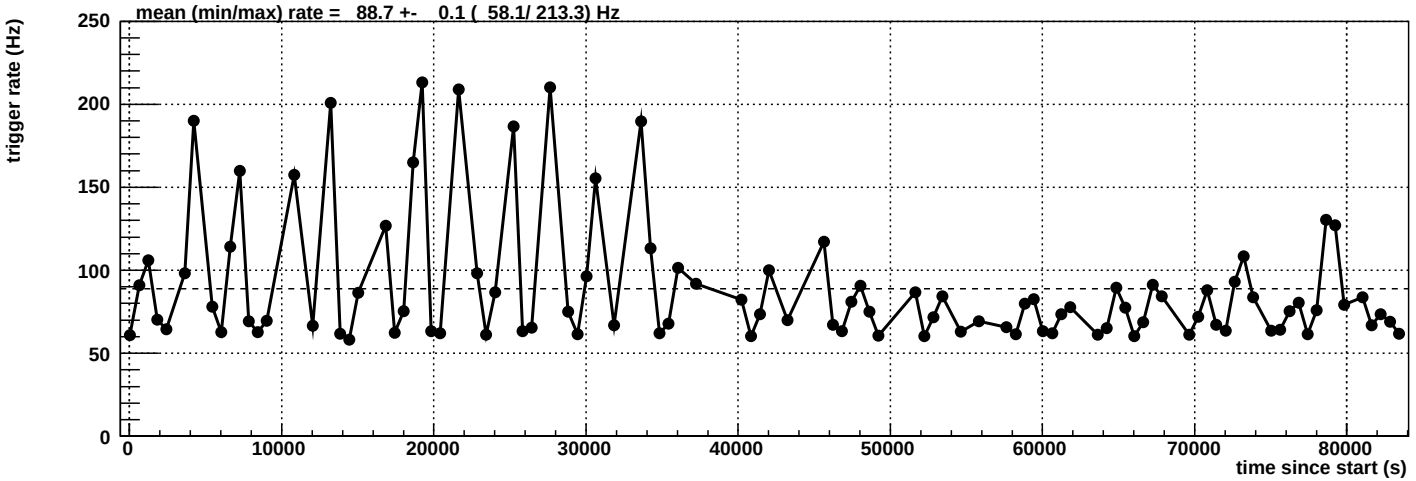
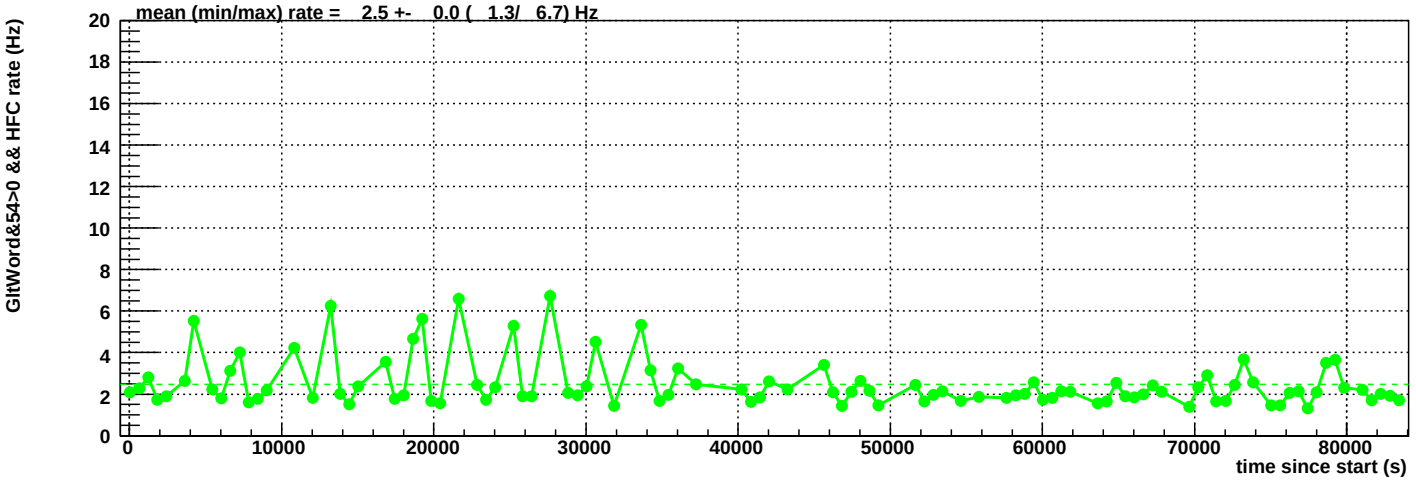
GCRCalib status

