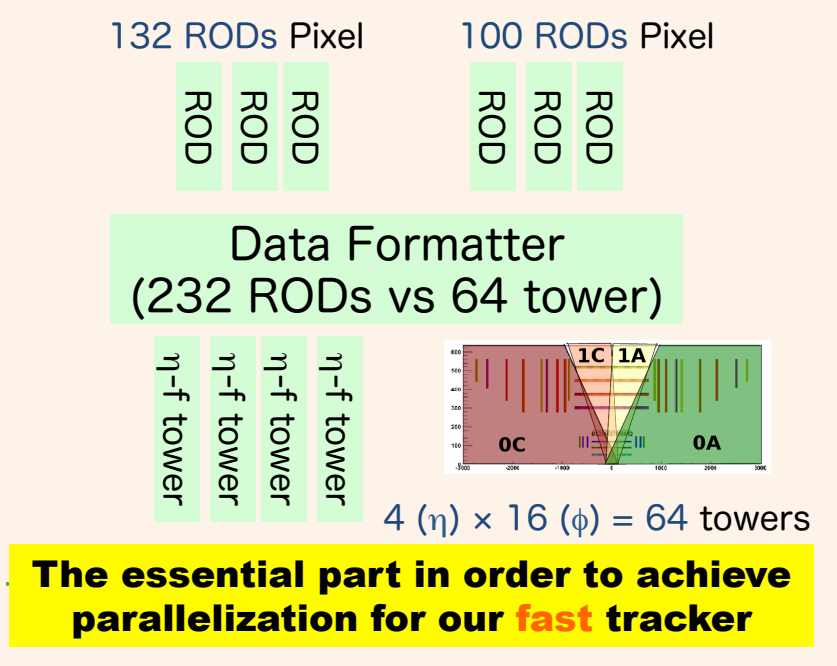
Research status (Yasu)

For the DF development at Fermilab:

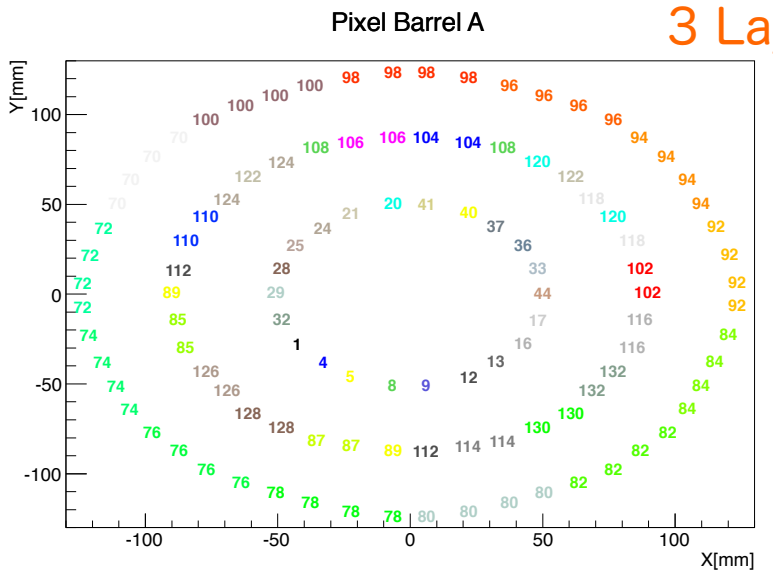
- Data format from ROD in S-Link
- Readout-Detector mapping

