H->bb Weekly Meeting

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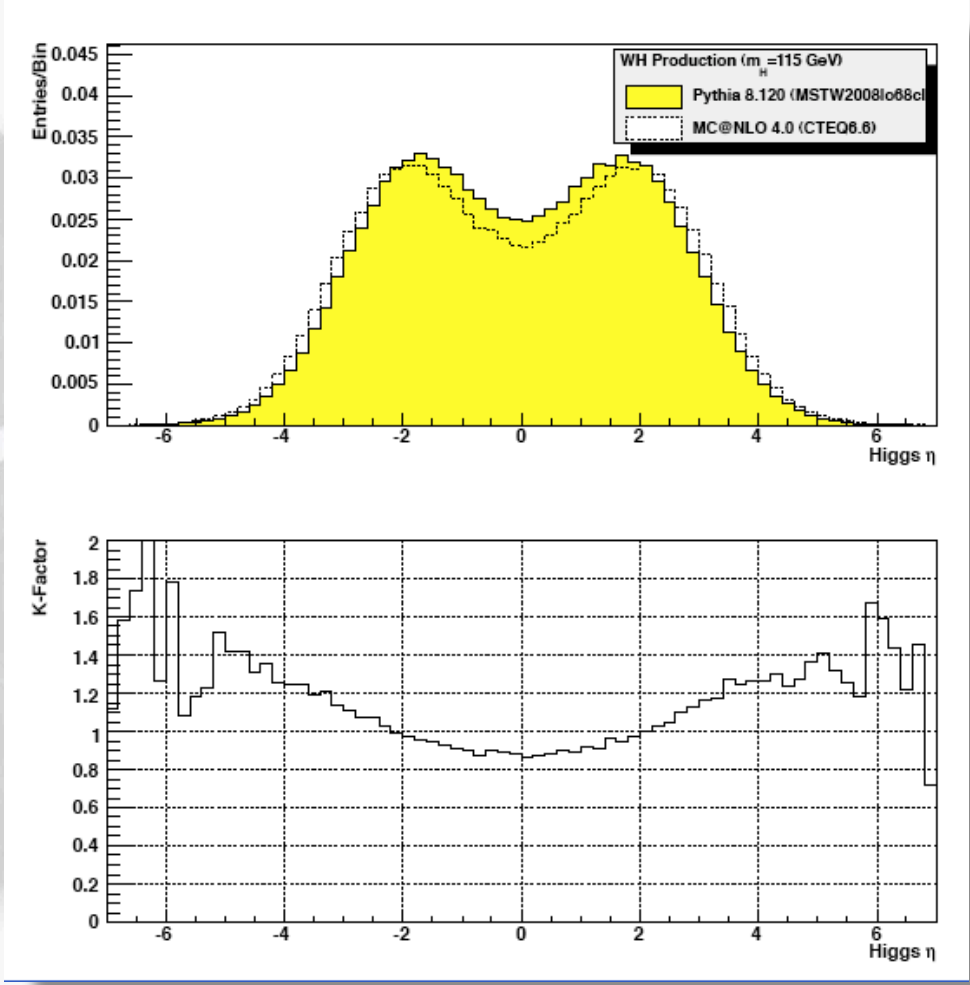
HSG5 H->bb Weekly Meeting, 22 February 2011

News! News! News!

- **We have beams again**! ATLAS and the LHC showing signs of life during the last week!
- See today's Weekly for **MC production plans** and news from restart
- **Muon** CP group recommendations for release 16:
  - Reconstruction efficiency and isolation efficiency scale factors, momentum smearing functions
  - https://twiki.cern.ch/twiki/bin/view/AtlasProtected/MCPAnalysisGuidelinesRel16
- Jet/Etmiss recommendations for **jet cleaning** in release 16:
  - Medium jet cleaning should give similar rejection to rel 15 cleaning but with better efficiency
  - Tight jet cleaning should not be used – still under discussion
  - https://twiki.cern.ch/twiki/bin/view/AtlasProtected/HowToCleanJets#Bad_jets_rel16_data
- Preliminary **b-tagging calibrations** for release 16 based on full 2010 data:
  - https://twiki.cern.ch/twiki/bin/view/AtlasProtected/Analysis16
- e/gamma recommendations for **energy scale and resolution** in release 16:
  - https://twiki.cern.ch/twiki/bin/view/AtlasProtected/EnergyScaleResolutionRecommendations
  - And rescaler tool: https://twiki.cern.ch/twiki/bin/view/AtlasProtected/EnergyRescaler
- Other:
  - HSG5 **Workshop in Dubna** – 17th – 19th May 2011:
    - http://indico.cern.ch/conferenceDisplay.py?confId=124954
    - Instructions for obtaining Visas in Geneva consulate will be available soon
    - **Will be the last check point for Summer CONF notes before approval process**

