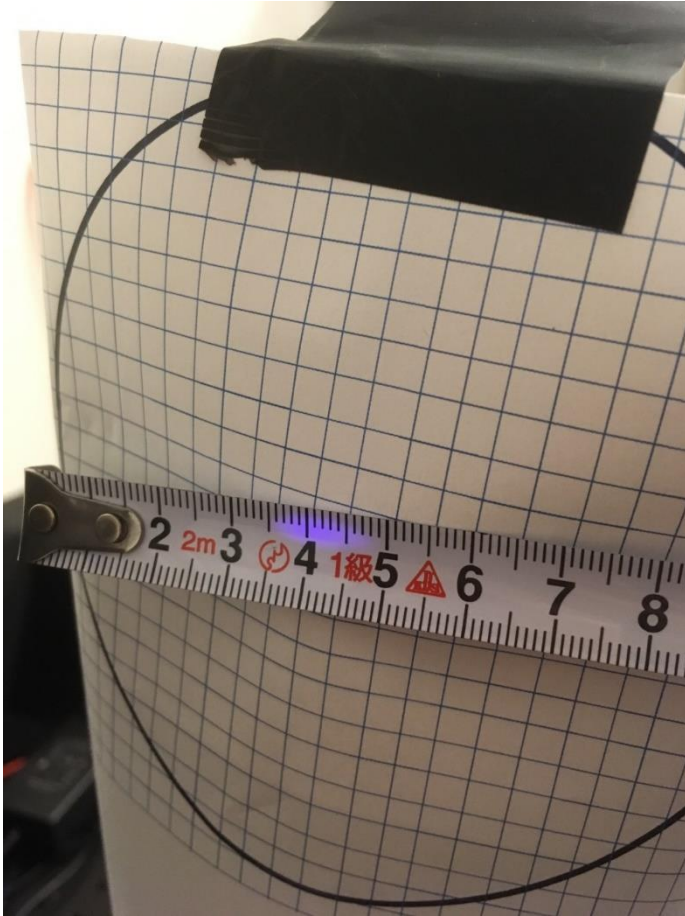


# Status Update

04/19/2019

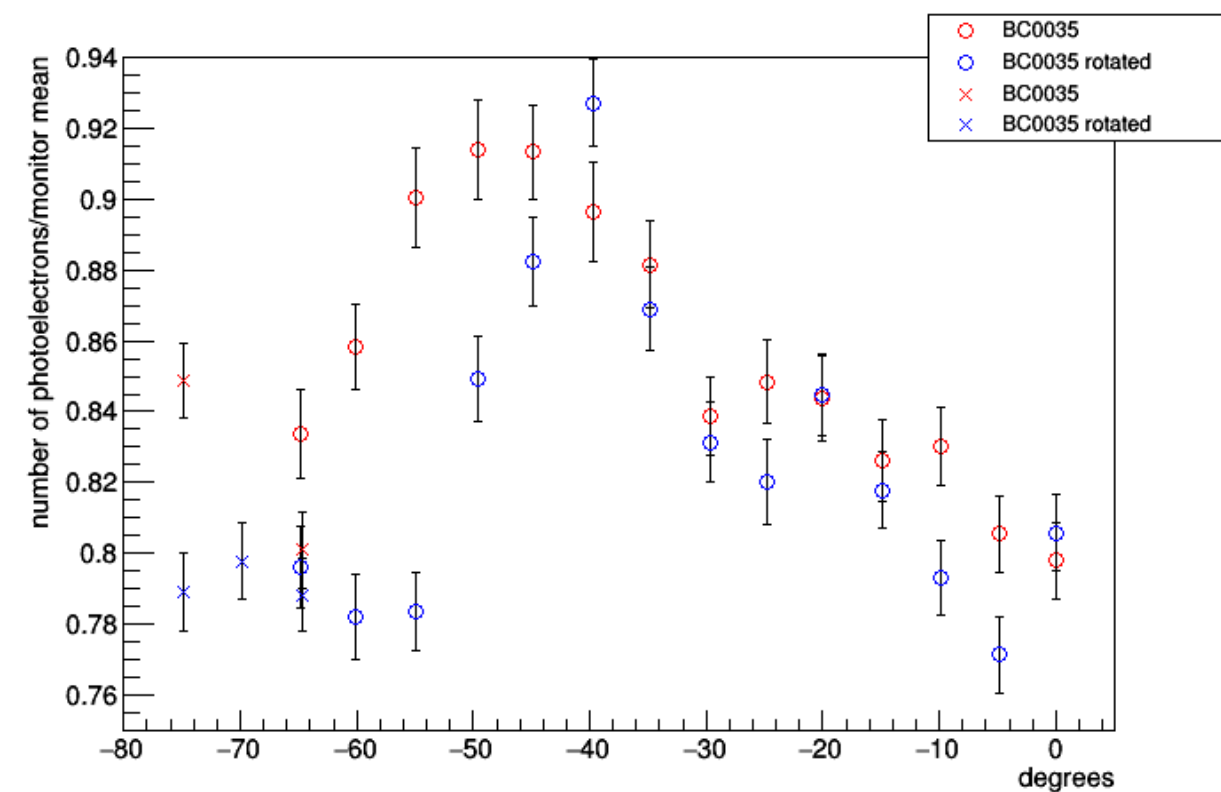
TUS Nao Izumi

# Angle measurement w/ small laser spot



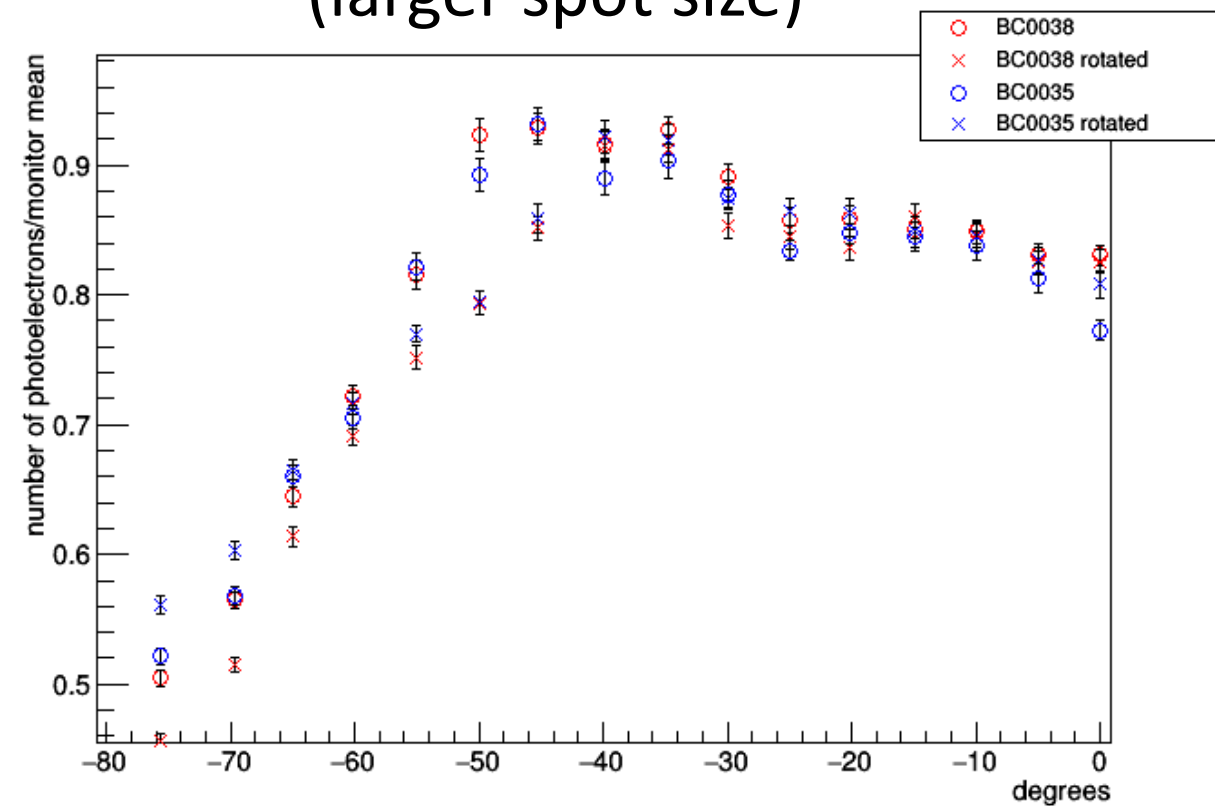
- Spot size 1 cm  $\rightarrow$  0.6 cm (@ 0 degrees)
- The picture shows the laser spot @ -65 degrees (maximum angle).
- I took the measurement from -65 to -75 degrees by increasing the radius from 105 mm  $\rightarrow$  115 mm.

