Preparation of the DCS for the 2016 DVCS Run

COMPASS Technical Board
March 23, 2016

C. Pires

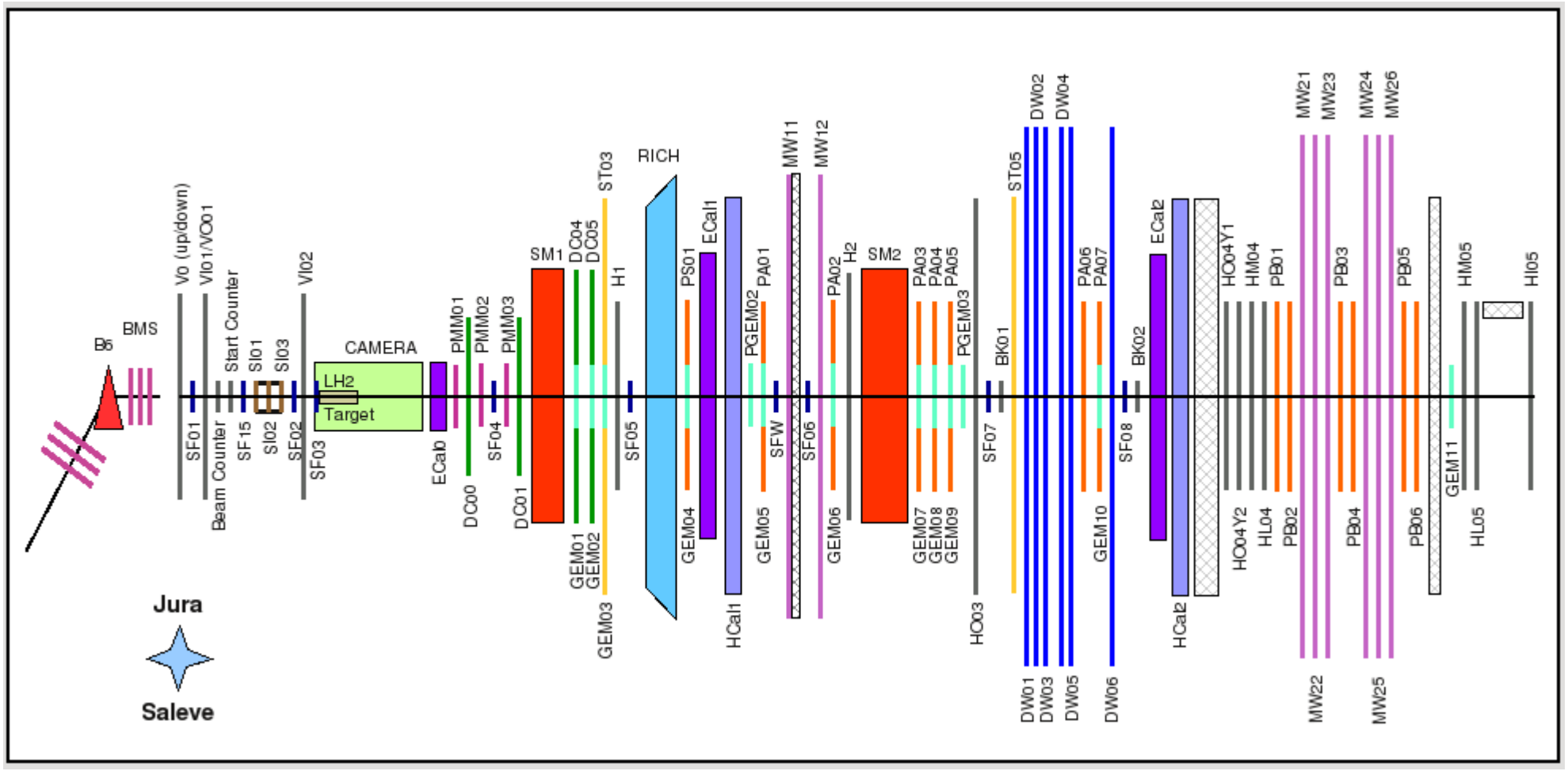
FCT Fundação para a Ciência e a Tecnologia
MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR

Ref.: CERN/FIS-NUC/0017/2015

- DCS main distributed project
  - 2 SLC6 / x86_64 PCs
  - WinCC OA 3.11 SP1
  - JCOP Framework 5.2.1 (core)
  - WinCC OA Oracle DB schema v8.9
- DCS scattered projects
  - 3 Windows 7 64-bit PCs
  - WinCC OA 3.11 SP1
  - OPC servers: CAEN, Iseg, Wiener (Krakow), Schneider, CANOpen
- SLiC servers
  - 4 SLC5 / i386, custom kernel build PCs
  - CAENet driver
  - DIM

