

# Jet/MET Data Quality Group

- People: *M. Consonni, H. Hadavand, J.R. Lessard, M. Petteni, R. Rezvani*
- Goal: Assesst the quality of the Jet/EtMiss in runs before starting the bulk processing.
- Tools and procedure
  - 4 DQ flags: JETB, JETEA, JETEC and MET
    - Set by shifters (day) and then reviewed by experts using Jet/EtMiss performance packages (days to week).
    - Automatically set by DQMF algorithms (probably not reliable for early data, but useful eventually).
  - Collaboration with experts of other detectors (Lar, Tile, CaloMonitoring, ...) to understand problem.
    - For now, it is done throught meetings and Twiki.

# Strategy to set DQ flags (proposal)

- Jet/EtMiss inheritate the color flag of Tile and LAr.
  - LAr red => Jet/MET red
- What about Muon and EtMiss (muon off => worst resolution for EtMiss)
  - ✗ Muon red => MET red? Probably too hard... many analysis might still use EtMiss even if Muon red.
  - ✗ Muon red => Met yellow? Might be ambiguous.
  - ✗ Ignore Muon for MET flag? Let the user required what he wants for Muon flag.
  - ✓ Have two flags! METCALO and METMUON.
- What about coverage.
  - Detector flags might be green even if half of the detector is off. Must define minimal coverage of Tile and LAr needed for Jet/MET. That quantity might change as time evolves...

# Strategy to set DQ flags (proposal)

- If detector all ok, we can then set our Combine Performance flag:
  - Green = good.
  - Red = Never (unless inherited from detectors)
  - Yellow =
    - To be investigated further before using for analysis
    - Possibly need some AOD-level corrections
    - Should not be definitive, but rather become Green or be corrected in next reprocessings
- CaloMonitoring "flag" is propagated to the Jet/MET flag with the same logic (if detector green):
  - CaloMonitoring is yellow/red => Jet/MET is yellow.

# Jet/EtMiss Shifters

- Tier-0 monitoring plots are automatically generated for cosmic (<http://atlasdqm.cern.ch:8080/webdisplay/tier0/>)
- Plan to have shifters for the first time in the next cosmic run (22<sup>nd</sup> of June to 5<sup>th</sup> of July).
  - One shifter/day to check Jet/EtMiss plots.
  - Shifts can be taken remotely!
    - All you need is a web browser and a P1 account (to access ATLAS ELog).
  - No ID task in OTP yet, but should come soon.
  - Further information are available at:  
<https://twiki.cern.ch/twiki/bin/view/AtlasProtected/JetEtMissDataQuality>
- Feedback is really important to help us getting ready for real collision shifts.
- Should we have "shifts" to look at reprocessed data as well?

# Other activities

- We are working on algorithms for automatic checks also, but we will really need to have experience of collisions to tune them.
- 70 new computers at P1 should provide full reconstruction of events with rate  $\sim 5\text{HZ}$ . We are exploring possibility to do online monitoring for Jet/EtMiss.