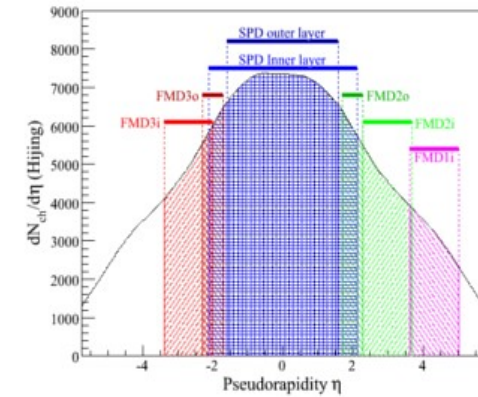# ALICE FMD offline update
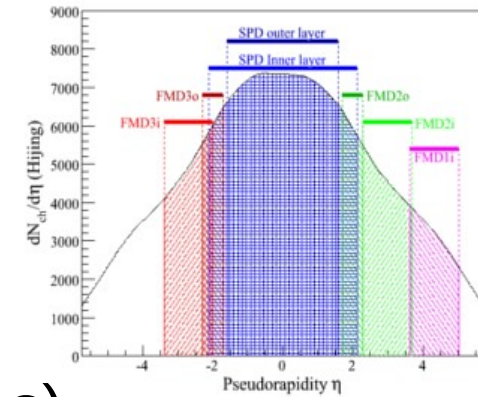## - offline week March 2009

Hans Hjersing Dalsgaard,
Niels Bohr Institute,
University of Copenhagen

- Calibration

- Simulation

- Raw Data

- Reconstruction

- Quality Assurance

- Geometry

- Material Budget

- Trigger

Calibration

- Offline calibration done by detector algorithms (DAs).

- 3 FMD DAs: BaseDA, GainDA and PedestalDA.

- The FMD DAs are in AliRoot.

- The FMD preprocessor is also in AliRoot.

- DAs and preprocessor tested extensively during data taking during the LHC injection tests.
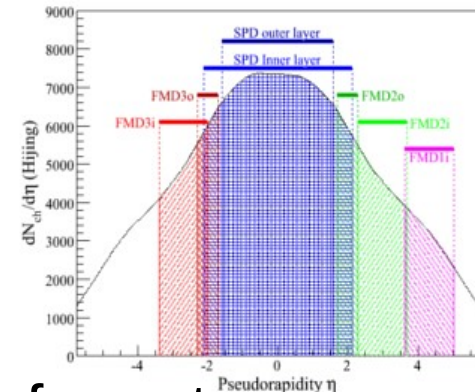
- Status: Done.

Simulation

- Simulation produces hits, digits and sdigits.

- Tested extensively through several productions.

- Event merging

  - Remind us what is needed? And how to check?

- Embedding

  - Remind us what is needed? And how to check?
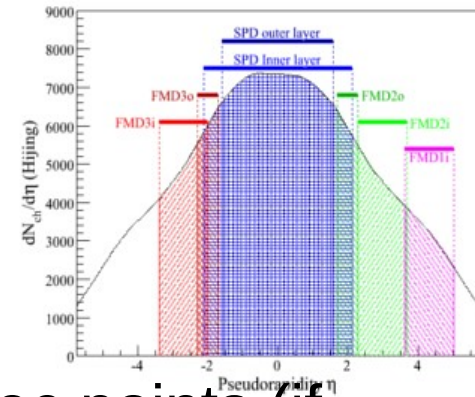
- Status: Done.
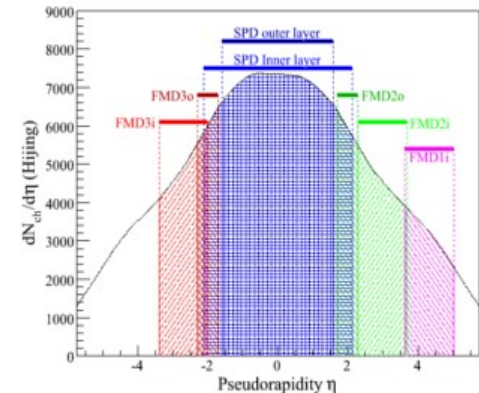
Raw Data

- Raw data format follows the ALTRO format, ie. the format decoded by Cvetans RAW code.

- FMD raw data tested extensively during data taking before the LHC incident and in productions.