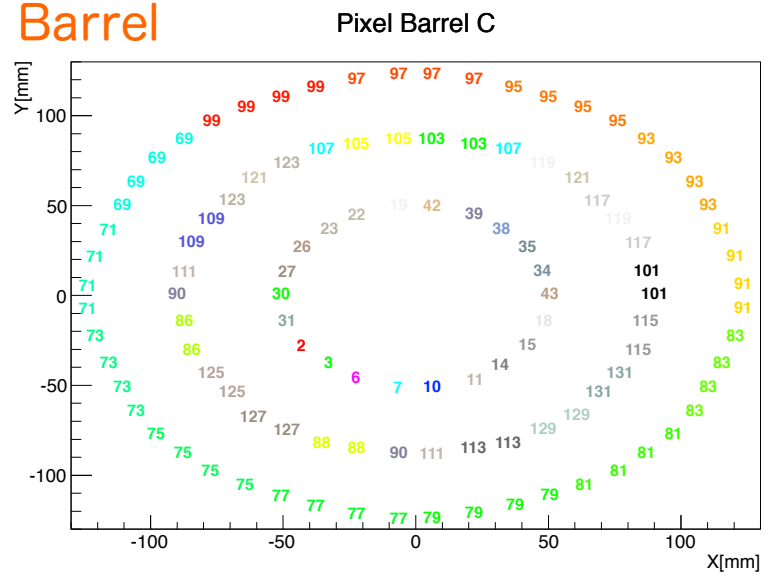


Hardware mapping

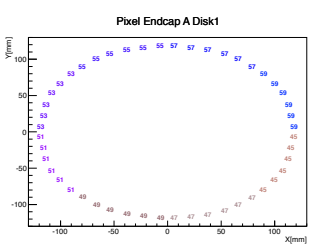
Pixel (1744 Modules, 132 RODs)

