

New Horizons in Primordial Black Hole physics (NEHOP)



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Primordial black holes and how to (not over-) produce them

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The simplest way to produce primordial black holes is via the collapse of large overdense regions in the early universe. However, a boost of the primordial perturbations requires very specific dynamics in single-field inflation, and both the amplitude of perturbations and the resulting abundance of primordial black holes are extremely sensitive to the parameters of the inflationary model. I will show how this can be seen as an opportunity for learning about the early universe, as well as a drawback for the motivation of primordial black holes from single-field inflation.

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