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Towards Neutron Star Radius and Mass Determinations Using NICER SHARON MORSINK, Univ of Alberta, NICER/LIGHT CURVES WORKING GROUP TEAM — Determining the masses and radii of neutron stars is important, not only for understanding the astronomical properties of these stars, but also for understanding the physical properties of the cold dense matter within them. The NICER mission will measure the masses and radii of several rotation-powered pulsars by fitting pulse waveform models to observations of the soft X-ray waveforms produced by the rotation of hot spots located near their magnetic polar caps. In this talk I will describe how these measurements will be made, the results we expect, and how these results will be used to constrain the properties of cold dense matter.

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