

DQM PXD

Recent Updates & Plans

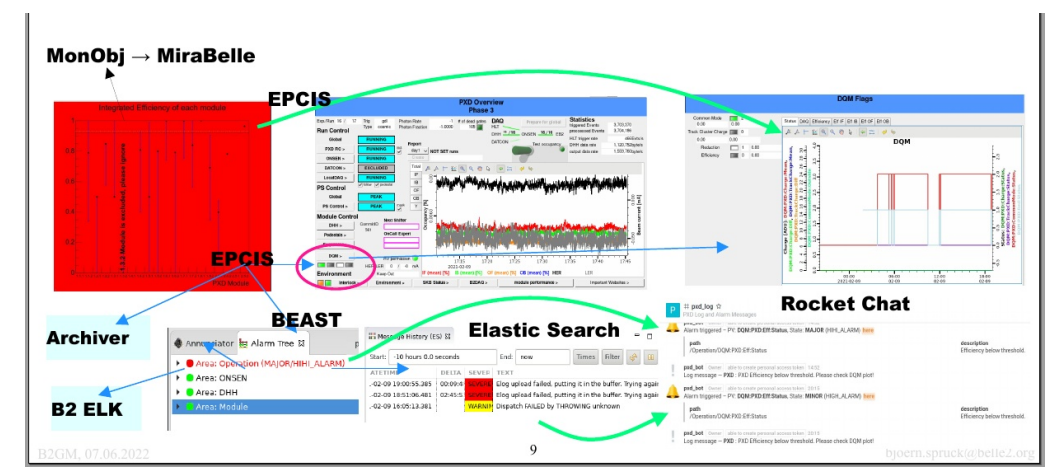
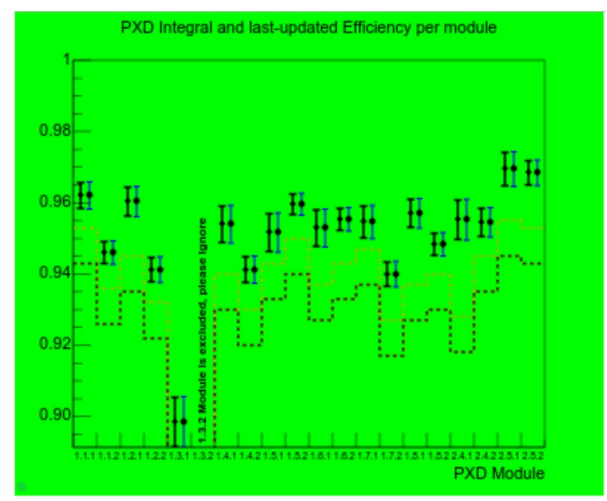
TRGDAQ Workshop, Nara

01.12.2022

Björn Spruck

Status and Changes on PXD DQM

- Automatic analysis already for most of analysis modules, in part connected to alarm system and message to CR shifter RocketChat if anomalies detected.
- → just add more of it ;)



- Efficiency: Reverting some change concerning PV limits (we understood the problem earlier, but didn't revert work-around during operation)

<https://stash.desy.de/projects/B2/repos/basf2/pull-requests/1356/overview>

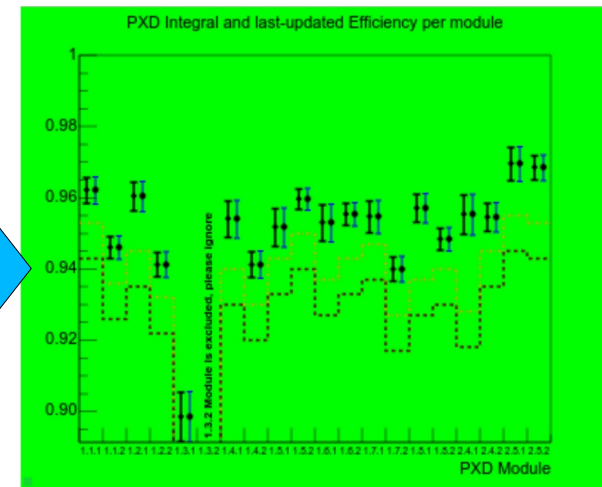
- Reduction: (monitor ROI processing). Added delta histogramming, alarms and adjustable limits from slow control side. Added test code.

<https://stash.desy.de/projects/B2/repos/basf2/pull-requests/1357/overview>

Open Topics, Reviews

- Change remaining private “delta” histogramming to new framework based one (easy, just need to find the time for proper testing)
- Adjust CommonMode plot for Module to ASIC wise, to better detect SEUs (started, WIP) → easier for automatic analysis/anomaly detection → could automatically trigger reconfiguration of ASIC?
- Remove plot for CR shifter as it is sometimes “confusing” and easier to auto detect.
- (may be better suited on localDAQ as faster reaction times.)

Some CR Shifters had problems understanding this plots with embedded limits and error bars
→ Already too complicated???
(or, shifter didn't read description?)
→ Review



- PXD2: Check 20→40 modules transition and workarounds for broken module (trivial but need to be done before combined VXD cosmic test)
- → Review plots for shifter (is it useful or just “pretty to watch”)
- MiraBelle PXD fine tuning (axis) and documentation (hope to find a student for that)
- → Review if MiraBelle data is understandable