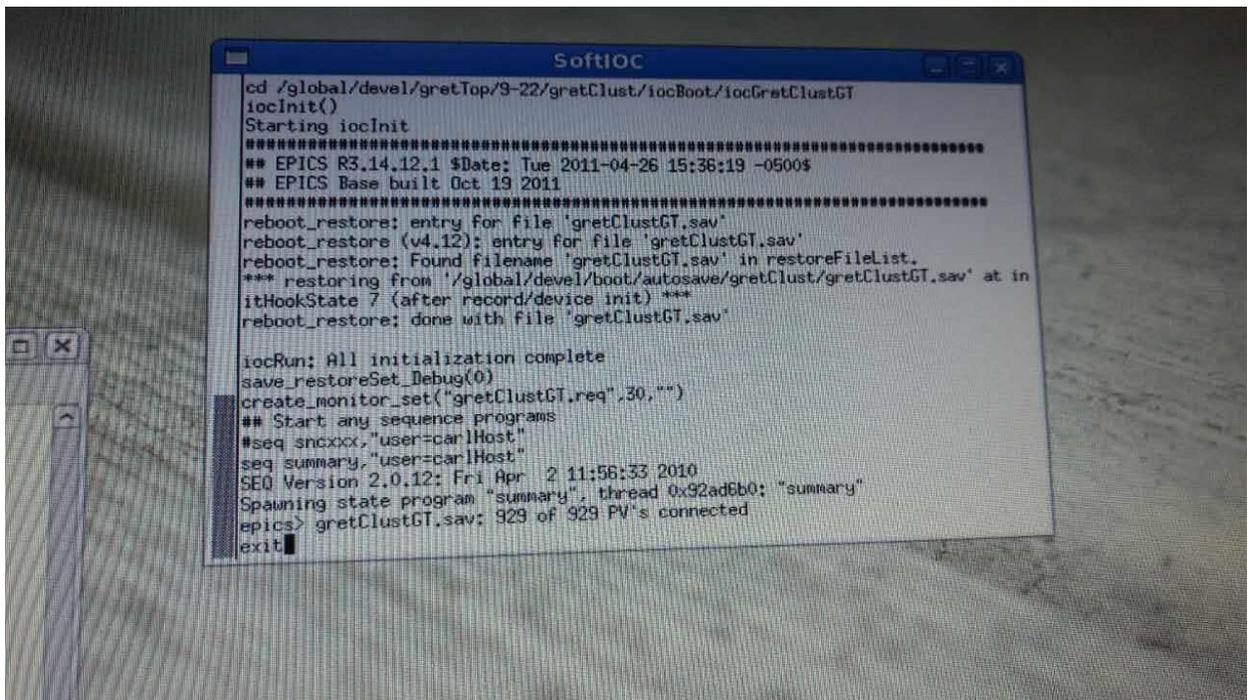
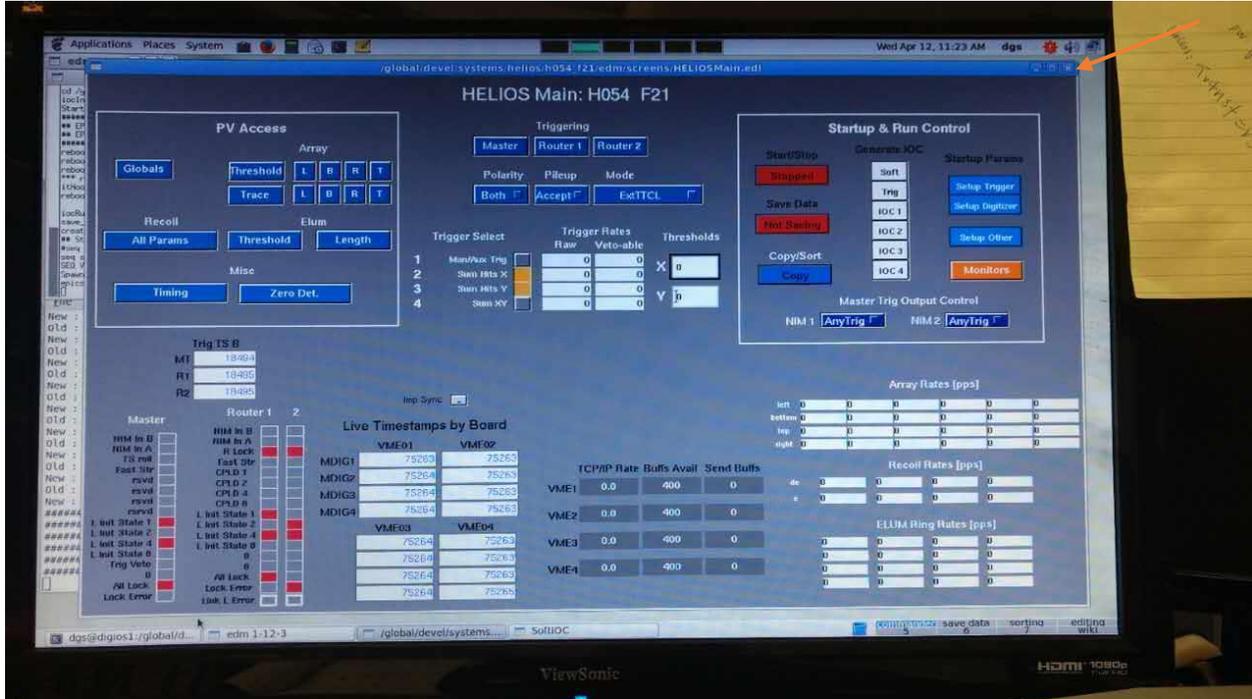
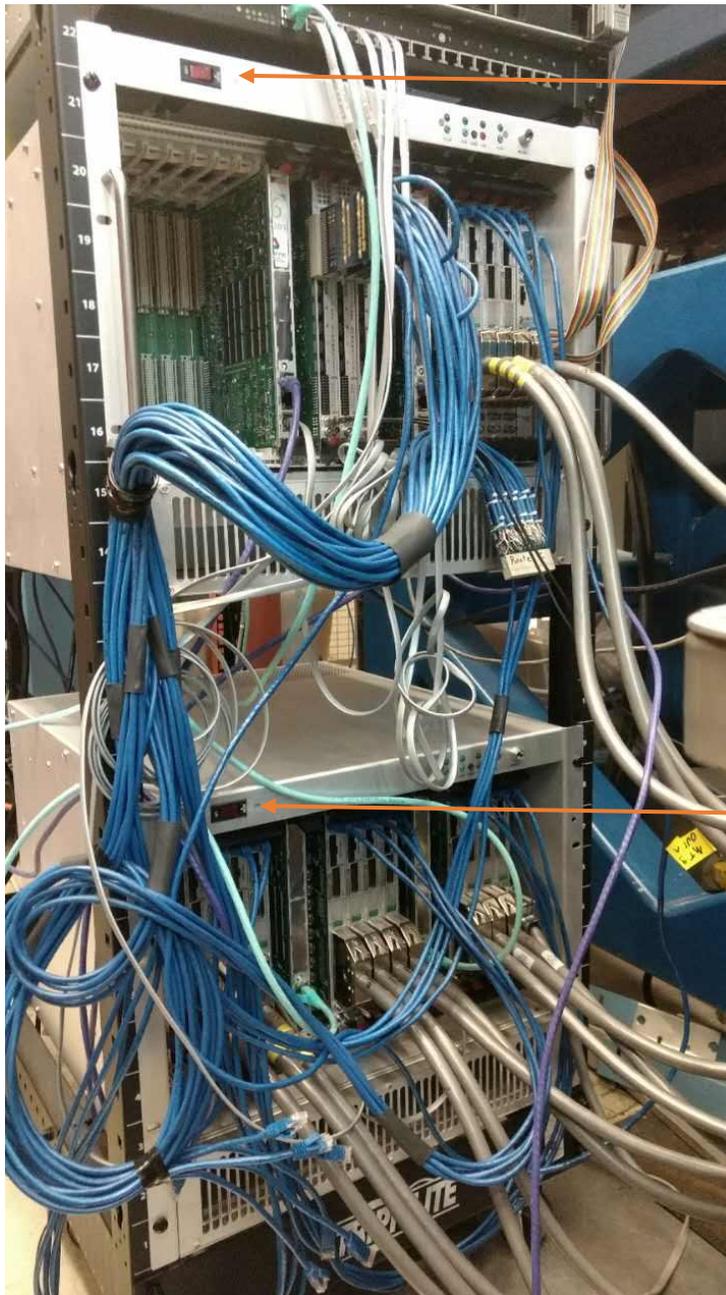


Instructions for restarting the Digital DAQ

On the DAQ computer named 'dgs' in the HELIOS Area: shut down the controller window and exit the Soft IOC:



Turn off the Crate1 and wait 10 s. Turn off Crate2. Power button is shown below.



