



Introduction of CMS on / offline shift

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Contents

➤ CMS RPC online shift

- Online shift information
- Detector monitoring
- Check list

➤ CMS RPC offline shift

- Submission & Resubmission
- Merge
- Analysis
- Write e-log



CMS RPC online shift

CMS RPC online shift at the P5

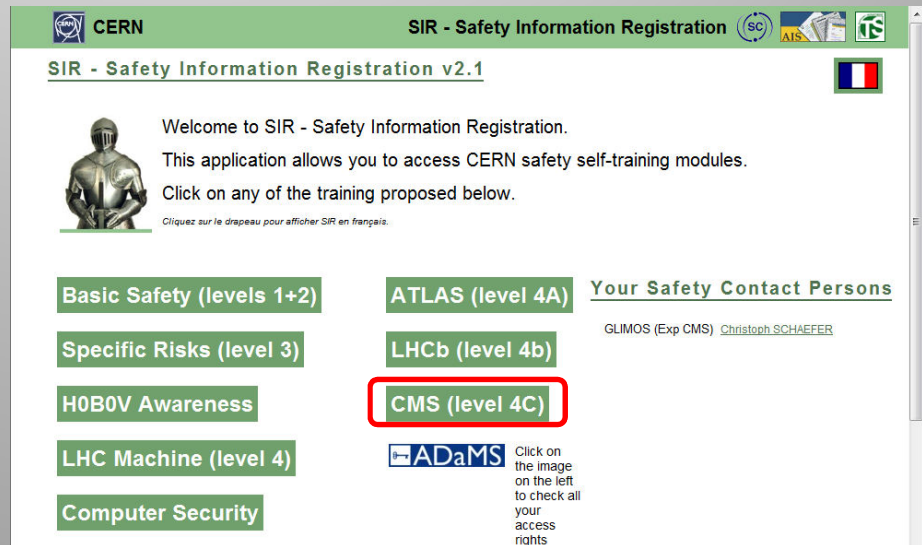


SIR – Safety information Registration

Enter this web page : <http://sir.cern.ch>

You have to pass the CMS(Level 4C) safety course.

There are 10 questions and you have only 3 chances to pass.





CMS RPC online shift

CMS online

UTC: 22:28:30 25-Sep-09 Home Help
 local: 07:28:30 26-Sep-09 Welcome Login/Logout
 page loaded: 07:28:23 26-Sep-09

Common HCAL RPC CSC Tracker Services

Run information

Booking time 2009/09/25 13:58:28
 Run number 114668
 Start time 2009/09/25 14:02:15

Trigger

Configuration TSC_001269_090925_MIDWEEK2009_GTgt200918longgap_GCT_RCT_DTTF_ECAL_M1
 Event number 952172
 Rate in Hz 0.0
 Run number 114668
 Trigger state Running

RC states

CMS.LVL0:DAQ_STATE Running
 CMS.LVL0:DQM_STATE Running
 CMS.LVL0:ECAL_STATE Running
 CMS.LVL0:RC_STATE Running
 CMS.LVL0:SCAL_STATE Running
 CMS.LVL0:TRG_STATE Running

Magnet

Field [T] Current [A] Ramping Steady Cryo Last change
 0.00 2 No No Not ok 22:26 25-SEP-09 UTC

Navigation: DAQ, SCX PC DETAILS, Error viewer, Farm configuration, DCS, Pmon - PVSS log, Event display, DSS, Flog, **Shiftlist**, Run control, Storage Manager, Storage Manager details, Firmware repository

