Low Voltage GUI Development

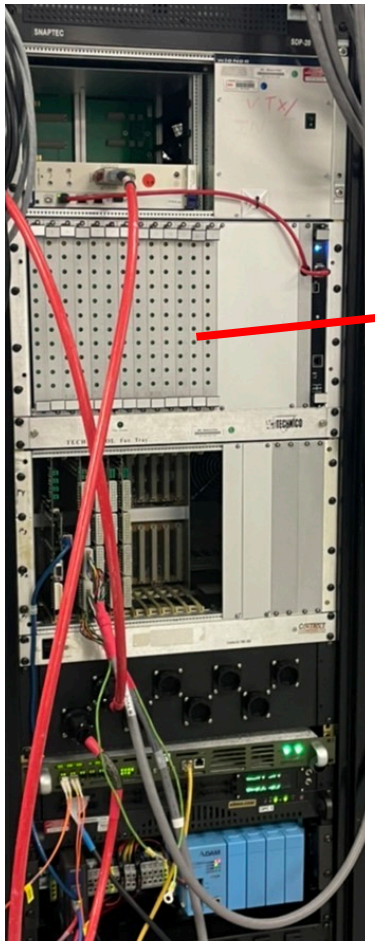
March 3rd 2023

Mai WATANABE, Maya SHIMOMURA

Nara Women's University

Power supply (LV) for INTT

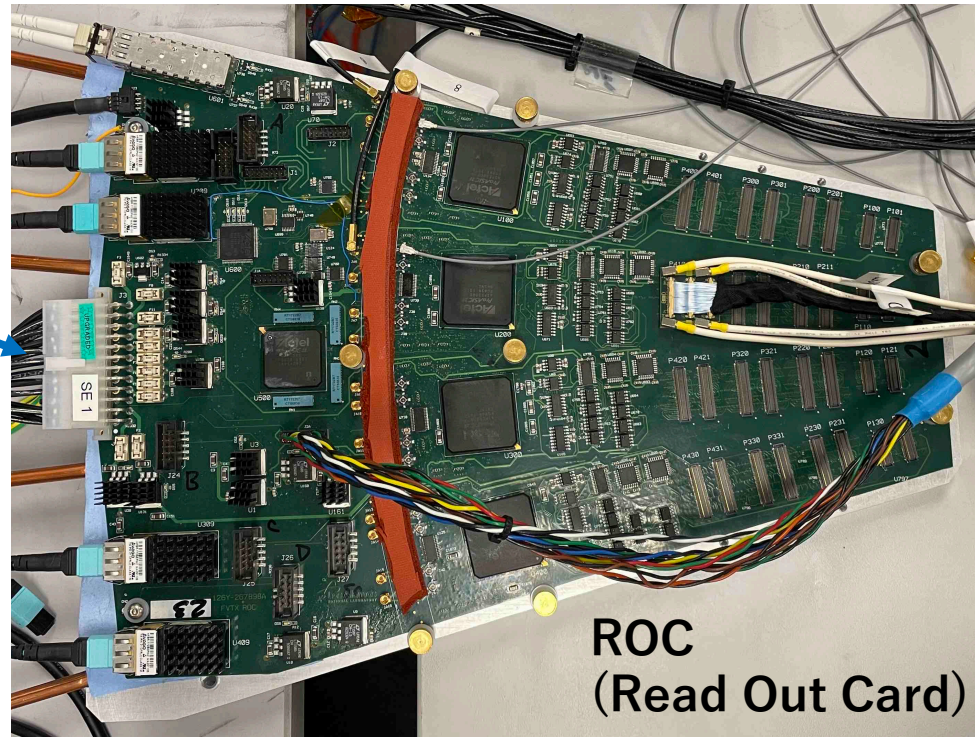
Rack @Silicon Lab
(BNL 510C)



More info : https://wiki.sphenix.bnl.gov/index.php/INTT_LV_system

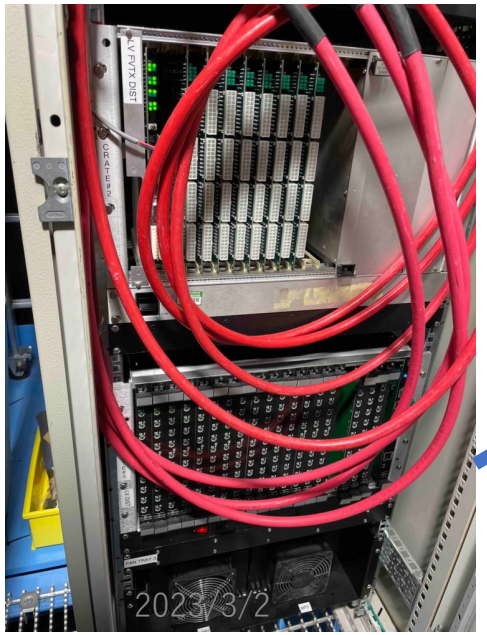
"LV distribution module"
LV for ROC and LV filter board

The two racks are ready in 1008.
- 2W1 → 2nd floor West South
- 2W3 → 2nd floor West North
- (don't touch 2W2)



