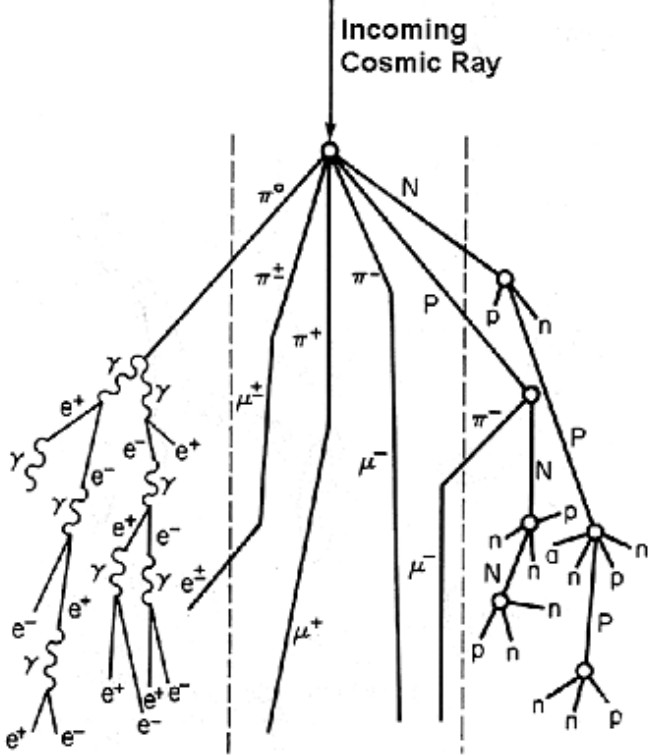
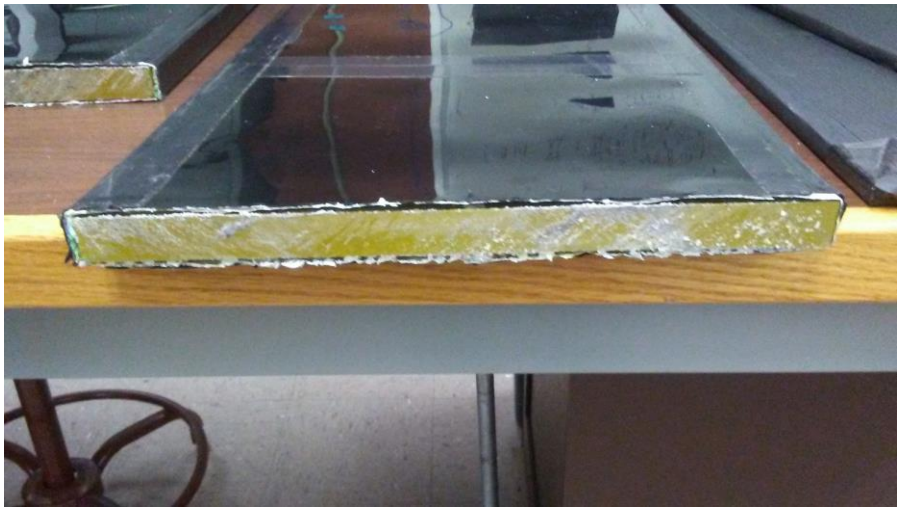
REU final presentation

