

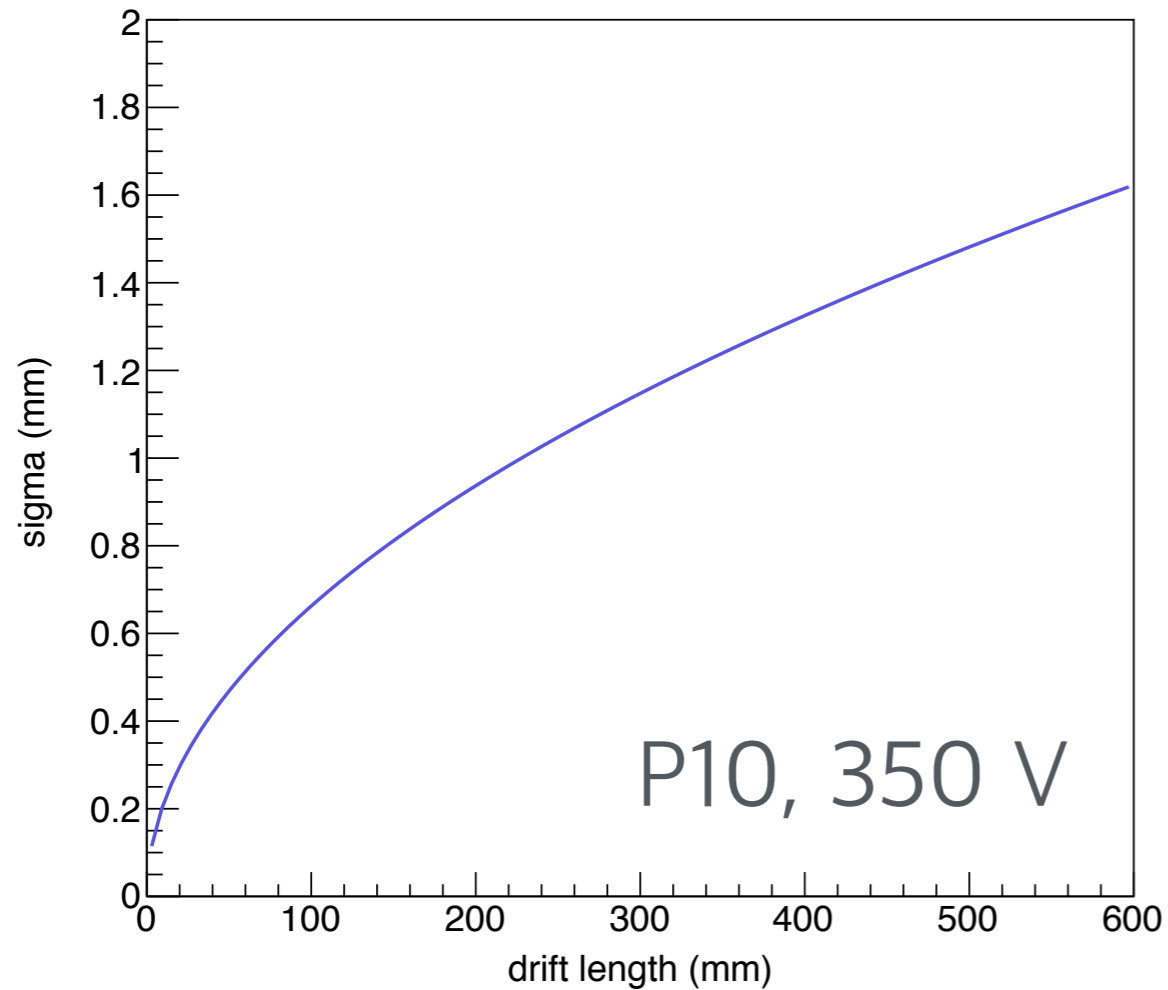
# LAMPS-TPC Simulation

이정우

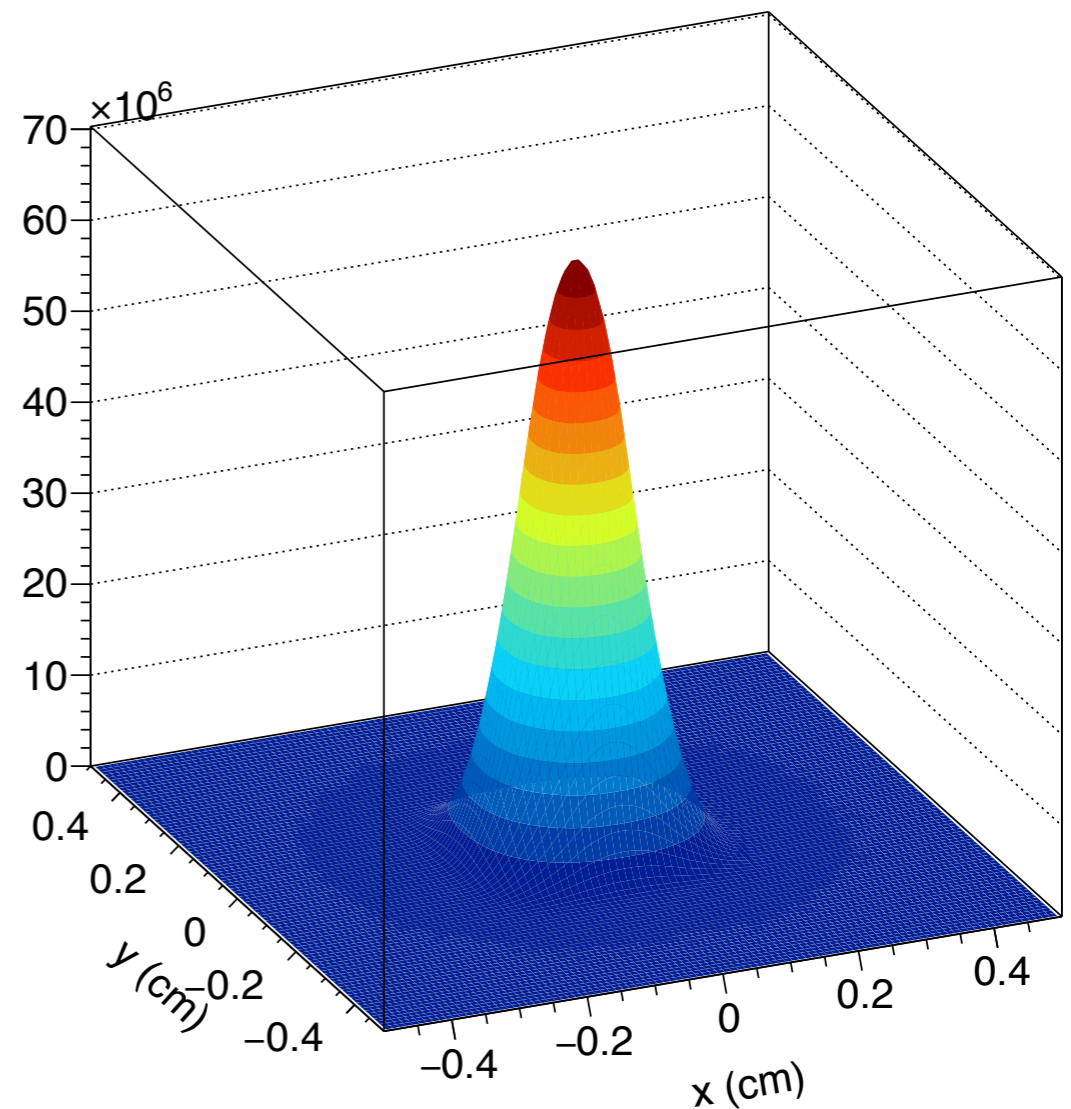
Group Meeting 2015.07.24

# Diffusion of Current Simulation

## Drift Diffusion

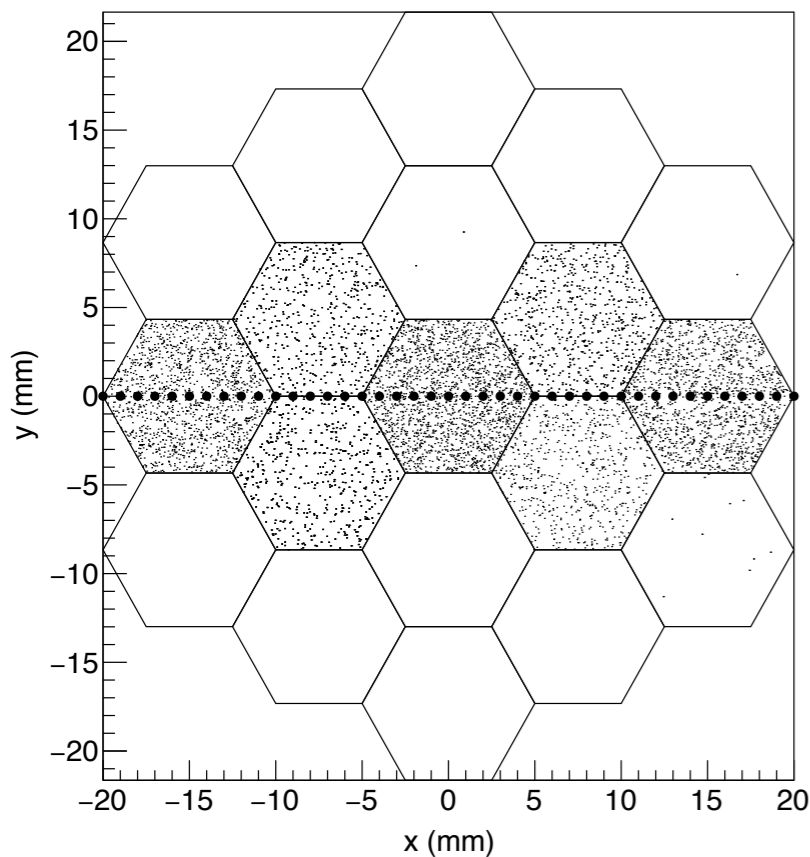


## Triple-GEM Diffusion

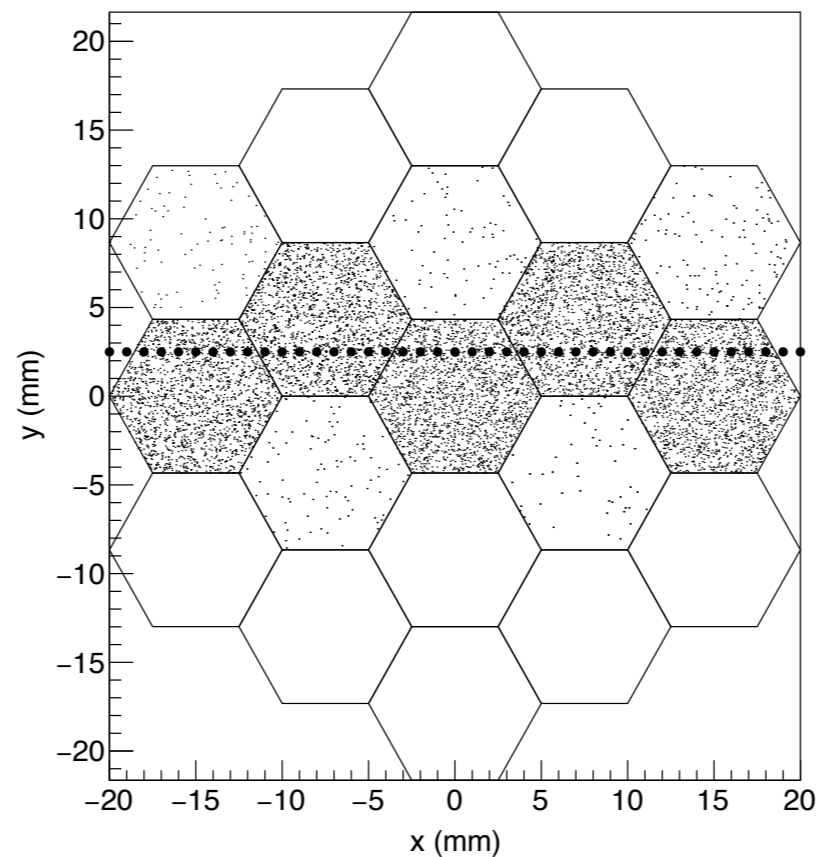


# Diffusion Test

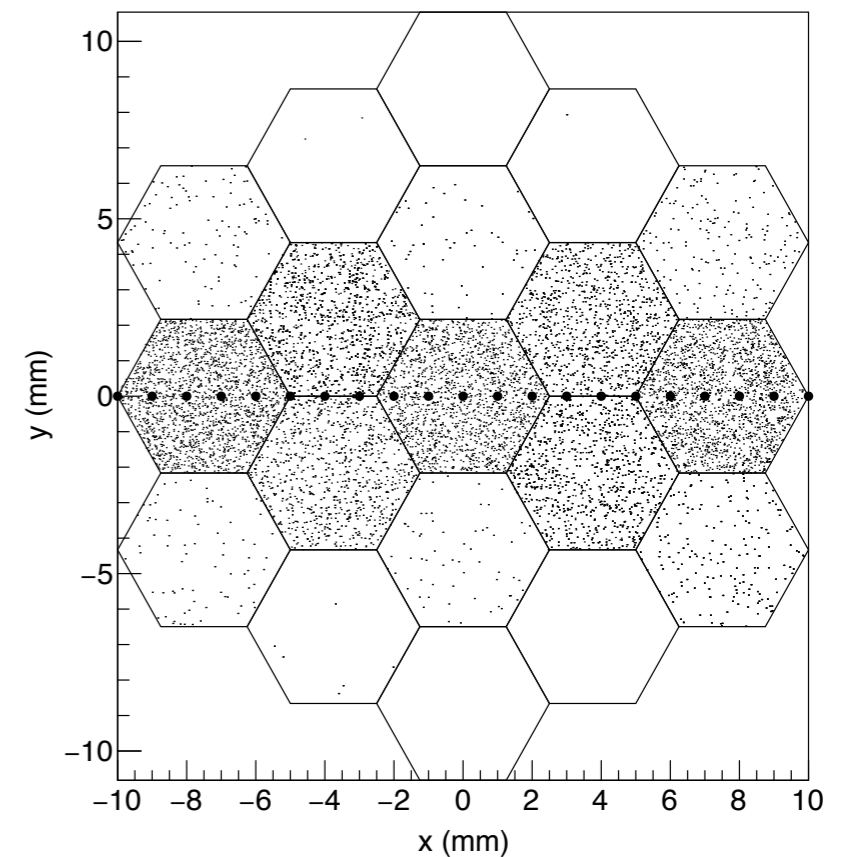
5 mm example 1



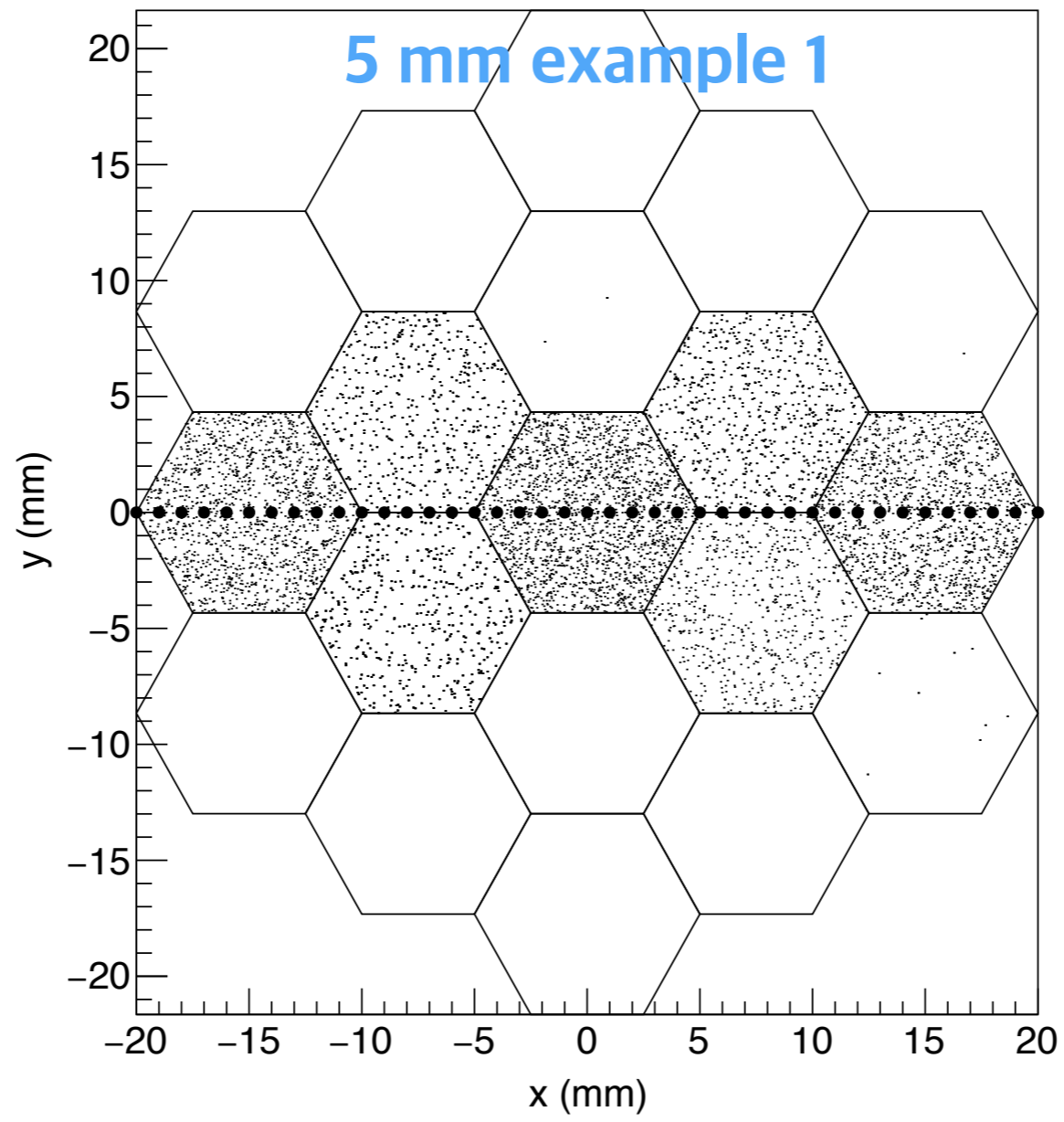
