

How to Start Up Different Systems in e09042

Motherboard:

- 1) Make sure the Chiller is on.
- 2) Make sure the motherboard +12 is on (look in EPICS – motherboard temperature G207TI should be 20-30 degC, not degF as listed)
- 3) Make sure the Motherboard power is on (look in EPICS – G207V should be 5V)
- 4) Be logged into spdaq19 using the command: `ssh spdaq19`
- 5) Type `gochip` to start the motherboard control program
- 6) Click on File → XLM Configure
- 7) On the right side of the screen, set crate = 2, slot =4, type = xxv.
- 8) Click on Pick Load File, browse to bitfiles, and select `hira_xlmxxv.bit`
- 9) Click on File → Load → (whatever the setup file is)
- 10) When ready, bias Si and turn on preamps

Miniball:

- 1) Make sure the Chiller is on
- 2) Type `gohv` (from any lab computer)
- 3) In the IPAddress spot, add 124 to the end of the IP Address already present
- 4) Click “Connect”
- 5) Click “Read File”
- 6) Navigate to `hvinputs/miniball`
- 7) Select the file with the appropriate combination of detectors (e.g. `e09042_MB_only.dat` or `e09042_MB_FA.dat`)
- 8) Click “On”
- 9) Get Current Voltage for 5 channels to check and make sure everything worked (reference channels can be found posted on the wall in the Data U)
- 10) Be logged into spdaq19 using the command: `ssh spdaq19`
- 11) Type `goMB_disc`
- 12) Click “Open Disc File”
- 13) Navigate to `inputfiles/e09042_MB.dis`

Neutron Walls:

- 1) Type `gohv` (from any lab computer)
- 2) In the IPAddress spot, add 123 to the end of the IP Address already present
- 3) Click “Connect”

- 4) Click "Read File"
- 5) Navigate to hvinputs/neutron/e09042_neut.dat
- 6) Click "On"
- 7) Get Current Voltage for 2 channels per wall to check and make sure everything worked (reference channels can be found posted on the wall in the Data U)
- 8) Be logged into spdaq19 using the command: ssh spdaq19
- 9) Type goNEUT_fastgates (once this program opens, you may close it again)
- 10) Type goNEUT_disc
- 11) Click "Open Disc File"
- 12) Navigate to inputfiles/e09042_NEUT.dis

Csl:

- 1) Make sure the Chiller is on
- 2) Turn on preamps
- 3) Make sure Csl have bias
- 4) Be logged into spdaq19 using the command: ssh spdaq19
- 5) Type goCSI_discr
- 6) Click "Open Disc File"
- 7) Navigate to inputfiles/e09042_CSI.dis
- 8) Type goCSI_shap1 (this will automatically open the correct file)
- 9) Type goCSI_shap2 (this will automatically open the correct file)

Forward Array:

- 1) Type gohv (from any lab computer)
- 2) In the IPAddress spot, add 124 to the end of the IP Address already present
- 3) Click "Connect"
- 4) Click "Read File"
- 5) Navigate to hvinputs/miniball
- 6) Select the file with the appropriate combination of detectors (e.g. e09042_FA_only.dat or e09042_MB_FA.dat)
- 7) Click "On"
- 8) Get Current Voltage for 2-4 channels to check and make sure everything worked (reference channels can be found posted on the wall in the Data U)
- 9) Be logged into spdaq19 using the command: ssh spdaq19
- 10) Type goFA_disc
- 11) Click "Open Disc File"
- 12) Navigate to inputfiles/e09042_FA.dis

DAQ

- 1) Be logged into u3pc3
- 2) Open file readout_segments.dat in the folder Current/readout/inputfiles
- 3) Make sure the components you want to be initialized have a value of 1 and the ones you don't want running have a value of 0.
- 4) Save File
- 5) Type godaq

SpecTcL

- 1) Be logged into a user machine other than u3cp3
- 2) Type gospec
- 3) Select which processors you want running

EPICS

- 1) Be logged into either spdaq 19 or a user machine
- 2) Type goEPICS

Elog

- 1) Be logged into spdaq19 or a user machine
- 2) Server should already be running on u3pc2. If it isn't, log into u3pc2 and type "goserver"
- 3) Type goelog

Proton Vetoes

- 1) Type gohv (from any lab computer)
- 2) In the IPAddress spot, add 124 to the end of the IP Address already present
- 3) Click "Connect"
- 4) Click "Read File"
- 5) Navigate to hvinputs/miniball
- 6) Select the file with the appropriate combination of detectors (e.g. e09042_PV.dat or e09042_all.dat)
- 7) Click "On"

- 8) Get Current Voltage for 2 channels to check and make sure everything worked (reference channels can be found posted on the wall in the Data U)
- 9) Be logged into spdaq19 using the command: ssh spdaq19
- 10) Type goPROTON_discr
- 11) Click "Open Shaper File"
- 12) Select "inputfiles/e09042_PROTON.shp"
- 13) Click "Open Disc File"
- 14) Select "inputfiles/e09042_PROTON.dis"

Downstream Scintillator

- 1) To insert the scintillator, you must plug in the power cable coming from the chimney into an outlet in the vault. There should be an extension cord blatantly next to the power cable.
- 2) To retract the scintillator, you must unplug the power cable coming from the chimney. Please leave it blatantly near it's outlet.
- 3) Type gohv (from any lab computer)
- 4) In the IPAddress spot, add 124 to the end of the IP Address already present
- 5) Click "Connect"
- 6) In the "Set Channel" entrybox, type 149
- 7) In the "Set Channel Voltage" entrybox, type -1500
- 8) Click "exec" next to the "Set Channel Voltage" entrybox
- 9) Check the current voltage to make sure it worked

Pump Down

- 1) Make sure O-Ring is in place
- 2) Lower chamber lid carefully down to rest
- 3) Attach bellows on both ends
- 4) Make sure that all biases and high voltages are turned off
- 5) On Panelmate Page 8
- 6) Make sure G207VV VENT VALVE is closed. If not click on that button, and then click the CLOSE button that appears on the right side.
- 7) Click on G207RV ROUGH VALVE and click the OPEN button that appears on the right side.
- 8) Once the vacuum is low enough, the G207GV TURBO GATE VALVE will change colors from red to blue.
- 9) Close the Rough Valve
- 10) Open the Turbo Gate Valve
- 11) To check the pressure once pumping on the turbo, click on G207IG BEAMCHAMBER ION GAUGE and click on the TURN FILAMENT ON button that will appear on the right side.

Venting Procedure

- 1) Make sure that all biases and high voltages are off
- 2) Close the Turbo Gate Valve by clicking on G207GV TURBO GATE VALVE and clicking on the CLOSE button that appears on the right side of the screen.
- 3) Click on the G207VV VENT VALVE and click on the OPEN button that appears on the right side of the screen.