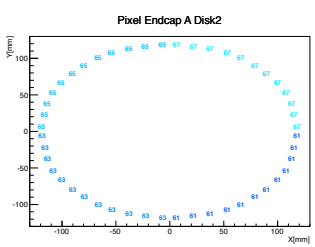
3 Layers in Barrel

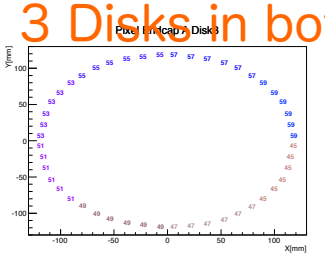


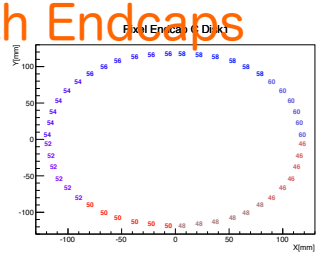


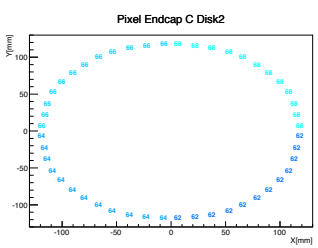
3 Disks in both Endcaps

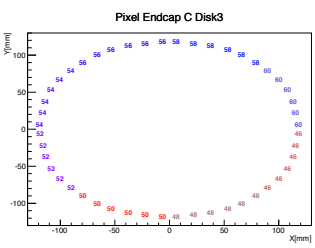








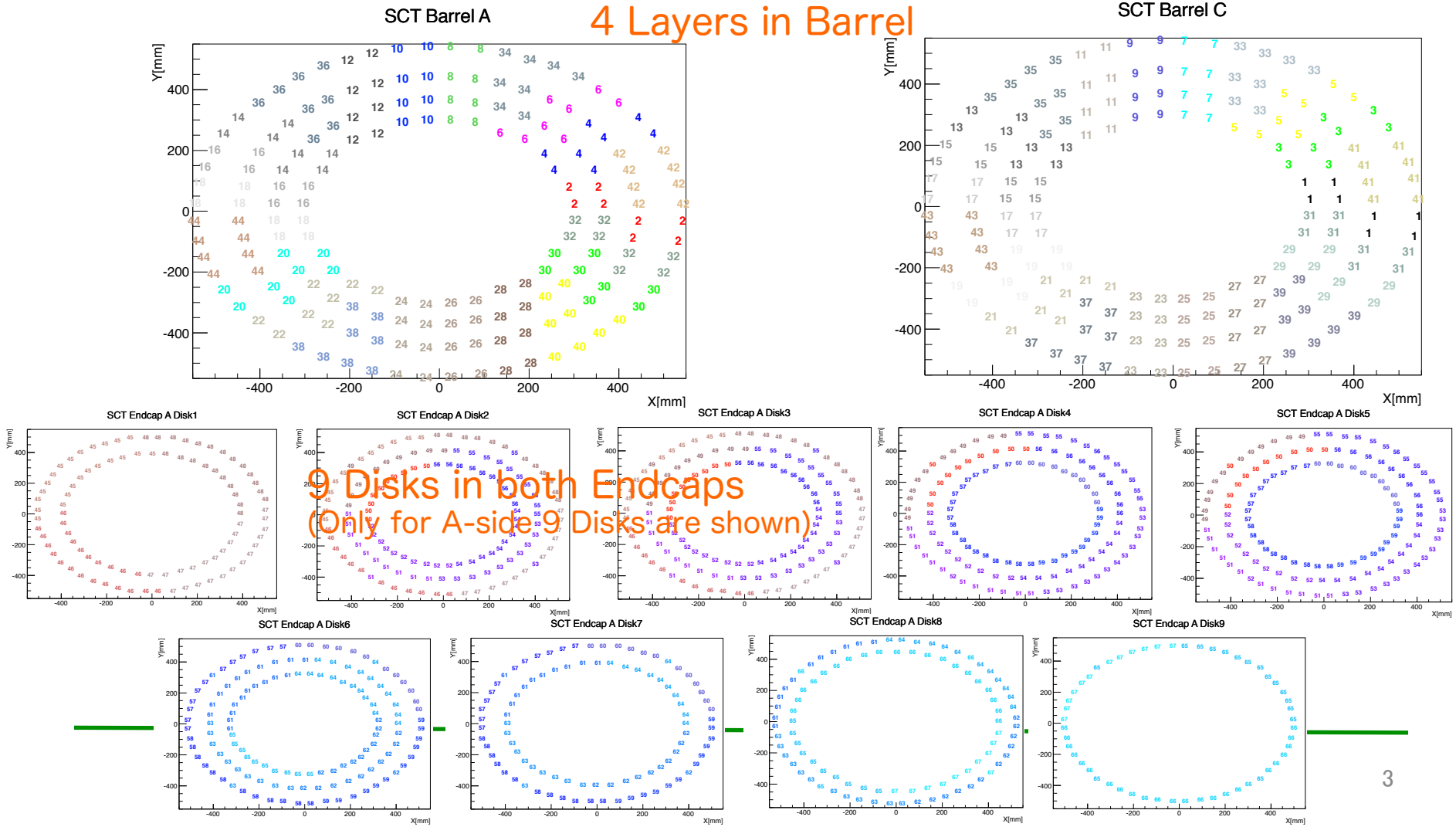




Hardware mapping

SCT (8176 Modules, 100 RODs)