- Rates
- HFC efficiency
- GCRCalib results

CrHeavyIonPrimary rates

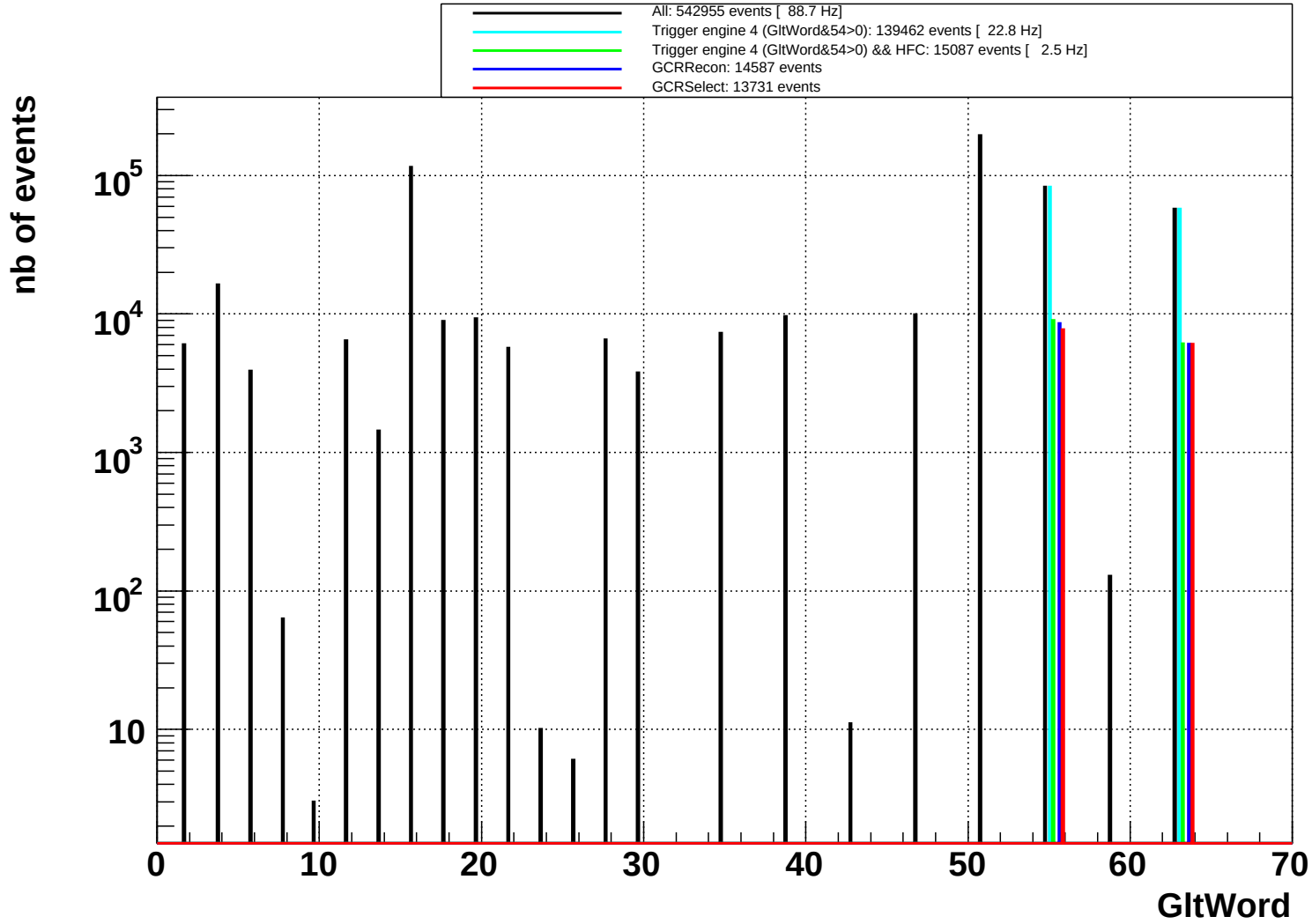
- 120 runs of 1 min spaced by 9 min: 102 min total (outside SAA)
- averaged trigger rate: 90Hz (2.5Hz after HFC)



