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Formation of PBHs during the QCD phase transition

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Primordial Black Holes (PBHs) are black holes that could have been formed in the very early universe due to the collapse of large curvature fluctuations after inflation. PBHs are nowadays one of the most attractive and fascinating research areas in cosmology for their possible theoretical and observational implications. In this talk, I will review the physical process of PBH formation and give some new results regarding the numerical formation of PBHs during the QCD phase transition. In this scenario, the temporal reduction that suffers the equation of state can modify the threshold of PBH formation in such a way to produce BHs with masses order solar mass, which could be detected with current gravitational wave detectors.

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