Jet Trigger News

R.Goncalo (LIP), D.Miller (Chicago), Andy Pilkington (Manchester)

Jet Trigger Signature Group Meeting

16 June 2015

OTP Accounting

- Please send us your estimates **by Monday next week**

- Regarding effort estimate for each person:
  - Units are **FTE fraction**. This is a rate so it is independent of the amount of time the task has been done for. Please just give **the average effort during the months worked**.
  - 1 FTE corresponds to 1 person working 8 hours per day, 5 days per week.
  - e.g. if someone worked half their time for the year so far, enter 0.5 with a start month of January and end month of June
  - e.g. if someone worked half their time from April onwards, enter 0.5 with a start month of April and end month of June
  - One decimal place, i.e. 10% precision, will suffice.

- Please note this is **only class 3** - class 1 & 2 tasks are entered directly into OTP when booked.

Jet Trigger Documentation

- Jet Trigger Validation Wiki

https://twiki.cern.ch/twiki/bin/view/Atlas/JetSliceValidation

  - Ana updated the wiki (THANKS!)
  - Comments?

- Jet Trigger internal note:
  - Intro & Menu parts progressing
  - Split main file jet.tex into different files so people can add edit concurrently

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Instructions:

Make pdf:

```
cd trunk
make
```

Get directory:

```
svn co svn+ssh://[username]@svn.cern.ch/reps/atlasgroups/
Trigger/TriggerNotes/JetTrigger/JetInternal2015/trunk
```

Bonus Slides

Jet Trigger Readiness Review

- Last week!
- Agenda: https://indico.cern.ch/event/354893/
- Today: list of actions emerging from the review

Tuesday, 26 May 2015

13:00 - 13:10 **Introduction** *10'*
Speakers: Ricardo Jose Morais Silva Goncalo (LIP Laboratorio de Instrumentac Part), David Miller (University of Chicago (US))

13:15 - 14:35 **Software and Validation**
Review of the jet trigger software, EDM and validation infrastructure

- 13:15 **Jet trigger software walkthrough** *30'*
- 13:50 **Validation infrastructure** *20'*
- 14:15 **EDM, GSC, jet cleaning, etc** *20'*

14:35 - 15:20 **Operations and Monitoring**
Review monitoring infrastructure and operational procedures

- 14:35 **Review of monitoring infrastructure and procedures** *45'*

15:20 - 15:35 Tea break

15:35 - 16:45 **Menu and Performance**
Review menu strategy and perspectives to obtain performance indicators from first data, tr level MC corrections

- 15:35 **Review of menu strategy** *25'*
- 16:05 **Trigger-specific JES** *15'*
- 16:25 **Brainstorm on analysis-level correction factors** *20'*

16:45 - 17:20 **Future Developments**
Brainstorm on future developments to put in place for 2016

- 16:45 **Tracking** *15'*
- 17:05 **p-flow** *15'*

17:20 - 17:35 Tea break

17:35 - 18:15 **Documentation**
Review of existing wikis in various activity areas and plan for future documentation

- 17:35 **Review of wiki documentation** *15'*
- 17:55 **Plans for notes** *15'*

1 – Software & Validation

1. Development suite – quick, concise tests to be run while developing code
   - **Valentinos & Peter**

2. Code documentation in SVN – add to doc directory of jet trigger packages
   - **Take section from internal note and put in svn**

3. Add information on running TrigJetValidation package by hand
   - **Valentinos**

4. Follow-up on what is necessary to update HLT jet calibration factors
   - **David & Ricardo**

5. What exactly (if anything) do we need to change in the offline packages?
   - Can we start to discuss necessary changes are going to be before we officially request them?
   - Need to start private discussions now with **Nuno**, **Peter, David Adams**, **Pierre-Antoine**, **Mark Hodgkinson – ask Ricardo to initiate**

2 – Operations & Monitoring

1. Update documentation on how to configure monitoring histograms
   - **Giulio & Lee**
2. Add turn-on curves to offline monitoring package (under way) and comparisons to offline monitoring
   - **Giulio**
3. Set up new file centrally for online and offline monitoring testing
   - Must contain multiple jet definitions, lumi blocks, all event info
   - **Ask Giulio to initiate discussion with Central Trigger DQ?**
4. Rapid monitoring configuration changes (less than 2 weeks…)
   - **David & Ricardo to follow up**
5. Update triggers in the jet monitoring to be those in the Express Stream
   - **Giulio & Lee**

3 – Documentation

1. Make the "Tasks and Topics" for the Jet Trigger more clear and prominent
   - **David, Andy, Ricardo**
2. Archive truly out-of-date Run 1 TWiki information and merge general Jet Trigger information that is currently categorized as only "Run 1" with Run 2 documentation - **Andy?**
3. Provide clearer documentation for software on the twikis **- Done**
   - How to run the jet trigger
   - How to run the ATN and RTT tests
   - **Sebastien?**
4. Update the DQ TWiki pages
   - **Lee & Giulio**
5. Provide common code examples
   - **David & Andy to follow up?**
   - Rate calculation
   - Trigger efficiencies
   - Pile-up dependence
   - Trigger Emulation
     - https://twiki.cern.ch/twiki/bin/view/Atlas/HowToEmulateTheTrigger
     - https://twiki.cern.ch/twiki/bin/view/Atlas/JetTriggerEmulation

- Internal note – **see next page**

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4 – Future developments & Other

1. New studies - **David & Andy?**
   - Check the HLT jet menu used in the ATLAS+IBL and ATLAS+ITK simulation samples to ensure that it has a reasonable representation of the various types of planned triggers and that the D3PDDumper properly outputs everything we need?
   - What are your current plans for implementing the substructure quantities in the EF trigger? Do you plan to use the standard offline filtering values? Any taggers? JMS? It would be useful to schedule a presentation at an upcoming Substructure meeting.

