

Abstract Submitted
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Measuring Antineutrino Oscillations in MINOS RICHA SHARMA,
Fermilab, MINOS COLLABORATION — MINOS has previously reported the results of $\bar{\nu}_\mu$ disappearance from a direct observation of muon antineutrinos. The antineutrinos studied for this purpose are taken from two types of beam configurations: (a) Forward Horn Current (FHC), optimized for ν_μ selection where the $\bar{\nu}_\mu$ content is 7% of the neutrino beam, and (b) Reverse Horn Current (RHC), optimized for $\bar{\nu}_\mu$ selection where the $\bar{\nu}_\mu$ content is 40% of the beam. The previous analyses were based on 3.2×10^{20} protons on the NuMI target in FHC configuration and 1.7×10^{20} protons on target in RHC configuration. These analyses make a precise measurement of the oscillation parameters $\Delta\bar{m}_{23}^2$ and $\sin^2 2\bar{\theta}_{23}$ and also constrain the fraction of ν_μ that oscillate to $\bar{\nu}_\mu$. In the present analysis we have an FHC $\bar{\nu}_\mu$ data sample with 7.1×10^{20} protons on target which will be used to improve the previous measurements. This talk summarizes the agreement between data and simulation in the Near Detector at Fermilab.

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