

# **DQ Flags from the Detector Monitoring System (DMS)**

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Virgo detchar meeting 19 june 2015

# Detector Monitoring System (DMS)

<b>Detector Monitoring System</b> SHELVED PAGE		<b>M MUTE DMS [current status: NOT MUTED]</b>		<b>ITF STATUS</b>		Last event ( 2011-11-09 09:16:58 LT ): <b>Lock sequence reset</b>	
v8r6		Switch to UNSHELVED page		Mode:		Step: -1	
UTC Tue Jun 16 08:54:54 2015		Stop refresh		7557 h 54 mn		- AutoRelock: OFF	
Latency 3.07		Switch to internal view				- AutoScience: OFF	
GPS 1118480110		Contacts / HELP				- Horizon_NSNS AVG: 0.0	
Frame No 1207783		Admin DMS flag list Alarm Log DMS / FLAG Log View XML files					

<b>Injection</b>	IB_ID	IB_Vert	IB_LC				
	MC_ID	MC_Vert	MC_LC				
	Laser	LaserAmpli	LaserChiller	LaserChillerDiodes			
	MC_Power	IMC_AA	RFC	BPC	FreqNoise		
<b>Environment</b>	CB_Hall *	MC_Hall	WE_Hall *				
	INJ_Area	External	Env_ADCs	EERoom	EnvServers		
<b>Infrastructures</b>	ACS_CB_Hall *	ACS_INJ	ACS_DET *	ACS_TB *	ACS_MC		
	UPS_TB	UPS_MC	UPS_NE	UPS_WE *	Generator		
<b>Vacuum</b>	OS9boot	TubeServers	TubePumps	Pressure	CompressedAir *	CryoTrap	1500N
<b>VPM</b>	DetEnvMon	DataCollection	DataAccess	Automation	Injection	Storage	
	ControlRoom	DetectorMonitoring *	DetChar	Minitowers			

# Detector Monitoring System (DMS)

- Current DMS is based on
  - a set of Moni processes producing flags (sent to raw/trend data) and XML files
  - php scripts that read XML files and provide the DMS web page
- New Moni library:
  - Will produce only flags with 0/1 values (no more bits coding)
  - Will produce per process only one overall flag + one set of subflags (no more flag levels)
  - Will always use calibrated data (no more use of REALUNITS keyword)
  - Will follow a DMS flags naming convention : DQ\_MoniName\_FlagName
  - **Does not require large modifications in DMS web page tools.**
- Use of DMS flags for data analysis:
  - SegOnline will select the flags to be included into the State Vector for online analyses
  - SegOnline will select the flags to be propagated to DQSEGDB for offline analyses
  - Should be only a matter of SegOnline configuration file
  - Or will need SegOnline code modification, depending on selection criteria we want