Josh, Nikki, and Garrett



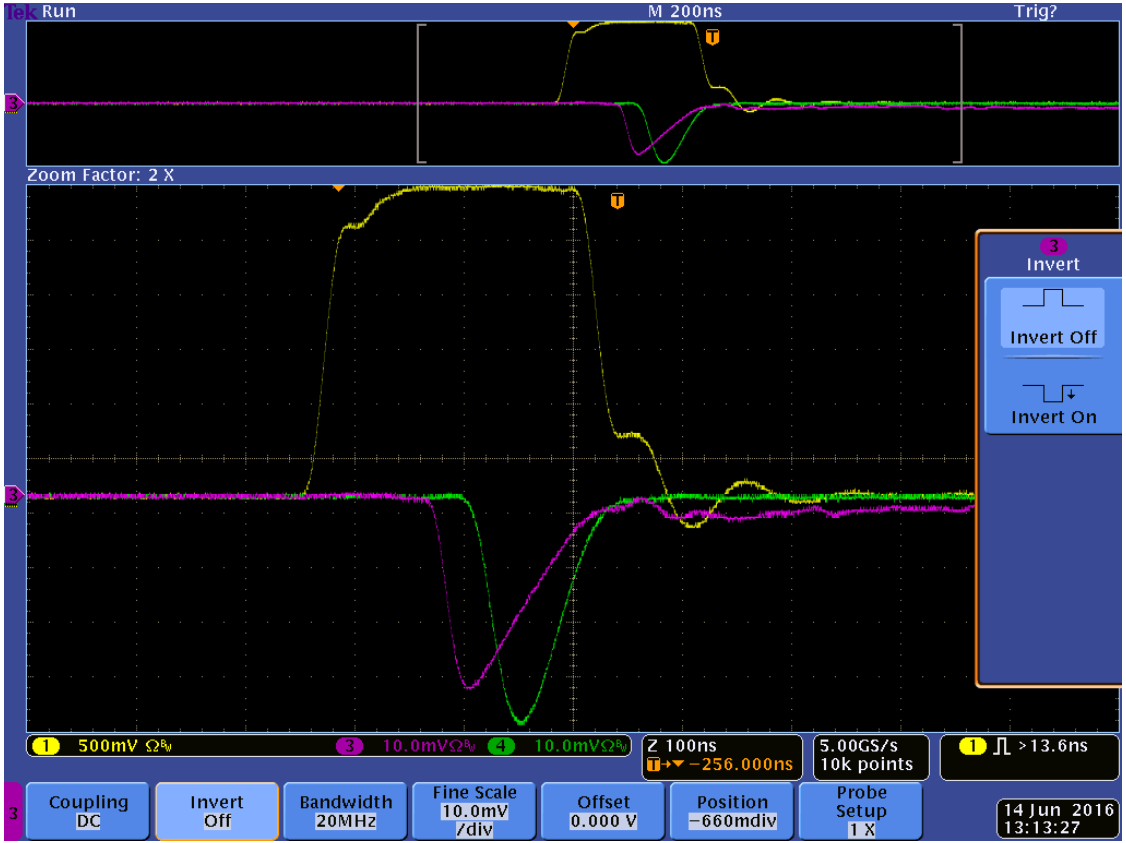
KEY

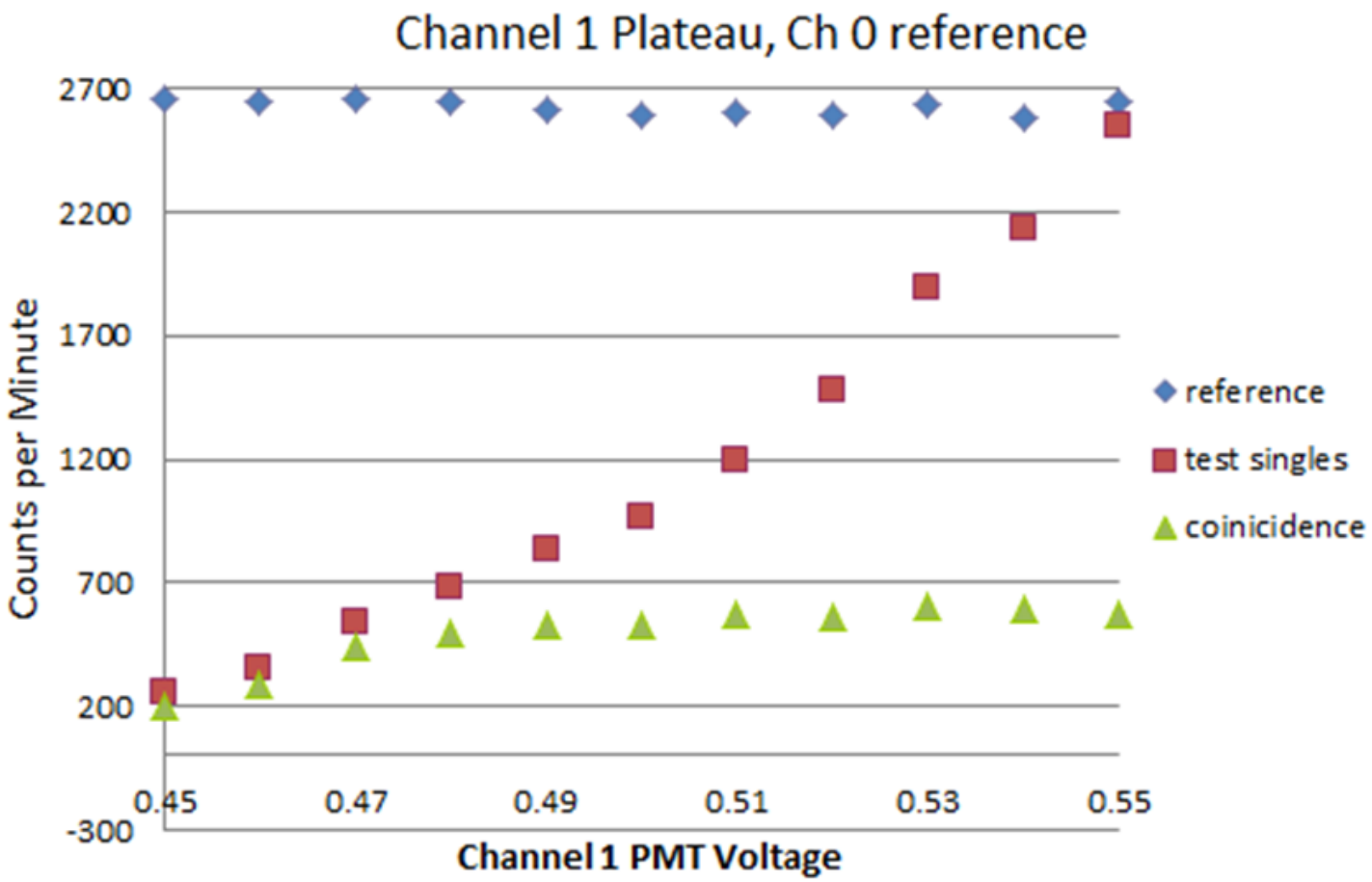
P	Proton	e	Electron
n	Neutron	μ	Muon
π	Pion	γ	Photon