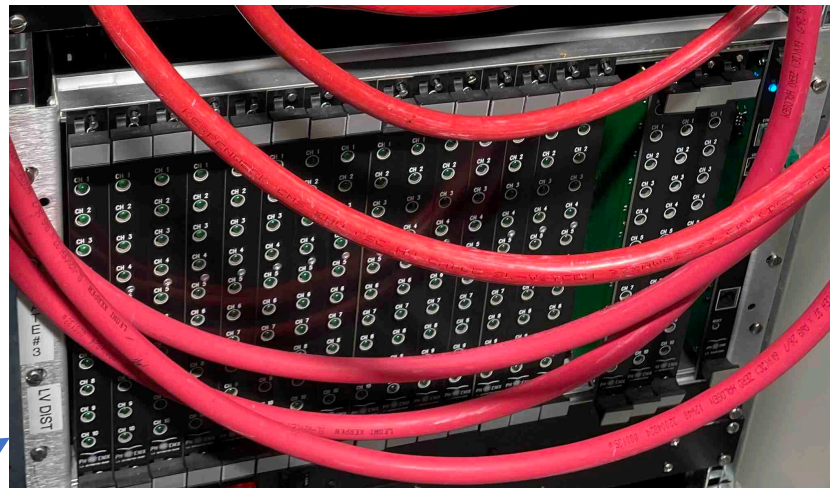
LV slots in racks at 1008

Inside of Rack 2W1

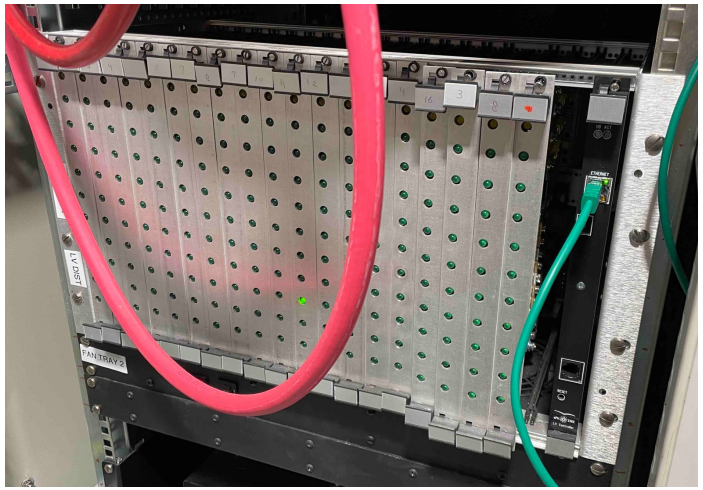


The two racks for INTT in 1008.
- 2W1 → 2nd floor West South
- 2W3 → 2nd floor West North
- (don't touch 2W2)

Rack 2W1

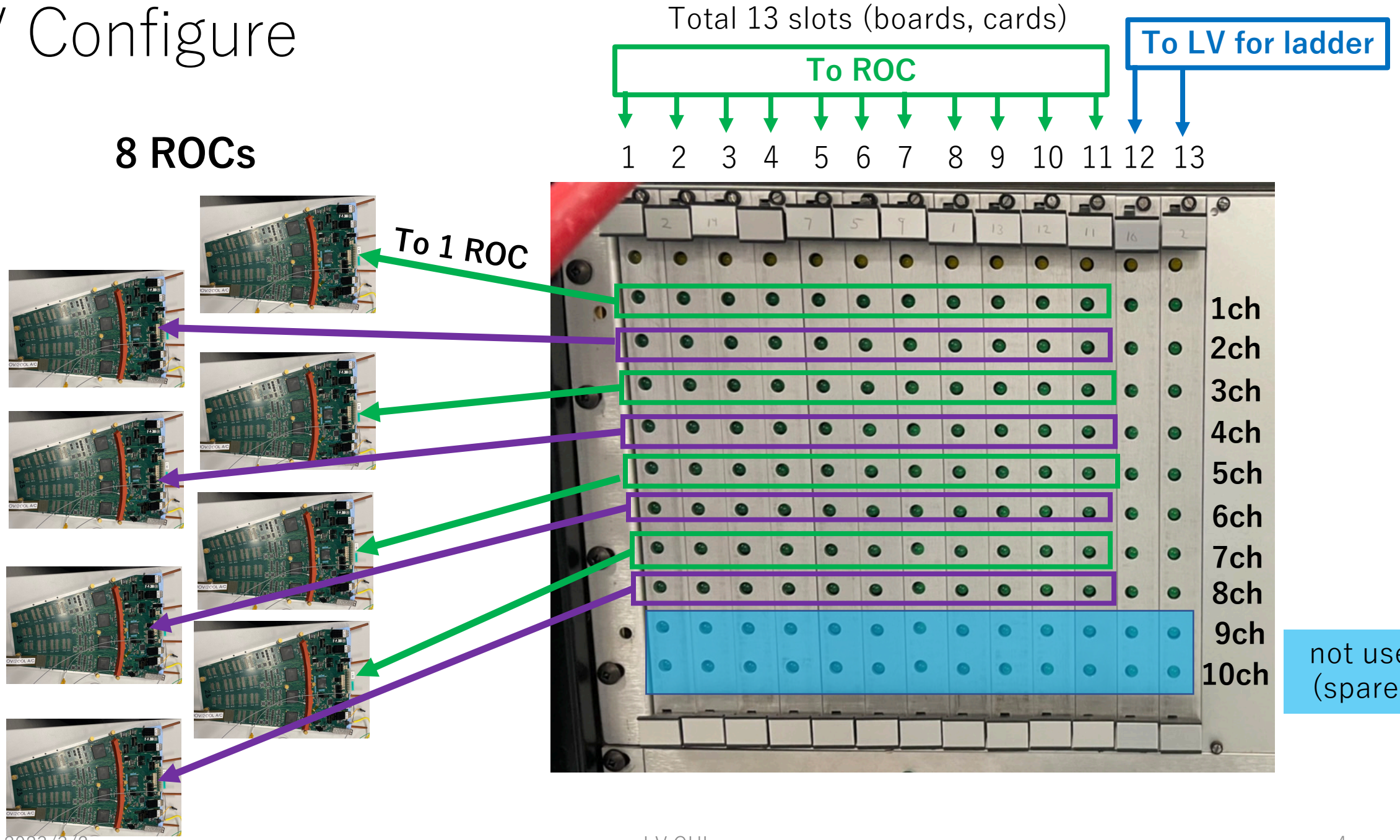


Rack 2W3



There are enough LV slots in each rack.

