

Connecting the micro to the macro in dense stars

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Nuclear astrophysics is a vibrant field that, thanks to impressive developments in astronomical observations and experimental nuclear techniques, will enhance our understanding of several stellar environments in the next decade. In this talk I will go over the overarching questions of modern nuclear astrophysics and the role of nuclear physics in addressing these problems. In particular, I will discuss the importance of neutrino interactions in dense matter, their influence in the synthesis of heavy elements, and the equation of state of nuclear matter.