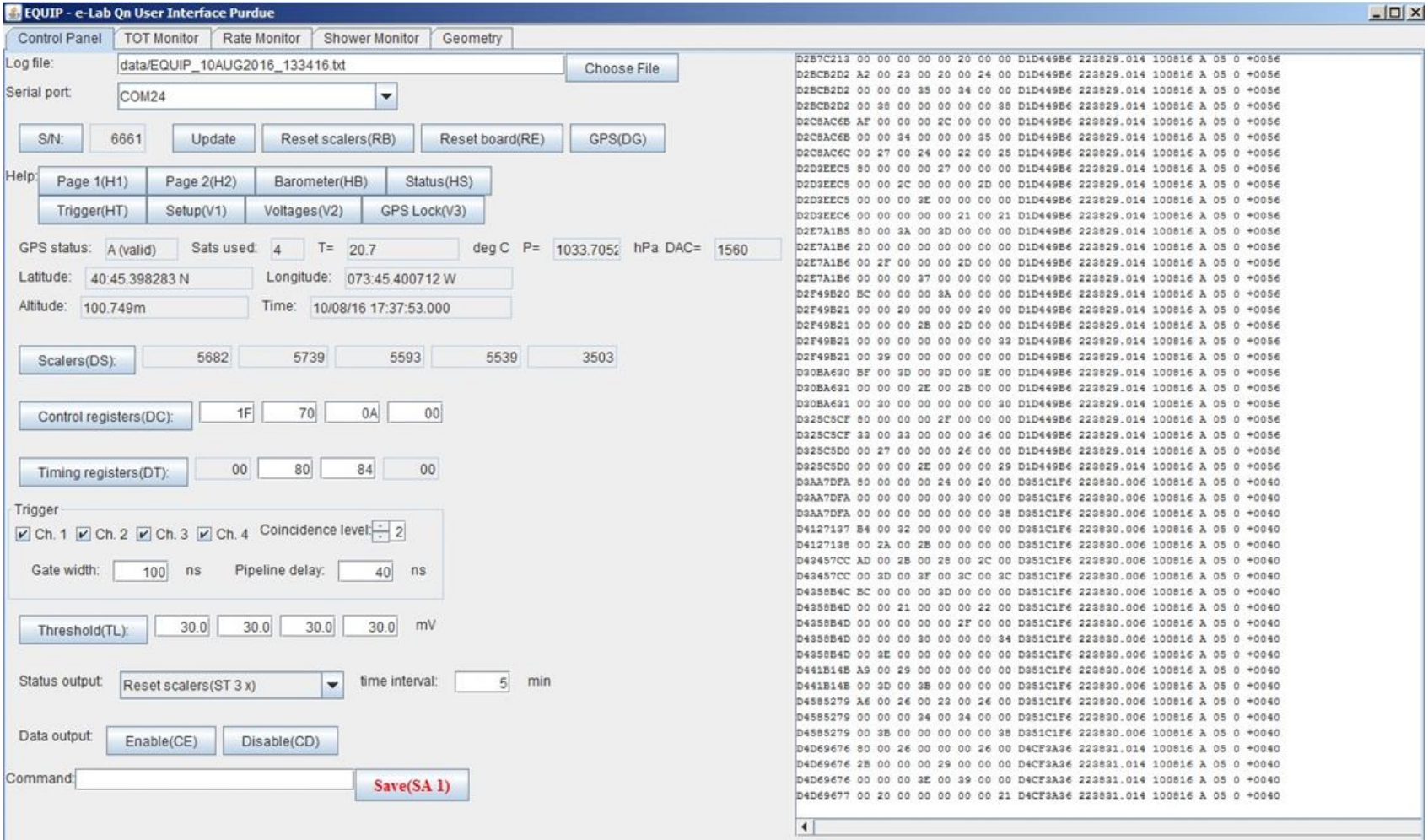


Pmt Testing

Signal

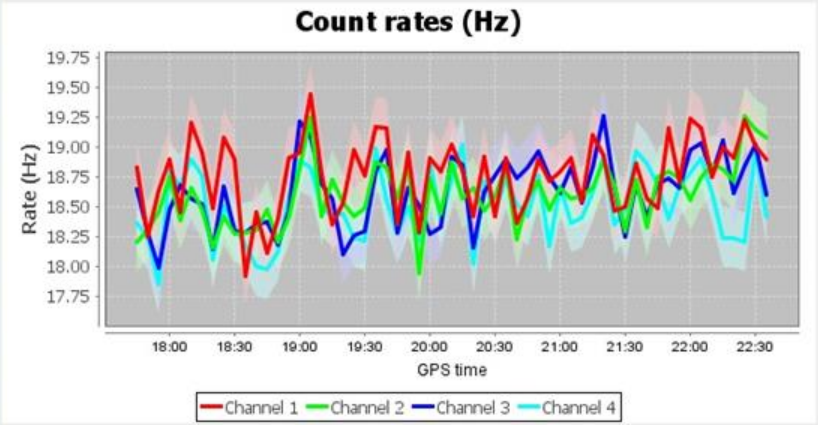

Tek Run
M 200ns
Trig?
Zoom Factor: 2 X
3
Invert
Invert Off
Invert On
1 500mV
3 10.0mV
4 10.0mV
Z 100ns
−256.000ns
5.00GS/s
10k points
1 >13.6ns
Coupling
DC
Invert
Off
Bandwidth
20MHz
Fine Scale
10.0mV
/div
Offset
0.000 V
Position
−660mdiv
Probe
Setup
1 X
14 Jun 2016
13:13:27

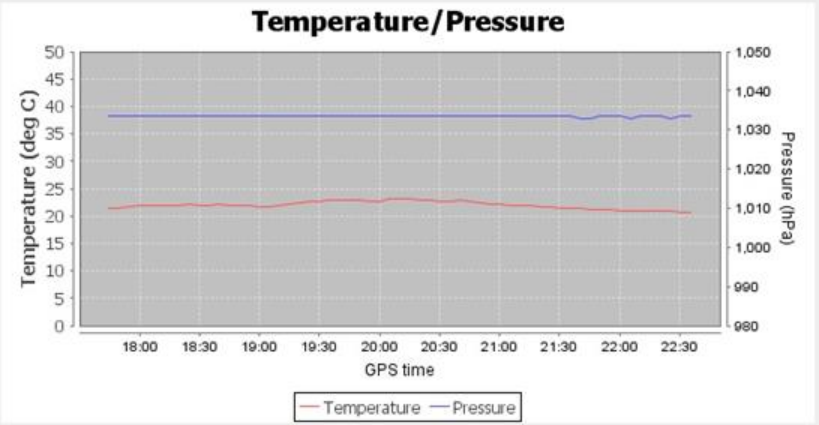

Channel 1 Plateau, Ch 0 reference
2700
2200
1700
1200
700
200
-300
Counts per Minute
0.45
0.47
0.49
0.51
0.53
0.55
Channel 1 PMT Voltage
reference
test singles
coinicidence

