

**LED Monitoring Update**  
**Calorimetry meeting May 28 2020**

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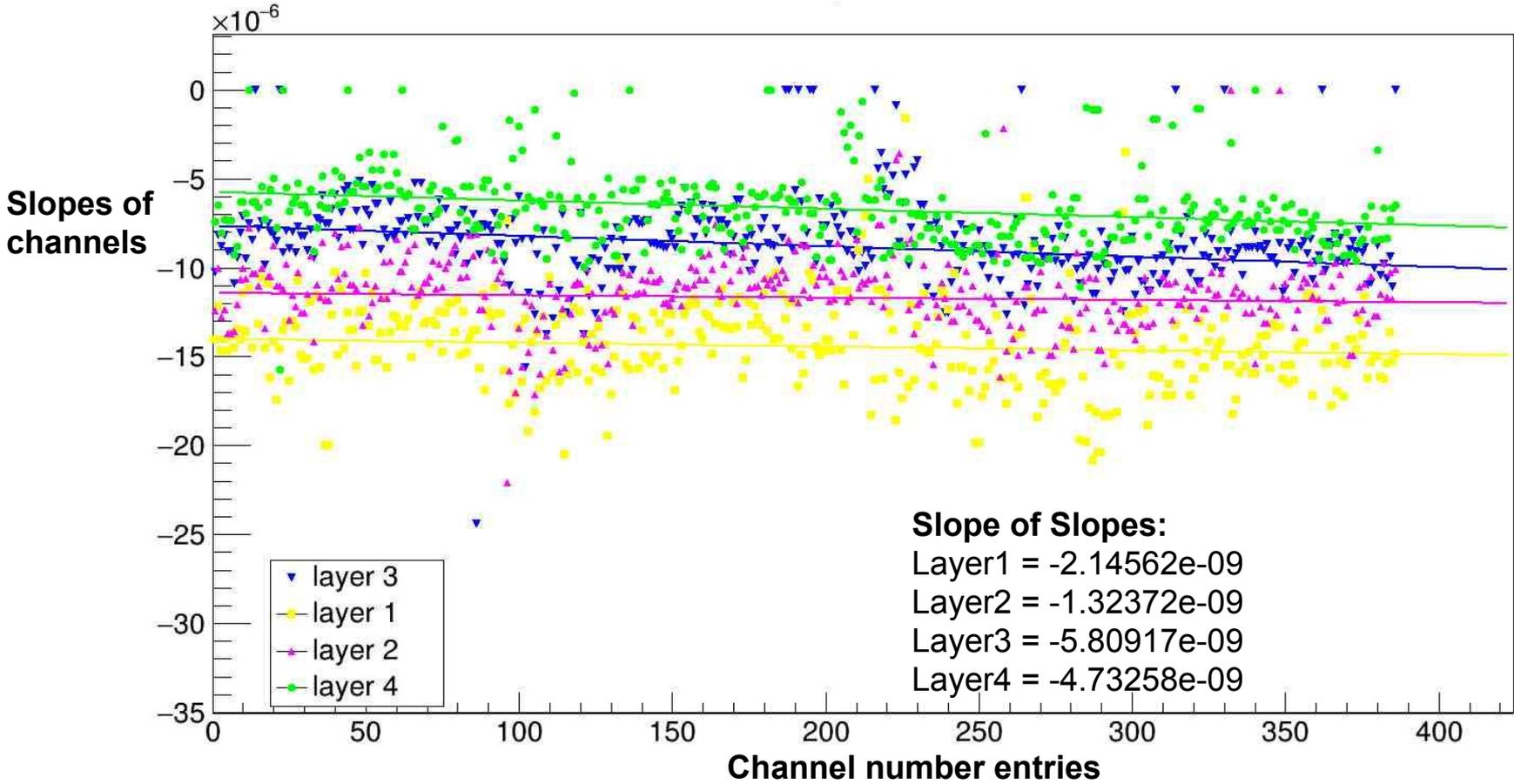
Faculty of  
Science

## Things done so far..

- Found slight slopes for the channels over Run number in LED data (LED plots)
- The plots having slopes of channels were fitted (Slope of slopes)
- Checked the failed fits
- Checking batch wise (Batch 1,2 and 3 over)
- Checked Temp (&other epics variable dependence)

