

## Detector Diagnostics

- Calibration Analysis  
Ped/LED/Laser
- RadDam Analysis
- Detector Optimization
- Lumi Detector Performance

## Monitoring

- DQM  
On/Offline
- Prompt Analysis
- DCS
- Run Certification
- Trigger Emulation

## Database

- OMDS
- OrcOn /  
OrcOff
- popcon
- Database Maintenance
- Access tools
- WBM (Trends)

## CMSSW

- LUT Generation
- Code Release  
Validation  
Reco/Sim/HLT  
AICaReco
- Simulation  
and Material  
Model
- Reconstruction  
Digi/Reco/  
CaloTower
- Data Format
- Anomalous  
Check email

## Calibration with Data

- HLT
- AICa  
Raw/Reco
- Producers  
Analyzer  
Calibrators
- Run  
calibration  
jobs
- Validation and  
Closure

## Performance

- Trigger
- Overall hadron  
performance
- HPD Noise  
Filter
- Anomalous  
Event Filter
- Timing
- Final Data  
Certification

# Detector Diagnostics

Establish optimal settings for operations

- HV settings

- timing optimization

- channel mapping (HF)

- HPD noise stability

Lumi detector performance

- Abort gap

Diagnosis / studies of detector effects

Input to the run plan

- Establish procedures

# Monitoring

Develop monitoring tools for shifters

- Online and offline DQM

Develop Run Certification criteria

DCS

- Input to Run Certification / Online alarm

Trigger Emulation

- HLT monitoring

Prompt Analysis (HCAL Expert)

# Database

Identify requirements and review current design  
schema and contents

correlation between different databases

Specify database schema

Provide interface to access database

Maintain popcon (populate conditions) utility to fill database

Database interface to Web Based Monitoring

# CMSSW

Maintain software within the CMSSW framework

Coordinate Reconstruction and Simulation code development

Validation of software release

Maintenance of the simulation and material model

Migrate geometry to database

LUT generation

Anomalous cell framework

channel status word / severity level

# Calibration with Data

Develop calibration HLT triggers

- Isolated track and minbias

Reconstructed objects

- Isolated tracks

- Dijet

- Minbias

- Muon for HO

- Z-> ee for HF

Develop Analyzer, Calibration, Validation and closure test after writing to database

# Performance

Overall performance

Energy resolution as a function of  $E$ ,  $\eta$ ,  $\phi$

Single hadron mean response

Study noise

Develop Anomalous Cell Algorithm

Establish Final Data Certification