5 mm example 2



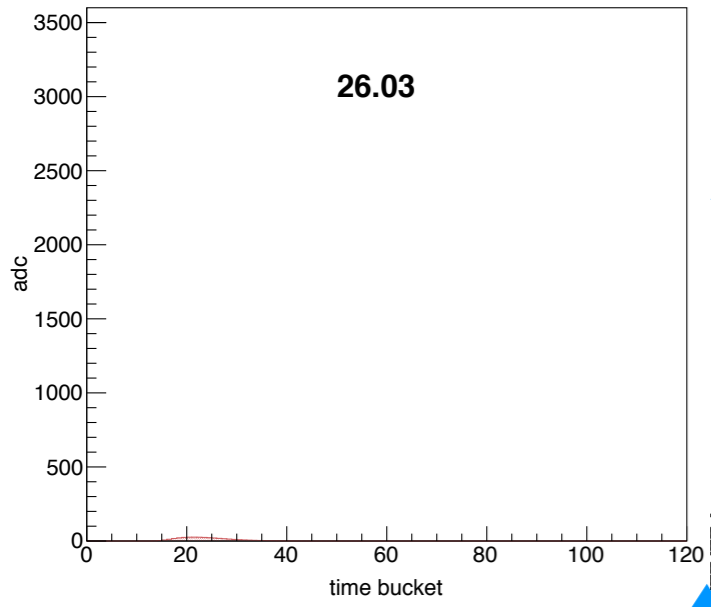
2.5 mm example



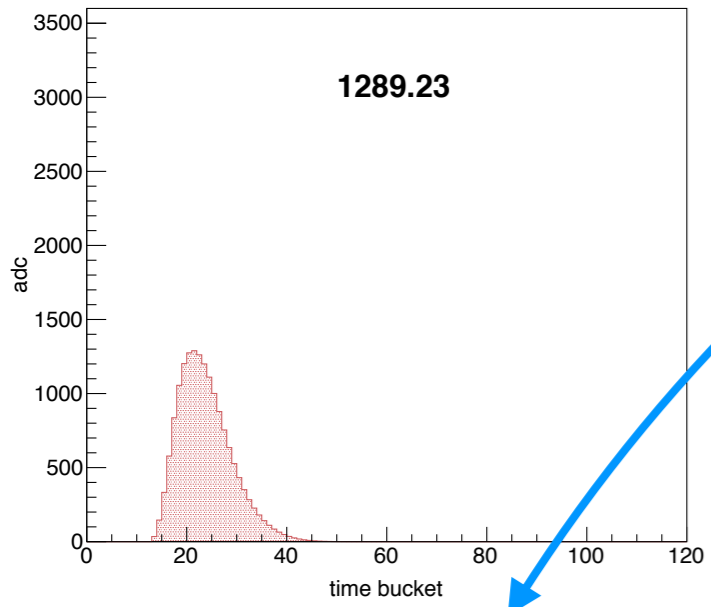
- MC point is given with 1 mm step each producing 30 electrons (drifting 600 mm).
- Signal is filled after diffusion and GEM gain to the pad plane.
- Charge of pads are scaled not to go over 3600 ADC value.
- ADC value should be higher than at least 5 to reconstruct hit.



