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Recent Progress in Multimessenger Nuclear Astrophysics¹

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Neutron stars offer us an excellent testbed to explore dense-matter physics that is difficult to access with terrestrial experiments. Recent multimessenger observations through radio, x-ray, and gravitational waves have advanced our understanding of the nature of supranuclear matter. In this talk, I will briefly review recent progress on probing nuclear physics with multimessenger astronomy. For example, I will discuss how one can measure certain nuclear parameter (the curvature of symmetry energy at nuclear saturation density) by adopting correlations between this parameter and neutron star observables, such as radius and tidal deformability, and using observations by LIGO/Virgo and NICER.

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