

Gravitational waves from primordial black hole isocurvature: The effect of primordial non-Gaussianity

The energy density perturbations of a population of primordial black holes (PBH) forming out of the collapse of enhanced cosmological perturbations are isocurvature in nature. Interestingly enough, they can induce through second order gravitational interactions a stochastic gravitational-wave (GW) background, potentially detectable by current and future gravitational-wave detectors. This GW background can act as a novel method to extract constraints on cosmological models and gravitational theories. In this talk, working within the context of general relativity we will discuss the effect of primordial non-Gaussianity on the clustering properties of PBHs as well as on the spectral shape of the aforementioned induced GW signal.

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