# DQM
# During 1st Beams 09

**and selected slides from readiness review 11/11/09**

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DESY CMS Meeting
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# Splash Events

Run_no____ 2021
Event_no__ 2673
Lumi_sec__ 268
Orbit____ 280933226
Crossing__ 101
http://iguana.cern.ch/ispy

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# Splash Events



Run 120015

L1T



Run 120020

L1T

Ecal

Hcal

bottom          top

# Castor DQM



Running live online
still to be included in archive
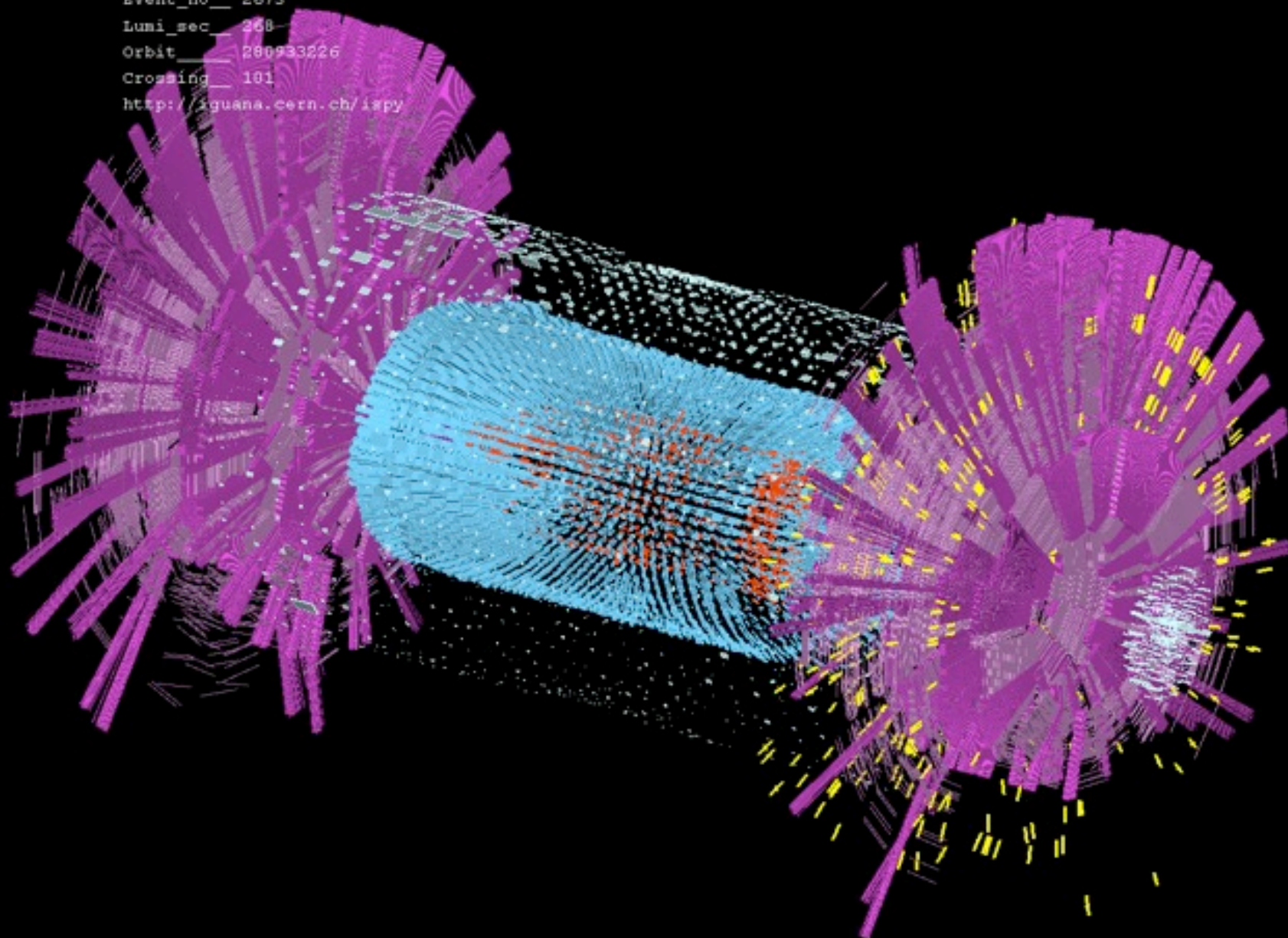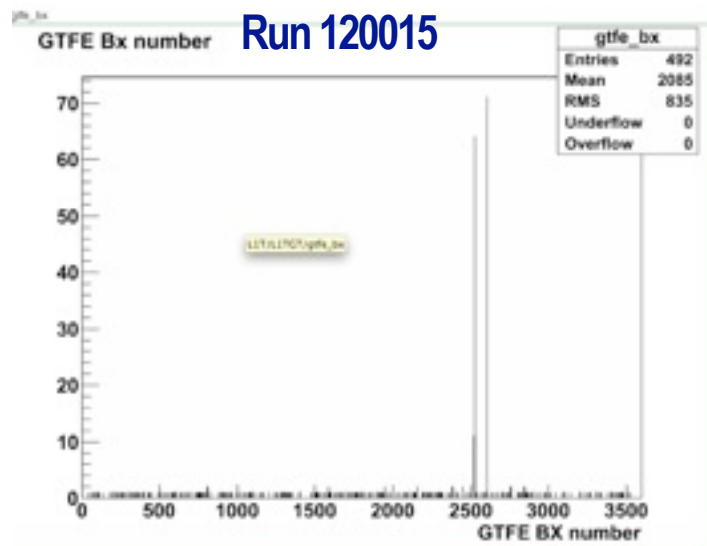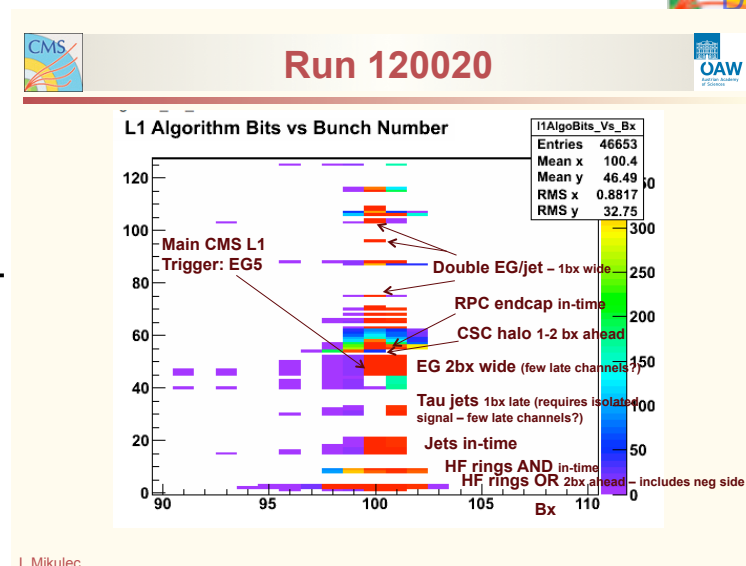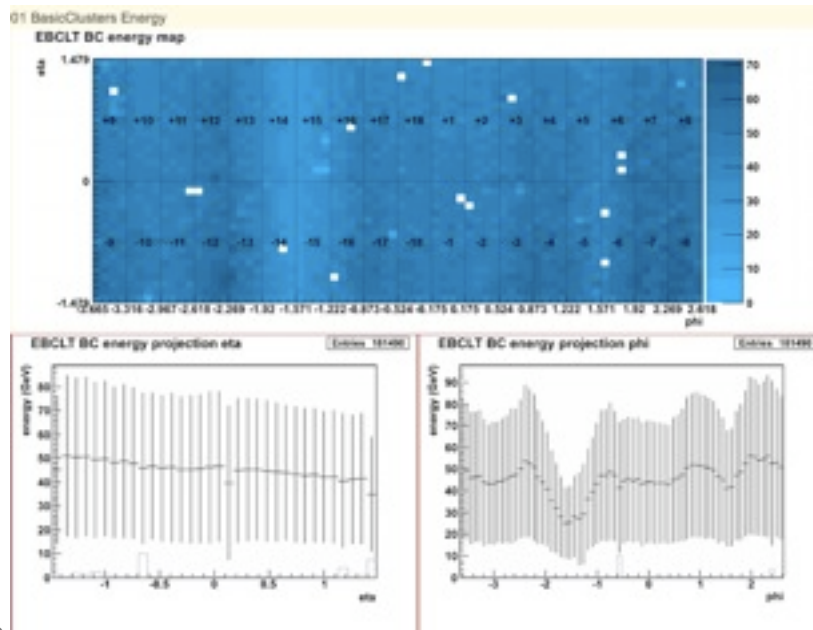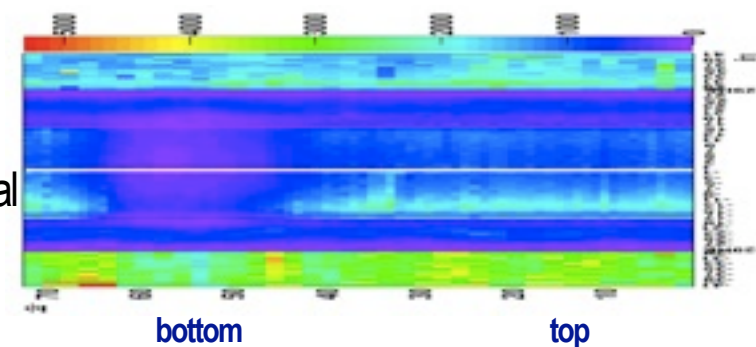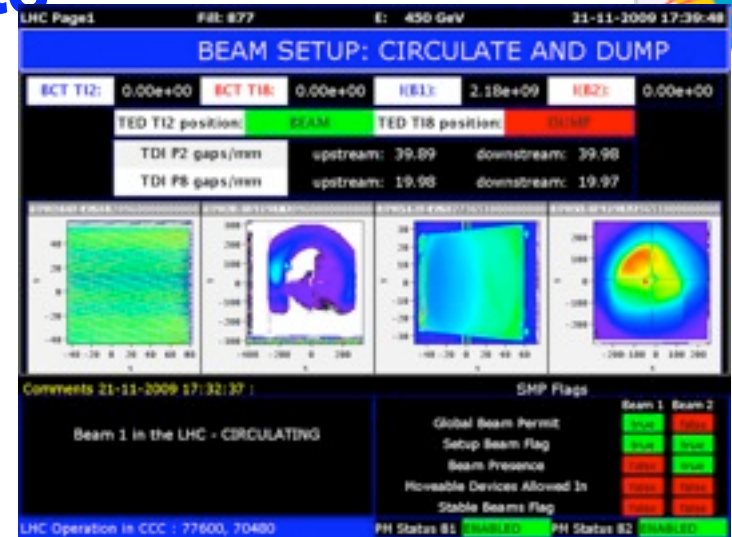
# First Beam Pictures and Plots

