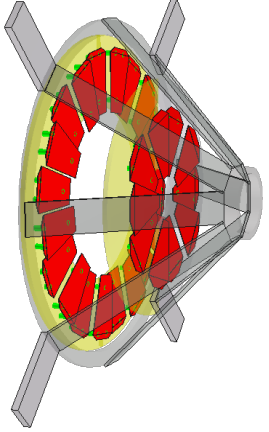
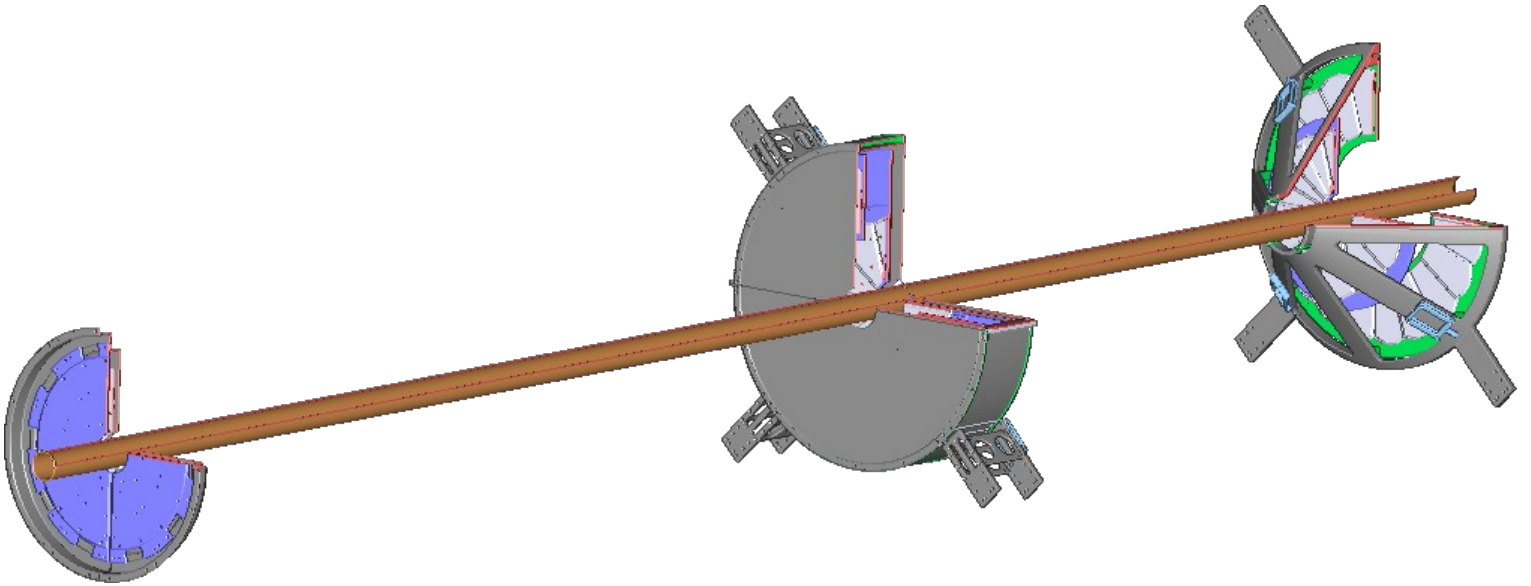
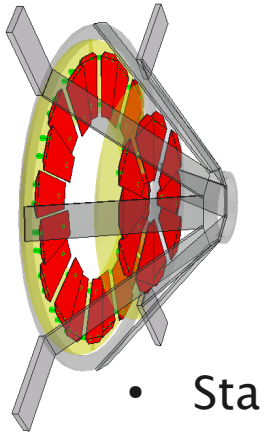


FMD DQM

Christian Holm Christensen

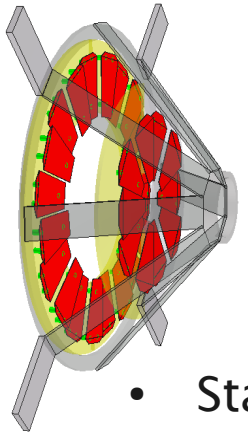
- Agents
- UI
- The logbook LOGY problem
- Quality Checking
- Example plots





