New Horizons in Primordial Black Hole physics (NEHOP) - '24



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Constraining peaked power spectrum

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It has been understood for a long time that the reduction in the equation of state during a phase transition in the Early Universe leads to an exponential enhancement in the formation rate of PBHs. However, this exponential sensitivity to the EoS (via the collapse threshold) is the same sensitivity that PBH formation shows to the amplitude of the primordial power spectrum. In this talk I will focus on peaked power spectrum and show the challenges associated with motivating populations of primordial black holes with the standard model.

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