

Dark Matter and Stars: Multi-Messenger Probes of Dark Matter and Modified Gravity

Contribution ID: 70

Type: **not specified**

Continuous gravitational-wave probes of dark matter

Wednesday, May 3, 2023 12:05 PM (15 minutes)

The third observing run of advanced LIGO, Virgo and KAGRA brought unprecedented sensitivity towards a variety of quasi-monochromatic, persistent gravitational-wave signals. Continuous waves allow us to probe not just the canonical asymmetrically rotating neutron stars, but also different forms of dark matter, thus showing the wide-ranging astrophysical implications of using a relatively simple signal model. In this talk, I will summarize recent results from searches for dark matter in the form of asteroid-mass primordial black holes, dark matter clouds that could form around rotating black holes, and even dark matter that could interact with the detectors themselves.

Primary author: MILLER, Andrew

Presenter: MILLER, Andrew