# Efficiency

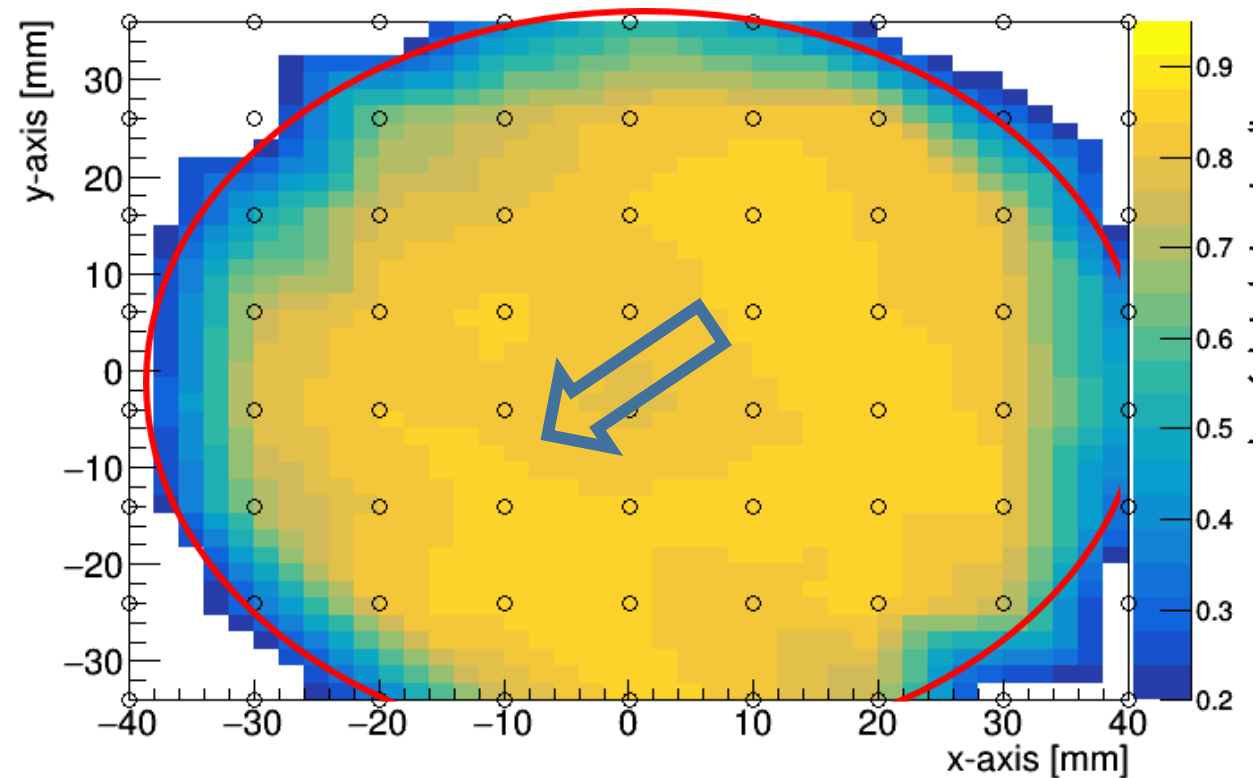
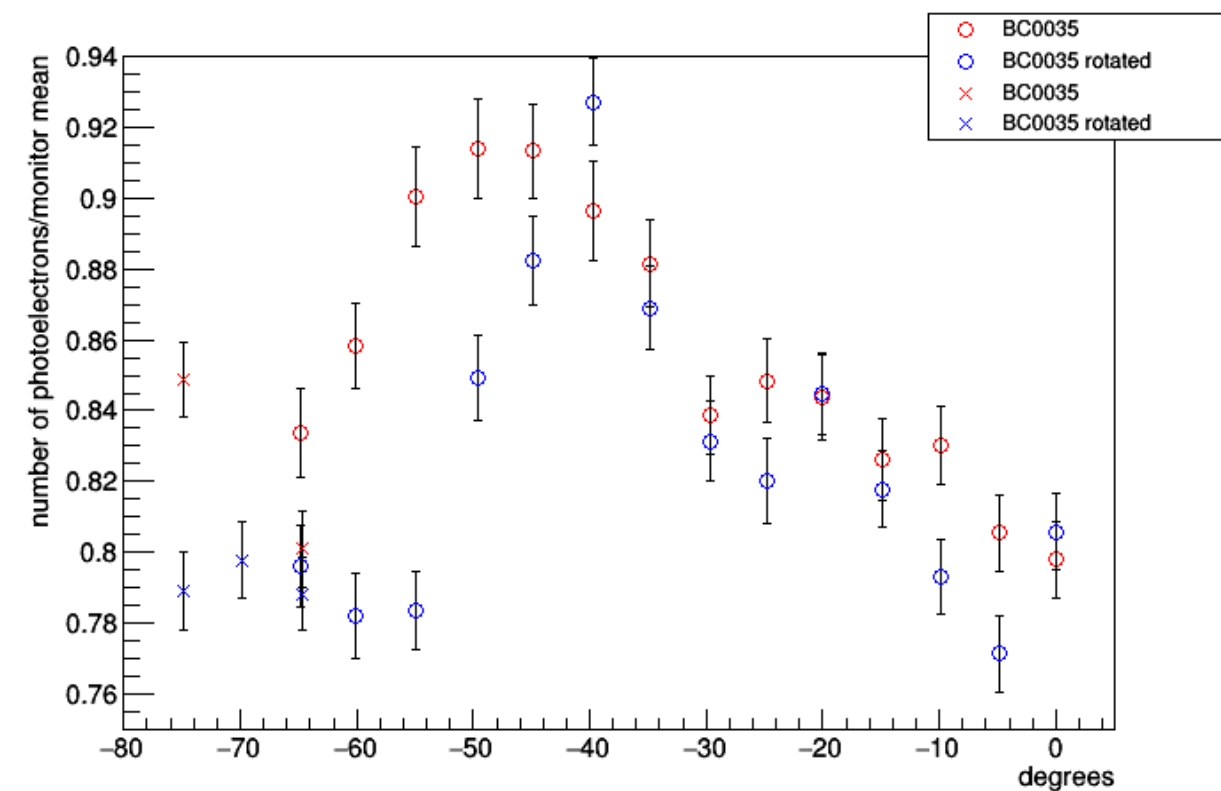


