

# Preliminary Rate Estimates

- New run of 25 billion beam photons in HDGeant for 1200 A (run 9104) and no field (run 9105) solenoid configurations
  - Assumed 100 nA beam current, 10 um Al radiator, 10mm CH2 target
    - Previous results assumed 2mm CH2 target, different beam line conditions
  - Normalized to  $4.65 \times 10^9$  photons/sec calculated by Richard
  - Almost no job crashes!
- Extracted rate estimates per channel for subdetectors from mcsmeas output
  - Thresholds for SC and TOF: > 0.5, 1.5 MeV

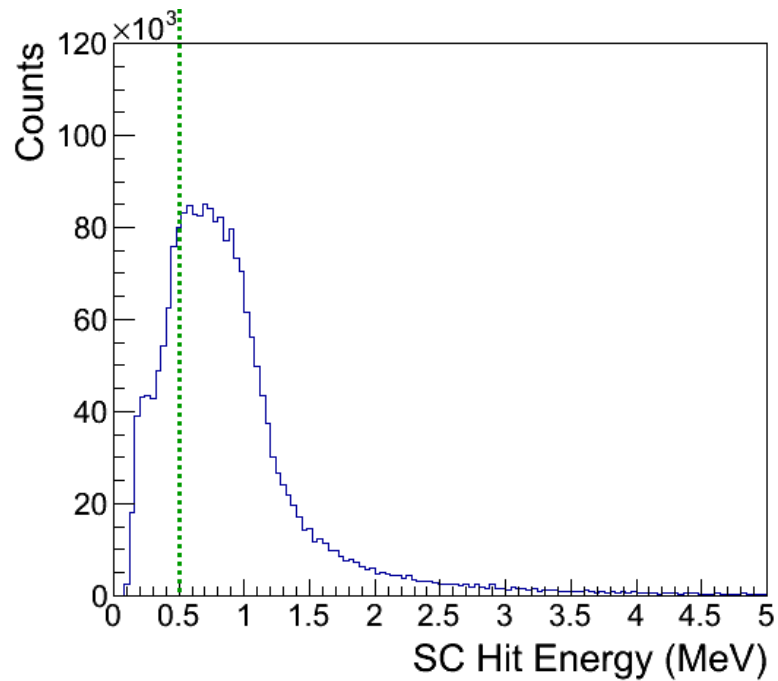
# Rate Dependence on Beamline Elements

- Various changes were made to the beamline geometry from last week's results to reflect changes in the hall (e.g. new BPM radiators, beampipe cap, scintillating block).
- The rates for detectors near the beamline are very sensitive to these changes.

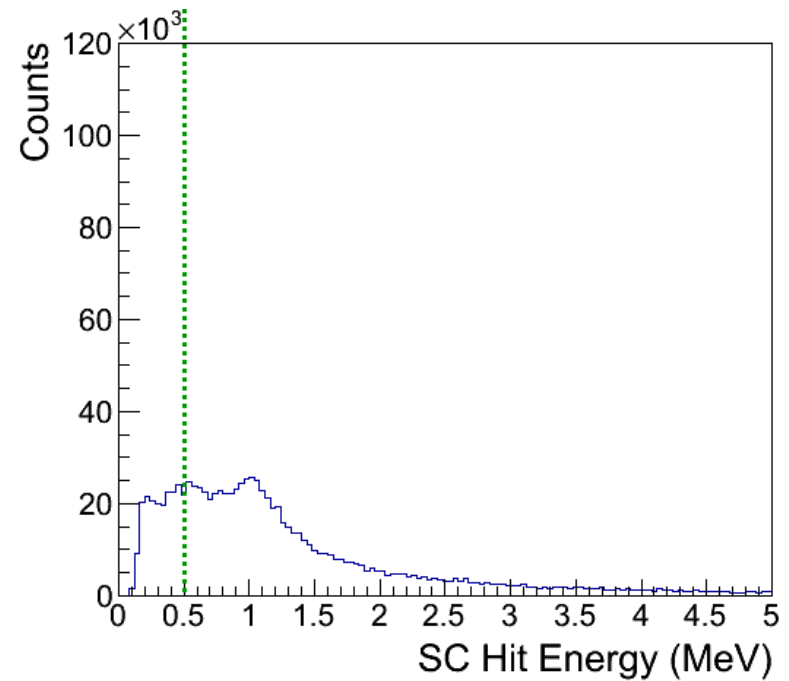
Example: Start Counter rates

- Last Wednesday (2mm target, no scin. blk.) – 150 kHz
- Current: (10mm target, scin. Blk.) – 50 kHz
- Current: (10mm target, no scin. Blk.) – 600 kHz
- Current: (2mm target, no scin. Blk.) – 300 kHz