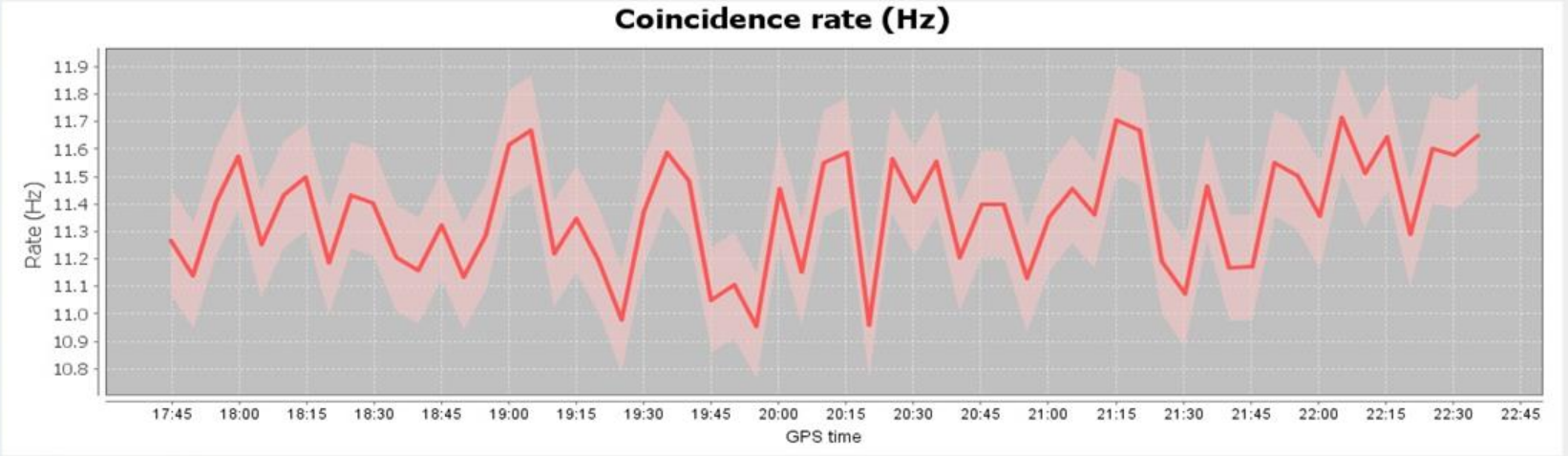

EQUIP - e-Lab Qn User Interface Purdue
Control Panel
TOT Monitor
Rate Monitor
Shower Monitor
Geometry
Log file:
data/EQUIP_10AUG2016_133416.txt
Choose File
Serial port:
COM24
S/N:
6661
Update
Reset scalers(RB)
Reset board(RE)
GPS(DG)
Help:
Page 1(H1)
Page 2(H2)
Barometer(HB)
Status(HS)
Trigger(HT)
Setup(V1)
Voltages(V2)
GPS Lock(V3)
GPS status:
A (valid)
Sats used:
4
T=
20.7
deg C
P=
1033.7052
hPa
DAC=
1560
Latitude:
40:45.398283 N
Longitude:
073:45.400712 W
Altitude:
100.749m
Time:
10/08/16 17:37:53.000
Scalers(DS):
5682
5739
5593
5539
3503
Control registers(DC):
1F
70
0A
00
Timing registers(DT):
00
80
84
00
Trigger
Ch. 1
Ch. 2
Ch. 3
Ch. 4
Coincidence level:
2
Gate width:
100
ns
Pipeline delay:
40
ns
Threshold(TL):
30.0
30.0
30.0
30.0
mV
Status output:
Reset scalers(ST 3 x)
time interval:
5
min
Data output:
Enable(CE)
Disable(CD)
Command:
Save(SA 1)
D2B7C213 00 00 00 00 00 20 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2BCB2D2 A2 00 23 00 20 00 24 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2BCB2D2 00 00 00 35 00 34 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2BCB2D2 00 38 00 00 00 00 00 38 D1D449B6 223829.014 100816 A 05 0 +0056
D2C8AC6B AF 00 00 00 2C 00 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2C8AC6B 00 00 34 00 00 00 35 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2C8AC6C 00 27 00 24 00 22 00 25 D1D449B6 223829.014 100816 A 05 0 +0056
D2D3EEC5 80 00 00 00 27 00 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2D3EEC5 00 00 2C 00 00 00 2D 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2D3EEC5 00 00 00 3E 00 00 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2D3EEC6 00 00 00 00 00 21 00 21 D1D449B6 223829.014 100816 A 05 0 +0056
D2E7A1B5 80 00 3A 00 3D 00 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2E7A1B6 20 00 00 00 00 00 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2E7A1B6 00 2F 00 00 00 2D 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2E7A1B6 00 00 00 37 00 00 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2F49B20 BC 00 00 00 3A 00 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2F49B21 00 00 20 00 00 00 20 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2F49B21 00 00 00 2B 00 2D 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D2F49B21 00 00 00 00 00 00 00 33 D1D449B6 223829.014 100816 A 05 0 +0056
D2F49B21 00 39 00 00 00 00 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D30BA630 BF 00 3D 00 3D 00 3E 00 D1D449B6 223829.014 100816 A 05 0 +0056
D30BA631 00 00 00 2E 00 2B 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D30BA631 00 30 00 00 00 00 00 30 D1D449B6 223829.014 100816 A 05 0 +0056
D325C5CF 80 00 00 00 2F 00 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D325C5CF 33 00 33 00 00 00 36 00 D1D449B6 223829.014 100816 A 05 0 +0056
D325C5D0 00 27 00 00 00 26 00 00 D1D449B6 223829.014 100816 A 05 0 +0056
D325C5D0 00 00 00 2E 00 00 00 29 D1D449B6 223829.014 100816 A 05 0 +0056
D3AA7DFA 80 00 00 00 24 00 20 00 D351C1F6 223830.006 100816 A 05 0 +0040
D3AA7DFA 00 00 00 00 00 30 00 00 D351C1F6 223830.006 100816 A 05 0 +0040
D3AA7DFA 00 00 00 00 00 00 00 38 D351C1F6 223830.006 100816 A 05 0 +0040
D4127137 B4 00 32 00 00 00 00 00 D351C1F6 223830.006 100816 A 05 0 +0040
D4127138 00 2A 00 2B 00 00 00 00 D351C1F6 223830.006 100816 A 05 0 +0040
D43457CC AD 00 2B 00 28 00 2C 00 D351C1F6 223830.006 100816 A 05 0 +0040
D43457CC 00 3D 00 3F 00 3C 00 3C D351C1F6 223830.006 100816 A 05 0 +0040
D4358B4C BC 00 00 00 3D 00 00 00 D351C1F6 223830.006 100816 A 05 0 +0040
D4358B4D 00 00 21 00 00 00 22 00 D351C1F6 223830.006 100816 A 05 0 +0040
D4358B4D 00 00 00 00 00 2F 00 00 D351C1F6 223830.006 100816 A 05 0 +0040
D4358B4D 00 00 00 30 00 00 00 34 D351C1F6 223830.006 100816 A 05 0 +0040
D4358B4D 00 3E 00 00 00 00 00 00 D351C1F6 223830.006 100816 A 05 0 +0040
D441B14B A9 00 29 00 00 00 00 00 D351C1F6 223830.006 100816 A 05 0 +0040
D441B14B 00 3D 00 3B 00 00 00 00 D351C1F6 223830.006 100816 A 05 0 +0040
D4585279 A6 00 26 00 23 00 26 00 D351C1F6 223830.006 100816 A 05 0 +0040
D4585279 00 00 00 34 00 34 00 00 D351C1F6 223830.006 100816 A 05 0 +0040
D4585279 00 3B 00 00 00 00 00 38 D351C1F6 223830.006 100816 A 05 0 +0040
D4D69676 80 00 26 00 00 00 26 00 D4CF9A36 223831.014 100816 A 05 0 +0040
D4D69676 2B 00 00 00 29 00 00 00 D4CF9A36 223831.014 100816 A 05 0 +0040
D4D69676 00 00 00 3E 00 39 00 00 D4CF9A36 223831.014 100816 A 05 0 +0040
D4D69677 00 20 00 00 00 00 00 21 D4CF9A36 223831.014 100816 A 05 0 +0040