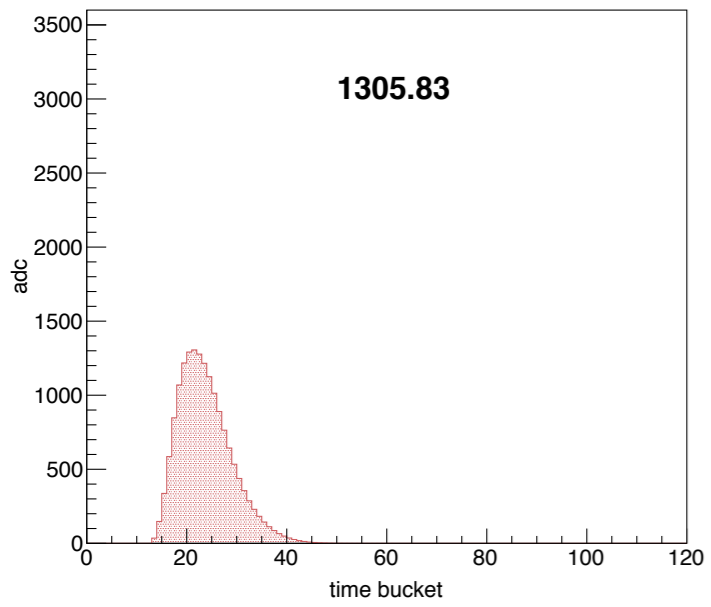
pad\_1



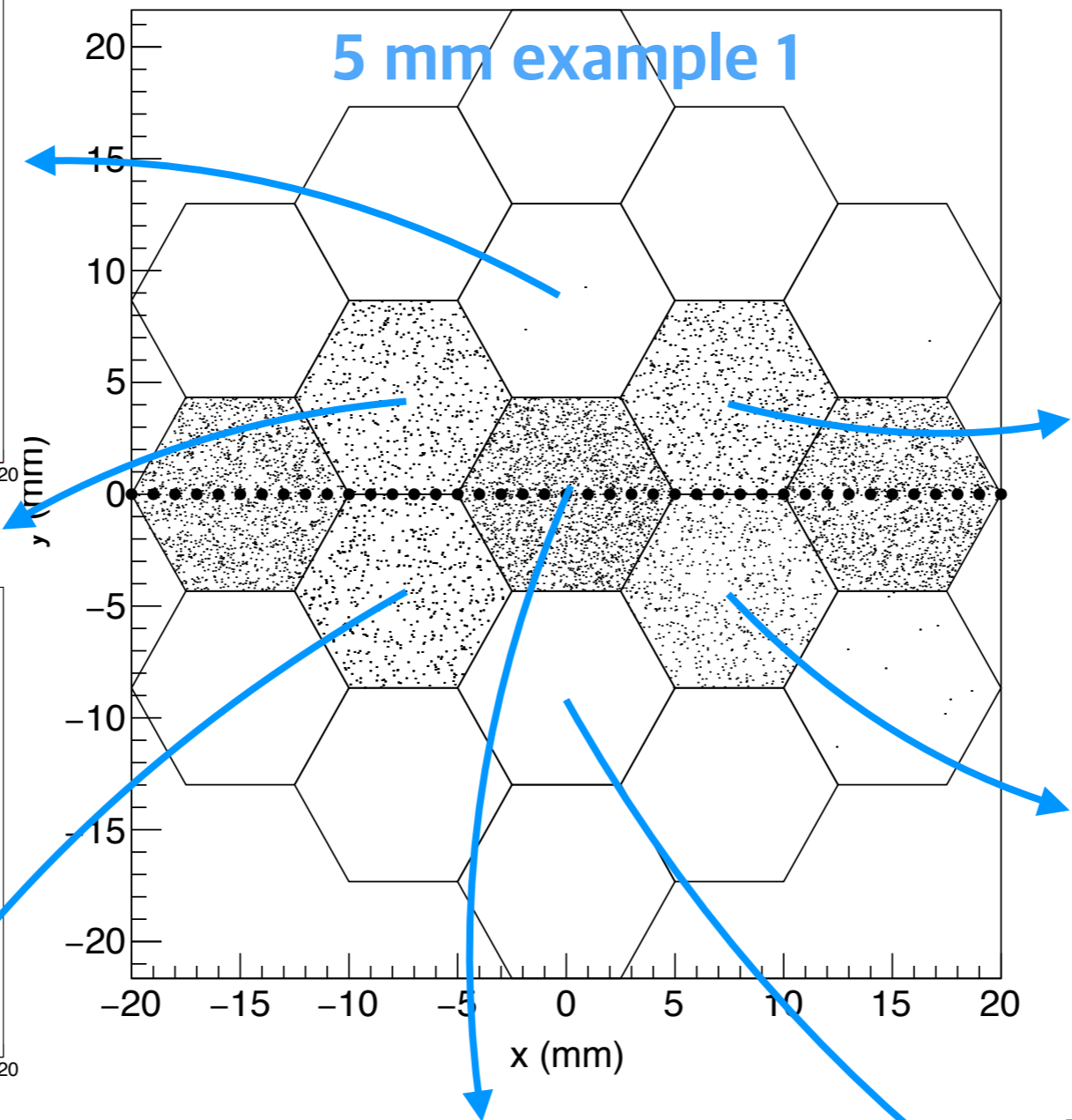
pad\_2



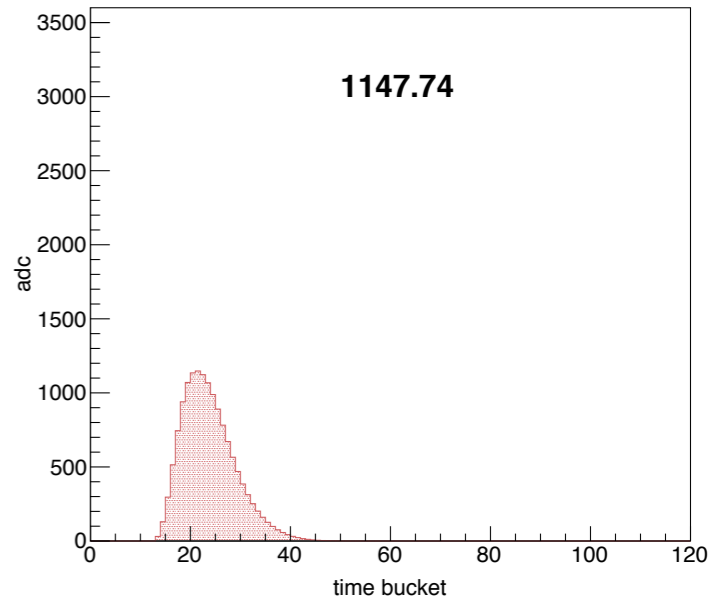
pad\_3



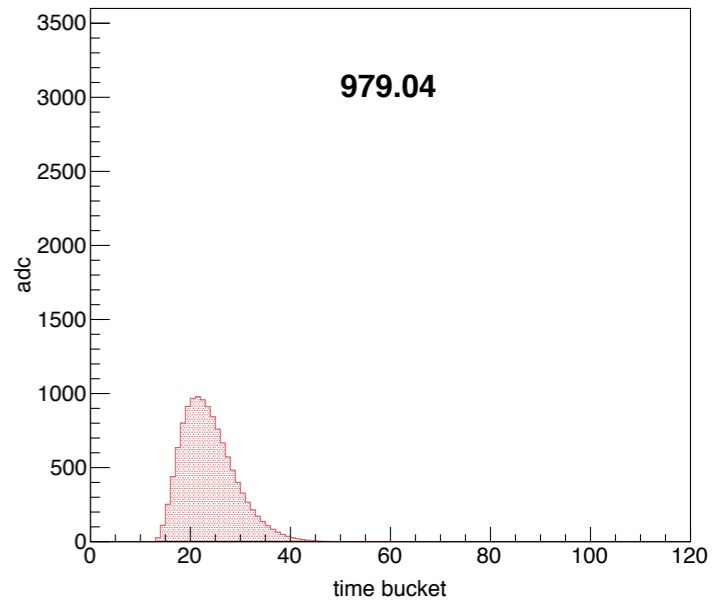
# 5 mm example 1



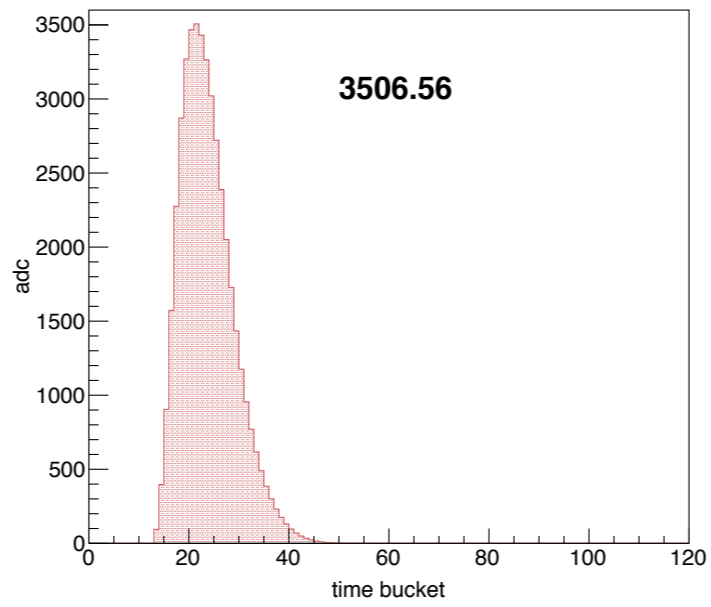
pad\_6



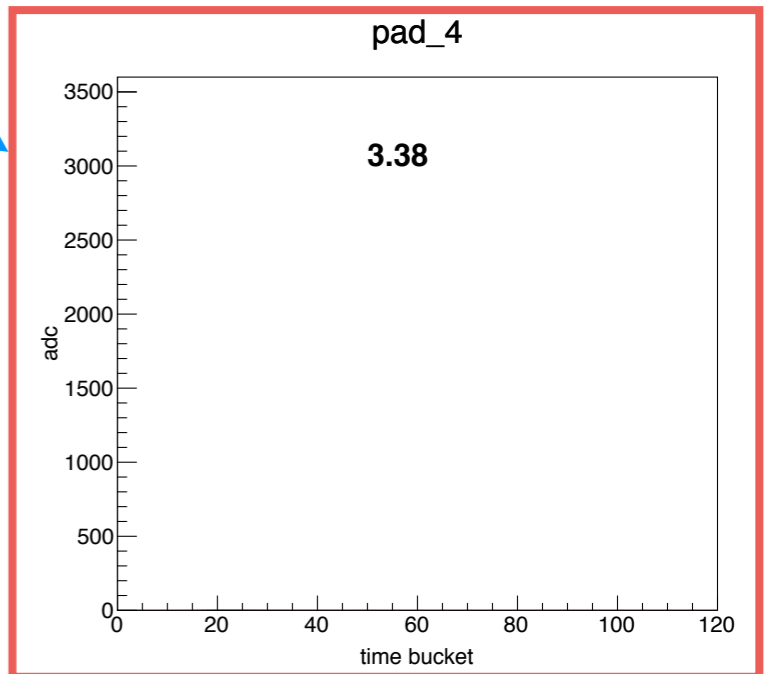
