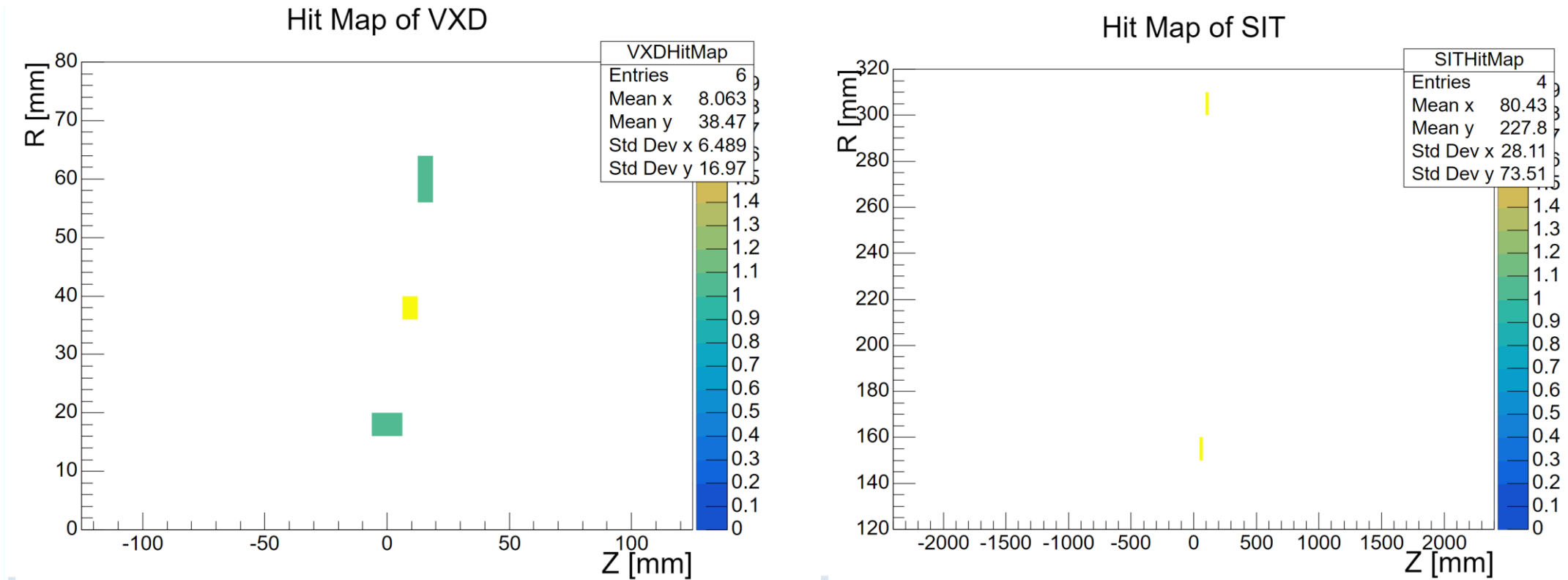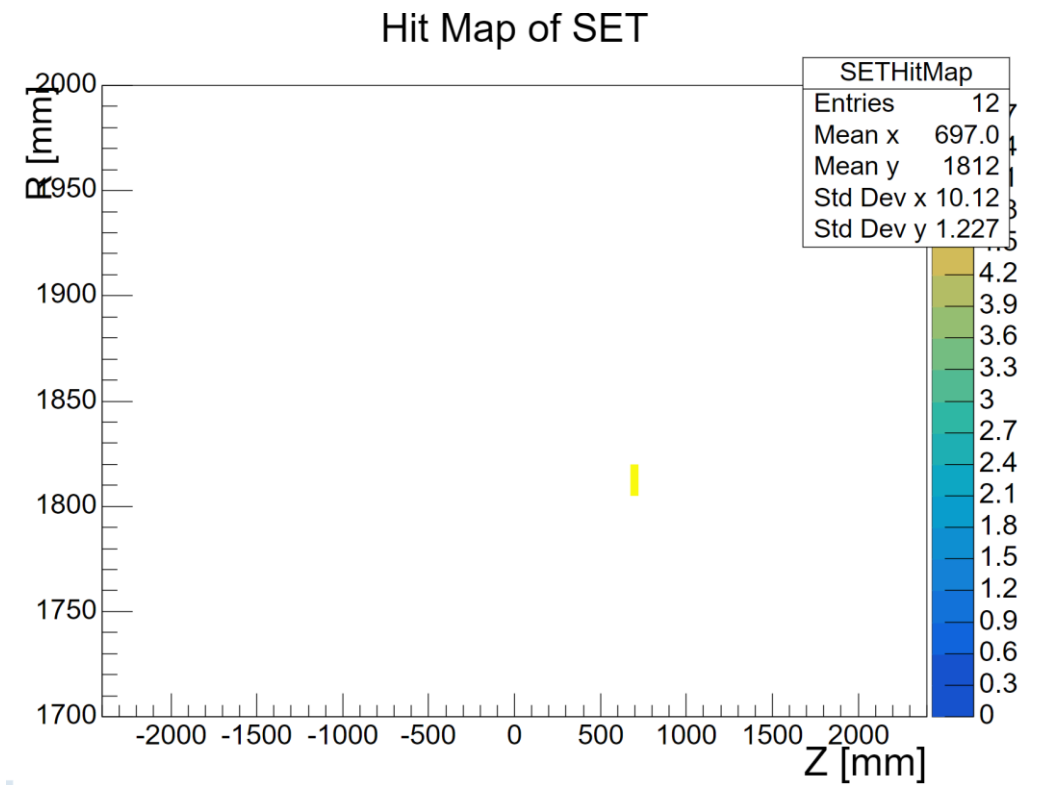