Cosmic HV=STD RUN 131

Now the decoding it is no more limited in the number of event but it is limited in the number of count. This slow down the reconstruction but it allow to obtain a reasonable distributions:

in SubRUN_event: nhits start from about 70 -> ok

in SubRUN_dec: count vs roc is equally distributed (some inefficiency on ROC 10 but the count number is the same)

Look now at the output of GRAAL.

From 10k event we have:

9847 events

3807 events without hits

6193 events with hits

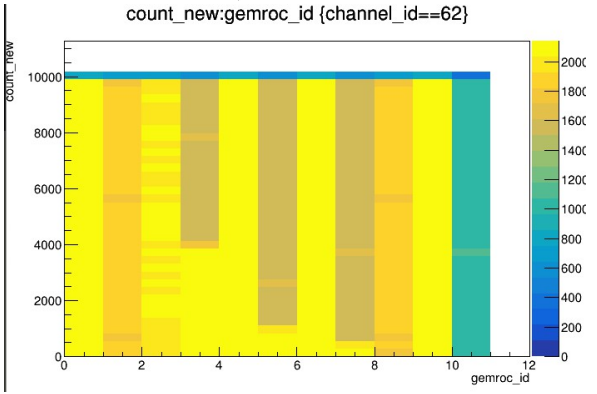
2216 events with 1 hit on L1

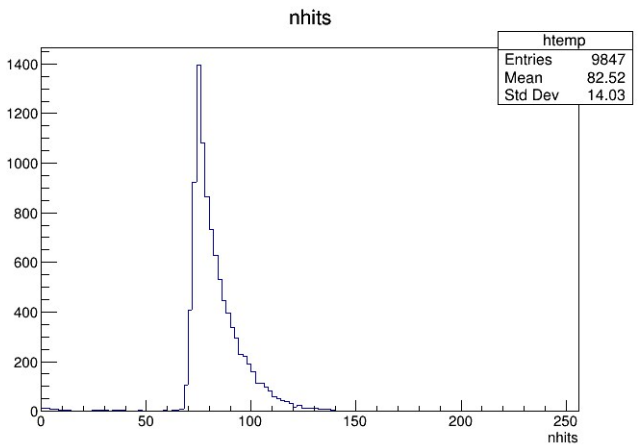
2897 events with 1 hit on L2 up

3222 events with 1 hit on L2 down

1708 events with L2 up and down

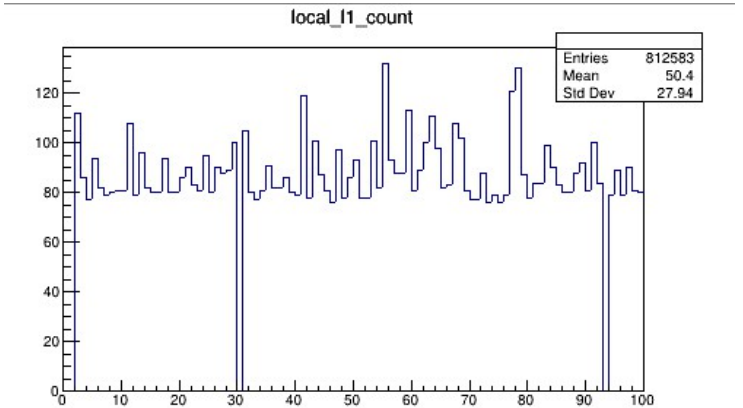
829 events with all the three detectors





Cosmic HV=STD RUN 131

First questions: why only 9847 events if 10k expected?
-> is count increasing without hits? or count does not start from 0?
--> **BOTH** !!



Second: why 38% of the events has no hits?
-> TP are there but not physical hits
?????????????
-> Check the efficiency of the TP and their sync
--> Eff ~ 95% but 10 chips are missing (12%)

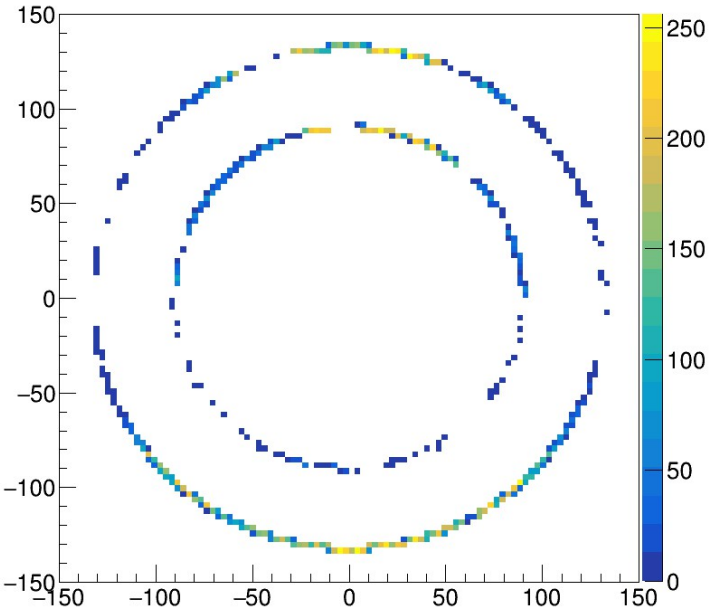
Third: why 13% of the events with hits has a track?
-> Missing FEB (50% ROC 10)
-> 70% efficiency due to geometry
-> 95% efficiency due to comunication
0.5 * 0.7 * pow(0.95,3) = 0.3 --> **NOT OK**
Missing a factor 2/3