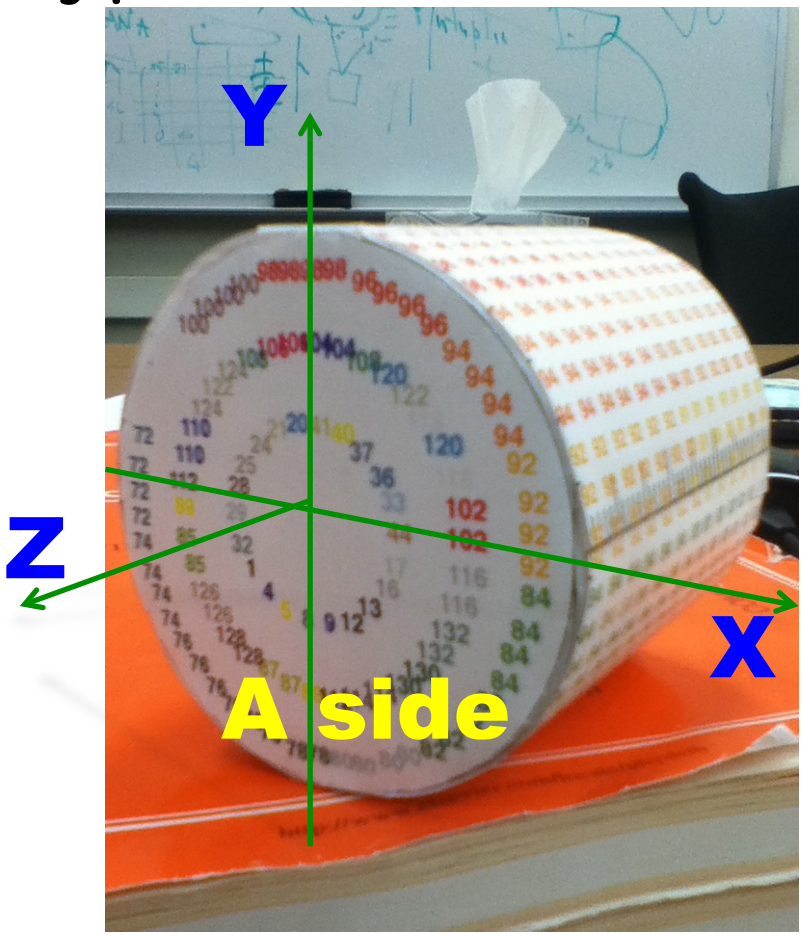
4 Layers in Barrel

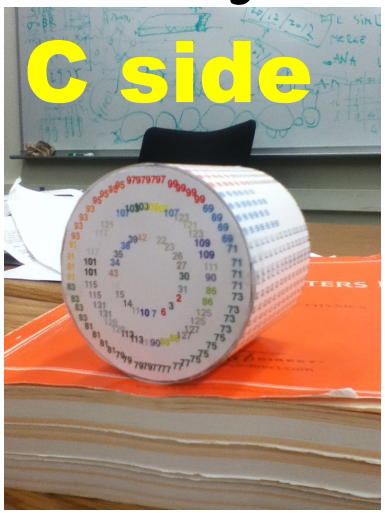


9 Disks in both Endcaps
(Only for A-side 9 Disks are shown)

3D paper model

Prototype for Pixel Barrel (3 layers)



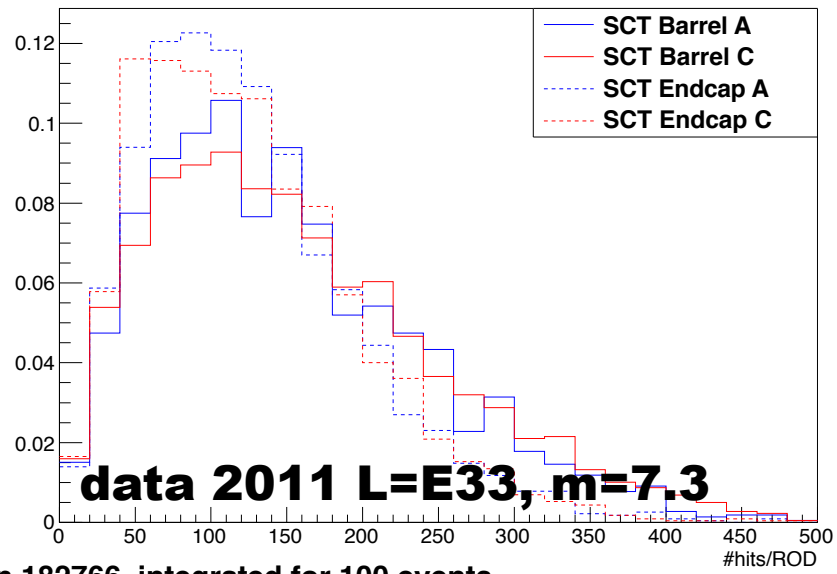


Data flow

Develop a private decoder (unpacker)

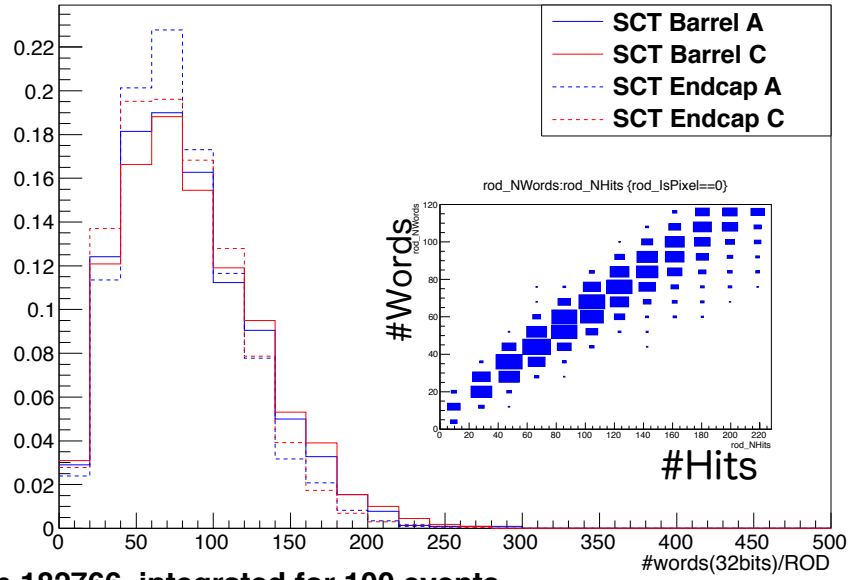
- Rawdata → Electronics ID
- Electronics ID → Real Position (X, Y, Z)