# Start Counter Hit Energies

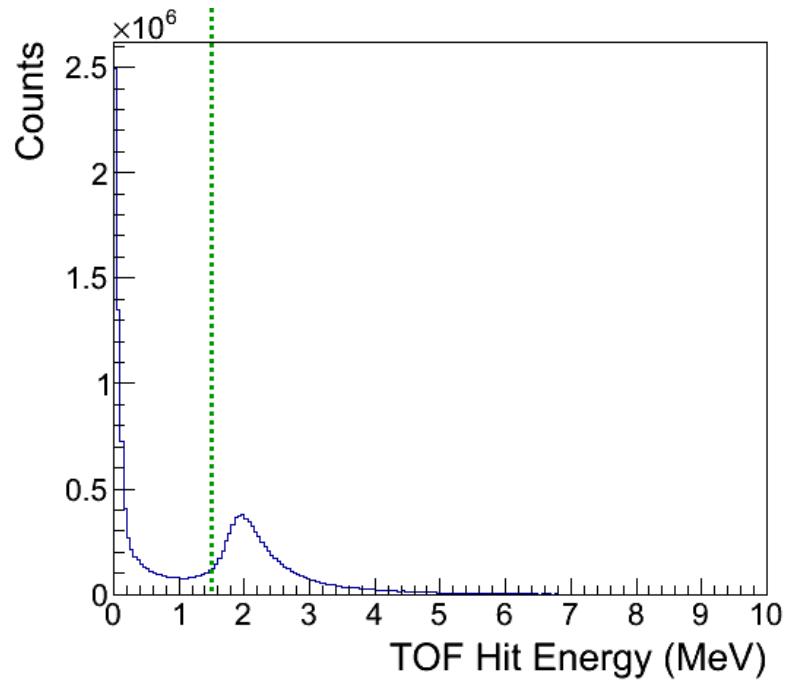


No Solenoid Field

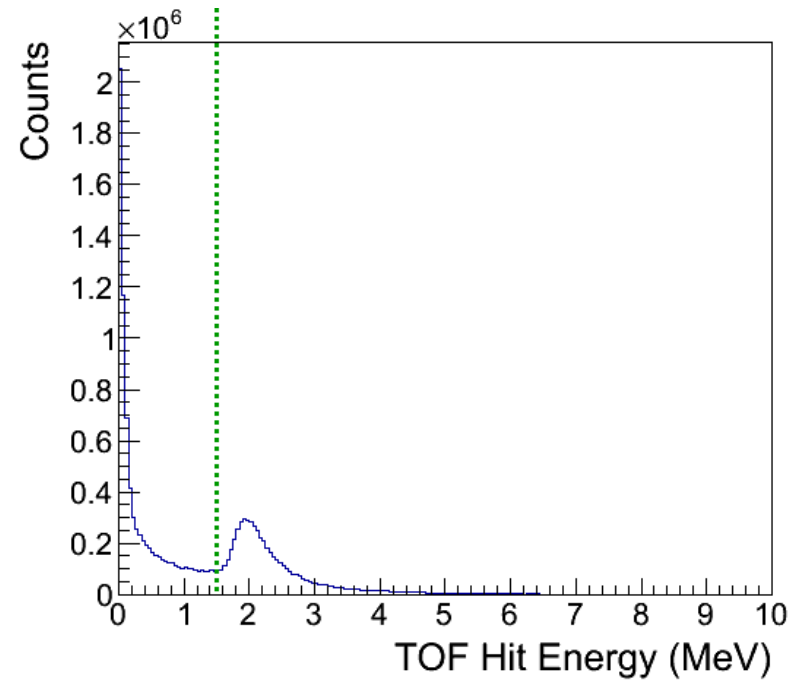


Solenoid @ 1200A