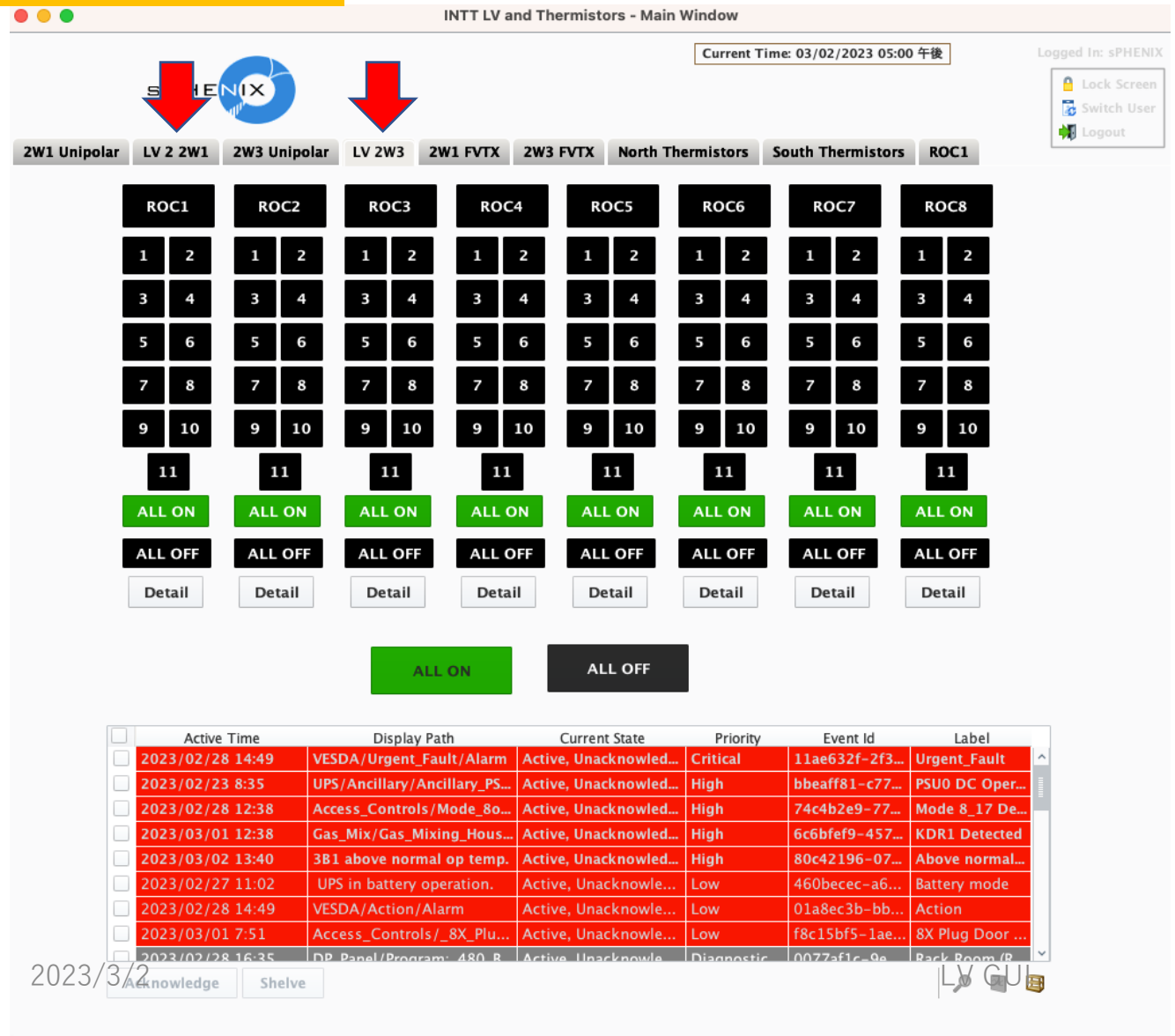
LV Configure



The GUI “LV2 2W1” and “LV 2W3”

Mai made these ROC by ROC GUIs, Alarms and Detail GUIs.

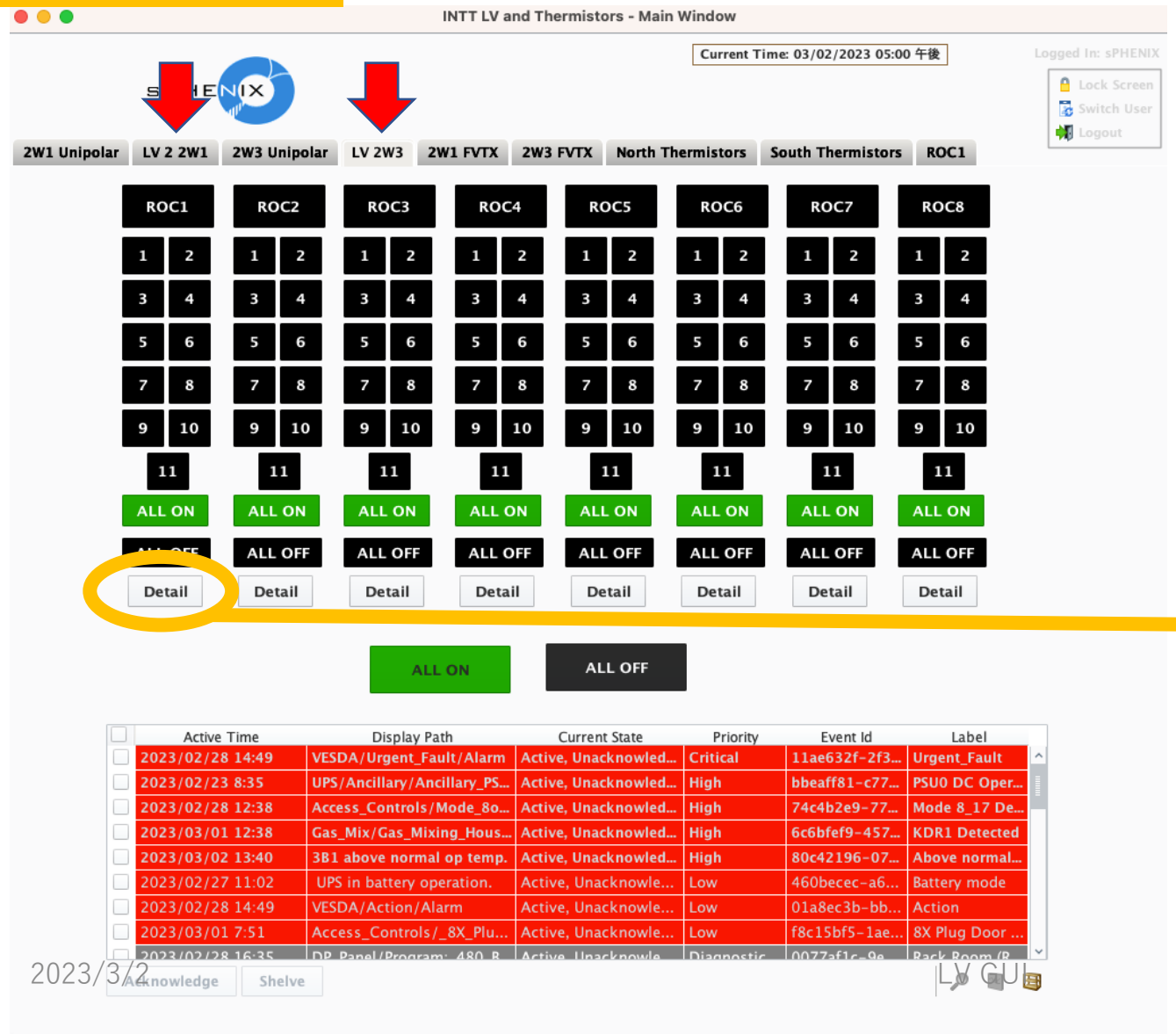
ROC by ROC GUI



The GUI “LV2 2W1” and “LV 2W3”

