

Combined Measurement of the Beam and Atmospheric Neutrino Oscillation Parameters from the MINOS Experiment

The Main Injector Neutrino Oscillation Search (MINOS) experiment at Fermilab uses a long-baseline neutrino beam in order to study neutrino oscillations. The near detector is placed 1 km from the target while the far detector is situated 735 km away from the target. Both detectors are magnetized allowing the charge determination of the particle being detected. The far detector is also used for the study of atmospheric neutrinos created by cosmic ray interactions in the atmosphere. Analyses from both beam and atmospheric neutrino and anti-neutrino data have been published by the MINOS collaboration. A combination of all these data will yield improved confidence limits on the oscillation parameters. Here, we present preliminary results from a combined oscillation analysis of the MINOS atmospheric and beam neutrino data. The final goal of this analysis is the combination of all MINOS atmospheric and beam data into a four-parameter oscillation analysis.

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