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# Status of Wire-Cell in the SBND experiment

*Friday, 21 June 2024 17:30 (2 hours)*

The Short Baseline Near Detector (SBND), a 112 ton liquid argon time projection chamber (LArTPC), is the near detector of the Short Baseline Neutrino Program at Fermilab. Neutrino events in SBND will produce both ionization electrons and scintillation light, which will be detected at the Anode Wire Planes Plane Assemblies (APAs) and the Photon Detection System (PDS), respectively. Wire-Cell is a standalone software package for TPC simulation, ionization signal processing, and 3D event reconstruction for LArTPC experiments, enabling high performance physics analyses. In this poster, we present the status of Wire-Cell development in the SBND experiment. Additionally we also introduce a Deep Neural Network (DNN) in LArTPC signal processing, to improve traditional signal Region of Interest (ROI) detection, and discuss the improvements over traditional ROI finding especially for certain track topologies using parameters such as bias and resolution of charge extraction

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