

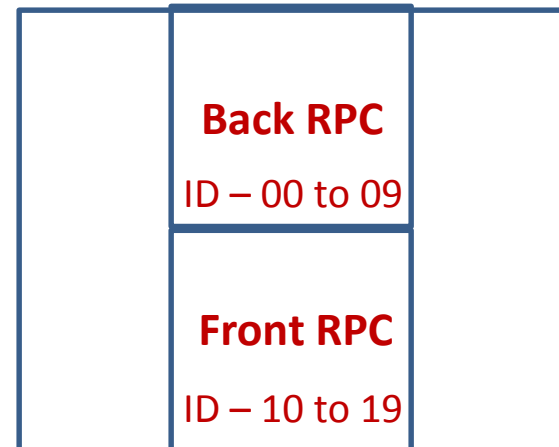
Mini ICAL Operations

K.C.Ravindran, INO Madurai

On behalf of INO Group both at
Madurai & Mumbai

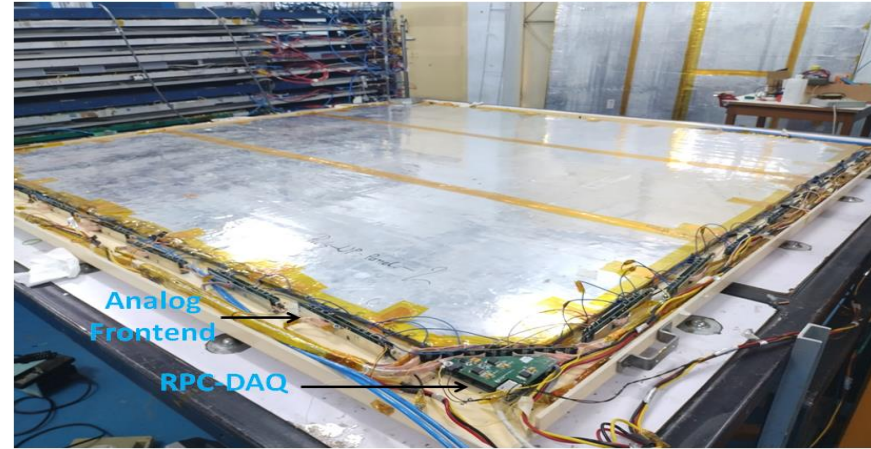
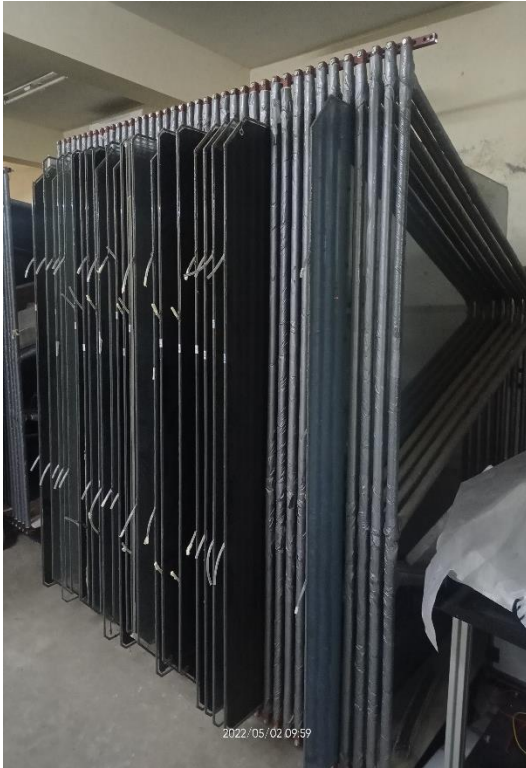
Mini-ICAL Present Status