Largest at about -40 degrees.

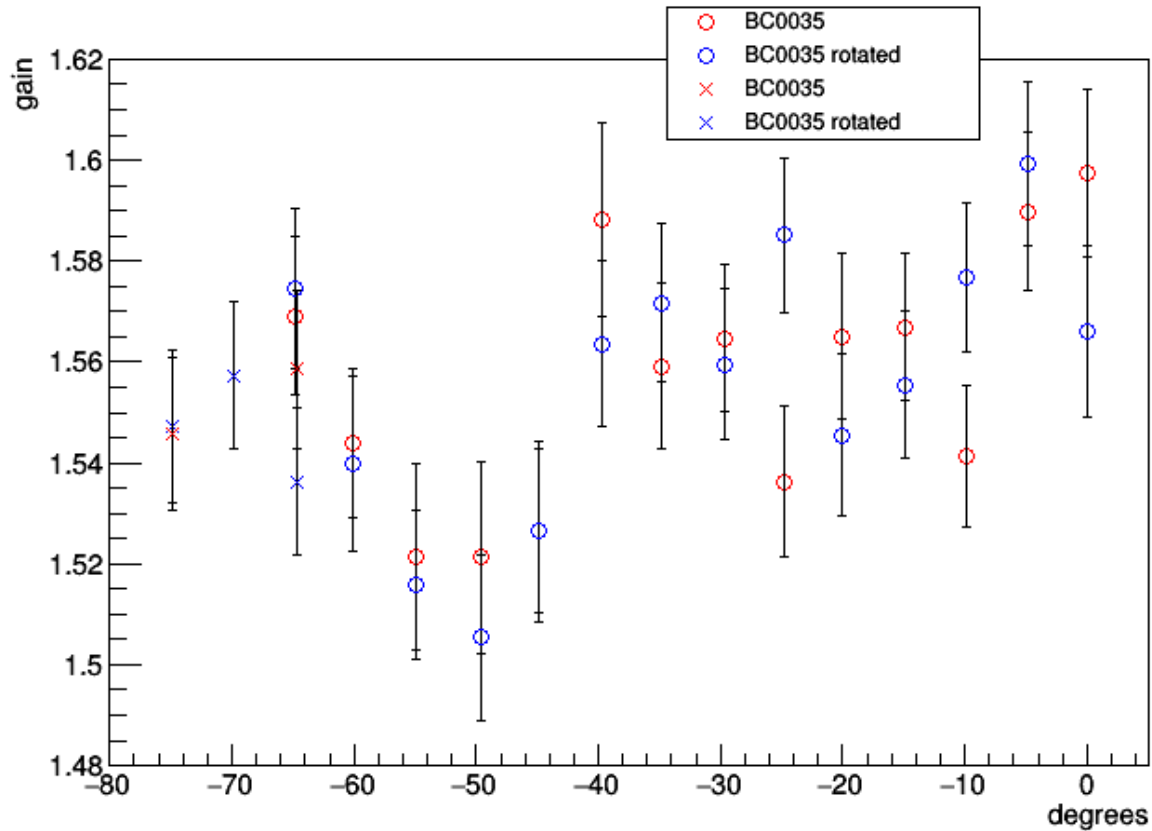
# Previous measurement (larger spot size)