Crate 1 : power button

Crate 2 : power button

Wait for 10s before turn on the button.

Turn on crate1 firstly. Wait for all the light on the module to turn green like in the photo below:

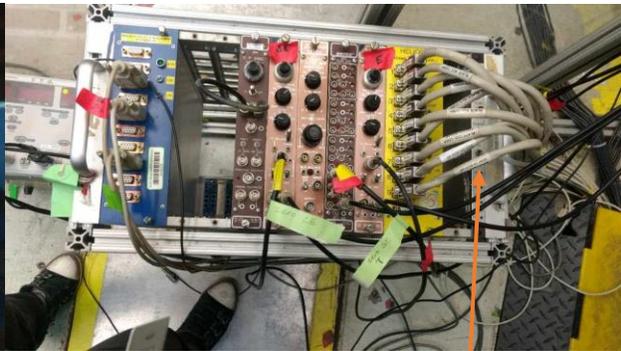


Wait for this light to be green

Sometimes, the light is orange like below(left). This is because the noise from the preamps is sending too much trigger. In this case, you need to turn off the preamps first, as shown below(right).



If the light is orange, you need to turn off the preamps



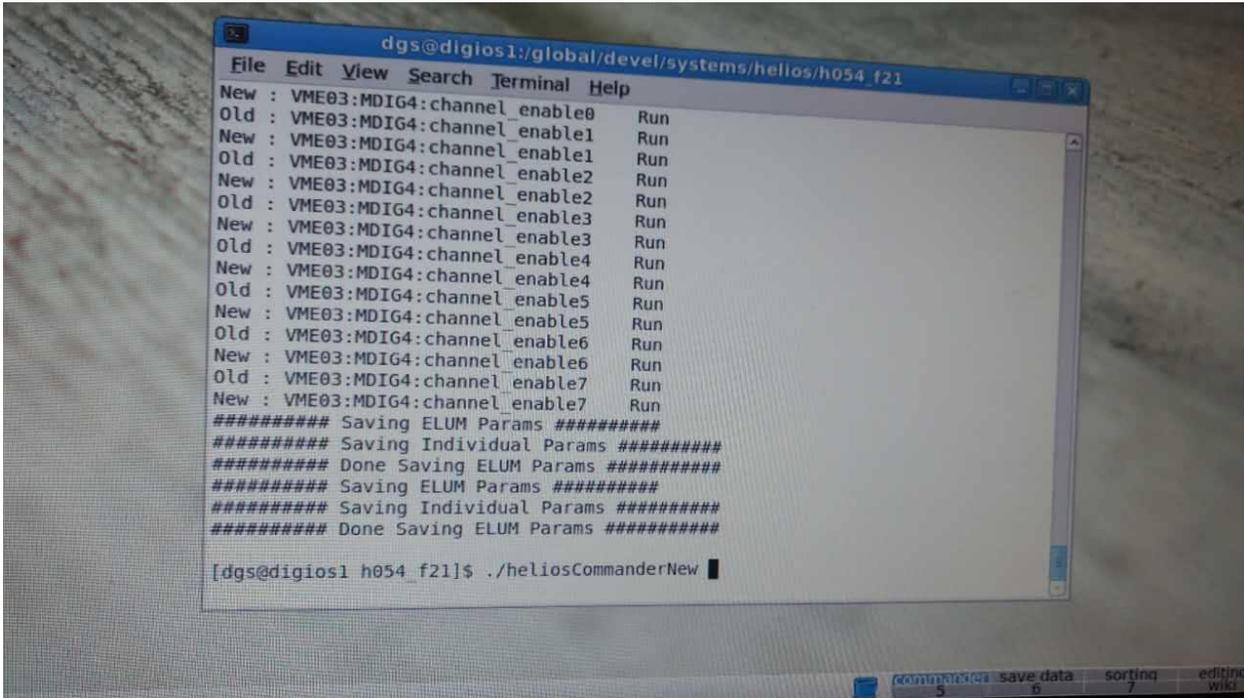
Power button to the preamps

After all lights on the modules of crate1 turn green, turn on crate2, and wait for all the lights of modules to turn green. Beside, you should wait until you can see some orange lights blinking in the green lights on each module. As photo shown below. Usually, this process takes 1 min.

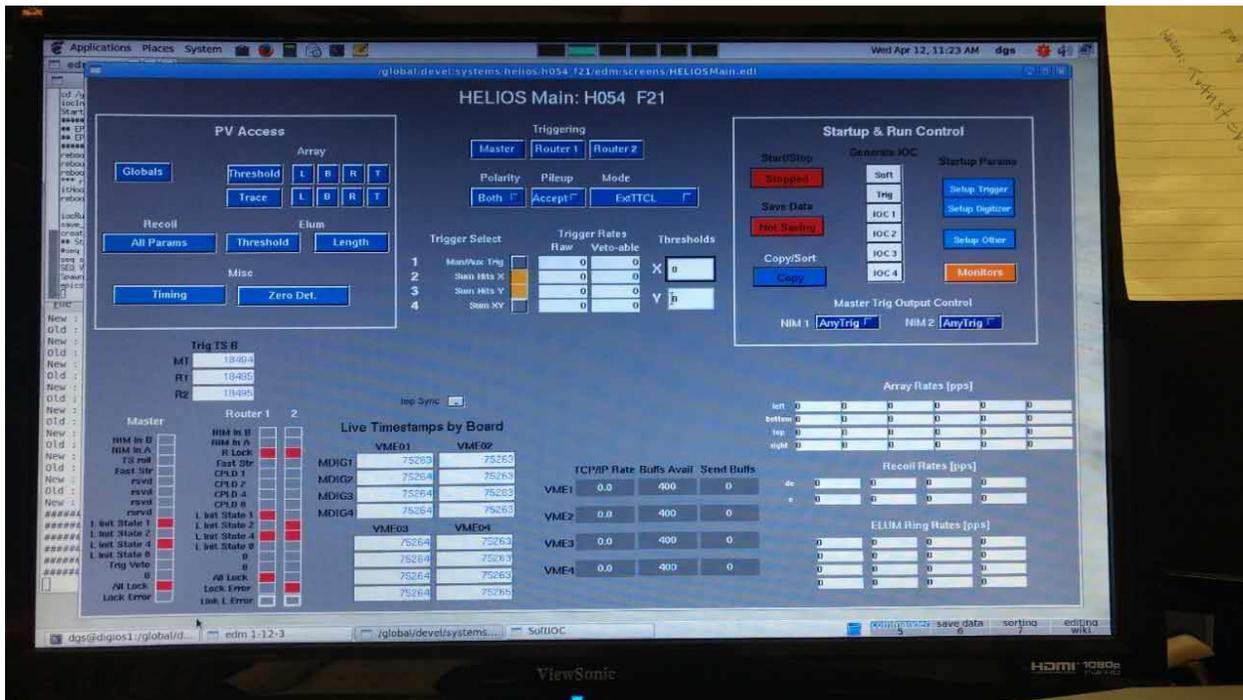
Orange lights blinking quickly.