*Updated

DCS setup

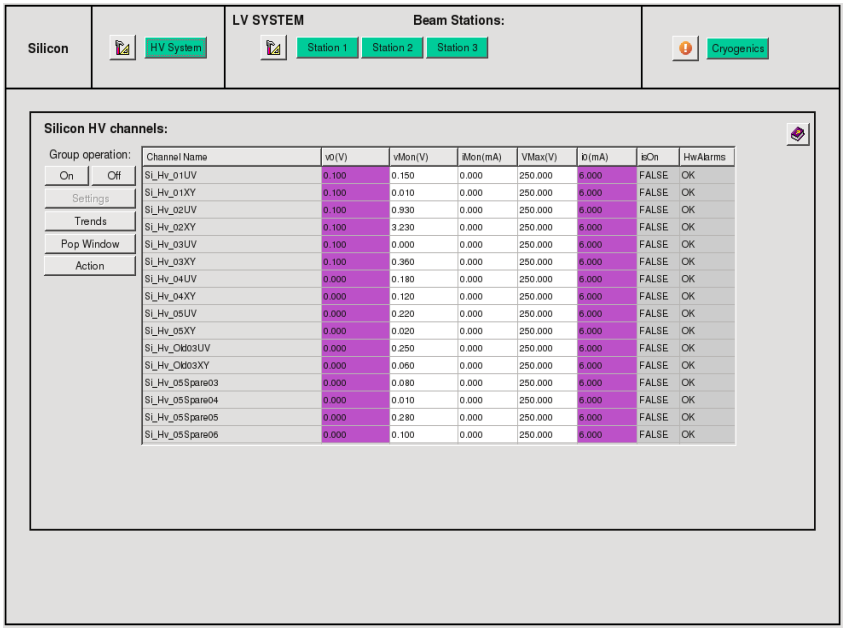

B6
BMS
V0 (up/down)
VI01/VO01
Start Counter
SI01
SI03
VI02
SF01
Beam Counter
SF15
SI02
SF02
SF03
CAMERA
LH2
Target
ECal0
PMM01
PMM02
PMM03
SF04
DC00
DC01
SM1
DC04
DC05
ST03
GEM01
GEM02
GEM03
H1
SF05
RICH
PS01
GEM04
ECal1
HCal1
PGEM02
PA01
GEM05
SFW
MW11
SF06
MW12
PA02
H2
GEM06
SM2
PA03
PA04
PA05
GEM07
GEM08
GEM09
PGEM03
HO03
SF07
BK01
ST05
DW01
DW03
DW02
DW04
DW05
DW06
PA06
PA07
GEM10
SF08
BK02
ECal2
HCal2
HO04Y1
HO04Y2
HM04
HL04
PB01
PB02
MW21
MW22
MW23
PB03
PB04
MW24
MW25
MW26
PB05
PB06
GEM11
HM05
HL05
HI05
Jura
Saleve