pad\_5

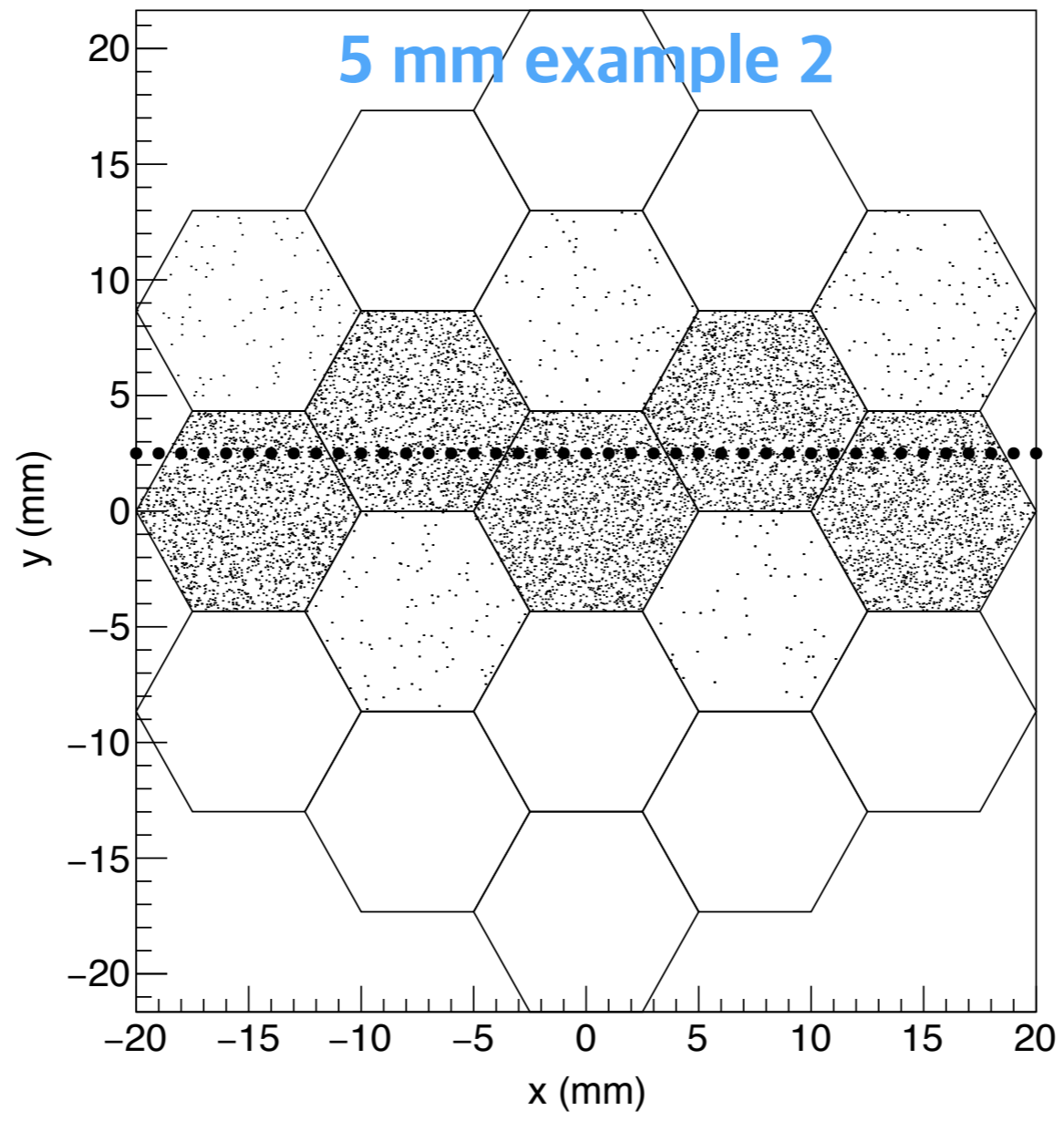


pad\_0

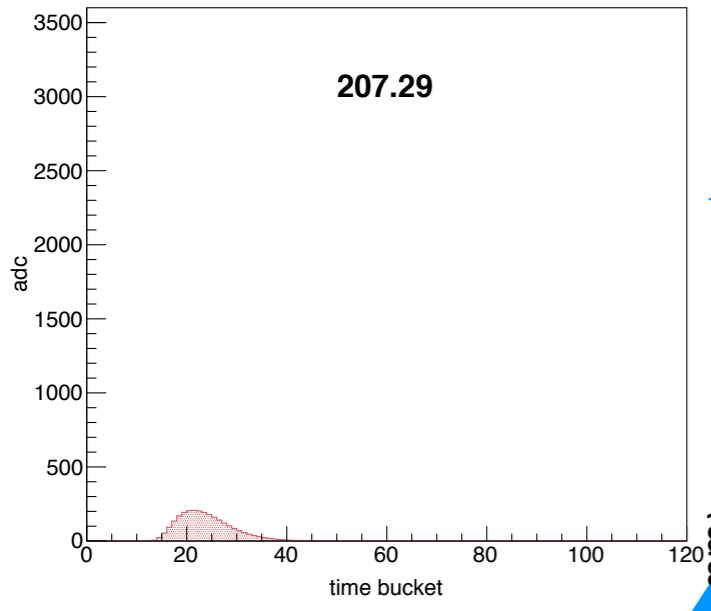


pad\_4

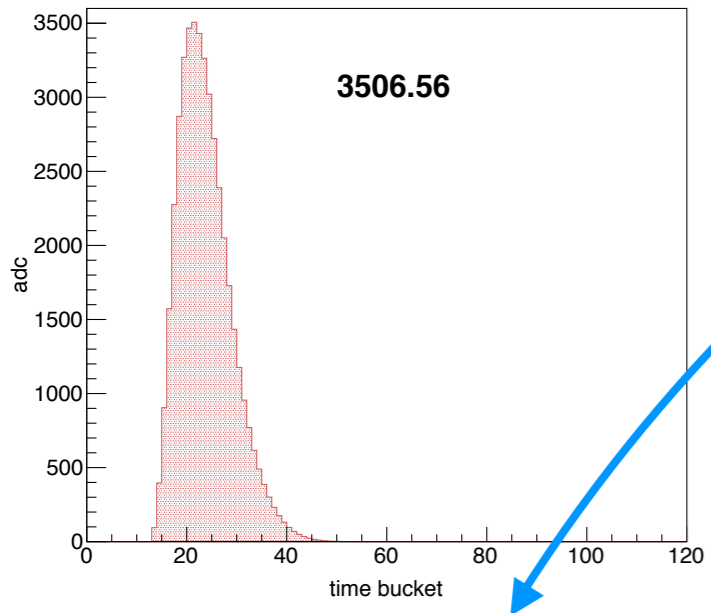




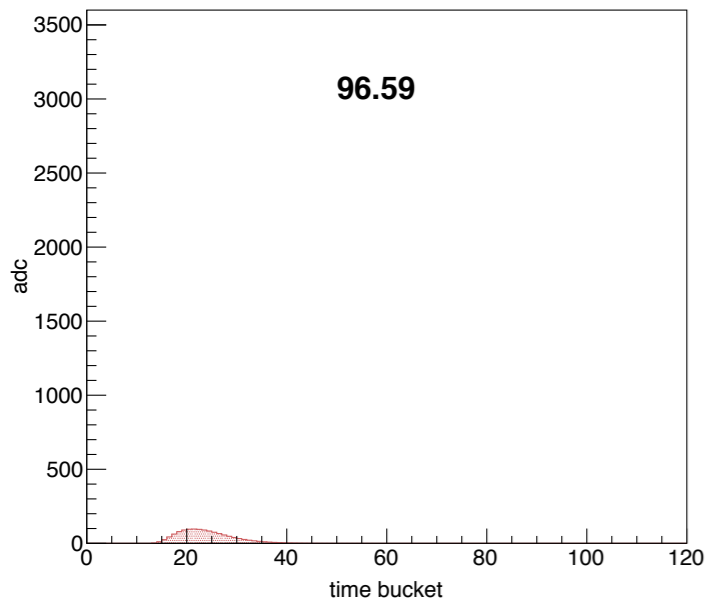
pad\_1



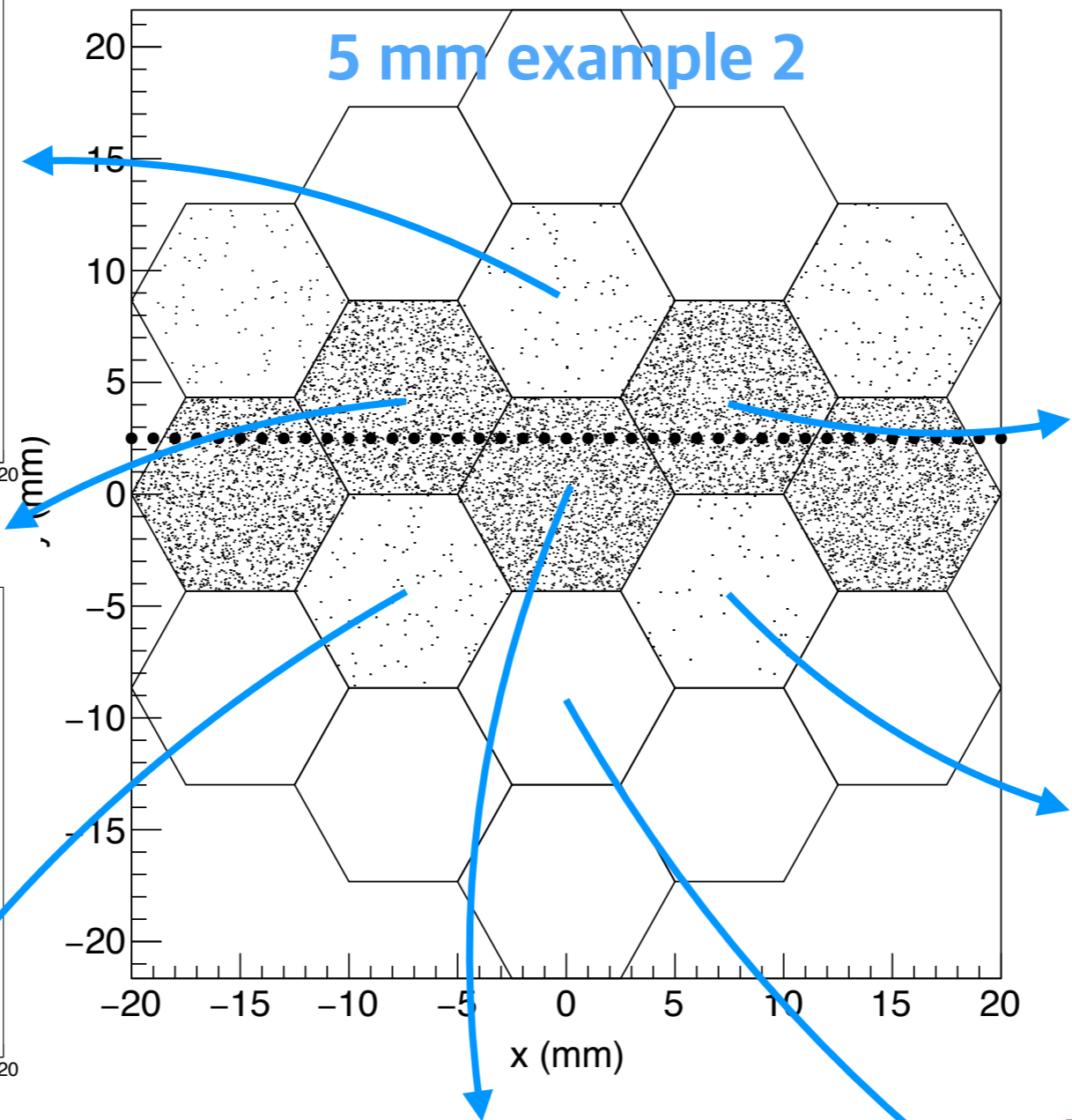
pad\_2