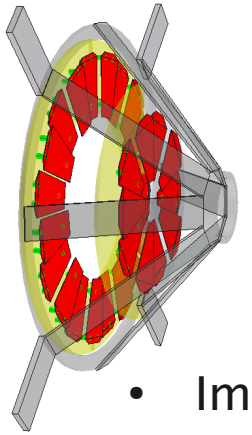
Agents

- Standard 'QA' agent
  - Issues:
    - Missing log Y scale on ADC spectra in logbook (more later)
    - DQM shifter should put in RO/decoding error histogram in layout
  - Recent changes:
    - FEE now fully powered during *TECHNICAL* → pedestal @ 0, smaller data size. Wiki updated.
- Pattern (event display) agent.
  - Issues:
    - Need copy of DA output to probably display data – copied 'by hand'
    - Not run automatically
- DAs publish summary of calibration results
  - Issues:
    - Should be propagated to logbook (more later)
- *Coming up:* Agent to propagate DA plots to log-book



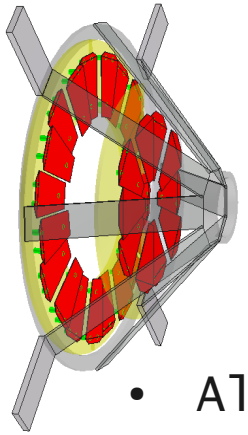
UIs

- Standard 'DQM' viewer.
- Custom QA viewer
  - 2 tabs – shifter and expert. Needs a bit of rework.
- Custom Pattern (event display)
  - Shows the hits on the FMD in 2D projections. Calculates rough hits/cm^2
- Custom calibration display
  - Show summary output from DAs
  - Option to browse to 'sectors' (256 or 512 channels)
  - Useful for varification of calibration runs.



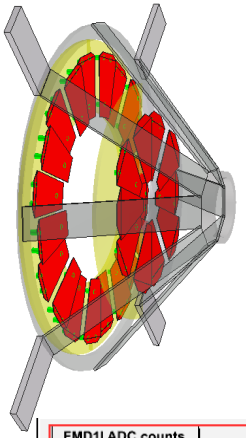
The logbook LOGY problem

- Images for logbook made by `AliQACheckerBase::MakeImage`
  - `Does not do LOGY at all`
  - `Initial patch looked at TH1::GetDrawOption` (set by `AliFMDQADataMakerRec`) to set log scale – failed because draw option saved in pad not histogram.
- Overloaded with `AliFMDQAChecker::MakeImage`
  - Put string "`[log]`" in axis title (in `AliFMDQADataMakerRec`), and set log scale on corresponding axis – remove sub-string for nice display. Failed!
    - Reason: AMORE agent calls `MakeImage` twice – sub-string gone second time around.
    - Solution: Restore "[log]" to axis title post-drawing
- Changes commited to SVN and ported to release
  - Awaiting installation of release at P2
- Other solutions:
  - Use a `TList` (rather than `TobjArray`) when propagating objects (allow setting per-object option).