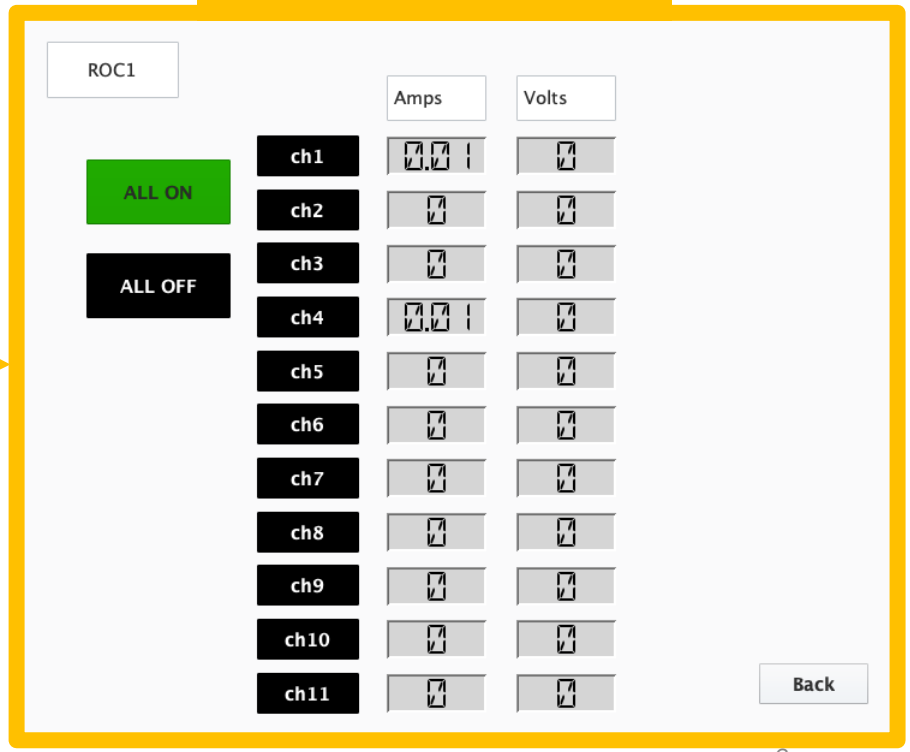
Mai made these ROC by ROC GUIs and Detail GUIs.

ROC by ROC GUI



When you click “Detail”, the detail GUI of each ROC comes up.
You can see the reading currents and voltages at each channel.

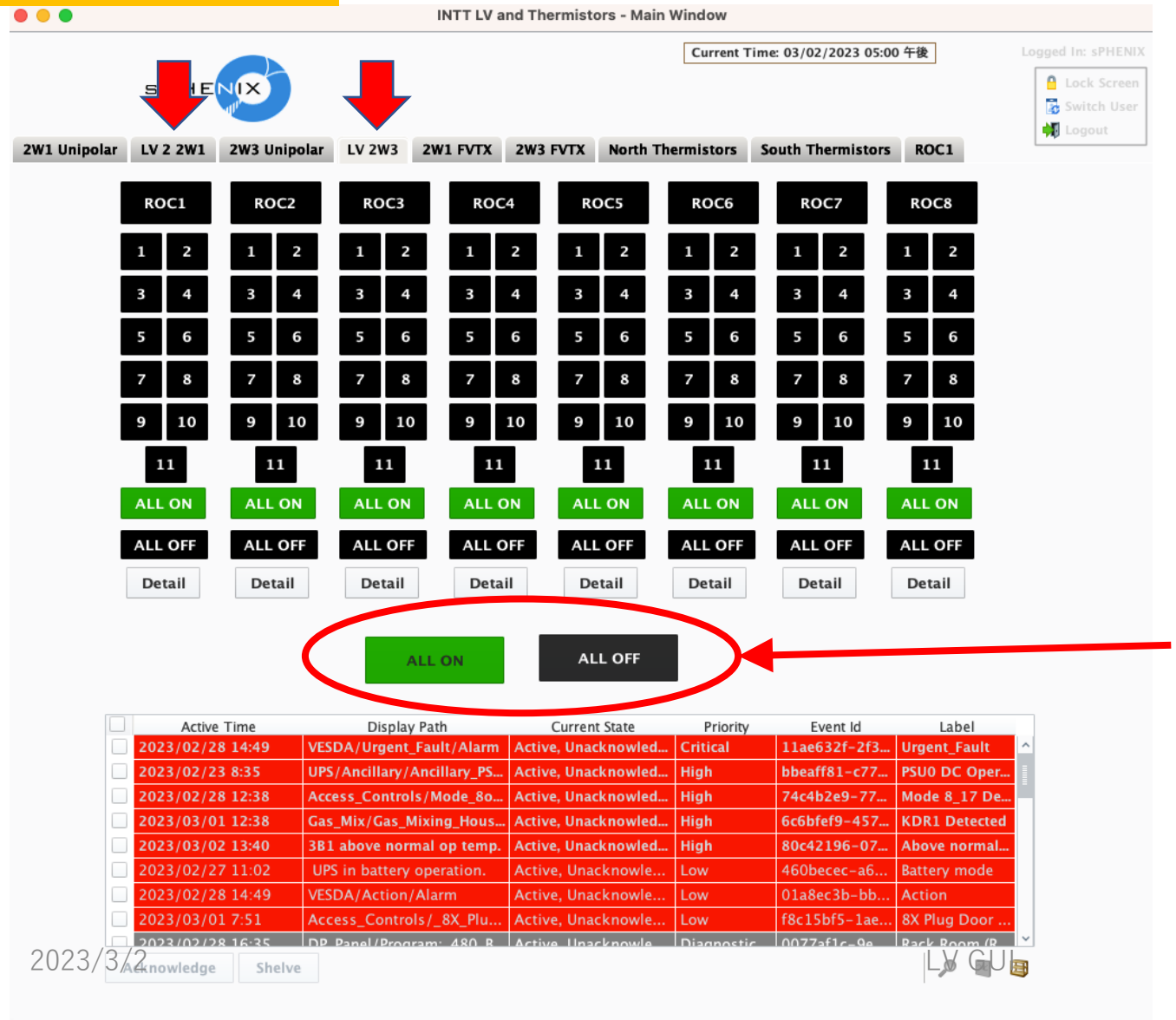
Detail GUI



The GUI “LV2 2W1” and “LV 2W3”

Mai made these ROC by ROC GUIs, Alarms and Detail GUIs.

