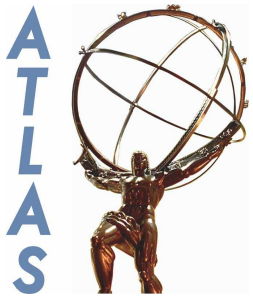
Athena OF Status & PileUp Studies



Ximo Poveda

TileCal Valencia Meeting
4-June-2006

Validation: Comparison OF2(δ)-Fit

- Sets of data:
  - MC data: Single π in Full ATLAS
  - Commissioning: Cosmics run #61621
- Channels with signal: Pretty good agreement

	MC data		Comm data	
	Mean	RMS	Mean	RMS
ΔE/E	~0.01‰	~0.3‰	~0.01‰	~0.02‰
Δτ	0.7 ps	5 ps	0.2 ps	9 ps

- Noise channels: good distribution (symmetric, centered at zero, etc.)

Technicalities

- Lots of refinements and fine tuning done on the OF reconstruction algorithm (Many thanks to Esteban and Belen)
- Some problems to integrate the algorithm in release13 (crash in TileConditions before algorithm execution, Sasha looking at it).
- Tool for constants calculation and storage in pool. Finished and ready to be committed to CVS

Resolution studies with PileUp

- First approach:
  - Understand how ManyAmps works when pileup is present.
  - Look at noise distributions
  - First values of the energy obtained…
- Next Steps:
  - Compute and understand noise correlations for OF (δ correlation not valid anymore): electronics noise + MB pileup

Other Business

- ATLAS Trigger and Physics Week at CERN these days.
- OMB panel at XTestROD:
  - I started to write the code inside the functions
  - Solved some problems acessing registers due to VME master map parameters (now ok).
  - Working in parallel with other tasks