

CMS data quality GUI test: 30129 . 3 1361: Everything, 1 / 15

Services Data sources Workspaces

Page: Previous, Next, 1 of 15

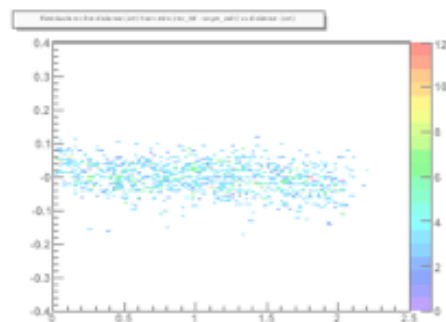
Objects

Search

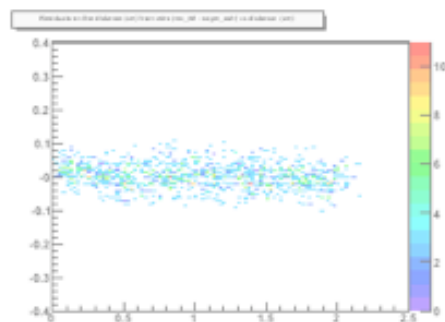
Show Item List...

- ☐ (Top)
- ☐ CSC
- ☐ EventInfo
- ☐ DT
- ☐ DTChamberEfficiencyTask
- ☐ DTDigiTask
- ☐ DTEfficiencyTask
- ☒ DTResolutionAnalysisTask
- ☐ DTSegmentAnalysisTask
- ☐ DataIntegrity
- ☐ EventInfo
- ☐ Test
- ☐ Tests
- ☐ Hcal
- ☐ DataFormatMonitor
- ☐ DeadCellMonitor
- ☐ DigiMonitor
- ☐ EVT MASK
- ☐ EventInfo
- ☐ FEDs Unpacked
- ☐ HotCellMonitor
- ☐ LEDMonitor
- ☐ PedestalMonitor
- ☐ Process Latency
- ☐ Quality Status
- ☐ RUN TYPE
- ☐ RecHitMonitor
- ☐ STATUS
- ☐ TrigPrimMonitor
- ☐ L1T
- ☐ EventInfo
- ☐ L1TCSCF
- ☐ L1DTTE
- ☐ L1DTTPG
- ☐ L1TCMT

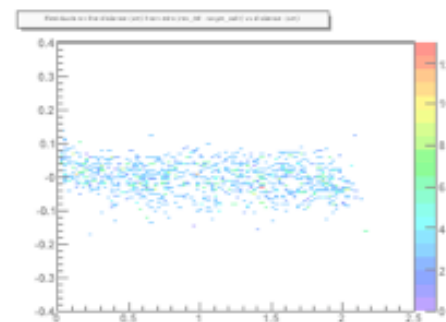
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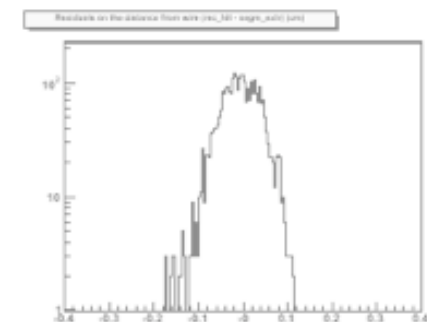
hResDistVsDist_W0_St1_Sec10_SL2



