

## Elastic Scattering of Muon Neutrinos from Electrons in MINERvA at NuMI Beam Line

*Thursday, 14 June 2012 11:00 (15 minutes)*

$\nu_{\mu} + e$  elastic scattering process is theoretically well understood in  $\sim 1\%$  accuracy. This pure leptonic process has a distinct final state of a single, very forward electron. Measurement of the rate of such events provides a useful constraint on the muon neutrino flux incident on the MINERvA detector. Distinguishing electron from gamma background is important on the analysis.  $e/\gamma$  separation based on  $dE/dx$  will be described.  $\nu_{\mu} + e$  is studied using partial data set. I present the status of single electron reconstruction and comparison of data and simulation.

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