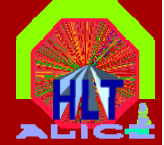


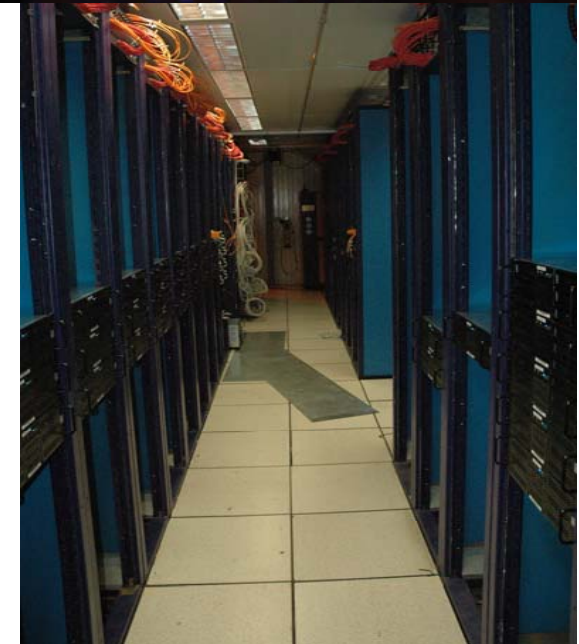
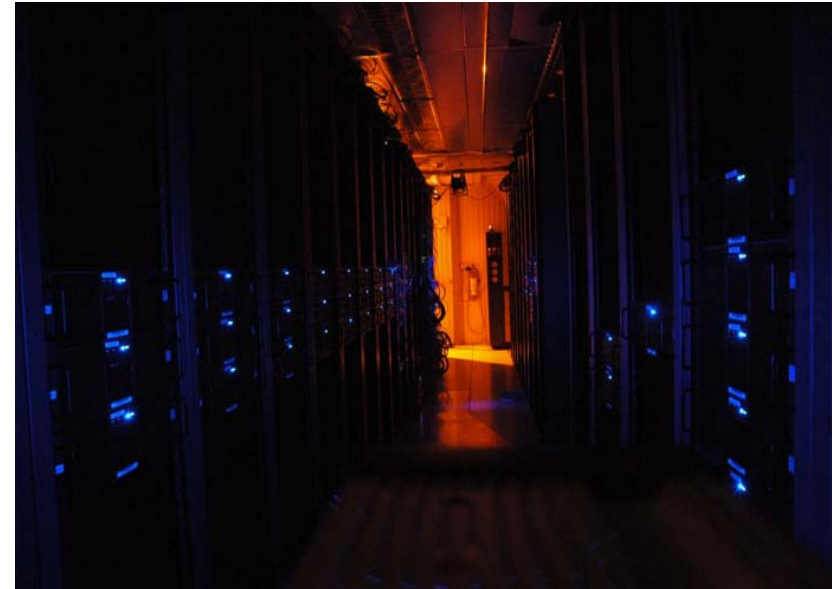
HLT – Status

Hardware / Commissioning

Jochen Thäder
Kirchhoff Institut für Physik
Ruprecht-Karls-Universität Heidelberg



- **87 Frontend PCs**
 - 696 GB Memory
 - 348 CPU cores
 - 174 H-RORCs
 - 348 DDL links
- **16 Infrastructure PCs**
- **All Optical Fibers from CR1 to CR2 installed and tested**
- **TPC/TRD/PHOS/DiMuon/HLTOUT optical patch cables installed**





Hardware (2)