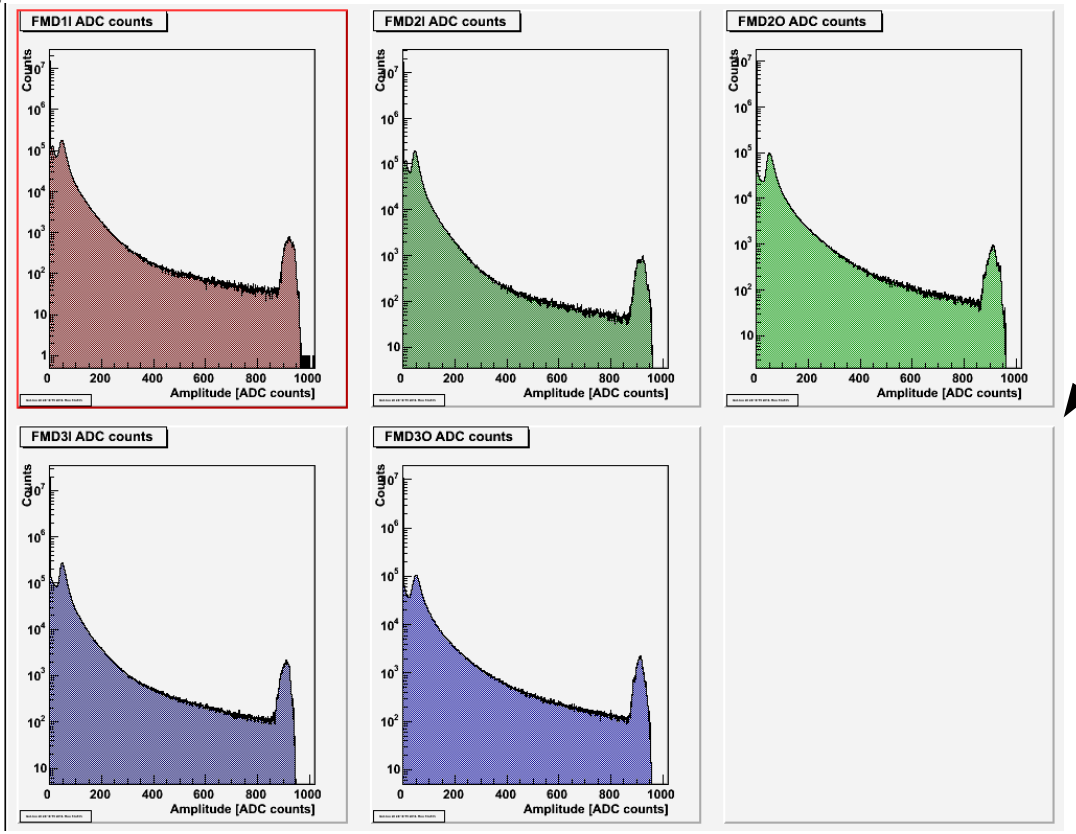


Quality Checking

- AliFMDQAChecker does very simple checks.
  - Basically good if there's data.
  - Could be elaborated upon – needs a bit of thought.
    - Check that enough channels have data
    - Perhaps try to estimate 1st MIP peak location using fits.
    - ... ideas welcome

