Noise/Baseline studies from warm wires in (open) cryostat

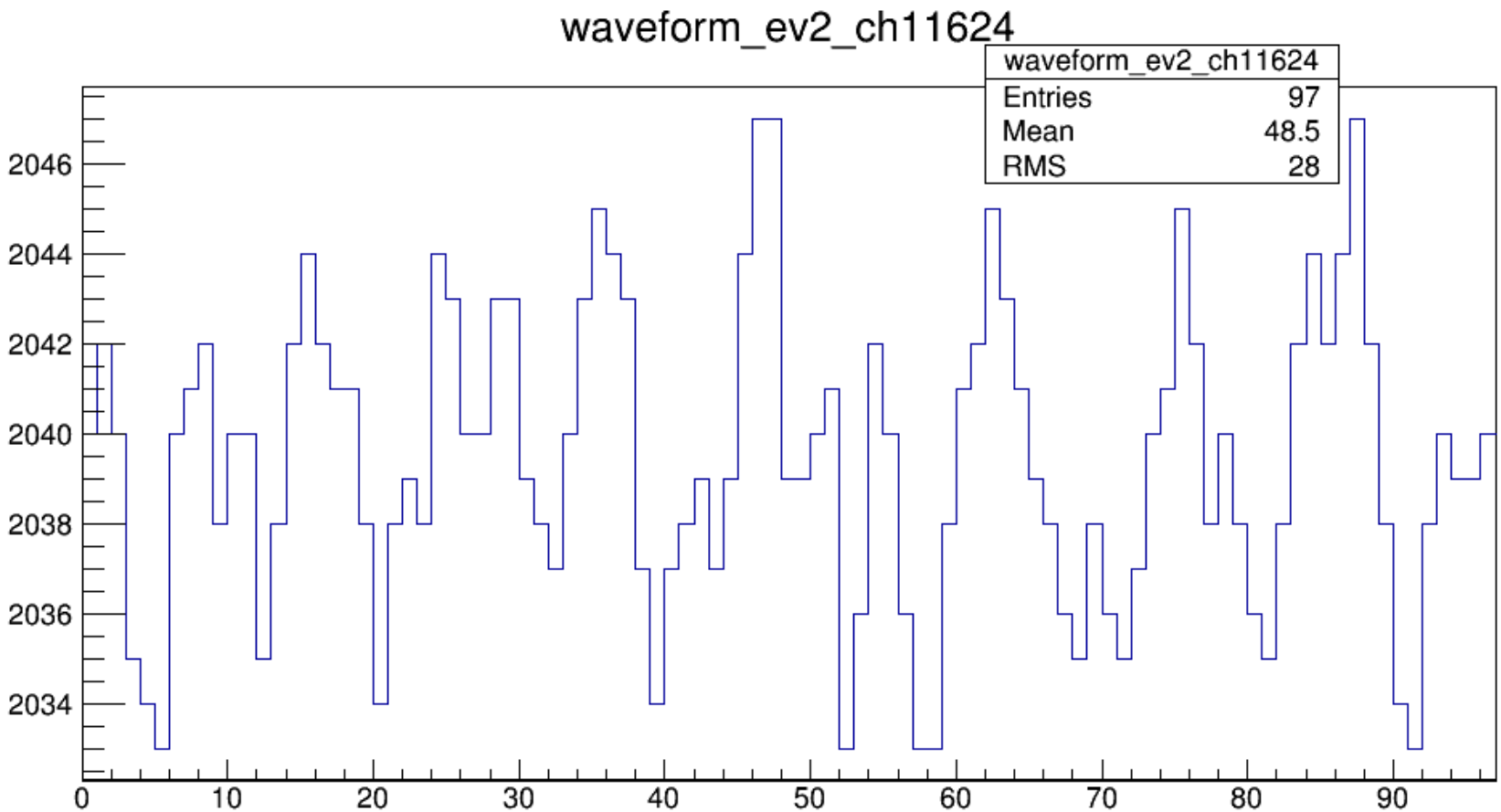
Looked at data from 100 events taken from both induction and collectionplane.

