Offline Data Quality Monitoring

Xuyang Ning (BNL) for the DQM team 08/02





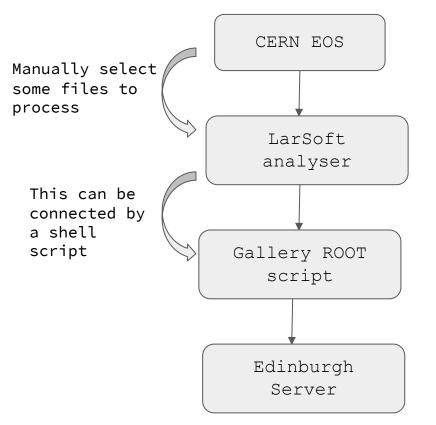
Planning the updates on DUNE Offline Data Quality Monitoring

Team:

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- Framework is built for protoDUNE, so we can test it under data taking context;
- Current User Interface: https://dunedash.edi.scotgrid.ac.uk/;
- 3. Plan to update de tool to be used in August 2024.

Process for DQM



Raw data in .hdf5 files

reco_stage1.root & reco_stage2.root

Extract information: Plots & values

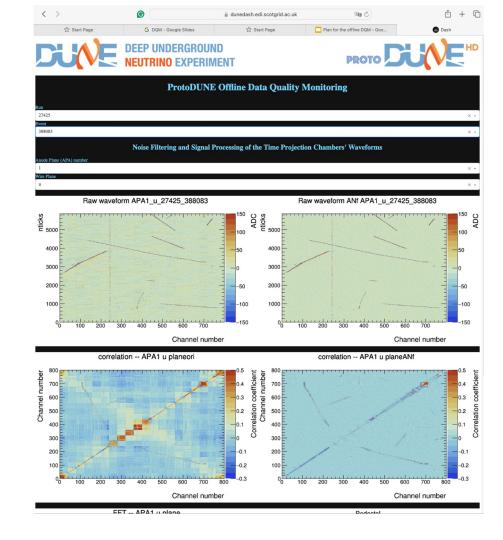
Display the figure according to user request.

Demo

- We have for now:(both before and after noise filter)
 - Waveforms;
 - Baseline;
 - RMS;
 - Noise spectrum vs frequency;
 - Correlation channel to channel;

https://github.com/Ningclover/protodune DQM v BNL

User Interface at Edinburgh (from Gabriela) : https://dunedash.edi.scotgrid.ac.uk/;



Next:

- More plots to be included:
 - Charge distribution after deconvolution (waveform ,etc.)
 - Hit finding information
 - Physics measurements: dE/dx; electron lifetime...
 - Summary or history plots of different runs: noisy/bad channels, etc.
 - 0 ...

- Improve the interface
 - Move to Django
 - 0 ...