

JOINT TUFTS/MIT COSMOLOGY SEMINAR

*Cosmological initial conditions: new type of
hill-top inflation from the CFT driven
cosmology*

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We give an overview of the cosmological model driven by conformal field theory (CFT) with the initial conditions in the form of the micro-canonical density matrix. This model features dynamical restriction of the cosmological constant range and, thus, might serve as a solution of the string landscape problem. In particular, it suggests a new mechanism of hill-top inflation originating from the underbarrier field oscillations in the vicinity of the inflaton potential maxima. Applications of this mechanism to Higgs inflation and Starobinsky models are considered. The problem of hierarchy between the inflation and Planck scales is discussed within the concept of a hidden sector of conformal fields with arbitrarily high spins. Thermal corrections to the primordial power spectrum and other properties of this model are briefly discussed.

Tuesday, September 29, 2015, 2:30 pm

574 Boston Ave, Room 204

Tufts University

Refreshments at 2:00 outside room 304