LHC Higgs Cross Section Working Group

- H→bb meeting:
  - Good attendance by theorists
  - Presentations from CMS & us
  - First differential K factors for WH and ttH production shown by C. Potter
- LHC Higgs Cross Section Group wiki



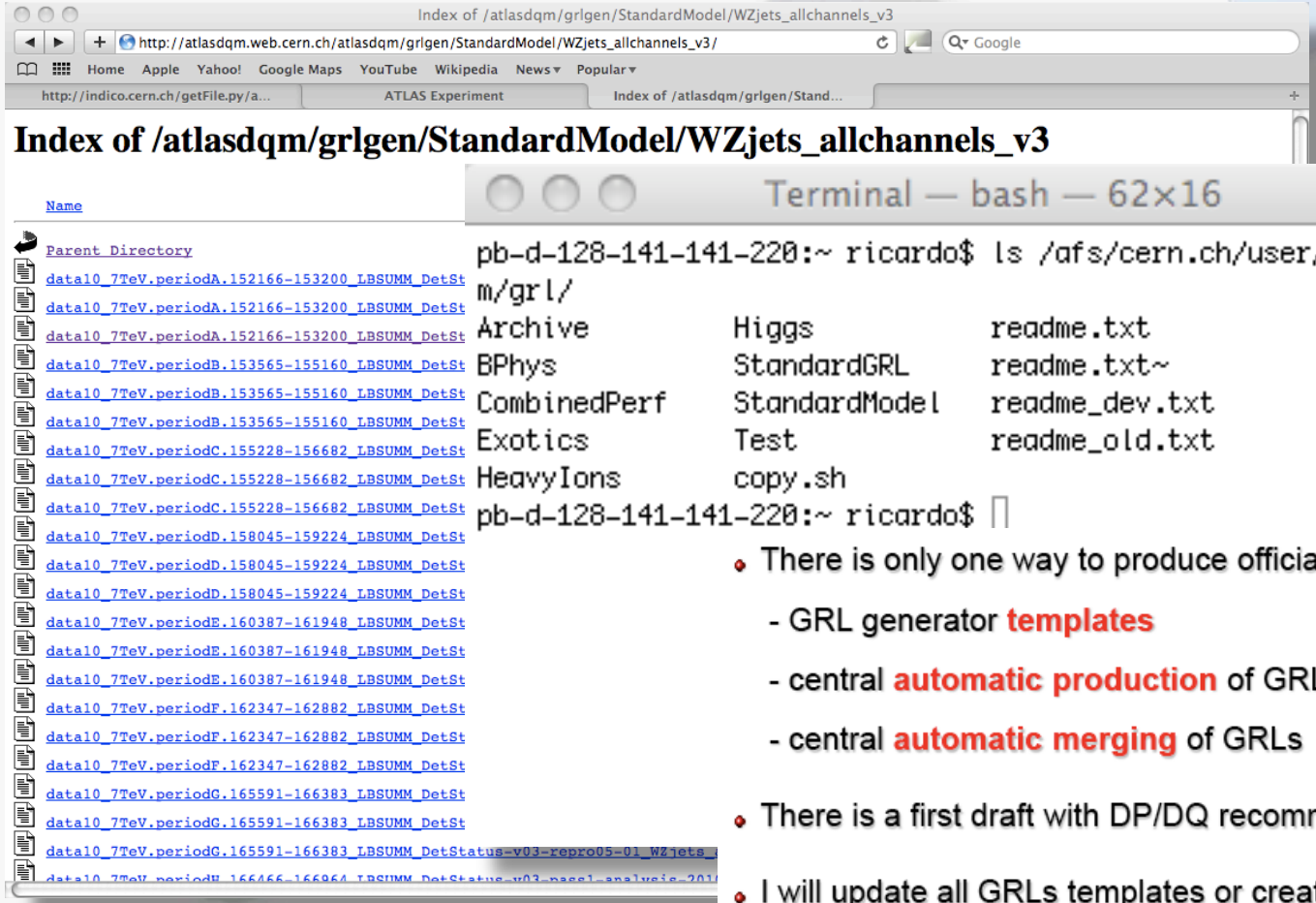
- Proposal for Life without the ESD:
  - See J.Boyd's talk in the weekly (2 weeks ago): http://indico.cern.ch/conferenceDisplay.py?confId=119624