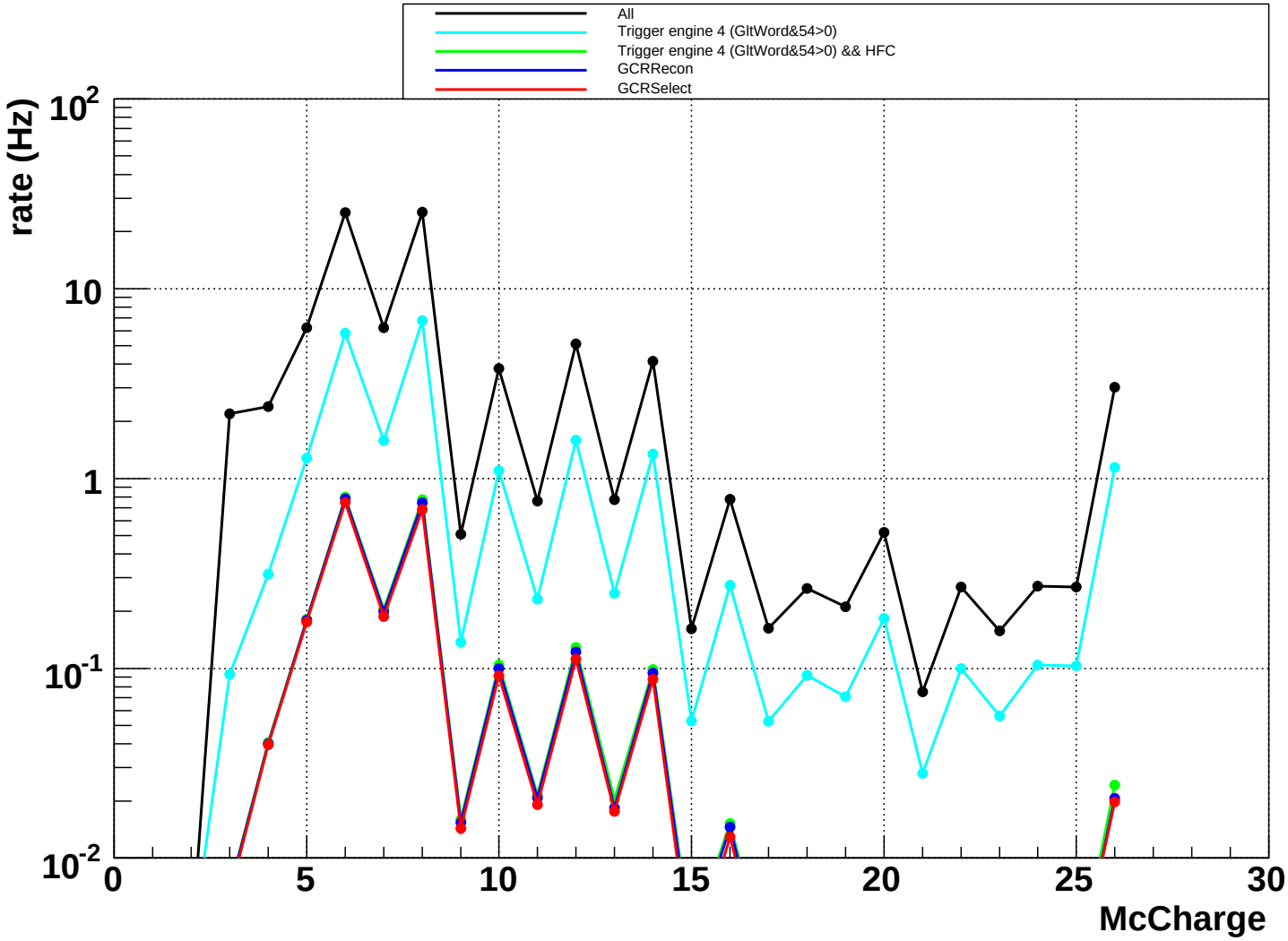


Trigger patterns

- HCF global efficiency ~10%
- GCRRecon (GCRSelect) keeps 97% (91%) of events passing HFC

