

Abstract Submitted  
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**Measuring Tidal Deformability and Radii of Neutron Star  
Sources with Third Generation Gravitational Wave Detector Networks**

RACHAEL HUXFORD, RAHUL KASHYAP, SSOHRAB BORHANIAN, BANGALORE SATHYAPRAKASH, Pennsylvania State University, LVK COLLABORATION — Third generation gravitational wave detectors such as the Einstein Telescope and Cosmic Explorer could be the newest members of an ever-expanding network of planned ground-based detectors across the globe. In this presentation, we explore how well current detector network configurations constrain the tidal deformability and radii of neutron star sources and how third generation of detectors will improve on these. Specifically, we focus on how the capability of possible 3G detector networks changes for different source equations of state, and source mass.

Rachael Huxford  
Pennsylvania State University

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