Request P5/CAF shift to Gabriella Pugliese

Enter this web page : <http://cmsonline.cern.ch> and check shiftlist

Year: 2009 Month: July Shift type: RPC - Detector O&M Show

main(m)	main 2nd(m2)	trainee(t)	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
					1	2	3	4	5
					00:00h-07:00h COLAFRANCESCHI, Stefano(m2) 00:00h-07:00h LOMIDZE, David(m) 07:00h-15:30h FABOZZI, Francesco(m) 15:30h-00:00h PICCOLO, Davide(m)	00:00h-07:00h AHMAD, Muhammad(m) 07:00h-15:30h TENG, Haiyun(m) 15:30h-00:00h FABOZZI, Francesco(m)	00:00h-07:00h LOMIDZE, David(m) 07:00h-15:30h AWAN, Imran(m) 15:30h-00:00h FABOZZI, Francesco(m)		
			6	7	8	9	10	11	12
			13	14	15	16	17	18	19
07:00h-15:30h BAESSO, Paolo(m) 15:30h-00:00h OSORIO OLIVEROS, Andres Felipe(m) 15:30h-00:00h BERTANI, Monica(t)	00:00h-07:00h MARINOV, Andrey(m) 07:00h-15:30h BAESSO, Paolo(m) 07:00h-15:30h ZAGANIDIS, Nicolas(m) 15:30h-00:00h BERTANI, Monica(m)	00:00h-07:00h ZHU, Bo(m) 07:00h-15:30h BAESSO, Paolo(m) 15:30h-00:00h BERTANI, Monica(m)	00:00h-07:00h LOMIDZE, David(m) 00:00h-07:00h QIAN, Sijun(t) 07:00h-15:30h TENG, Haiyun(m) 15:30h-00:00h BAESSO, Paolo(m)	00:00h-07:00h LOMIDZE, David(m) 07:00h-15:30h COLAFRANCESCHI, Stefano(m) 15:30h-00:00h QIAN, Sijun(m)	00:00h-07:00h KIM, Hyun-chul(m2) 00:00h-07:00h QIAN, Sijun(m) 07:00h-15:30h BERTANI, Monica(m) 15:30h-00:00h BAESSO, Paolo(m)	00:00h-07:00h LOMIDZE, David(m) 00:00h-07:00h JO, Mihael(m2) 07:00h-15:30h BERTANI, Monica(m) 15:30h-00:00h QIAN, Sijun(m)			
			20	21	22	23	24	25	26
00:00h-07:00h SEO, Eun-sung(m2) 00:00h-07:00h CIMMINO, Anna(m) 07:00h-15:30h	00:00h-07:00h MARINOV, Andrey(m) 07:00h-15:30h ZHU, Bo(m)	00:00h-07:00h LOMIDZE, David(m) 07:00h-15:30h BAESSO, Paolo(m)	00:00h-07:00h KIM, Hyun-chul(t) 00:00h-07:00h LOMIDZE, David(m)	00:00h-07:00h SHIN, Seung-su(t) 00:00h-07:00h KIM, Hyun-chul(m)	00:00h-07:00h BENUSSI, Luigi(m) 07:00h-15:30h CIMMINO, Anna(m)	00:00h-07:00h BENUSSI, Luigi(m) 07:00h-15:30h COLAFRANCESCHI, Stefano(m)			