- In Phase -1 we installed 10 RPC's and these RPC's were pushed towards the center of the magnet and data taking started during May 2018
- Phase-2 installation started in March 2020 and Pandemic started
- 2 RPC's are installed for all layers making the total number to 20 in July 2021
- Layer-0 and Layer-5 removed now for magnetic field measurements
- Layer 3 back installed with Anusparsh Preamplifier-Discriminator boards for testing and all other layers have NINO boards.
- 5 layers have HV developed by BARC, INO HV
- HV and others connected to CAEN HV supply
- Gas system from OLS to CLS



Top View of any layer

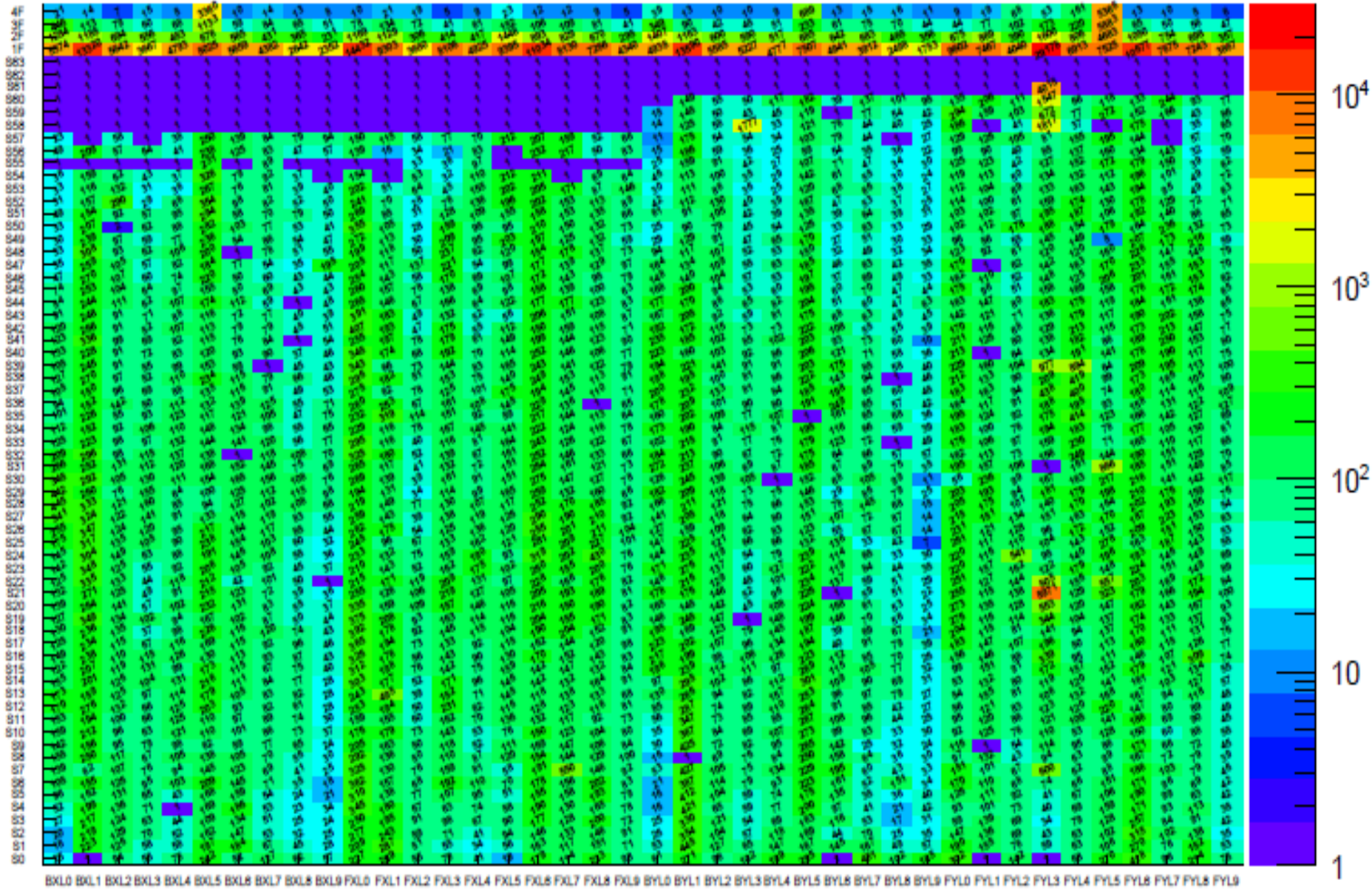
RPC Packing, testing and inserting in the layer



