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Atmospheric Neutrino Oscillations Measured at the MINOS Far Detector

This poster presents an analysis of the atmospheric neutrino sample collected with the MINOS Far Detector. Data from the first 8 months of MINOS+ is added to the full data set collected with MINOS, adding a factor of 30% to the 2011 analysis. The analysis uses a three flavor framework, with a four layer model for the Earth's matter density. Matter effects for atmospheric neutrinos traversing the earth greatly enhance the sensitivity to three flavor effects compared to the beam-only sample. The magnetized MINOS Far Detector uniquely enables charge sign separation in the reconstructed tracks, distinguishing neutrino events from antineutrinos.

Primary author: Mr PERCH, Andrew (UCL)

Presenter: Mr PERCH, Andrew (UCL)

Track Classification: Long Baseline Oscillations