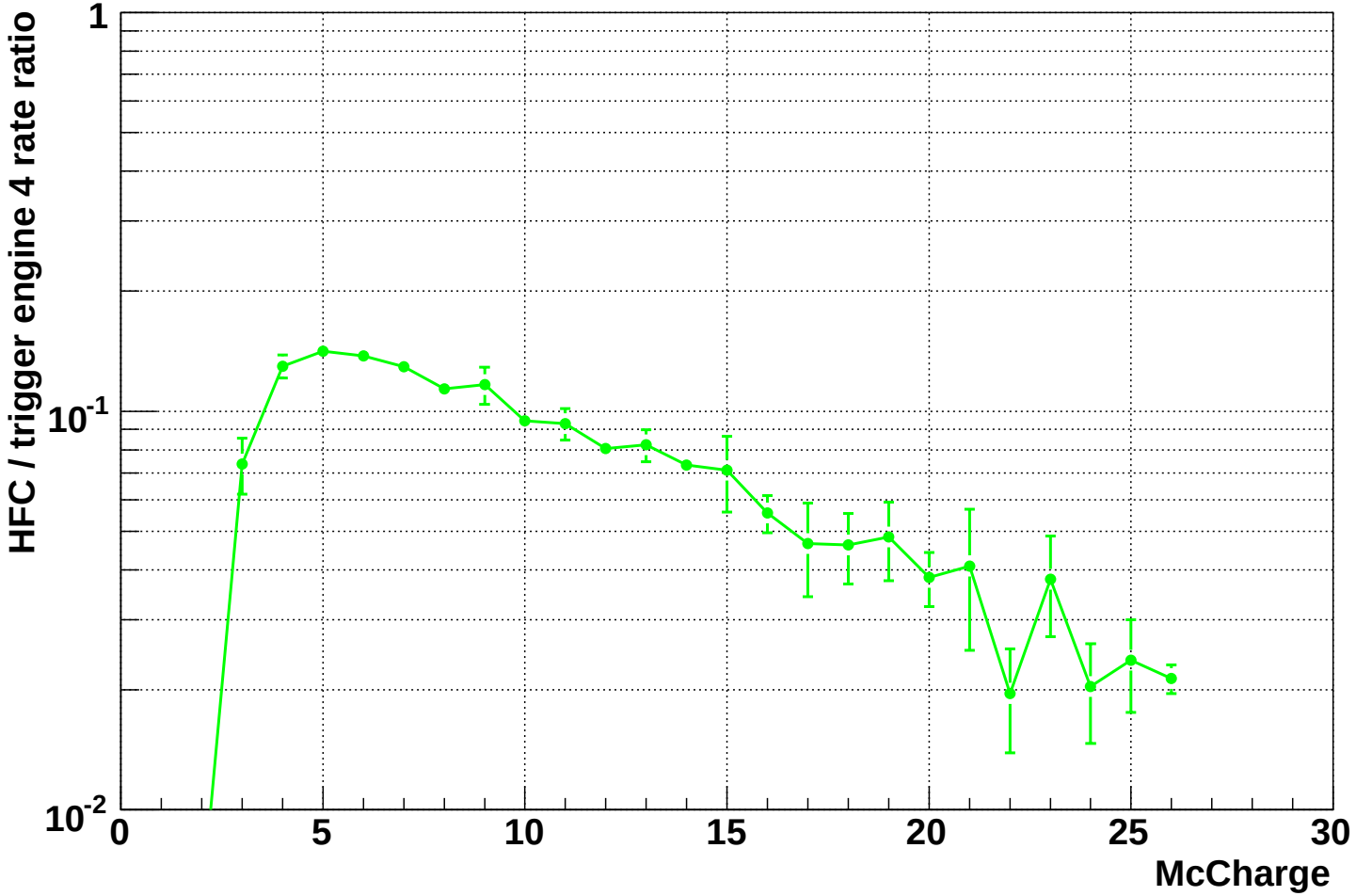


Individual rates



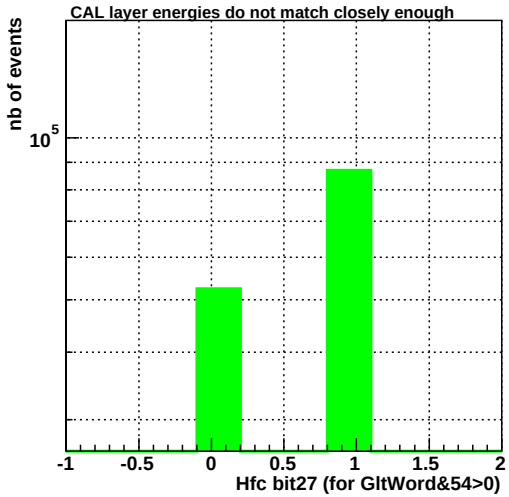
HFC efficiency 1/2

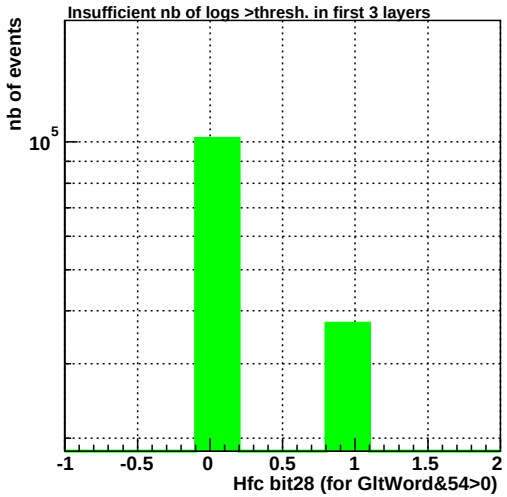
- HFC efficiency of 10-15% for light ions and <5% for heavy ions (2% for Fe)

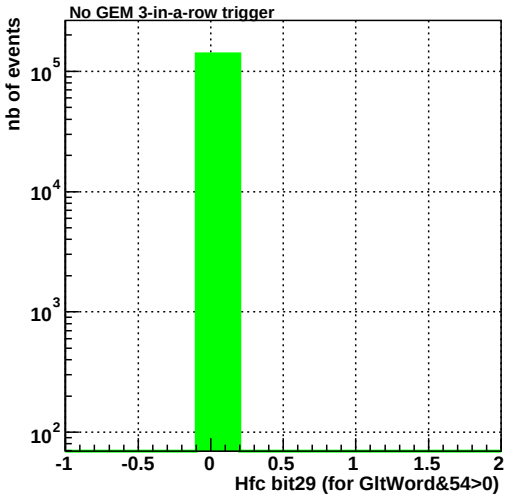


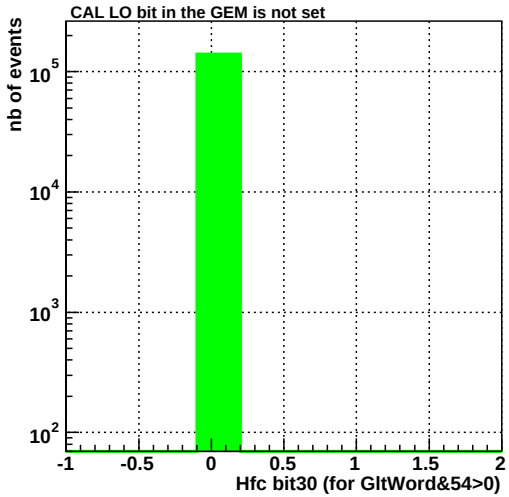
HFC efficiency 2/2

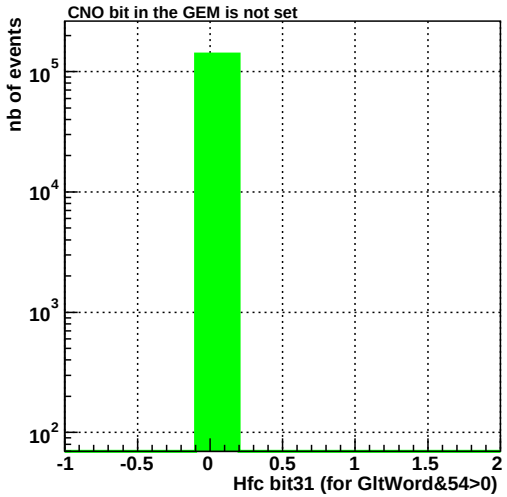
- energy matching criterion mostly responsible for low efficiency
- need to study bits 27 & 28 as functions of Z