**a full night of splash events (2 weeks ago)**



**circulating beam 1 (sat 21/11)**





**DESY did not miss the action - only the champaign ;-)**

# Review: Subsystem Integration

| Component | L1 | HLT | Pixel | Strip | Ecal-Presh | Ecal | Hcal | DT | RPC | CSC | HLX | Beam | Castor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DQM contacts | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Top-level Summary | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Shift Hists. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Shift Description | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| Actions | ✓ | ✓* | ✓* | ✓* | ✓* | ✓ | | ✓* | ✓* | ✓ | | | |
| Reference Histograms | ✓ | | off at present | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | |
| FED Integrity | ✓ | -- | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | -- | -- | |
| DCS in Orcoff | | -- | work ongoing | work ongoing | work ongoing | | work ongoing | work ongoing | work ongoing | work ongoing | -- | -- | |

✓*: criteria when to contact subsystem experts are provided, but not always clear if good or bad

# Review: Issues / Plans

- **Retrieve detector status info from event to reset DQM histograms during the run (at different transitions)**
  - GT (global run status, e.g. safe for injection/pre-physics/mu,cal/mu,cal,trk/mu,cal,trk,pix) → use for histogram block/reset
  - Scaler FED (coarse DCS info, e.g. status word 32 bits) => monitoring (for lack of DCS in Orcoff)
    ready for first tests, waiting for data recorded with global DCS

- **Injection of DQM results into database (OMDS and/or DIP) for**
  - Lumi (HF) monitoring
  - Beamspot position monitoring

- **Online Installation:**         2 new FTE started beginning of Nov: Srecko Morovic (Zagreb) and Amita Raval (DESY)
  - Triplicate system: Production, Test, Development: Test system must made realistic copy of production system
  - SMProxyServer: more flexible trigger and HLT output selection
  - Run Control Function Manager: stop gracefully at run end (at present: kill)