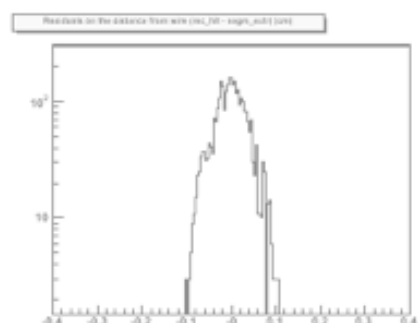
hResDistVsDist_W0_St1_Sec10_SL3



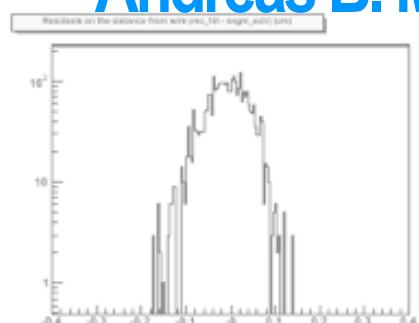
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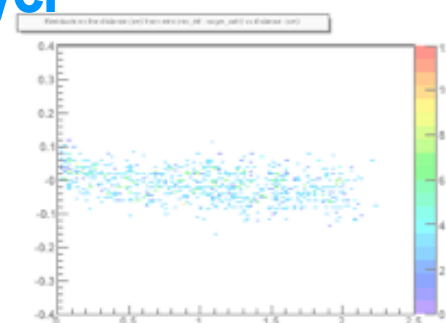
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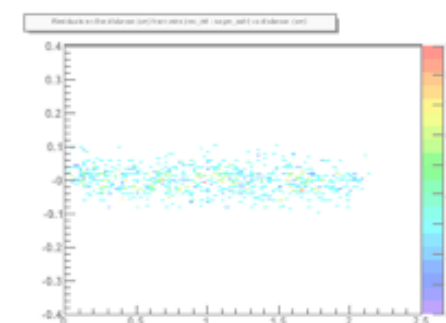
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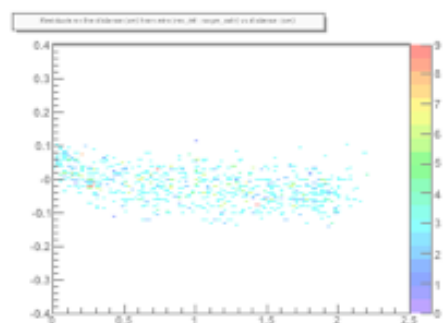
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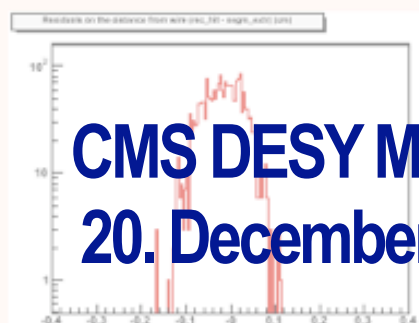
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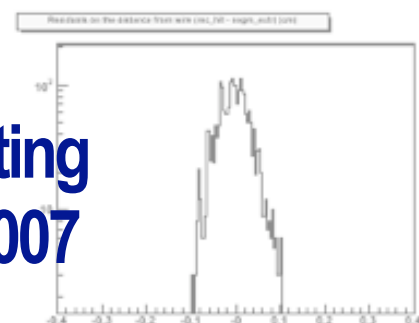
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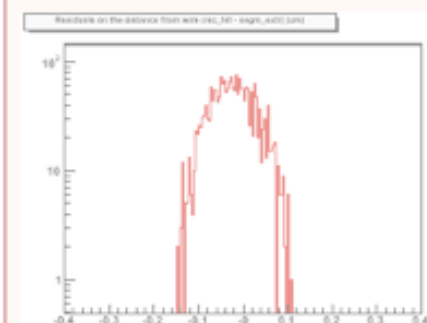
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hResDist_W0_St1_Sec11_SL3

