

Daq and readout

- Daq is running fine with occasional read out errors
- Replaced two faulty APVs coming with very high signal (>2000 ADC)
- Replaced on cable to crate0MPD12
- When we see readout error we do not need to restart/reset stuff unless we find any faulty APV
- Coda has MPD reset so that run could go on and take more data
- We have now a tool in hand to check data instantly when we see readout error
- This tool can track which ones (MPD/APV/cables) are troublesome then other

Comparison of Hit and cluster distributions

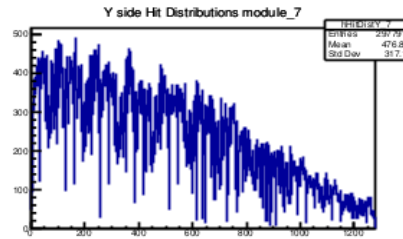
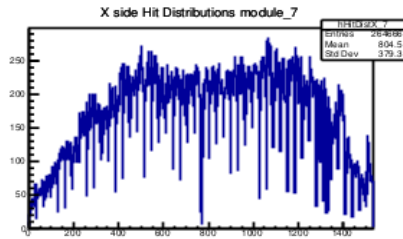
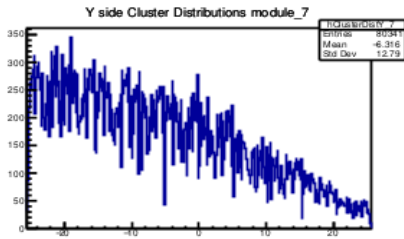
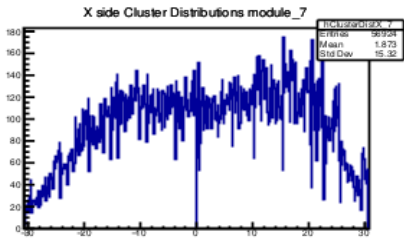
- Found three low efficiency regions in the third layer from tracking analysis
- Compared hit and cluster distributions for the scans from two different periods: Scan taken in august and the current scan
- No difference in hit distributions between two period

New Scan 4100 V (eqv.) (Oct. 2020)

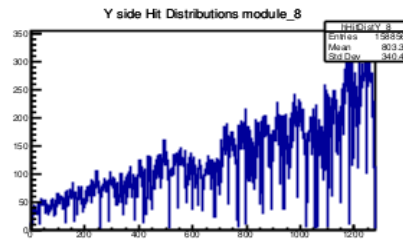
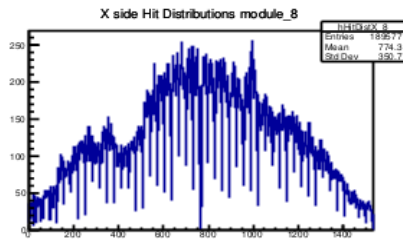
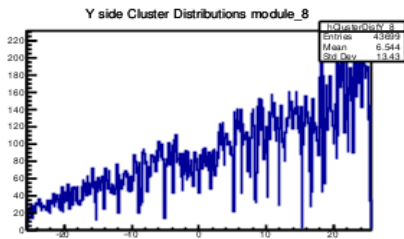
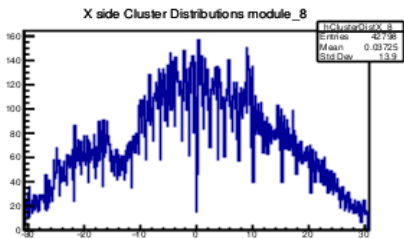
Use for tracking analysis