ROC by ROC GUI

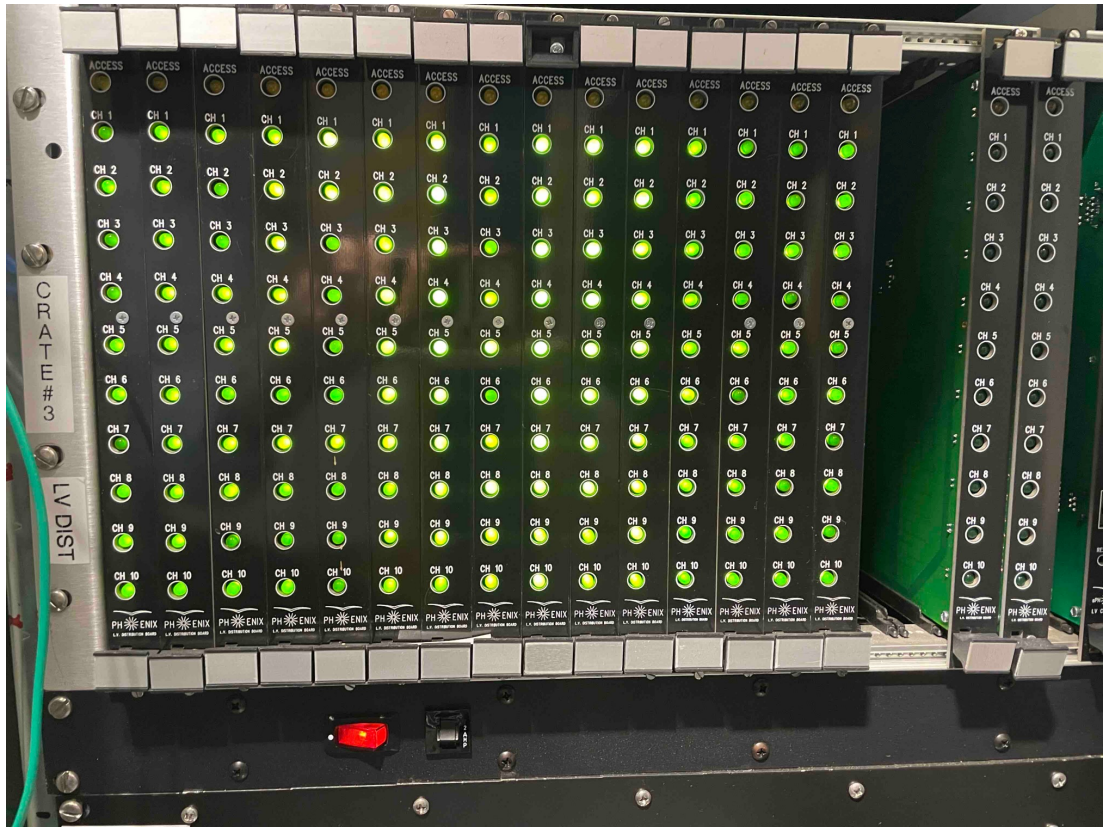


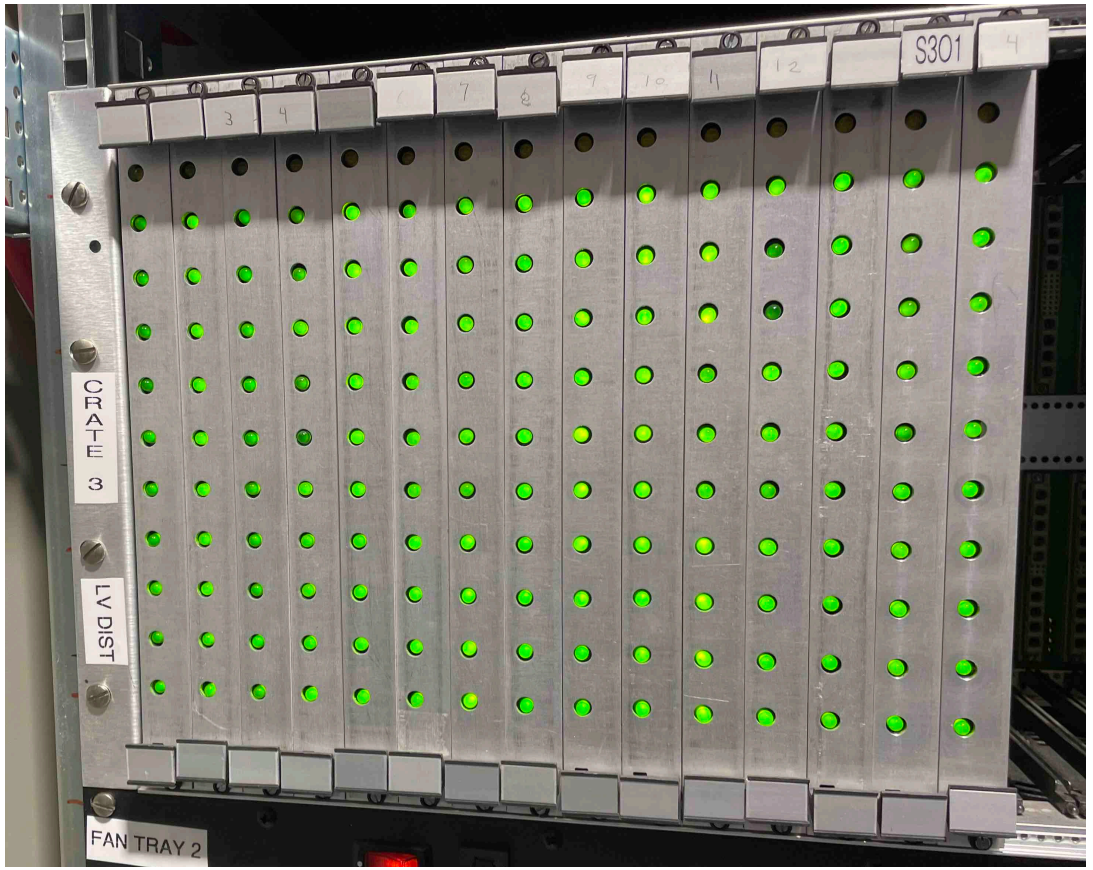
- The GUI designs are finalized.
- We are still working on the scripts for each switches to improve their behaver.

Use only “ALL ON” or “ALL OFF” which turn on or off all 8 ROCs together respectively.

* We also need to tune the alarm values.

