Sixteenth Marcel Grossmann Meeting



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Low effective spins of LIGO/Virgo binary black hole mergers

Thursday, 8 July 2021 18:30 (20 minutes)

All ten LIGO/Virgo binary black hole (BH-BH) coalescences reported from the O1/O2 runs have near zero effective spins. The similar trend seems to be seen also in O3 results, alas with some exceptions. Even the famous massive event (GW190521: 85+66 Msun BH-BH merger) is fully consistent with having zero effective spin. I will discuss possible astrophysical implications of this intriguing result. It appears that stellar-origin BHs are formed with low natal spins and this may allow to constrain angular momentum transport in stellar interiors.

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