

JOINT TUFTS/MIT COSMOLOGY SEMINAR

Unwinding Inflation

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I will present a new model of inflation based on the discharge of higher-form electric flux that threads space-time and at least one compact extra dimension. Such fluxes are meta-stable and drive eternal inflation, and are one origin for the very large number of vacua in the string landscape. They can decay via a bubble nucleation that initiates a flux discharge cascade that gradually unwinds the flux, providing a period of slow-roll inflation. Without fine tuning this slow-roll phase can last 60 e-folds or more and produce a nearly scale-invariant power spectrum of perturbations consistent with observation, but with a number of characteristic features (such as oscillations and non-Gaussianity).

Tuesday, February 19, 2013, 2:30 pm
Robinson Hall, Room 250
Tufts University

Refreshments at 2:00 in Knipp Library, Room 251