# TOF Hit Energies

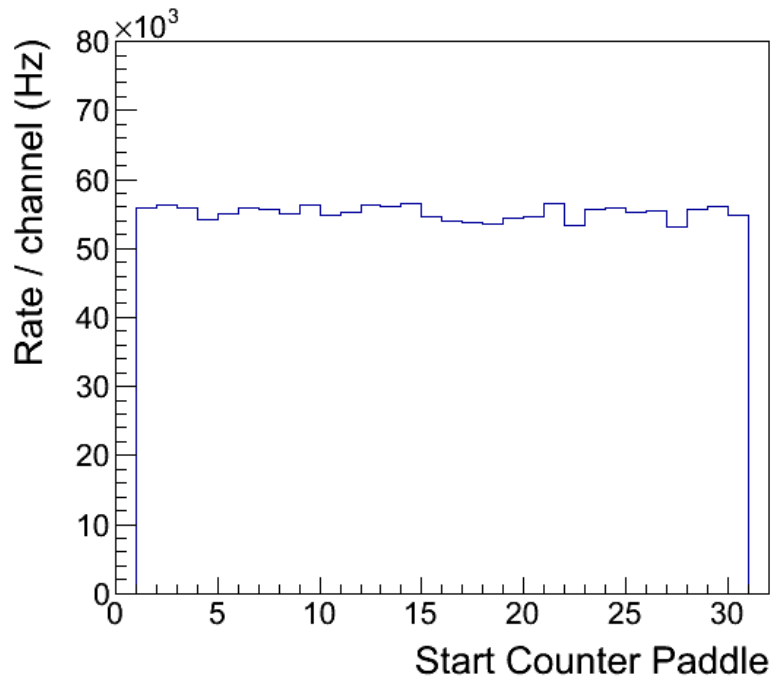


No Solenoid Field

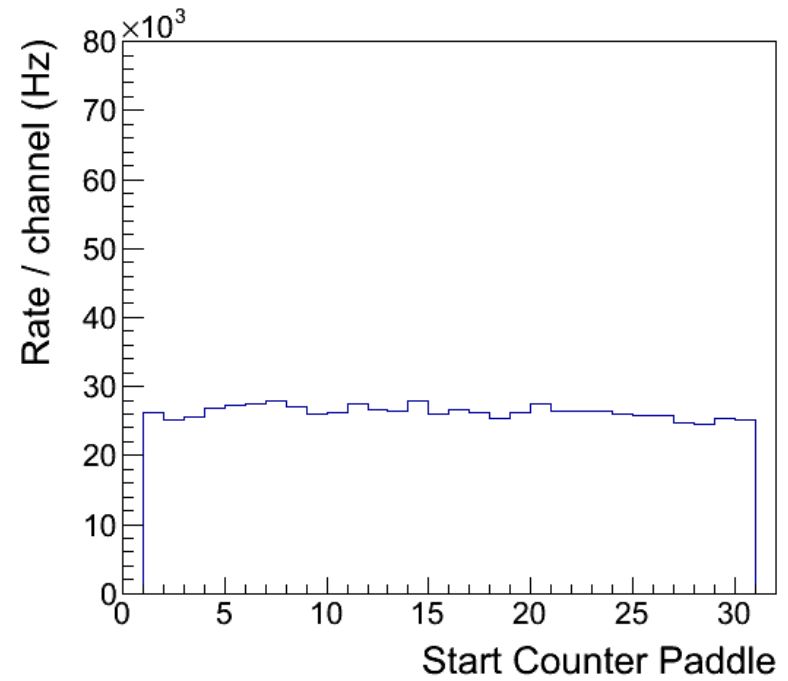


Solenoid @ 1200A

# Start Counter

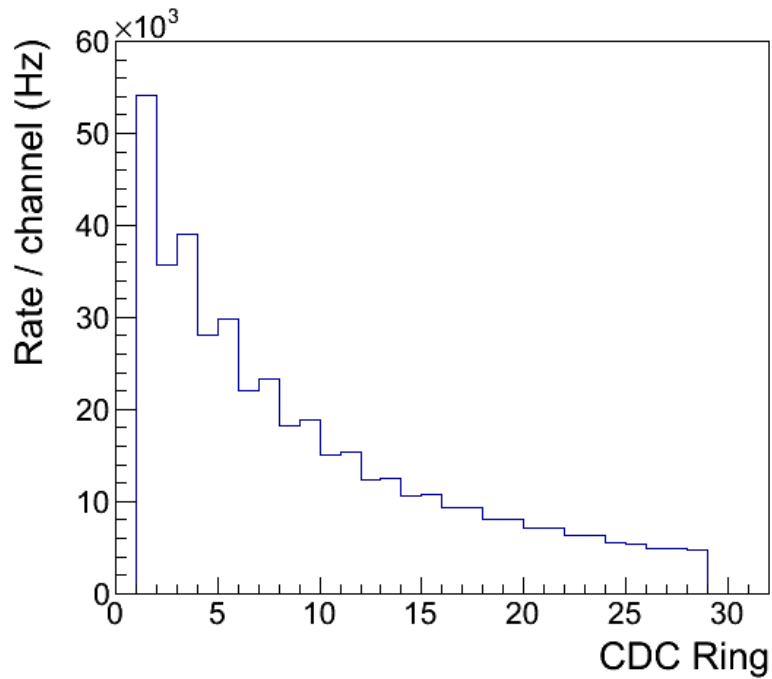


