

First detections of neutron star-black hole mergers

mardi 12 octobre 2021 09:00 (15 minutes)

In this talk I will present the detection of NS-BH binary mergers with gravitational waves by the LIGO - Virgo-KAGRA collaboration. I will first present how the events GW200105 and GW200115 were detected: the first was observed by LIGO Livingston and Virgo, and the second by all three LIGO-Virgo detectors. Then I will detail the main properties of the events and how we establish the presence of the NS.

These detections provide the first proof of the existence of this new class of binaries and I will present the inferred merger rate. Then I will place the merger rate and binary properties in the global context of known compact objects and the various formation channels of compact object mergers.

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Classification de Session: Groupe de Travail: Population des sources