# Whole Run period plots

## Downstream Layers

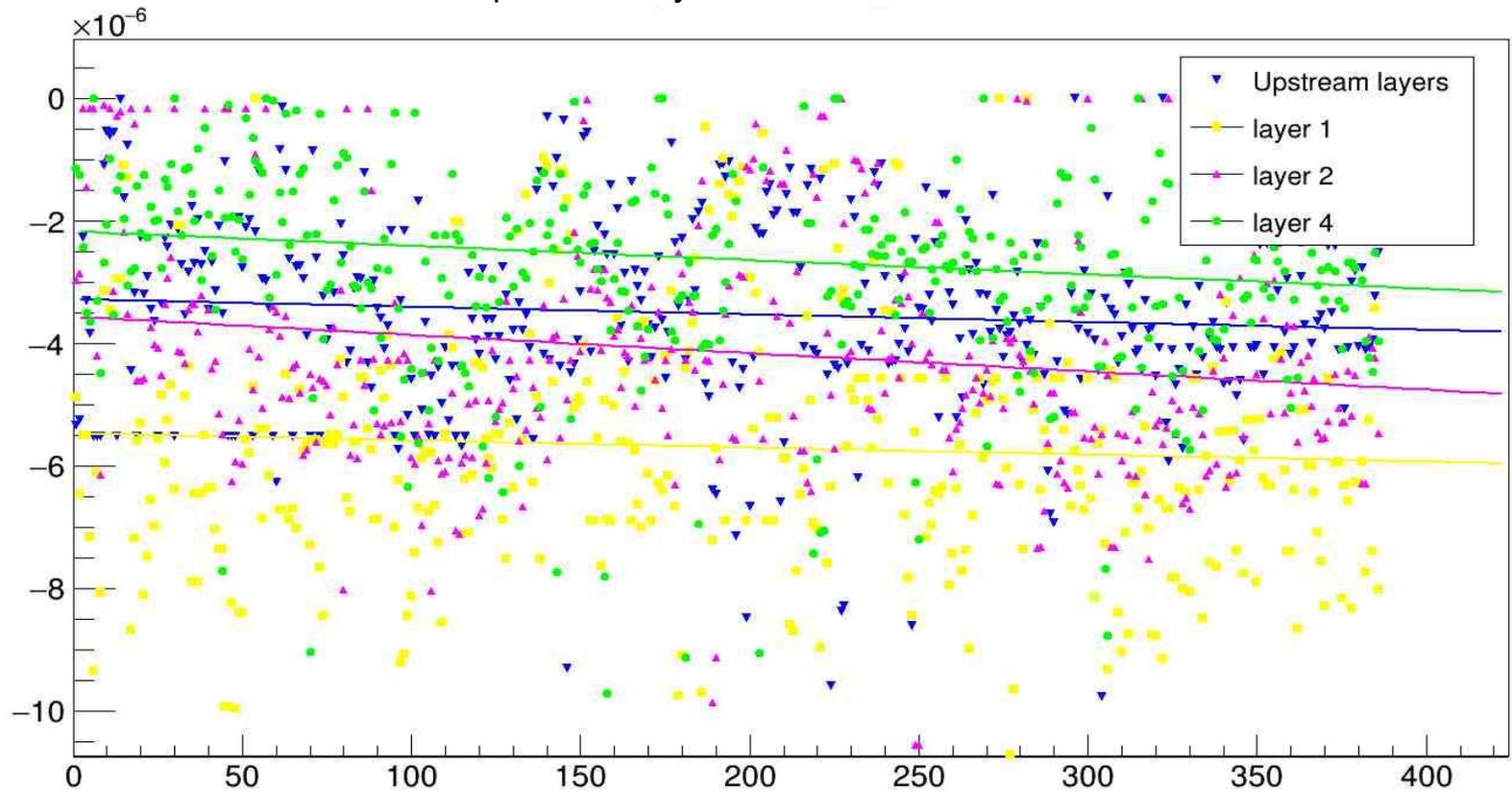


192 Channels having two entries each (US LED and DS LED) = **384 entries**

# Whole Run period plots

## Upstream Layers

Slopes  
of  
channels

