

UM Physics Department

Miami 2020 Physics Conference (Online)

Name: Maya Fishbach

Title: Population properties of compact objects from the second LIGO–Virgo Gravitational-Wave Transient Catalog

Abstract:

I will discuss the population properties of the 47 compact binary mergers detected with a false alarm rate $< 1/\text{year}$ in the second Gravitational-Wave Transient Catalog (GWTC-2). I will review our measurements of the binary black hole mass distribution, spin distribution and merger rate as a function of redshift. I will discuss astrophysical implications, including what the most massive black holes teach us about the pair-instability mass gap and what black hole spin (mis)-alignment teaches us about their formation channels.