# Configuration file of InjMoni\_new

```
QC_XML ./QcInjectionData_new.php 5

QC_NAME Qc_Injection

QC_FLAG MasterLaser "MasterLaser parameters out of range"
QC_FLAG SlaveLaser "SlaveLaser parameters out of range"

/** MasterLaser */
QC_MONITOR * MasterLaser "mean(PSL_ML_DC,60)>0.5" "Master laser thermal correction voltage saturated"

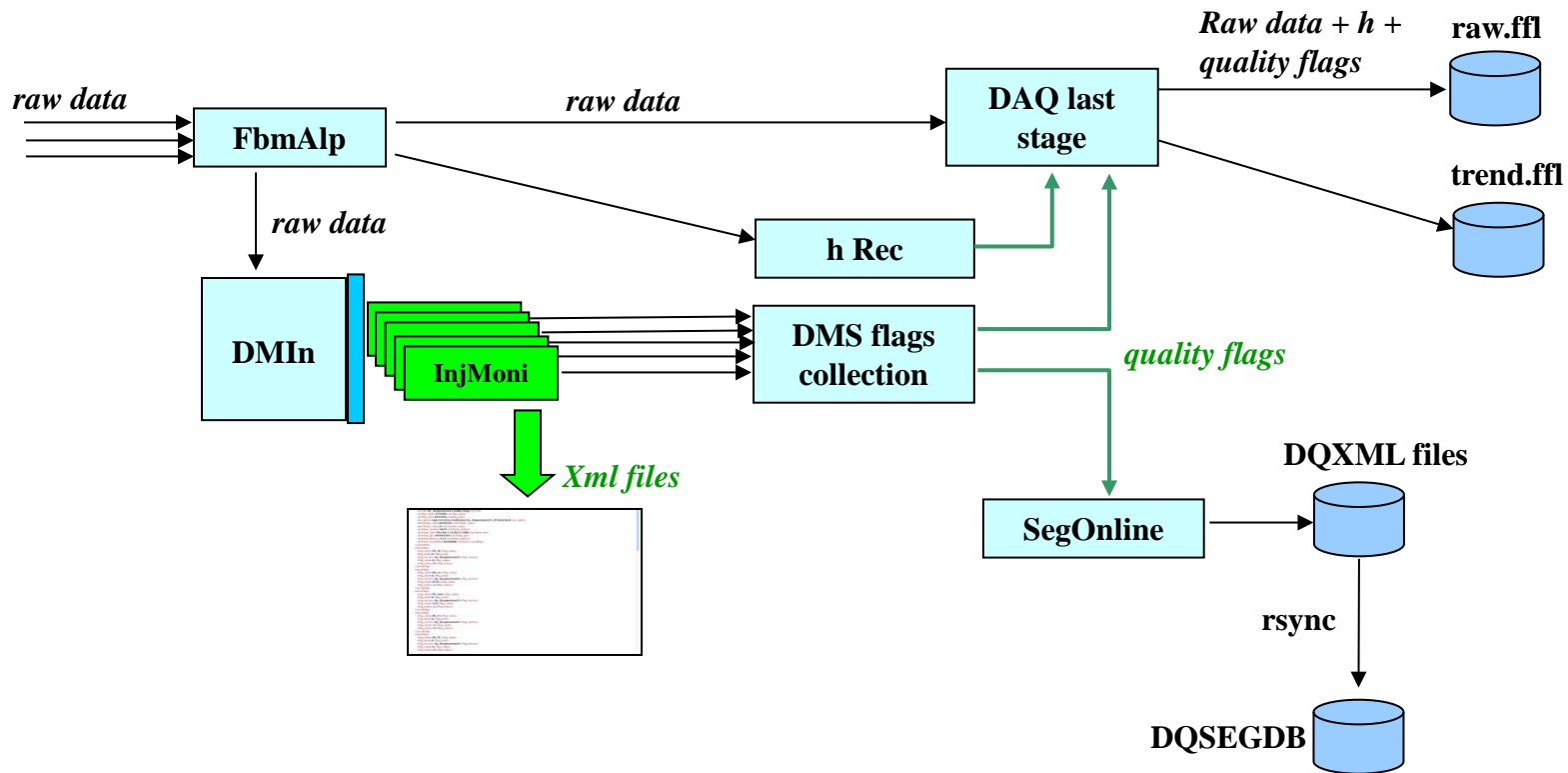
/** SlaveLaser */
QC_MONITOR * SlaveLaser "0.5<mean(PSL_SL_PUMP1_CURR,60)<1.8" "Slave Laser current too high"
QC_MONITOR * SlaveLaser "0.5<mean(PSL_SL_PUMP2_CURR,60)<1.8" "Slave Laser current too high"
QC_MONITOR * SlaveLaser "0.2<mean(PSL_SL_REFL_PD2_DC,60)<3.8" "problem with the master or slave laser"
```

Will produce the following flags sent to SegOnline:

- DQ\_Qc\_Injection\_overall
- DQ\_Qc\_Injection\_MasterLaser
- DQ\_Qc\_Injection\_SlaveLaser

Will produce the XML file QcInjectionData\_new.php  
which will contain those flags + the results of the various QC\_MONITOR

# Scheme of implementation



# Next steps?

- New Moni library ready to be tested : June 2015
- Configurations of Moni processes changed and tested: July or Sep 2015? (DV or DV+FB)
- XML files format changed: need small modifications of the DMS php scripts : Sep 2015? (FB)
- SegOnline ready to get DMS flags : need a test for the selection of DMS flags (DV)
- Upgrade of the DMS web page tools (php, mySQL...) : Nov 2015?
- New user requirements, new software requirements : Nov 2015?
  
- Investigate the possibility to read trend data frames with php script?  
(no more use of XML files)
- Look how to include VirgoCAM information?
- VPM monitors many Virgo processes. It provides only a XML file (no flag sent to DAQ).  
Do we need also DMS flags coming from it?