

Information and Statistics: A New Paradigm in the Study of Neutron Stars

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ABSTRACT:

Neutron stars are unique cosmic laboratories for the exploration of matter under extreme conditions of density and neutron-proton asymmetry. Due to their enormous dynamic range, neutron stars display a myriad of exotic states of matter that are impossible to recreate under normal laboratory conditions. In this presentation I will discuss how the combination of nuclear physics insights, modern theoretical approaches, and powerful statistical ideas pave the way to our understanding of these fascinating objects.