



The Astrophysics of LIGO/Virgo Sources (No 1755)

📅 29.06.2020 ⌚ 12:30 - 13:00 🗨 Plenary talk
🔗 Monday Plenary

Krzysztof Belczynski¹

¹ Copernicus Center, Polish Academy Of Sciences

Despite the fact that massive BH-BH dominance in gravitational-waves was predicted prior the detections, it is not at all clear which one of the several formation scenarios produces these massive mergers.

This inhibits astrophysical information inference from LIGO/Virgo observations, as conclusions are different within each formation scenario.

There is quite an opposite problem with the first detection of NS-NS merger in an old elliptical host galaxy. None of the formation channels that can reproduce basic properties of the detected BH-BH mergers, can recover the very high NS-NS merger rate estimated by LIGO/Virgo.

Despite the fact that the exact origin of LIGO/Virgo sources is not yet known, several astrophysical implications are beginning to emerge.