



*... for a brighter future*

# ATLAS Hadronic Calibration Workshop 2009 Foz do Arelho, Portugal

## *Workshop Goals*

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# The Target: A Possible Luminosity Roadmap

Spring Conferences 2010	Data up to December? Maybe a few $\text{pb}^{-1}$ Minimum Bias, Jets Observation of $J/\psi$ 's Observation of $W$ 's and $Z$ 's ...
Summer Conferences 2010	Data up to March? A few 10's $\text{pb}^{-1}$ $W$ and $Z$ cross-sections/distributions Observation of $J/\psi$ 's from $b$ 's Observation of tops ...
Spring Conferences 2011	Full data set (100's of $\text{pb}^{-1}$ ) $W$ & $Z$ + jets cross-sections/distributions Top and Bottom cross-sections Dibosons...

# JetEtMiss Milestones

1. Jet Algorithm Comparison: Jan-April 09  
-> 2009 calibration efforts will be focussed on anti-Kt
2. Performance DPD:  
->Format and Event Selection defined march 09
3. Calibration Streams  
->Initial set identified by summer 09
4. Comprehensive plan for determination of systematic uncertainties  
-> September 09
5. Jet re-calibration <-> consistent estimator of EtMiss  
-> October 2009
6. Data analysis and default calibration to meet the anticipated LHC  
-> spring 2010 - summer 2011

# Workshop Topics

Detector performance in testbeam, tuning of simulation and detector description

Jet calibration using Monte Carlo: LC//Energy Density

Jet energy scale offsets, detector dependence and rescaling

In situ tests of jet calibration - “closure” and relationship to scale systematic uncertainty

In situ tests of MET - “closure” and relationship to scale systematic uncertainty

Data cleanup and cell masking

DPDs and triggers for performance studies

# Workshop Goals

Establish the path to accomplishing 4,5,6

Session conveners have reviewed material presented in JetEtMiss and task force meetings, solicited and received additional material, digested it and apply their judgment (and perhaps bias) to:

- Provide summary and status of ongoing work, with focus on performance and readiness to be applied to data

- Presentation and discussion of open issues

- Identify holes in work being covered - areas where more manpower could be applied

- Open the dialogue to discuss issues and set direction for the next 6-18 months

## Agenda( Tuesday - Friday)

<http://indico.cern.ch/conferenceOtherViews.py?view=standard&confId=48780>

Tuesday:

Pedagogical talks on jets, jet reconstruction and calibration

Wednesday (Buffet):

testbeam and detector performance

Tuning of detector simulation

Local hadron calibration

Cell energy density weighting for jet calibration

Thursday (Workshop dinner):

Jet energy scale I, II, II, IV

Friday:

Cosmic cleanup and cell masking

MET calibration with first collisions

In situ EtMiss performance with first 10-100 pb<sup>-1</sup>

Data analysis using DPD and triggers

## Agenda( Saturday)

<http://indico.cern.ch/conferenceOtherViews.py?view=standard&confId=48780>

Tuesday (morning):

Towards one calibration scheme

Conclusion of workshop – Open issues and action items from RP

Tuesday (afternoon):

Software tutorial by Pierre-Olivier