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## The stochastic gravitational-wave background from binary black holes

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The astrophysical stochastic gravitational-wave background is created by incoherent superposition of sources, such as merging binary black holes and binary neutron stars. The estimated merger rate of binary compact objects suggests that this background may be detected with ongoing and future gravitational-wave experiments. In this talk I will describe the theoretical predictions for the stochastic background from binary black holes and the astrophysical parameters we will be able to constrain with future observations. In particular, I will show that this background is expected to have an anisotropic component, which depends on the properties of binary black holes and their host galaxies. I will also discuss the possibility of cross-correlating the anisotropies of the stochastic gravitational-wave background with electromagnetic tracers of the large scale structure, such as galaxy number counts, and the complementarity of this signal with other gravitational-wave observations.

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