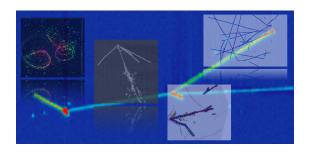
## **Neutrino Physics and Machine Learning (NPML 2025)**



Contribution ID: 39

Type: Short talk (15min. + 5 min. Q/A)

## Development of Machine Learning PID Methods in KamLAND-Zen Experiment

Tuesday 28 October 2025 15:25 (15 minutes)

We developed machine learning methods for background rejection in the  $0\nu\beta\beta$  decay search of the KamLAND-Zen experiment. Using CNN-based KamNet and Transformer-based ViViT for particle identification from PMT hit maps, we compared the rejection efficiency of both models. The results showed equivalent performance with high correlation (0.85-0.95) in output scores. Performance improvement through integrated models was limited.

Presenter: NAKANE, Jun

**Session Classification:** Experiments - 0nuBB