Forward Ecal Software Status

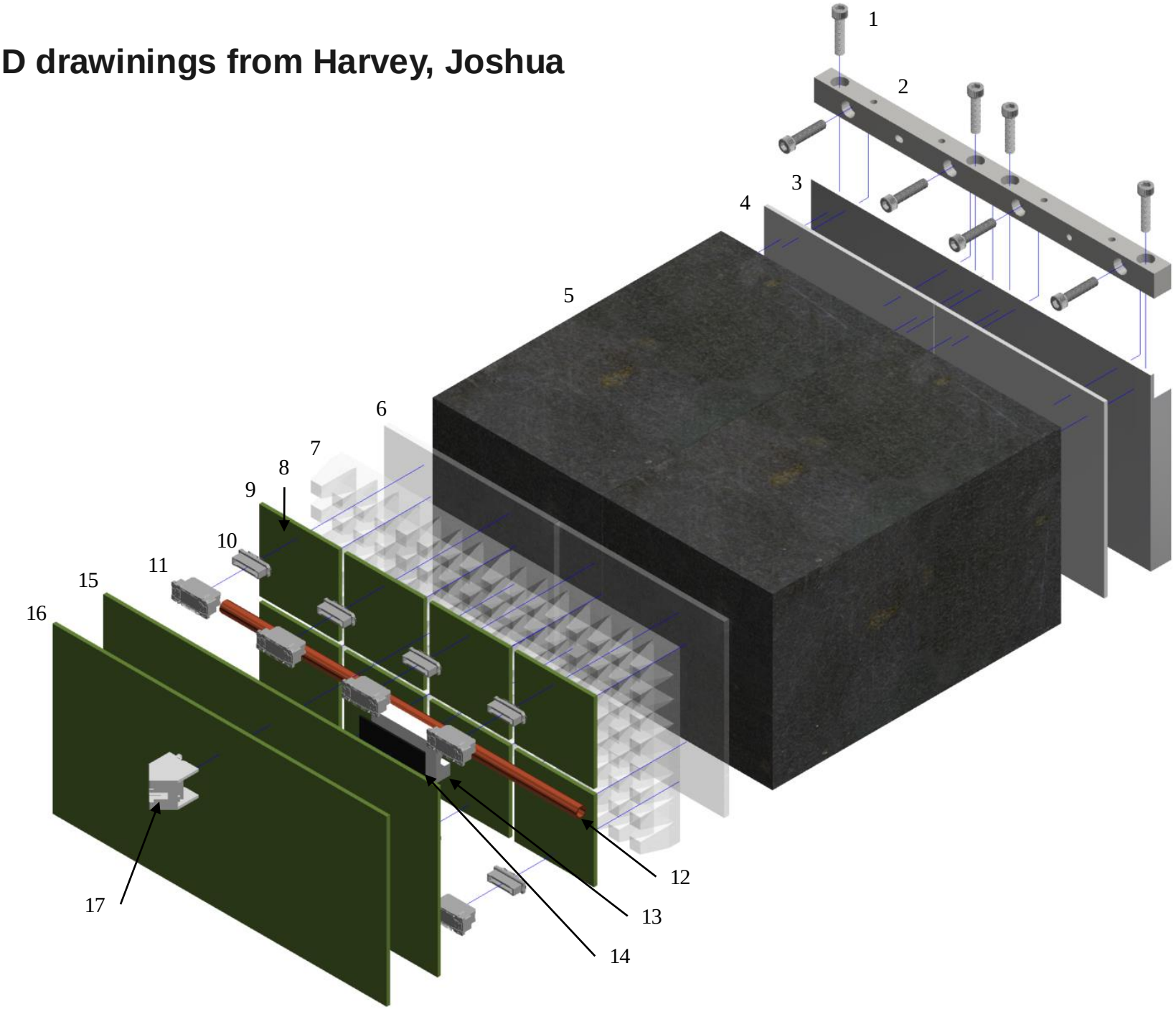
New coordinator : Akio Ogawa

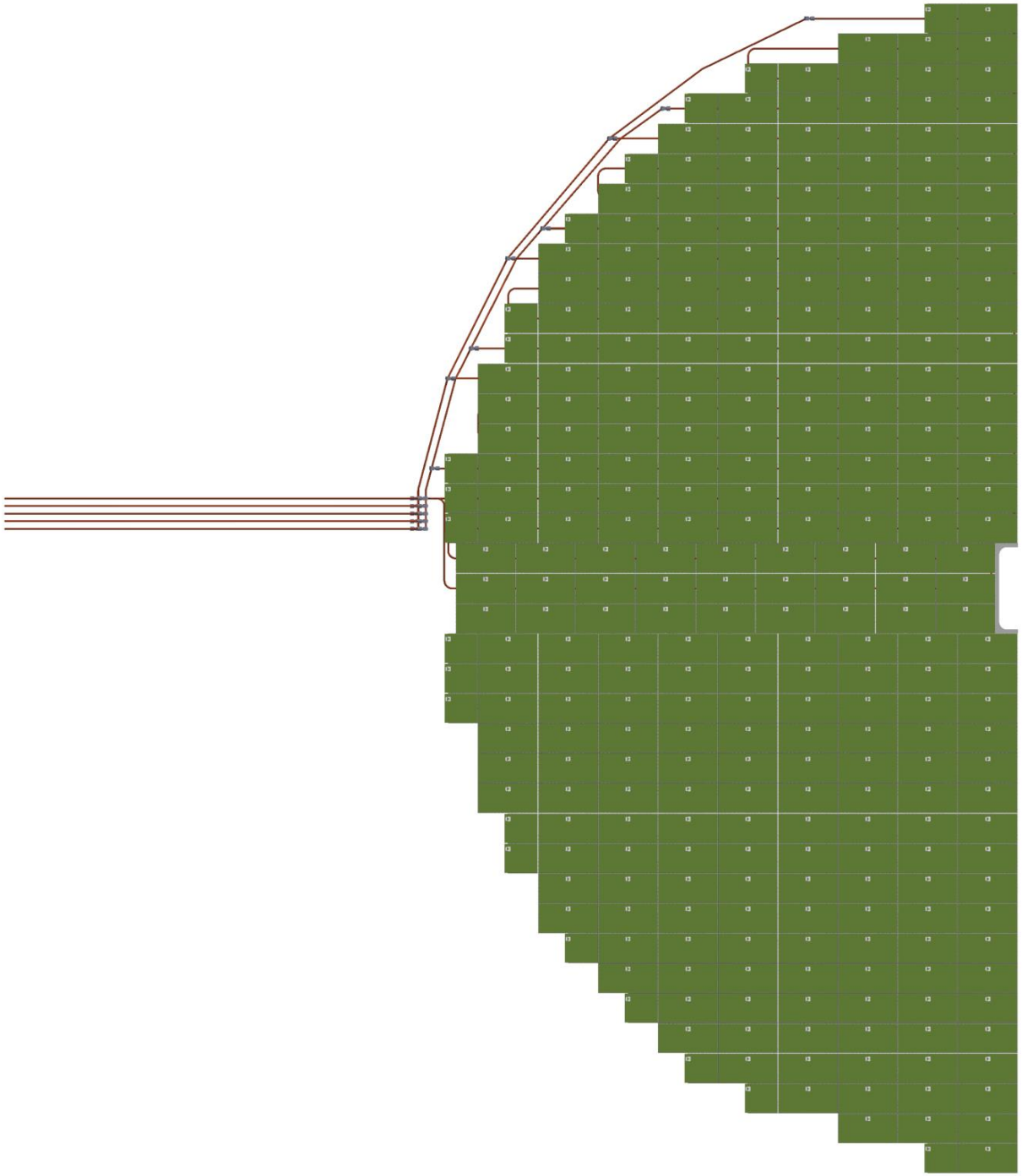
Coordinated : None

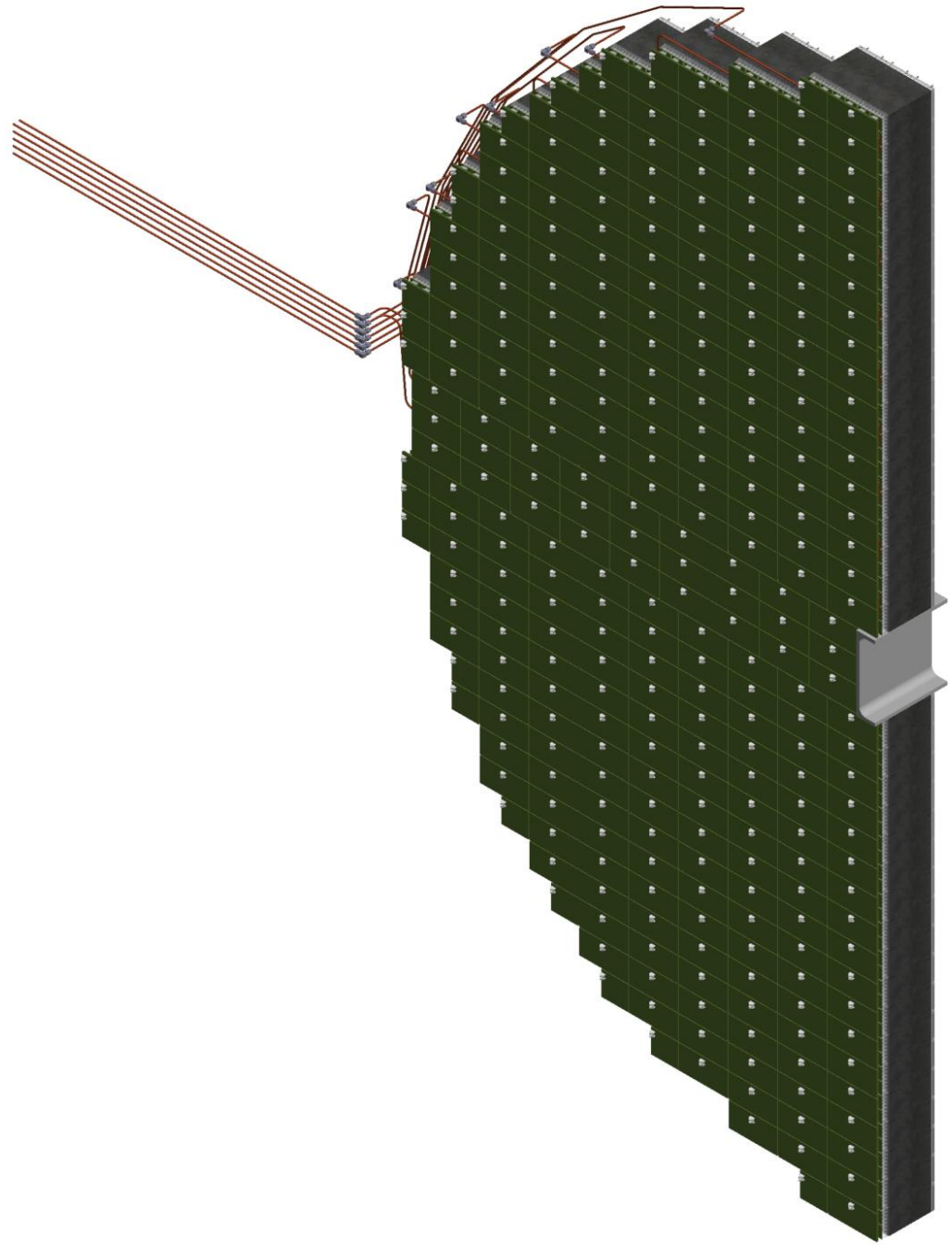
- Update Geometry with the current design
  - Currently geometry in MC code is totally symmetric and not updated with current design
  - Block & FeeBd & cooling pipe placements are being finalized
    - Gap tolerance between blocks
    - Gap between north and south halves
  - CAD model is being refined
  - We'll update Geant geometry according to the current design
- Fiber geometry vs Mixture + resolution smearing
  - Study is done and mixture model is sufficient
- Studies on response to low energy hadrons
  - MC showing possibly too much energy loss in Ecal?
  - Need to be checked against test beam
- SiPM Noise ~10MeV @ highest luminosity
  - Against current plan to have ~15MeV digitization threshold
  - This may be insignificant for fEcal
- Pulse Shape Simulator & Fitting algo?
- Clustering, Ecal-Hcal correlations, pi0/photon analysis, etc?