Data taken from feed-through 9

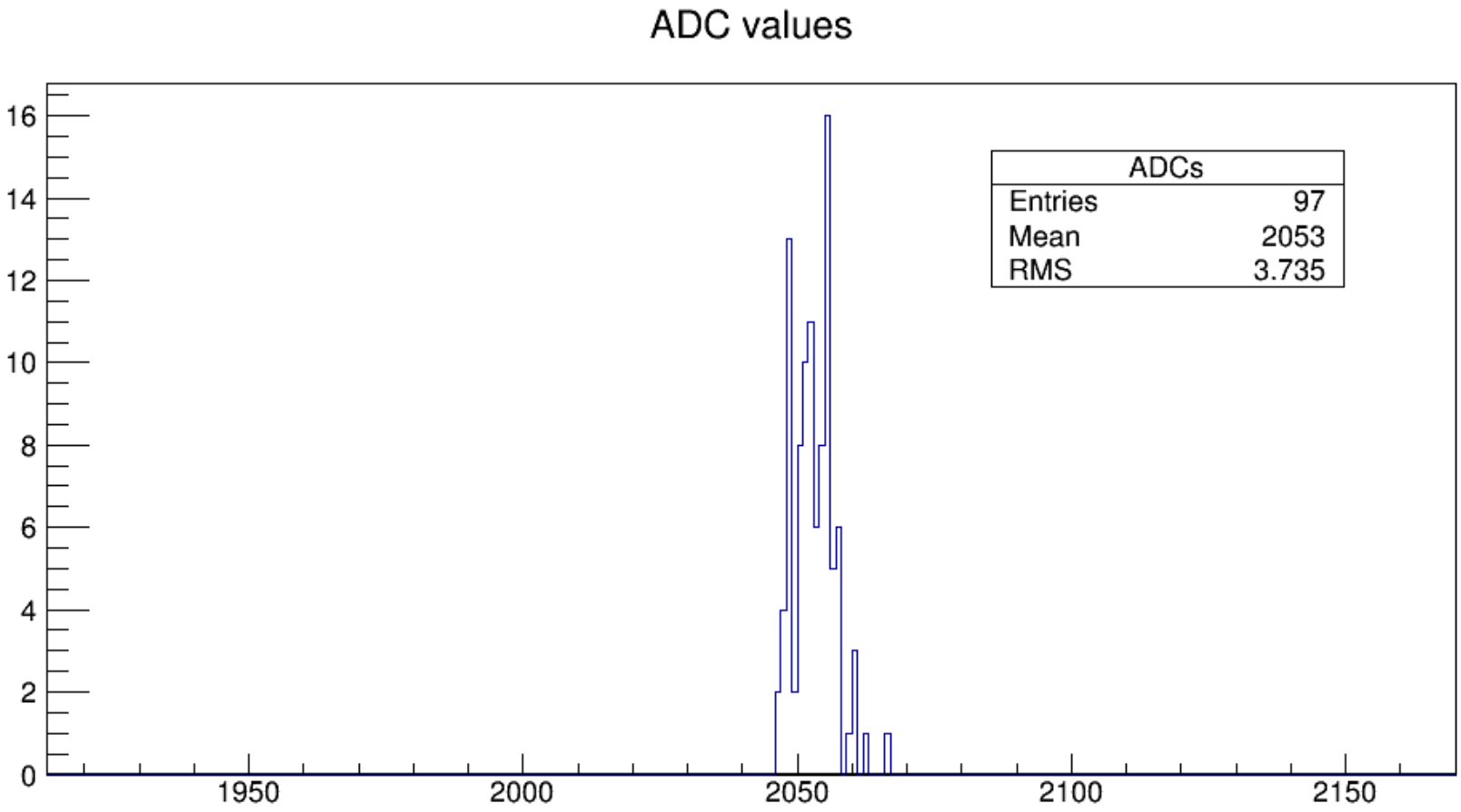
Waveforms are 99 samples long (@ 2MHz)