Four: why in the first plot of p73 the ROC column do NOT have the same color for each count?
??????????????????

Cosmic HV=275V RUN 134

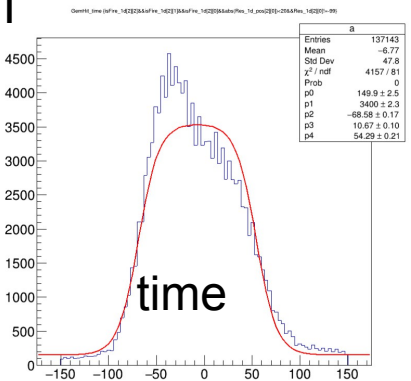
```
root [7] t1->GetEntries()
(Long64_t) 92973
root [8] t1->GetEntries("nGemHit!=0")
(Long64_t) 63431
root [9] t1->GetEntries("isFire_1d[2][2]&&isFire_1d[2][1]&&isFire_1d[2][0]&&abs(Res_1d_pos[2][0])<20&&Res_1d[2][0]!=-99")
(Long64_t) 6437
```

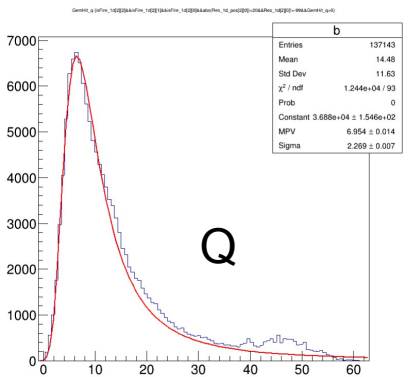
32% of the events without GemHit
10% of the runs with events have a good track