No Solenoid Field

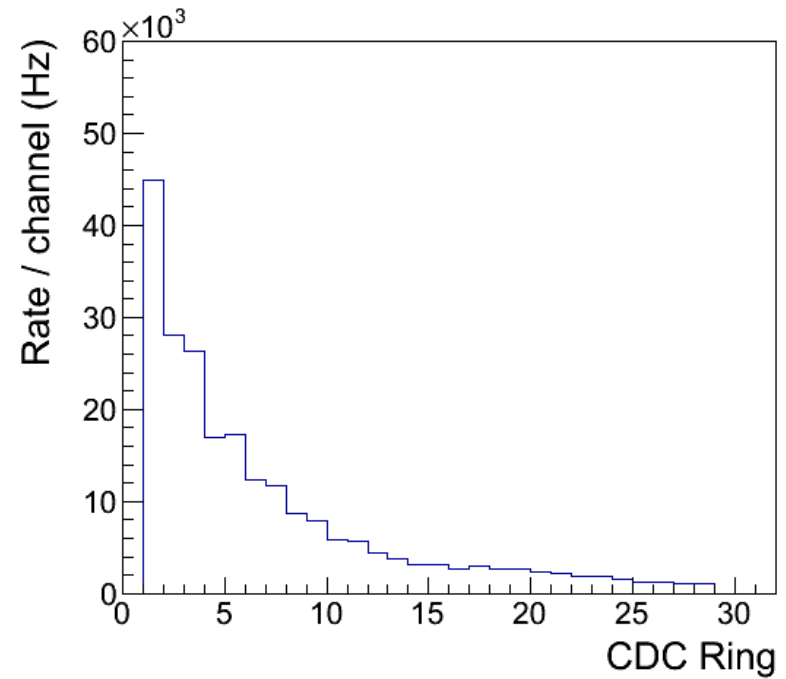


Solenoid @ 1200A

# CDC

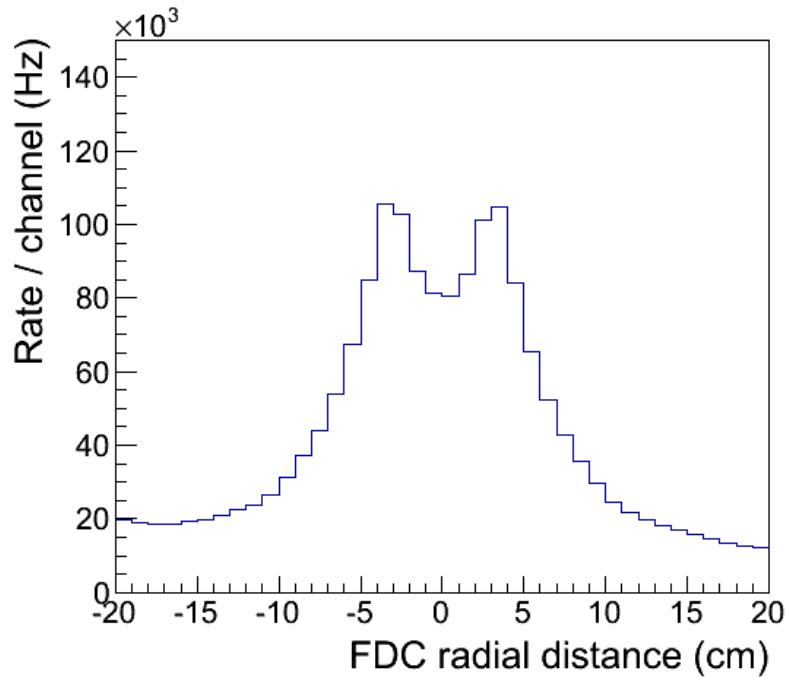


No Solenoid Field

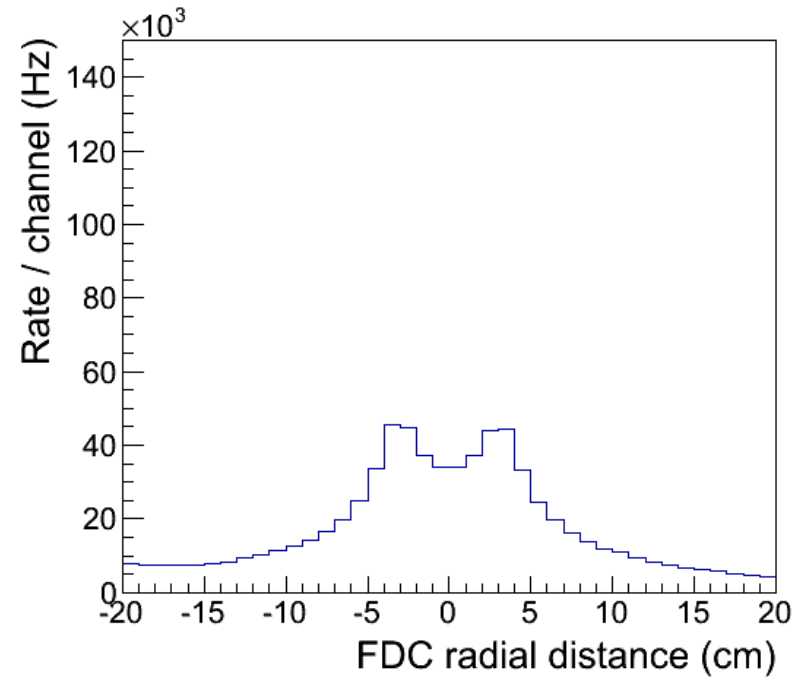