EQUIP - e-Lab Qn User Interface Purdue

Control Panel | TOT Monitor | Rate Monitor | Shower Monitor | Geometry





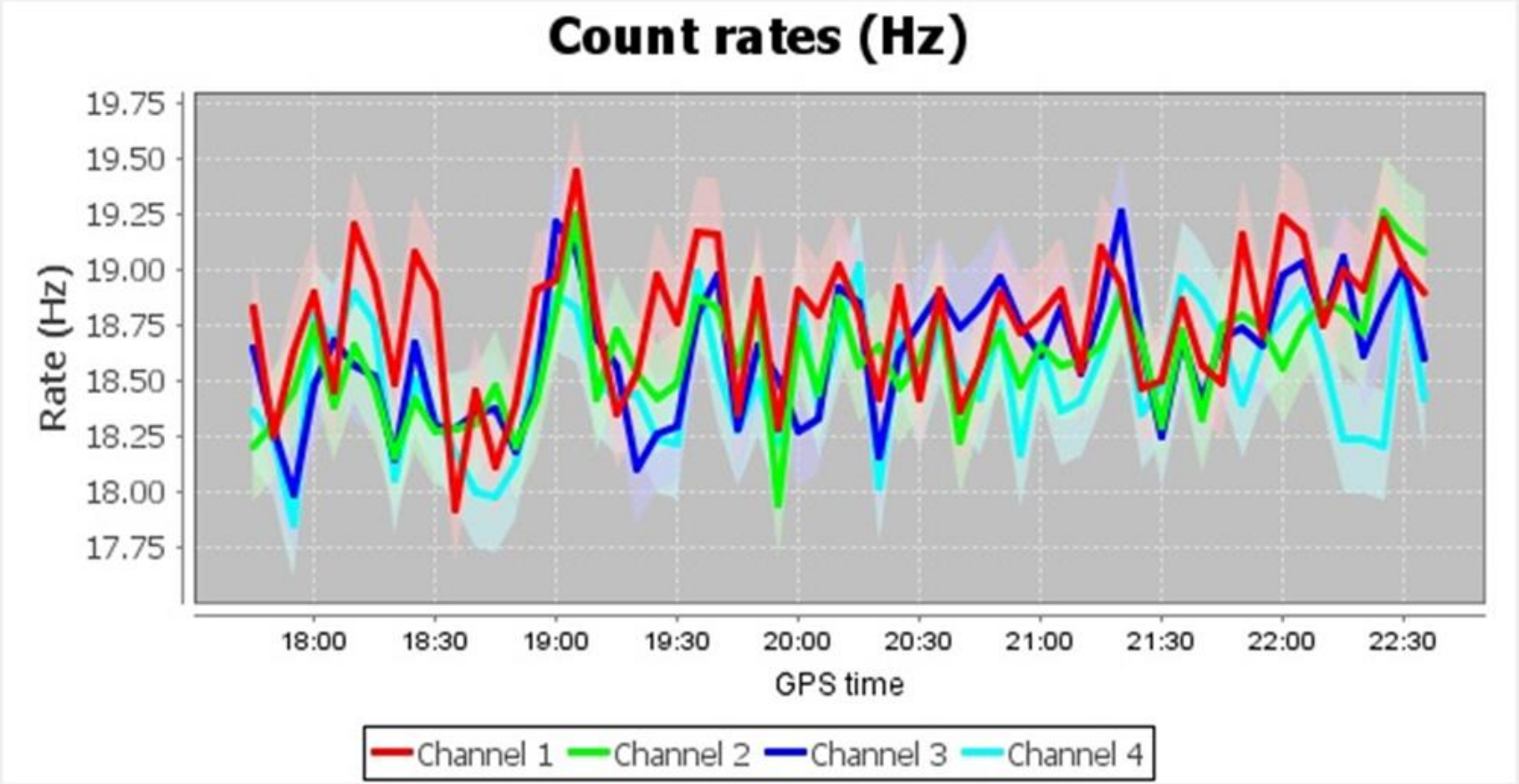


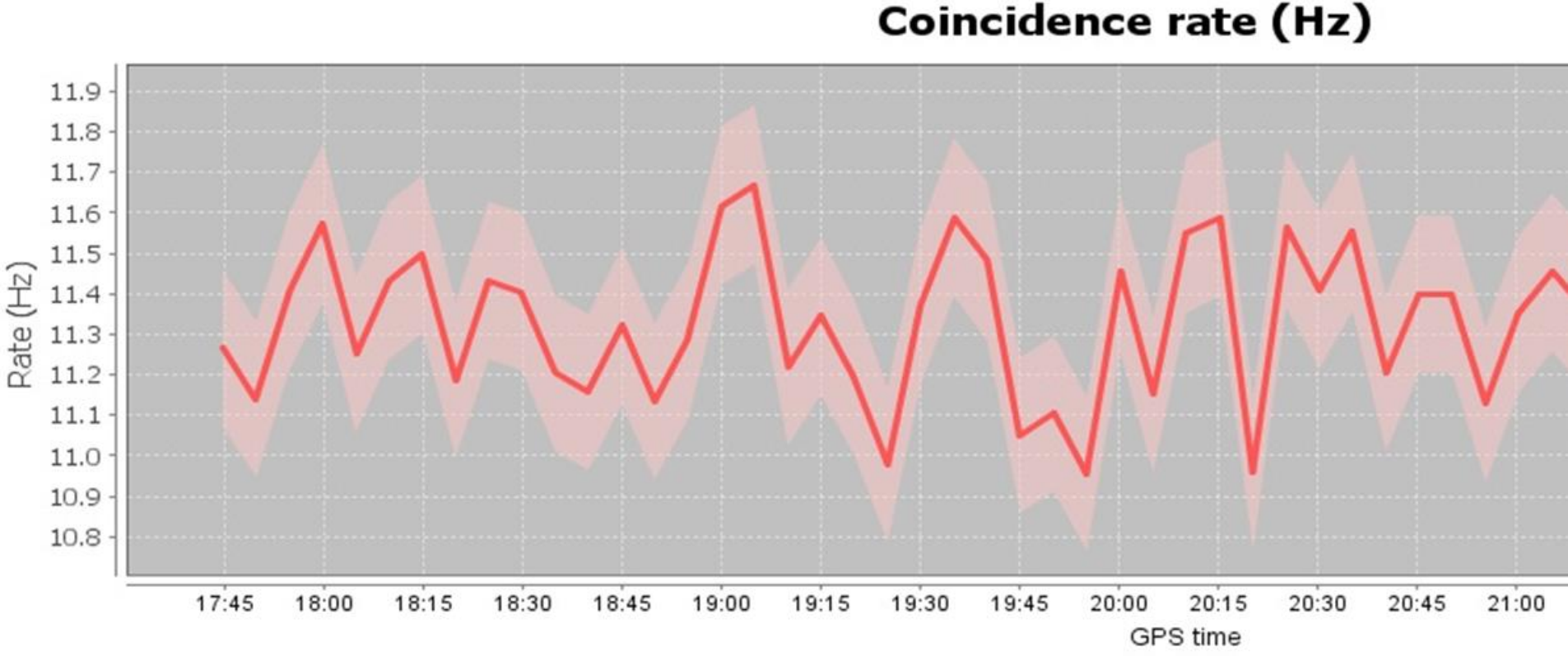
Fill | Save... | Clear

Coincidence level:Two-fold

EQUIP - e-Lab Qn User Interface Purdue

Control Panel | TOT Monitor | Rate Monitor | Shower Monitor | Geometry




Coincidence rate (Hz)
Rate (Hz)
11.9
11.8
11.7
11.6
11.5
11.4
11.3
11.2
11.1
11.0
10.9
10.8
17:45
18:00
18:15
18:30
18:45
19:00
19:15
19:30
19:45
20:00
20:15
20:30
20:45
21:00
GPS time

