

UNL Department of Physics and Astronomy presents:

Hearing the forest for the trees: understanding LIGO/Virgo's plurality of singularities

PRESENTED BY
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THURSDAY
APRIL 13TH
4:00 PM
IN JH 136

Refreshments will be served in the JH 1st Floor Vending Area at 3:30

ABSTRACT

With the impending start of their fourth observing run, the LIGO and Virgo detectors have collected an impressive census of compact binary mergers in the local universe. By the end of the second observing run in August 2017 the LIGO Scientific Collaboration and Virgo Collaboration claimed a total of 10 binary blackhole mergers and one binary neutron star merger. The third observing run (O3) spanned April 2019 through March 2020, include many significant discoveries (e.g., neutron star-black hole binaries, surprisingly massive black holes) and culminated in the third catalog of Compact binary mergers, GWTC-3, which raised the total catalog of confidently detected binary mergers to 90. I will present some of what ground-based gravitational wave astronomy has taught us about compact binaries over the last eight years, and what may lie ahead.