

# Reco Session in S&C Week, 1<sup>st</sup> Dec. 2010

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Software and Computing Week  
1<sup>st</sup> Dec. 2010

Preparation for 2011 data taking  
Validation  
Reco Meetings  
Reco and Software Shifters  
Agenda

# preparation for 2011 data taking

- challenges in 2011: 8 TeV (?), up to 600 Hz
- should be prepared to speed up reco @ T0
  - 'outsource' DPD production, etc. to T1
  - switch off monitoring (how much gain in CPU?)
    - Thomas' plots are difficult to read for CPU
  - introduced descoping, might help us in 2011
  - RAWtoESD/AOD in one go, if memory permits
    - learn from HI data, they use up to 4- $\epsilon$  GB
  - last resort, cut into physics
    - but should estimate now, what it costs !

# validation

- Problem with Energy loss of STACO muons in calorimeter in autumn reprocessing has shown importance of (automated) validation tests, much can be caught beforehand, 'just' have to look at right plots
- please think hard about what you should do for (automated) tests, implement this in RTT
- DQMF can automatically compare plots or root macros, RTT postprocessing with python, etc
- RTT is difficult to use, but - see later slide

# AODFix / TAG content

- Other hot candidate for a fix up algorithm for new reprocessed data:
  - isEM for egamma: wrong definition of medium and tight, please see recommendation from egamma group (fixable also in analysis level)
- TAG content wrong
  - dedicated TAG reprocessing

# Reco Meetings

- to collect ideas, advertise future meetings and give details about past meetings please see <https://twiki.cern.ch/twiki/bin/viewauth/Atlas/AtlasReconstructionMeetings>
- just started, will collect more ideas over time
- minutes and links to agendas of old meetings will be posted there

# future reco meetings

- should also think about different topics:
  - RTT tutorial (not run by RTT dev. but users)
    - RTT dev. Busy enough, but feedback welcome
    - range from from simple setting up tests to fancy features like postprocessing, create html page
  - further, possible topics:
    - advanced debugging (always amazed by high tech debugging in HEP – print statements)
    - val/call/helgrind, intel tools, totalview, etc ...
- need bit of flexibility, as theme of reco meeting sometimes dictated by actual events

# Reco and Software Shifter

- have now reco and sw val shifter merged
  - cat 2 shifts, 0.25 credits per 2h shift, several different shifts available: release, prod cach, morning , afternoon shift, ...
  - will look at compilation, ATN, TCT (morning)
  - FCT, TCT, savannah (afternoon)
  - Block A/B for prod cache / dev release
- morning: well suited for shifters in Asia
- afternoon: well suited for shifters in Americas

# Reco and Software Shifter

- Now also have “other builds” looking at problems solely seen in 64 bits, debug builds
- still testing, workload ok ? Look at problems 'just' seen in “other builds”
  - fixes less urgent, so could very well be seen as a “training shift”
- first shifter from Canada next week, we'll see
- plan to have a 4<sup>th</sup>, more experienced shifter: deal with newly submitted savannah bugs, ensure reproducibility, re-assign, and baby-sit



# Agenda

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ATLAS Software & Computing ...

Wednesday 01 December 2010

09:00 - 12:30 ADC Monitoring Part II  
Convener: Alexander Lincoln Read (EPF group-Department of Physics-University of Oslo)  
Location: [40-S2-D01 - Salle Dirac](#)

09:00 - 12:30 Reconstruction

Convener: Rolf Seuster (MPI Munich)  
Location: [40-S2-C01 - Salle Curie](#)

09:00 **Introduction 20'**   
Speaker: Rolf Seuster (MPI Munich)

09:20 **problems found in Pixel Clustering 20'**   
Speaker: Andreas Salzburger (CERN)

09:40 **Problems found for STACO 20'**   
Speakers: Wolfgang Liebig (CERN) , Wolfgang Liebig (U Bergen)

10:00 **News from Trigger, and feedback to Reco 20'**   
Speaker: Simon George (Royal Holloway)

10:20 **Improvement to P4Helpers / I4Momentum 20'**   
Speaker: Anthony Denton-Farnworth (University of Sheffield)

10:40 **Negative Energies in P4ABCD 20'**   
Speaker: Pierre-Antoine Delsart (LPSC Grenoble)  
Material: [Slides](#)

11:30 - 12:30 Frontier in AGIS  
*Discussion on the inclusion of information on Frontier servers and Squids in AGIS and on the tools needed to use this information*  
Convener: Dario Barberis (Genoa University/INEM)

Find:      Match case

Done

# I4Mom/P4ABCD

- Two talks about base classes:
  - Anthony: improving speed by avoiding costly calculations of sqrt, log, exp etc.  
<https://twiki.cern.ch/twiki/bin/viewauth/Atlas/FourMomEvolution>
  - P.A.: common convention for all P4ImplABCD for  $E < 0$   
problem known, fixed in private Jet code, re-introduced with jet software rewrite in rel 16