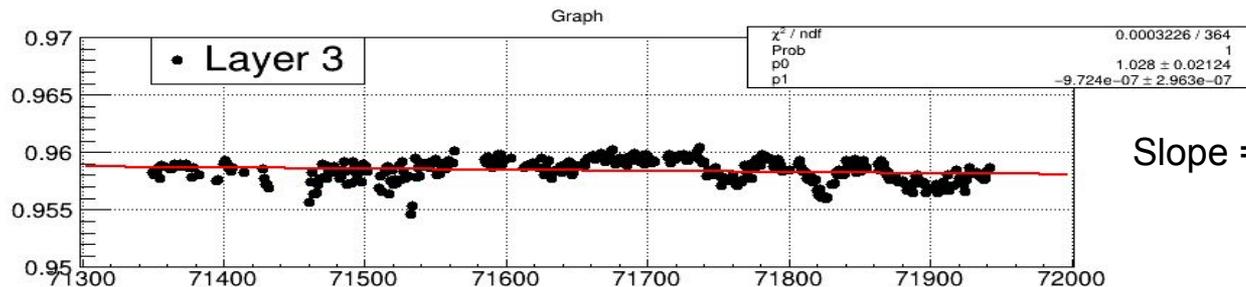
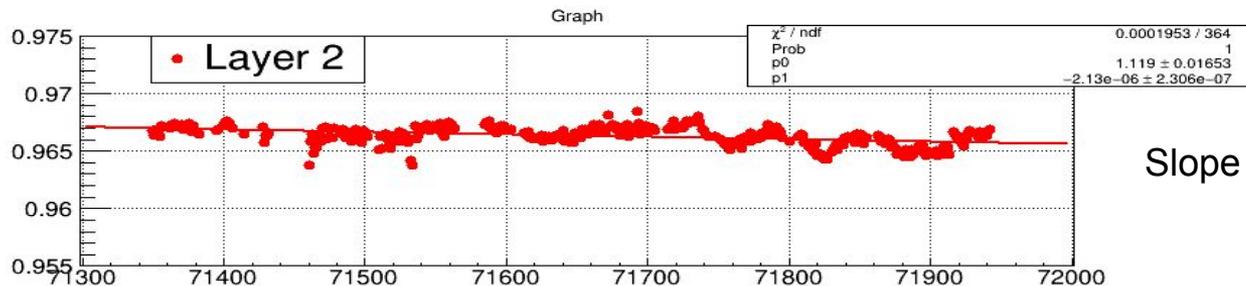
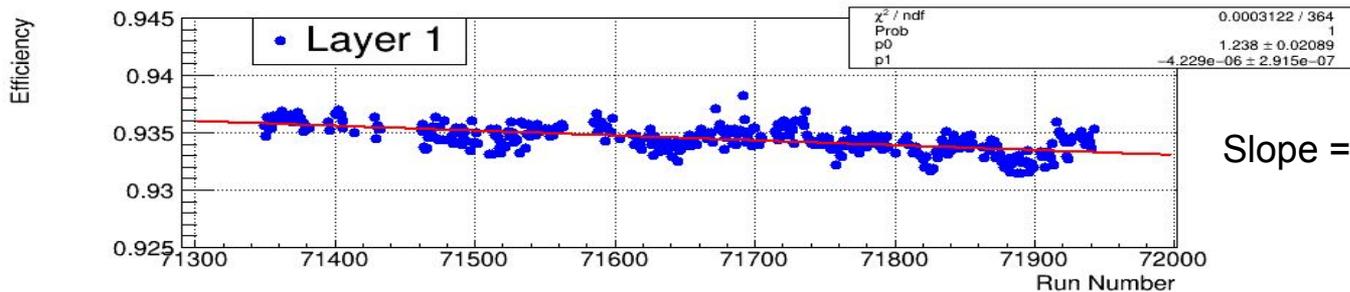


Number of channel entries

Slope of slopes

- Layer1 =  $-1.15773e-09$
- Layer2 =  $-3.03875e-09$
- Layer3 =  $-1.25159e-09$
- Layer4 =  $-2.33631e-09$

