JOINT TUFTS/MIT COSMOLOGY SEMINAR

The Goldstone and Goldstino of Supersymmetric Inflation

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I construct a supersymmetric effective field theory (EFT) for the minimal degrees of freedom of perturbations about slow-roll inflation. These can be viewed as the goldstone of spontaneously broken time translations, and the goldstino of spontaneously broken SUSY, both of which are tied together in an interesting way through the structure of the SUSY algebra. I will outline some phenomenological consequences of the leading-order Lagrangian, including a modified goldstino/gravitino dispersion relation and a time-dependent gravitino mass phase. Finally, I will describe schematically the possible contributions of goldstino loops to inflationary correlators.

Tuesday, December 1, 2015, 2:30 pm
Cosman Seminar Room
Center for Theoretical Physics
Building 6C, Room 6C-442
Massachusetts Institute of Technology

Refreshments at 2:00 in the same room