CMS RPC online shift

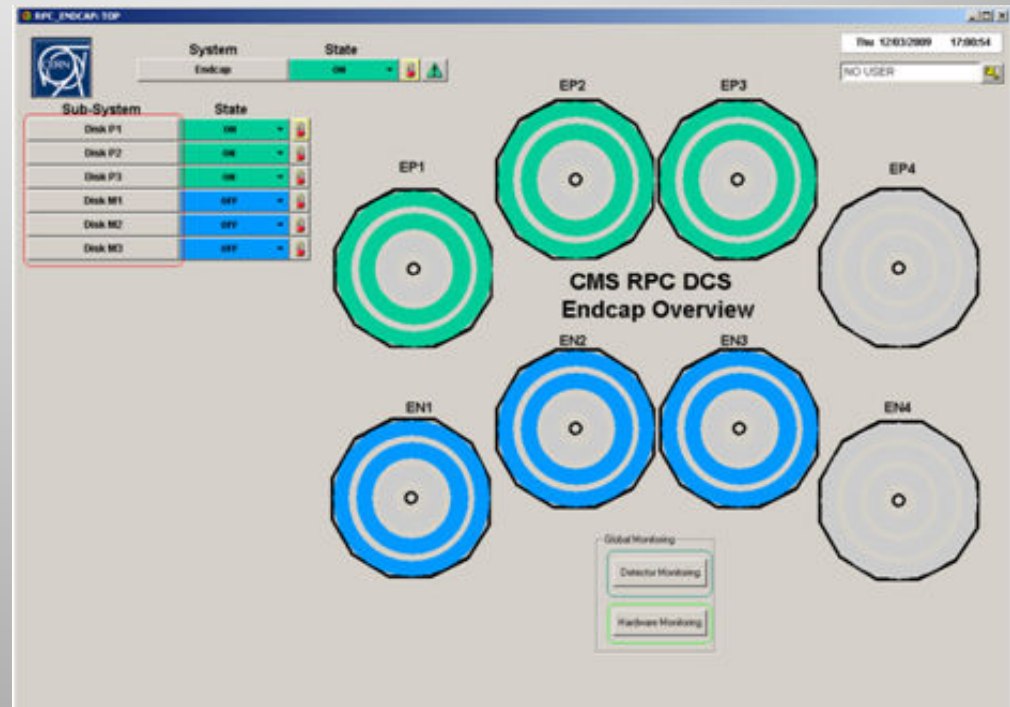
Detector monitoring

Green sign is good

RED sign is bad

Check step by step

If there are big problems then call to shift leader





CMS RPC online shift

Check list

#general info

1. Run number
2. Start & Stop time
3. LBB & FEB monitor running
4. Magnetic Field

Check every two hours

1. Current Barrel & Endcap
2. Temperature Barrel & Endcap

Trigger info

1. Trigger key

#Detector configuration

1. Threshold & HV

others

1. CSC on or off
2. HCAL on or off



CMS RPC offline shift

CMS RPC CAF (Cern Analysis Facility) shift

#Check CMS online web server

<http://cmsonline.cern.ch>

The screenshot shows the 'CMS online' web interface. It has a navigation bar with tabs for 'Common', 'HCAL', 'RPC', 'CSC', 'Tracker', and 'Services'. The 'RPC' tab is selected. On the left, there is a vertical menu with links like 'DAQ', 'SCX PC DETAILS', 'Error viewer', 'Farm configuration', 'PCS', 'Pmon - PVSS log', 'Event display', 'DSS', 'Elog', 'Shiftlist', 'Run control', 'Storage Manager', 'Storage Manager details', and 'Firmware repository'. The main content area is divided into several panels: 'Run information' (Booking time: 2009/09/25 13:58:28, Run number: 114668, Start time: 2009/09/25 14:02:15), 'RC states' (listing various CMS.LVL0 states as 'Running'), 'Trigger' (Configuration TSC_00, Event number: 952172, Rate in Hz: 0.0, Run number: 114668, Trigger state: Running), and 'Magnet' (Field [T]: 0.00, Current [A]: 2).

```
-----
Name of shifter: Seungsu Shin
-----
Time: 09:00-16:00
-----
Description of shift:
runs to be analyzed status:
run109562@9.3KV (instead of run 109624@9.1KV)
run109817@9.0KV (done, by Haiyun Teng)
run110315@8.8KV (done, by Luke Heo)
run110409@9.4KV (done, by Seungsu Shin)
run110419@9.4KV (merged, analyzed by IORIO)
run110756@9.4KV (done, by Haiyun Teng)
run110784@9.4KV (merged : still running)
run110924@9.3KV (merged)
run110998@9.2KV (merging ongoing)
run111009@9.1KV (done, by Maria IORIO)
run111047@9.0KV (done, by Maria IORIO)
run111125@9.5KV (done, by Haiyun Teng)
-----
```

