

Angelo Ricciardone (INFN Padua): Probing anisotropies of the stochastic gravitational waves backgrounds with LISA

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Gravitational Waves (GWs) represent a unique tool to explore astrophysics, cosmology and fundamental physics of our universe. After the GW detections by the LIGO/Virgo collaboration the next target of future ground and space-based interferometers is the detection of the stochastic background of GW (SGWB), both astrophysical and hopefully cosmological. Beside their isotropic contribution, such SGWBs are characterized by anisotropies, in the same fashion of the Cosmic Microwave Background.

In this talk I will present the formalism and prospect for detection of the anisotropies of the SGWB, which represent a powerful tool to characterise and disentangle it. I will mainly discuss the cosmological background case and I will present some recent studies to probe the anisotropies using the future space-based interferometer LISA.