ID de Contribution: **7** Type: **Contributed talk**

StarTrack predictions of the stochastic gravitational-wave background from compact binary mergers

jeudi 11 mars 2021 14:30 (18 minutes)

Nowdays we are able to resolve more and more compact binary merger events as our detector sensitivities improve. However the detected sources are loud and close events, suggesting a large number of non-resolved binary mergers participating to a background. I will present this background computed from the StarTrack population synthesis in a large frequency range (1μHz - 2kHz). For the first time the calculation includes the redshift and orbital evolution of binary systems as well as new merger channels : the stars from population III and the non-merging systems population. For several detector networks scenario (2G : LIGO, Virgo, KAGRA; 3G : Einstein Telecope, Cosmic Explorer and the space antenna : LISA) we compute the residual background by substracting the corresponding resolved sources and evaluate its detectability.

Auteurs principaux: Dr REGIMBAU, Tania ({CNRS}UMR5814); BULIK, Tomasz (University of Warsaw); BELCZYNSKI, Chris; PERIGOIS, Carole

Orateur: PERIGOIS, Carole

Classification de Session: Stellar binaries