#Hits/ROD distribution (SCT)



run 182766. integrated for 100 events

#Words/ROD distribution (SCT)

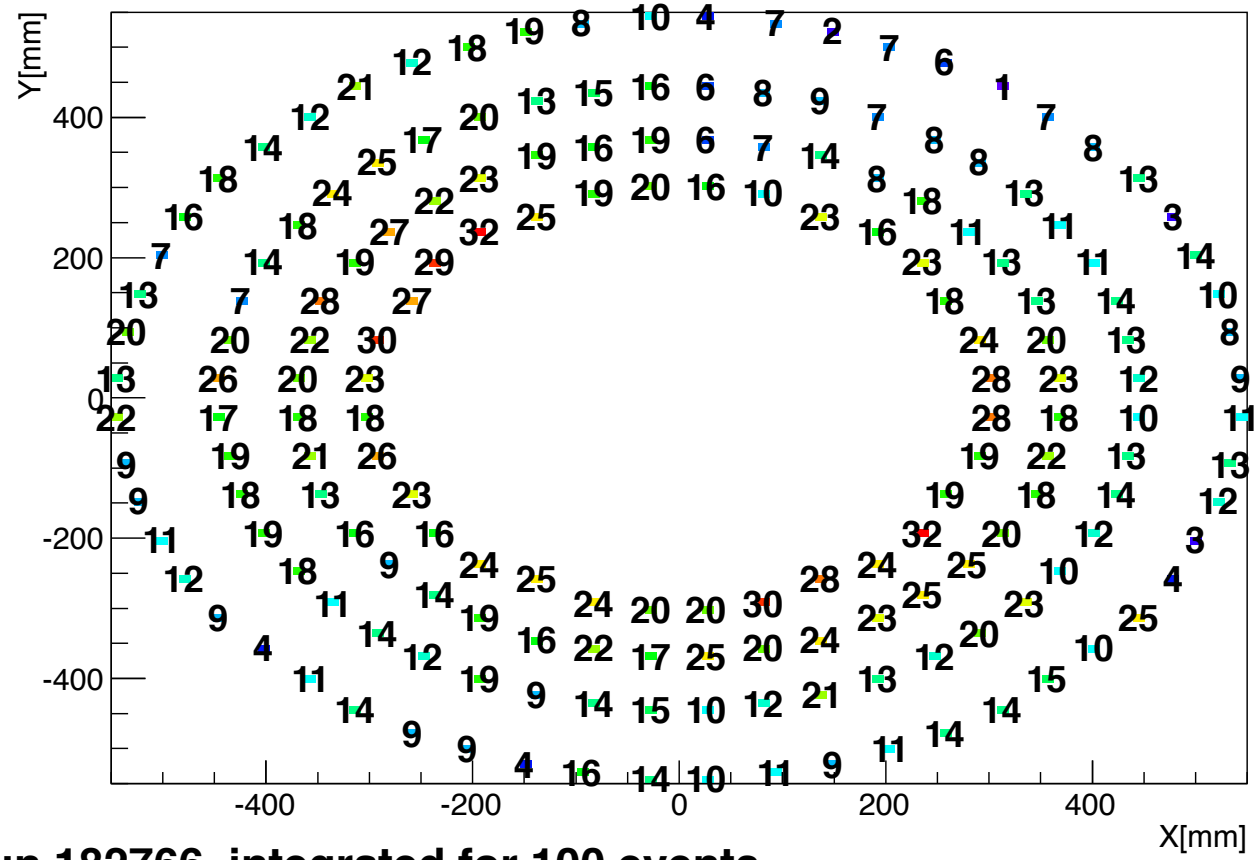


run 182766. integrated for 100 events

Data flow

SCT Barrel eta 2 (just as an example)

#Hits/Module/100Events with E33 (μ=7.3)



run 182766, integrated for 100 events