No pulse was induced on the wire → this is only noise

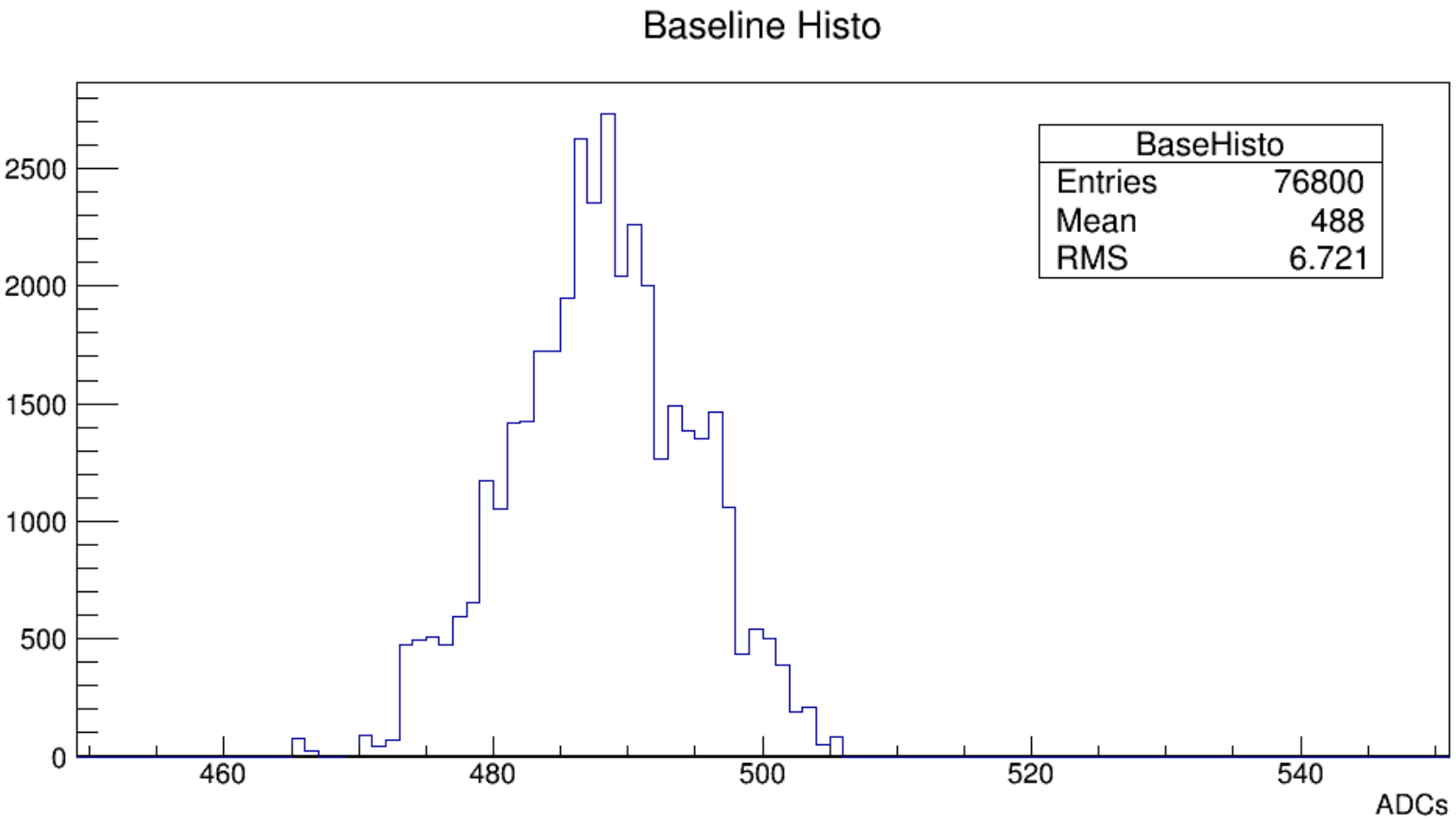
Example waveform



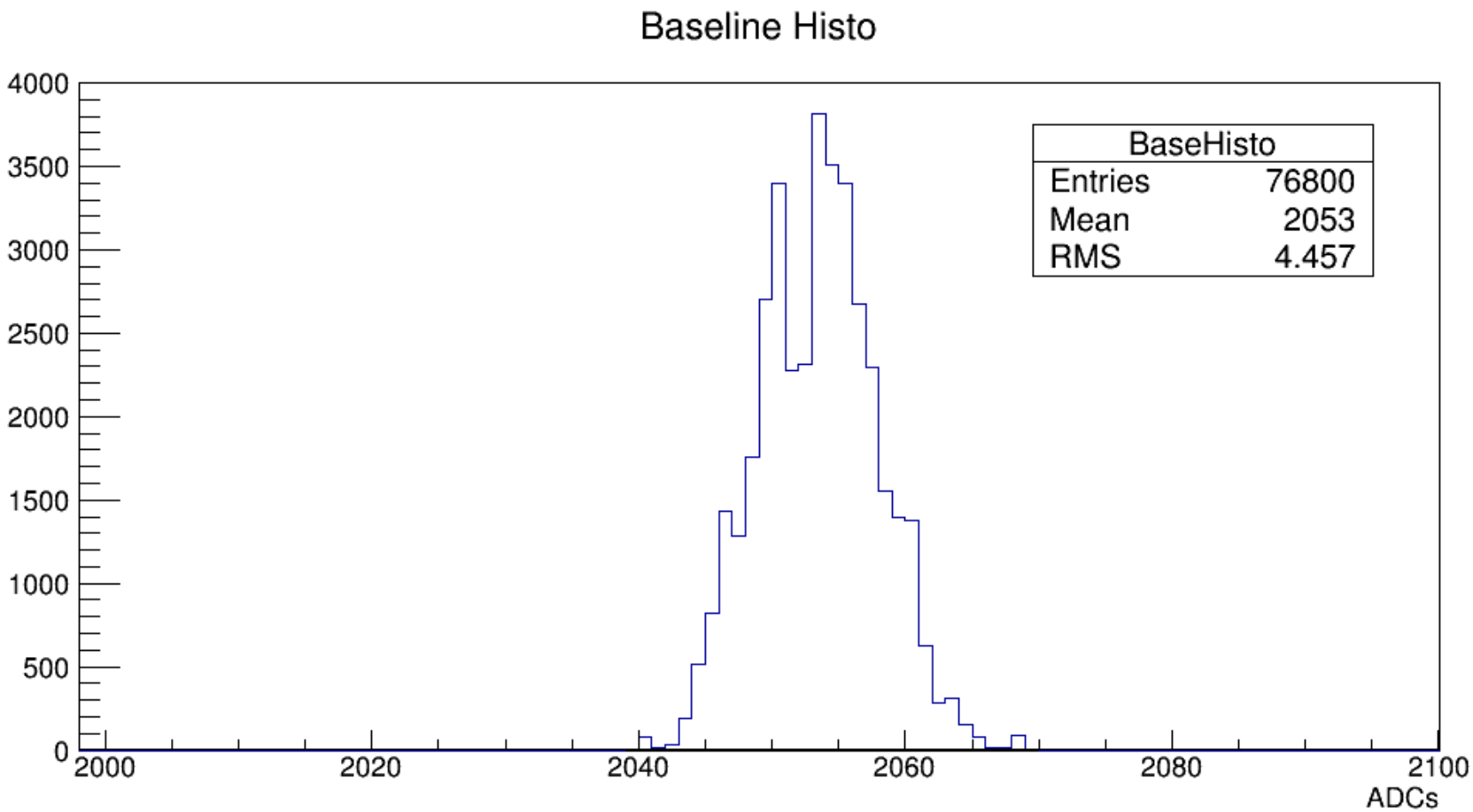
Baseline...how do I find it?