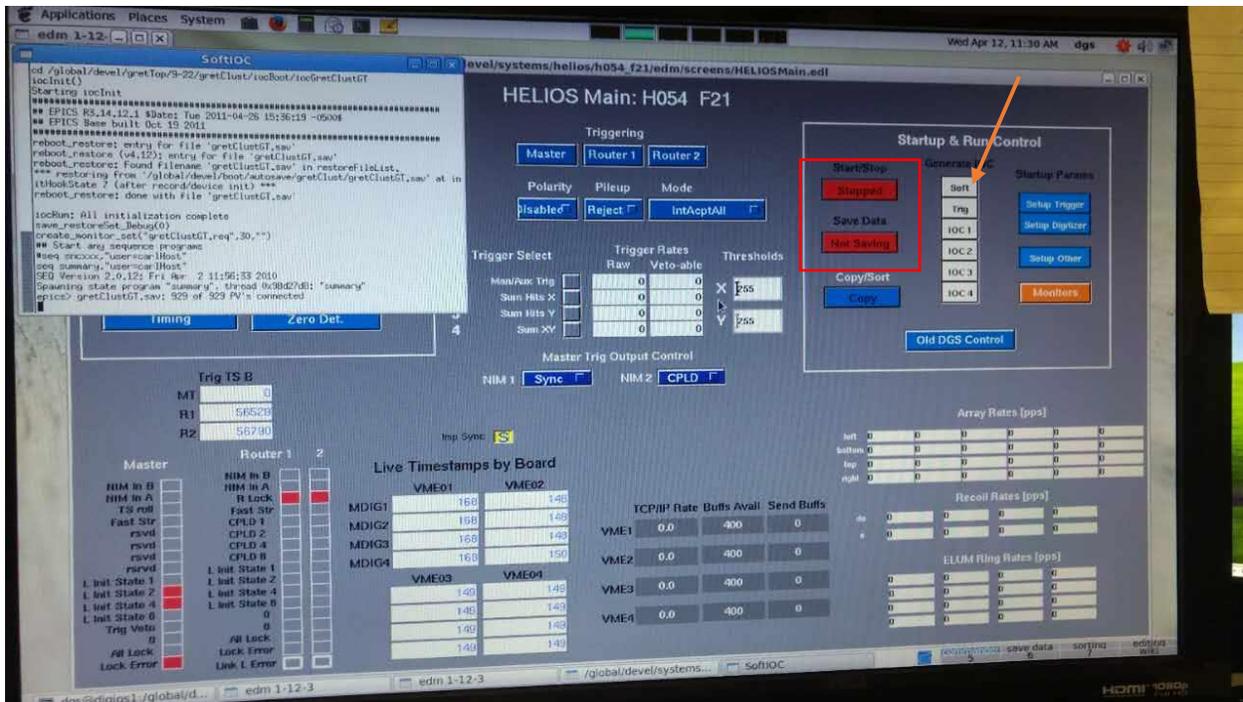
On the DAQ computer, in the command window, type: `goto daq`
`./heliosCommanderNew`



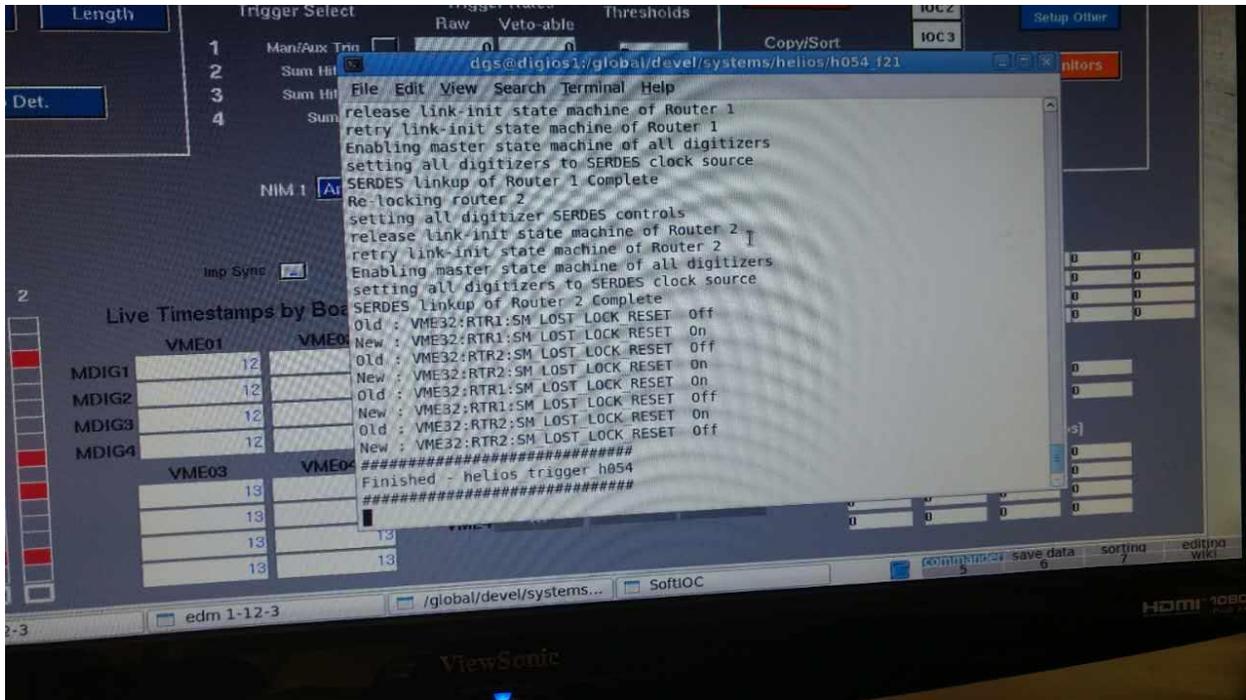
Then you should see the Helios main controller



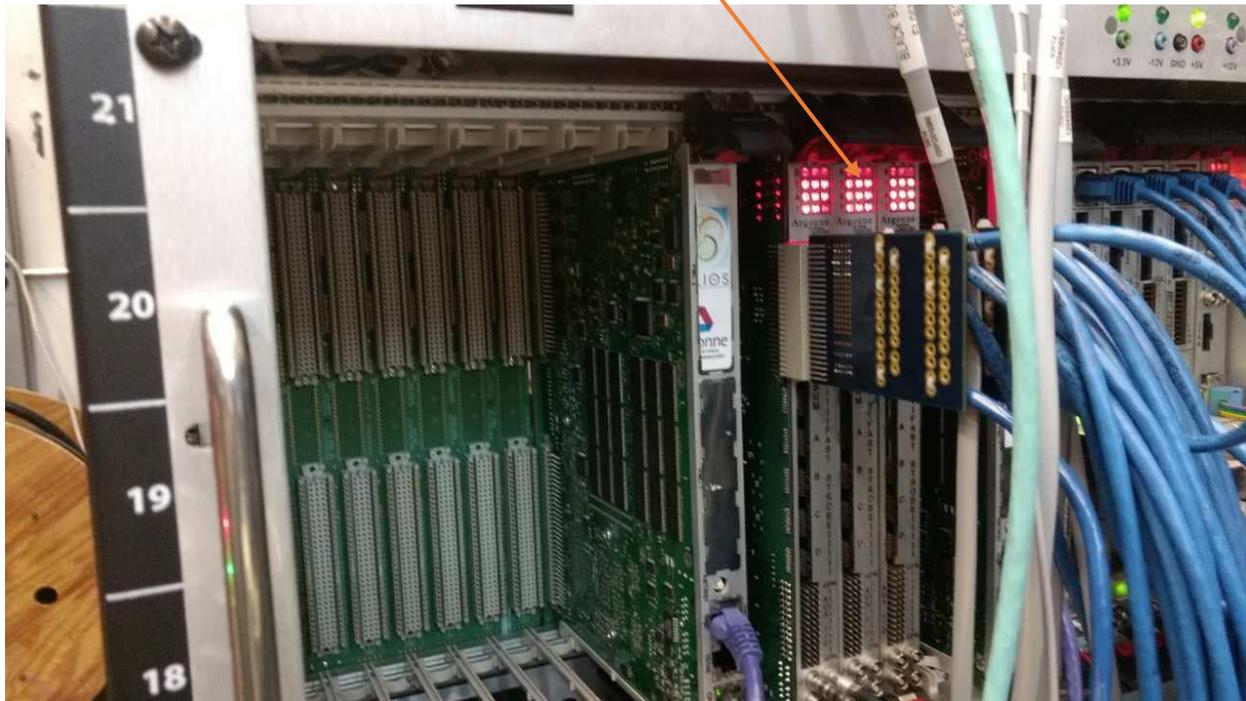
Click on the "soft" button, then you should see the SoftIOControl window, then you should see the "start/stop" button:



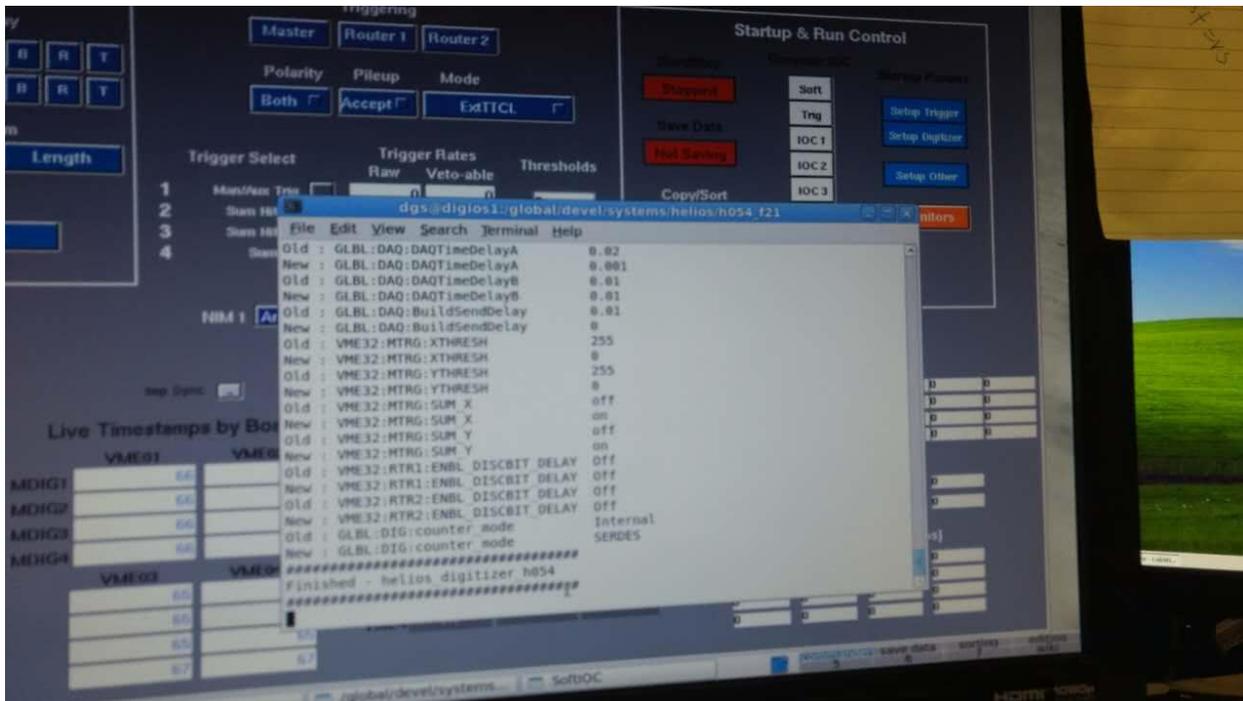
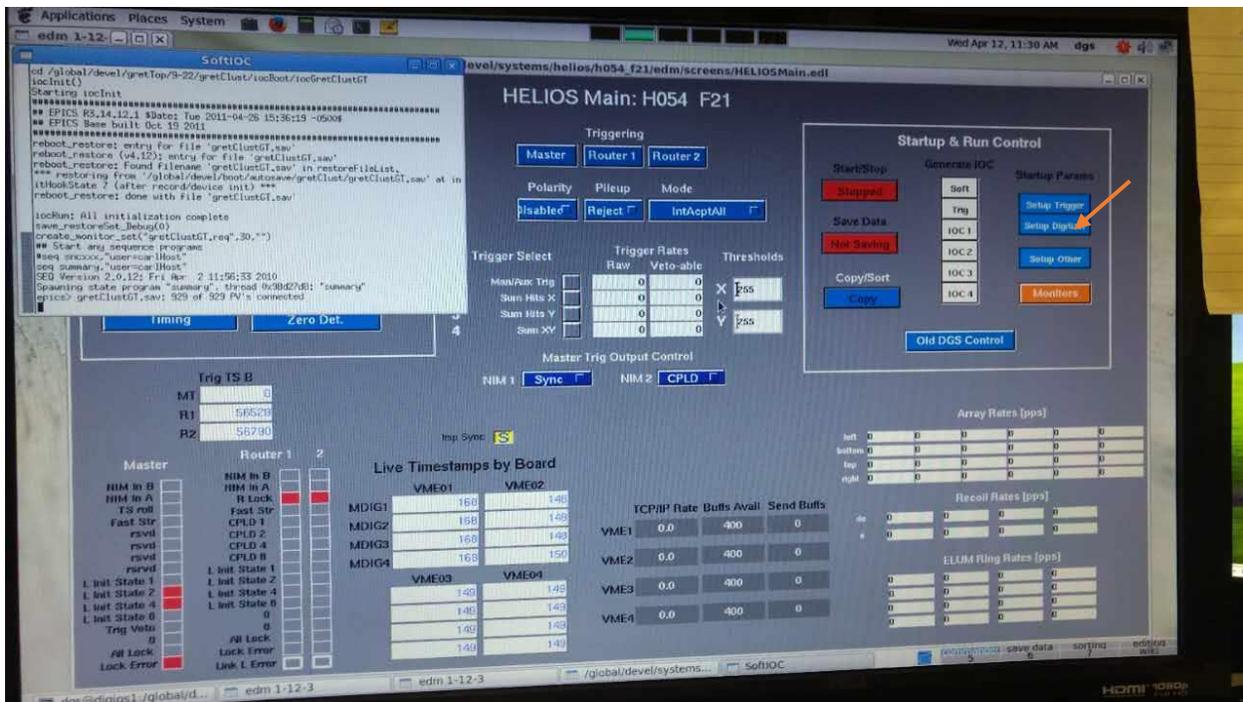
Click on the "setup trigger", you should see in the command window as below:



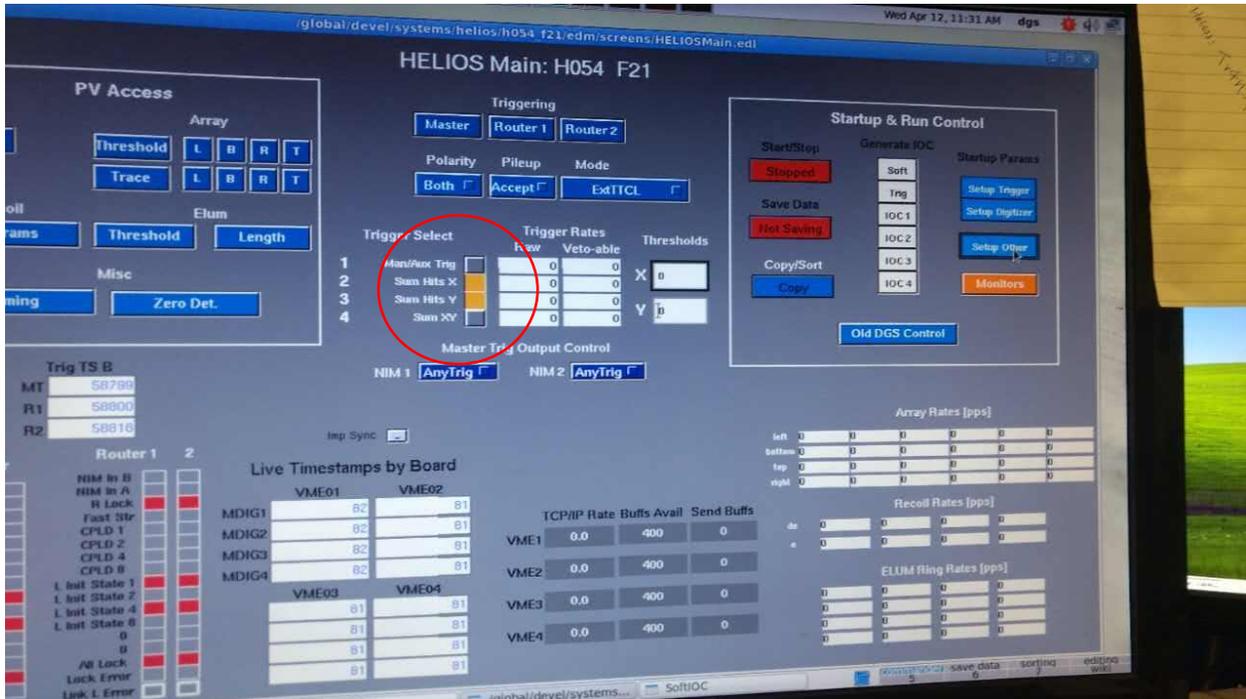
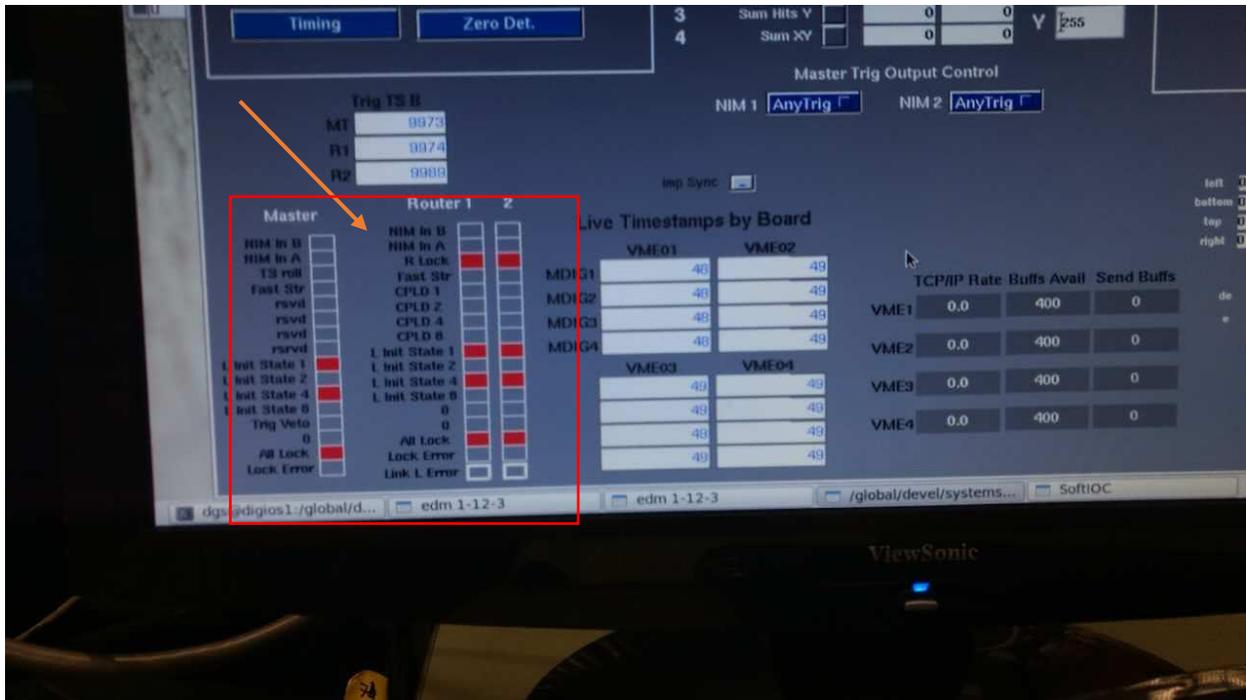
And you should also see the red lights on the first crate.



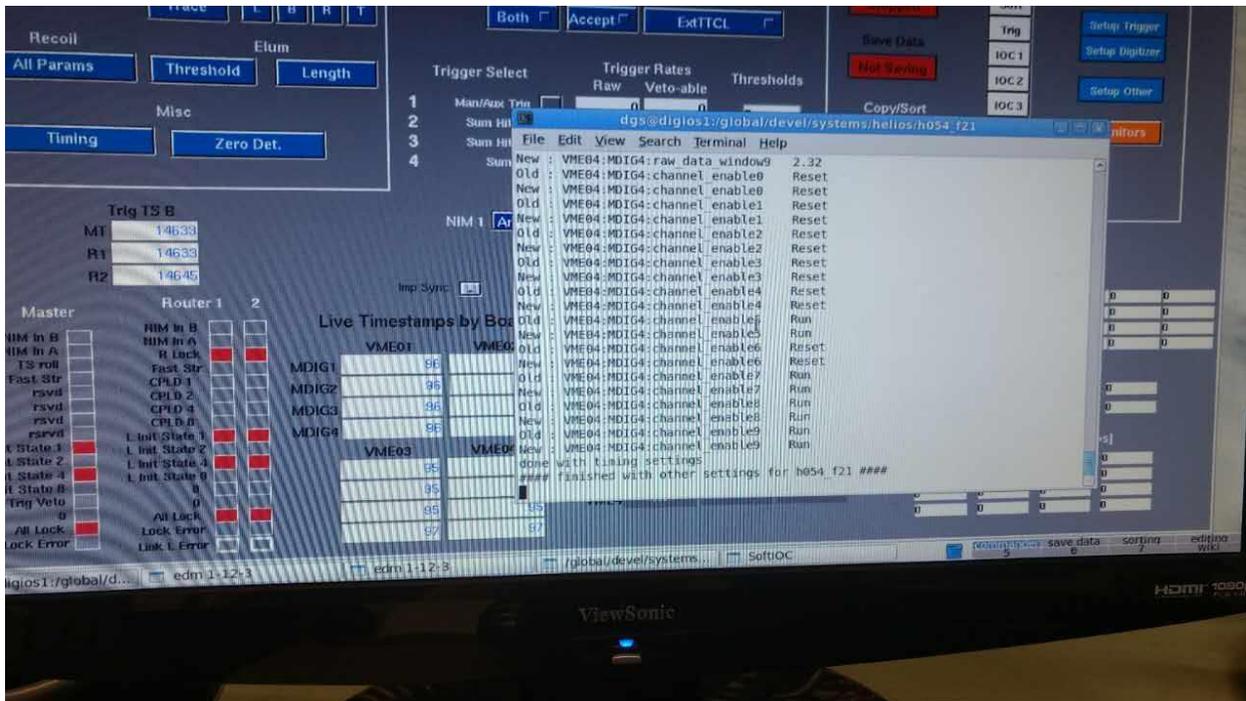
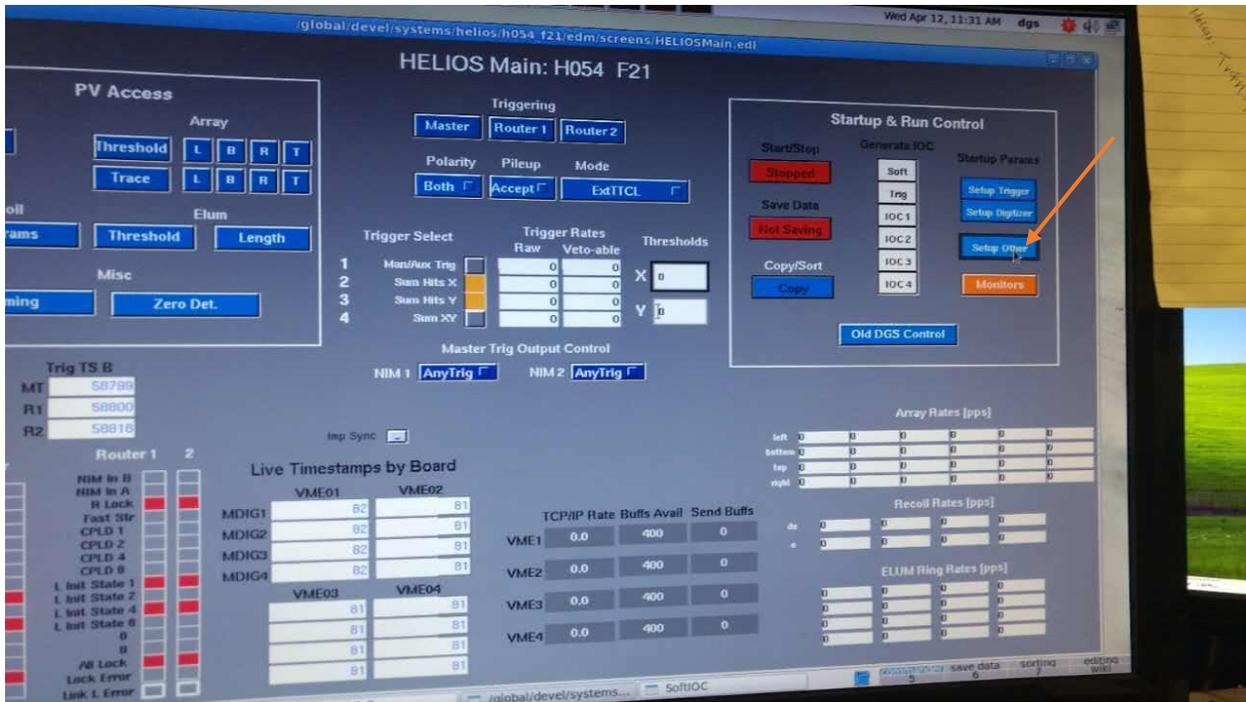
Click on the "Setup Digitizer", you should also see in the command window as photo below.