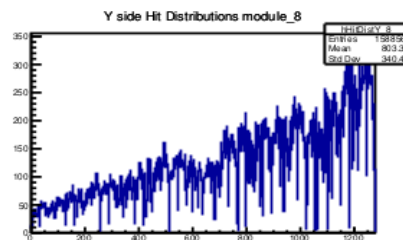
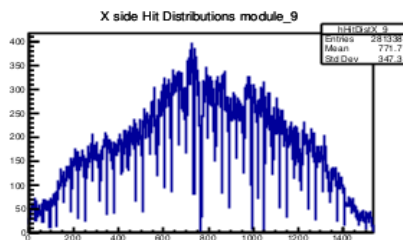
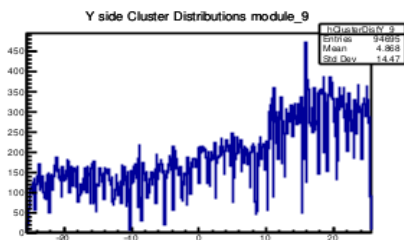
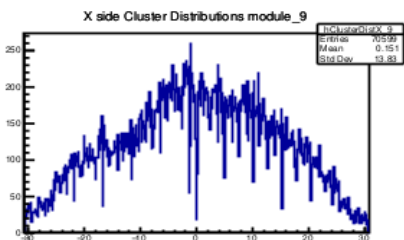
2nd layer
Module 7



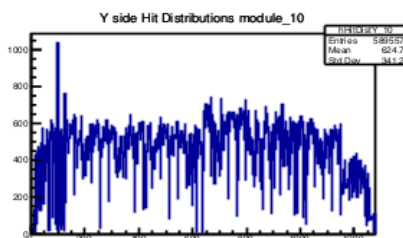
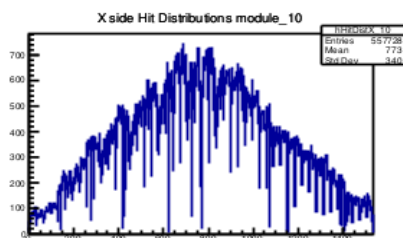
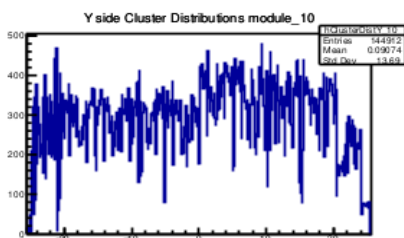
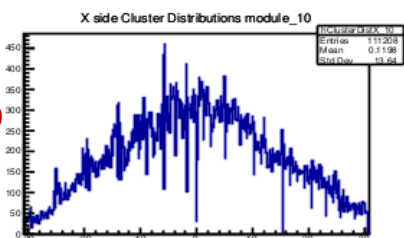
3rd layer
Module 8



3rd layer
Module 9



3rd layer
Module 10



X cluster

Y cluster

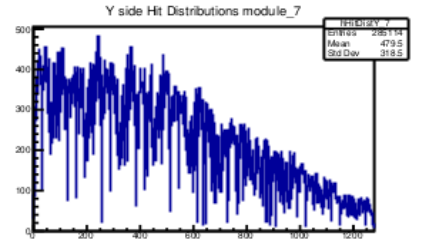
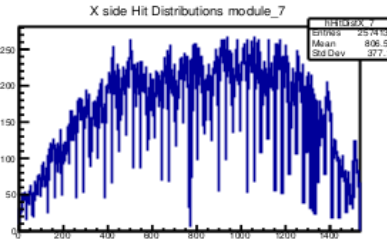
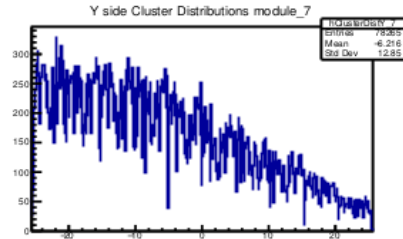
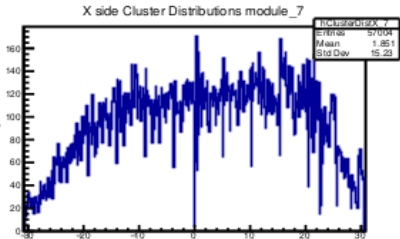
X Hit

Y Hit

Old Scan 4100 V (Aug 2020)

