

# The XXIX International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY 2022)



Contribution ID: 81

Type: **not specified**

## PBHs and GWs from an early matter era

*Friday, 1 July 2022 18:40 (20 minutes)*

A low reheating temperature is predicted by many supersymmetric extensions of the Standard Model. This implies that an extended early matter domination era (eMD) might have occurred in the universe during the first seconds of the cosmic evolution. In this talk I will present how the density perturbations grow and primordial black holes (PBHs) can form during eMD. Emphasis will be given to the production of the associated gravitational wave (GW) signal, its particular spectral characteristics and the detection prospects that can be also seen as a probe of the eMD cosmological scenario.

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**Session Classification:** Particle cosmology: Theory and Experiment