1. Leak test of gap at RPC rack
2. Move to A-Type trolley
3. Pack the RPC and move to the layer

noise_2d

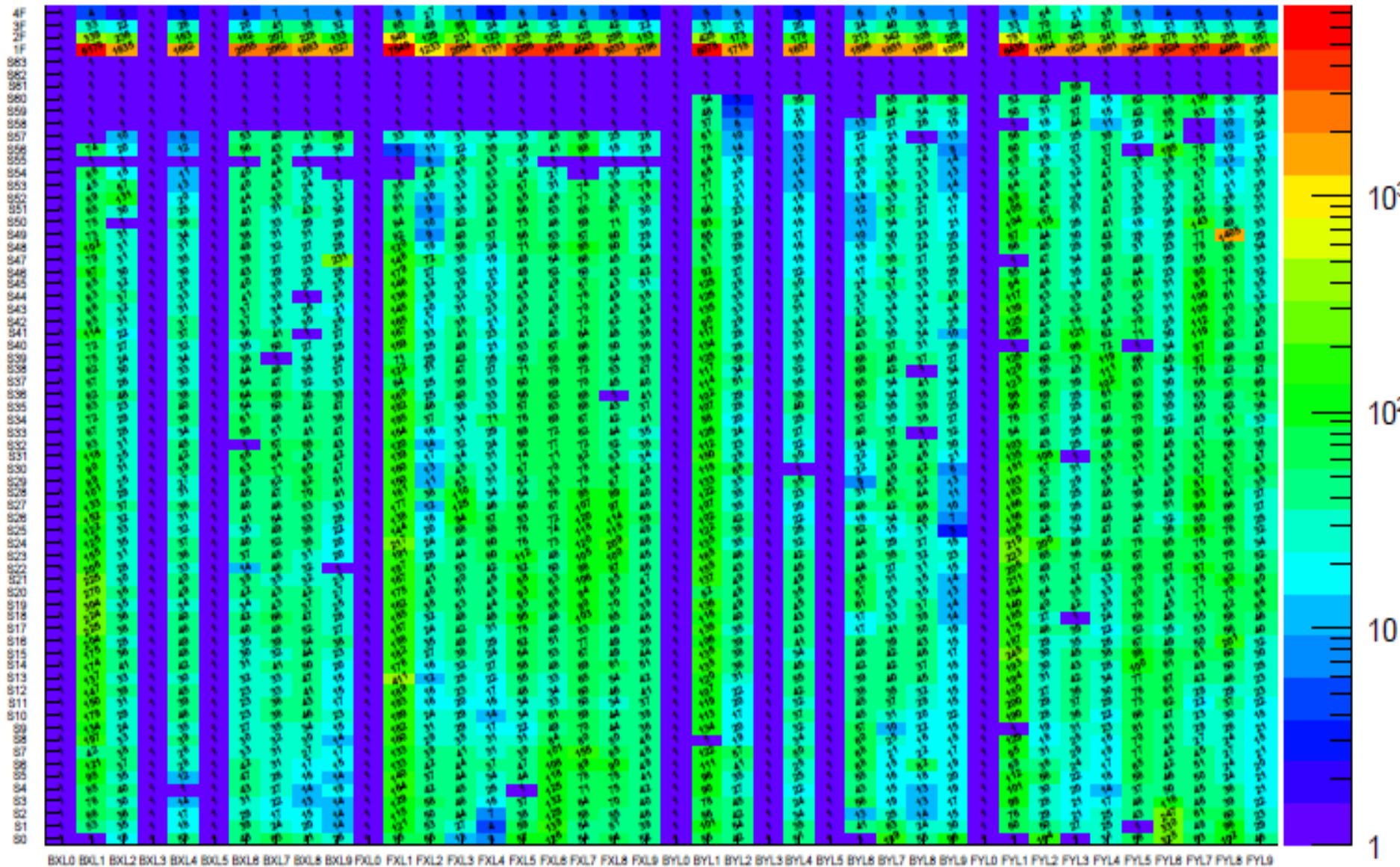
07/2021 – All 20 RPC's in stack



Present status

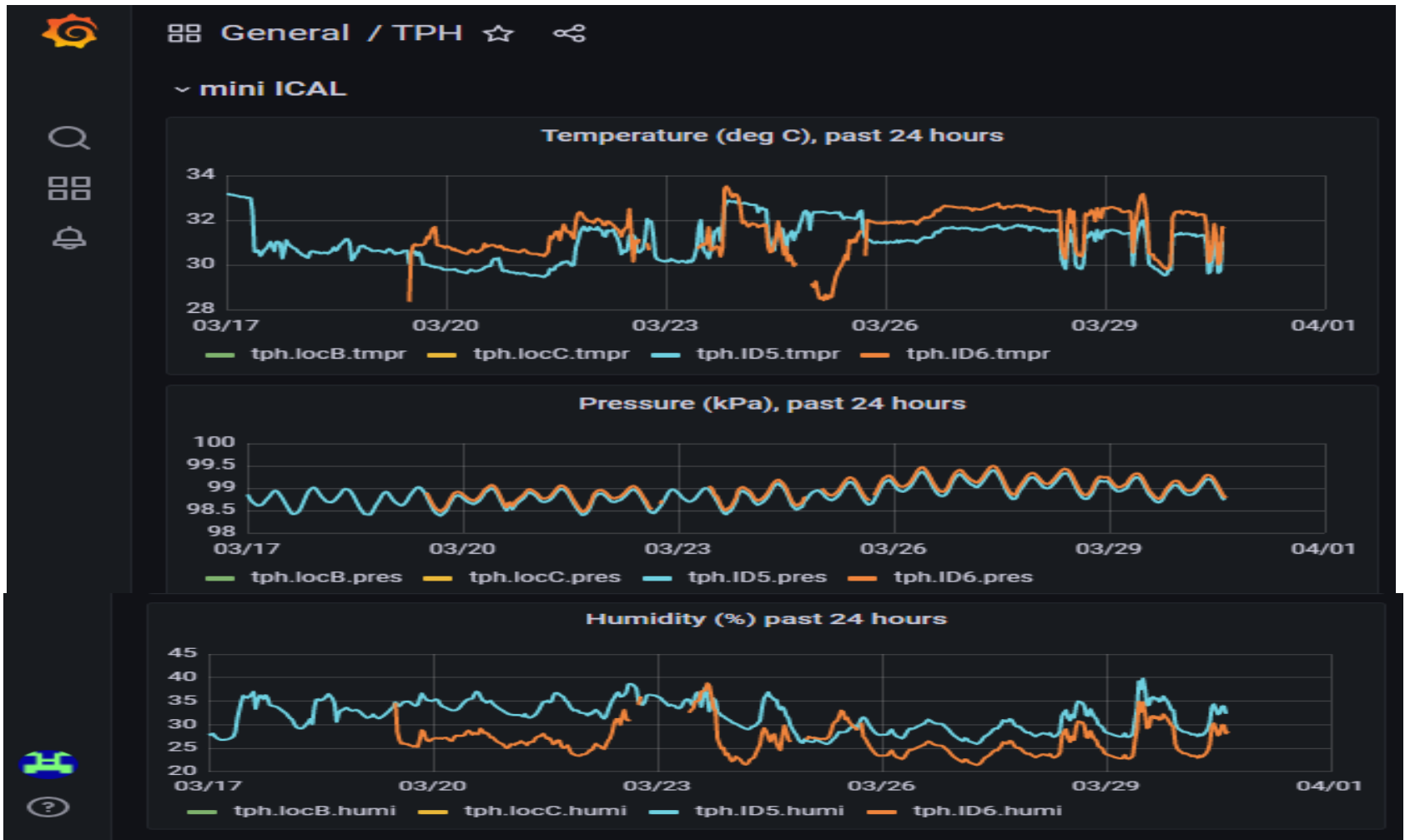
noise_2d

L0,L5 both RPC's removed
L3 Back – Under test



BX0 BX1 BX1.2 BX1.3 BX1.4 BX1.5 BX1.6 BX1.7 BX1.8 BX1.9 FX0 FX1 FX1.2 FX1.3 FX1.4 FX1.5 FX1.6 FX1.7 FX1.8 FX1.9 BY0 BY1 BY1.2 BY1.3 BY1.4 BY1.5 BY1.6 BY1.7 BY1.8 BY1.9 FY0 FY1 FY1.2 FY1.3 FY1.4 FY1.5 FY1.6 FY1.7 FY1.8 FY1.9

