

Abstract Submitted  
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**Study of Neutrino-Antineutrino Transitions in MINOS** RICHAS SHARMA, Fermilab, MINOS COLLABORATION — MINOS is a long-baseline neutrino oscillation experiment composed of two detectors along Fermilab's high-intensity NuMI neutrino beam. In addition to studying oscillation between different flavors of neutrinos, MINOS is also capable of studying the possibility of transitions between neutrinos and antineutrinos. The observation of such a signal would indicate the violation of Lorentz and CPT symmetry in the neutrino sector. I present the analysis techniques being developed to study the muon neutrino to muon antineutrino transitions, including event selection and prediction of the Far Detector spectrum. The expected MINOS sensitivity to the transition of  $\nu_\mu$ 's to  $\bar{\nu}_\mu$ 's is also discussed.

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