- **DQM histogram collection/summation from HLT**        by StorageManager and EventFilter developers
  - Updates of EVM-FUEP-SM code underway (not yet available)
- **FED Integrity checking**
  - to be re-included in HLT menu

# Review: DQM GUI

Lassi Tuura

- **Recent Update (5.1.4)**
    - **Fixes of performance and memory consumption**
    - **Side-by-side view of same histos from different datasets / runs**
    - **Trend plotting**

- **Splash events:**
    - **1.2 million plots / day (sessions * hists on page * updates)**
    - **90-180 ms server response time**



New: trend plotting
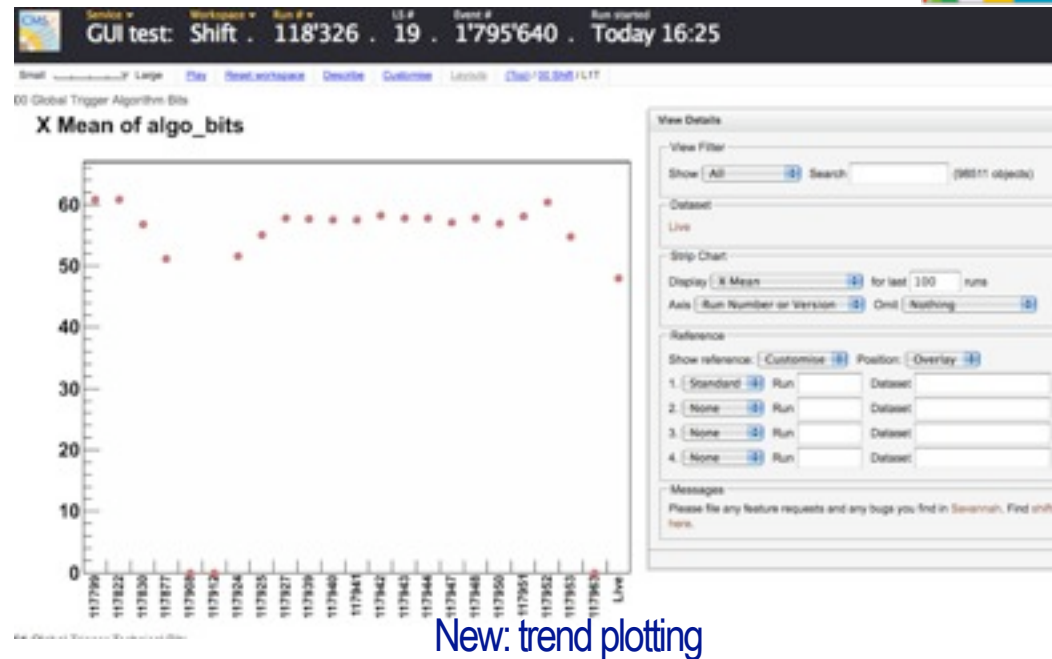
- **Next steps: Further improvements of navigation and histogram viewing**
    - **use of provenance module application for transport / bookkeeping of conditions and provenance info**
    - **better navigation, inspection (e.g. top level frame, customization menus stick to glass, focus on single histogram)** https://twiki.cern.ch/twiki/bin/view/CMS/DQMGUIMenuUpdate

- **Looking for help: maintenance / deployment as well as cosmetics of front-end and back-end code**

# Review: Operations

### central DQM operator
### (online DQM)

- **On-call phone (165579)**

- **Updates and horizontal test and integration**
  - **Code: on demand (daily)**
    - to be posted on wiki-page
    - additional posting on DQM-development HN
  - **Configurations: on demand (daily)**
    - HEAD of CVS
  - **Render-Plugins: on demand (weekly)**
    - HEAD of CVS
  - **Lay-Outs: on demand (weekly)**
    - HEAD of CVS

### DQM shift supervisor
### (online and offline DQM)

- **Day-to-day operations**
- **Shift Tutorials**
- **Weekly shift summary**

- **Shift Instructions (including short term):**
  - subsystems provide instructions
  - move to using GUI-integrated descriptions / instructions

- **DQM shifts report to/via**
  - Shift leader / subsystem experts (P5)
  - Offline run manager (offline DQM)
  - Run Registry
  - ELOG
  - Shift supervisor