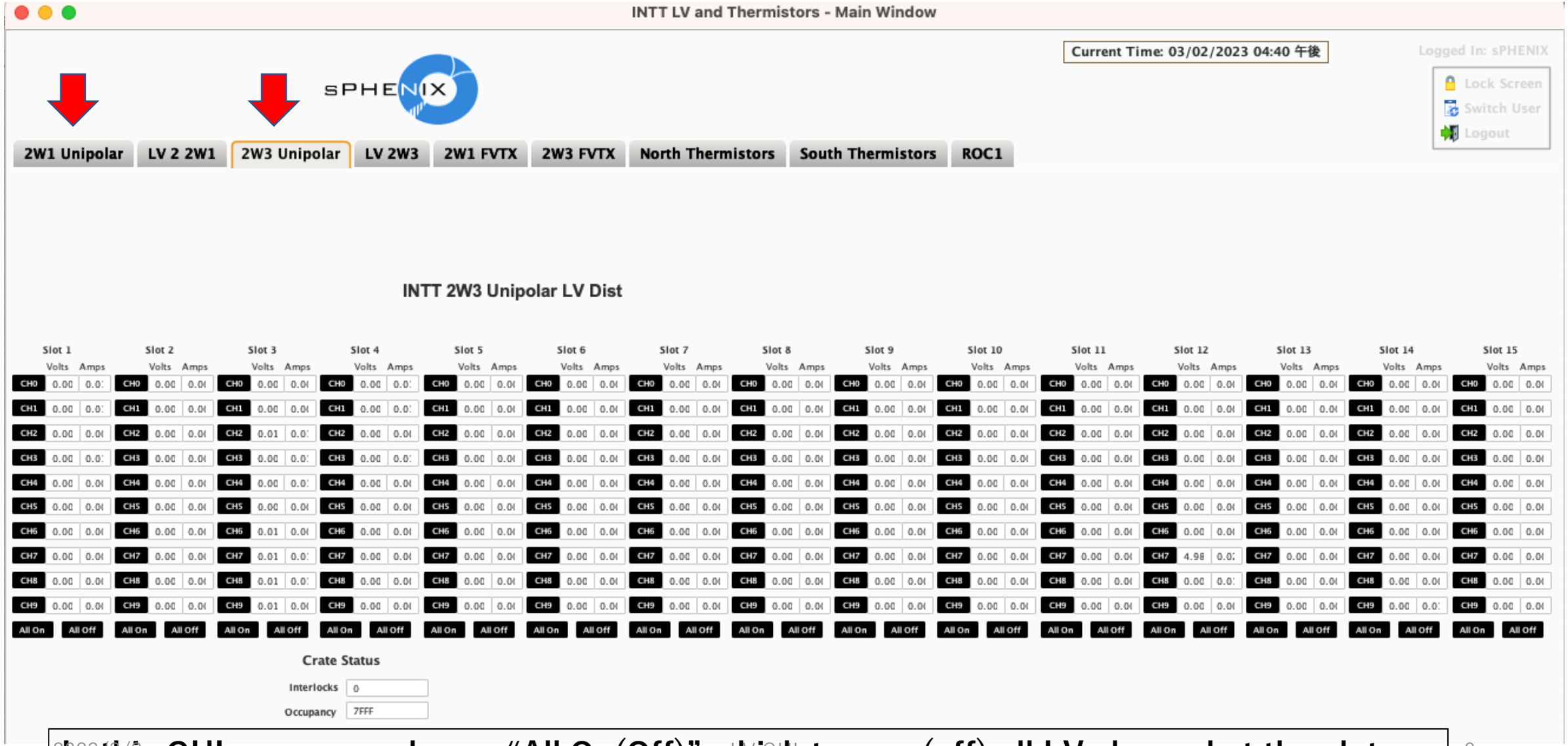
Turn on test for the all LV slots together.





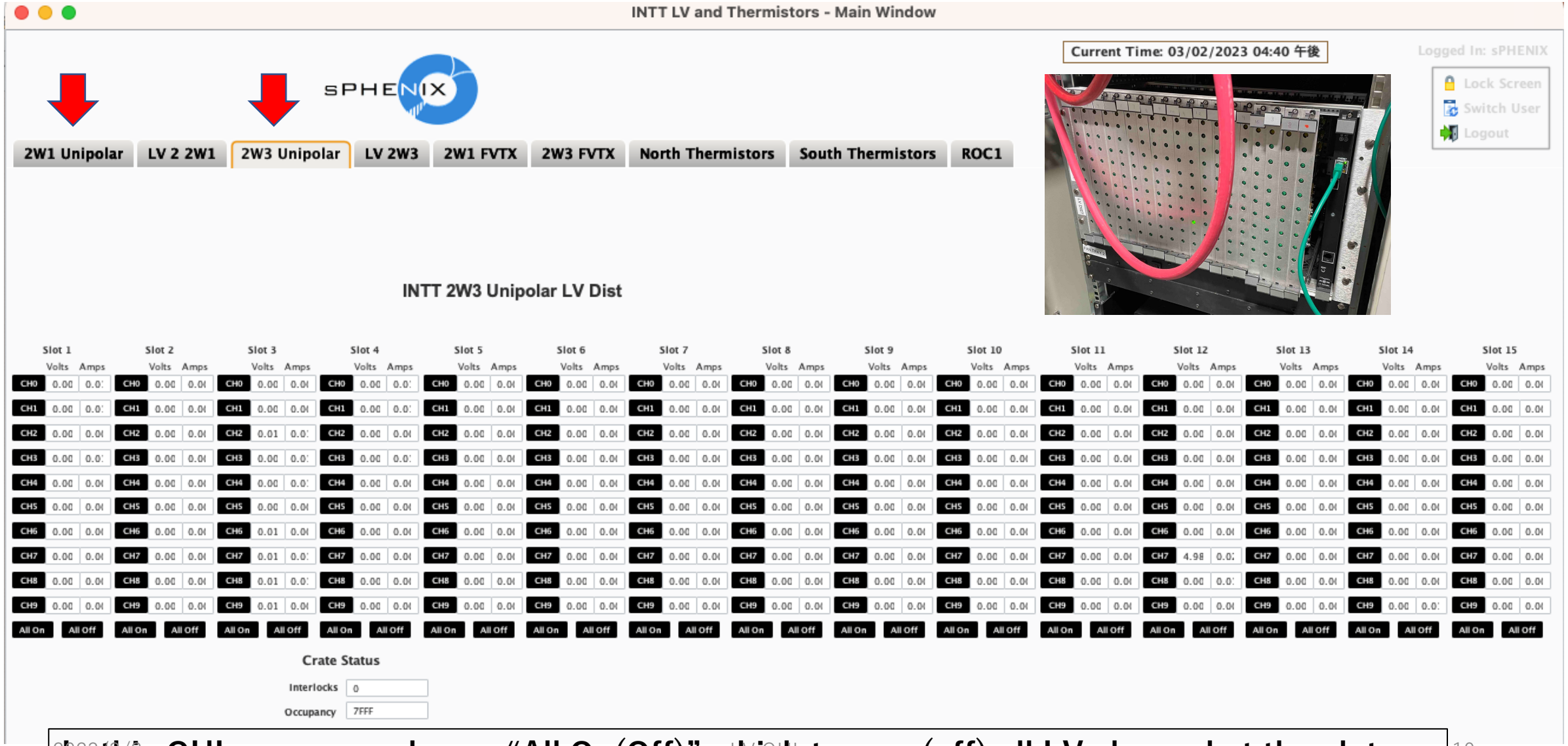
- ALL ON!
- Ready for ROC readout test.

There are the GUI ”2W1 Unipolar” and “2W3 Unipolar” which line up just same as the physical slot layout.



