW170817 a new era of multi-messenger astronomy started. GW170817 proved that neutron star mergers are ideal laboratories to constrain the equation of state of cold supranuclear matter, to study the central engines of short GRBs, and to understand the origin and production of heavy elements. In this talk, we discuss how the last milliseconds before and after the merger can be studied with full 3D numerical relativity simulations to obtain information about the emitted gravitational wave and electromagnetic signals.

**Primary author:** Dr DIETRICH, Tim (Nikhef (Dutch National Institute for Subatomic Physics))

**Presenter:** Dr DIETRICH, Tim (Nikhef (Dutch National Institute for Subatomic Physics))

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