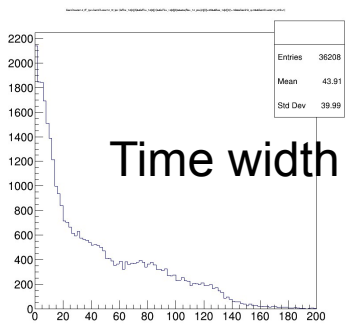
Cosmic HV=275V RUN 134

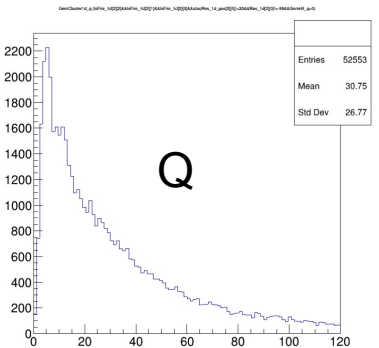
All HIT

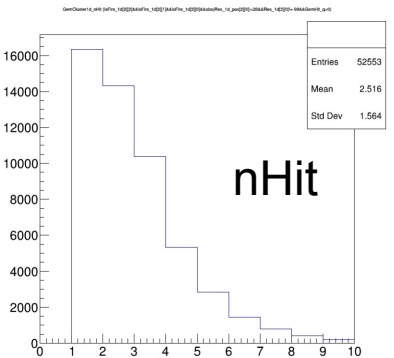




All CLUSTER



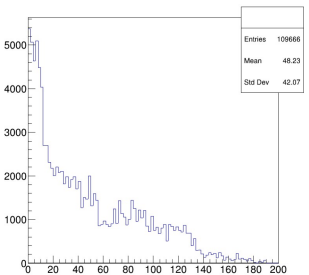


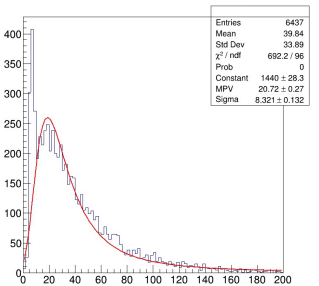


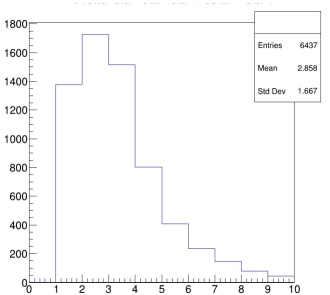
Cosmic HV=275V RUN 134

Time width | Q | nHit

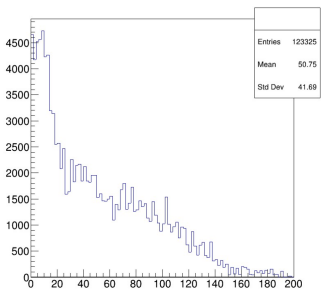
L1 - Phi

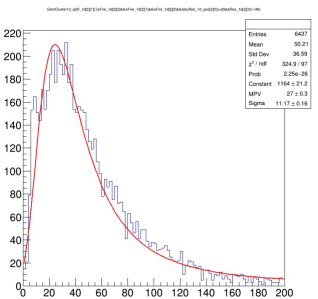


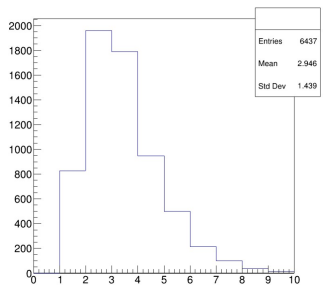




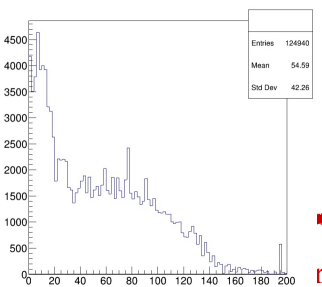
L2up - Phi

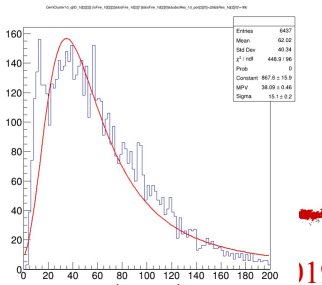


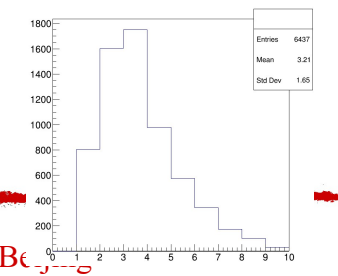




L2down - Phi



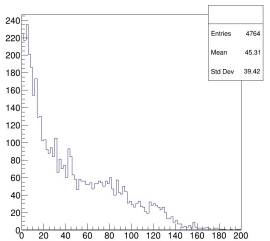


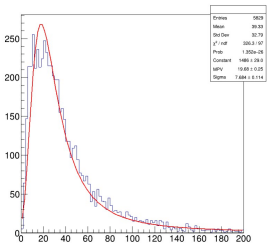
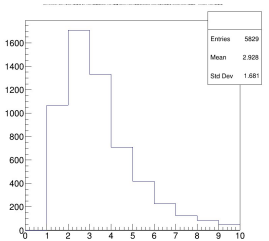


Cosmic HV=275V RUN 134

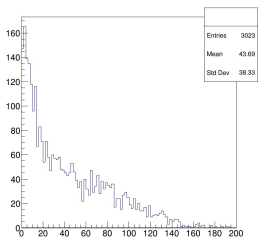
Time width | Q | nHit

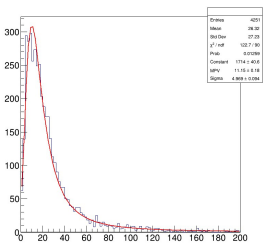
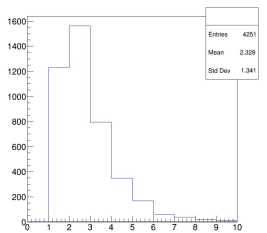
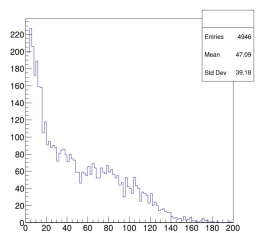
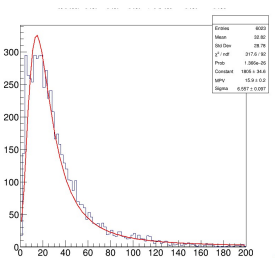
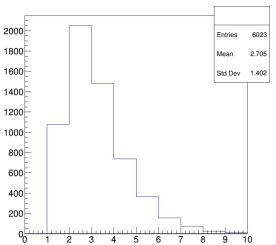
L1 - V



L2up - V






L2down - V