#Check List of CRAFT 09 runs & dataset of the run on the DBS discovery

<https://twiki.cern.ch/twiki/bin/view/CMS/RPCListofRunP5CRAFT09>

https://cmsweb.cern.ch/dbs_discovery/runs?userMode=user



CMS RPC offline shift

Execute program

- Request scratch0 and queues

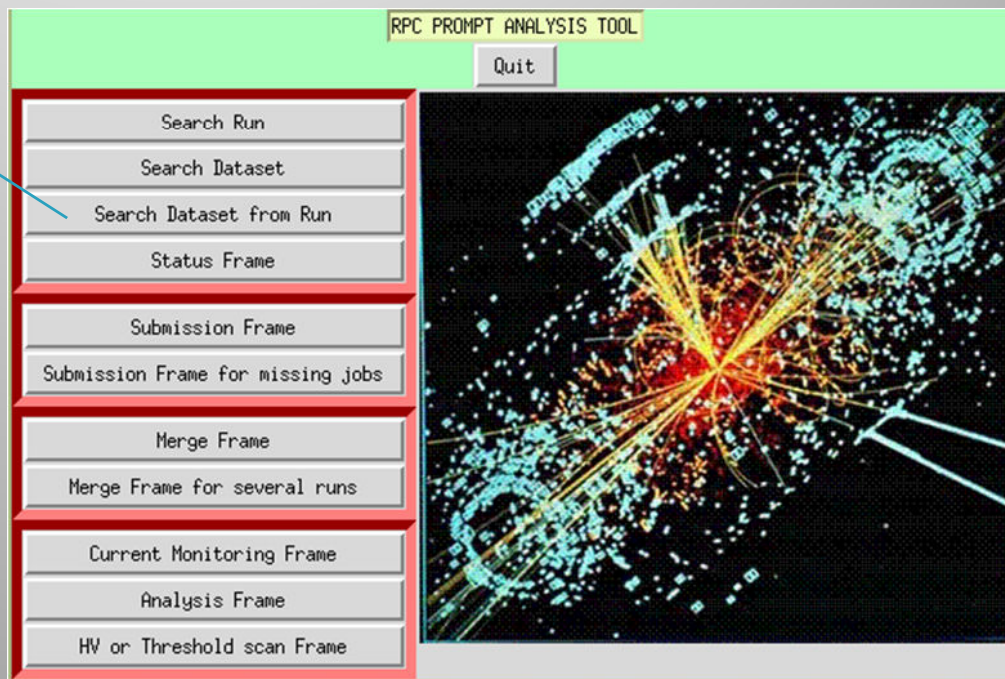
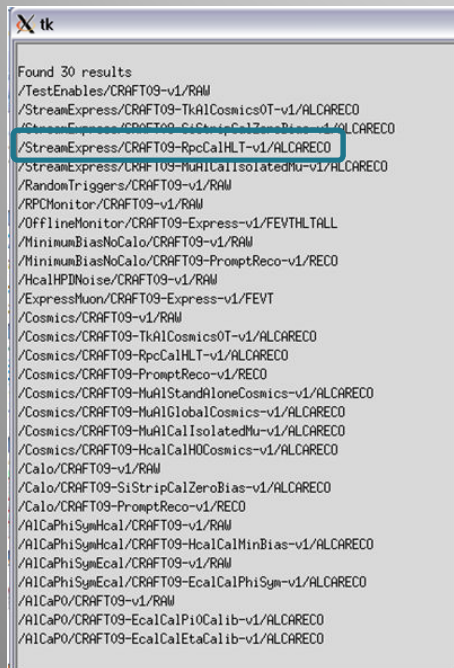
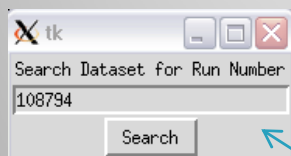
```
[lxplus226] ~ > cd scratch0
[lxplus226] ~/scratch0 > fs listquota
Volume Name          Quota      Used %Used  Partition
s.cms.seungsu.1      1000000    505630   51%      15%
```