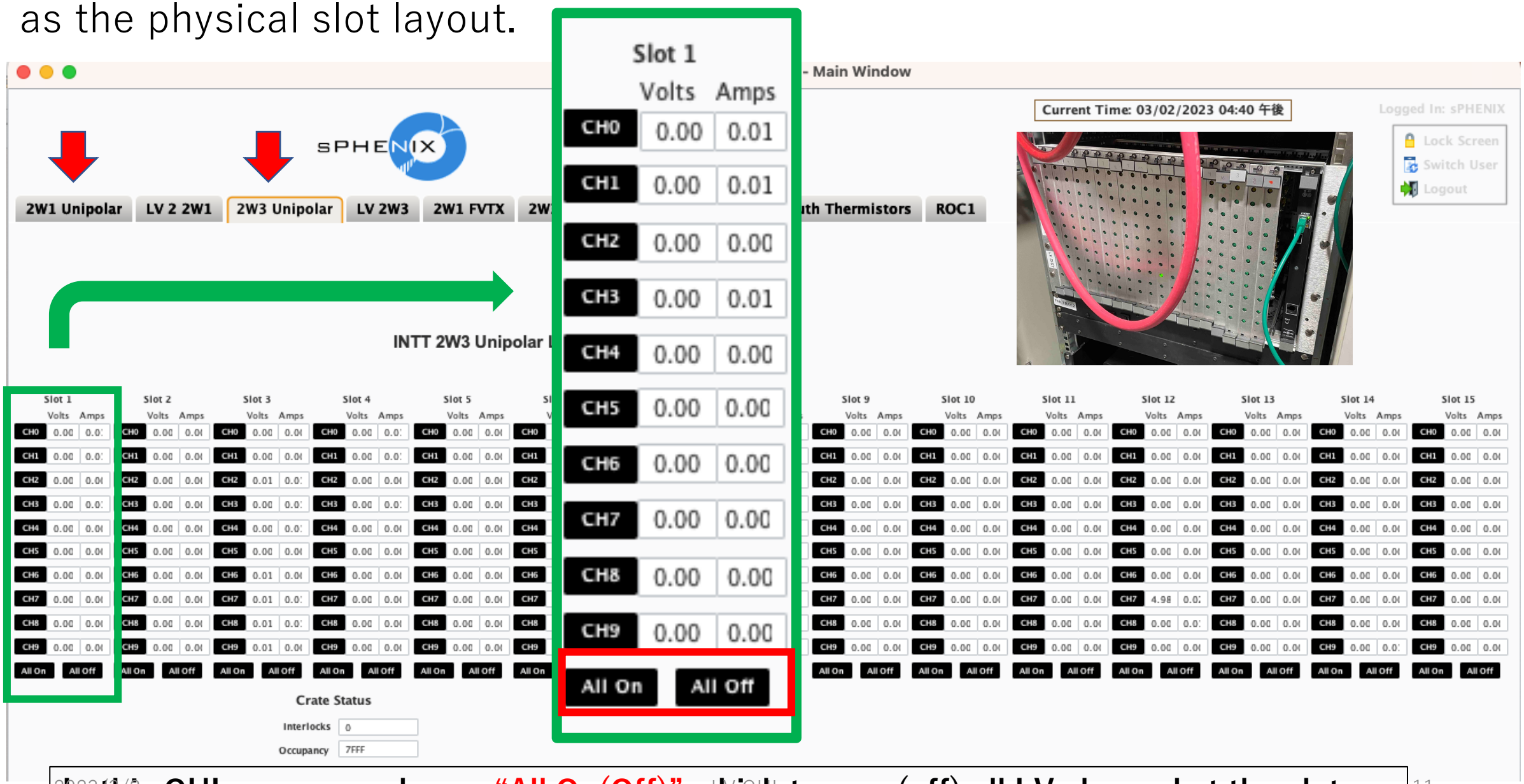
In this GUI, you can only use “All On(Off)” which turn on(off) all LV channel at the slot.

There are the GUI ”2W1 Unipolar” and “2W3 Unipolar” which line up just same as the physical slot layout.



In this GUI, you can only use “All On(Off)” which turn on(off) all LV channel at the slot.

There are the GUI "2W1 Unipolar" and "2W3 Unipolar" which line up just same as the physical slot layout.



In this GUI, you can only use "All On(Off)" which turn on(off) all LV channel at the slot.

How to operate from your computer

Procedures 1

(0)You need the setup to login to 1008 machines with public& private keys. See Martin's instruction if you have not done yet.

(1)Login to OPC0 as phnxrc user with port-forwarding.

```
~ % ssh -l phnxrc opc0.sphenix.bnl.gov -L 8088:localhost:8088
```

After entering your passphrase, you need to enter phnxrc password

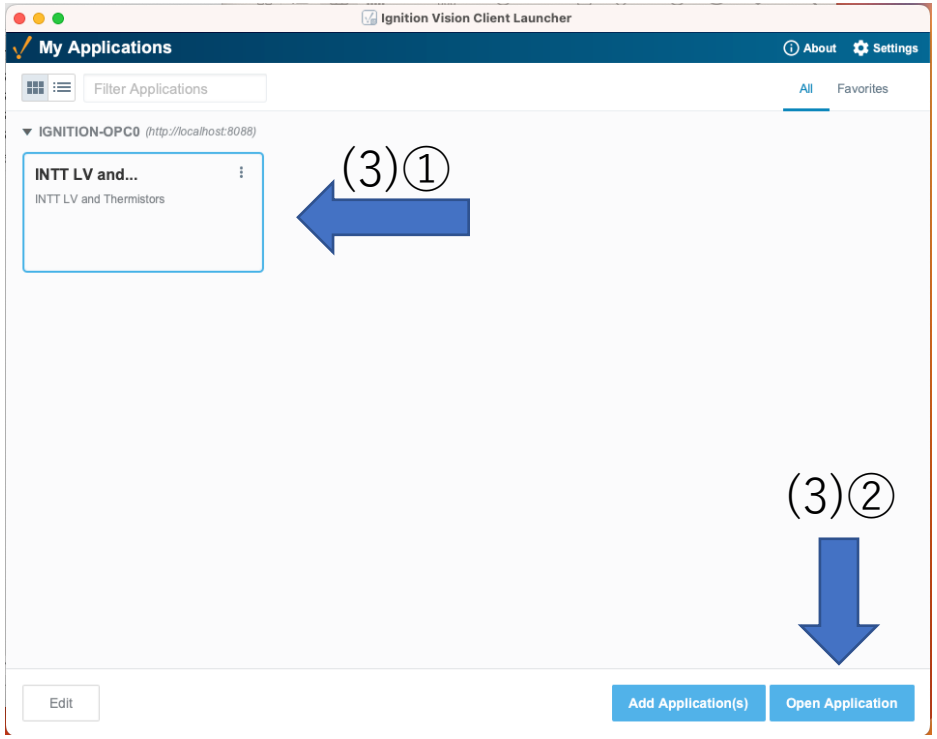
```
phnxrc@opc0.sphenix.bnl.gov's password:
```