- If you rely on ESDs please make sure to follow this discussion
  - Subscribe to hn-atlas-primary-dpd-content@cern.ch

1. No long term storage of ESDs on disk for physics streams
   - Muon, JetTauEtmiss, Egamma, MinBias
2. Do not store any ESD on tape
   - This removes the possibility of reprocessing from ESD
3. Provide 2 replicas of ESD from all physics streams for ~10% of the data
   - Last 2 months 'rolling buffer' for Tier0 produced ESDs
   - Specific data period corresponding to ~10% of the data for ESDs from reprocessing
4. Provide 2 replicas of ESD for some small streams
   - CosmicCalo, ZeroBias, Standby & express
5. Reduce the ESD size by ~30% by dropping unused or redundant information
6. Provide 1 copy of RAW data on disk for the physics stream for data taken in the last year
   - In addition to copy of RAW on tape
   - Investigate possibility of compressing RAW data on disk (can achieve a factor of ~2)

Good Run List

- GRLs produced by automatic production can be found at: http://atlasdqm.web.cern.ch/atlasdqm/grlgen/
- Templates can be found at: /afs/cern.ch/user/a/atlasdqm/grl/
- Will need to investigate if we can use a standard GRL – volunteers?



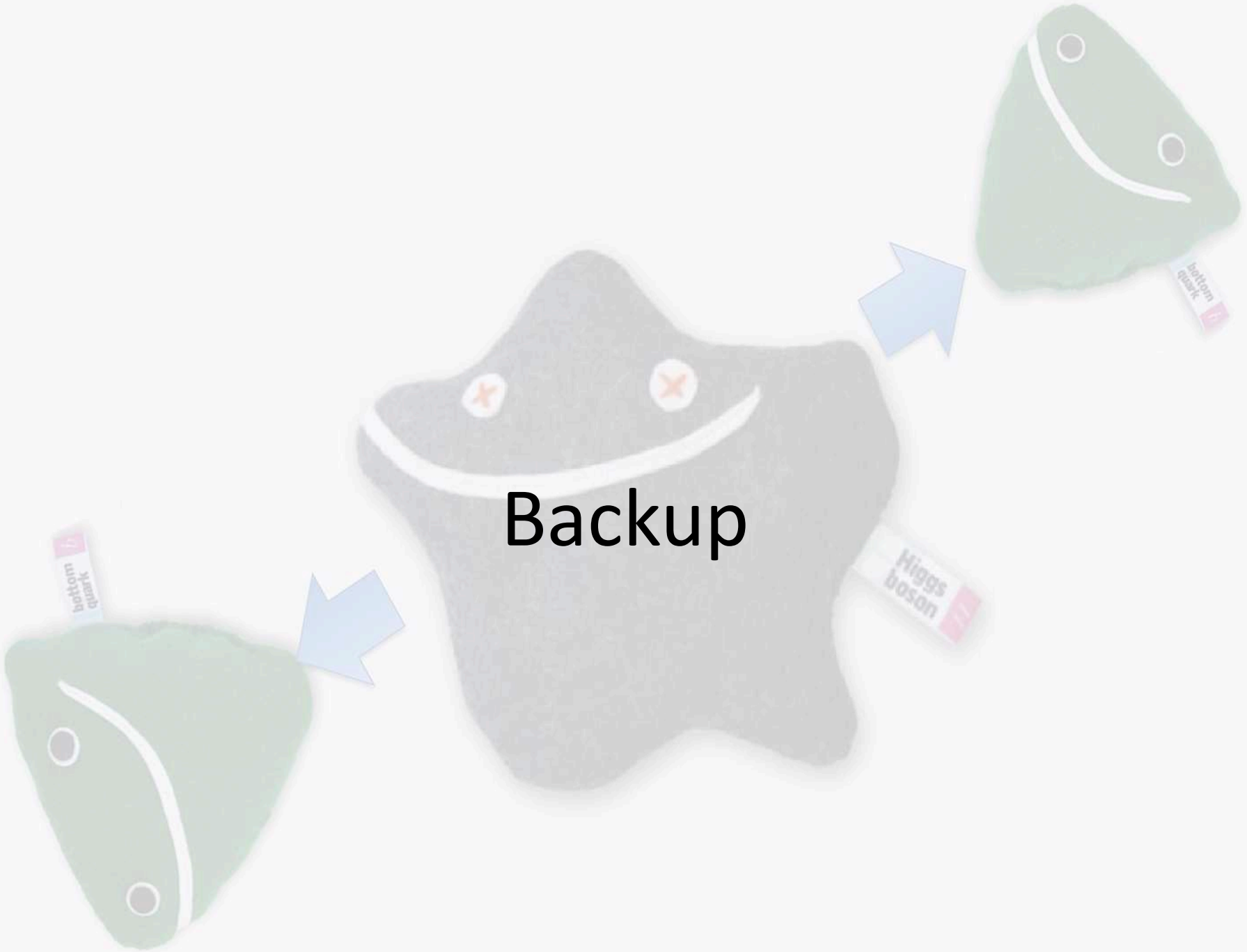
Fast Monitoring

- Idea is to receive early warning when there is something interesting in the data
  - …better than getting a late warning from the other side of the ring ☺
  - Not to make plots of control regions – we have the regular monitoring for that
  - Not to do the analysis in real time – no final corrections, systematic uncertainties etc
    - Note that not seeing a signal does not mean it is not there, and vice versa!...
- Implications are that it should be **stable** and **robust** selection focusing on signal region

- Several open technical/organizational questions at the moment:
  - Where to run: Tier0, CAF or CERN Tier1
    - Other Tier1/2/3 would require too much bandwidth for AOD/D3PD/DAOD transfer
  - What data format:
  - D3PD:
    - Serious complications from D3PD versioning and stability - D3PDs not stable until long after data collection
    - D3PD size also a problem – would need to be produced from recent AODs as they are produced
    - Which D3PD – many different varieties and would require different analysis applications starting from different inputs
  - AOD:
    - Would need to implement analysis selection in Athena! (IWithin monitoring framework?)
