



Controls and Monitoring Update

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Reminder

2 purposes for Controls and Monitoring, C&M

- **Protect equipment**
- **Protect data quality**

Task divided into multiple systems:

- Beamline (magnets, DS, BS, Diffuser, PA, target)
- PID (TOF, CKOV, BPM, KL, EMR)
- Environment monitoring (T, RH, radiation,...)
- Tracker (tracker and SS)
- DAQ (DAQ—CDB--C&M interface, crates,...)
- AFC (absorber and magnets)
- RFCC (RF cavities and magnets)



Status

- **Beamline – complete (no diffuser yet)**
- **PID – in progress**
- **Environment monitoring – near completion (request input)**
- **Tracker (tracker and SS) – in progress**
- **DAQ – in progress (DAQ-CDB-C&M, interface, network, crates, ...) (request input)**
- **AFC**
- **RFCC (RF tuners)**



Status – continued

Other tasks:

- **Alarm handler**
 - ♦ **Mostly working**
 - ♦ **Adding new systems**
 - ♦ **Tuning alarm limits**
 - ♦ **Defining operational states**
- **Channel archiver**
 - ♦ **Mostly working**
 - ♦ **Adding new systems**
 - ♦ **Tuning periodicity**



Status – continued

Other tasks:

- Remote monitoring
 - ◆ Working well
 - ◆ No requests to date
- Remote archive viewer
 - ◆ Awaiting notification from PPD
 - ◆ Hope to test next week



Status – continued

DL is developing C&M for major systems:

- **Spectrometer solenoid magnets**
- **AFC modules**
- **RFCC modules**

Recent interruptions in network has resulted in shut downs on different systems

- **Systems will be restarted this week**



Newest IOC - HV

/home/epics/epics/Config/opi/edl/HVSY527a.edl (on nash.fnal.gov)

C.A.E.N. SY527 V 0.0 **High Voltage Display** **Group: All**

1 **0**
SLOT CHANNEL

C **S** **O** **N**
H **T** **Y** **OFF**
A **N** **O** **OVC**
N **T** **V** **OVV**
T **N** **U** **UNV**

Fatal Initialization Error

Crate Set Values do not match configuration data base.

Use "Error Table" button to view differences and resolve them before continuing.

Exit

Close

Exit Next read in 29 s



Newest IOC - HV

/home/epics/epics/Config/opi/edl/HVSY527a.edl (on nash.fnal.gov)

C.A.E.N. SY527 V 0.0

1
SLOT

0
CHANNEL

SL 1CH 0
NAME

0.0 V

0.0 uA

CONTROL

Update Read HV

Select Slot

Select Chan

Set Params

HV Module Map

Error Table

Close

Exit

High Voltage Display

Group: All

Next read in 41 s



Newest IOC - HV

/home/epics/epics/Config/opi/edi/HVSY527a.edi (on nash.fnal.gov)

C.A.E.N. SY527 V 0.0

1

SLOT

0

CHANNEL

NAME

0.0 V

0.0 uA

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☐ ON
☒ OFF
☐ OVC
☐ OVU
☐ UNV
☐ TRIP
☐ RAMP UP
☐ RAMP DN

Set Chan Parameters

Set Name

Set V

Set I max

Set Rmp Up

Set Rmp Dn

Set Trip

Set On

Enter max current (uA):

Present value

0.0

Close

Present limits

0.0 < I < 0.0

Exit

High Voltage Display

Group: All

Next read in 21 s



Plans

DL is developing C&M for major systems:

- **SS to be completed for magnet mapping**
- **AFC and RFCC model to follow SS**

To Do List:

- **Install complete TOF/KL HV monitoring**
- **Update archiver**
- **Implement state configurations for ALH**
- **Remote archive viewer**
- **Remote alarm announcements**
- **Develop RF tuning control**



Bigger Plans

New effort being developed to bring all control systems under single umbrella

- Will have to worry about systems which could interfere***

- Also need to consider overall system for Steps IV, V, and VI separately (tomorrow's talk)***



**For the last time, Linda,
where did you put the
spectrometer solenoid
magnets?**