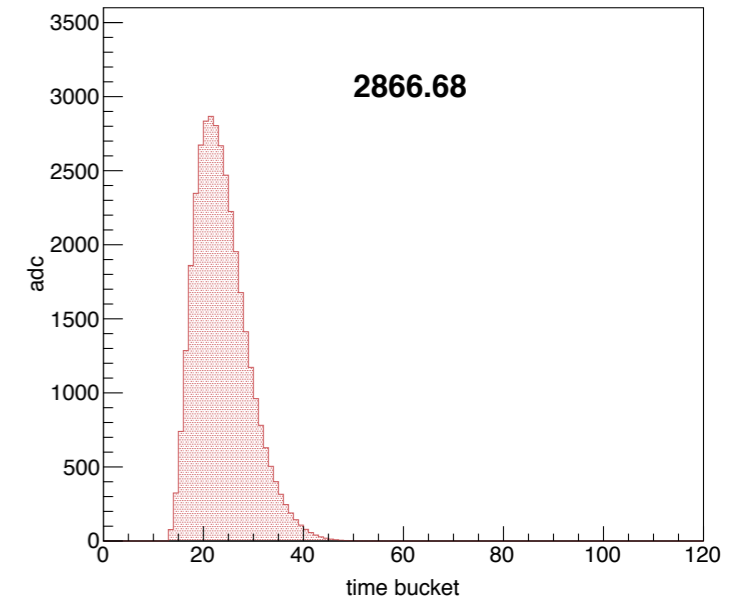
pad\_3



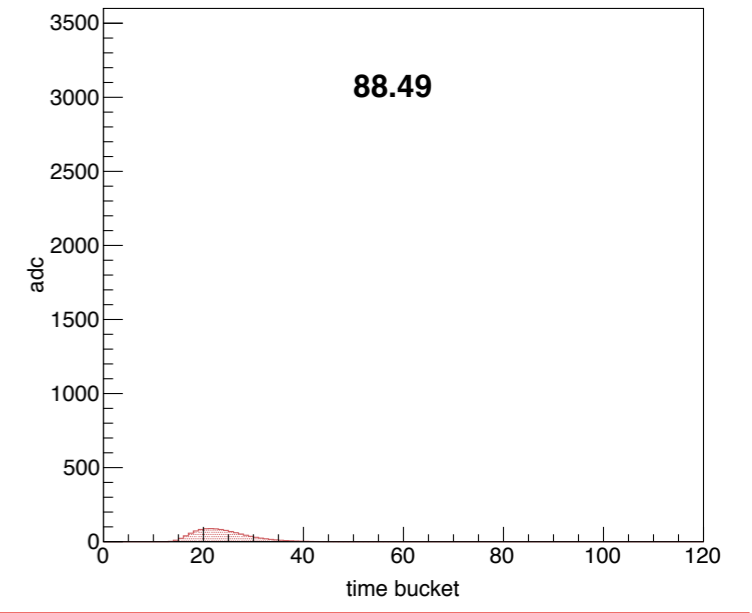
# 5 mm example 2



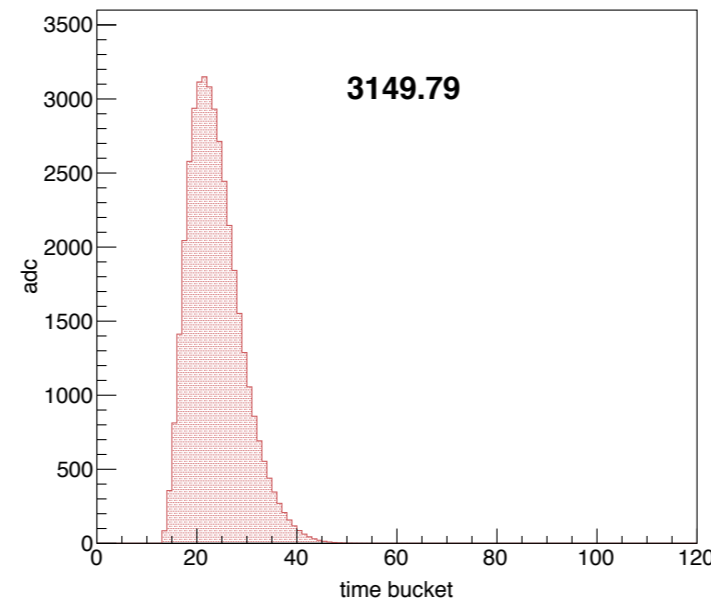
pad\_6



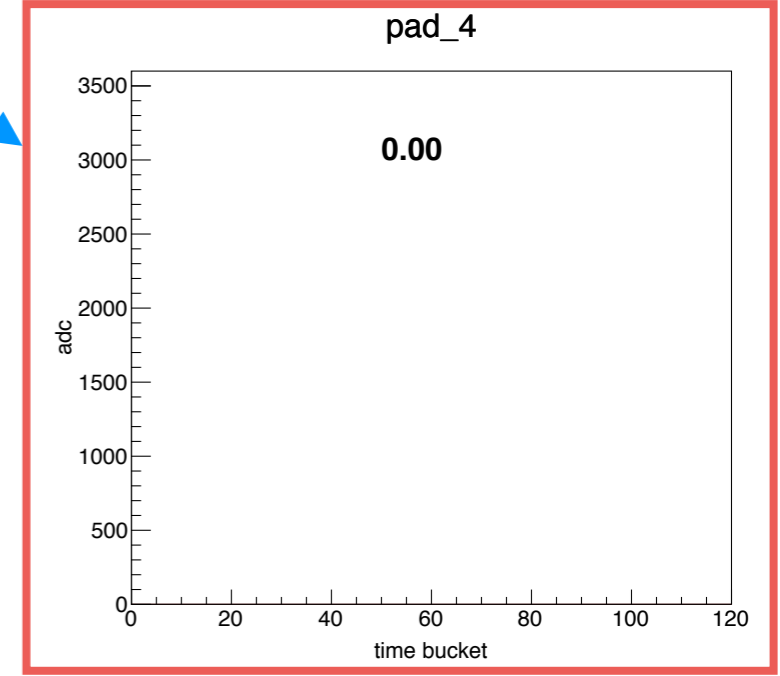
pad\_5

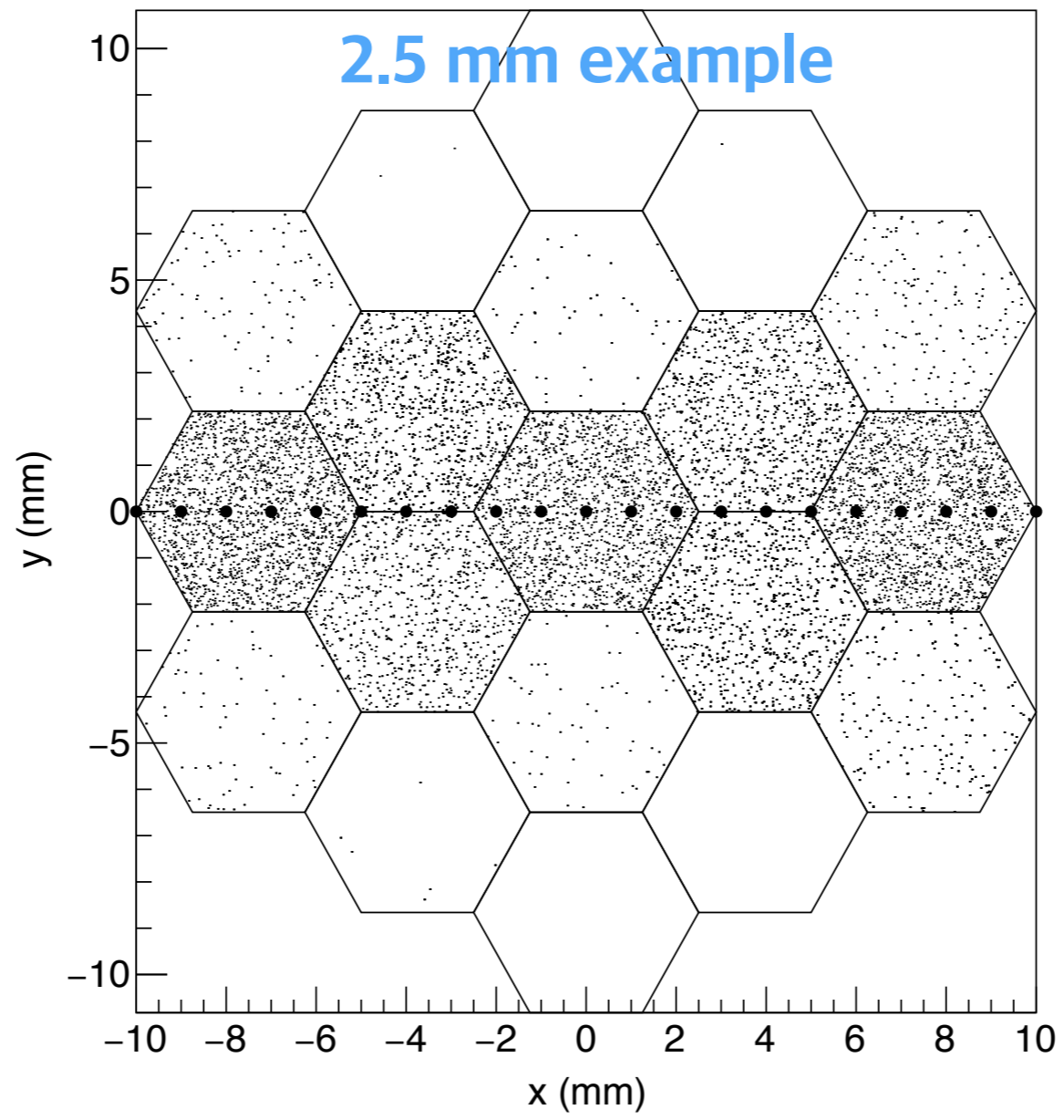


pad\_0



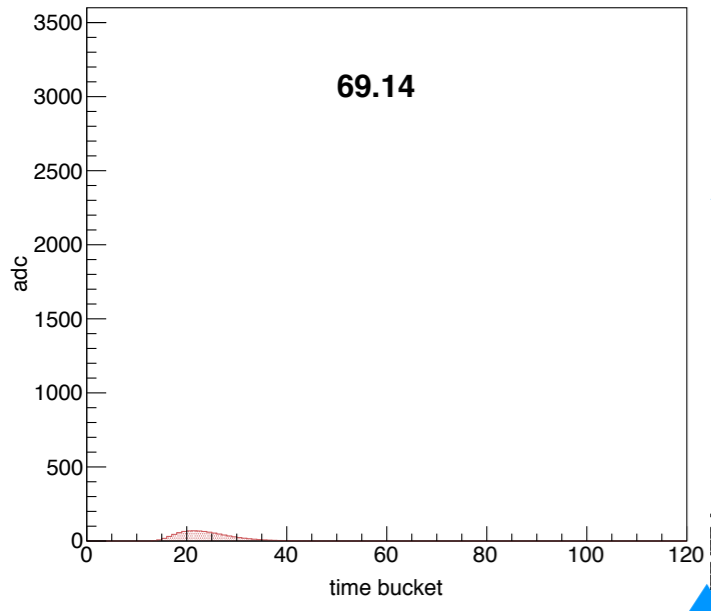