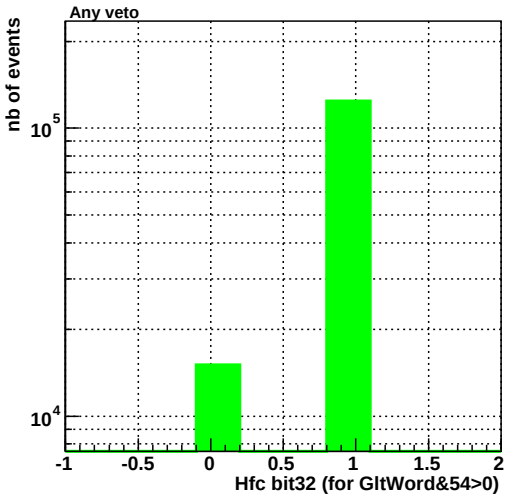






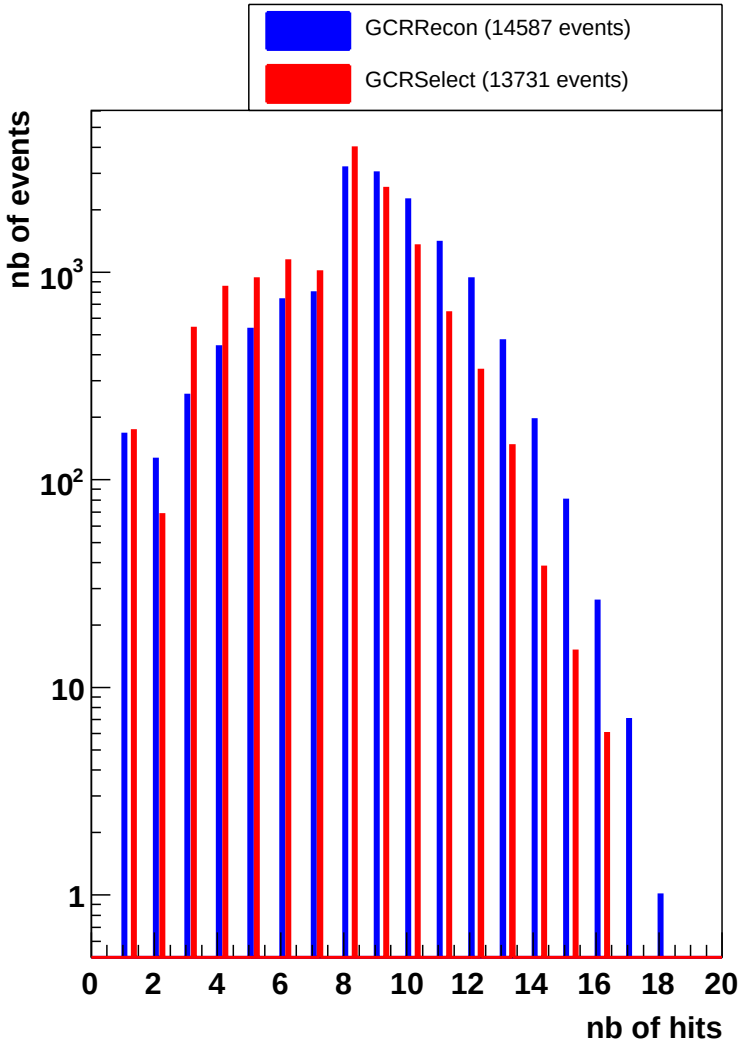


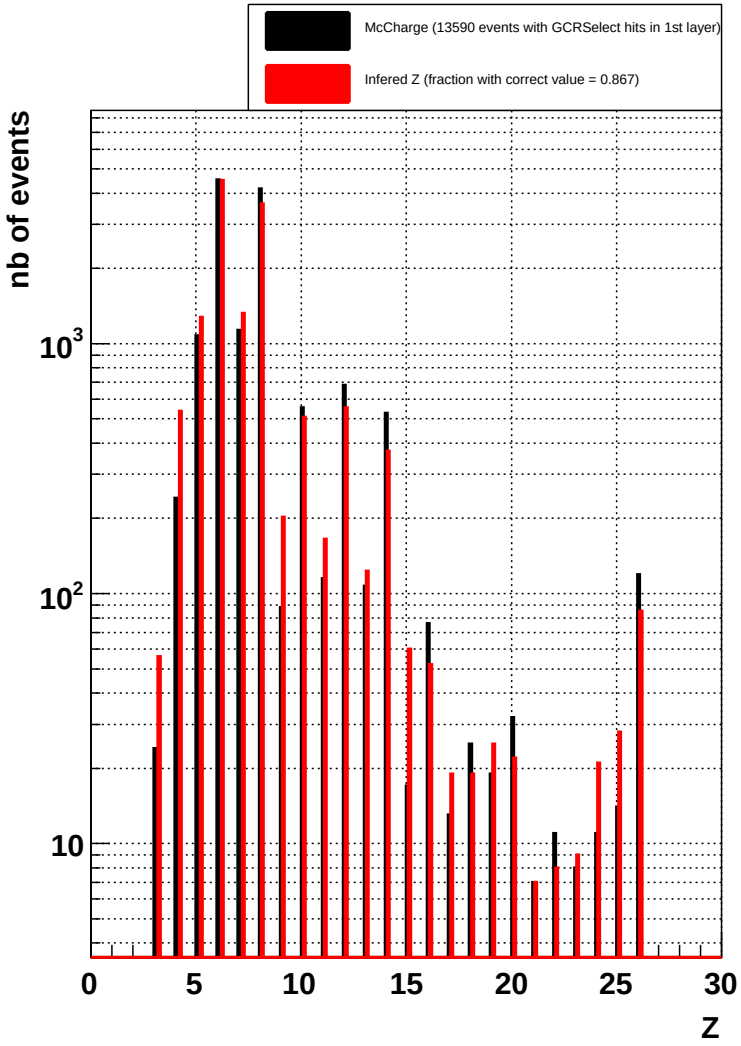




GCRcalib hits

