

Shi Pi: Universal infrared scaling of induced gravitational waves

Monday, 2 December 2019 14:40 (20 minutes)

I will talk about the general infrared behavior of the power spectrum of a stochastic gravitational wave background Ω_{GW} produced by stress tensor with bilinear structure, focusing on the gravitational waves induced by scalar perturbations. If the source term is bounded in both frequency and time and reenters the Hubble horizon in a radiation-dominated stage, we have a universal k^3 -scaling for k smaller than all the physical scales associated with the source, like the peak frequency, peak width, and time duration, etc. I will also talk about possible violations of these conditions and their physical implications.