- Make work directory :
cmsrel CMSSW_3_1_0
- Download UserCode :
cvs co UserCode/trentad/NewGUI
- Execute shell script :
source set_caf.csh
- Execute RPC PROMPT ANALYSIS TOOL :
./MainPanelNew.py &

CMS RPC offline shift

Execute RPC PROMPT ANALYSIS TOOL

Click Search Dataset from run





CMS RPC offline shift

a. Submission & resubmission

tk Submit jobs for Run Number

CMSSW Release: CMSSW_3_1_0
Dataset: /StreamExpress/CRAFT09-RpcCa1HLT-v1/ALCARECO
Run Number: 108794
Number of jobs to submit: -1
Starting from job number: 0

Submit

Eff STAMuon Eff DT DQM Noise Trigger SO W+2 Trigger Eff SO W+1 SO W+0 SO W-1 SO W-2 SO RE+1 SO RE+2

tk Submit jobs for Run Number

CMSSW Release: CMSSW_3_1_0
Dataset: /StreamExpress/CRAFT09-RpcCa1HLT-v1/ALCARECO
Run Number: 108794

Submit

Eff STAMuon Eff DT DQM Noise Trigger SO W+2 Trigger Eff SO W+1 SO W+0 SO W-1 SO W-2 SO RE+1 SO RE+2



```
[lxlplus226] ~/scratch0/CMSSW_3_1_0/src/UserCode/trentad/NewGUI > rfdir /castor/cern.ch/cms/store  
/caf/user/ccmuon/RPC/GlobalRuns/StreamExpressCRAFT09-RpcCa1HLT-v1/ALCARECO/108794  
drwxrwxr-x 174 miheejo zh 0 Aug 03 14:20 noise  
drwxrwxr-x 216 miheejo zh 0 Aug 02 14:04 out  
drwxrwxr-x 43 miheejo zh 0 Aug 03 15:32 root  
[lxlplus226] ~/scratch0/CMSSW_3_1_0/src/UserCode/trentad/NewGUI >
```



CMS RPC offline shift

b. Merge

tk

Faster Merge for long Runs

DataSet: /StreamExpress/CRAFT

Run Number: 108889

Submit



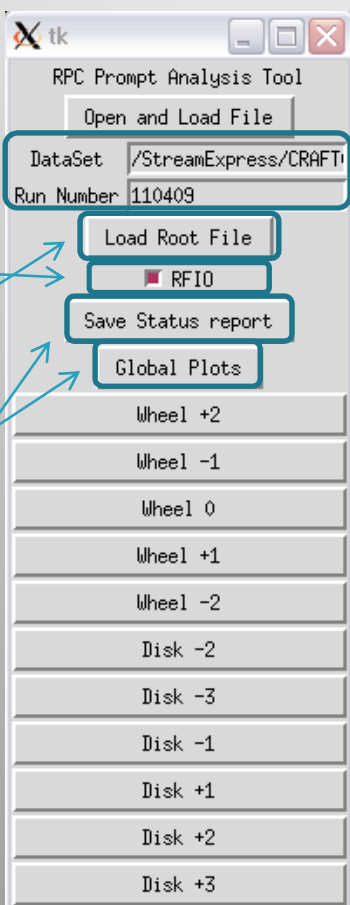
```
lx64slc4.cern.ch - PuTTY
-rwxrwxrwx 1 seungsu zh 16818582 Jul 29 18:05 GRPC_108889_1.root
-rwxrwxrwx 1 seungsu zh 16815826 Jul 29 18:04 GRPC_108889_2.root
-rwxrwxrwx 1 ses zh 16815725 Jul 29 09:45 GRPC_2.root
-rwxrwxrwx 1 ses zh 16813696 Jul 29 09:41 GRPC_3.root
-rwxrwxrwx 1 ses zh 16815202 Jul 29 09:37 GRPC_4.root
-rwxrwxrwx 1 ses zh 16816381 Jul 29 09:41 GRPC_5.root
-rwxrwxrwx 1 ses zh 16814492 Jul 29 09:41 GRPC_6.root
-rwxrwxrwx 1 ses zh 16814568 Jul 29 09:43 GRPC_7.root
-rwxrwxrwx 1 ses zh 16813577 Jul 29 09:40 GRPC_8.root
-rwxrwxrwx 1 ses zh 16815247 Jul 29 09:42 GRPC_9.root
-rw-r--r-- 1 seungsu zh 10870192 Jul 29 18:17 Merge_DQM.root
-rw-r--r-- 1 seungsu zh 41571572 Jul 29 18:20 Merge_DQM_SRPC_GRPC.root
-rw-r--r-- 1 seungsu zh 16822663 Jul 29 18:17 Merge_GRPC.root
-rw-r--r-- 1 seungsu zh 13887432 Jul 29 18:18 Merge_SRPC.root
-rwxrwxrwx 1 socampot zh 16717318 Aug 17 22:56 Merge_Trigger_off.root
-rwxrwxrwx 1 seungsu zh 44292489 Jul 29 18:40 Merge_tot_new.root
-rwxrwxrwx 1 ses zh 13321790 Jul 29 09:58 SRPC_1.root
```

```
[lxplus226] ~/scratch0/CMSSW_3_1_0/src/UserCode/trentad/NewGUI > rmdir /castor/cern.ch
/cms/store/caf/user/ccmuon/RPC/GlobalRuns/StreamExpressCRAFT09-RpcCalHLT-v1ALCARECO/10
8889
drwxrwxr-x 72 seungsu zh 0 Jul 29 18:45 gif
drwxrwxr-x 196 ses zh 0 Aug 18 01:08 noise
drwxrwxr-x 187 ses zh 0 Jul 29 13:39 out
drwxrwxr-x 63 ses zh 0 Aug 17 22:56 root
[lxplus226] ~/scratch0/CMSSW_3_1_0/src/UserCode/trentad/NewGUI >
```