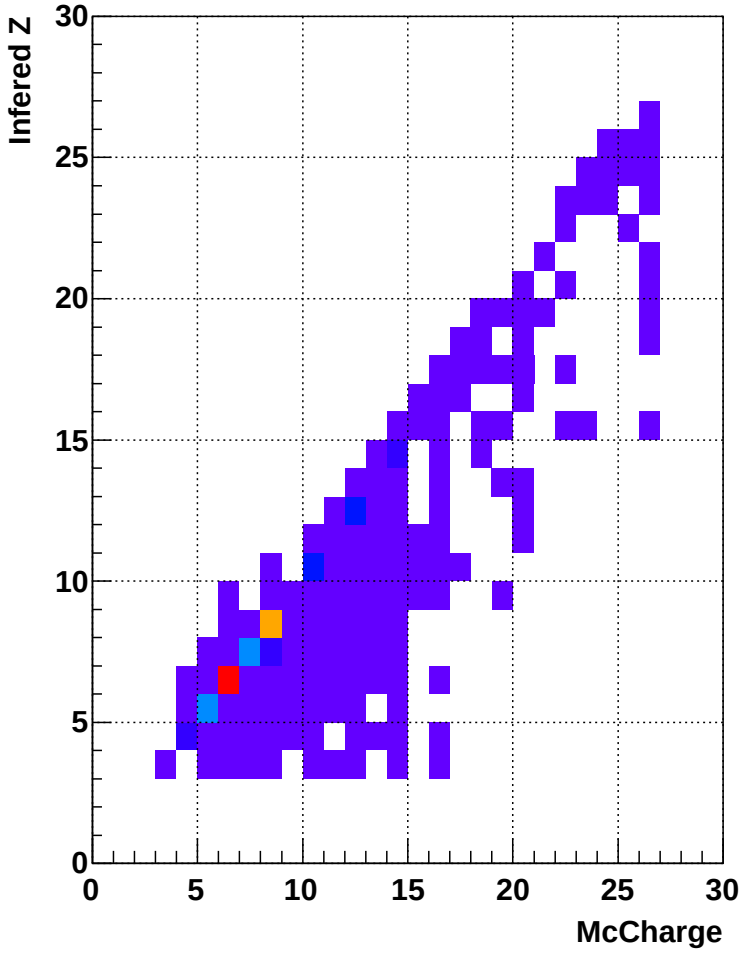
- after HFC, every event has a large number of hits useful for calibration
- energy in 1st layer yields correct Z for ~87% of events

