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Event Reconstruction and Particle Identification for MiniBooNE Experiment¹ HAIJUN YANG, University of Michigan — The MiniBooNE experiment at Fermilab is designed to confirm or refute the evidence for $\nu_{\mu} \rightarrow \nu_{e}$ oscillations at $\Delta m^{2} \sim 1 eV^{2}/c^{4}$ found by the LSND experiment. It is a crucial experiment which may imply new physics beyond the standard model if the LSND signal is confirmed. This talk will focus on the event reconstruction, event identification (or Particle Identification) based on boosted decision trees and expected $\nu_{\mu} \rightarrow \nu_{e}$ oscillation sensitivity.

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