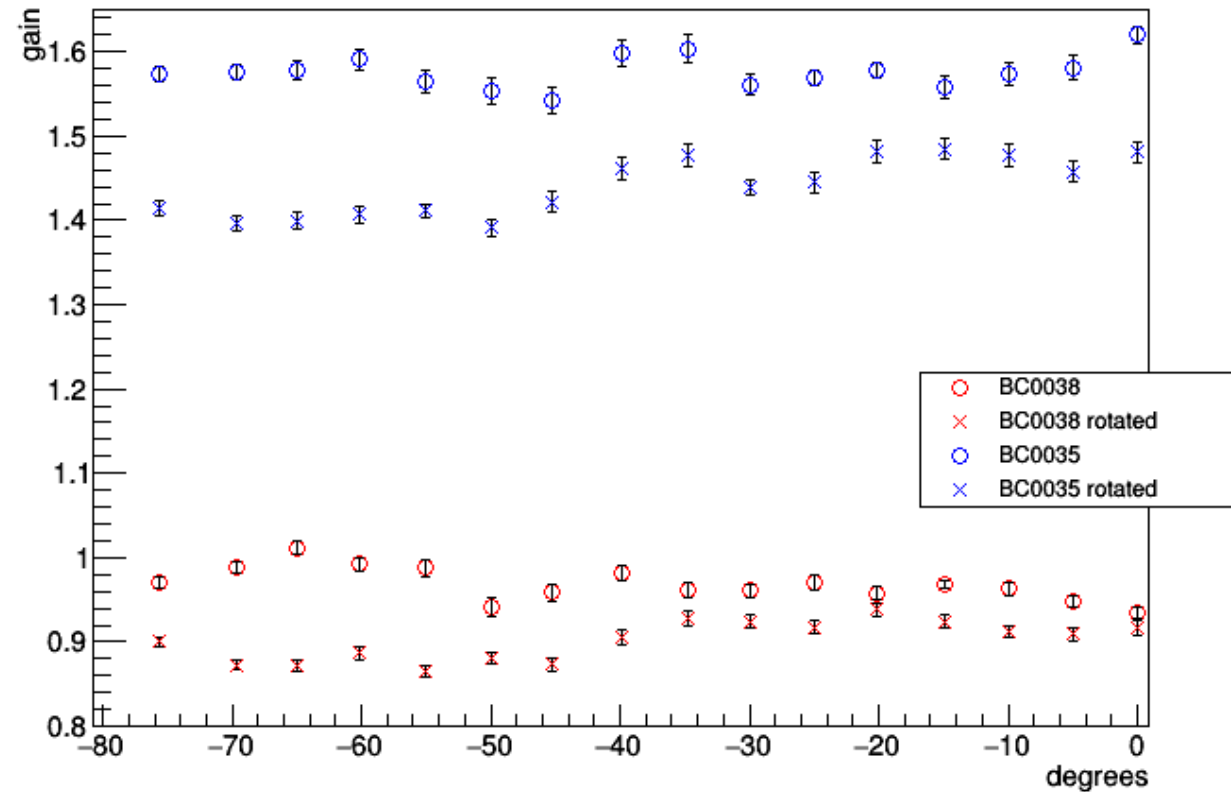
# Position dependence



# gain



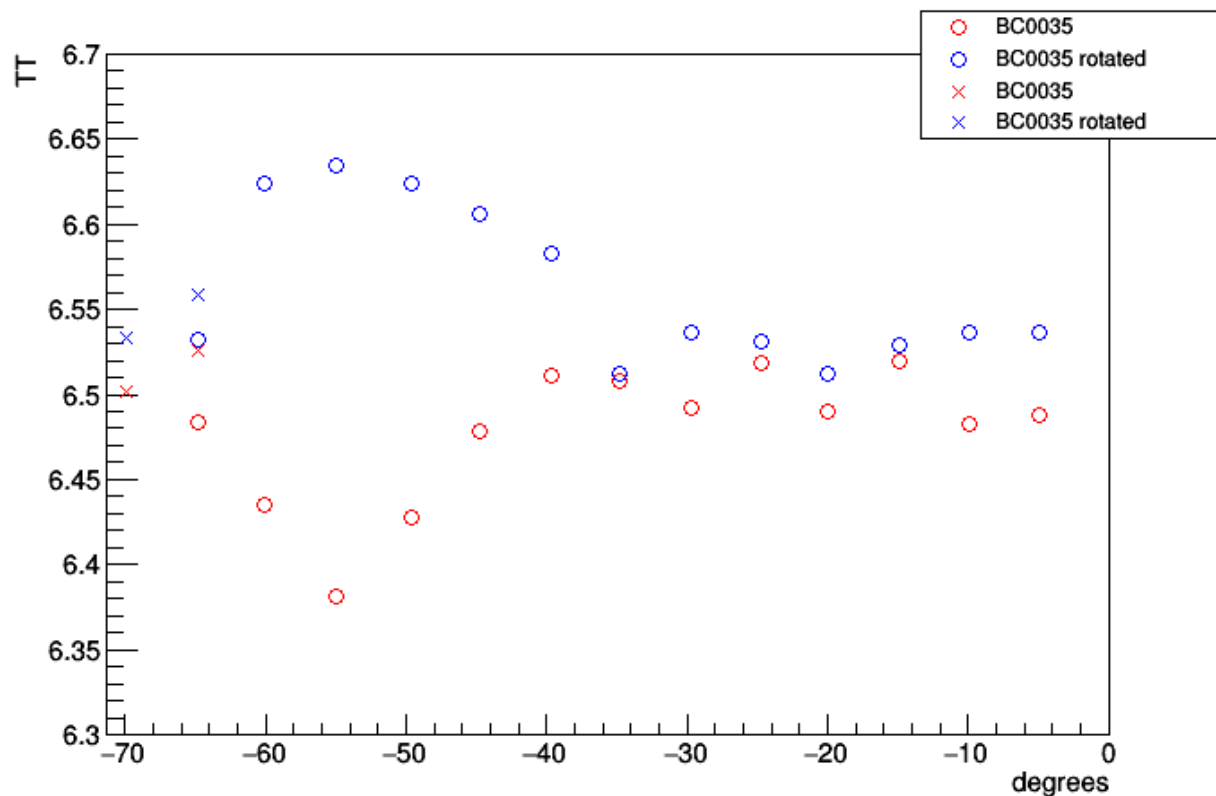
## Previous measurement (larger spot size)