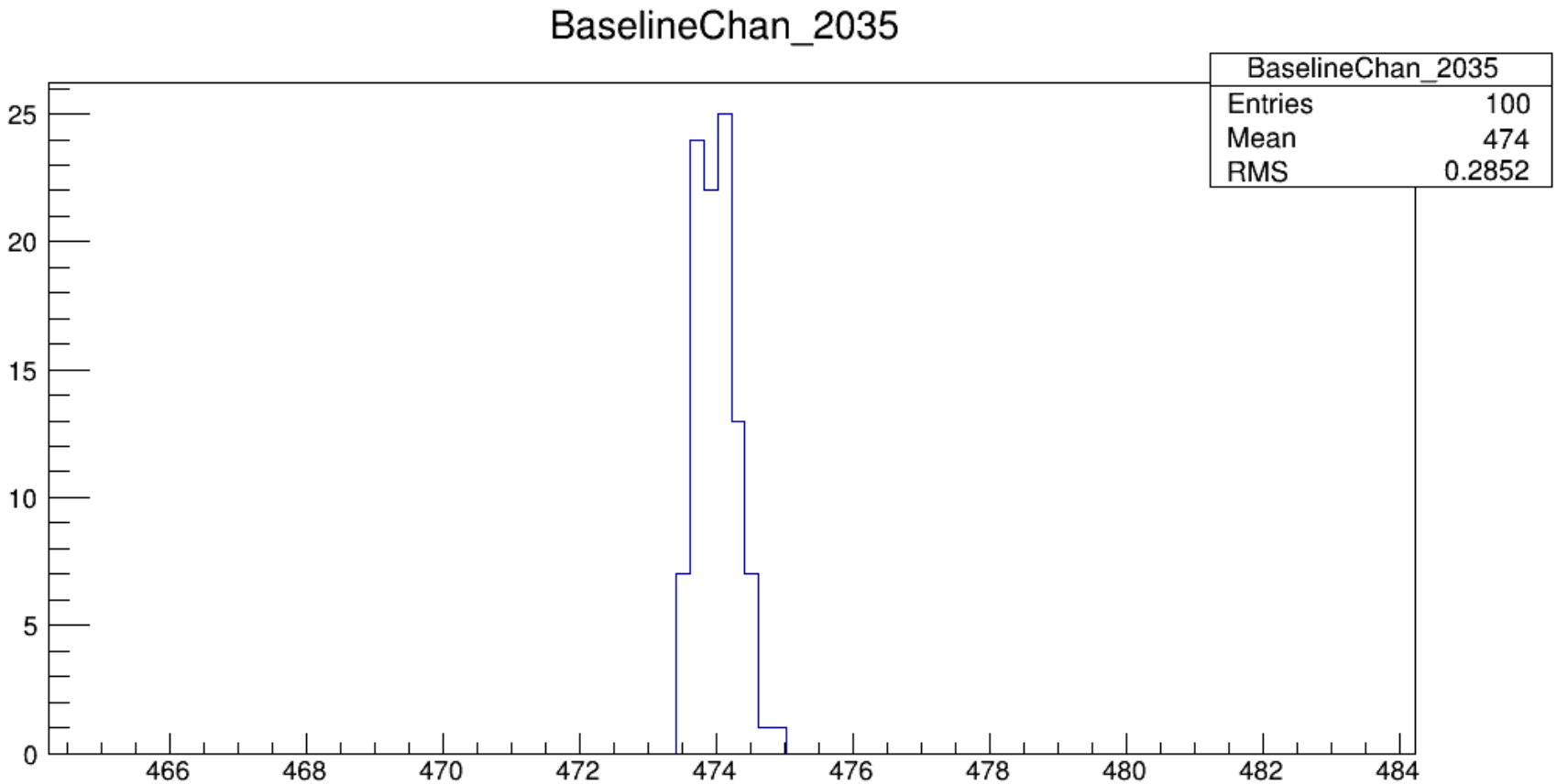
Baseline Study – collection plane



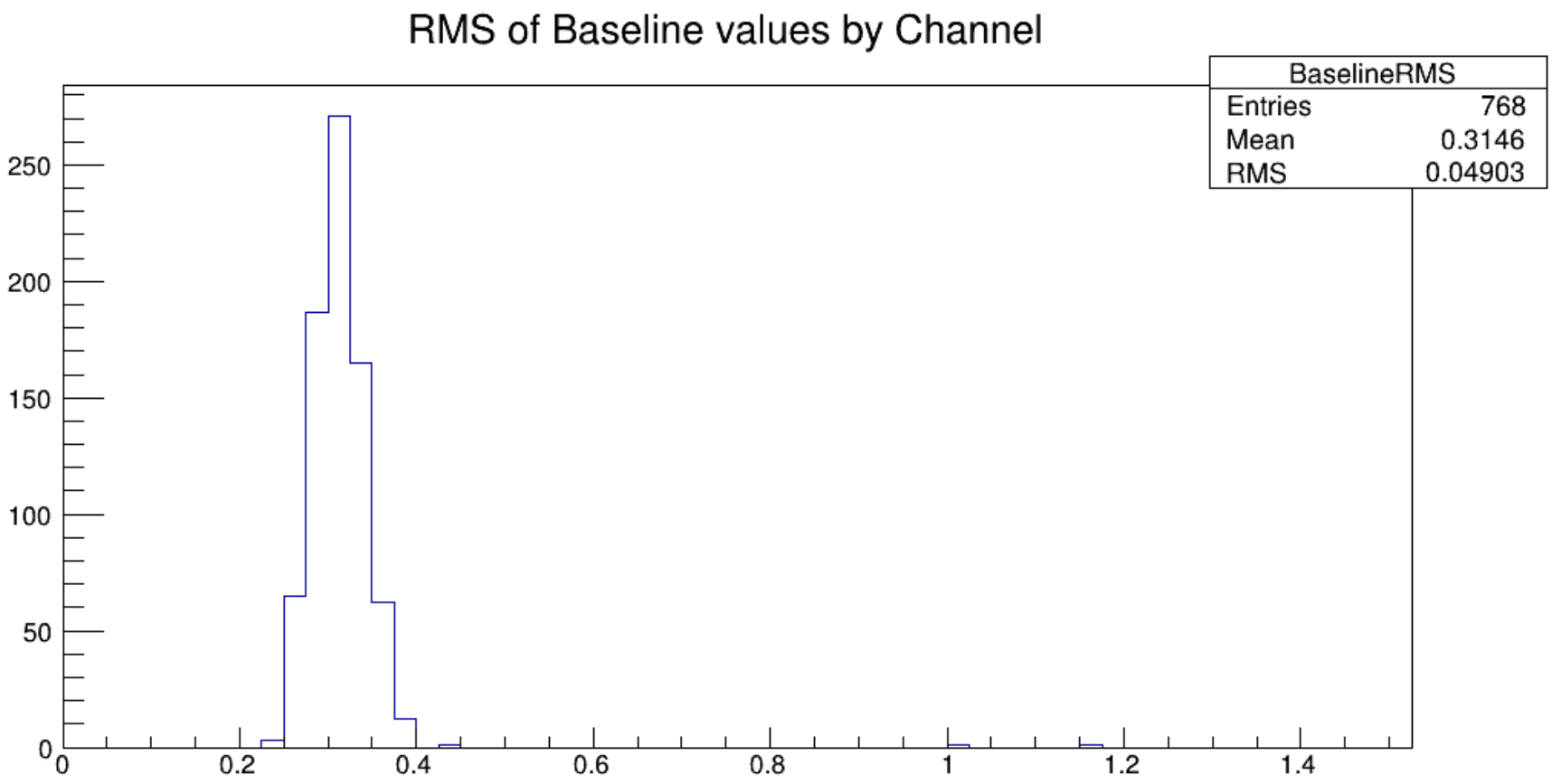