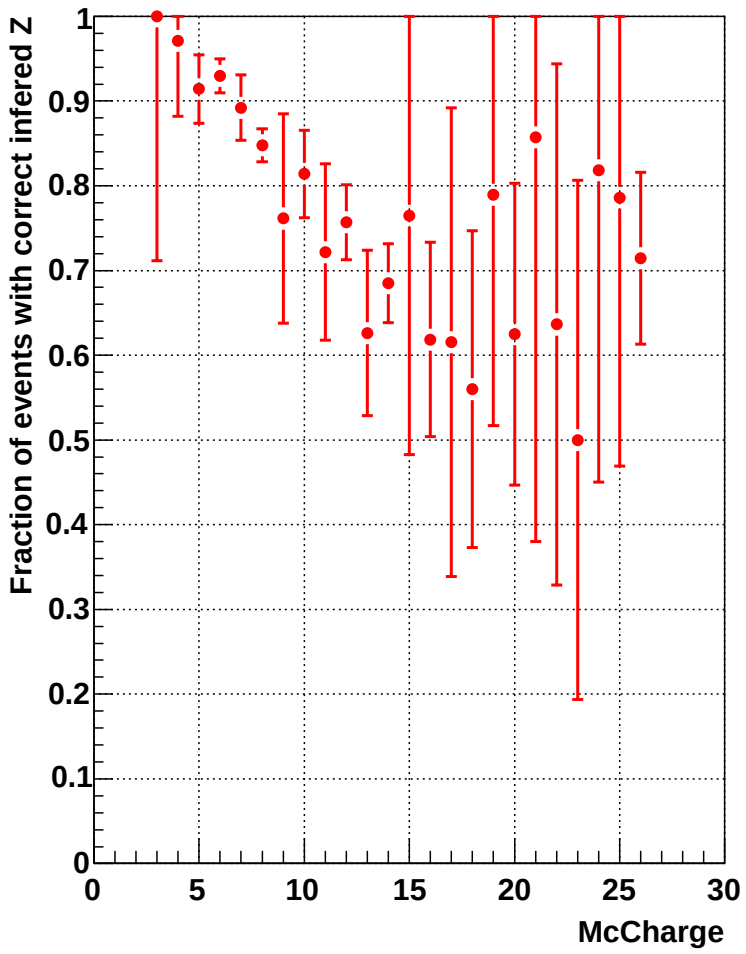




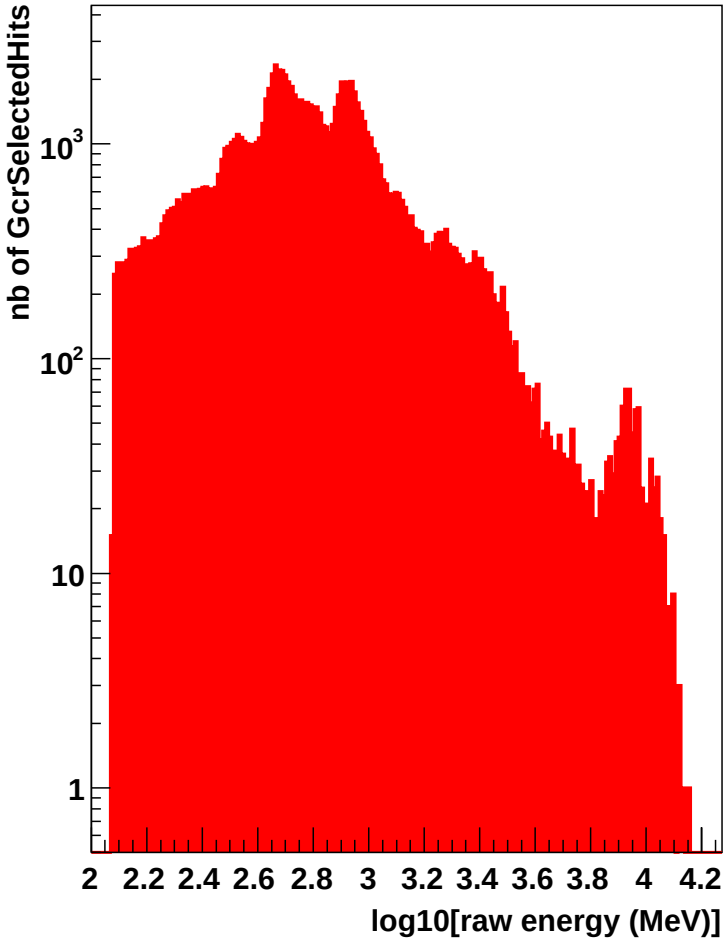
Z identification with GCRRecon

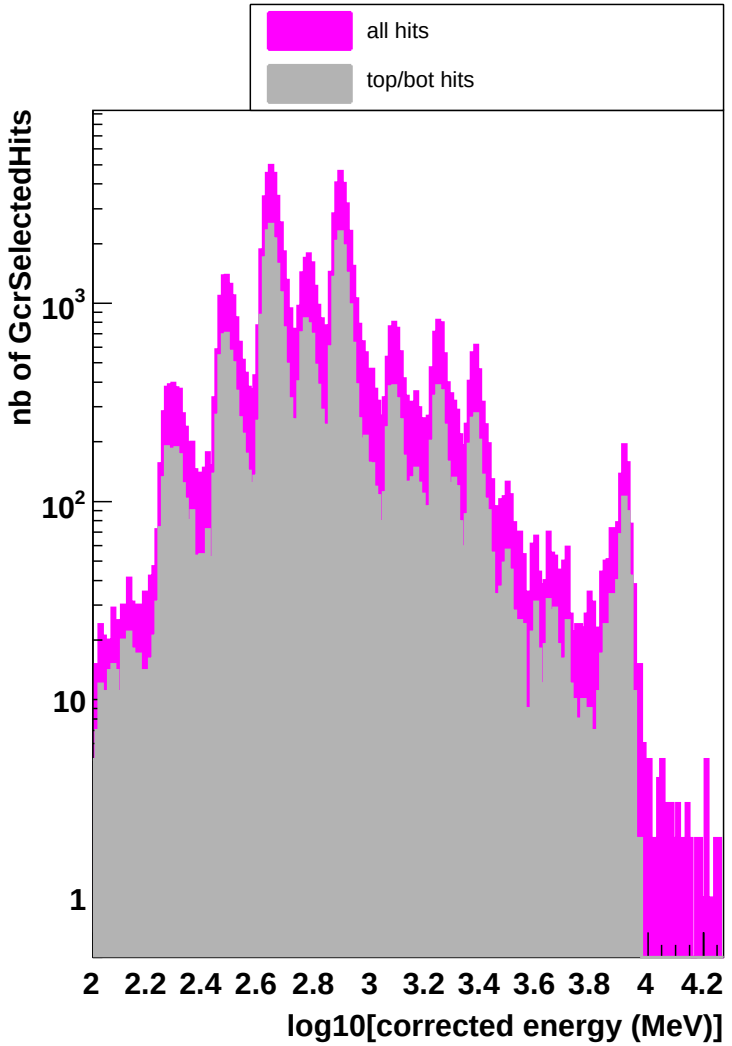
- Z id efficiency ranges from ~70% to >90% (93% for C)





