Contribution ID: **1118** Type: **Poster**

Online Event Classification in JUNO

Friday 19 July 2024 20:40 (20 minutes)

The Jiangmen Underground Neutrino Observatory (JUNO) consists of the Central Detector (CD), Water Cherenkov Detector (WCD), and Top Tracker (TT) each utilizing thousands of Photomultiplier Tubes (PMTs) for signal detection. These signals are processed by front-end readout electronics and converted into digital ADC waveforms. Real-time waveform processing using FPGAs is used for charge reconstruction and timestamp tagging. Processed signals are transmitted to the data acquisition (DAQ), while raw waveforms are sent to the DAQ once verified by the global trigger electronics. JUNO is interested in an energy range spanning from tens of KeV to tens of GeV. The high event rate and massive raw data generated by PMT waveforms necessitate an online event classification (OEC) system to identify events based on physical characteristics, compress data volume, and handle unusual data acquisition situations. This presentation will discuss the implementation of the OEC system in JUNO.

Alternate track

I read the instructions above

Yes

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Session Classification: Poster Session 2

Track Classification: 02. Neutrino Physics