Baseline Study – induction plane



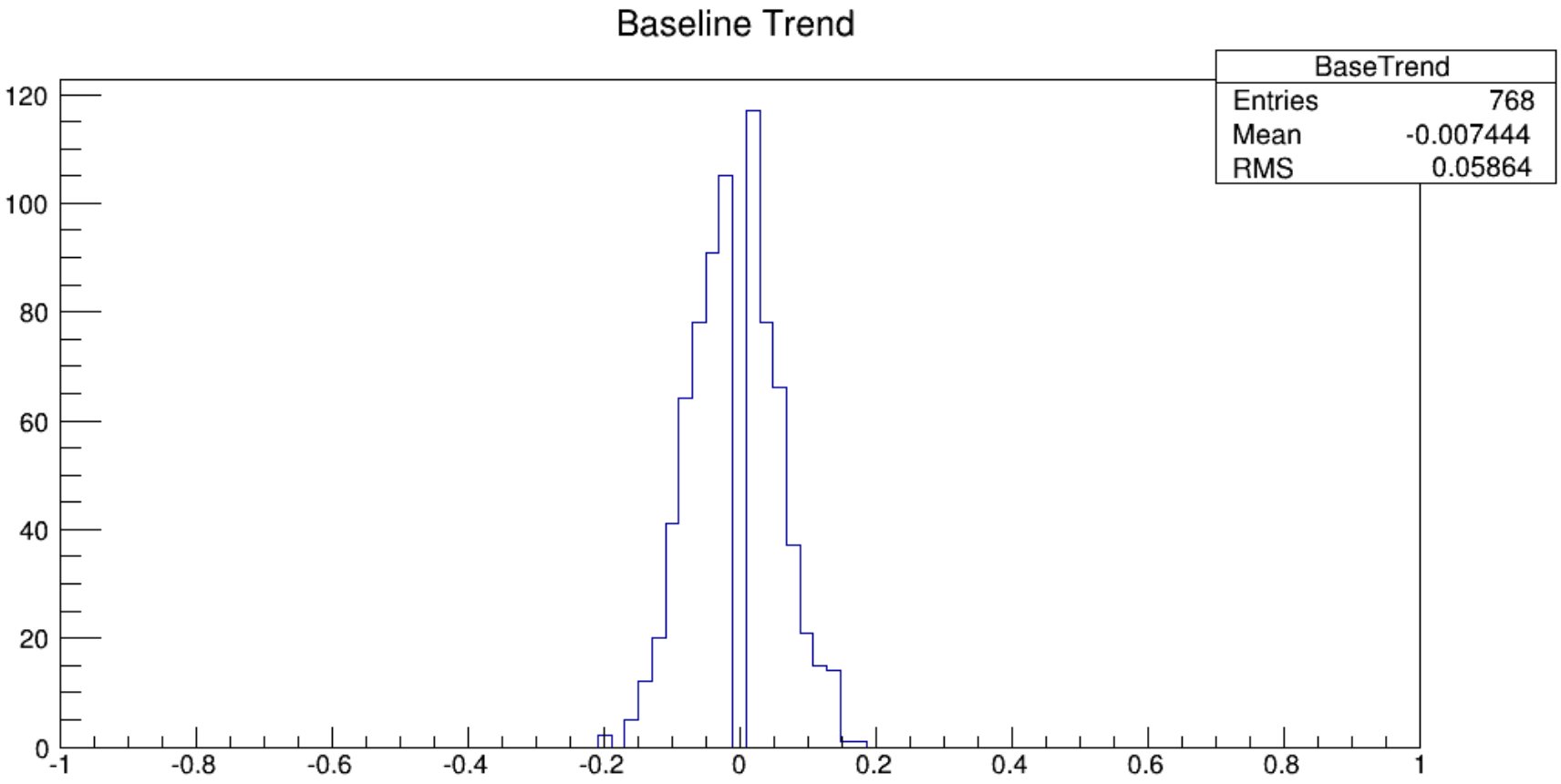
Baseline for one Channel – across events



