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Deep Learning Event Reconstruction at NOvA

Thursday, 7 July 2022 09:45 (15 minutes)

The NOvA experiment is a long-baseline accelerator neutrino oscillation experiment. NOvA uses the upgraded NuMI beam from Fermilab and measures electron neutrino appearance and muon neutrino disappearance at its Far Detector in Ash River, Minnesota. NOvA is a pioneer in the neutrino community to use classification and regression convolutional neural networks with direct pixel map inputs for particle identification and energy reconstruction. NOvA is also developing new deep-learning techniques to improve interpretability, robustness, and performance for the next generation of analyses. In this talk, I will discuss the development of deep-learning-based reconstruction methods at NOvA.

In-person participation

Yes

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