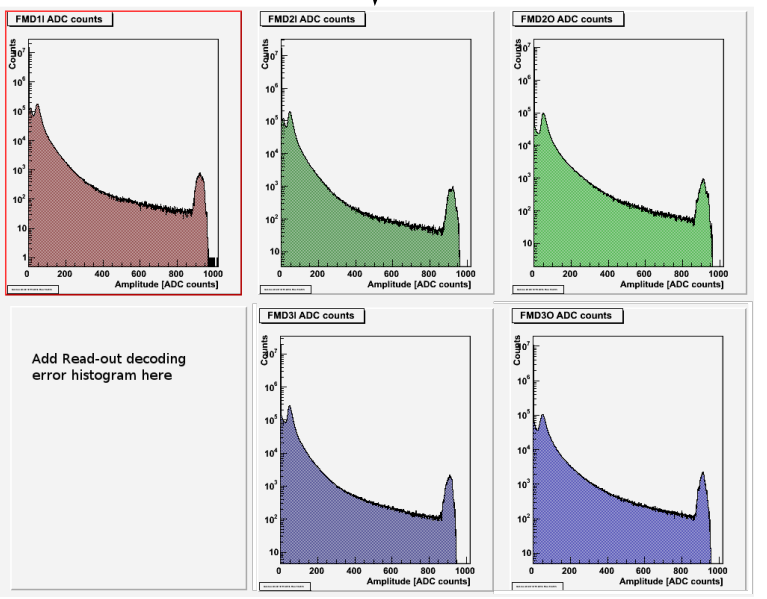


Example plots
QA – online

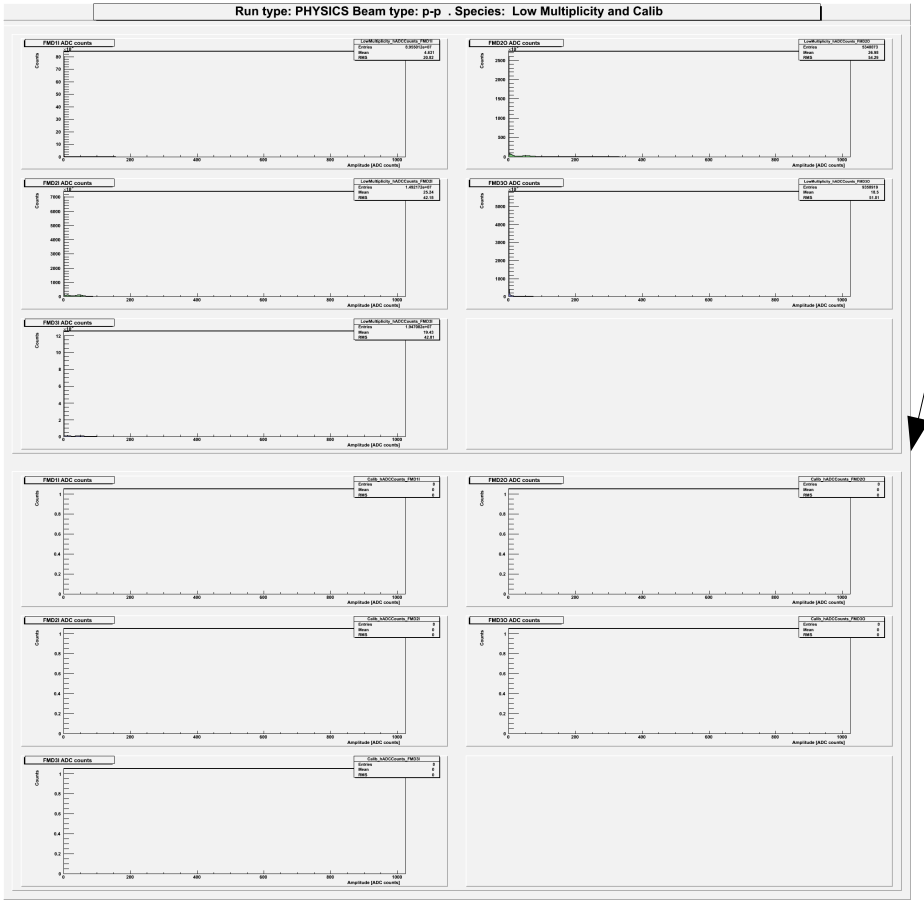


Current layout

Better layout

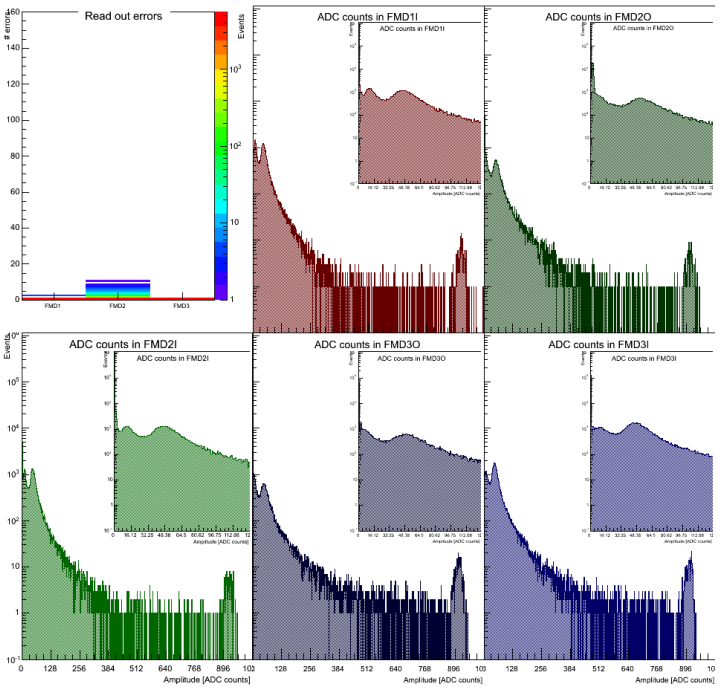


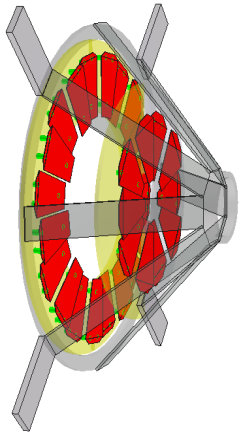
Example plots
QA – logbook



Current layout (unusable)