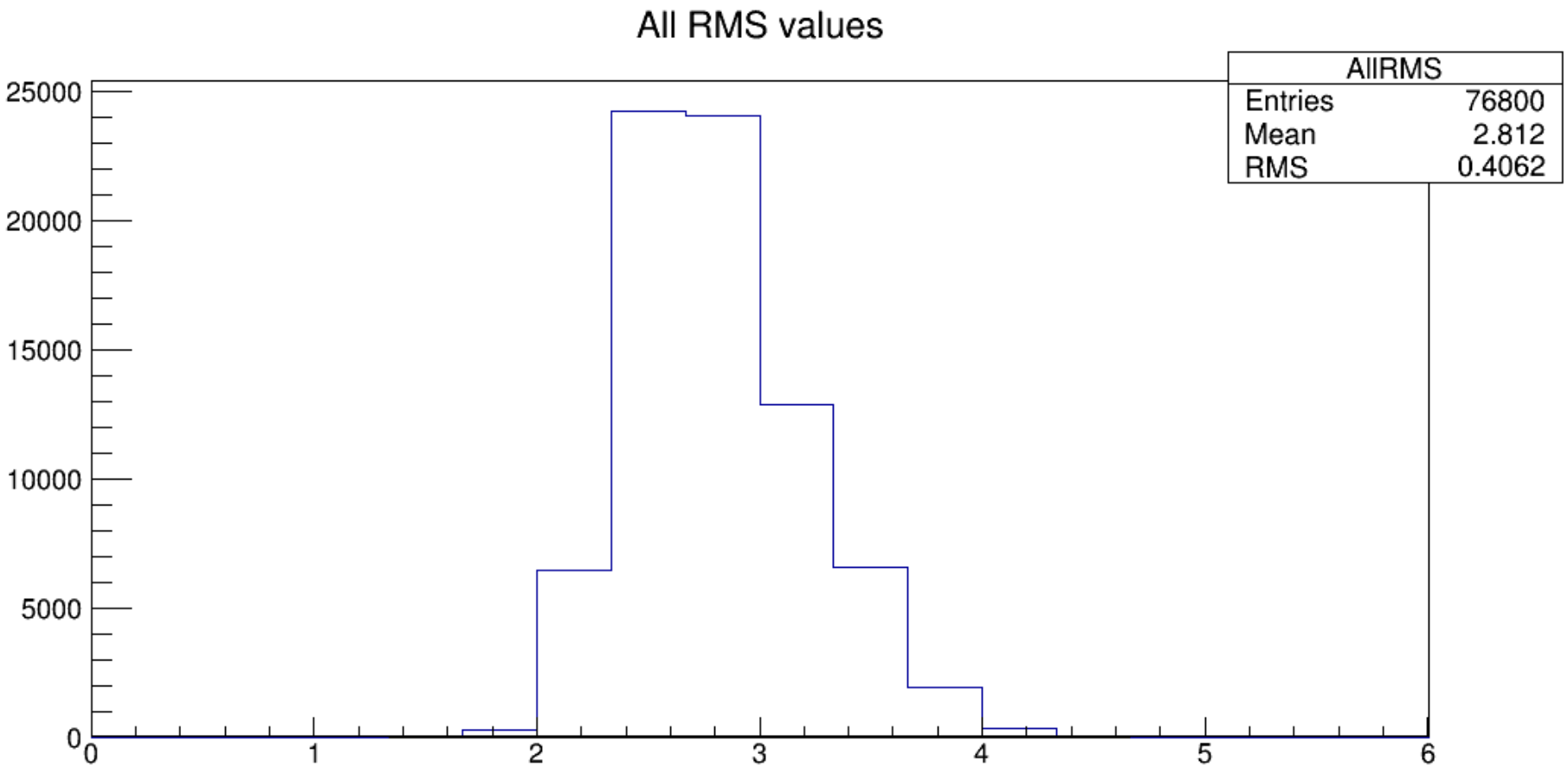
Baseline channel-by-channel



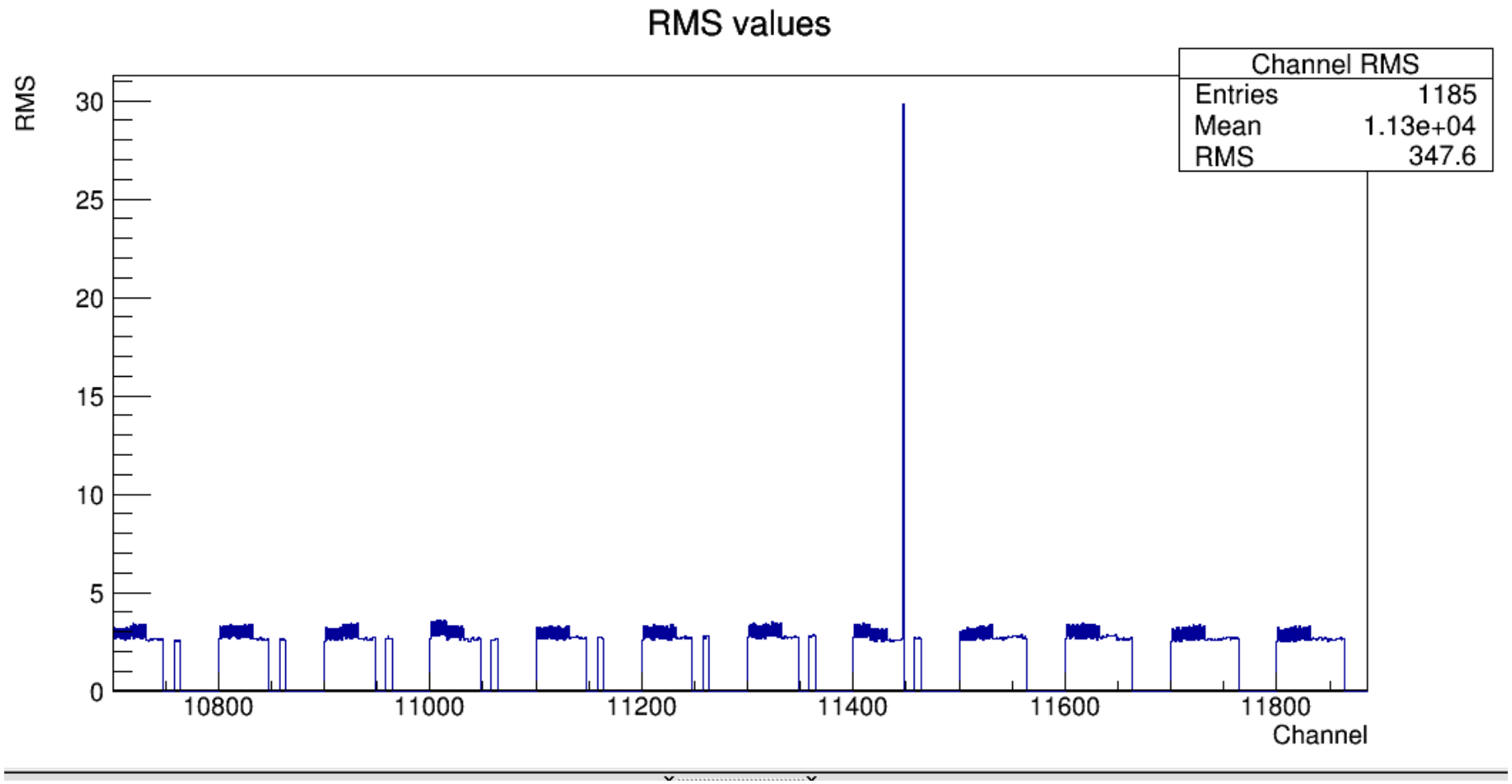
Baseline Trend: [(N+)-(N-)]/N_tot