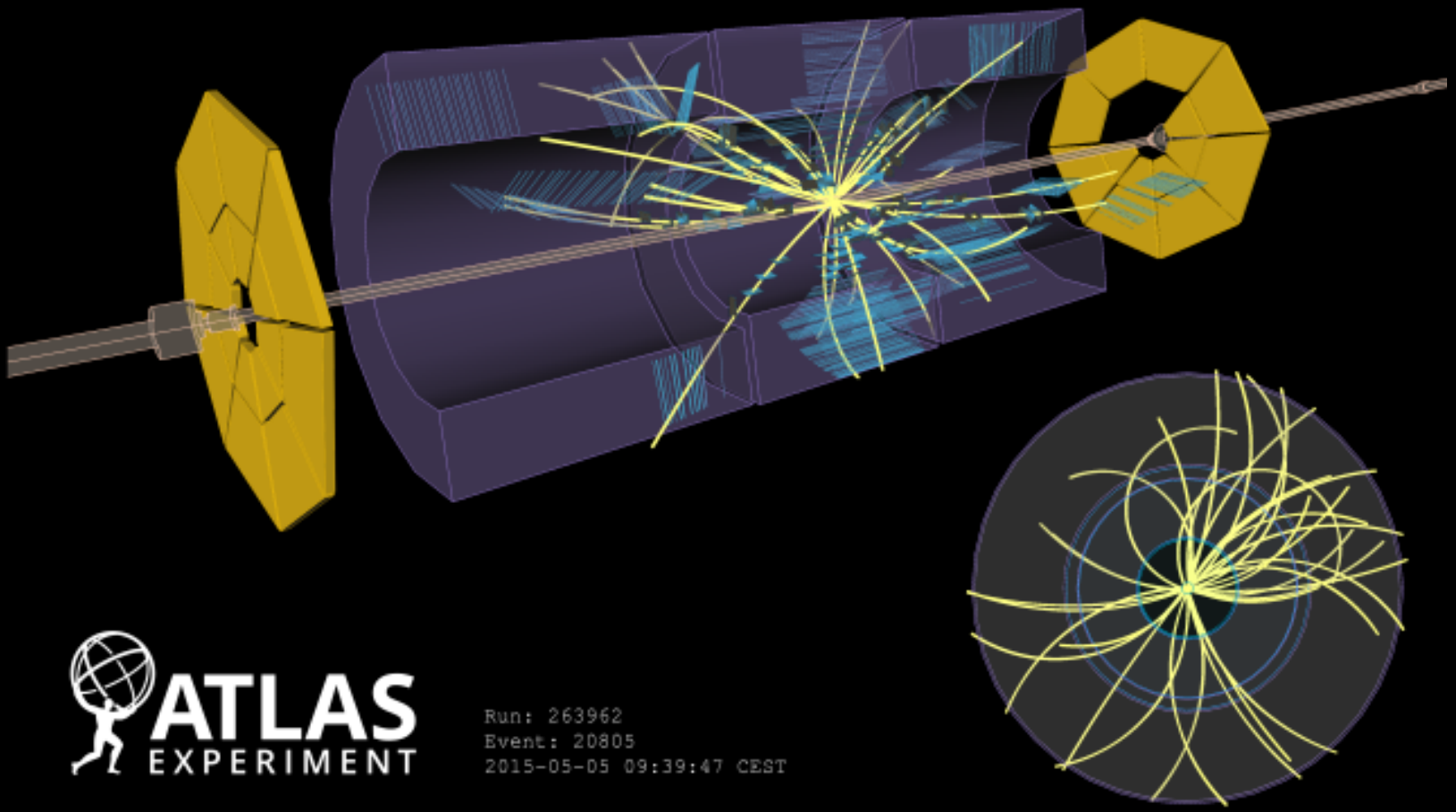
2. Add HLT jets into dijet eta intercalibration
   - **Michaela – done**

3. 2011 paper – **Mark Sutton, Mario, Sue, Ricardo**

Passing the baton

On July 1st

- Ricardo retires from Jet Trigger convenership to a life of leisure
- David becomes convener until October 1st
- Andy Pilkington becomes deputy
- Then David goes to the greener pastures of Jet/ MET CP group. Congrats!

First LHC Run-II Collisions!

Display of one of the first collision events recorded at 900 GeV centre-of-mass energy on 5 May, 2015. Tracks are reconstructed from hits in the SCT and TRT detectors.