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Compact object mergers and implications for nuclear physics[1]

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The very first detection of gravitational waves from a neutron star merger and of accompanying electromagnetic emission marks a breakthrough in astrophysics. We will provide an overview on neutron star mergers in general and the different implications of the first unambiguous detection of such an event for nuclear physics. Moreover, we will describe the future potential of observations of compact object mergers to inform about incompletely known aspects of nuclear physics. We will discuss in more detail possibilities to infer unknown properties of high-density matter and stellar parameters of neutron stars from future measurements.

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