



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.

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Session Classification: Experiments - 0nuBB