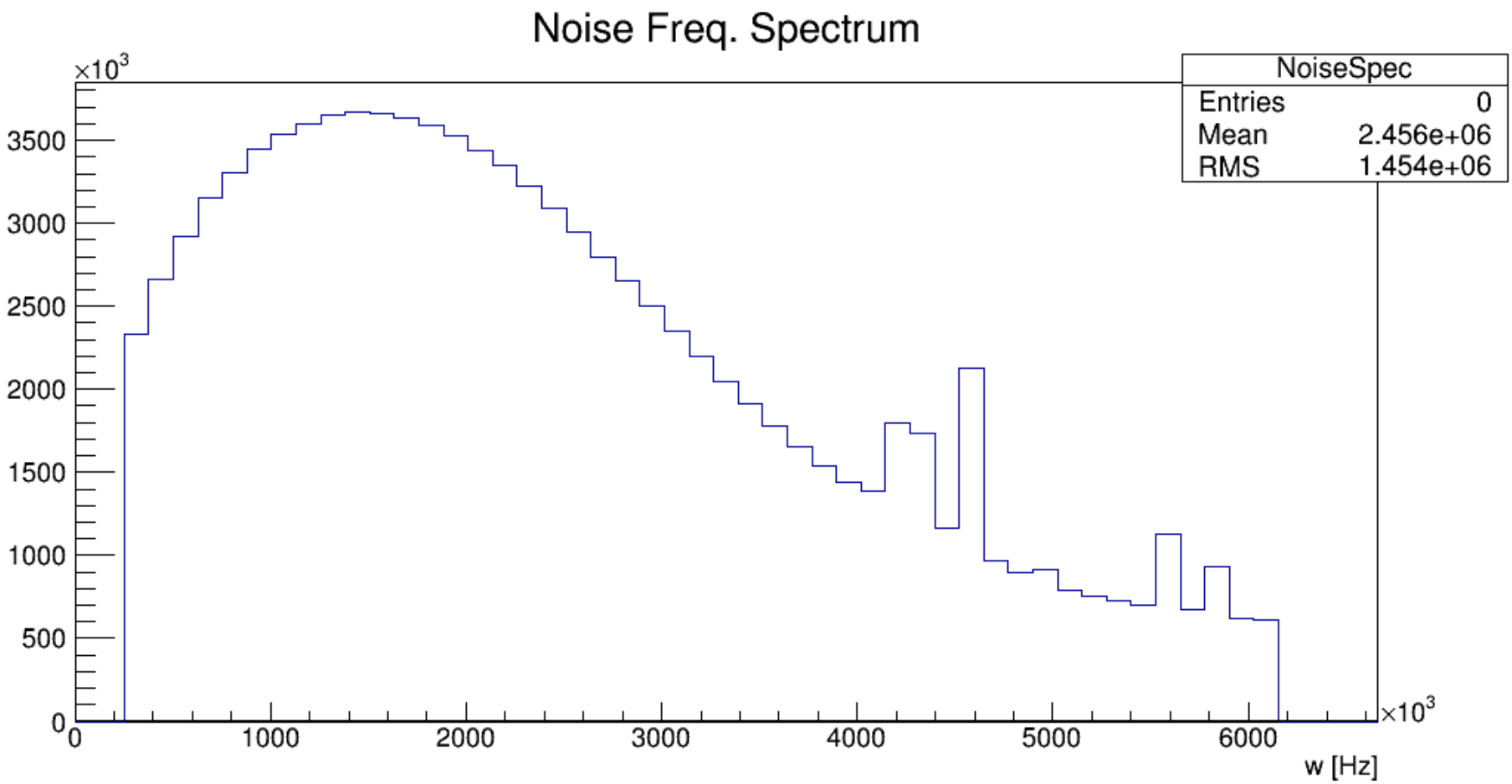
Noise: RMS


All RMS values
AllRMS
Entries 76800
Mean 2.812
RMS 0.4062
25000
20000
15000
10000
5000
0
0
1
2
3
4
5
6

