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The Quest for the astrophysical background with Advanced LIGO/Virgo TANIA REGIMBAU, CNRS/ARTEMIS/Observatoire de la Cote d'Azur, LIGO VIRGO COLLABORATION COLLABORATION — In addition to the cosmological background, an astrophysical background may have resulted from the superposition of a large number of unresolved sources since the beginning of stellar activity. This astrophysical contribution could be a foreground masking the cosmological background but it can also provide very interesting informations, not only about the physical properties of the respective astrophysical populations, complementing individual GW detections, but also about the evolution of these objects with redshift, the star formation history or the metallicity. In this talk, predictions of the gravitational wave background formed by all the compact binary coalescences at cosmological distances will be given, as well as a discussion of their accessibility with the network of Advanced LIGO/Virgo detectors. Finally, the expected astrophysical and cosmological constraints to be made by Advanced LIGO/Virgo will be presented.

Tania Regimbau
CNRS/ARTEMIS/Observatoire de la Cote d'Azur

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