UP stream  
Efficiency



Batch 1

Average over whole run period  
US LED

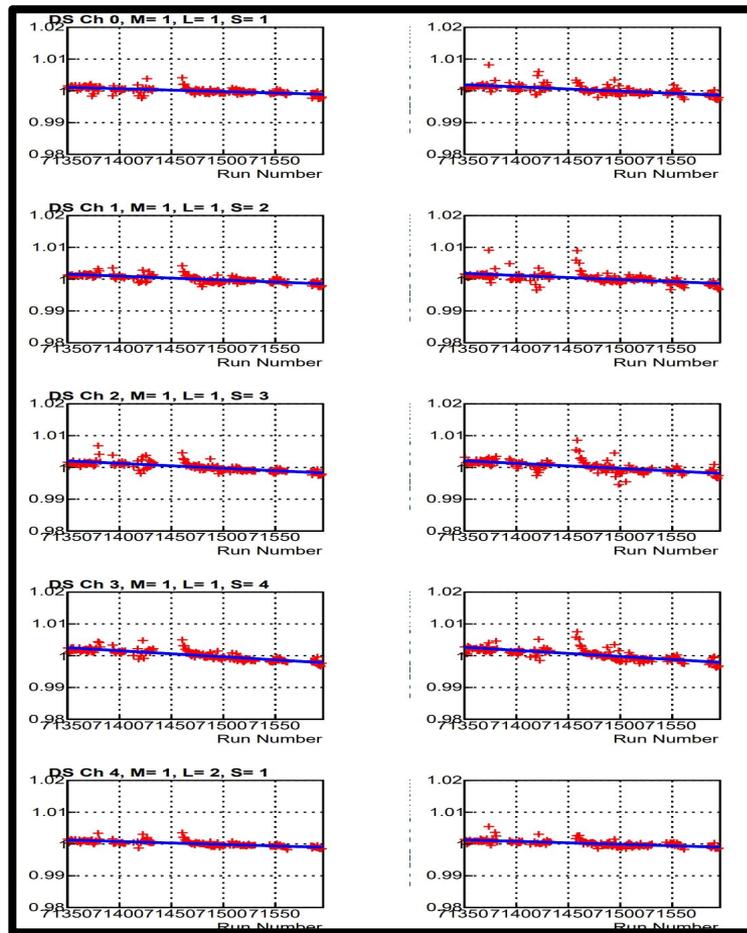
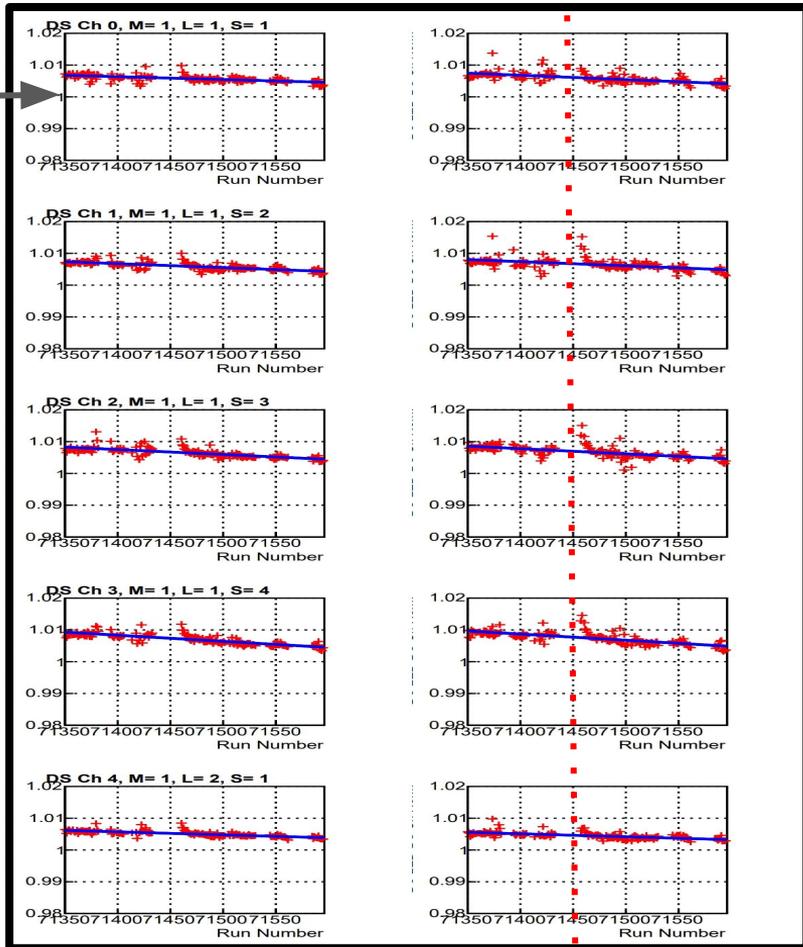
DS LED