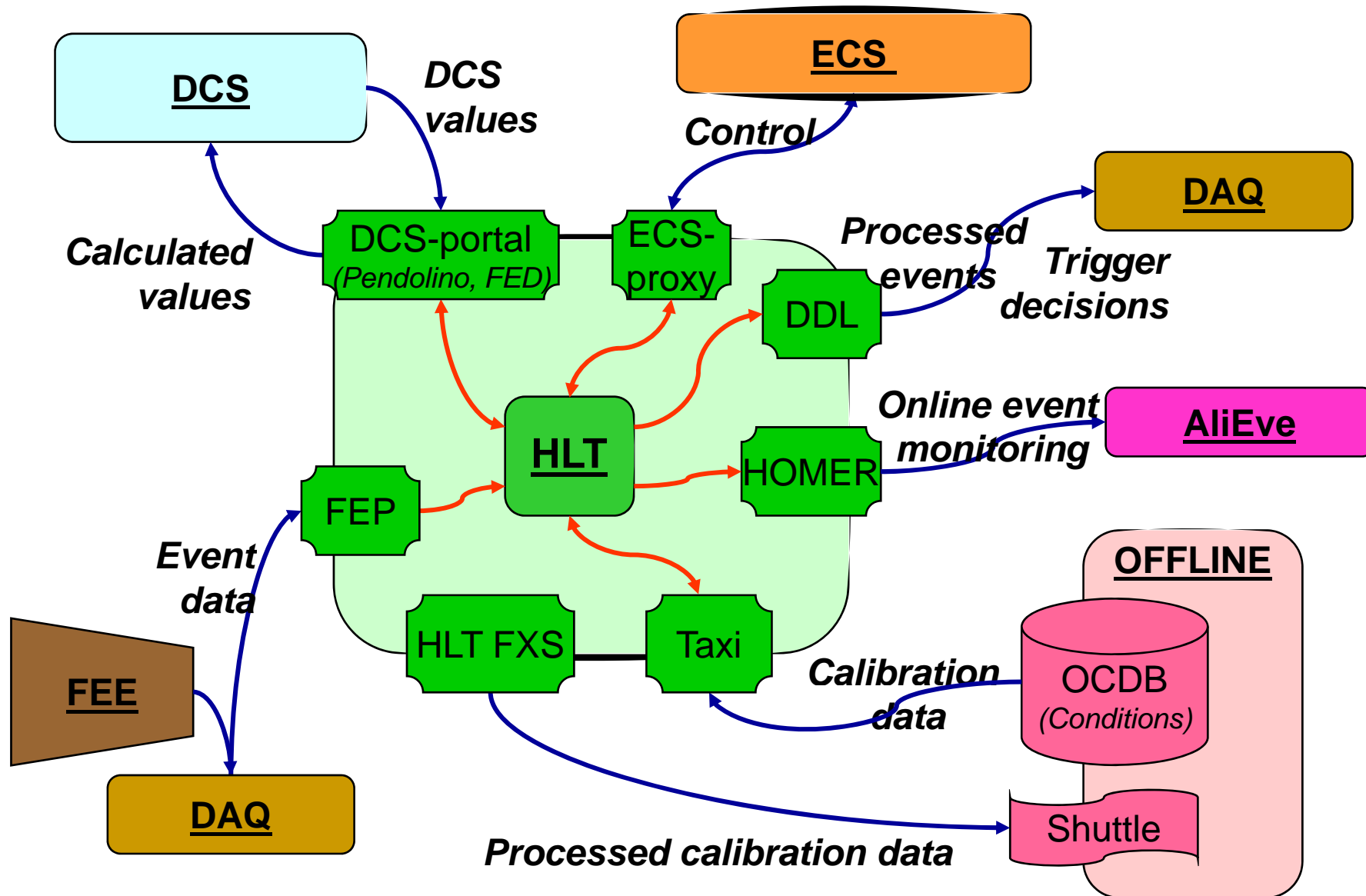
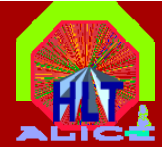


- **Portal nodes (2 each) to ALICE online systems**
 - ECS / DCS / Offline
- **Connection tested and in use**





Interfaces Overview

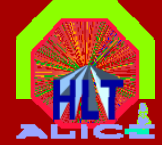




Interfaces Status (1)