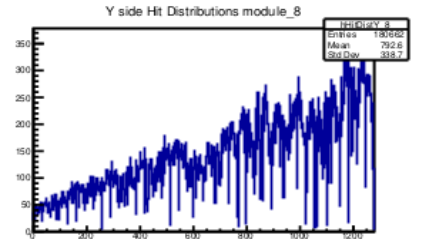
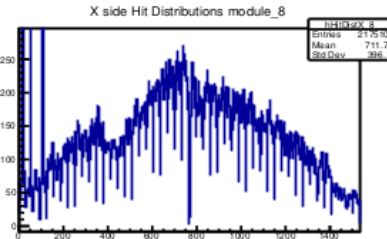
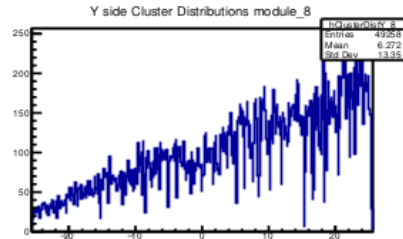
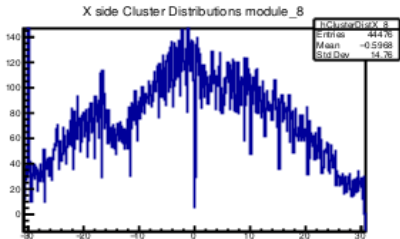
2nd layer

Module 7



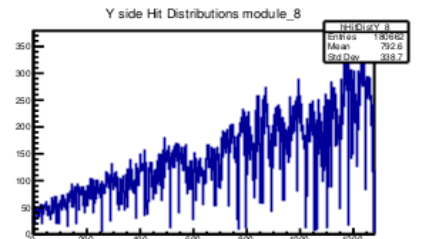
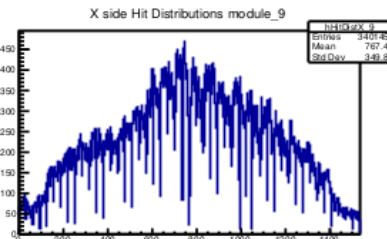
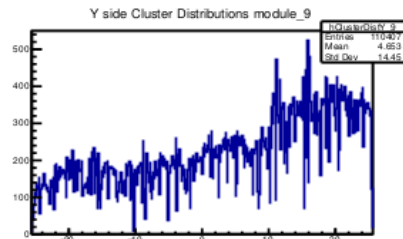
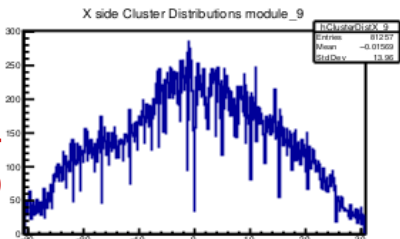
3rd layer

Module 8



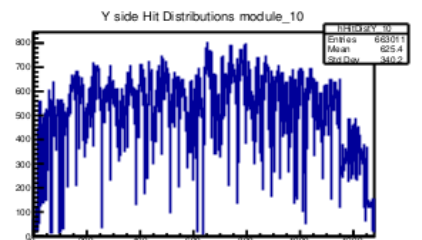
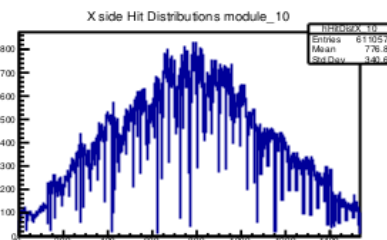
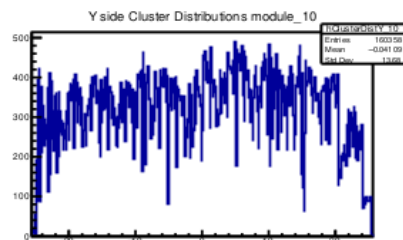
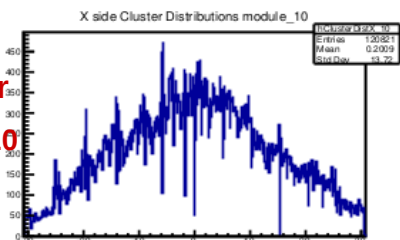
3rd layer

Module 9



3rd layer

Module 10



X cluster

Y cluster

X Hit

Y Hit

Cluster finding in root gui

- Find cluster on X and Y by checking if there are adjacent fired strips. If there are at least two fired strips close to each other, this will be considered as cluster
- For each cluster found in step one, add all the strip ADCs,. this will be considered as the cluster ADC ->> accumulated charge
- Sort the X and Y cluster charge value calculated from step 2.
- Match the X and Y. It will consider Highest ADC on X corresponding the highest on Y , and so on