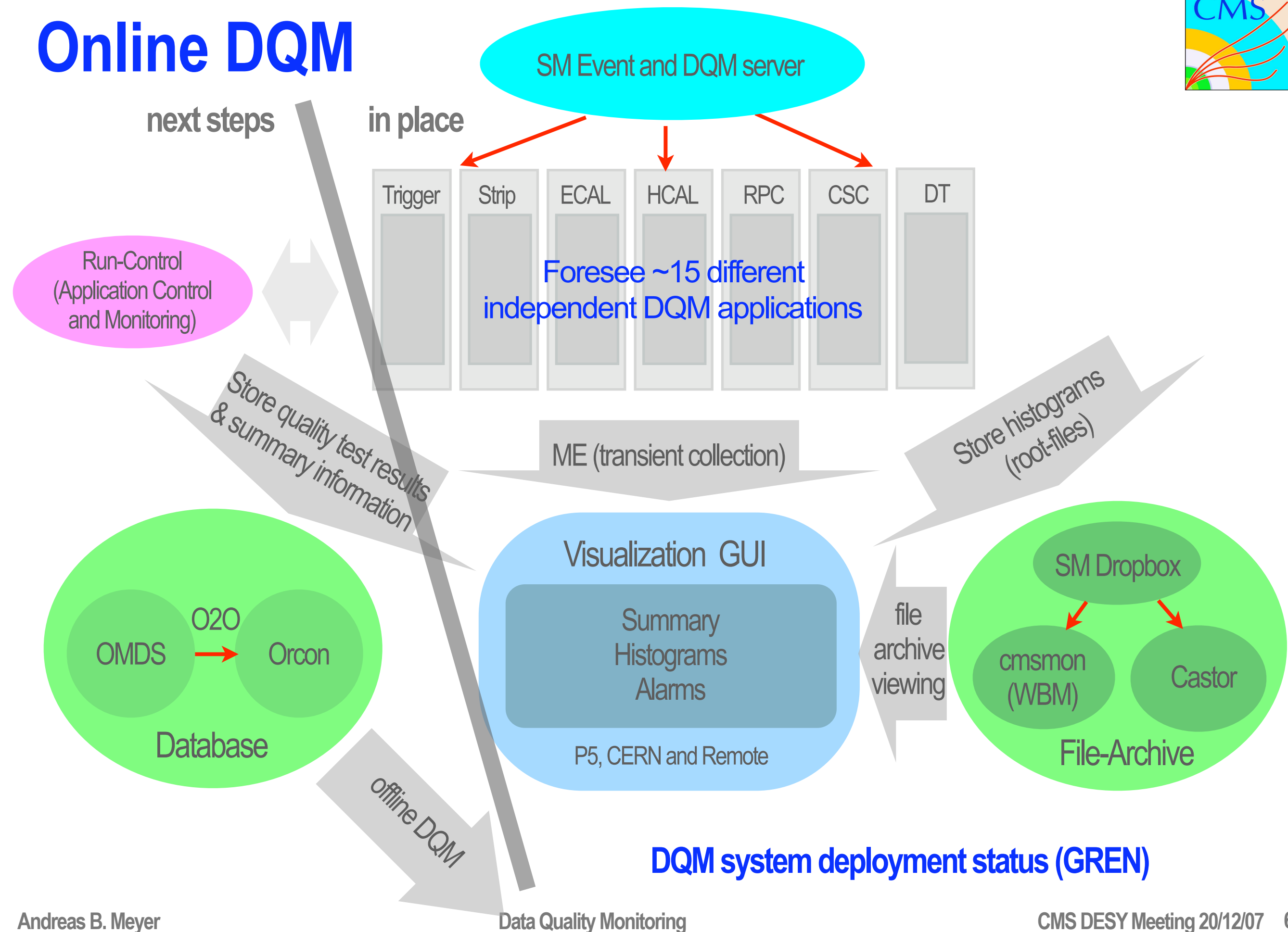
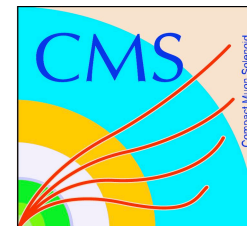