Average over Batch 1  
US LED

DS LED

Shifted  
from 1

Y Axis  
0.98  
To  
1.02



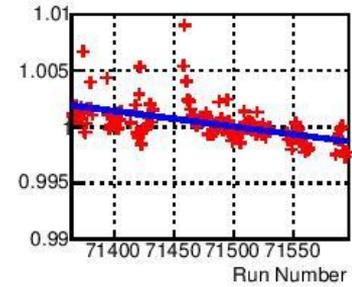
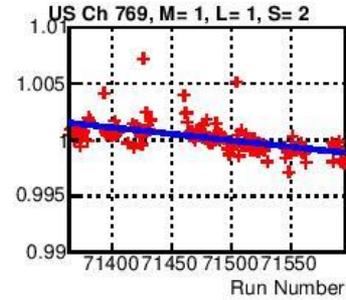
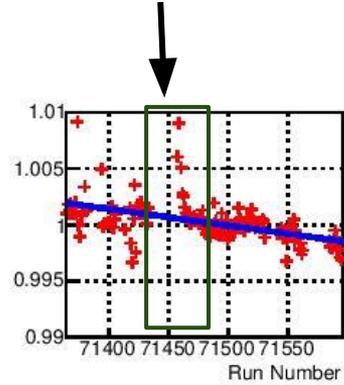
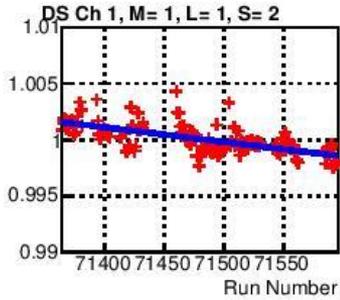
Downstream SiPMs

150 nA to 250 nA (from 71464)

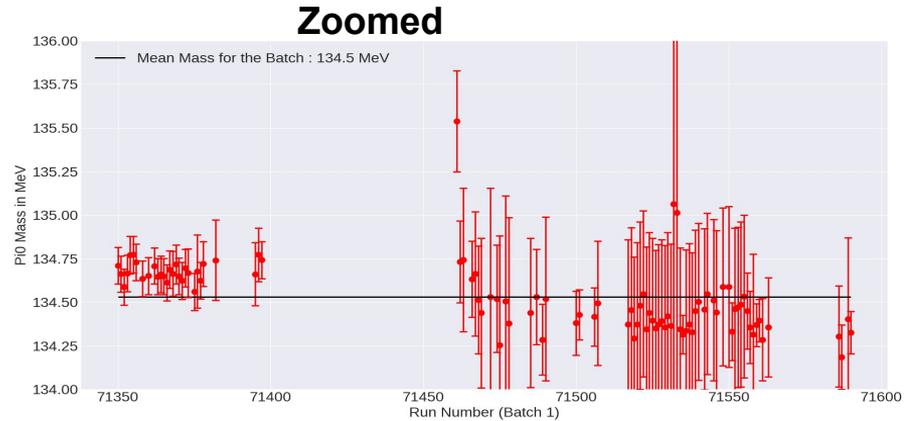
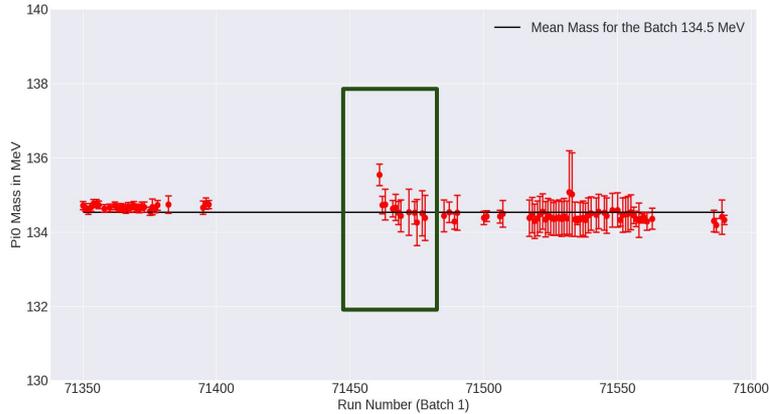
Downstream SiPMs

