

LED Monitoring Update
Calorimetry meeting 17 Aug 2022

Varun Neelamana

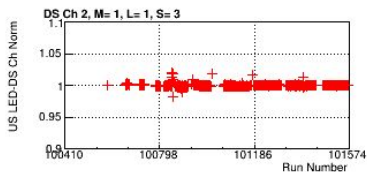
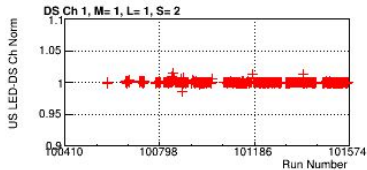
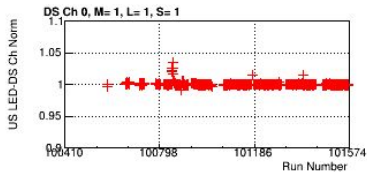


University
of Regina

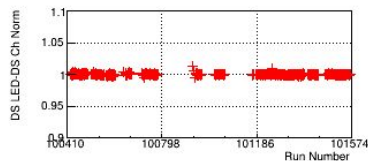
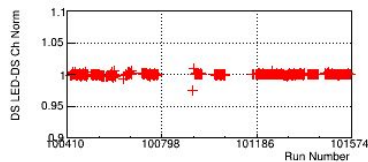
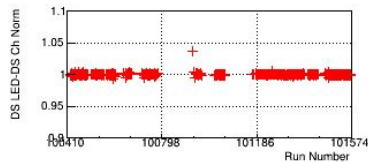


Faculty of
Science

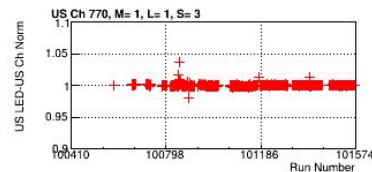
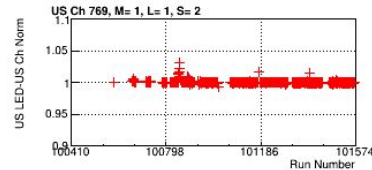
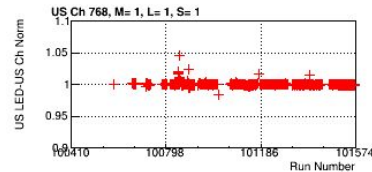
US LED



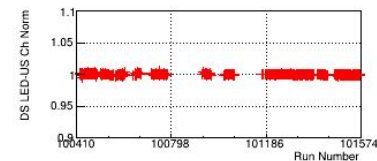
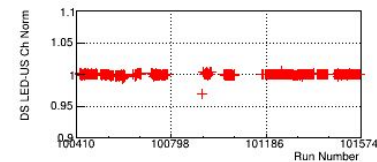
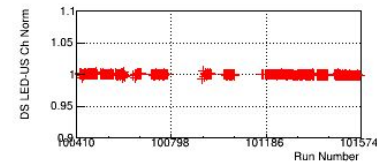
DS LED



US LED



DS LED



Y Axis

0.9
To
1.1

Run Number



Downstream SiPMs

Upstream SiPMs

100410- 101574

- LED triggers not firing issue. Solved for now
- SiPMs are looking normal

SiPM issues

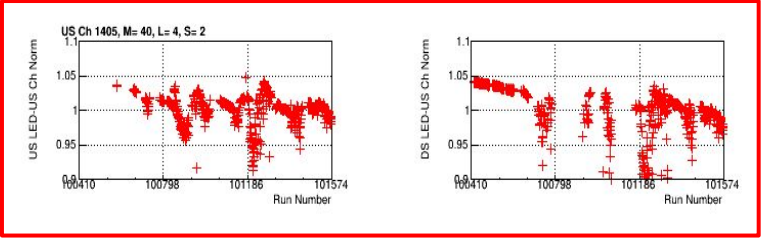
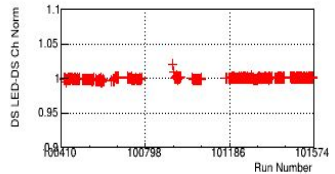
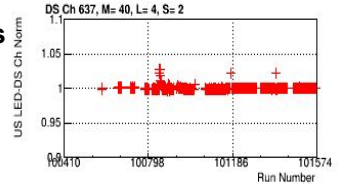
US LED