Nagios to Grafana to monitor Ambient Pressure, Temperature and Humidity

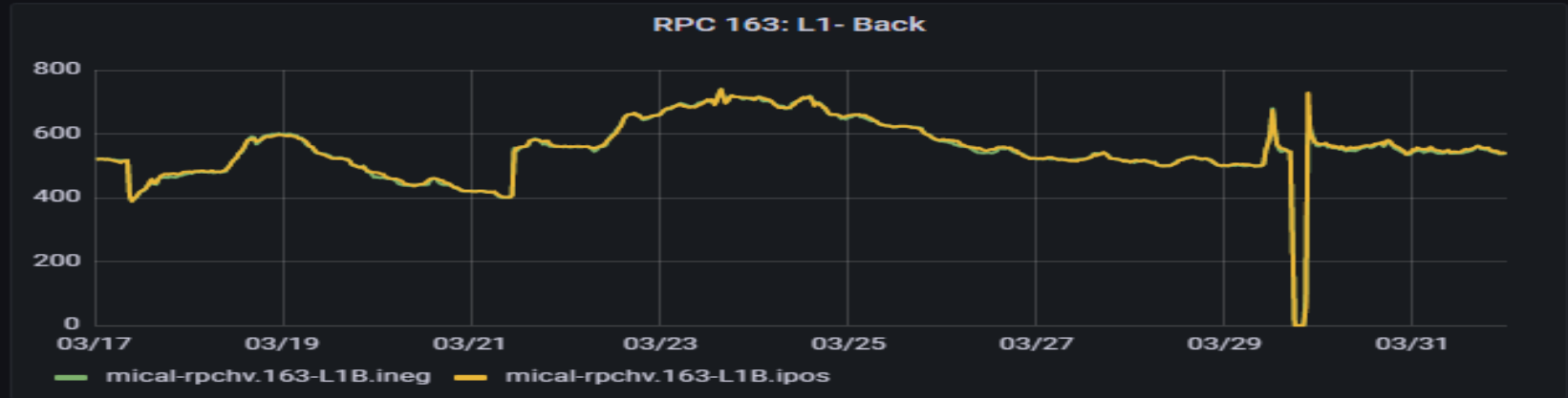


Grafana to monitor RPC Voltages and current

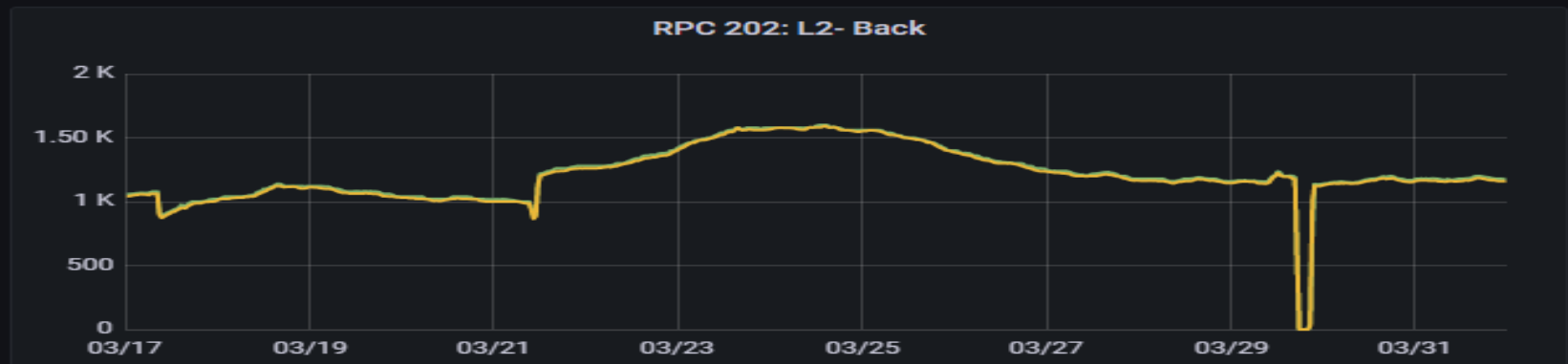
RPC Current : back Layer 1 and back Layer 2

I
nA

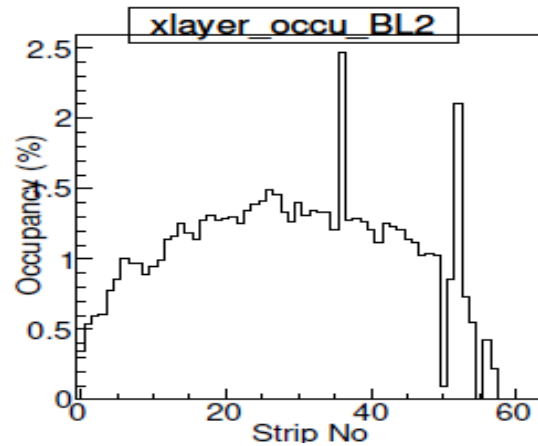
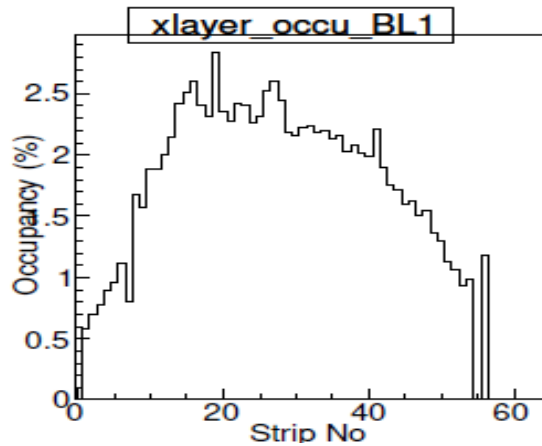
General / RPC HV: Voltages and Currents