Data Quality Monitoring

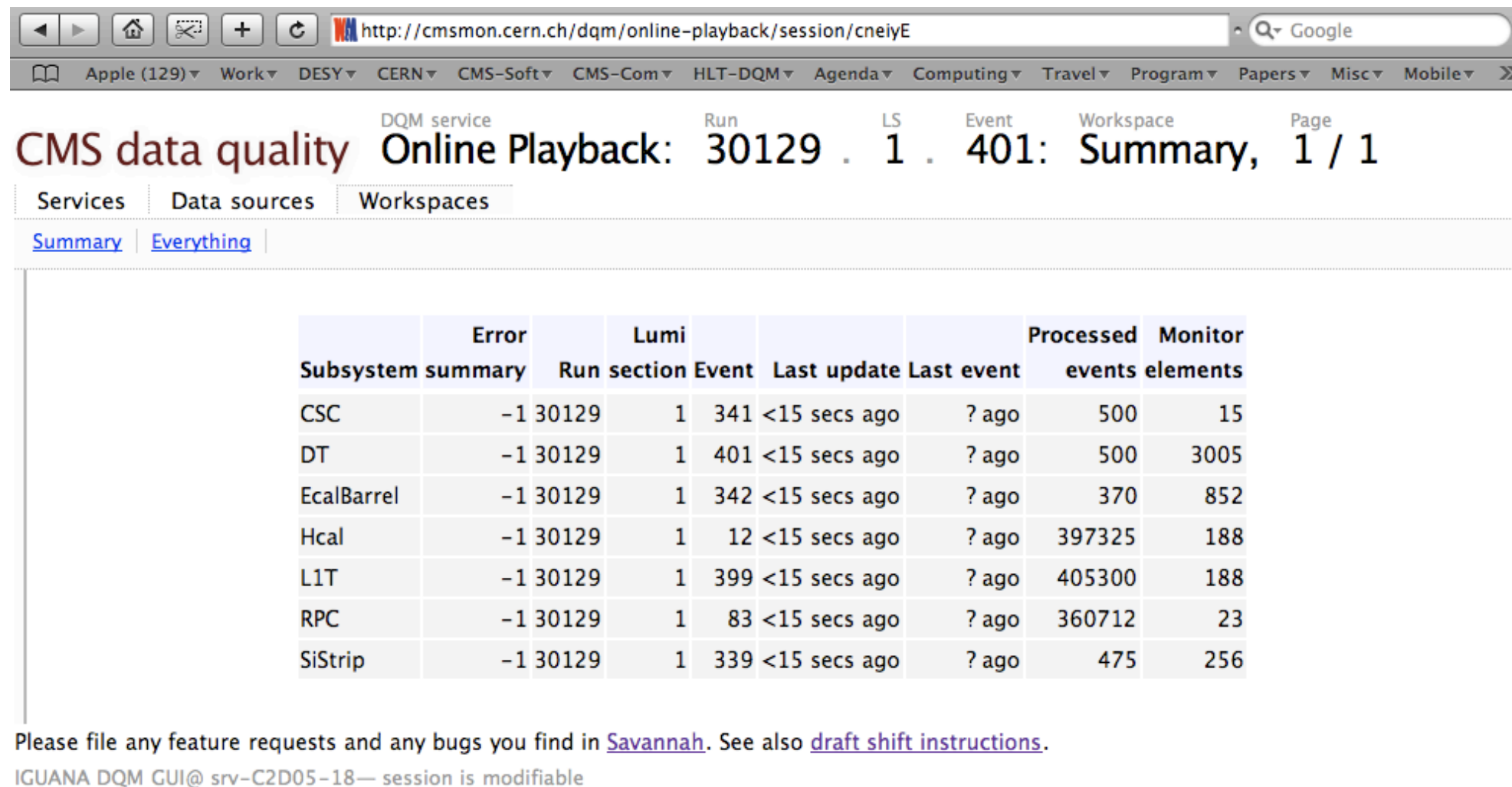
Andreas B. Meyer

CMS DESY Meeting
20. December 2007

Online DQM

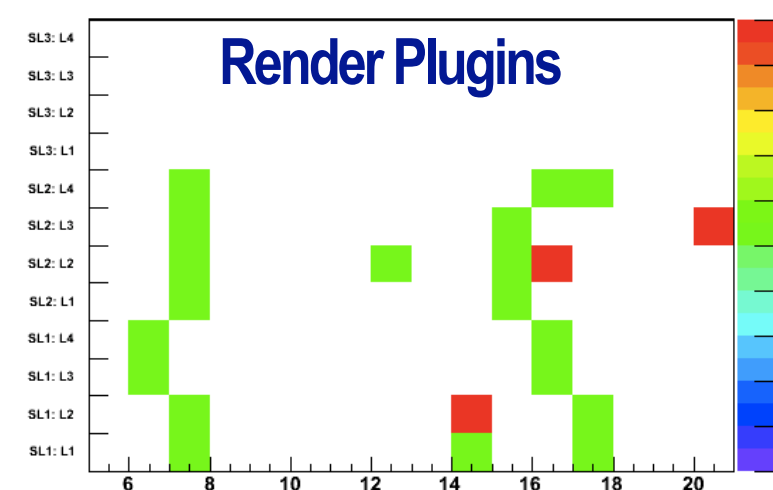


DQM Integration



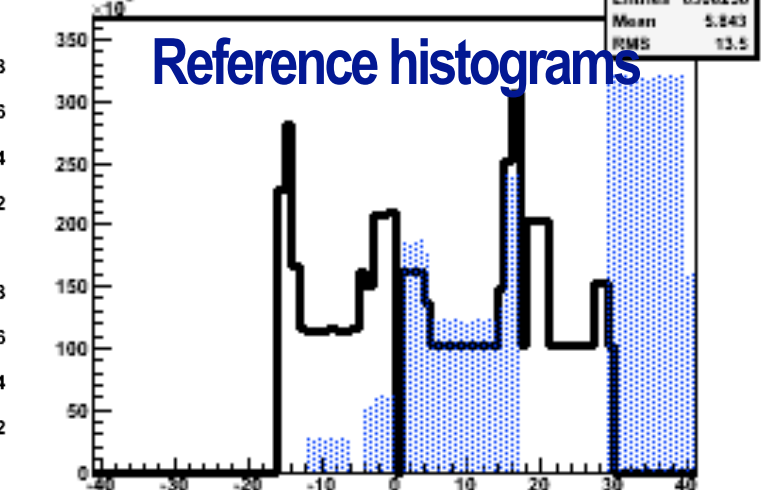
- Error Summary
- Common Parameters
- RenderPlugins, Layouts
- Reference histograms

OccupancyAllHits_perCh_W0_St2_Sec1