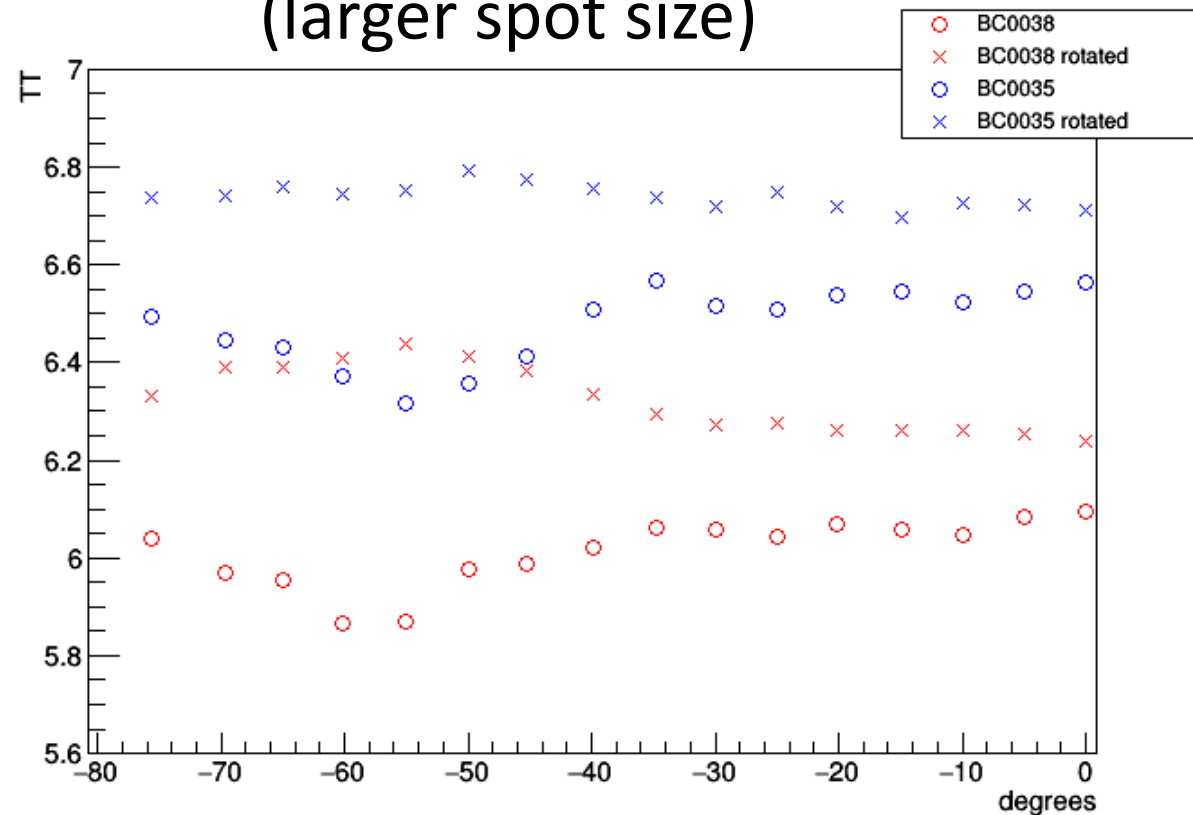
The difference between before and after rotation got smaller.

Laser hits the center of the PMT now , so the contribution from the position is smaller?