150 nA(71350-71463) to 250 nA ( 71464-71591)

## Zoomed plots



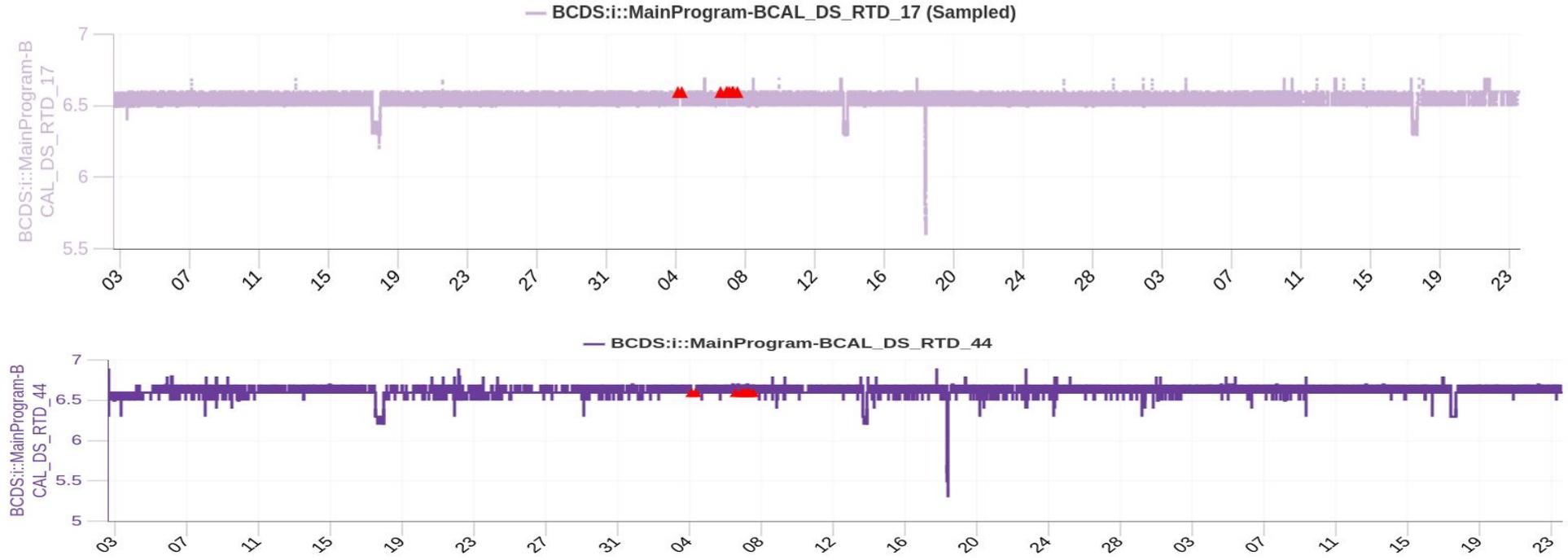
Pi0 mass distribution over Run number For Batch 1 (from Karthik )





## EPICS variables check

- Checked EPICS variables (Temp , Humidity) from Jan 04 till March 23 for 96 RTDs.
- Things look normal. Doesn't have any fluctuations.
- Below are some sample plots



## **Next..**

- Other batches
- Investigation is still going on