Render Plugins

Digi Eta Occupancy Map



Reference histograms

Detector Subsystems were integrated during GREN

DQM GUI

Lassi Tuura



live: <http://cmsmon.cern.ch/dqm/online>
playback: <http://cmsmon.cern.ch/dqm/online-playback>

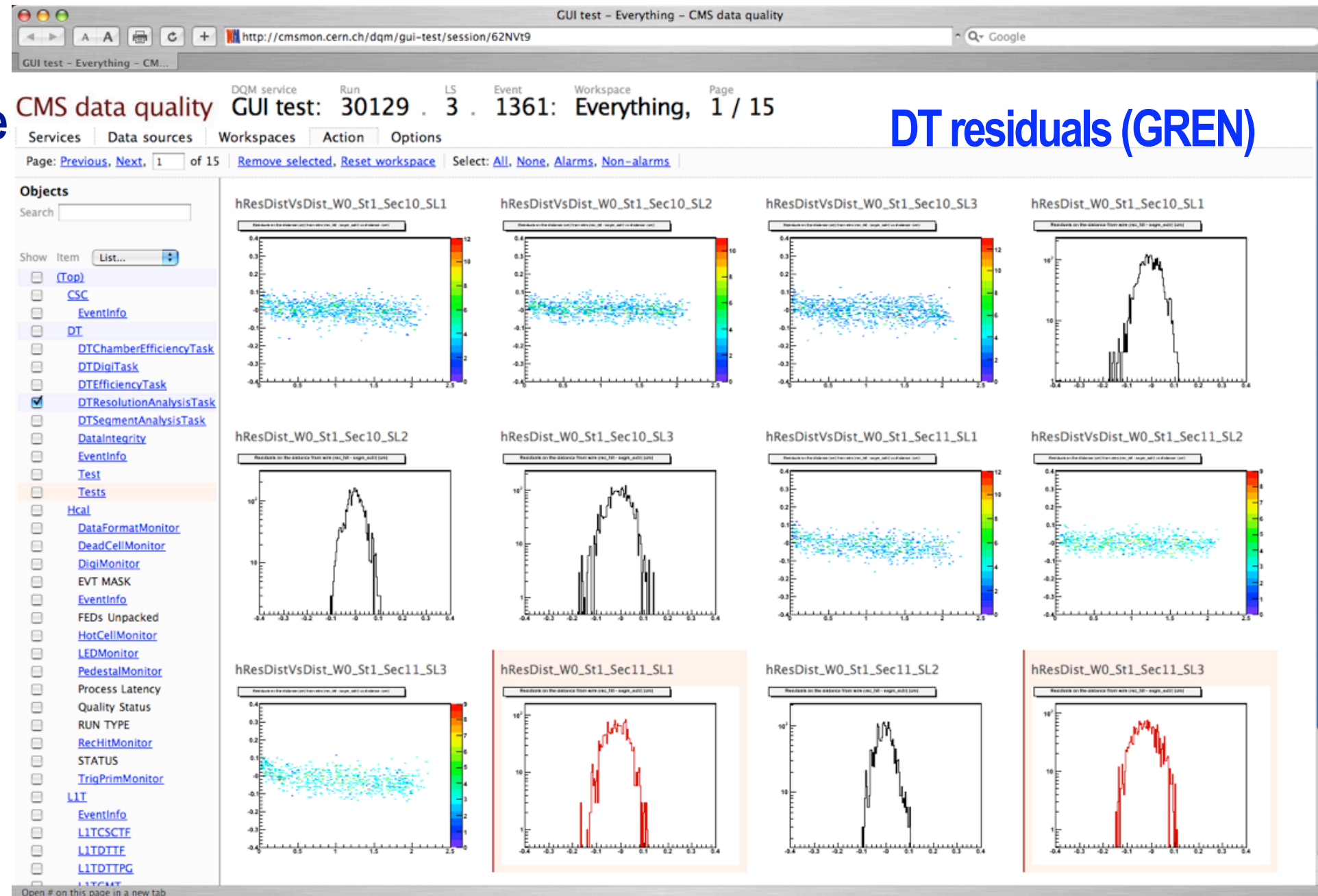
- Web-based service
- no specific S/W installation on user side