pad\_4



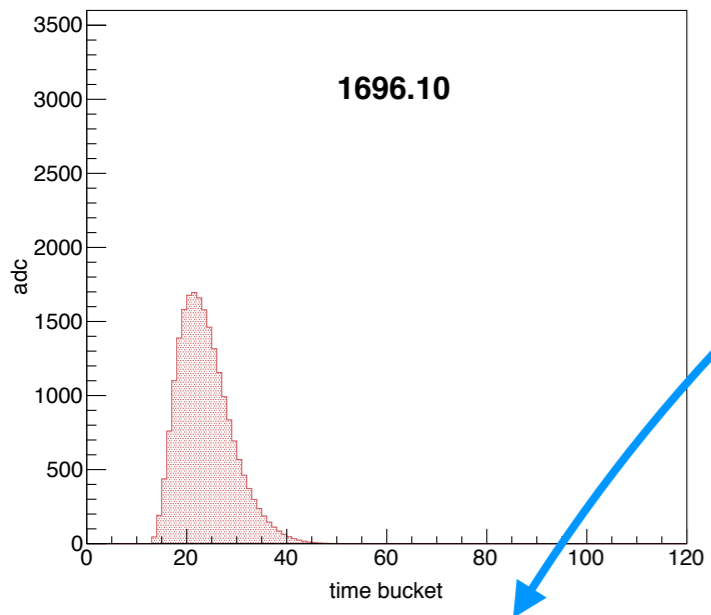




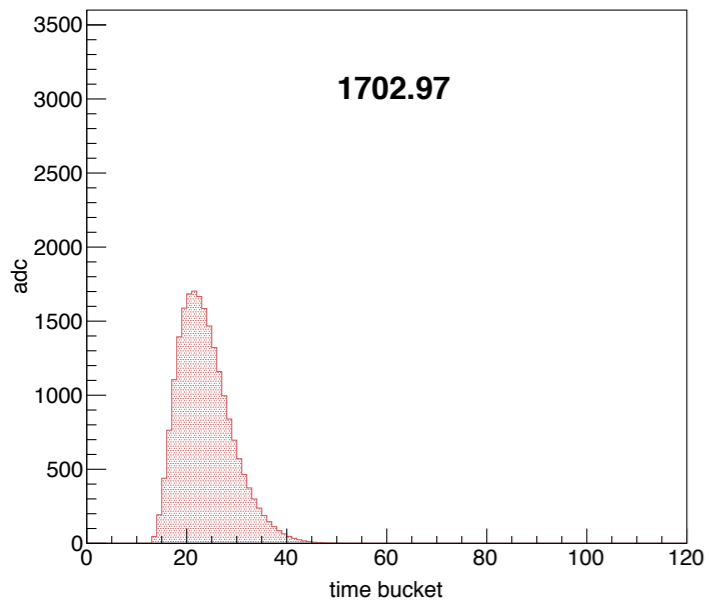
pad\_1



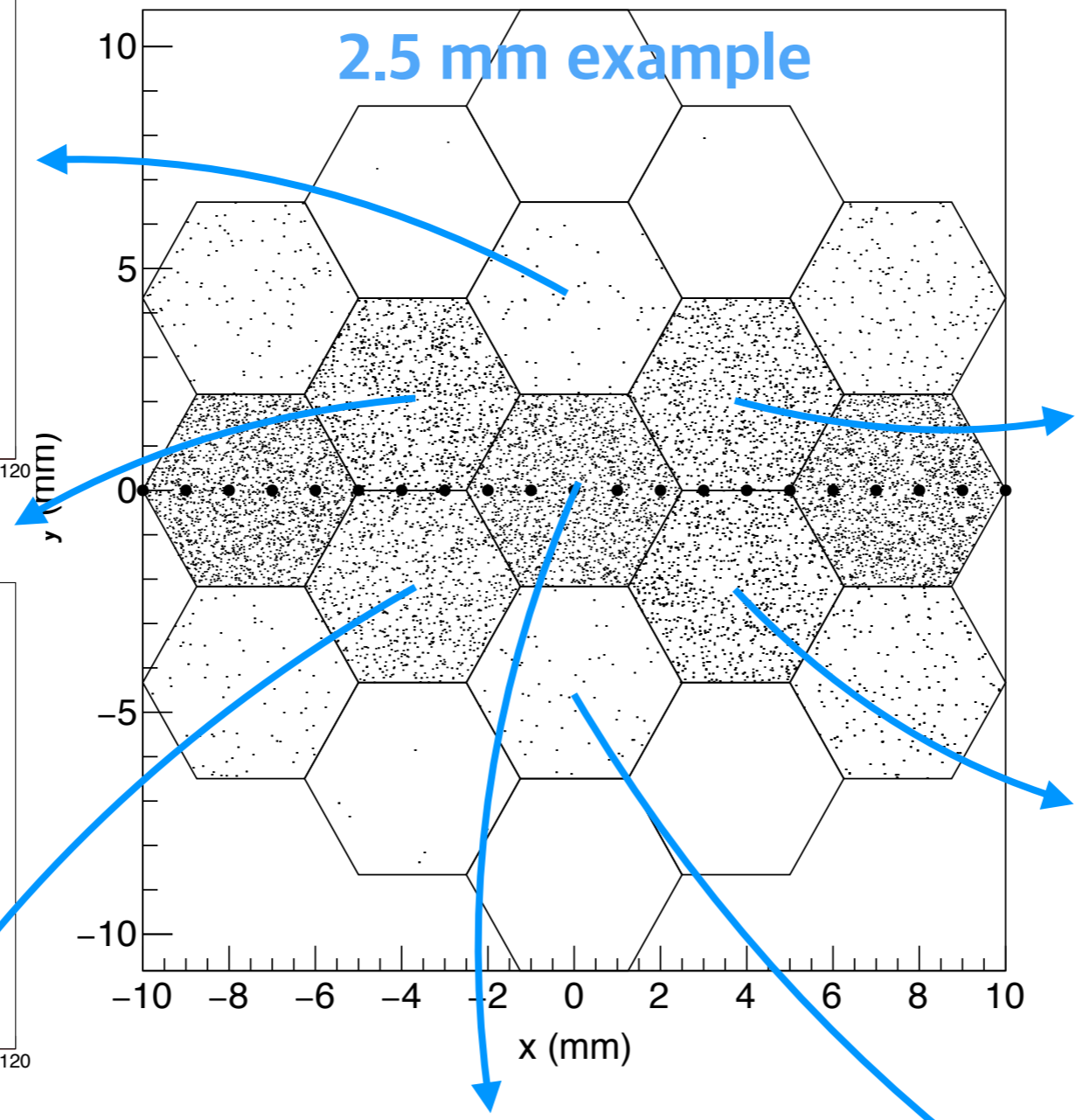
pad\_2



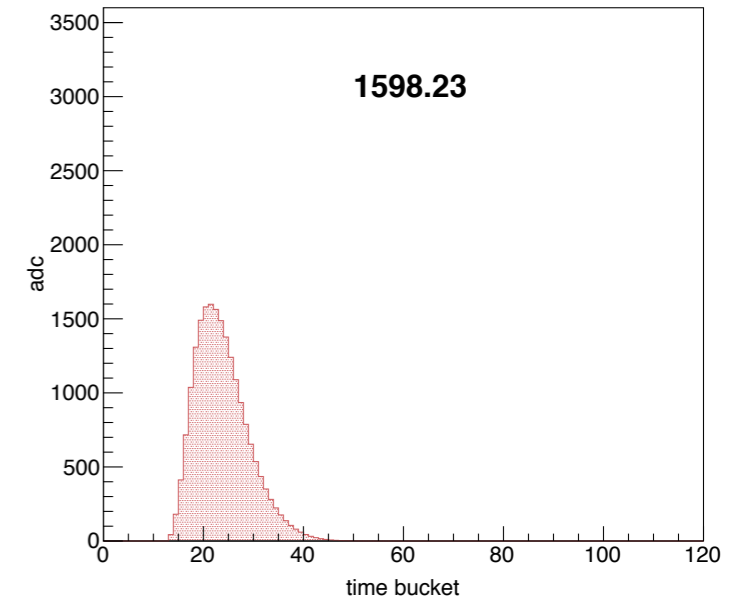
pad\_3



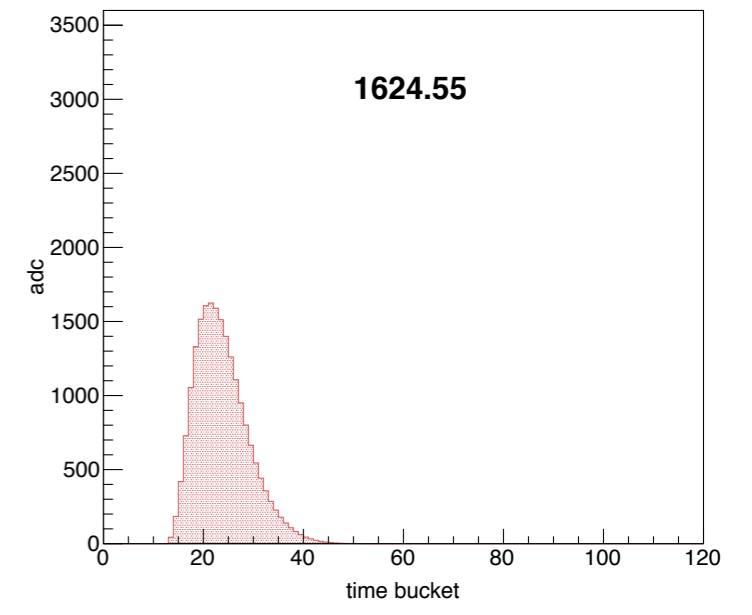
2.5 mm example



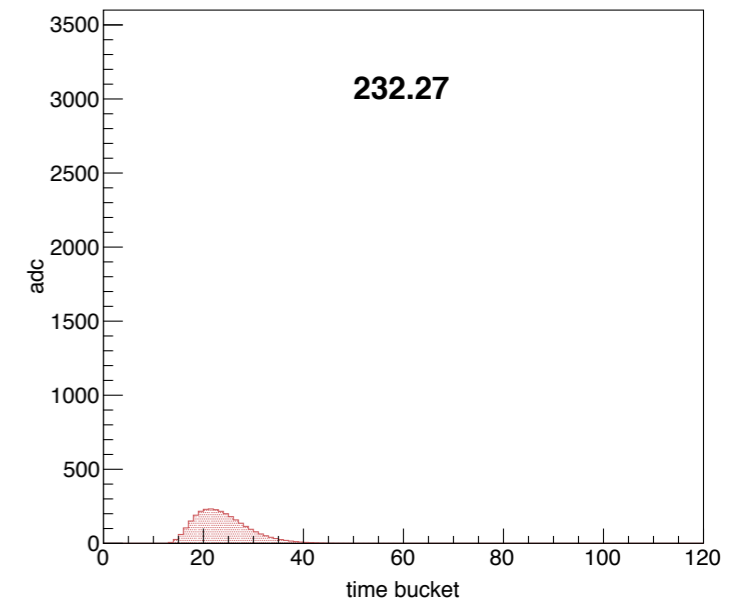
