Abstract Submitted for the APR10 Meeting of The American Physical Society

Measurement of the relative neutrino flux using low-nu method JIAJIE LING, AZIZUR RAHAMAN, SANJIB MISHRA, University of South Carolina, MINOS COLLABORATION — MINOS is a long-baseline neutrino oscillation experiment employing the NuMI neutrino beam. We present an analysis of the NuMI neutrino flux using the low-nu (low hadronic energy) events in the MINOS Near Detector. The analysis provides an empirical parameterization of tuning the simulation of production spectra of secondary hadrons produced in the 120 GeV proton-NuMI target collisions by fitting the spectra of muon neutrino and antineutrino charged-current events at low-nu. The principal goal of this empirical parameterization analysis is to provide an accurate neutrino flux measurement for the oscillation studies. Preliminary results will be shown and they will be compared with other flux methods used by MINOS.

Jiajie Ling University of South Carolina

Date submitted: 19 Oct 2009 Electronic form version 1.4