- accessible from

- P5
- CERN
- Remote

- access to

- Online (live)
- Online (archive)
- Offline (Tier-x)
- ReVal, SVsuite
- ...



DT residuals (GREN)

Homogeneous, simple and fast access to all DQM data (online and offline)

Next steps (until ~March 08)



- Runcontrol Integration and use of HLTConfDB (underway)
- Error Summary Displays (underway)
- Alarm Storage (starting)

- Rewrite DQM Core Software (3 step migration planned for Jan/Feb)
 - simplify package structure
 - upgrade transport layer
 - short cut “MonitorElements” with root

- Considering using same GUI for
 - DAQ Monitoring
 - DB Access

Backup: DQM GUI Plan

- **Navigation**
 - 'Heart-beat' overview of available info (GREN)
 - Layouts: pre-canned views (user specifiable) (GRES)
 - Search functionality (based on the histogram name) (GRES)
 - Different views, geometric, front-end and cabling map, alarm states etc.
 - Provide access to files (online and offline)
- **Rendering and displays, custom views**
 - Display plug-ins (e.g. color palettes, decorations etc., GREA)
 - Zooming and pointering (GREN)
 - Well-defined javascript interface and library
 - History and trend plots
- **Decorations, quality assessment**
 - Reference histograms (GREN)
 - Instructions to shift crew (draft wiki page) (GREN)
- **Histogram Collection**
 - from all subsystems, HLT and physics monitoring
 - cope with 500k histograms (GREN: proven for 50k)
 - revising management and transport of histograms; **discussion this Friday**
- **Provisioning the service**
 - Online and offline servers
 - Data storage for offline histograms
 - Servers for O(500 requests / sec)
 - P5, Tier-0 and all Tier-1s
 - Actual operations at CMS centres

Past: focus on pushing the web server technology and DQM infrastructure

Present: efficient and robust GUI baseline settled

Future: consolidate (code-base, hardware, servers, specific features)

Backup: Timeline for Online DQM



- Automated operation and shifters
- GUI: introducing layouts and plugins
- Remote monitoring (from FNAL)

- DQM common EventInfo and FileSaving modules
- Subdetector and trigger DQM fully integrated
- GUI: With fast and robust navigation

- DQM in Run Control (use HLTconfDB)
- Error reporting and persistency
- Upgrade/simplify core DQM software
- File archive viewing directly from DQM GUI
- Additional navigation options and custom views

- GUI, history, trends, correlations with conditions
- Standardized DQ certification criteria

GRES

09/07

GREN

~11/07

CCR0T

GREF

~02/08

CCR4T

~04/08

DQM must be up to pp-collisions in June 08