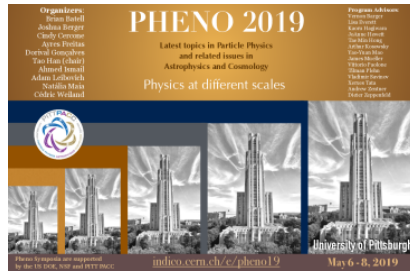


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Unraveling the origin of Black Holes from spin measurements with LIGO-Virgo

Monday 6 May 2019 17:15 (15 minutes)

The recent discovery of gravitational waves from five binary black hole (BBH) mergers has given us a new way to study our universe. The origin of the black hole (BH) binaries remains unclear. In this talk, I discuss how the BH spin distribution may help us distinguish between primordial or stellar origins. Primordial black holes (PBHs) may have formed due to the collapse of large density fluctuations in the early universe and are generically expected to have nearly vanishing spin, having arisen from the collapse of a distribution of matter without a significant vorticity. So far, all the merger events observed by LIGO-Virgo favor small spin effective values.

Summary

Gravitational waves

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