

Mini Dry Run Muon Data & MC

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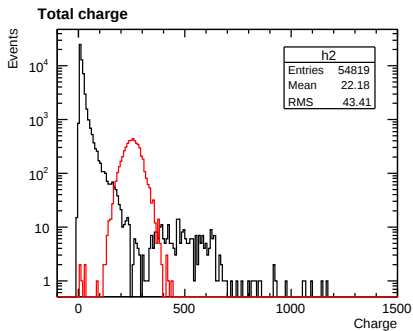
Dayabay Collaboration

- Data
 - First 120000 trigger in Run 1062
 - i. ACU LED ao0 -7.2V; freq. 100Hz;
 - ii. ESum>15 | NHi>=5;
 - iii. Trigger rates; 1.12kHz;
- Monte Carlo
 - Mini Dry Run geometry
 - 99000 events generated for SAB site
 - Detector level data, no electronic and trigger simulation

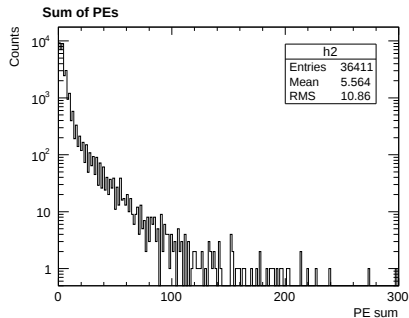
Without trigger simulation (If there is hit, it is a trigger)

Total charge distribution

Data (Red line is LED events)

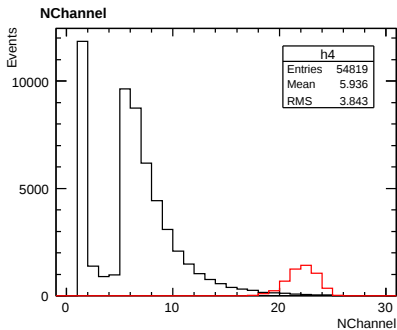


Simulation

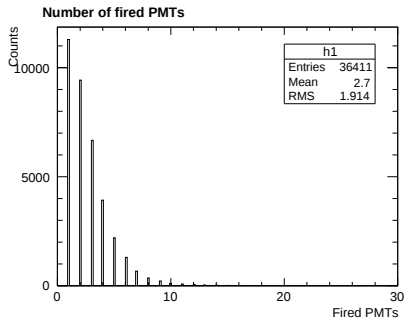


Number of fired PMTs

Data (Red line is LED events)

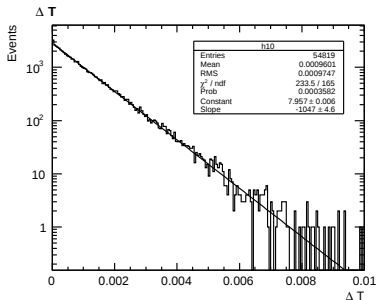


Simulation

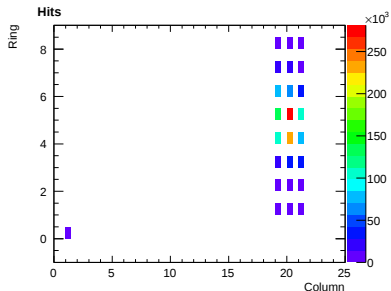


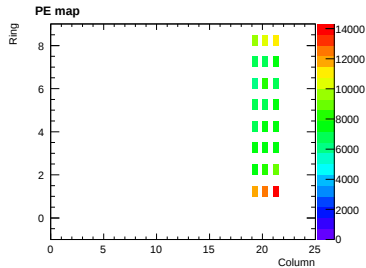
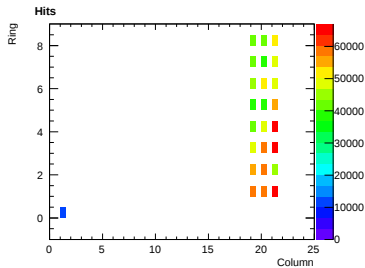
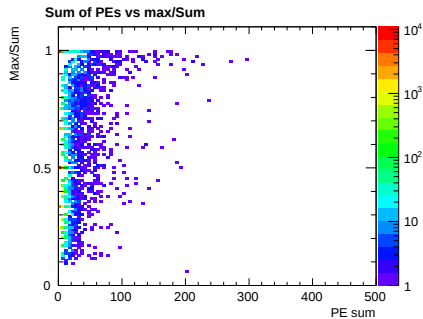
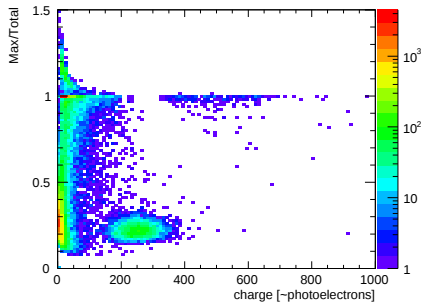
Some plots of real data