# TT



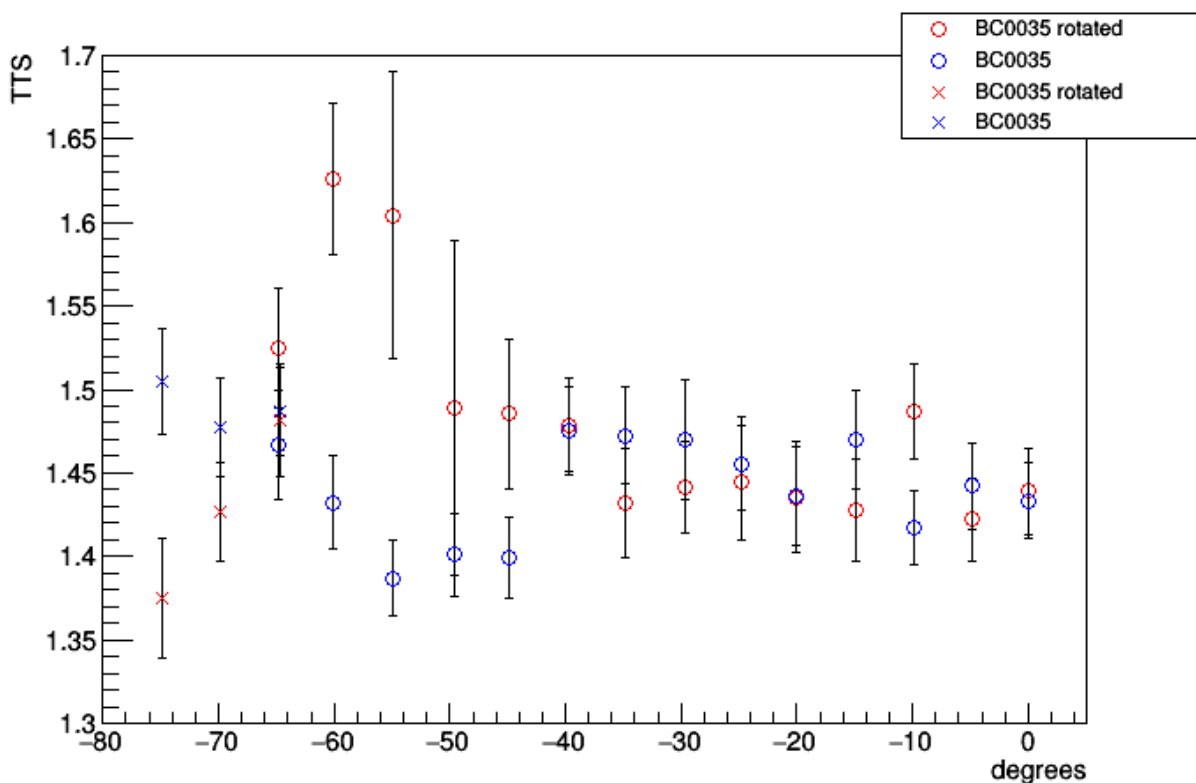
# Previous measurement (larger spot size)



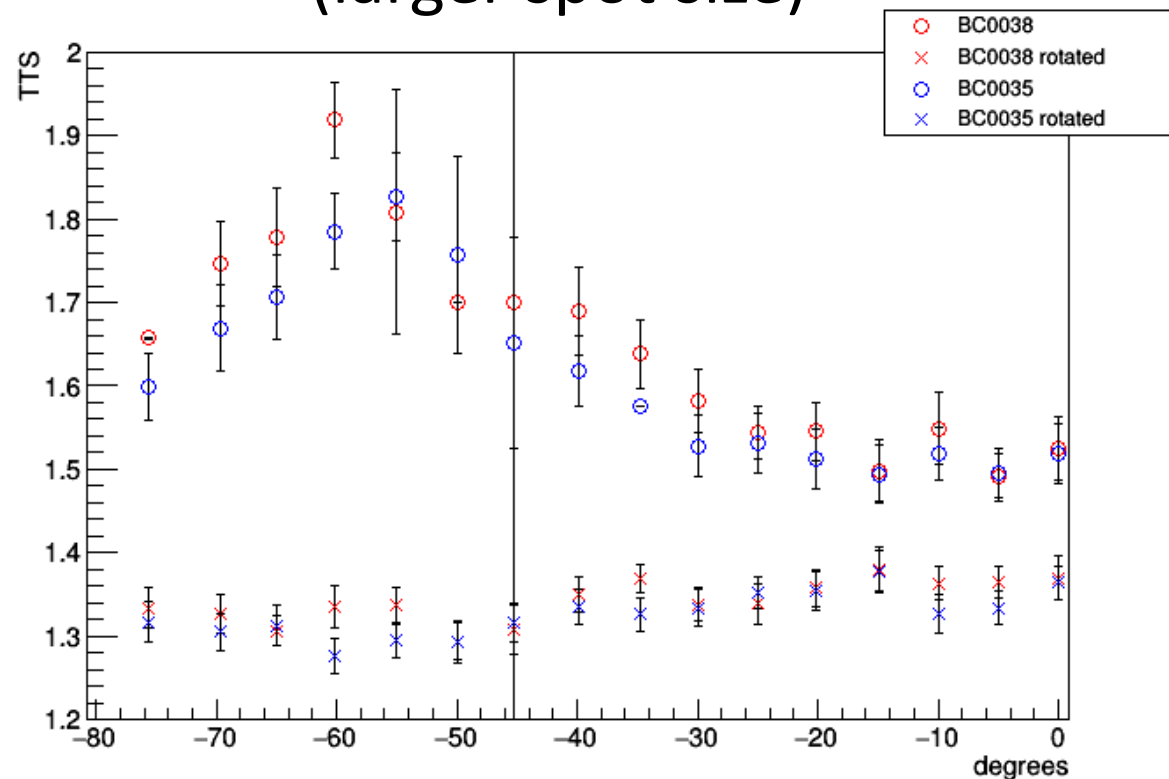
Similar trend was seen.