DS LED

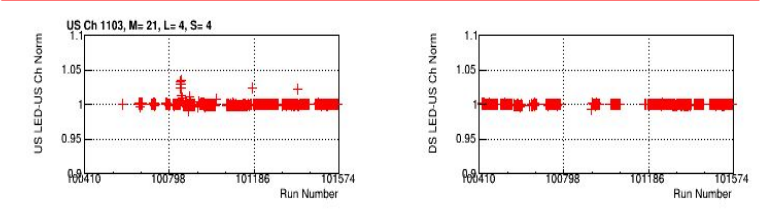
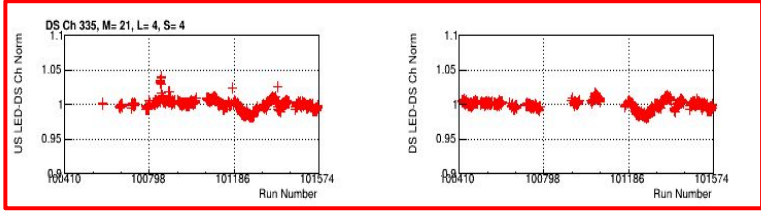
US LED

DS LED

Y Axis
0.9
To
1.1



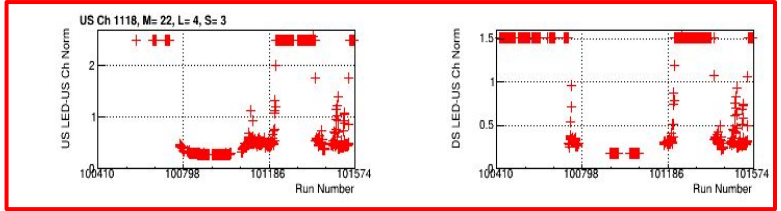
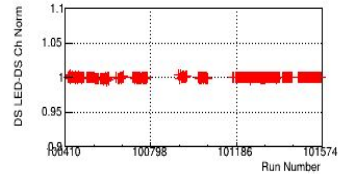
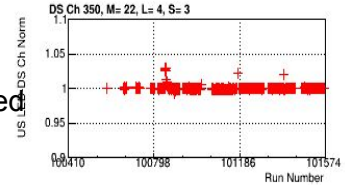
Ch=1405 (US)
M=40,L=4,S=2
>10% fluctuation



Ch=335 (US)
M=21,L=4,S=4
3% fluctuation

Ch 1118

Y Axis
Unzoomed



Ch=1118 (US)
M=22,L=4,S=3
Not using
anymore ?

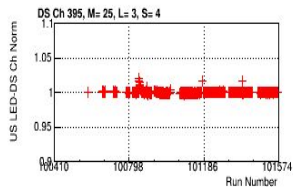
Run Number

Downstream SiPMs

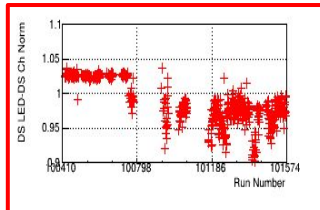
Upstream SiPMs

LED issues

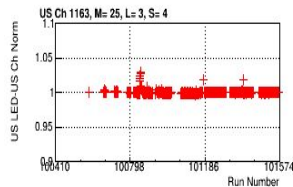
US LED



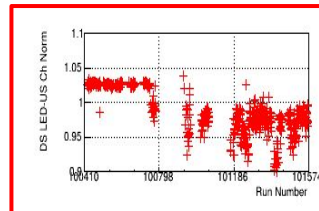
DS LED



US LED



DS LED



98 DN LEDs
fluctuations

18 UP LEDs
fluctuations

Run Number



Similar patterns for 2 & 4 plot (same LED)



Downstream SiPMs

Upstream SiPMs

Conclusions

- SiPM and LED operation mostly nominal for CPP runs except for LED trigger issue
- SiPMs 1405, 335 had deviations
- 116 LEDs has fluctuations (previously reported)