Solenoid @ 1200A

# FDC Strips – Package 1

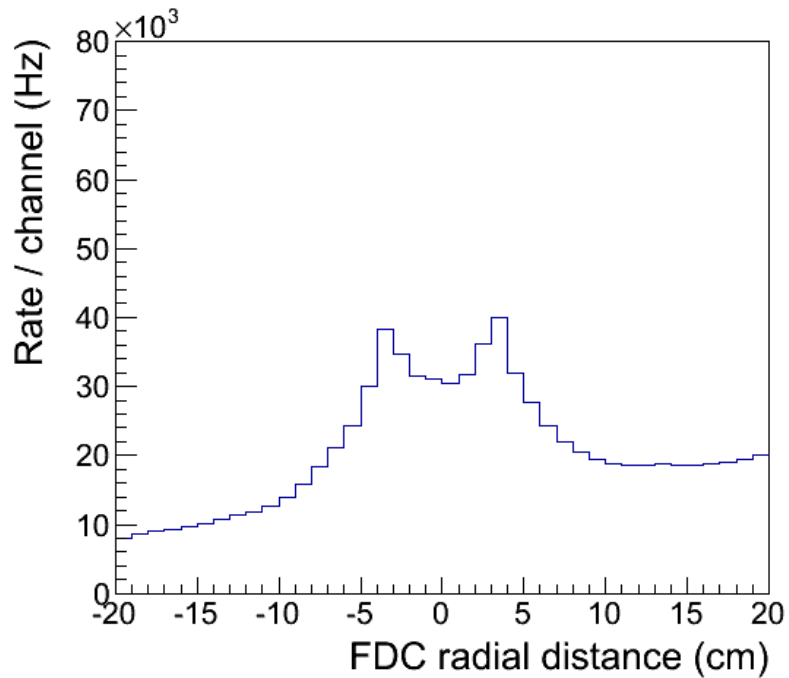


No Solenoid Field

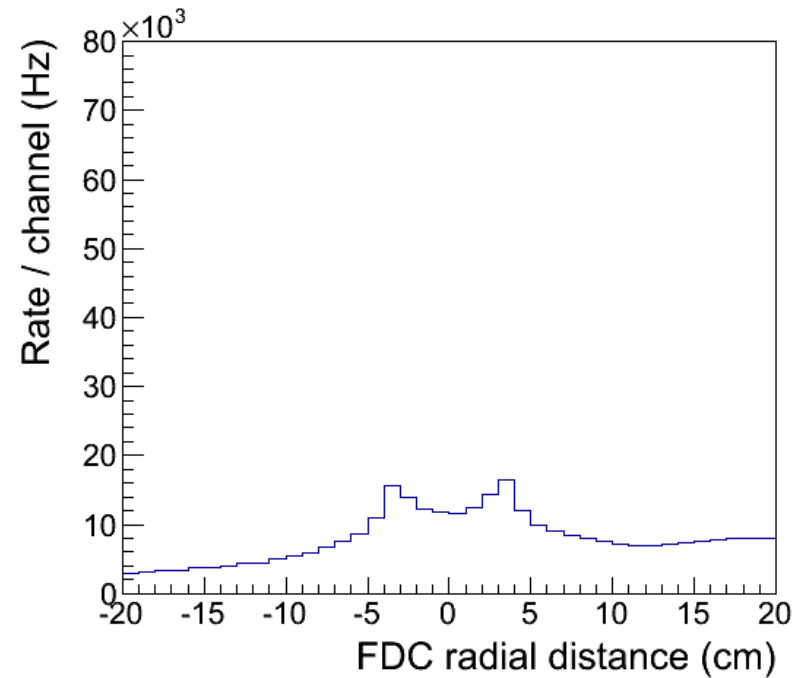