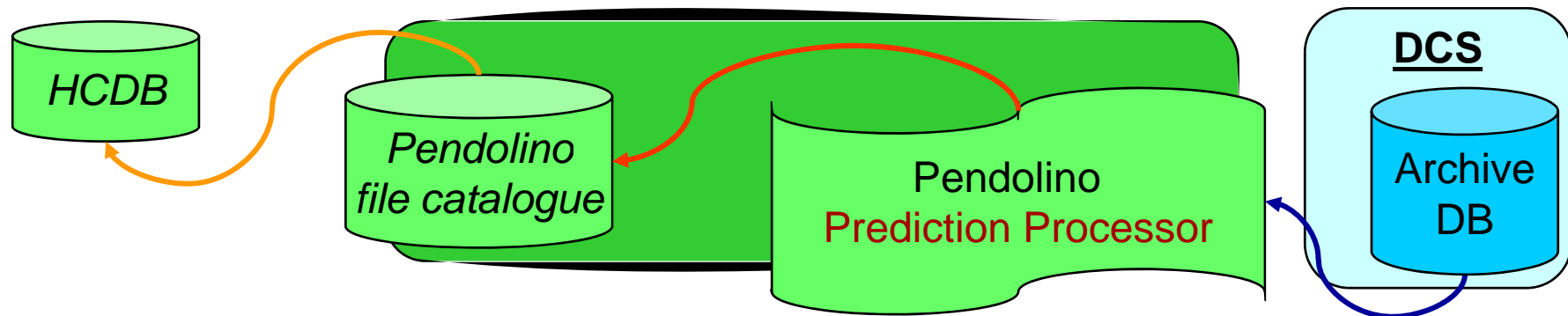


- **To ECS :**
 - HLT ECS-Proxy : Communication with HLT Data Transport Framework → **already in use**
- **To DAQ :**
 - HLTOUT : Send data and dummy ReadOut List back to LDCs → **tested, scheduled to use in TRD / PHOS**
- **To Offline :**
 - Taxi : Fetch Data from OCDB to HCDB → **tested**
 - FXS : Calibration output fetched by Shuttle via offline Preprocessor into OCDB → **tested**



- **To DCS :**

- **Pendolino : Fetch time/value-pairs from Amanda server for HLT Prediction Processor → **in finalizing****



- **To new AliEve :**

- **HOMER manager as interface for all sent HLT detector data → **under discussion / implementation****

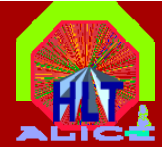


Purpose:

- **Providing calibration settings from OCDB to Algorithms**
 - fetched before run
- **Providing run conditions (*like temperature, voltages, pressure, ...*)**
 - updated during the run
- **HCDB Deployment requires as well notification of update to HLT Components**
 - synchronization with HLT framework
- **Participating Interfaces:**
 - Taxi (Offline → HLT)
 - Pendolino (DCS → HLT)



Offline Farm

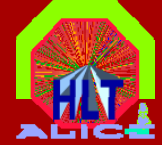


- „HLT as offline farm“
- Running in virtual machines → **in offline testmode**

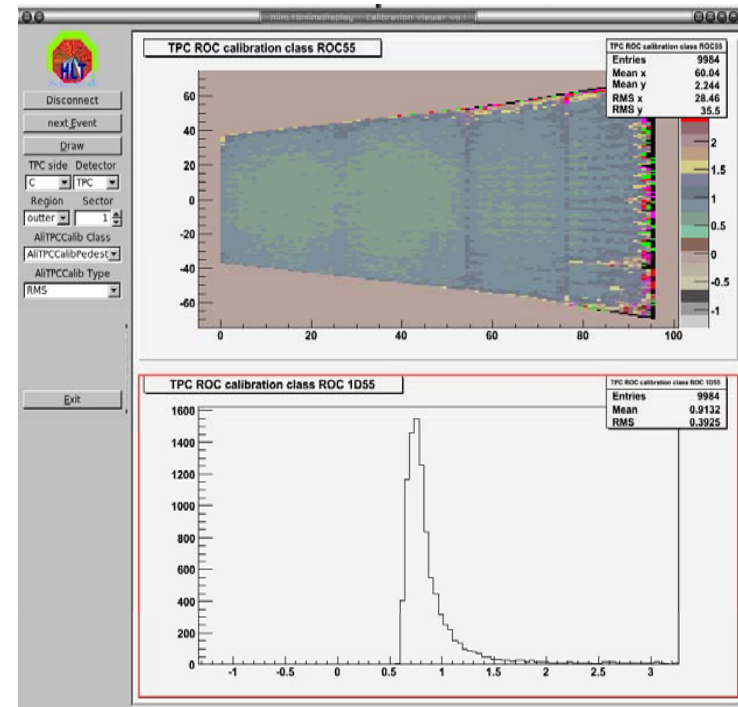
The screenshot shows the MonALISA Repository for ALICE interface. The main content is a satellite map of the CERN site. A popup window titled "CERN_HLT (41)" displays a bar chart of "Running jobs" over a period of 10 days in October 2007. The chart shows a fluctuating number of running jobs, generally between 20 and 50. The legend below the map indicates:

- Green circle: Running Jobs
- Orange circle: ML Service Down
- Yellow circle: No Active Jobs
- Red circle: ML Service Down & no running jobs

 On the map, several locations are marked: CERN_HLT (green), CERN-L (orange), CERN_eLit (yellow), and CERNMAC_CERN (red). The interface includes a navigation sidebar on the left with categories like "ALICE Repository", "Google Map", "Running trend", "Job Information", "SE Information", "Services", "Network Traffic", "FTD Transfers", "CAF Monitoring", "SHUTTLE", "LCG exp. monitoring", "Build system", and "Dynamic charts". A "Running jobs trend" gauge is also visible, showing a value of 4982 jobs. The top navigation bar includes links for "Repository Home", "Administration Section", "ALICE Reports", "Events XML Feed", "Firefox Toolbar", and "MonaLisa GUI". The footer contains "Repository Home · ALICE Web Page · ALICE Clusters · Contact" and "CERN Copyright 2007 - ALICE EXPERIMENT".

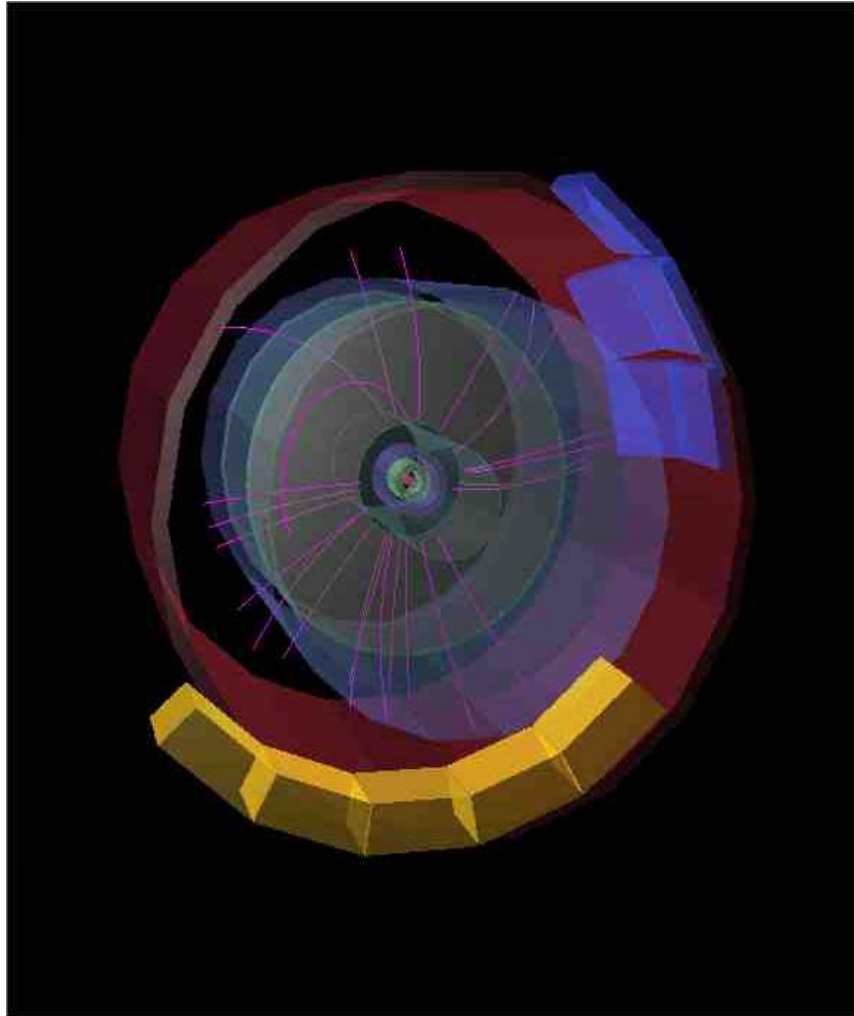


- **Calibration Base Class developed**
 - Output : ROOT Files / ordinary files
 - Handels shipping data to FXS
- **Implementations for TPC / TRD / PHOS / DiMuon**
- **Already used for TPC**
- **HLT -> FXS -> Shuttle**
-> Preprocessor tested with TPC data