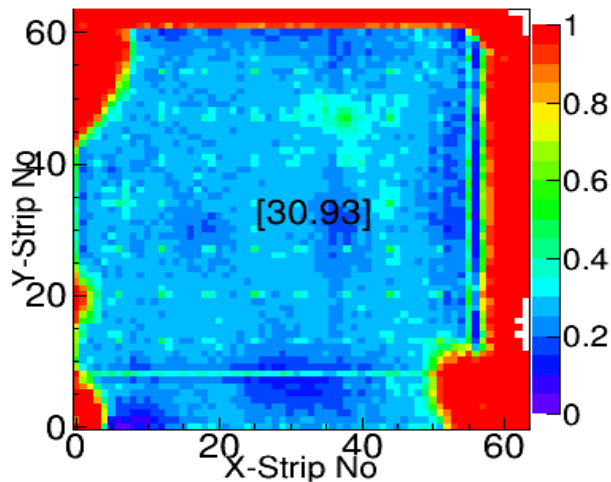
I
nA



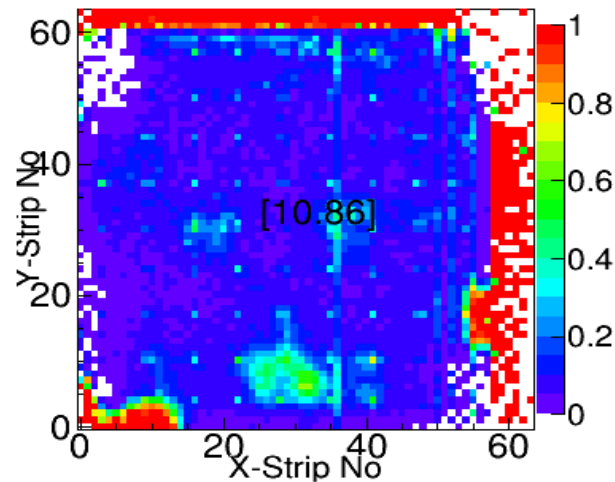
Typical Occupancy & Efficiency plots



