

JOINT TUFTS/MIT COSMOLOGY SEMINAR

CMB anomalies from primordial dissipation

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We analyze an inflationary model in which part of the power in density perturbations arises due to particle production. The amount of particle production is modulated by an auxiliary field. Given an initial gradient for the auxiliary field, this model produces a hemispherical power asymmetry and a suppression of power at low multipoles similar to those observed by WMAP and Planck in the CMB temperature. It also predicts an additive contribution to δT with support only at very small l that is aligned with the direction of the power asymmetry and has a definite sign, as well as small oscillations in the power spectrum at all l .

Tuesday, October 29, 2013, 2:30 pm
Robinson Hall, Room 250
Tufts University

Refreshments at 2:00 in Knipp Library, Room 251