Analysis of KalmanFilter3D module

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Abstract

The NOvA-ART module KalmanFilter3D has been used to reconstruct $\mu^{\pm}$ in simulated neutrino interaction events both in the far detector and in the near detector. We developed a module in order to compare the reconstructed energy and position in xy-plane with the original ones in order to have an estimation of the efficiency of this algorithm. We also try a new muon tagging algorithm for neutrino interaction events.