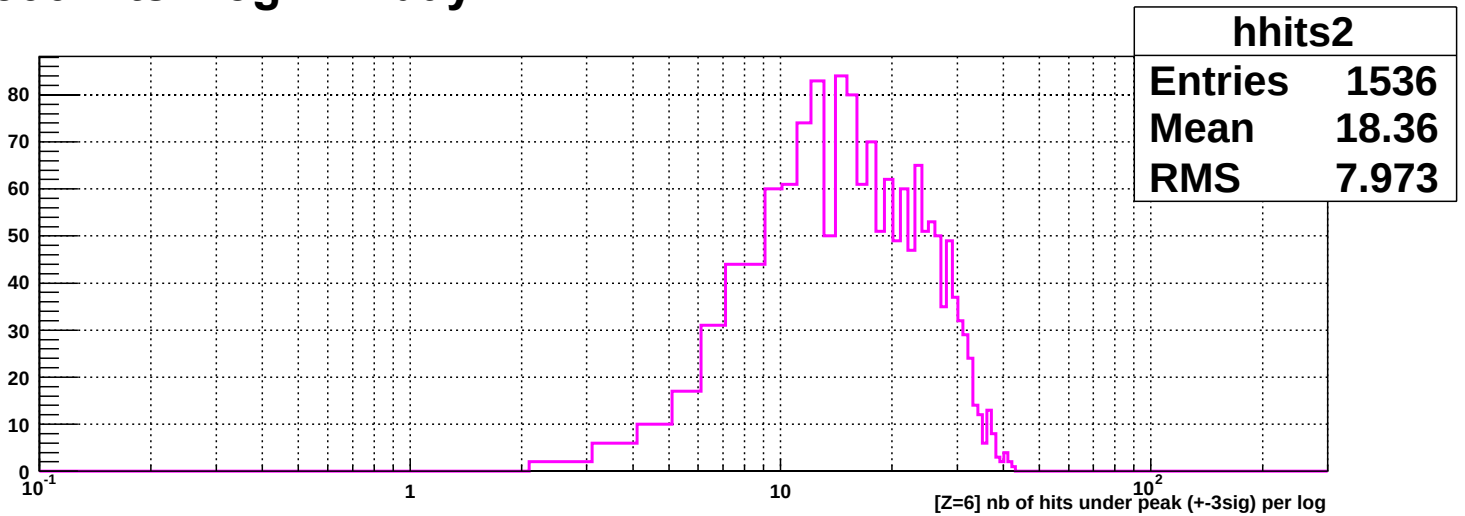
Raw vs path-length corrected energy spectrum

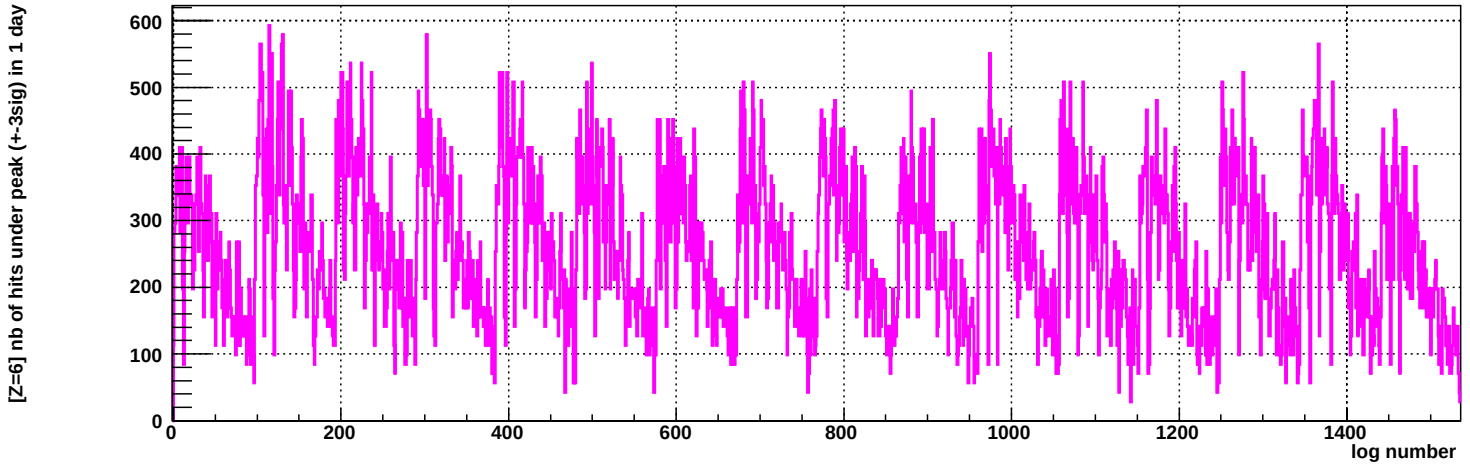




Statistics per log

- count number of hits under peak (+-3 sigma) after fit to an asym. gaussian
- 100 to 500 hits / log in 1 day





Code status

- Call for GCRCalib package driven from JO file (now in CVS)
  - 2 options:
  - trigger engine 4 by default
    - declareProperty("HFC_Or_TriggerEng4", m_HfcOrCnoTrig = "TriggerEng4");
    - HFC study possible using ObfCnoStatus variable in merit file
  - HFC
    - GcrReconAlg.HFC_Or_TriggerEng4="HFC";
- ROOT readers (recon.root and gcrSelect.root) implemented
  - tests in progress, soon in CVS
- Compilation in optimized mode done
  - tests ongoing (gain in CPU time?)