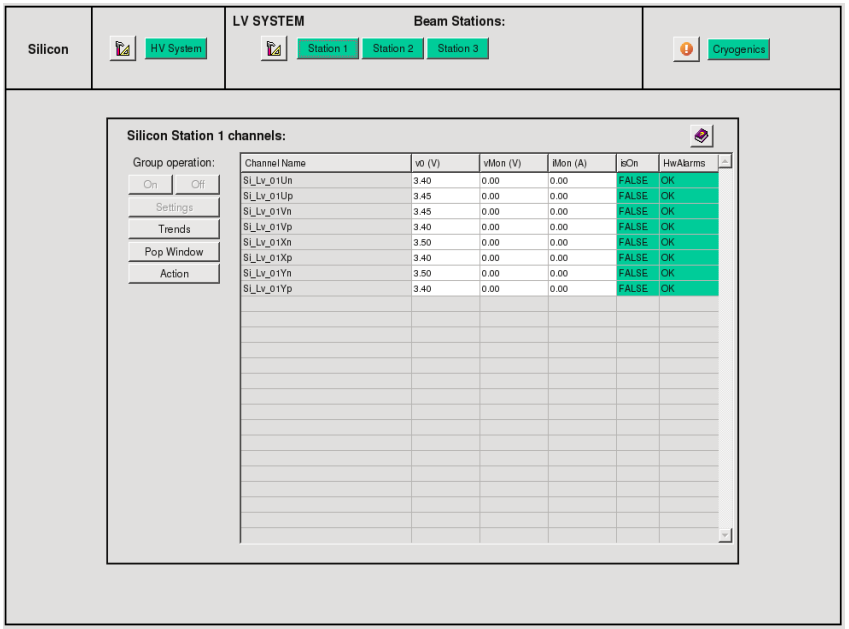
BMS, Scifis and Trigger hodoscopes

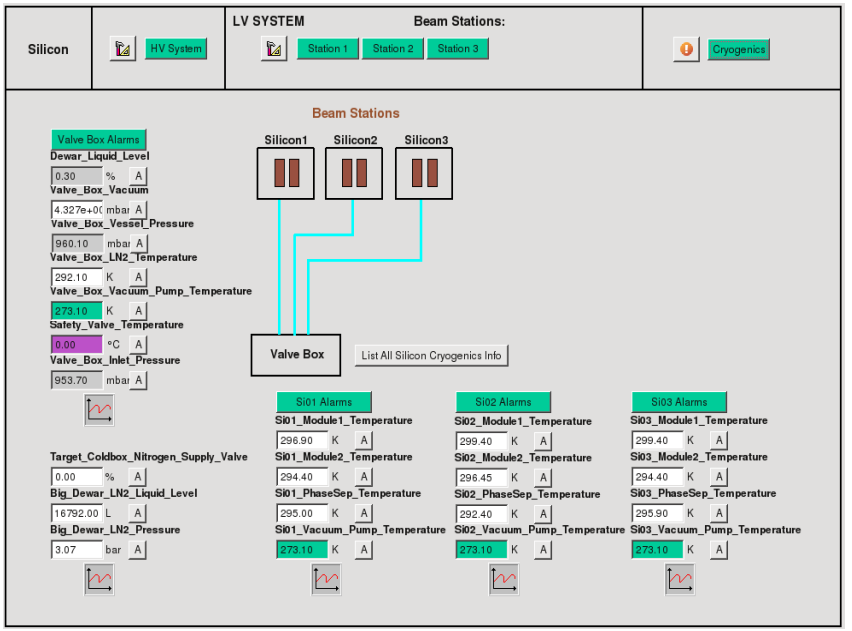
- BMS
  - High voltage control and monitoring checked
- Scifis
  - High voltage control and monitoring
    - CAEN HV mainframes SY403 and SY527 (SLiC) checked
    - CAEN HV mainframe SY2527 to be checked once on
  - Low voltage control and monitoring to be checked once on
- Trigger hodoscopes
  - New high voltage system
    - CAEN HV mainframe SY4527 → New
    - CAEN HV A1535 SN boards
    - Other board models to be integrated?
  - High voltage control and monitoring to be checked once on
  - Trigger and Veto rates monitoring moved to DCS Trigger section

Silicons

- Same setup as in 2012
  - Cryogenics monitoring via Modbus
    - Already connected
  - High and low voltage control and monitoring to be checked once on