EQUIP - e-Lab Qn User Interface Purdue

Control Panel | TOT Monitor | Rate Monitor | Shower Monitor | Geometry

--- Statistics ---

Valid GPS: 0.0 %

Pulses analyzed: 795408

Rising orphans: 20181

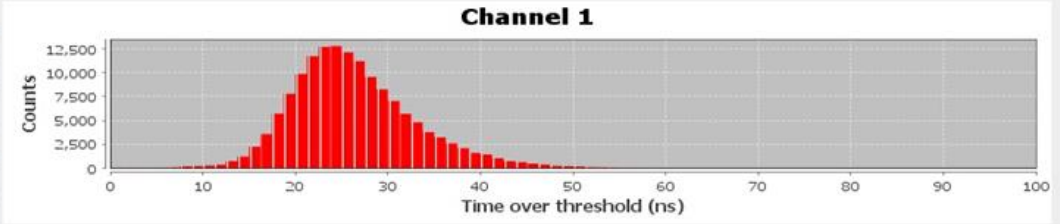
Falling orphans: 22298

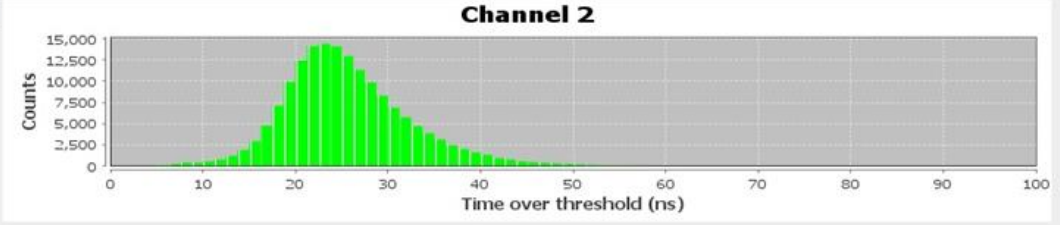
Scalers not updating: 0

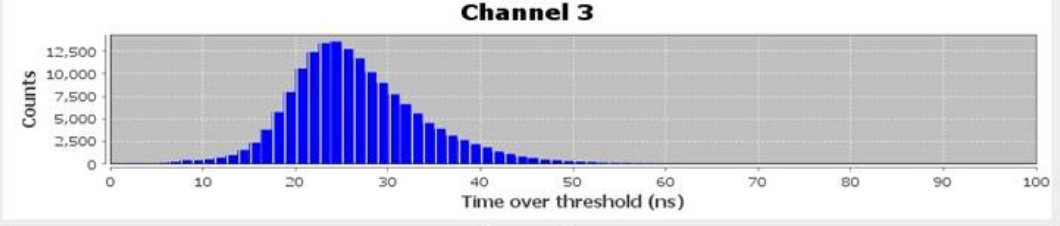
