

Spanish and Portuguese Relativity Meeting



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On cosmological clustering of Gravitational Wave events

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Traditional large-scale structure surveys estimate the power spectra from galaxy surveys where distances are estimated based on the observed redshift. But not all tracers of dark matter, such as supernovae Type Ia and gravitational wave merger events, have a measured redshift; instead, they provide an observed luminosity distance. Therefore the natural estimator would be the observed number counts in luminosity distance space. In this talk, we would review the full calculation of clustering in luminosity distance space including all light-cone effects, and establish the differences with redshift space. We will also present models for the biases that affect the observed angular power spectrum. Additionally we will discuss the implication of cosmological constraints can have in the properties of BH population responsible for GW events.

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