- New RCU Firmware introduces new format. Decoder/Encoder by Cvetan. New FW and decoder not tested yet.
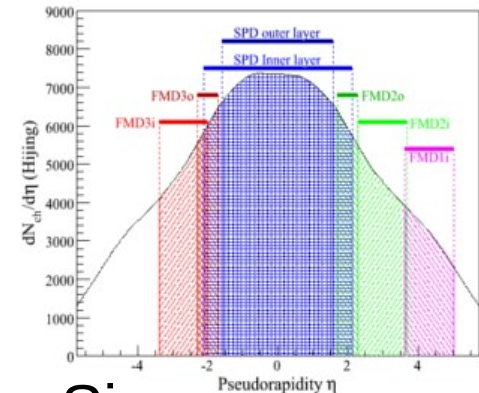
- Status: Awaiting test

Reconstruction

- FMD reconstructions produces digits (if needed), rec points (if needed) and ESD objects.

- Tested extensively in productions and with the data from the first run.

- Recent bug fix for the case where reconstruction is done directly from digits.
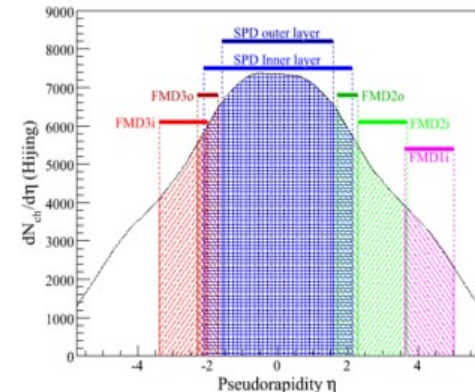
- Status: Done.
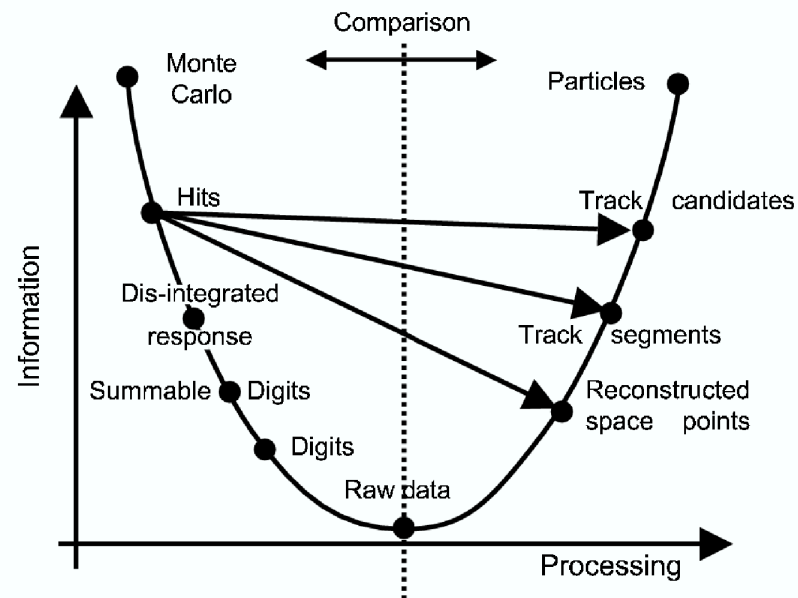
Quality Assurance

- AliFMDQADataMakerRec and AliFMDQADataMakerSim are implemented with corresponding reference data.

- When real data are available the reference distributions should be upgraded.

- What is the status of core QA ?

- If need arises we will upgrade accordingly.

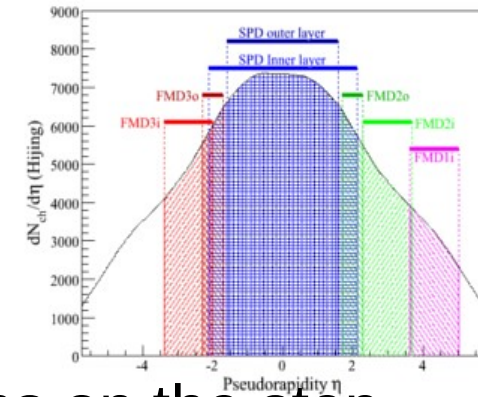- Status: Done (with room for improvement)

Geometry

- All FMD-ITS overlap issues fixed.

- Issue was the too long ITS thermal screen. Fixed in fruitful collaboration with Mario Sitta.