pad\_6



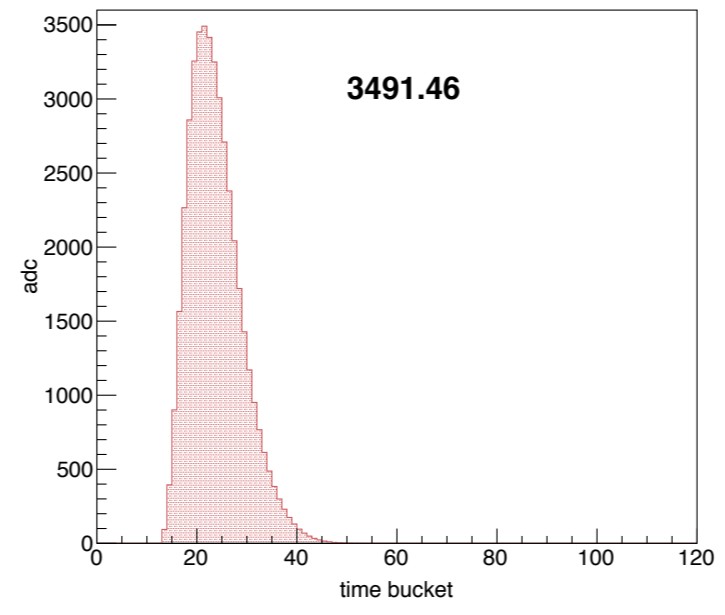
pad\_5



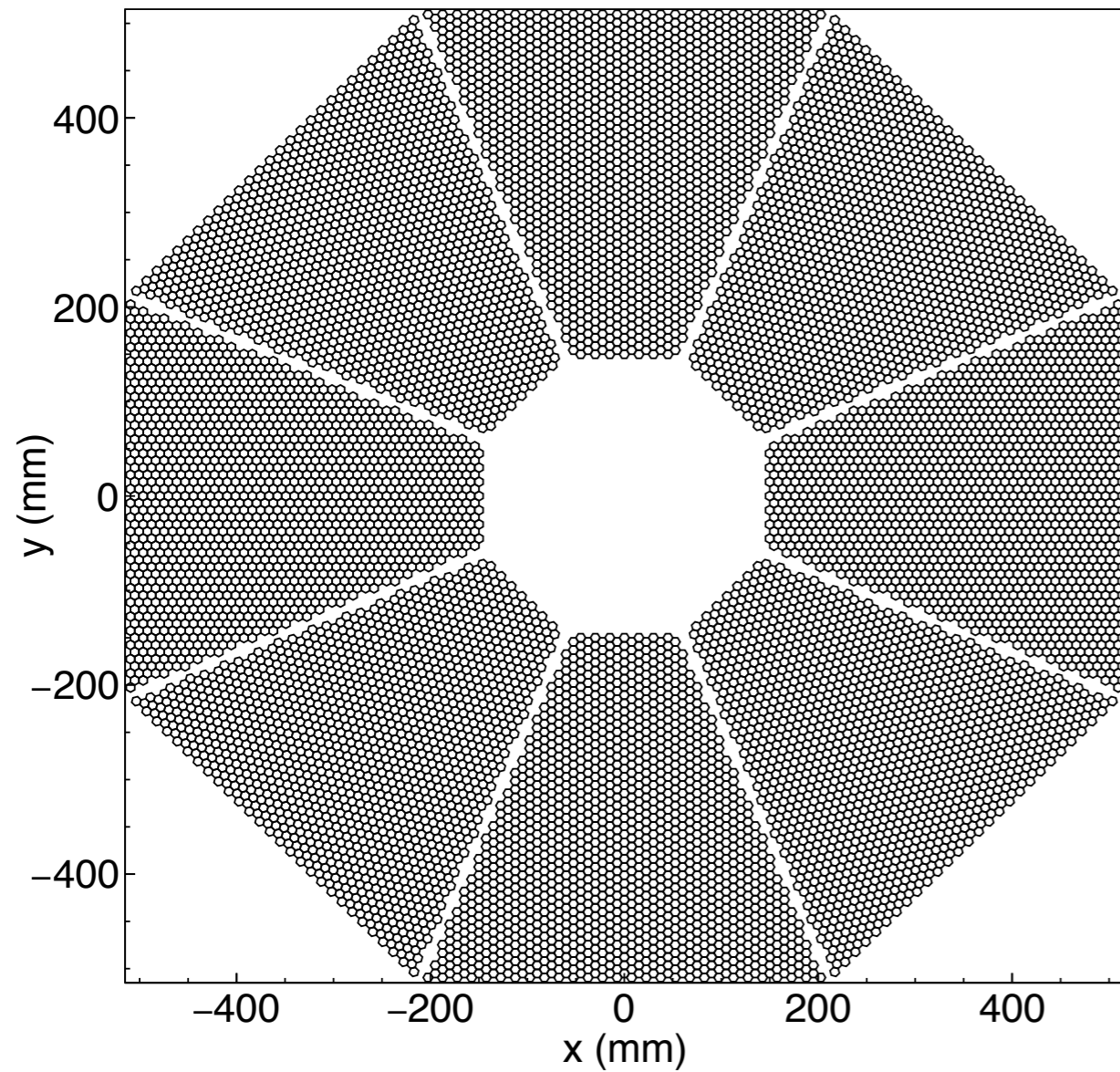
pad\_4



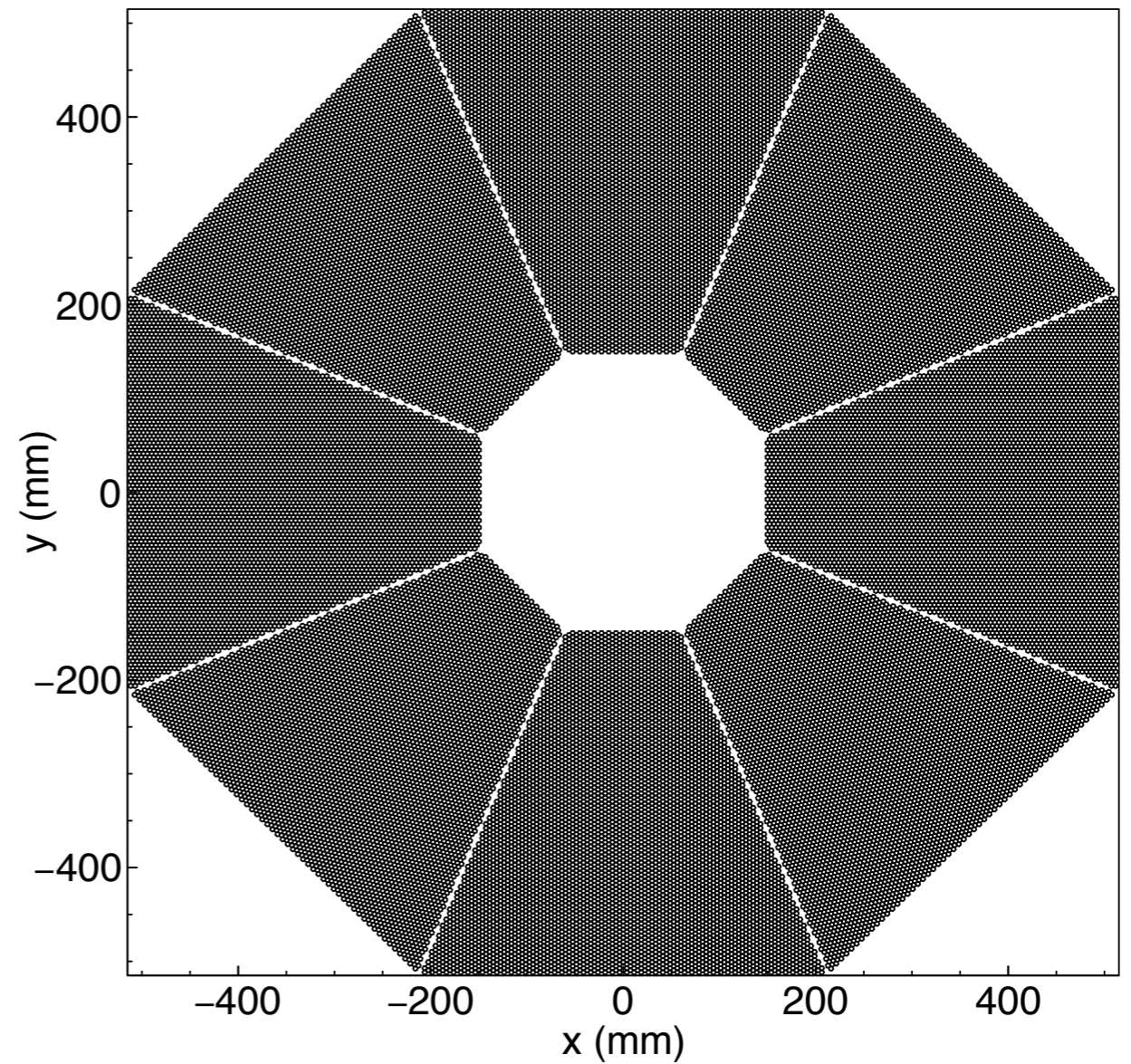
pad\_0



# Hexagonal Pad



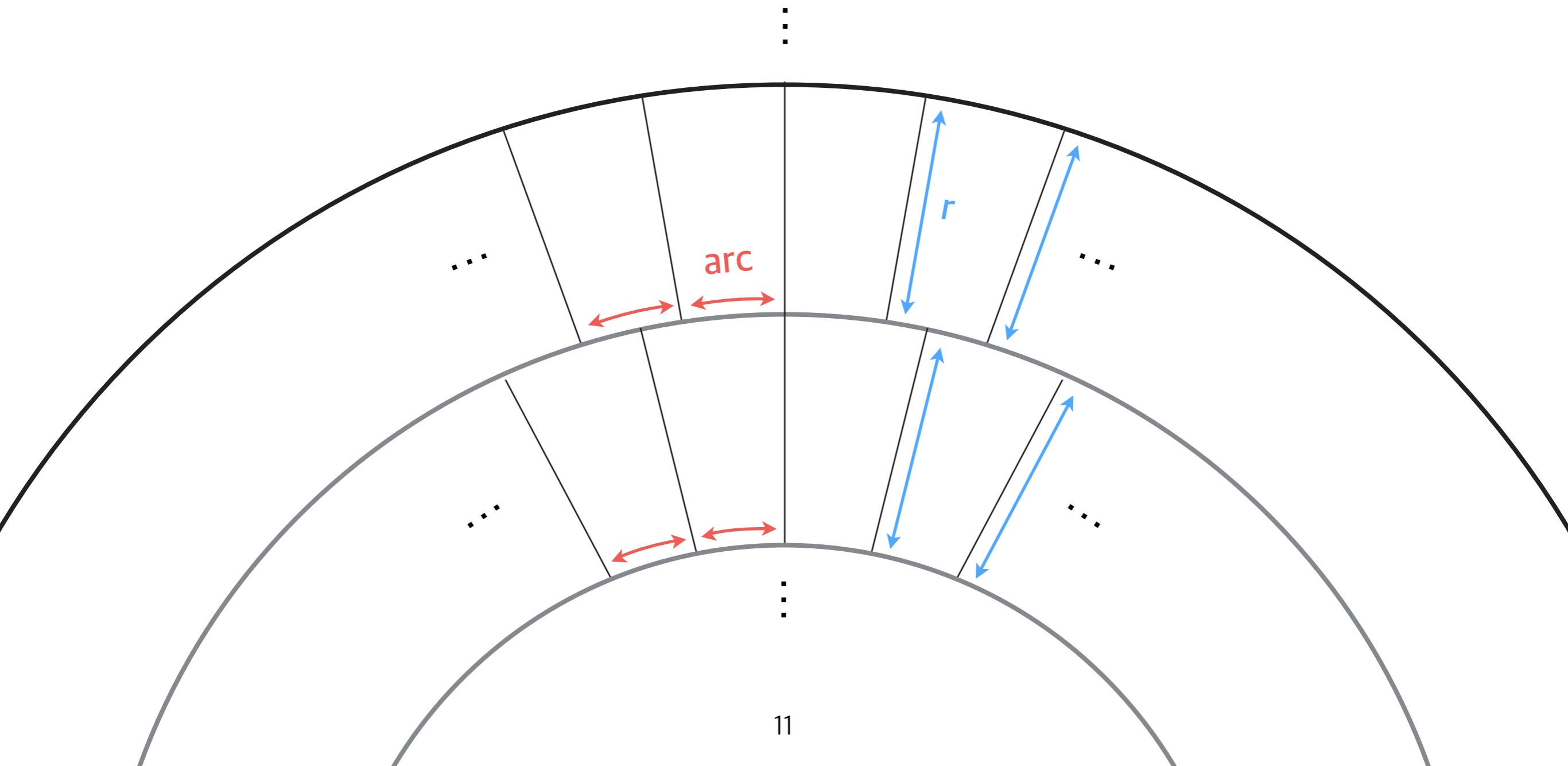
**Hexagonal Pad 5 mm (#23136)**



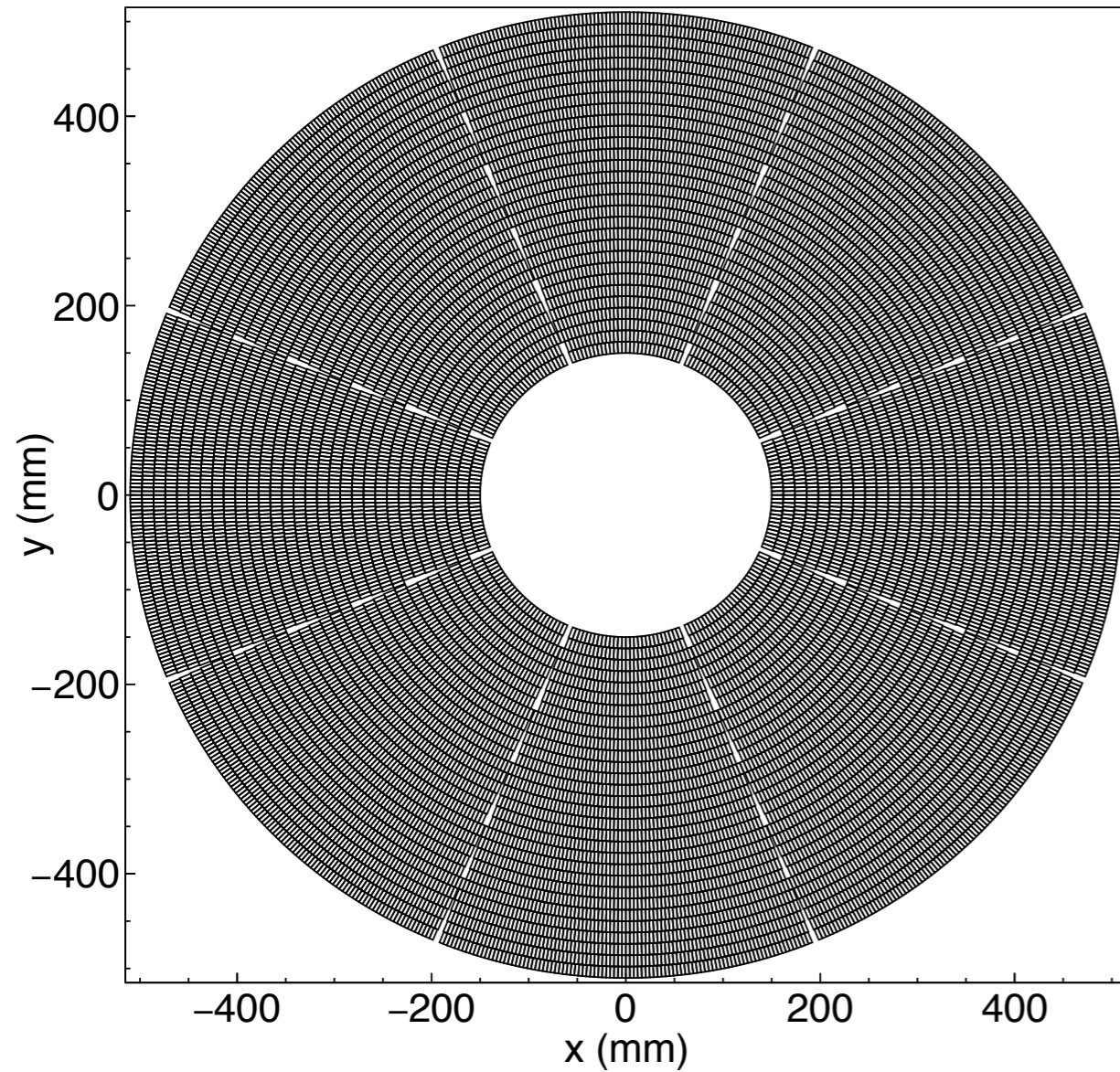