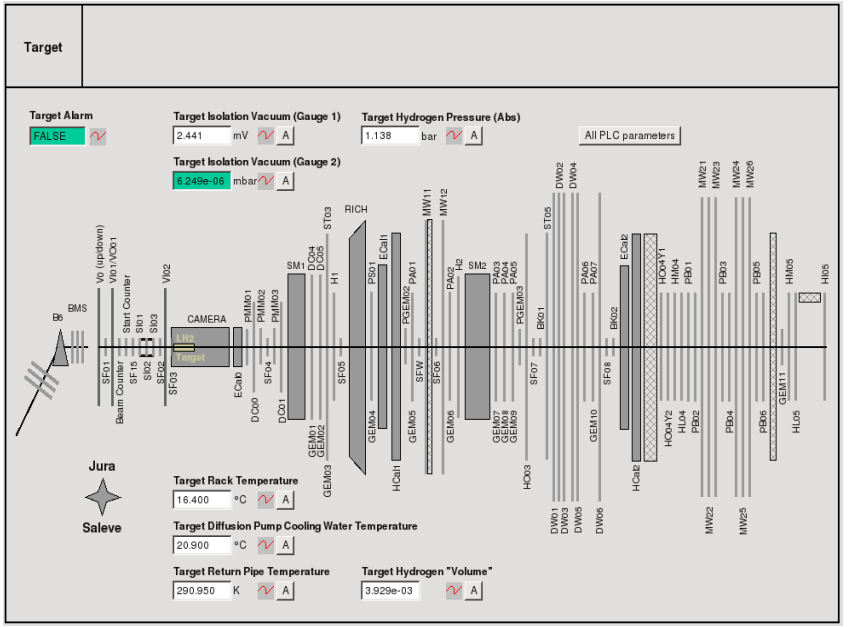






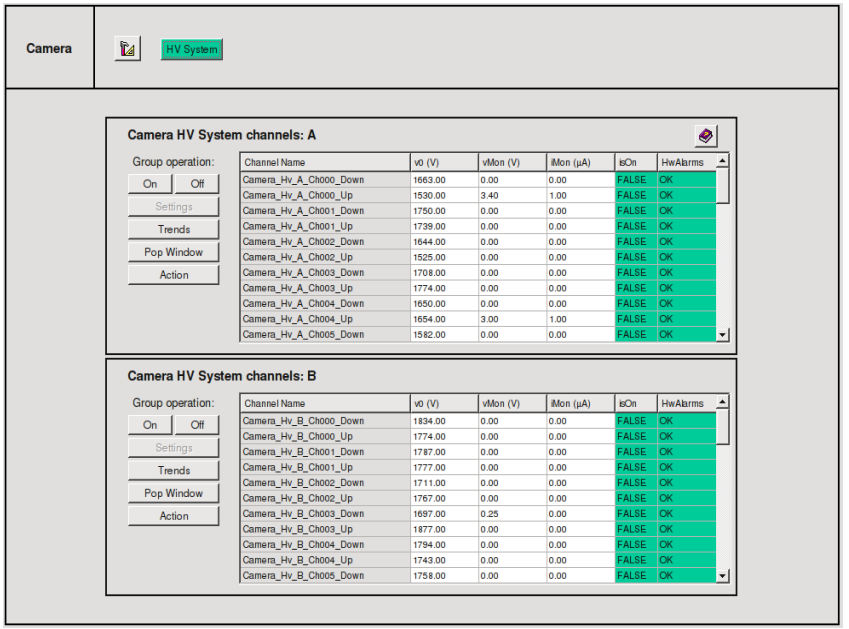
LH_2 Target

- Same setup as in 2012
  - Siemens S7-1200 PLC monitoring performed via WinCC OA S7 driver
    - Issues to connect to the PLC - ticket ENS-16250 → Solved
  - Additional temperature probe → New
  - Renaming of parameters for clarity
  - Alert handling and sms notifications implemented
  - Tests ongoing



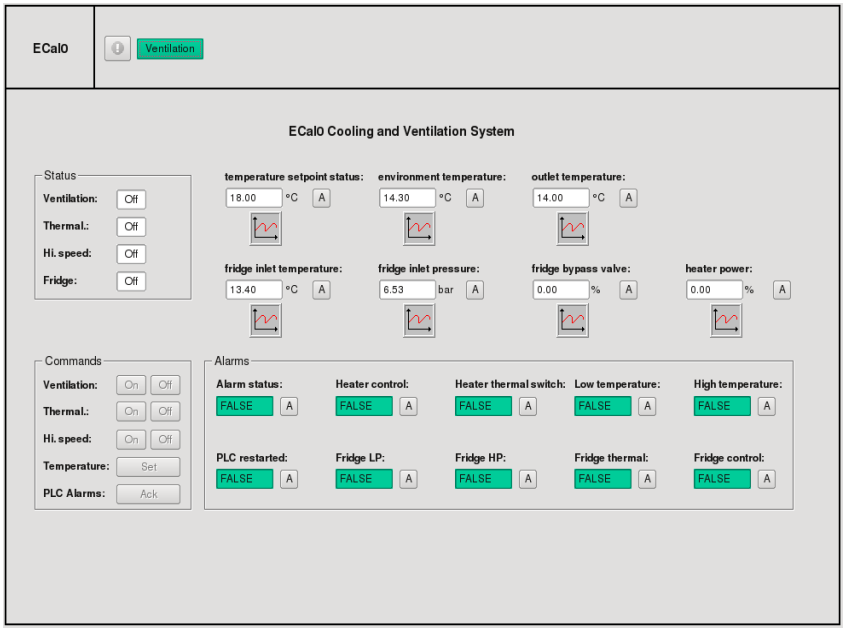
Camera

- Same setup as in 2012
  - High voltage system
    - CAEN HV SY1527 mainframe
    - CAEN HV boards A1733N
    - CAEN HV boards A1833N
    - Few channels to be moved from SY527 to SY1527
  - High voltage monitoring checked
  - High voltage control to be checked once switched back on



ECal0

- Cooling and ventilation system → New
  - Schneider PLC TSX Premium
    - Ethernet connection
      - Exposed to TN for EN/CV supervision
    - Control and monitoring performed via Schneider OFS OPC server



- Delta Electronics low voltage → New
  - To be checked if and how it can be integrated

- DCS LED monitoring integration?
  - Non-DCS standalone solution adopted by ECal0 group

