

Recent Developments

■ DQM Infrastructure

- Online: upgrade of run control / xdaq infrastructure
- Offline: by-LS certification

■ Harvesting

- Extended to include MC (J.Olzem) and ReReco
- (Semi-)automatic DQM processing of all data sets (N.Pietsch)

■ Run Registry

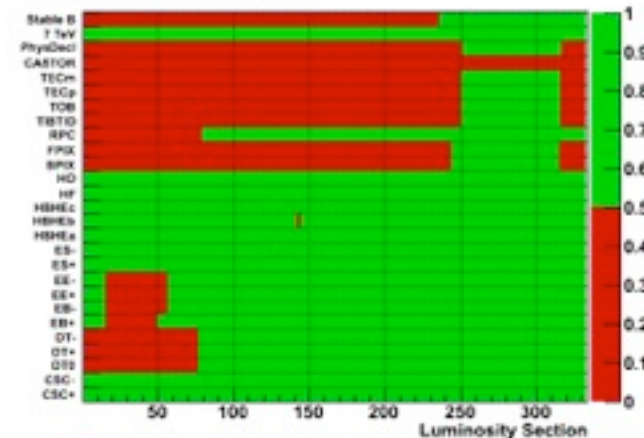
- Introduce Beam Status information
- Automatic Certification
- Integrate with WBM

■ DQM GUI

- Improving Navigation
- Automation of histogram archival and backup
- Working to distinguish Collision Runs from other Runs



HV and Beam Status vs Lumi



The screenshot shows the CMS DQM Run Registry (Global) interface. It displays a table with columns for Run Number, Run Type, and various DQM metrics. The table is organized into sections for different data sets, with each row representing a specific run and its associated DQM results.

Future Plans

■ Online DQM

- Rewrite of SM Proxyserver
- Move to using online release installation
- Improve versioning

■ Offline DQM

- Regular use of reference histograms
- reduce memory footprint
- multi-run DQM (required esp. for "physics DQM")

■ Data Certification

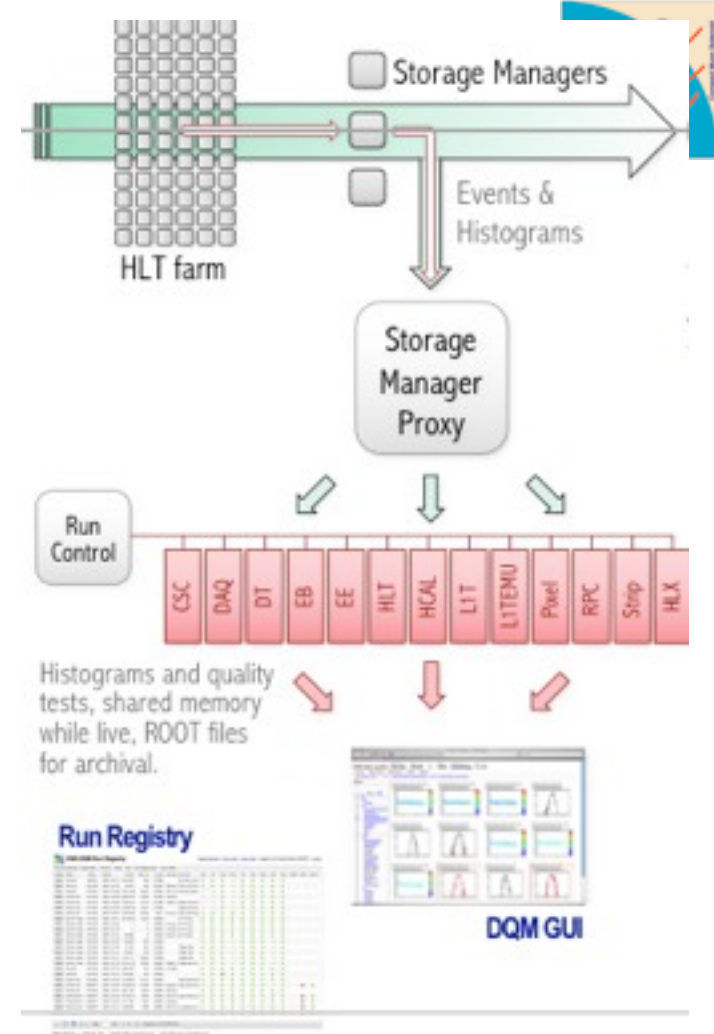
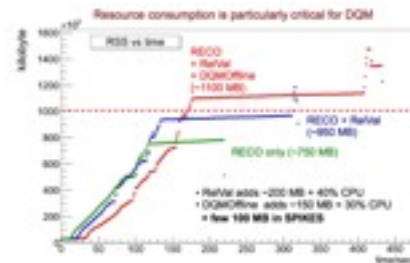
- Starting to validate results from automatic certification

