Artemis WP1 deliverables

A. Dotti, S. Paganis

2nd Artemis Annual Meeting

Paris, 3-4 July 2008

Trigger Deliverables

- "Tools for monitoring the performance of track reconstruction in the ATLAS LVL2 Trigger"
  - Done
- "Measurement of the Trigger efficiencies from the data"
  - In progress.

.

Muon-Deliverables

- Atlfast: parametrization of muon efficiencies
  - done
- Calorimetric muon tag (TrackInCalo)
  - done , needs validation
- Alignment constants in dBase contribution
  - In progress
  - Tested in FDR2, problems solved.
- (New) Parametrization of muon efficiency including isolation
- Monitoring of muon data quality
  - Several muon DQM tools have been written and used for cosmic data. Monitoring will take place in Tier0.
- Muon reconstruction software authors
  - Muonboy, Staco, MuTag.

EM Deliverables

- EM calibration constants for data-taking
  - Constants for 3 cluster sizes and e/g are now extracted with new MC files
  - Constants for Atlfast also extracted
- Test of calibration methods in CTB:
  - A paper on electrons is written (not submitted)
  - A paper on photons is being written
- Extraction of calibration constants from data:
  - In progress: we proposed and tested novel methods that worked well in test-beam data.
  - Discussion on possible new collaboration with groups working in Z→ee (inter)calibration.

HAD deliverables

- Del. 1.b.1 : Final extraction and implementation of the calorimeter calibration constants from test beam and commissioning data : Done, now in the phase of finalizing notes.
- Del. 1.b.2 : Recalibration and inter-calibration of the calorimeter using physics data (W/Z) : In progress (to be presented in this workshop N. Kerschen, P. Giovannini, V. Giangiobbe, P. Francavilla)
- Del. 1.b.3. : Energy scale, linearity and resolution determination for jets with W/Z hadronic decay studies : in progress.

From TB to real data

- At test beam we learned how to deal with (a fraction of) the detector and we put in place "prototypes" for the tools and analysis model that we will use
- Pre-beam commissioning phase (now with cosmics) is focusing on stability and integration of the sub-detectors. The final or quasi-final tools (trigger slices, athena algorithms, Tier-0 reconstruction, Data Quality assessment,...) are tested and used on a bigger scale (example: O(100) L2 and EF nodes currently running at P1 with real trigger selection algorithms, 800 nodes by end of 2008. Total of 3000 nodes foreseen in the next years)
- Success for FDR-2 showed that we can use the multi-tier structure of ATLAS model (pre-requisite for any analysis) to distribute and analyse the data
- Need to focus on analysis tools and athena analysis algorithms that are still missing