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Measurements of Masses and Radii Of Neutron Stars

Monday 25 April 2016 12:10 (50 minutes)

In this talk I will present the current state of mass and radius measurements of neutron stars in low mass X-ray binaries obtained during thermonuclear X-ray bursts or in quiescence. Taking into account a number of systematic uncertainties that may be present in

the measurements as well as the results of recent theoretical calculations we obtain strong and quantitative constraints on the properties of the equation of state between above

the nuclear saturation density. Our measurements strongly favor radii in the 9.9-11.2 km range for a $^{\sim}$ 1.5 M_{sun} neutron star.

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Session Classification: Plenary Talk