Drift Chambers and MicroMegas

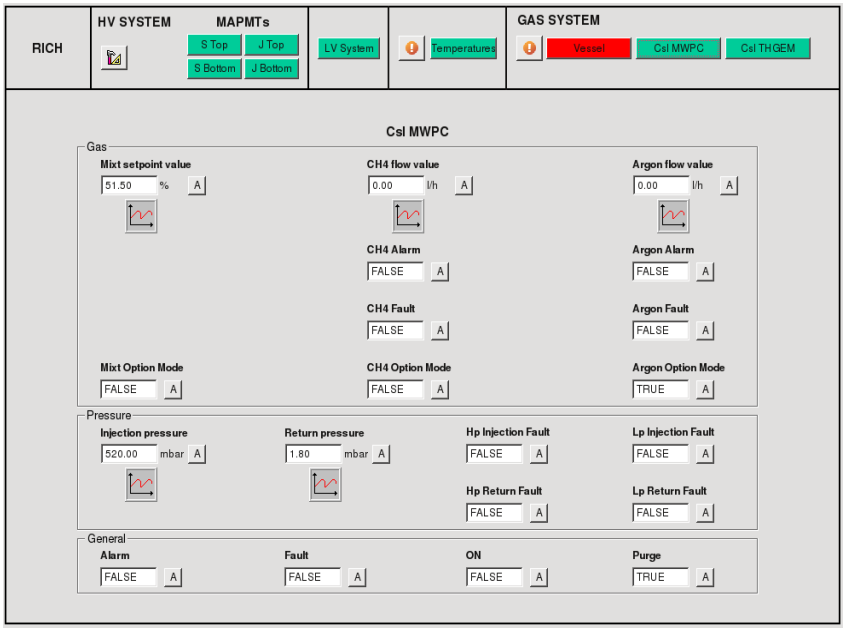
- Drift Chambers
  - Control of DC05X will be activated
  - High voltage control and monitoring to be checked once on
- MicroMegas
  - Low voltage remote control → Updated
    - DIM Server connects directly to the Ethernet to Digital IO Relay
      - No intermediate script used anymore
  - High voltage control and monitoring to be checked once on

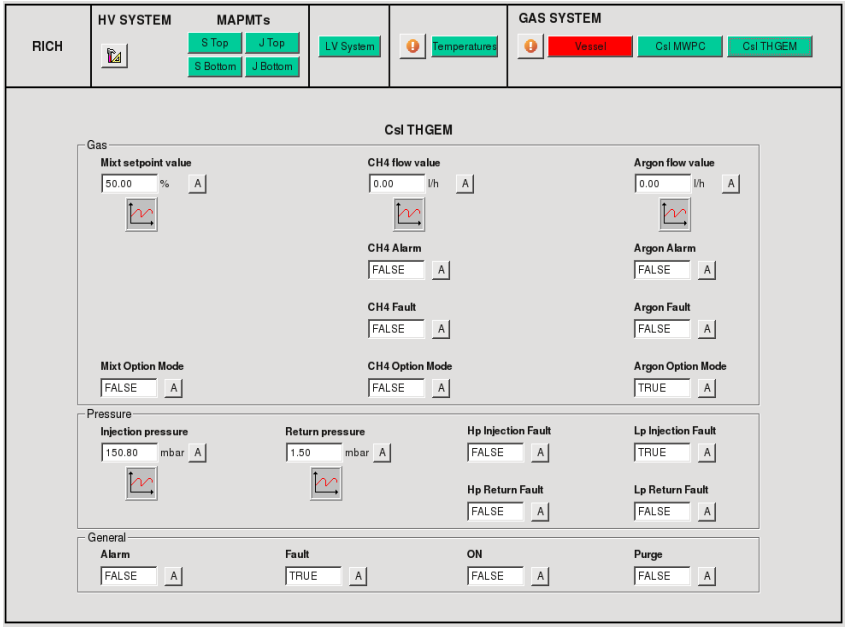
RICH

- Gas system monitoring → Updated
  - CsI MWPC and CsI THGEM → New
    - Panels layout might change
    - Alert handling not defined

- New high voltage system
  - CAEN HV mainframes SY4527 → New
  - CAEN HV boards A1561 HDN → New
  - CAEN HV boards A7030 DP → New

- CAEN board models not supported by current CAEN JCOP component - ticket ENS-16519
  - An update will be provided as soon as the boards can be tested