Time between triggers (Non LED events)



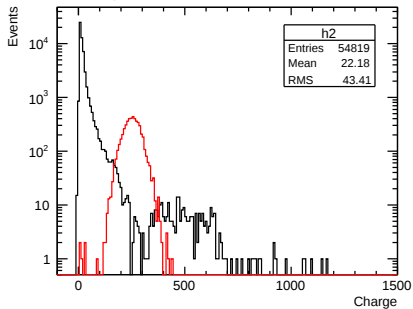
LED events



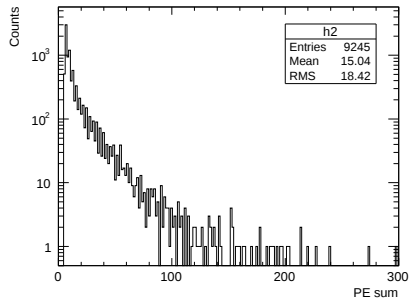


With trigger simulation ($nPMT > 4 \parallel PE_{sum} > 5$)

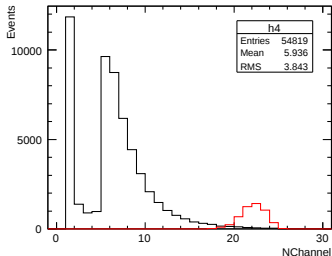
Total charge



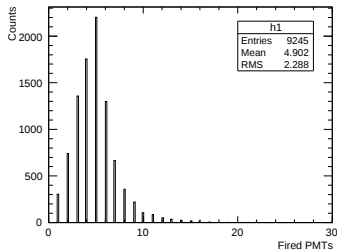
Sum of PEs

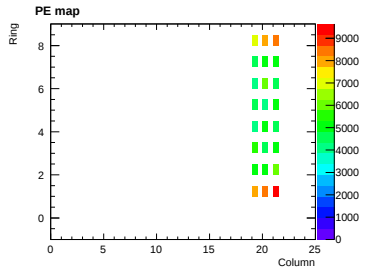
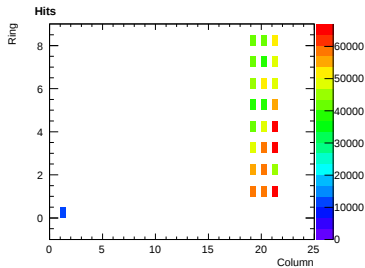
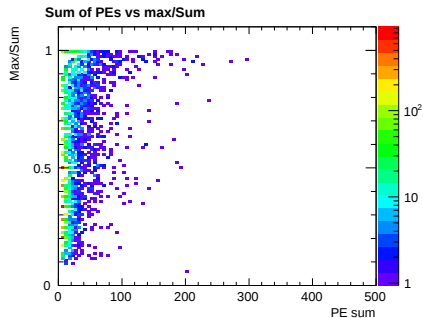
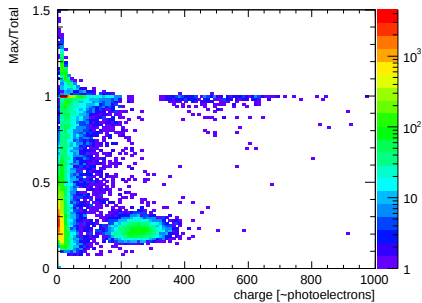


NChannel



Number of fired PMTs





- Hard to compare between data and MC without electronic simulation
- The events with hits mostly concentrate in one PMT may come from Muon events.