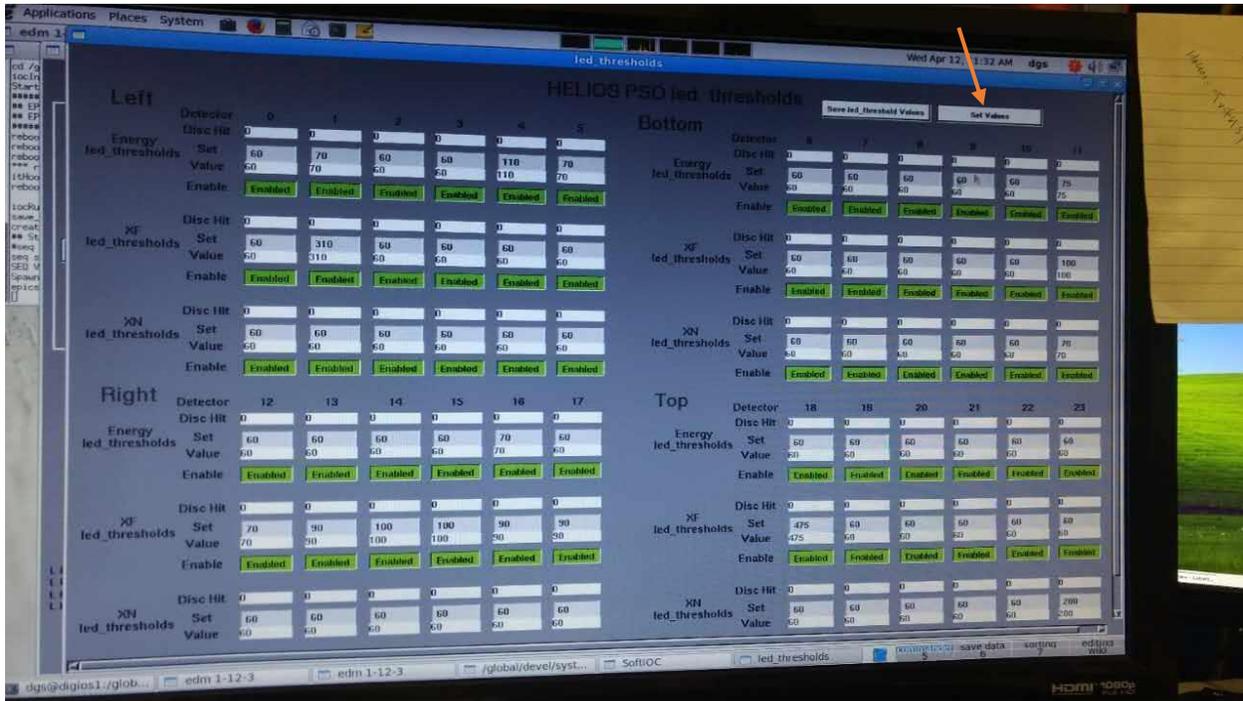
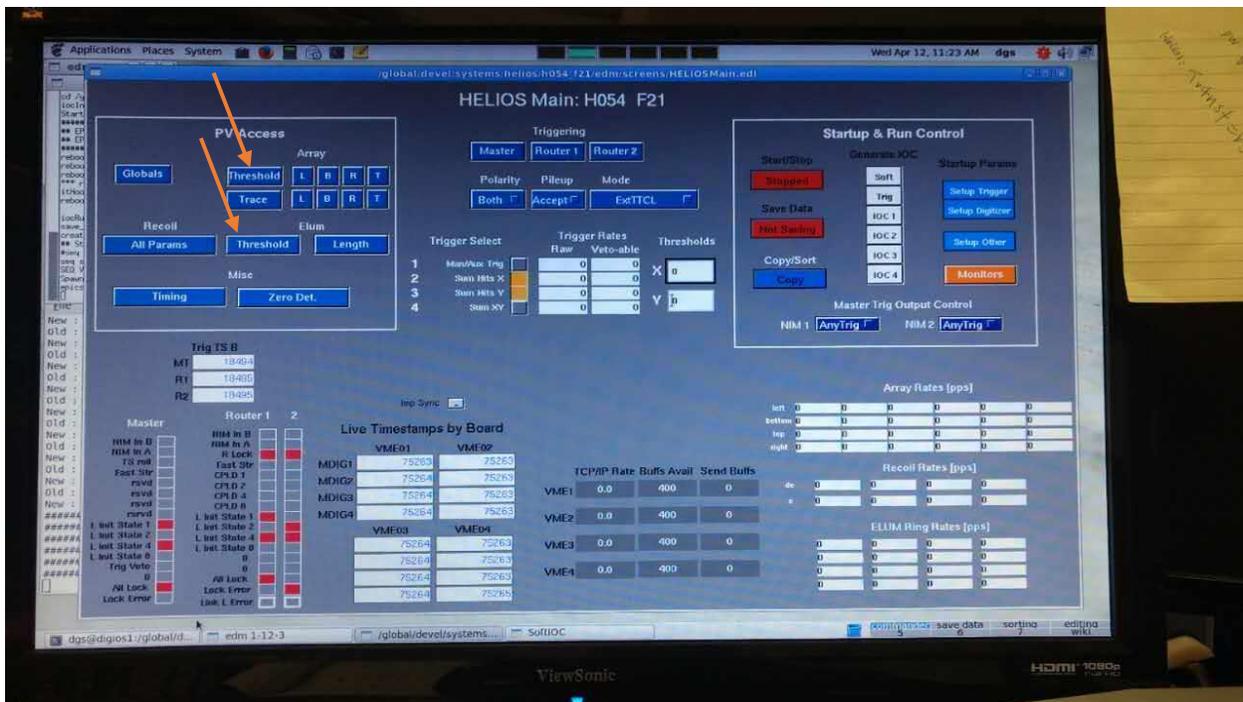
The controller should like lie below:



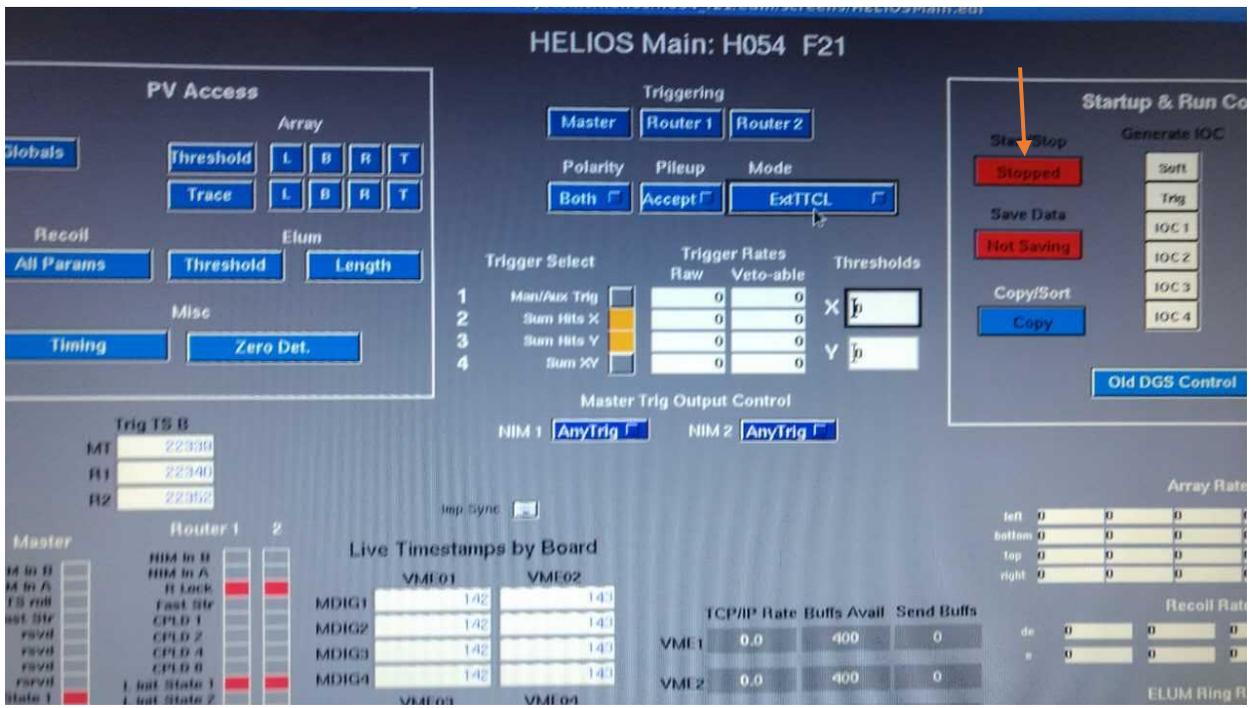
Click on the "Setup Other", you should also see in the command window as photo below.



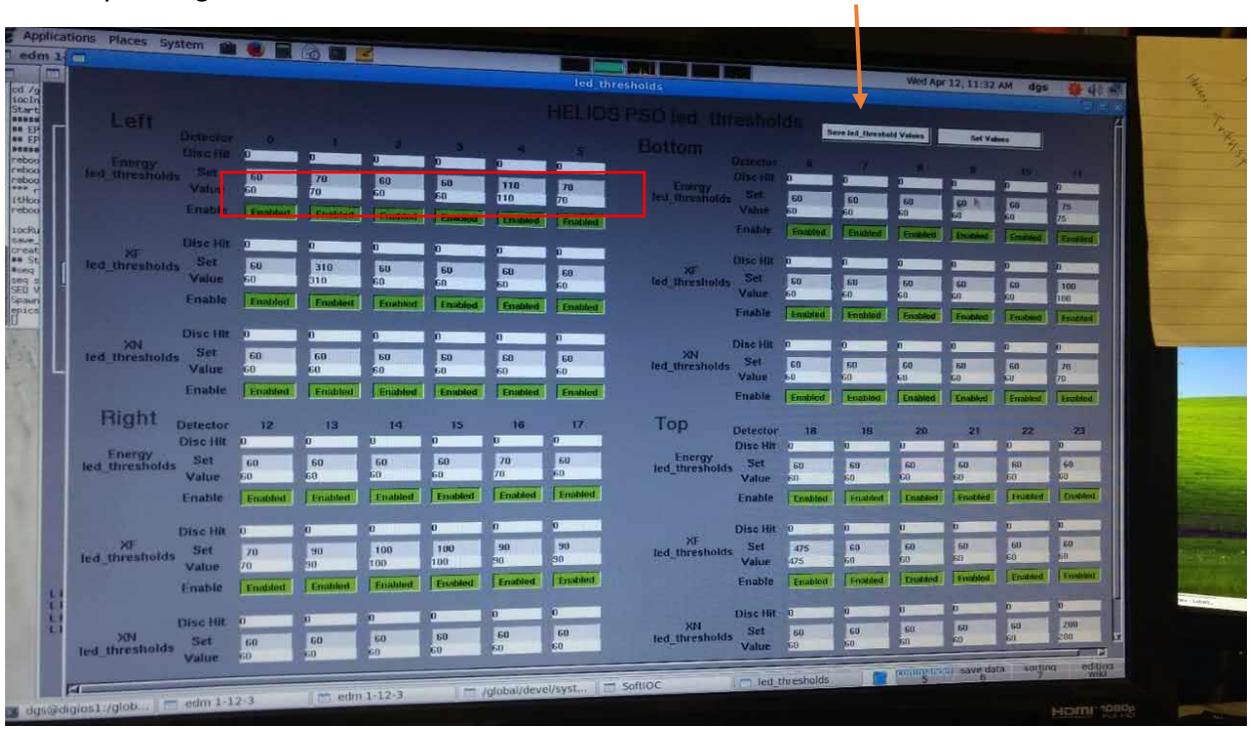
By clicking on the “Threshold” button, you should be able to adjust the threshold in the window pop out. You can click on “the set value” button to set the threshold to the saved ones.



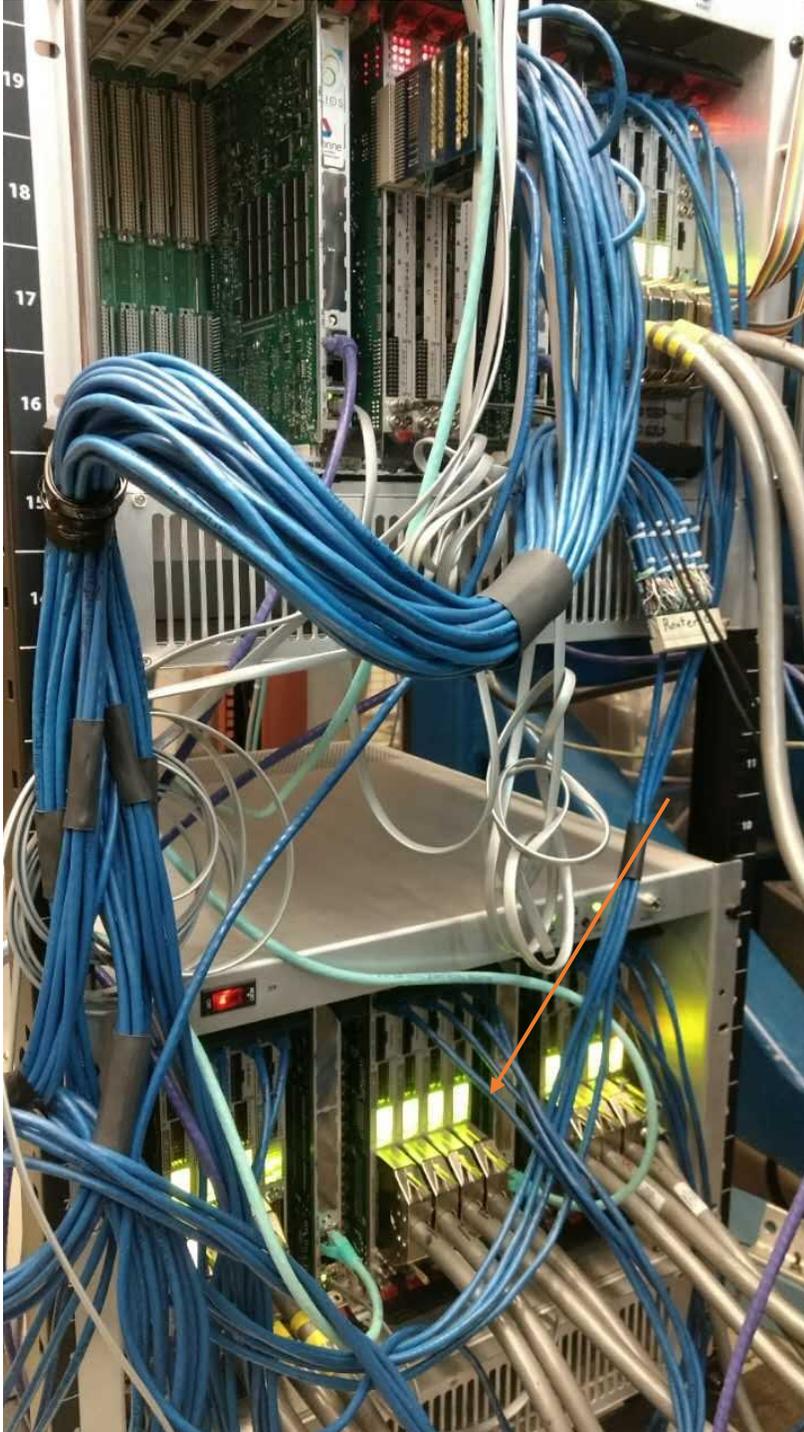
You can start the DAQ by clicking on the “start/stop” button with the no-saving mode.