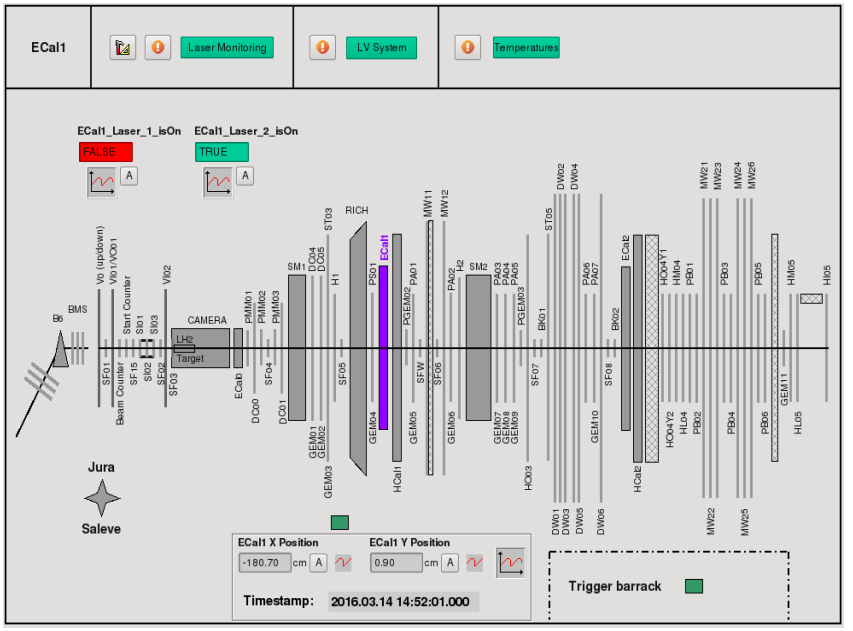


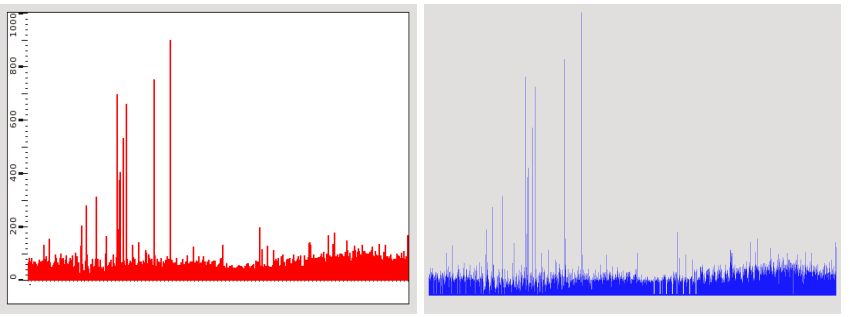
ECal1

- Independent monitoring of ECal1 lasers ON/OFF status → New

- Request to get the pedestals data
  - Pedestals aren't stored in the MySQL database...

- Request to provide an histogram with the amplitudes of all blocks
  - JCOP Framework Bar Graph
    - Slow/Unresponsive
      - 1730 bars to update on a Trend like shape!
  - Drawing channels as vertical lines in a panel → too wide
  - Unable to easily plot a reference curve in both cases
  - COOOL plots might be a better option