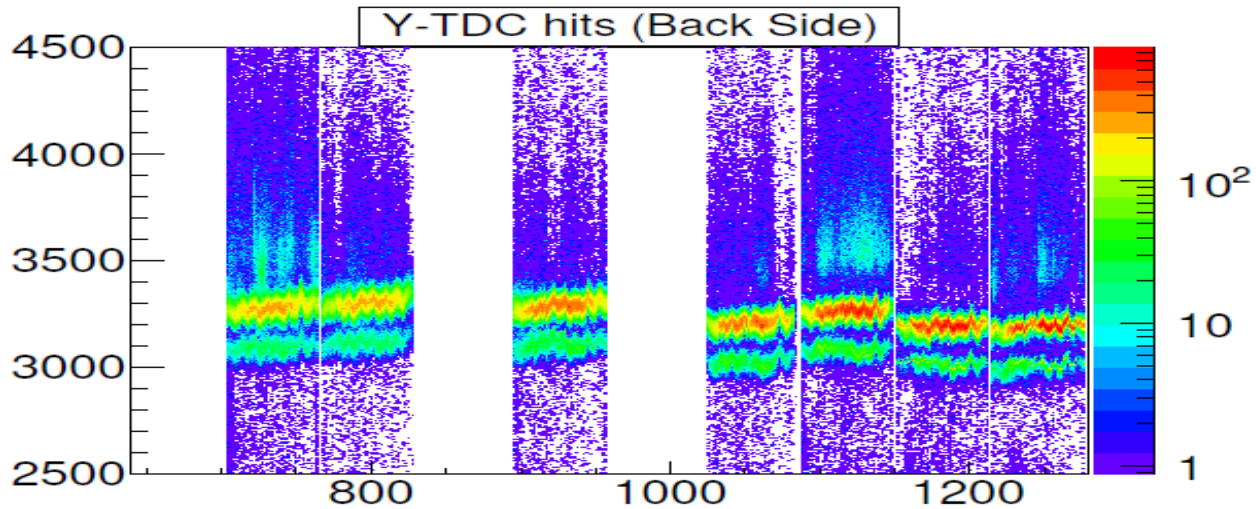
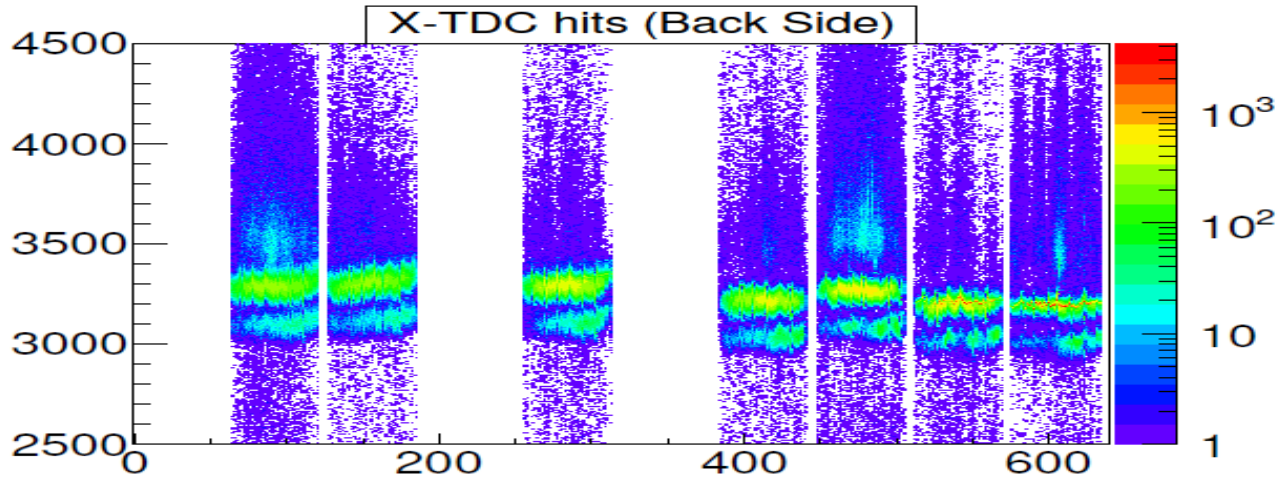
X-Inefficiency-BL1



