



Contribution ID: 351

Type: **Talk in a parallel session**

Detectability of exotic object mergers by current generation gravitational wave detectors

Tuesday, 9 July 2024 17:00 (40 minutes)

Over the last decade the international network of gravitational wave detectors (LIGO-Virgo-KAGRA) have detected close to a hundred compact binary mergers. All observations have been consistent with mergers of black holes or neutron stars, but some have been posited as signals generated by the merger of exotic stars. The signal from any compact binary merger would look like that emitted by the merger of two black holes at leading order. Any deviations would be small and very sensitive to the underlying model of formation. We consider a more generic compact-binary waveform model, which allows us to make qualitative statements about the detectability of exotic mergers with current gravitational wave data analyses, and the identification of deviations from the black hole hypothesis.

Primary author: GHOSH, Shrobana (Max Planck Institute for Gravitational Physics, AEI Hannover)

Co-author: Prof. HANNAM, Mark (Cardiff University)

Presenter: GHOSH, Shrobana (Max Planck Institute for Gravitational Physics, AEI Hannover)

Session Classification: Astrophysics with gravitational waves

Track Classification: Gravitational Waves (GW): Astrophysics with gravitational waves