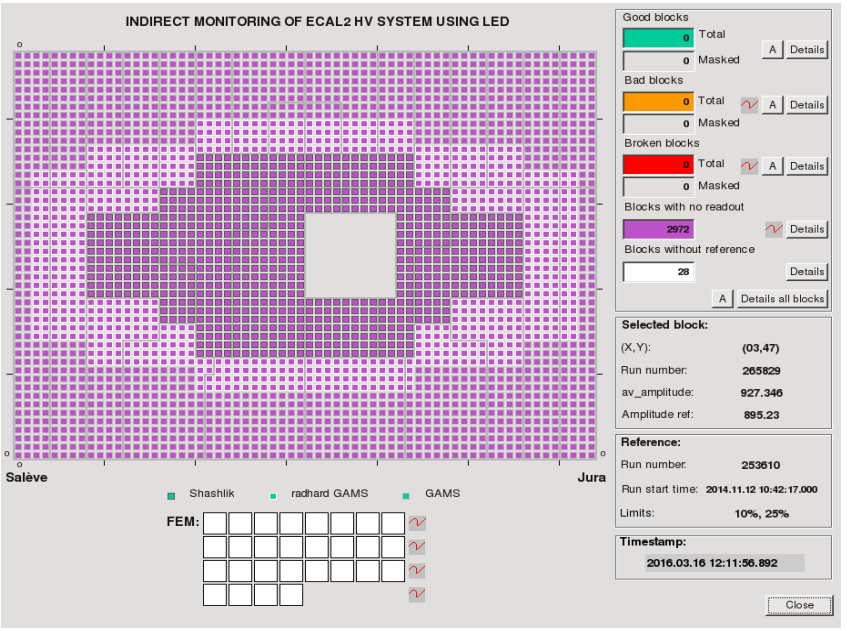




X → channel/block #
Y → Amplitude

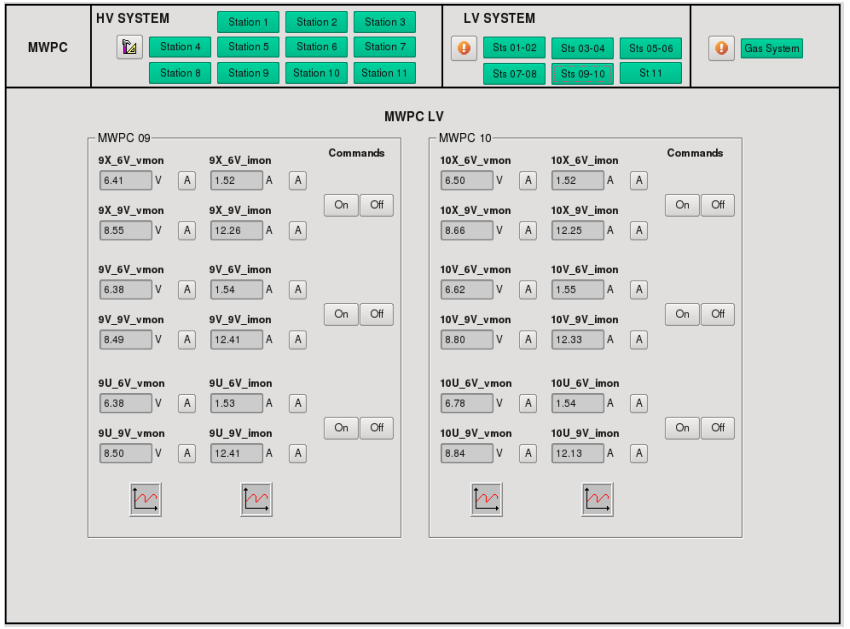
ECal2, HCal1 and HCal2

- ECal2
  - FEMs added to LED monitoring → New
- HCal1
  - No changes
- HCal2
  - No changes



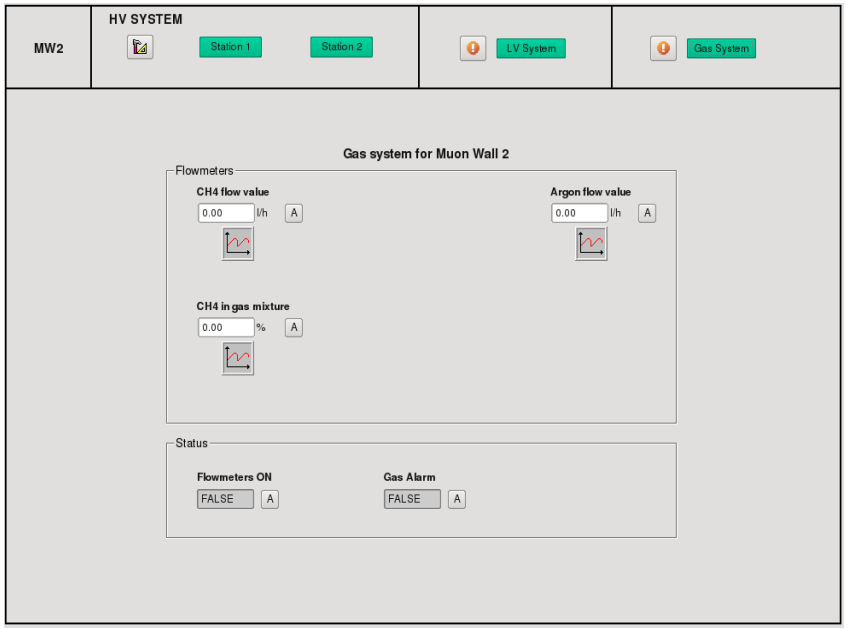
GEMs and MWPCs

- GEMs
  - Station 11 put back in the DCS
  - High and low voltage control and monitoring to be checked once on
- MWPCs
  - Low voltage remote control → New
    - Performed via ELMB/CANOpen
  - Stations 7 and 11 low voltage → New
  - High voltage control and monitoring to be checked once on



MW1, MW2 and Straws

- MW1
  - High and low voltage control and monitoring to be checked once on
- MW2
  - Gas system connected to PLC3
    - DCS monitoring updated → New
      - OFS Schneider OPC Server
      - To be checked once gas on
  - High and low voltage control and monitoring to be checked once on
- Straws
  - High and low voltage control and monitoring to be checked once on



DAQ, Gandalf and M2 Beamline

- DAQ
  - VME crates
    - VME crates to be added → New
      - Ex: ECal0, Camera, TCS controller, etc.

