

Measuring antineutrino oscillations in MINOS as a test of CPT conservation

The MINOS experiment has made the best measurement of the atmospheric neutrino mass splitting to date by studying the disappearance of muon neutrinos over its 735 km baseline. Since October 2009 MINOS has been running with a dedicated muon antineutrino beam and has obtained data corresponding to 1.5×10^{20} protons on target in this configuration. Details of the analysis of these data are presented, allowing the first precision measurements of the atmospheric-regime antineutrino oscillation parameters. Any difference between the neutrino and antineutrino values could indicate CPT violation or other new physics.

Primary authors: Dr DANKO, Istvan (University of Pittsburgh); Dr EVANS, Justin (University College London); Mr DEVENISH, Nicholas (University of Sussex)

Presenters: Dr DANKO, Istvan (University of Pittsburgh); Dr EVANS, Justin (University College London); Mr DEVENISH, Nicholas (University of Sussex)