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Constraining properties of rotating neutron stars with nuclear data from terrestrial laboratories[1] PLAMEN KRASTEV, BAO-AN LI, AARON WORLEY, Texas A&M University-Commerce — Abstract: 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 both nuclear physics and astrophysics. In this talk we will present our most recent results on the properties of rotating neutron stars with a particular emphasis on rapid rotations. The available constraints on the nuclear symmetry energy around saturation density restrict the possible rotating neutron-star configurations.

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