Solenoid @ 1200A

# FDC Wires – Package 1



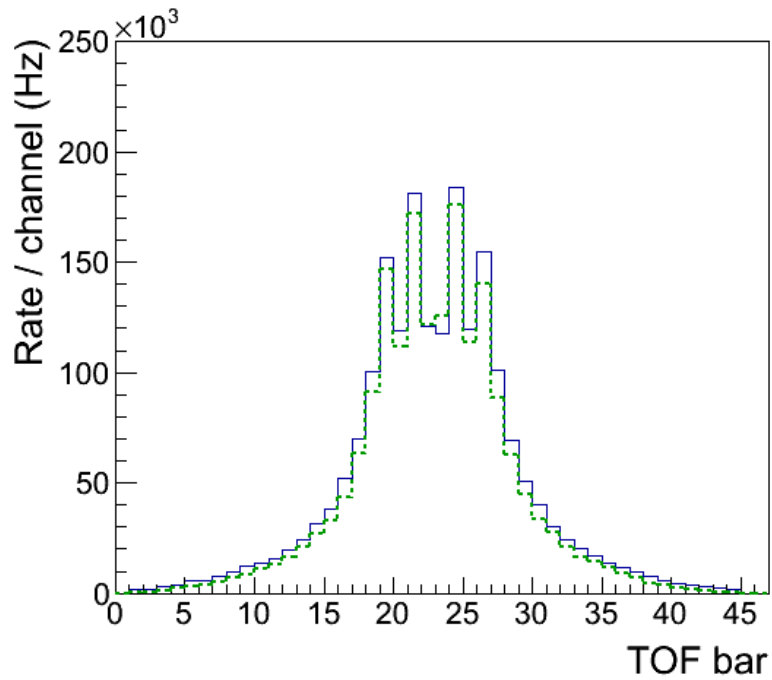
No Solenoid Field



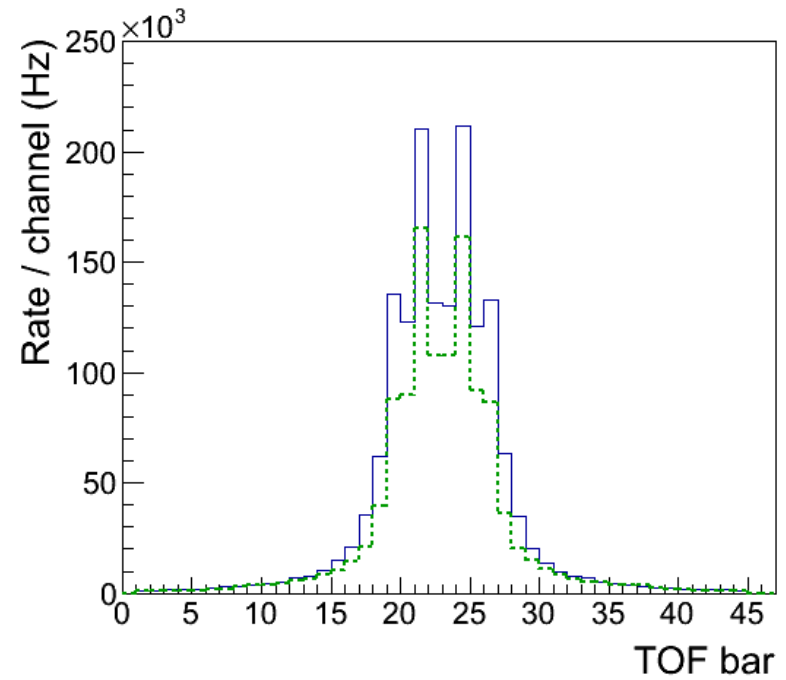
Solenoid @ 1200A



# TOF



No Solenoid Field

