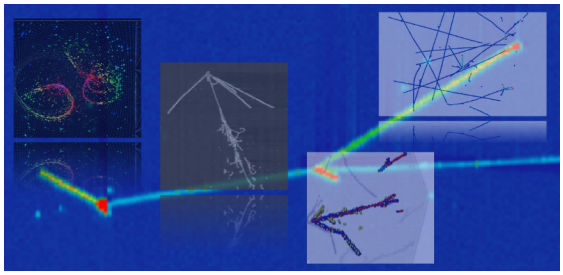

Contribution ID: **23** Type: **Short talk (15min. + 5 min. Q/A)**

WCTE Event Reconstruction with Graph Neural Networks

Monday 27 October 2025 14:15 (15 minutes)

The Water Cherenkov Test Experiment is a powerful detector for studying water Cherenkov detectors, demonstrating new detection technologies testing reconstruction algorithms with controlled data. In particular, the relatively small scale of the detector allows for a fast and lightweight exploration of machine learning methods. We will present here the performances of Graph Neural Networks for event reconstruction - namely particle identification, vertex, energy and direction reconstruction - using the CAVERNS framework. Comparison with traditional reconstruction methods (FiTQun) is also shown.

Presenter: FEREY, Mathieu

Session Classification: Experiments - SK/HK