

# L1 DOC Report of Week 29

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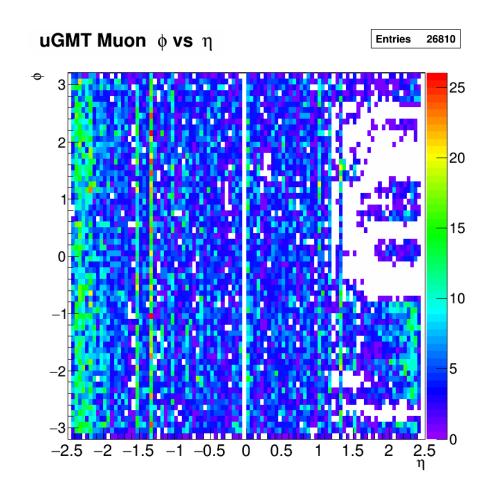
#### **Activities**

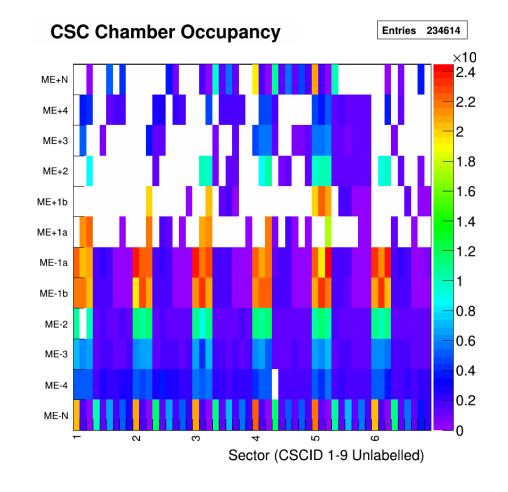
- L1v2 menu tested successfully in inter-fill and collisions
  - Now deployed in normal collision mode
  - JIRA: <a href="https://its.cern.ch/jira/browse/CMSHLT-1940">https://its.cern.ch/jira/browse/CMSHLT-1940</a>
- Rate monitoring failure: low LCT occupancy in EMTF positive endcap
  - Run 320007-320009, took > 1hr for shifters to notice it from asymmetric DQM plot
    - Discuss ideas on how to catch this case promptly instead from DQM plots
  - Reconfigure trigger from central DAQ solved the problem
    - Never have this type of low occupancy before, not clear what is the cause so far
    - EMTF SWATCH showed several CSC input link ID mismatches
    - Might be related to an earlier issue where the EMTF FED 1385 was in OUT\_OF\_SYNC TTS state
      - http://cmsonline.cern.ch/cms-elog/1053942

## Back Up



### Low Occupancy in online DQM Plots







### EMTF test new CPPF timing alignment

- Wednesday
  - Test in cosmic run 319879: similar performance to old setting
- Thursday
  - Test in collision run 319914: better performance
    - NEW setting: BX0—>96.16% BX-1—>3.5% BX1—>1.15%
    - OLD setting: BX0—>68.77% BX-1—>30.66% BX1—>0.92%
  - Keep the new setting until machine development
- JIRA
  - <a href="https://its.cern.ch/jira/browse/CMSLITOPS-128">https://its.cern.ch/jira/browse/CMSLITOPS-128</a>



## High FinOR rate caused by DT

- Wednesday
  - DT DCS issue in Wedge 0
  - Masked two channels and tested successfully in all run modes
  - http://cmsonline.cern.ch/cms-elog/1053409
- Thursday
  - DT access and replaced board
  - TwinMux unmasked channels, key updated and tested successfully
  - http://cmsonline.cern.ch/cms-elog/1053565



#### Miscellaneous

- Wednesday:
  - HCAL updated config key "Physics2018v6d" for regular radiation damage correction
    - https://its.cern.ch/jira/browse/CMSLITOPS-129
  - Memory problem in TwinMux from last week
    - TwinMux swatch cell is recompiled, reinstalled and restarted to monitor memory usage
    - http://cmsonline.cern.ch/cms-elog/1053323
    - https://its.cern.ch/jira/browse/CMSLITOPS-132
- Thursday:
  - OMTF RS key update to mask the only bad CSC link
  - http://cmsonline.cern.ch/cms-elog/1053359