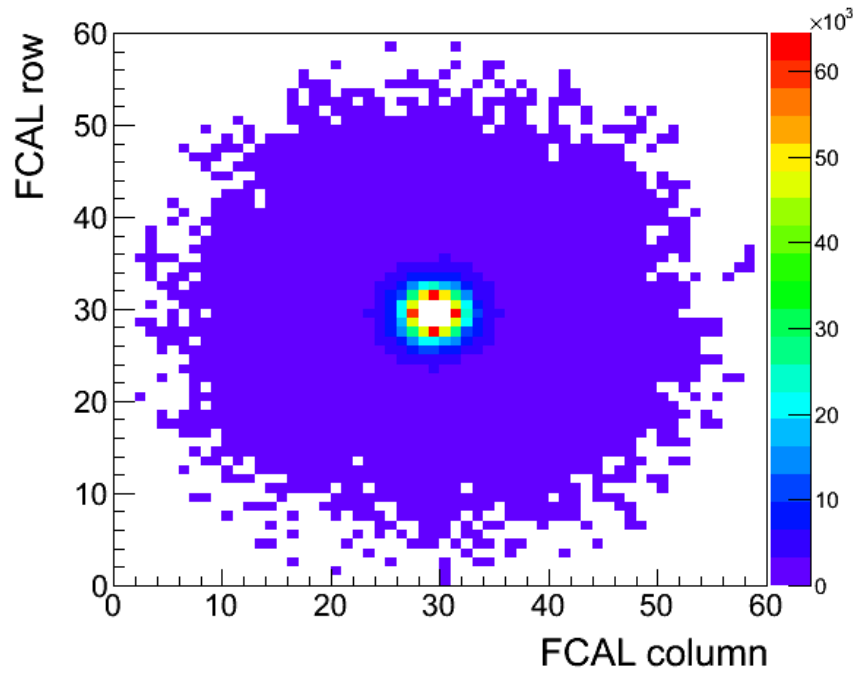


Solenoid @ 1200A

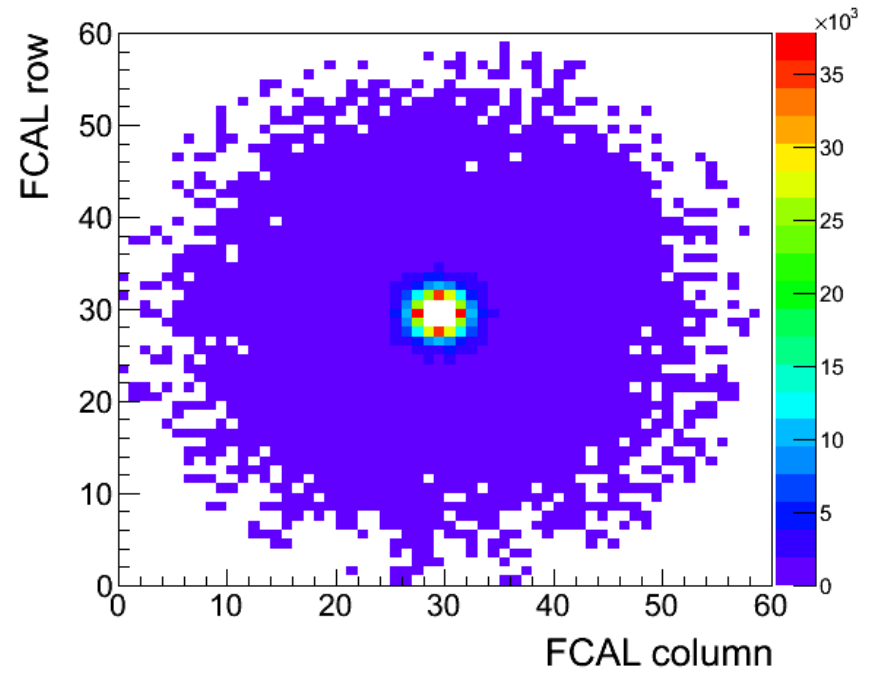
Solid line – Upstream plane

Dashed line – Downstream plane