Check the trigger rate of each detector. If any of them are triggering to high, you should click on the threshold button to increase the threshold a little, until the trigger rate is normal. Save the threshold values by clicking on the “save threshold value” button.



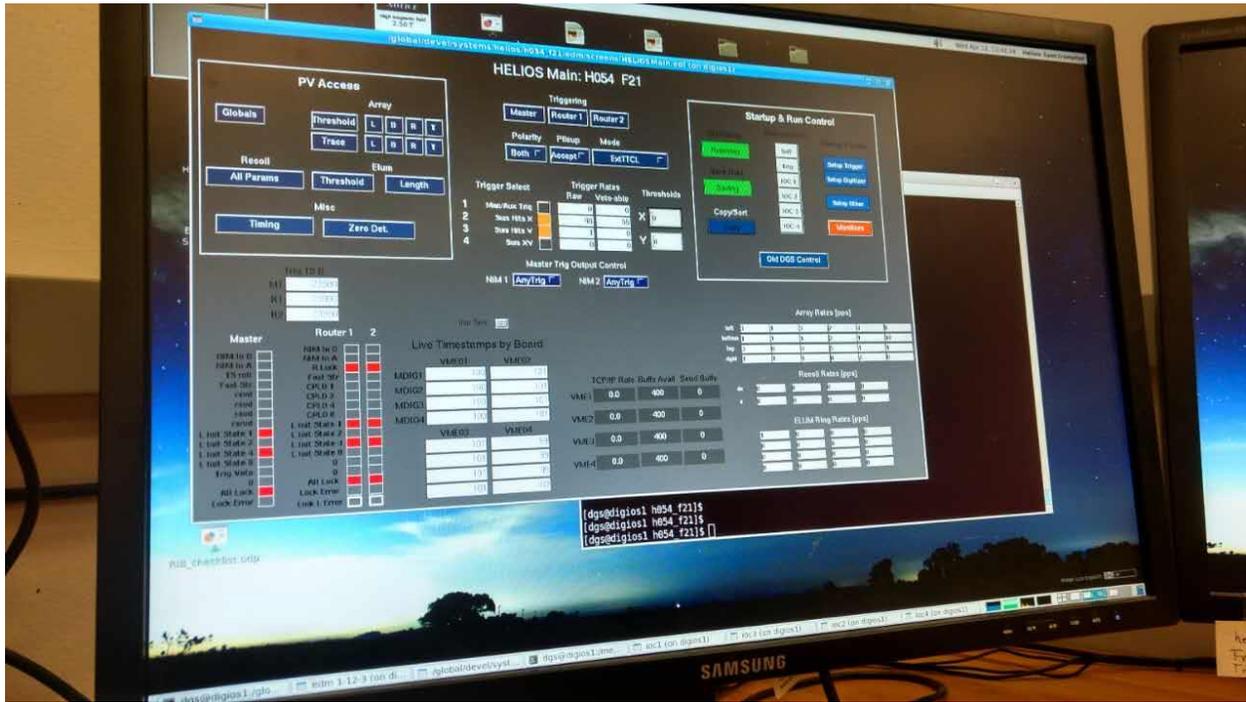
When the DAQ are running, you should see the light like below. If any of the modules have dim light, the module must be dead. You should start over by turning the crate off.



On the computer in the data room, you can remote control the DAQ computer. In the command window:

```
ssh -X dgs@digios1    pw:gam$hippie
```

After connection, just like before, you can type "goto daq", then "./heliosCommanderNew" the controller should pop out.

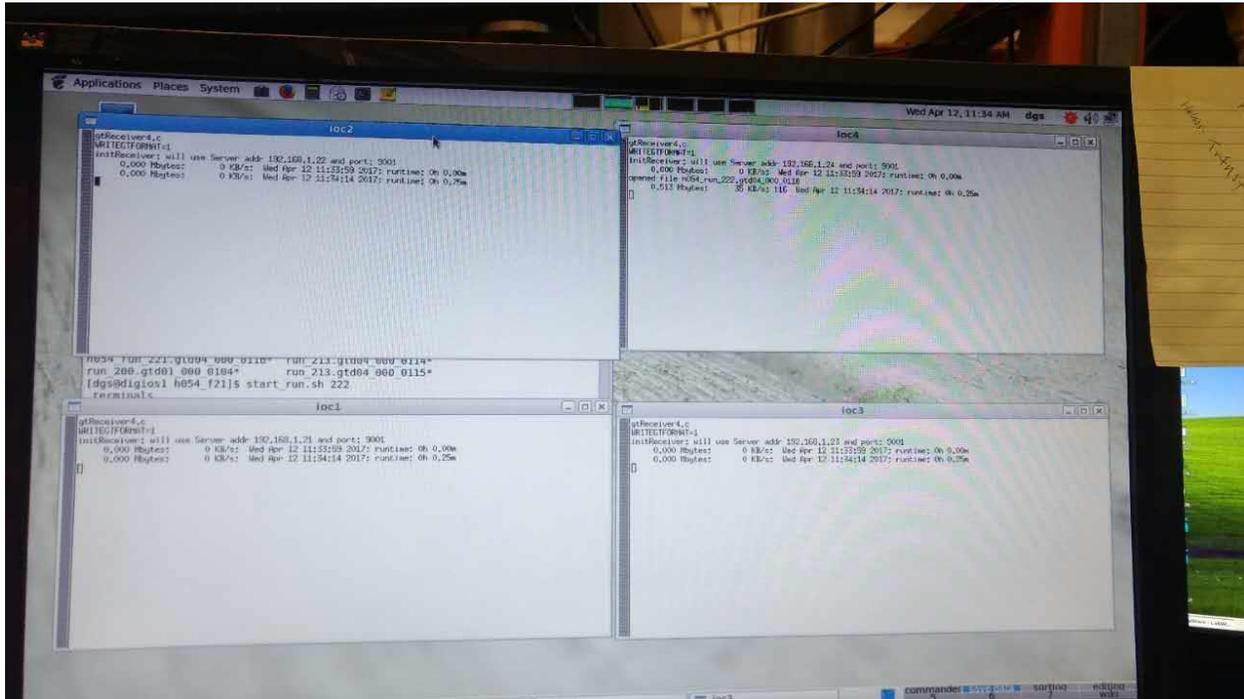


How to start/stop a run

In the command window, type:

Start_run.sh *** (*** is the run number, like 221)

You should see four windows for IOC pop out



In the command window, type:

stop_run.sh *** (*** is the run number, like 221)