- **HLT is running for TPC tests**
- **Whole TPC reconstruction is running on all 54 TPC FEP nodes (simulated events)**
- **Calibration Components already implemented -> on going with TPC Offline as soon as new classes are developed**
- **Krypton ClusterFinder implemented/under testing**
- **ESDs of tracking results provided**
- **Use of AliEVE**



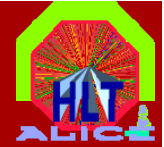
ESDs of HLT tracks in AliEVE



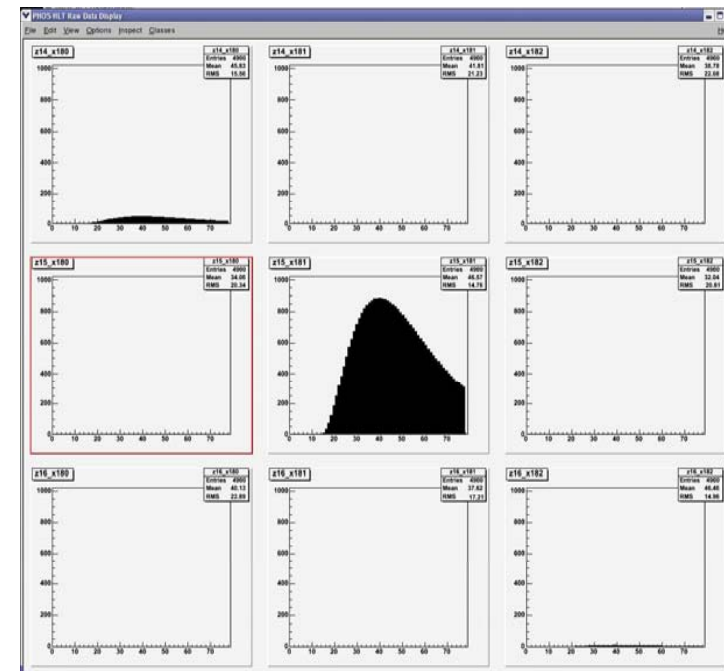
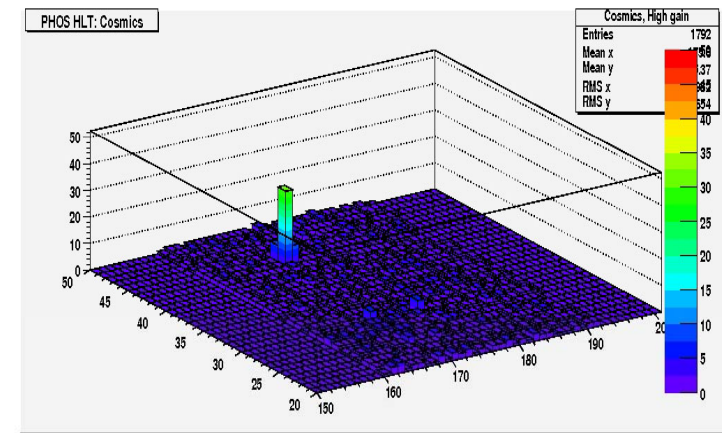
AliEVE in ACR (TPC raw data)



PHOS Status



- **HLT Setup in PHOS Lab during Cosmic test**
 - Data Compression (Zero Suppression) by factor 100
 - Calibration in use
 - PHOS – HLT Raw data display in use
- **Full PHOS chain running on HLT Cluster (simulated events)**





TRD Status



- **Use of offline TRD algorithms in HLT**
- **Under Testing at HLT cluster**
- **Preparing for TRD testbeam**



- **Hit Reconstruction migrated to the CERN HLT cluster**
- **Tracker migrated to the CERN HLT cluster**
- **Calibration Component implemented**
- **OCDB data used**
- **Under Testing**



- **Finalize DCS – HLT interface**
- **Implementation of HOMER – AliEVE interface**

- **On going tests with various sub detectors**
- **DAQ – HLT tests**

- **Installing of missing optical patch cables**
- **Installing of Infiniband / Quadrics backbone**
- **Final ethernet cabling**