

Abstract Submitted  
for the APR08 Meeting of  
The American Physical Society

**A Study of the NuMI Beam in the SciBooNE Detector**<sup>1</sup> JAVIER DUARTE, Massachusetts Institute of Technology, SCIBOONE COLLABORATION — The MiniBooNE and SciBooNE experiments, designed to detect neutrino events from the Fermilab Booster, can see events from the NuMI beam, albeit at significant angles. In fact, SciBooNE lies at an off axis angle of 543 mrad, five times greater than MiniBooNE. In this talk, I outline the process of neutrino production in NuMI and describe the off axis simulation of event rates at SciBooNE from NuMI Monte Carlo output. A Pauli-suppression parameter,  $\kappa$ , introduced by the MiniBooNE collaboration in their description of muon neutrino charged current quasi-elastic scattering on Carbon, is applied to see its effect on the prediction of NuMI events at SciBooNE. A geometric acceptance restriction on the events is utilized to single out those leading to the capture of the outgoing muon in SciBar. Finally, the MiniBooNE NuMI trigger timing is summarized for its relevance to a possible SciBooNE NuMI trigger.

<sup>1</sup>NSF Research Experience for Undergraduates Program

Javier Duarte

Date submitted: 11 Jan 2008

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