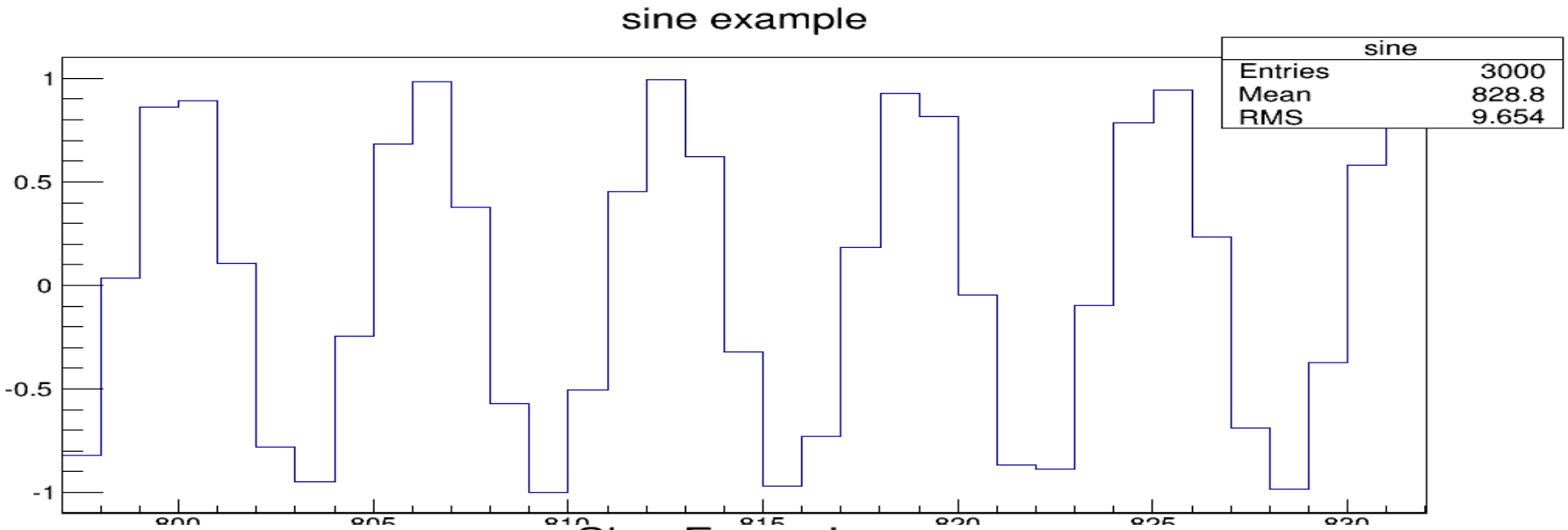
Noise: channel by channel

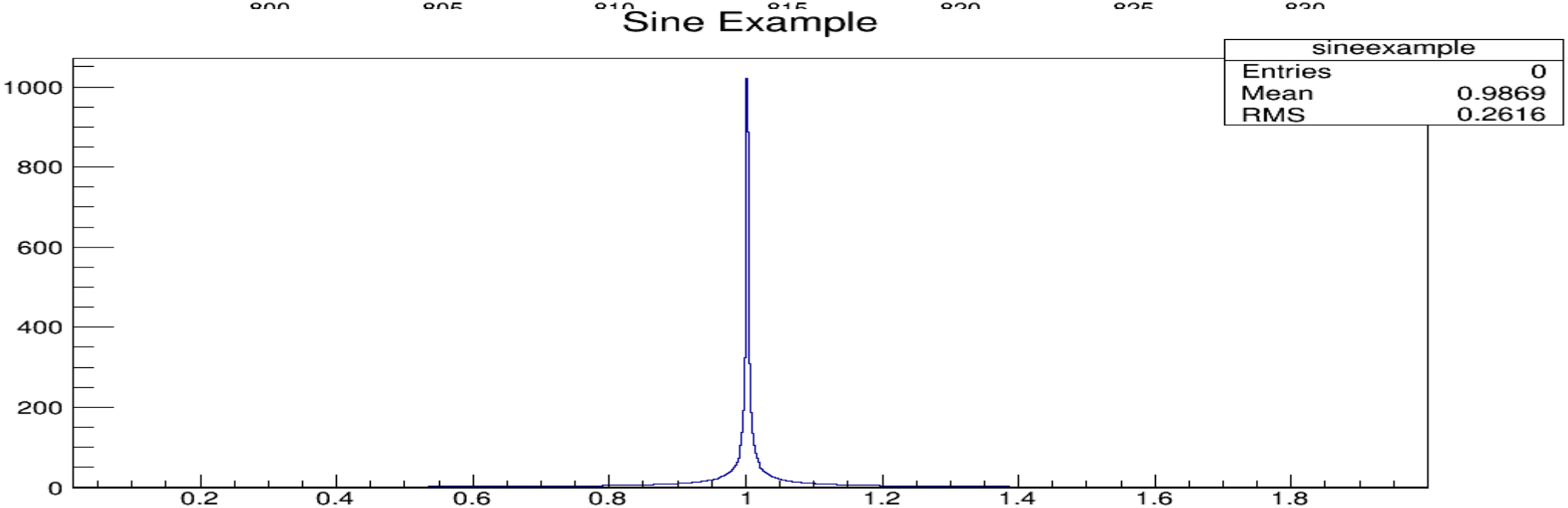


Noise: freq spectrum



Backup


sine example
sine
Entries 3000
Mean 828.8
RMS 9.654
1
0.5
0
-0.5
-1


Sine Example
sineexample
Entries 0
Mean 0.9869
RMS 0.2616
1000
800
600
400
200
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8