- Status: Done.
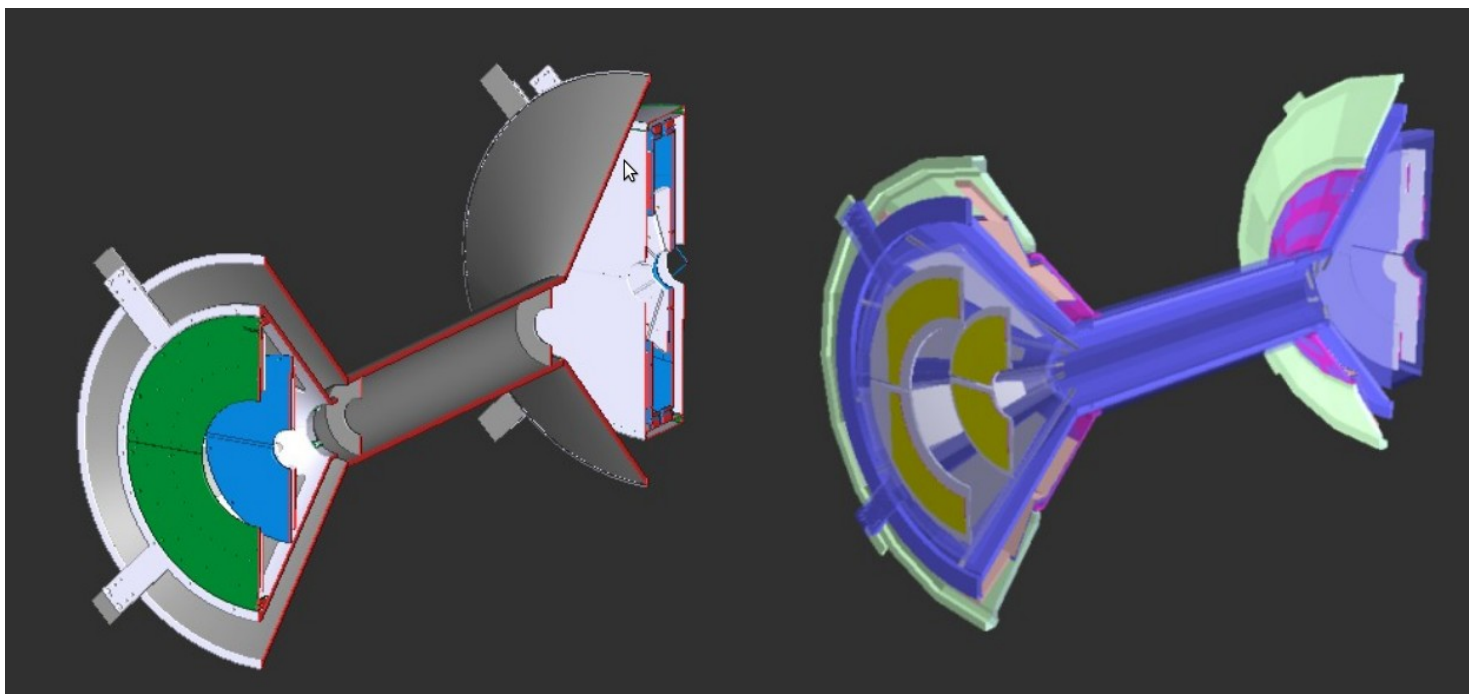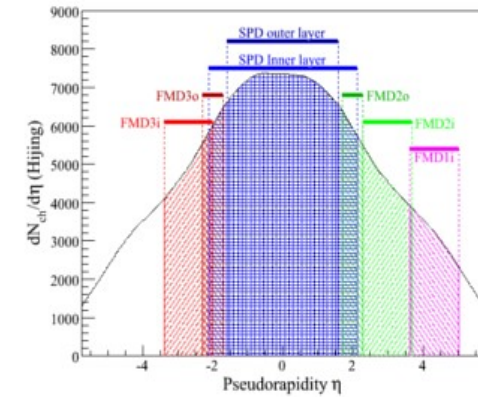
Material Budget

- We should study the dependence of the simulations on the step size.

  - What's the reasonable bounds for the step size?

  - Is there an automated check procedure implemented?

  - How do CORE suggest to check this?

- Status: ?

Trigger

- We are not a trigger detector.

- No work has been done on including the FMD as an offline trigger.

- Status: ?

Conclusions

- **Basically done with core stuff.**

- **Focus now on analysis methods and corrections.**

    - Includes methodical MC studies of background

    - Particle cuts

    - And similar.

    - Is there any progress on the system to handle external parameters and objects entering the analysis ?