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Nuclear constraints on properties of rotating neutron stars and gravitational waves PLAMEN KRASTEV, San Diego State University, Texas A&M University-Commerce, BAO-AN LI, Texas A&M University-Commerce — Nuclear reactions with radioactive beams provide unique means to constrain the equation of state (EOS) of neutron-rich matter, in particular its density dependence through the nuclear symmetry energy. The EOS is important for our understanding of numerous phenomena in nuclear physics, astrophysics and cosmology. Applying an EOS with symmetry energy constrained by recent nuclear laboratory data, we set a limit on the properties of rotating neutron stars and the resultant gravitational waves.

Plamen Krastev
San Diego State University, Texas A&M University-Commerce

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