Contribution ID: **113**   Type: **not specified**

Forecasting detections of gravitational-wave tails from LIGO data

Wednesday 8 June 2022 14:45 (15 minutes)

The growing collection of gravitational-wave (GW) detections from current ground-based detectors coupled with constant improvements in detector sensitivity provide opportunities to observe as-of-yet undiscovered consequences of General Relativity. The recent prediction of the existence of GW "tails" produced by primary signals scattering off of stellar-density astrophysical objects is a promising candidate for detection and could yield further insight into properties of the astrophysical populations of such perturbers. In this presentation, I present progress made toward forecasting the capacity for detection of such GW tails in LIGO data at modern-day sensitivities over a representative sample of GW tail parameter space. We find promising results that motivate searches for such signals in public GW data.

Primary author: CARNEY, Matthew

Presenter: CARNEY, Matthew

Session Classification: Parallel