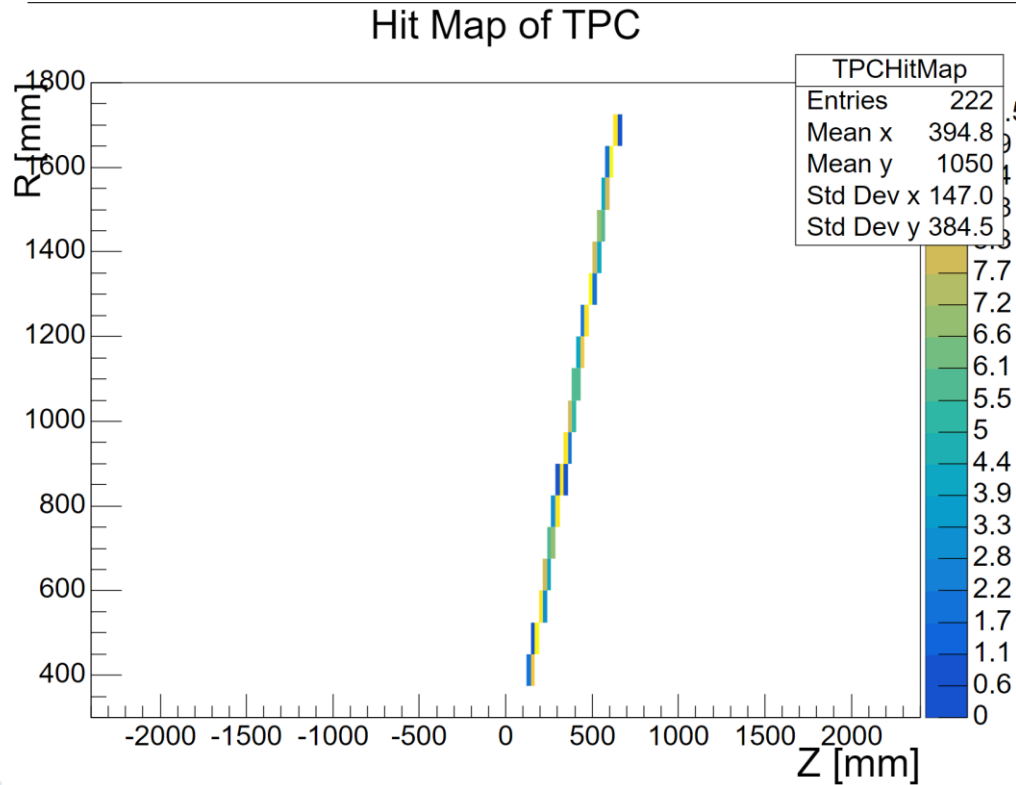# SET Estimation

