Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Inferring gravitational wave polarization content without templates KATERINA CHATZIIOANNOU, Simons Foundation, MAX ISI, MIT, TYSON LITTENBERG, NASA Marshall, CARL JOHAN HASTER, MIT — The addition of further detectors in the network of ground-based gravitational wave detectors offers the possibility to test the polarization content of the detected signals. I will discuss a morphology-independent way to probe the polarization content of a signal using BayesWave, a data analysis pipeline that does not rely on compact binary waveform templates to model the observed signal. I will show how the polarization content can be used to study effects such as spin-precession. Additionally, I will describe how this data analysis framework can be generalized to incorporate polarization modes beyond the ones predicted by General Relativity and place constraints on their amplitude.

Katerina Chatziioannou
Simons Foundation

Date submitted: 30 Dec 2019 Electronic form version 1.4