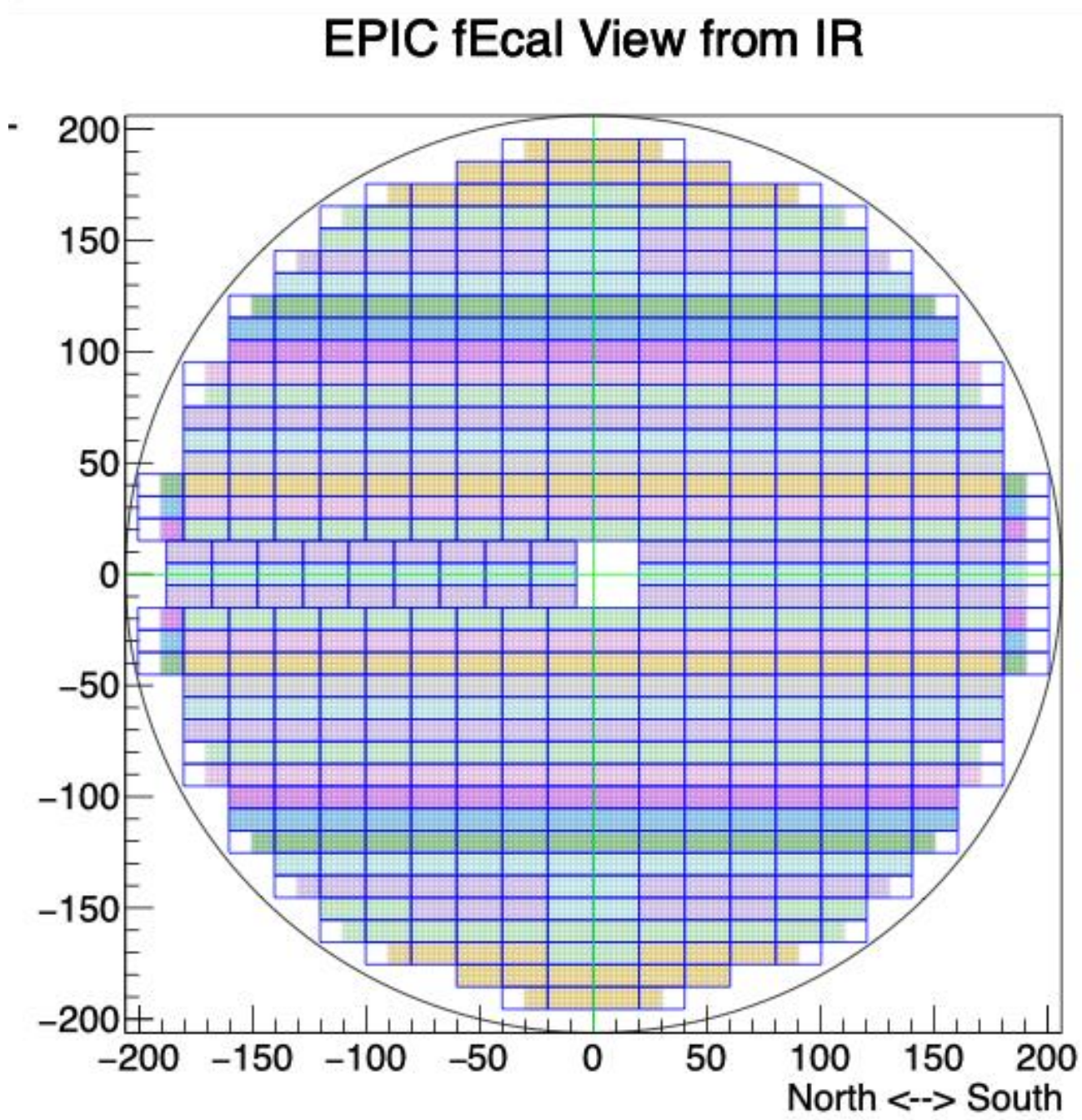
CAD drawinings from Harvey, Joshua

Part Number	Component
1	8-36 Screws
2	Mounting Plate – Top
3	Mounting Plate – Bottom
4	Titanium Dioxide Epoxy
5	Tungsten Sci-Fi Block
6	Light Guide Face
7	Light Guide
8	SiPM (Hidden behind SiPM Board)
9	SiPM PCB
10	Connector MA01R030VABBR600
11	Connector MA01F030VABBR300
12	¼” Copper Tube
13	Aluminum Heat Sink
14	Thermal Pad
15	Pre-Amp PCB
16	Bia PCB
17	Ethernet 615008145121