# FCAL

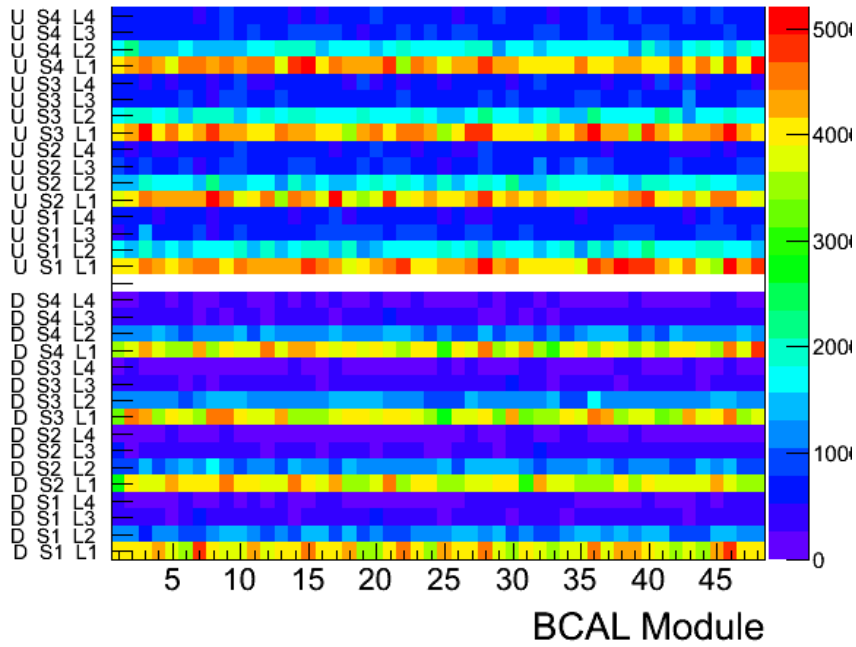


No Solenoid Field

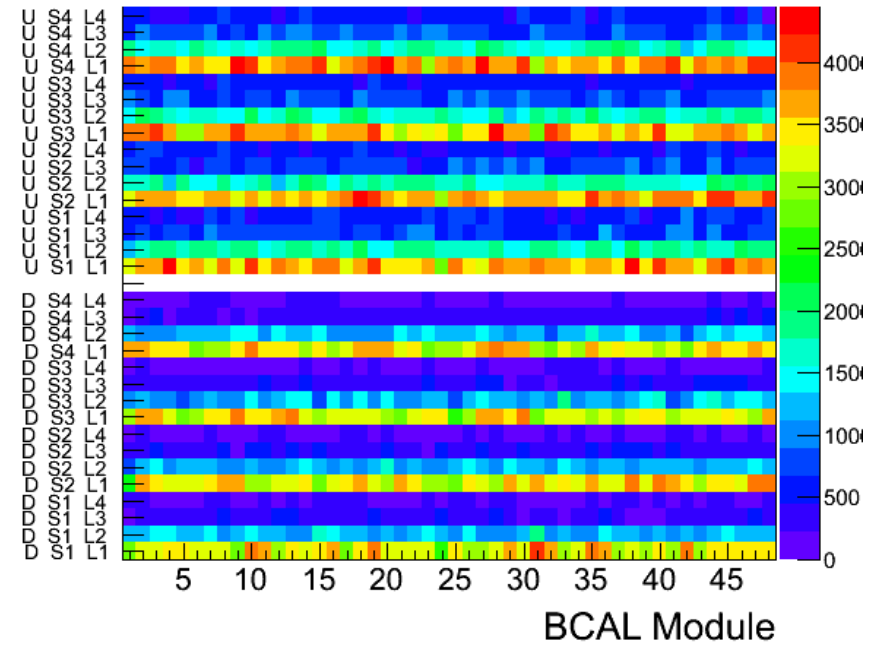


Solenoid @ 1200A

# BCAL



No Solenoid Field



Solenoid @ 1200A