**Hexagonal Pad 2.5 mm (#95552)**

# Fan Shape Pad

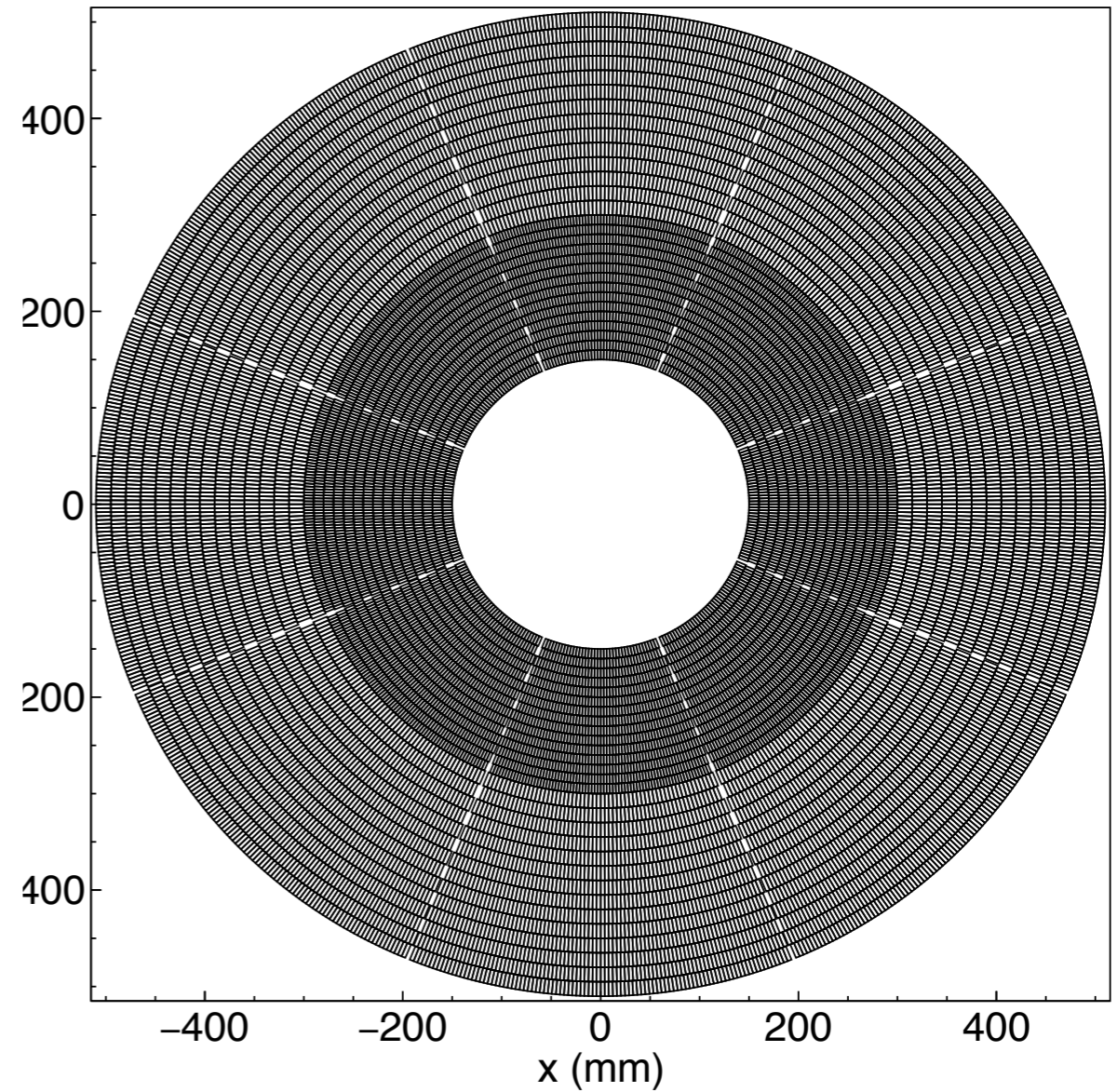
- Pad with **length of bottom side** arc and **length through radial** is fixed.



# Fan Shape Pad



**Fan Pad 4x12 mm (#30048)**



**Fan Pad 3x10, 4x15 mm (#30816)**