

# JOINT TUFTS/MIT COSMOLOGY SEMINAR

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## *Using quasars or CMB to test Entanglement*

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I'll discuss a practical scheme to use photons from causally disconnected cosmic sources to set the detectors in an experimental test of Bell's inequality. In current experiments, only a small amount of correlation between detector settings could mimic the predictions of quantum mechanics. By choosing the measurement basis using pairs of quasars or patches of the Cosmic Microwave Background, observed violations of Bell's inequality would require any such coordination to have existed for billions of years — an improvement of 20 orders of magnitude.

Tuesday, April 14, 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