    - Less versioning complications – could use stable Tier0 cache used for production
    - Could produce DAOD for selected events – would allow easy subsequent analysis, producing event displays etc

- When plans are more clear will need someone to implement/coordinate this for our group

Backup



SM WZ GRLs

WZjets_allchannels[WZjets_allchannels_beamspot] :

- 7 TeV collision samples : **'ptag' = "data10_7TeV"** and **'ATLGL g'**
- Data with LHC stable beam and after the ATLAS warm start : **'ready' = '1'**
- Data taken with all sub detector "ATLAS combined" and use the DB of Data
  'partition' = "ATLAS" and **'db' = 'DATA'**
- Solenoid 'on' and not ramping up/down and with nominal magnetic field
  'ATLSOL g' and 'mag' = 's > 6900' and **'ATLTOR g' and 'mag' = 't > 20000'**
- Trigger : L1 CAL, MUO, CTP working and HLT for electron/muon/jet/MET running
  'L1CTP g' and **'L1CAL g'** and **'L1MUE g'** and **'L1MUB g'**
  'TRELE g' and **'TRMUO g'** and **'TRJET g'** and **'TRMET g'**
- Electron/Muon/Jet/MET flags
  'cp_eg_electron_barrel g' , **'cp_eg_electron_endcap g'** and **'cp_eg_electron_forward g'**
  'cp_mu_mmuidcd g' and **'cp_mu_mstaco g'** and **'cp_met g'**
  'cp_jet_jetec g' , **'cp_jet_jetea g'** , **'cp_jet_jetb g'** , **'cp_jet_jetfc g'** and **'cp_jet_jetfa g'**
- Remove data when the luminosity cannot be calculated [like VdM scan ...] : **'lumi g'**
- Vertex requirement : **'idvx g'**
- Beam spot requirement : **'idbs g'** : GRLs are produced with/without beam spot requirement

Top GRLs

top_allchannels_7TeV :

- 7 TeV collision samples : **'ptag' = "data10_7TeV"** and **'ATLGL g'**
- Data with LHC stable beam and after the ATLAS warm start : **'ready' = '1'**
  'lhc' = 'stablebeam T' [Obsolete]
  'lhc' = 'beamenergy 3400+' [Obsolete]
- Trigger : L1 CTP working and HLT for electron/muon running
  'L1CTP g' and **'TRELE g'** and **'TRMUO g'**
- Electron/Muon/Jet/MET/Tracking flags
  'cp_eg_electron_barrel g' and **'cp_eg_electron_endcap g'**
  'cp_mu_mmuidcb g'
  'cp_jet_jetb g' and **'cp_jet_jetec g'** and **'cp_jet_jetea g'**
  'cp_met_metcalo g' and **'cp_met_metmuon g'**
  'cp_tracking g'
- Remove data when the luminosity cannot be calculated [like VdM scan ...] : **'lumi g'**
- There are 12 other Top GRLs that are analysis specific, see for example:
  https://atlas-top-grls.web.cern.ch/atlas-top-grls/xmlGRL/DetStatus-v03-repro05-00/
  are not recommended to use by the top group.