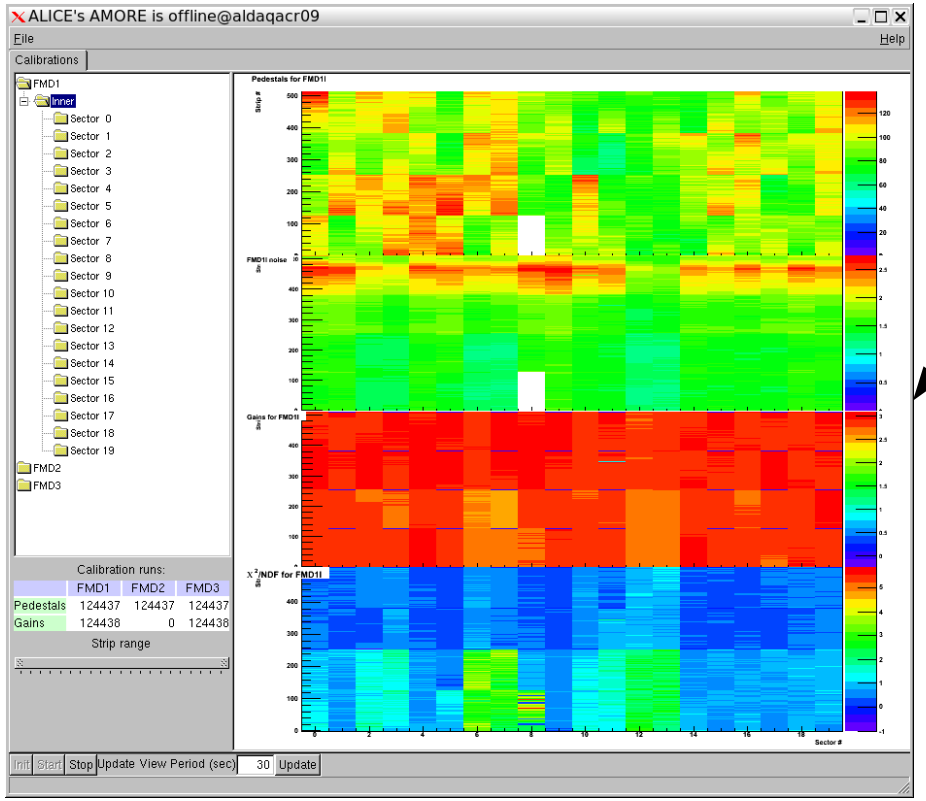
Future layout



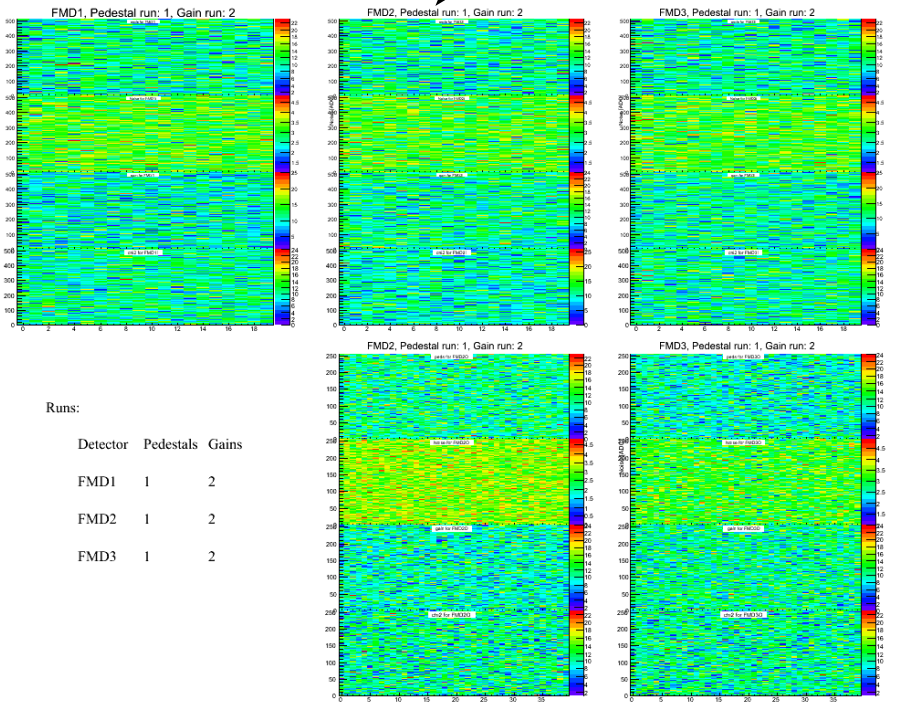


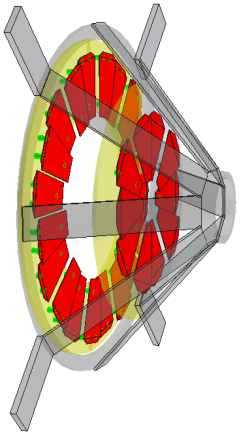
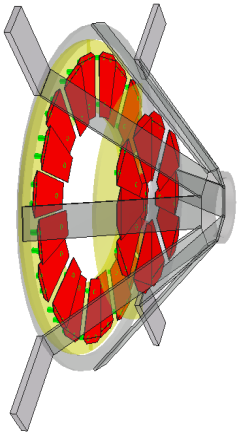
Example plots
Calibrations

Custom online UI



Future log-book
(dummy data)



Runs:

Detector	Pedestals	Gains
FMD1	1	2
FMD2	1	2
FMD3	1	2