

JOINT TUFTS/MIT COSMOLOGY SEMINAR

Primordial Black Hole Dark Matter and the End of Inflation

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I will discuss the post-inflationary universe focusing on the question, when does the universe thermalize? Motivated by fundamental theory, we will consider the consequences of a prolonged matter dominated phase following inflation, and prior to Big Bang Nucleosynthesis (BBN), and the implications it has for cosmological observations. In particular, we will consider the primordial formation of black holes during this time and whether they could be all or part of the dark matter. Most notably, we find that if the universe thermalizes slightly before BBN the favored mass range for the black holes is 30 solar masses. That is, near the masses recently detected by LIGO.

Tuesday, October 17, 2017, 2:30 pm
574 Boston Ave, Room 316
Tufts University

Refreshments at 2:00 outside room 304