



Contribution ID: 198

Type: **Invited talk in the parallel session**

Hunting for the Stochastic Gravitational-Wave Background

Tuesday, 6 July 2021 08:40 (30 minutes)

I will first define the stochastic gravitational-wave background (SGWB) and highlight the method we are using to detect it in the presence of correlated magnetic noise. I will then discuss astrophysical and cosmological sources and report on the current constraints imposed from a non-detection during the first three observing runs of the LIGO/Virgo/KAGRA collaboration. I will also address the question of a simultaneous estimation of astrophysical and cosmological SGWB. Then I will present a search for circularly polarised SGWB and its relation to early universe cosmology. Finally, I will discuss how the SGWB can provide tests for gravity theories, including quantum gravity proposals.

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Session Classification: Sources of Gravitational Waves

Track Classification: Gravitational Waves: Sources of Gravitational Waves