■ Shifts

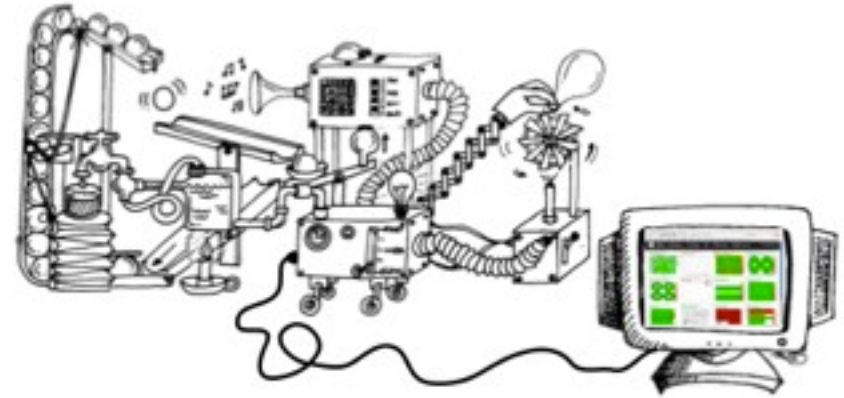
- Further improve/update collection of shift histograms and instructions

■ 2-day Offline Management Meeting next week 12/13 July

- Among other things the future of shift organization will be discussed



DQM Project Coordination



- **Past (since 2008):**
 - Ilaria Segoni (CERN), Giuseppe Della Ricca (Trieste) , A.M. (DESY)
- **Future (starting September 2010):**
 - main: Kaori Maeshima (FNAL)
 - deputies: Amita Raval (DESY), Marco Rovere (CERN)
- **Re-confirming institutional responsibilities for DQM by "the three big labs on CMS"**
 - active participation and contributions to the various areas of DQM is a pre-requisit to sustaining officially accredited remote shift operations

DQM Project Overview

<https://twiki.cern.ch/twiki/bin/viewauth/CMS/DQMProjectDescription>



- **Project Coordination** **Andreas Meyer** (past), **Amita Raval** (future)
- **Data Certification**
 - data quality monitoring (online) **Amita Raval**
 - data certification: produce good-run-list (offline) by run and LS
 - define data certification criteria and procedures (with PVT)
- **Software development**
 - CMSSW core infrastructure (includes run control and cmssw-xdaq interfaces for 'live' processing) **A.M**
 - Run Registry (webserver and database)
 - DQM GUI (webserver and archive)
 - Subsystem code integration (DPG, POG, PAG) **Jan Olzem** (L3)
- **DQM System Operations, data operations**
 - Online DQM system **Dima Volyanskyy** (past), **A.M.**, **Niklas Pietsch**,
 - Offline DQM histogram 'harvesting' **Niklas Pietsch**, **Dirk Kruecker**
- **DQM Shift Organization**
 - Online and offline shifts 6h/day from remote center at DESY
 - Expert on-call **A.M**, **Amita Raval**, **Niklas Pietsch**