Scalers reset: 0

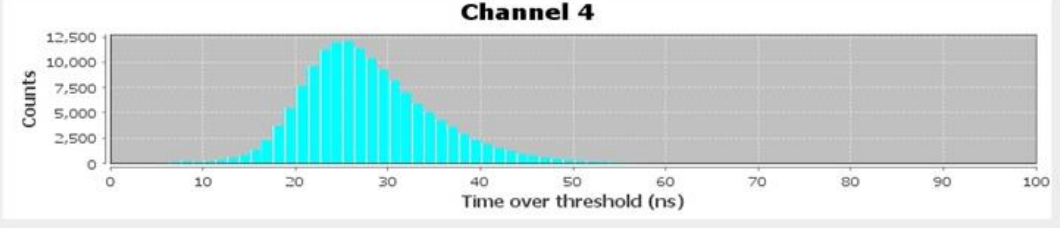
Bin width: 1.25

Clear

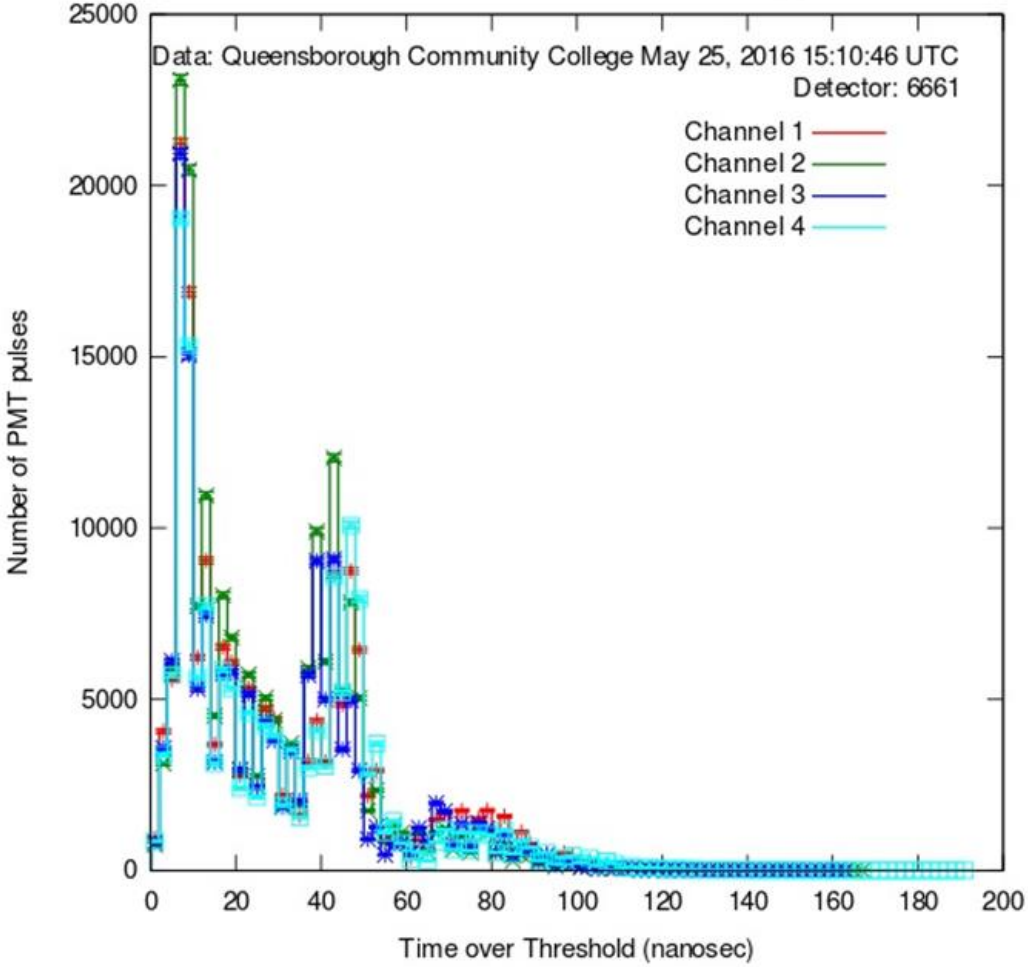




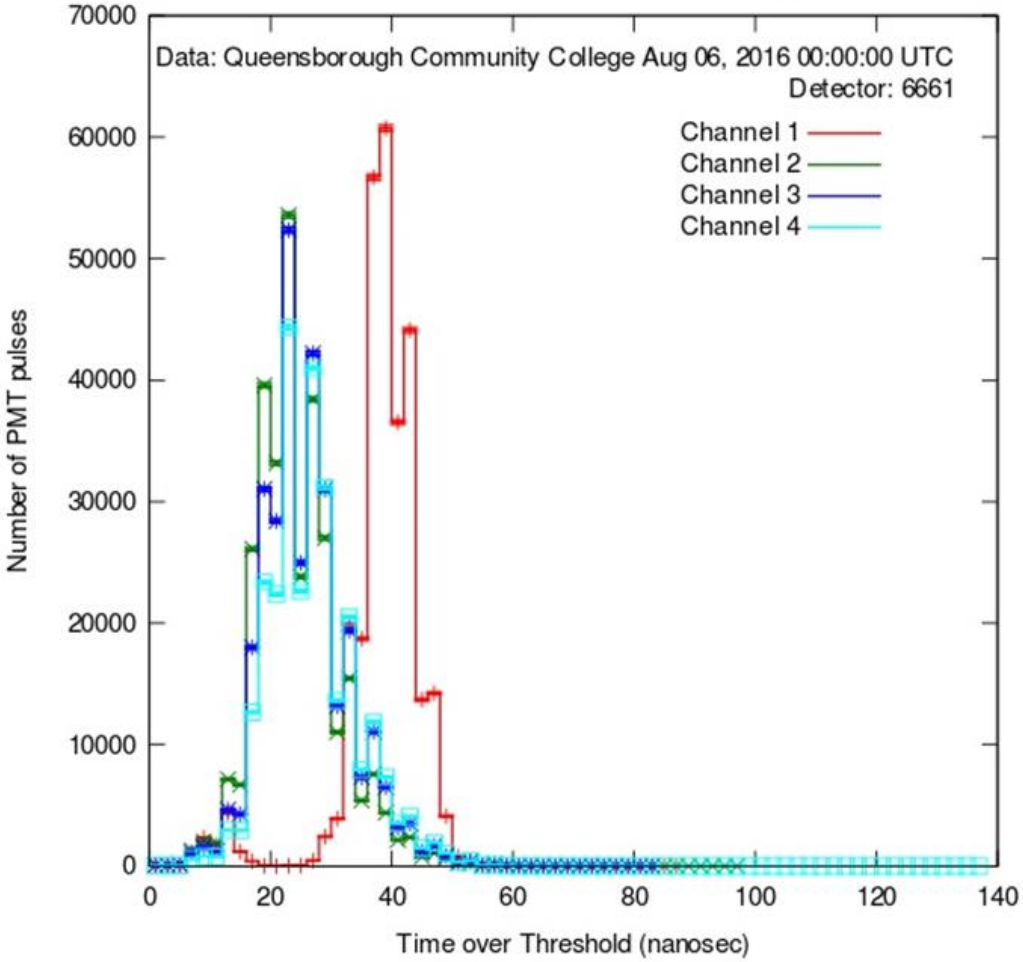




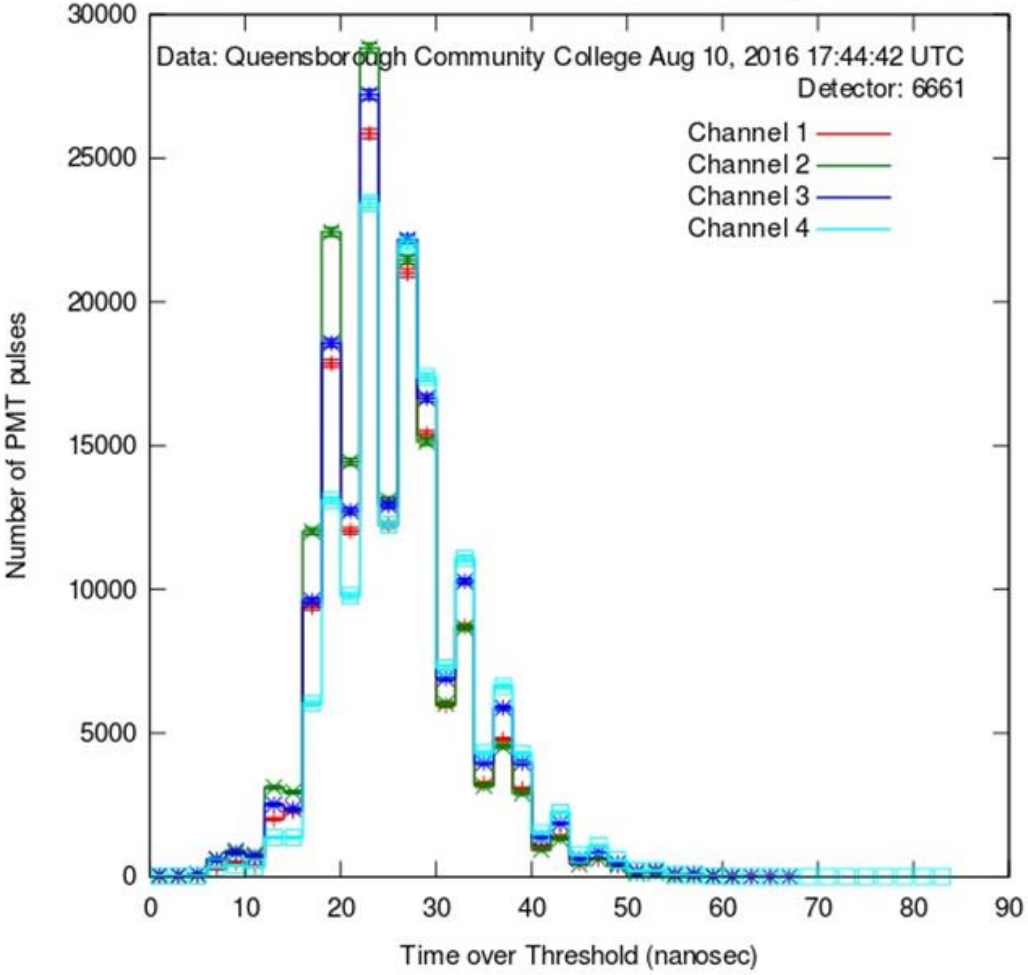
Performance Study



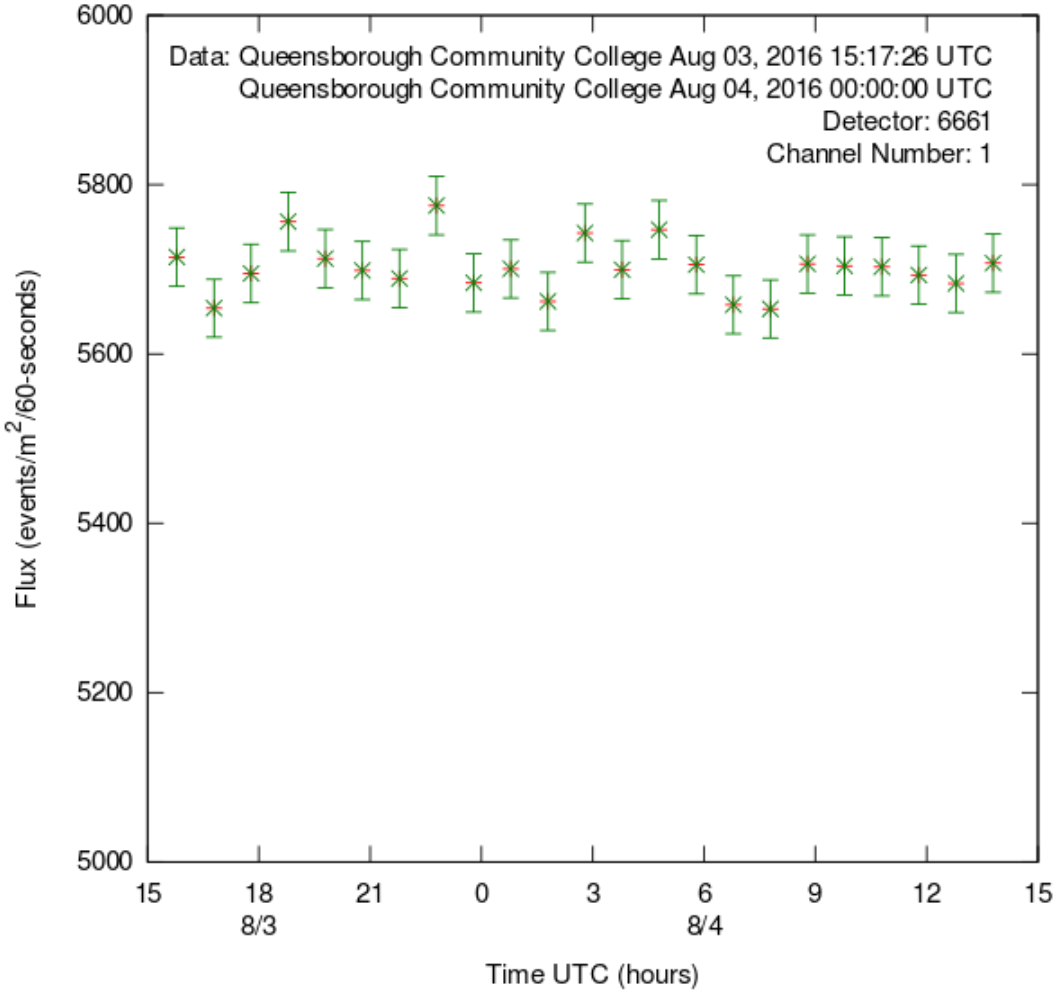
Performance Study



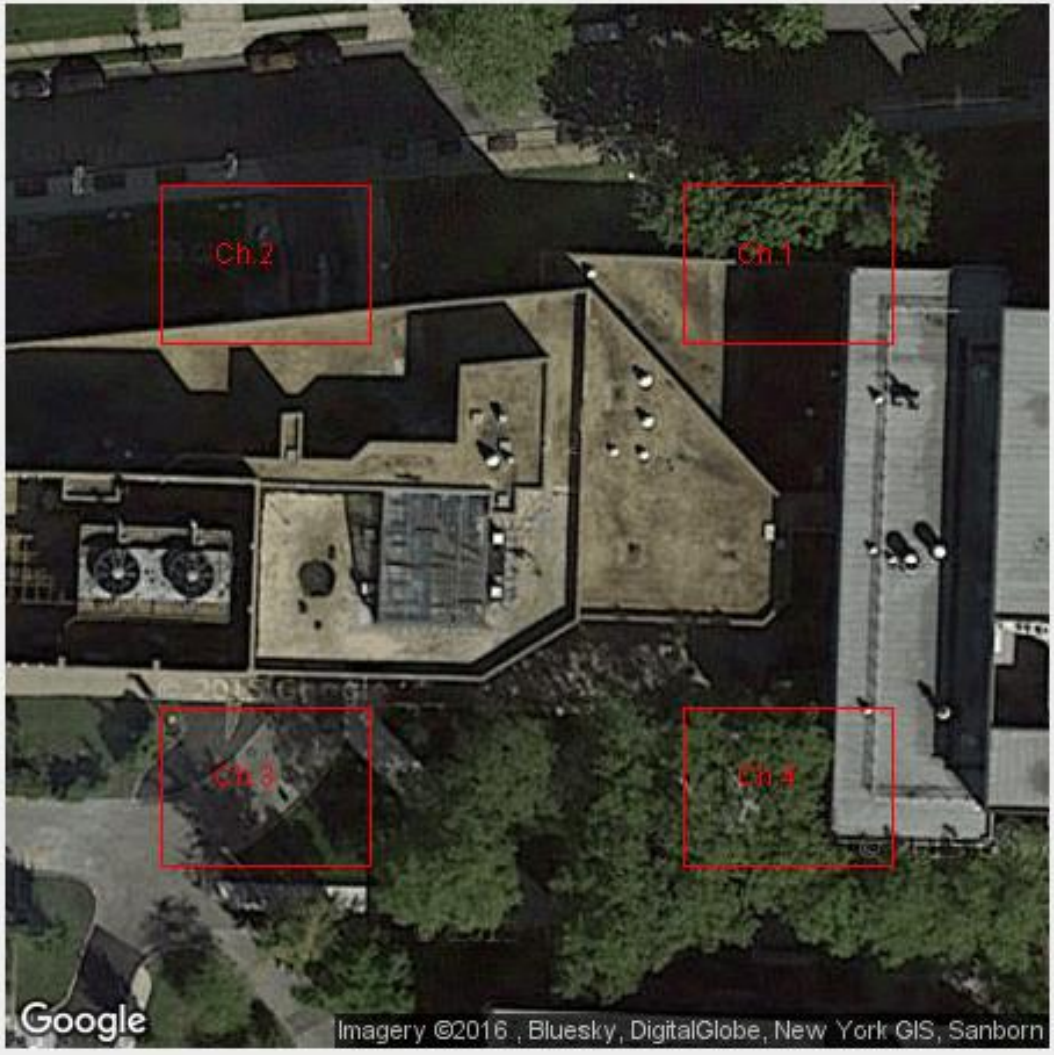
Performance Study



Flux Study


Data: Queensborough Community College Aug 03, 2016 15:17:26 UTC
Queensborough Community College Aug 04, 2016 00:00:00 UTC
Detector: 6661
Channel Number: 1
Flux (events/m2/60-seconds)
6000
5800
5600
5400
5200
5000
15
18
21
0
3
6
9
12
15
8/3
8/4
Time UTC (hours)

Shower Study


Ch 2
Ch 1
Ch 3
Ch 4
Google
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