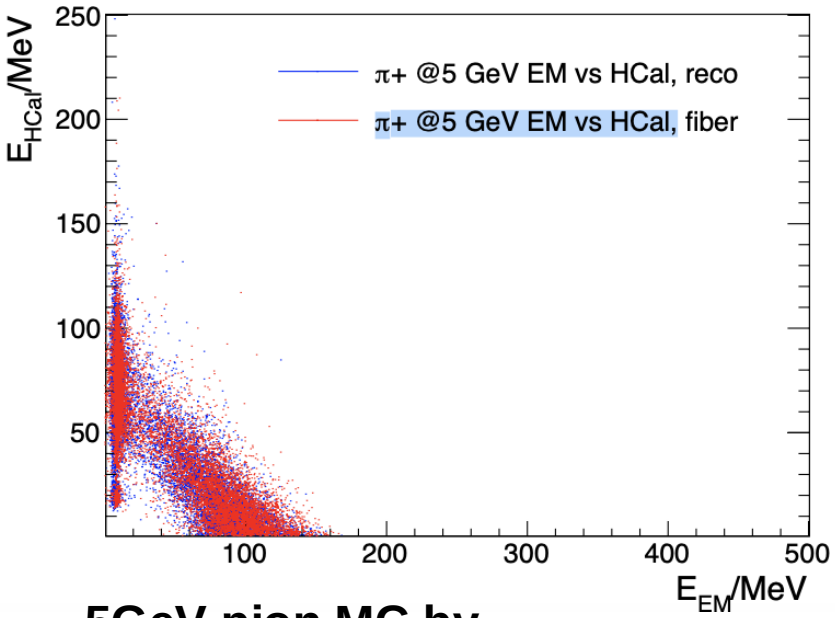




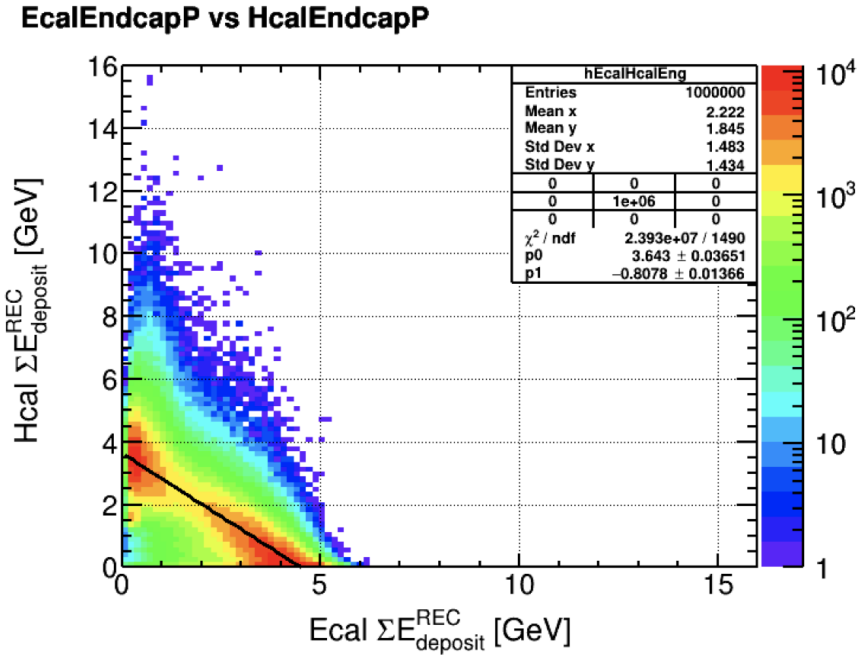



EPIC fEcal View from IR
200
150
100
50
0
−50
−100
−150
−200
−200
−150
−100
−50
0
50
100
150
200
North <--> South

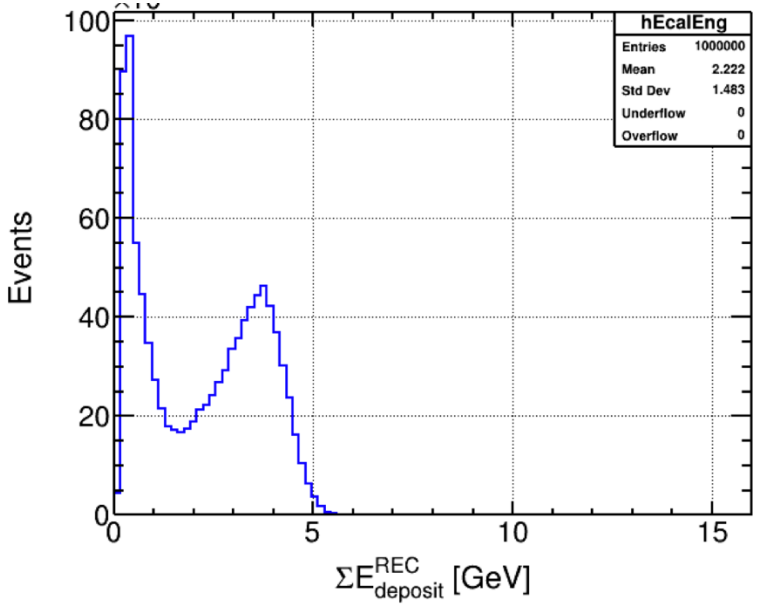
Response to low energy hadron



5GeV pion MC by Zhiwan Xu, Ryan Milton



5GeV Pion MC by Jihee Kim



4GeV Pion Test Beam (Oleg)