

# JOINT TUFTS/MIT COSMOLOGY SEMINAR

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## *Energy conditions allow eternal inflation*

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Eternal inflation proceeds by a series of fluctuations that increase the expansion rate of the universe in some Hubble volumes. This appears to violate the energy conditions, including the averaged null energy condition, which the inflaton field should obey. I will show that this conflict is resolved by consideration of the quantum states of the inflationary modes. In any single quantum state, the energy conditions hold, but decoherence repeatedly selects substates that are more rapidly expanding.

Tuesday, March 8, 2022, 2:30 pm

Hybrid talk

In person at 574 Boston Ave, Room 310

Zoom link will be distributed to joint cosmology seminar mailing list. See <https://cosmos.phy.tufts.edu/mailman/listinfo/cosmology-seminar> to join.

Tufts University

Refreshments at 2:00 outside the building, at the corner of  
Harvard St. and Boston Ave.