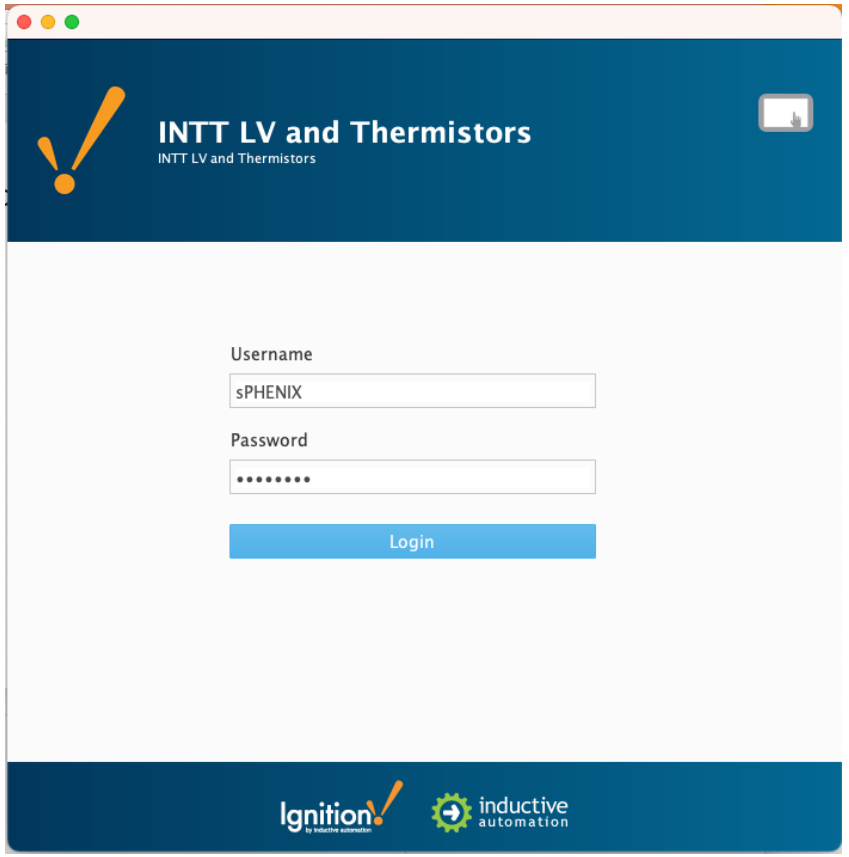
(2) Start Client Launcher. If you don't have it, you need to download.

Procedures 2

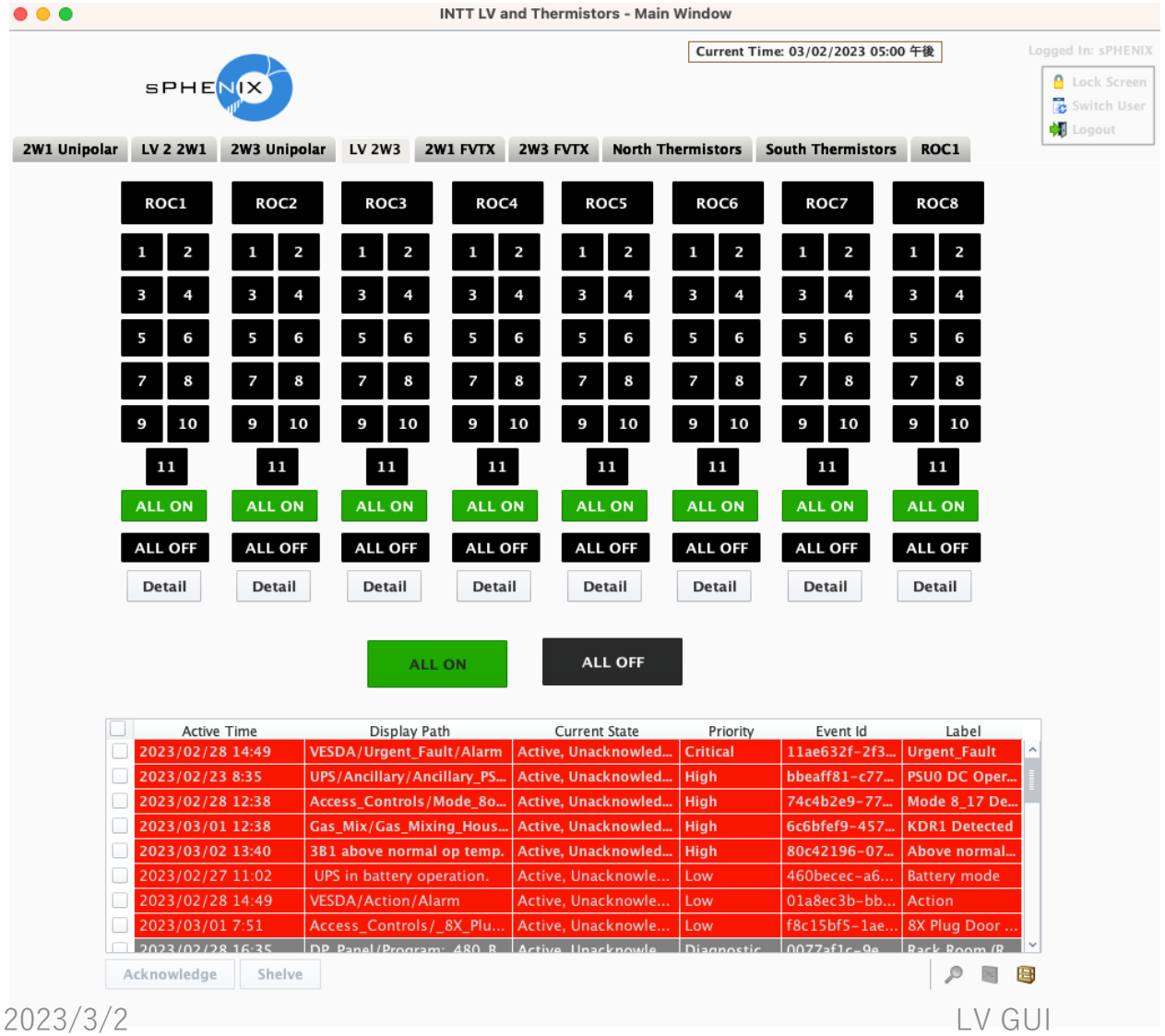
(3)①Select “INTT LV and …” and ②click “Open Application”

(4) Login as sPHENIX username





You have the GUI at Client Launcher to operate LV.



- Use only all on(off) for now.
- Be careful when turning on/off the switch from anywhere other than 1008.

Back Up

Control Flow (Goal)