ZHAN LI

2024/3/15

# Simulation of the beam background

- Beam background electron hit the beampipe and interact with the detector

- Use 1 event to ensure that we can go through the program running in CEPCSW

- Geometry:CEPC_v04.xml
  - The length of the tracker is still 2350mm, not 2900mm(cos~0.85)
  - Old geometry file, may differ from what we do today
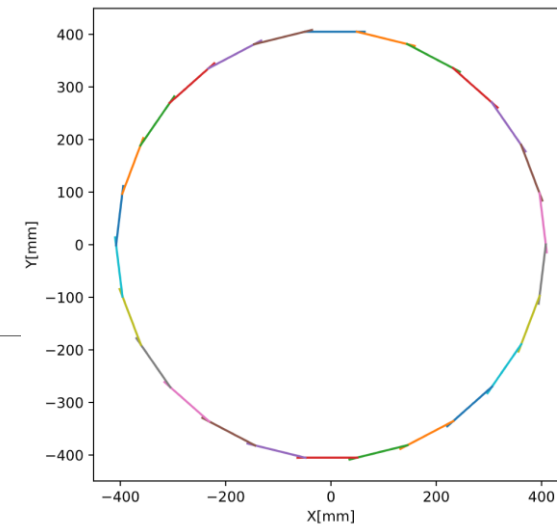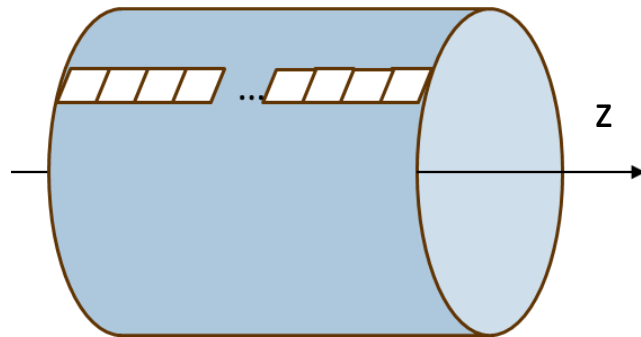
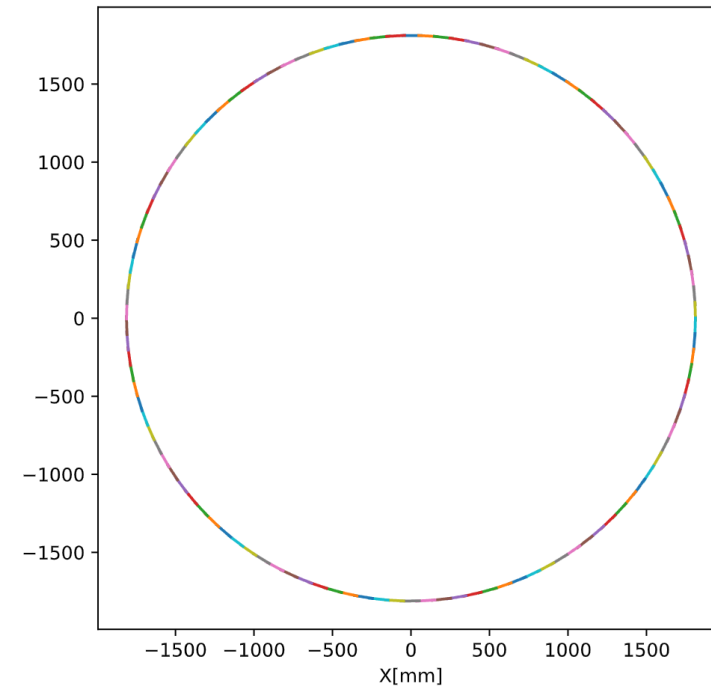# Simulation of the beam background