X-Inefficiency-BL2



TDC Distributions




SETTINGS

SERVER IP: 192.168.183.80 : 5236 DATA FOLDER: D:\EventData\ROOT

UDP Endpoint: 192.168.183.10 : 4002 HEADER LENGTH: 40

File Name: 20220428_131030 SAVE MODE: ROOT

Is Acquiring: 

SAVE CONFIG

BROWSE

TRACK INFORMATION

X-Strip Chart

Layer	Channel
1.0	48
2.0	48
3.0	48
4.0	48
5.0	48
6.0	48
7.0	48
8.0	48
9.0	48
4.0	35
3.0	45

Y-Strip Chart

Layer	Channel
1.0	95
2.0	92
4.0	85
5.0	82
6.0	80
6.0	82
7.0	78
8.0	72
4.0	25

Windows Taskbar: 15:28:51 28-04-2022

SETTINGS

SERVER IP: : DATA FOLDER:

UDP Endpoint: : HEADER LENGTH:

File Name: SAVE MODE:

■
■
Is Acquiring:
SAVE CONFIG
BROWSE

TRACK INFORMATION

X-Strip Chart

Layer	Channel
9.0	5
8.0	5
7.0	5
7.0	15
6.0	5
5.0	5
4.0	5
3.0	5
2.0	5
1.0	5
1.0	15
3.0	5

Y-Strip Chart

Layer	Channel
9.0	80
8.0	85
7.0	80
7.0	90
6.0	90
6.0	100
5.0	95
4.0	100
2.0	110
1.0	115
3.0	40

Windows
Search
Taskbar
New Volume (D:)
Screenshots
ROOT - inodag@19...
Trigger_monitoring...
print screen in win...
System Tray
15:30:45
28-04-2022

Post graduate students of Mannar college, Madurai visited IICHEP on 29/03/2022



No visitors, interns were allowed during pandemic and 4 interns joined recently after pandemic

Staff at IICHEP, Madurai

- **Pethuraj**
- **Jim M John**
- **Vijaykumar**
- **Umesh Shas**
- **Rajkumar Bharati**
- **Jayakumar Ponraj**
- **Pandiraj C.**
- **Shrinadh Gobidesi**
- **Veera Padmavathi**
- **Krishnamoorthy J.**
- **Aditya Deodhar**
- **Kartik KS**
- **Kirti prakash Sharma**