



Contribution ID: 77

Type: **not specified**

Searching for subsolar mass primordial black holes with gravitational waves

Thursday 22 May 2025 09:00 (30 minutes)

Primordial black holes (PBHs) can form in the early universe and represent an intriguing dark matter candidate as well as a unique probe of the physics governing the early universe. Focusing on subsolar mass PBHs, we will discuss avenues to constrain their abundance with gravitational waves (GWs). These include i) direct searches for mergers using LIGO/Virgo/Kagra detectors; and ii) indirect searches for the stochastic GW background associated with their formation using pulsar timing array experiments. We will also discuss the challenge of distinguishing these signatures from those of expected astrophysical sources.

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Session Classification: PBHs and GWs