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Abstract for an Invited Paper for the HAW14 Meeting of the American Physical Society

Constraining the EoS of neutron-rich matter by laboratory measurements¹ WILLIAM LYNCH, NSCL and Dept. of Physics and Astronomy, Michigan State University

The density and momentum dependencies of the symmetry energy play an important role in the masses, isobaric analog states, low-lying E1 strength functions, neutron skins, giant resonances of neutron rich nuclei, and the isospin dependence of transport and emission during nuclear collisions. It also governs the internal structure of neutron stars, influences their radii and cooling rates as well as the neutrino transport in core-collapse supernova. This talk will discuss some current experimental constraints on the density and momentum dependence of the symmetry energy. It will also discuss future plans to extend these constraints to densities greater than that found in nuclei and similar to those found in the interiors of neutron stars.

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