- Gandalf
  - Improvement of monitoring?
    - ADC monitoring wasn't working in 2015

- M2 Beamline
  - Request to get more information - ticket CMW-1907
    - Supercycle length - denied
      - Can be extracted from CALS Data Extraction API or Timber (for offline/statistics)
    - Calibration factors of scalers - denied
      - History of changes added to CESAR GUI
      - Calibrated counts to be provided via DIP and CALS - ticket CSR-1501
    - Obstacle positions – accepted and published → New
      - Electron target and absorbers positions - ticket CSR-1500
    - Timing events - pending

Any other requests for the DCS?
If any, please give them ASAP.

Spares

IV JCOP Workshop 2015

IV JCOP Workshop 2015

4-5 November 2015
Château de Bossey (Switzerland, 20 km from CERN)
Europe/Zurich timezone

Search

Support
en-dep.workshops@cer...

The aim of this workshop is define the mid and long term plans for ***The Joint COntrols Project (JCOP)*** in view of the LS2 and LS3 upgrades.

Topics that will be covered include:

- Operational experience
- Upgrade plans
- Front-end and middleware solutions
- Supervision
- Data-driven configuration
- Data-analytics

Organising Committee:

- Andre Augustinus (ALICE)
- Clara Gaspar (LHCb)
- Philippe Gayet (EN-ICE)
- Frank Glege (CMS)
- Manuel Gonzalez Berges (EN-ICE)
- Stefan Schlenker (ATLAS)
- Fernando Varela (EN-ICE), Chairman

Château de Bossey (maps and directions)

Starts 4 Nov 2015 09:00
Ends 5 Nov 2015 17:30
Europe/Zurich

Varela Rodriguez, Fernando

Château de Bossey (Switzerland, 20 km from CERN)
Room "Genève-Lausanne"

WinCC Open Architecture V3.14

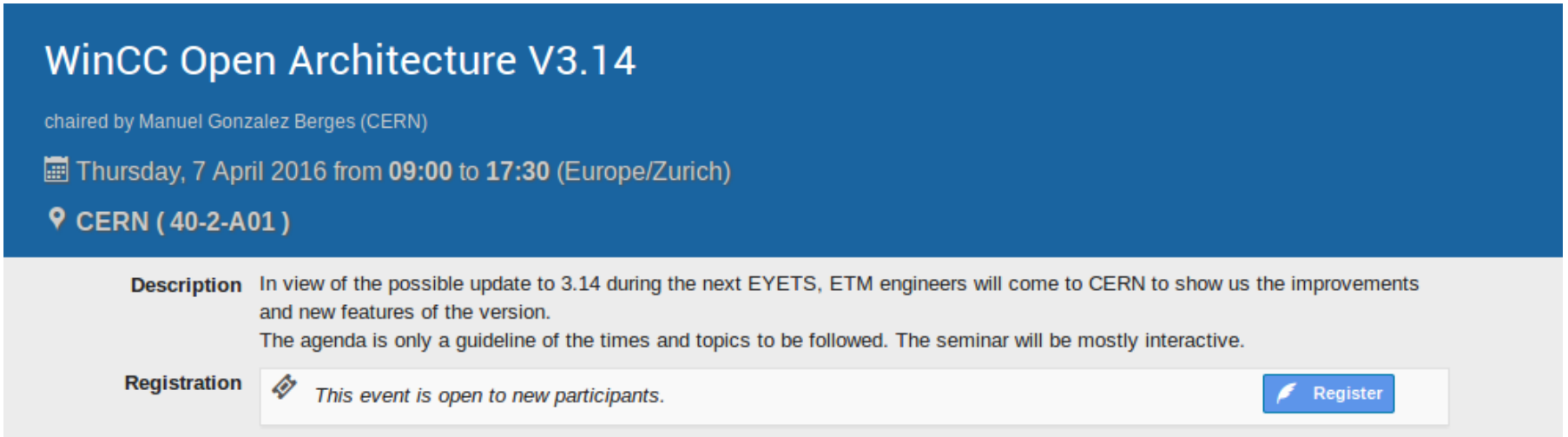
Dear All,

ETM will be presenting their latest version of WinCC OA (3.14) in a seminar/course on the 7th of April. We are in the process of planning the possible deployment of this version for the EYETS next year. The seminar is mainly intended for people developing regularly with WinCC OA. Please forward it to the relevant people. You can register here:

https://indico.cern.ch/event/509401/

If you are not interested in the whole seminar but still have some specific topics that you would like to discuss with ETM, please let me know in advance.

Regards,
Manuel



COMPASS

COMPASS DCS

WinCC OA

JCOP Framework

DIM

DIP

ELMB

OPC

SLiC

CAEN

ISEG

WIENER