# Simulation of the beam background

# Number of Ladders

- Estimated number of ladders: 114

- Total length ~5.8m, 6 staves in z direction
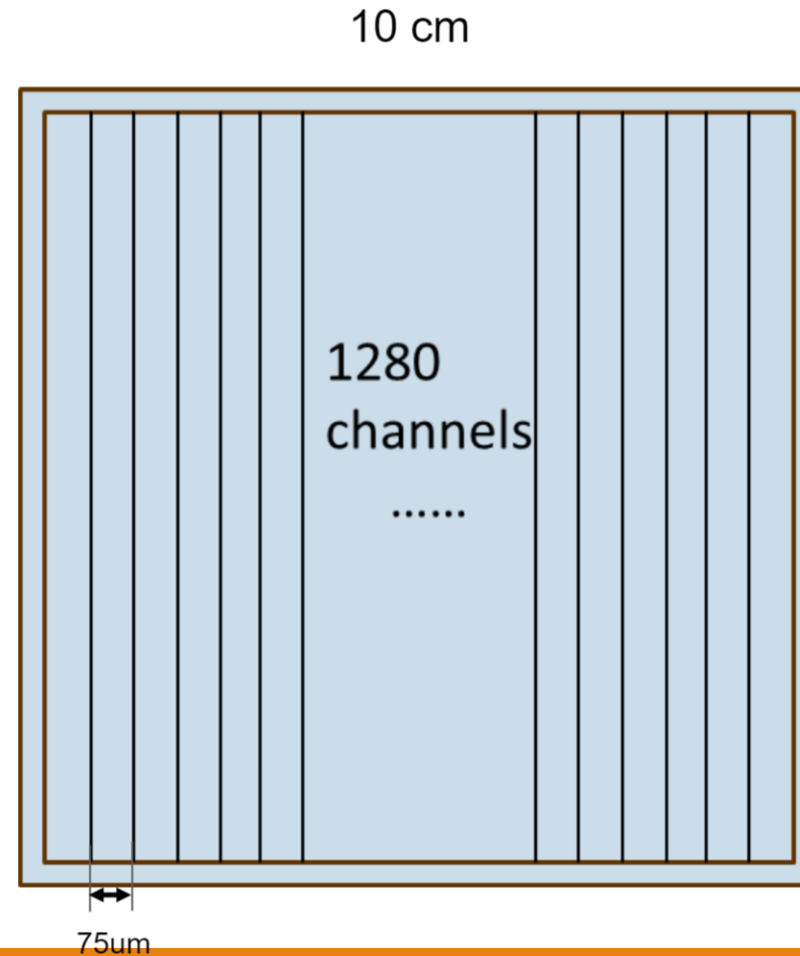  - Each stave ~ 1m

- Number of staves: 684

R=405mm
N=15

R=1811mm
N=114

# Number of modules and channels

- 10 modules on every stave

- Number of modules: 6840

- Number of channels:
  - 6840*1280 = 8,755,200 ~ 9e6

| SET | |
|---|---|
| Radius | 1811mm |
| +/- z | 2904mm |
| Strip Length | ~10cm |
| Strip Pitch | 75um |
| Channels | 1280 |

# Next Steps

- Converge on the Front-end electronics design (Xiongbo)

- Simulation of physical events with CEPCSW (Zhan)

- Mechanical design of stave structure (Jinyu)

- End-Cap …

# Thank you!