CMS RPC offline shift

c. Analysis



tk
RPC Prompt Analysis Tool
Open and Load File
DataSet /StreamExpress/CRAFTI
Run Number 110409
Load Root File
RFIO
Save Status report
Global Plots
Wheel +2
Wheel -1
Wheel 0
Wheel +1
Wheel -2
Disk -2
Disk -3
Disk -1
Disk +1
Disk +2
Disk +3

1 → DataSet field
2 → Load Root File button
3 → Save Status report button
4 → Global Plots button
5 → Wheel +2 button

Upload StatusReport.txt when you write e-log



- Search Run
- Search Dataset
- Search Dataset from Run
- Status Frame
- Submission Frame
- Submission Frame for missing jobs
- Merge Frame
- Merge Frame for several runs
- Current Monitoring Frame
- Analysis Frame
- HV or Threshold scan Frame



CMS RPC offline shift

d. Write e-log

The screenshot shows the CMS RPC e-log interface. At the top, there are navigation tabs for Common, HCAL, RPC, CSC, Tracker, and Services. The user is identified as SEUNGSU SHIN. The main content area displays a shift report for 'SUN 23.AUG.09 15:41:40, Seungsu SHIN, Seungsu.Shin@cern.ch, CAF Shift, Prompt Analysis Shift Report'. The report includes the following details:

- Author:** Seungsu SHIN, Seungsu.Shin@cern.ch
- Type:** CAF Shift
- Subject:** Prompt Analysis Shift Report

The shift description lists various runs to be analyzed, such as run10956289.3KV, run10981789.0KV, and run11078489.4KV. It also includes sections for 'Runs submitted', 'Runs failed and resubmitted', 'Runs merged', and 'Runs analyzed', all of which are currently empty. The 'Experimental setup' section lists parameters like HV89.4KV, TH8210mV, and Trigger Key. Technical problems are noted as 'Focus on analysis and status report for the largest runs of each different condition' and 'Strip Occupancy should be skipped to avoid the CAF to be too busy and merge could be taken when other jobs completion are over 90%'.



Future plan

- Study CMSSW
- Work with DPG (Muon Reconstruction)