→angle dependency?

# TTS



## Previous measurement (larger spot size)

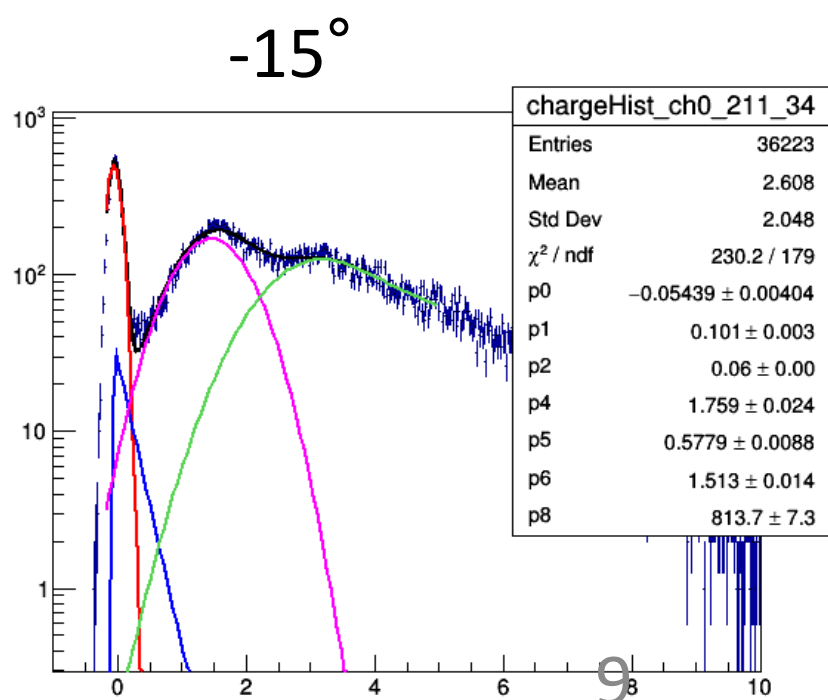
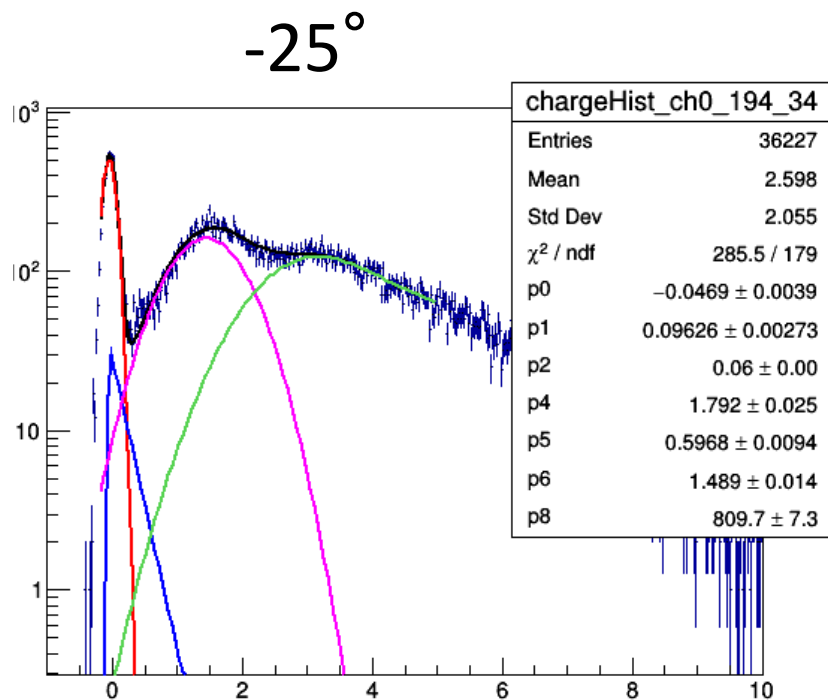
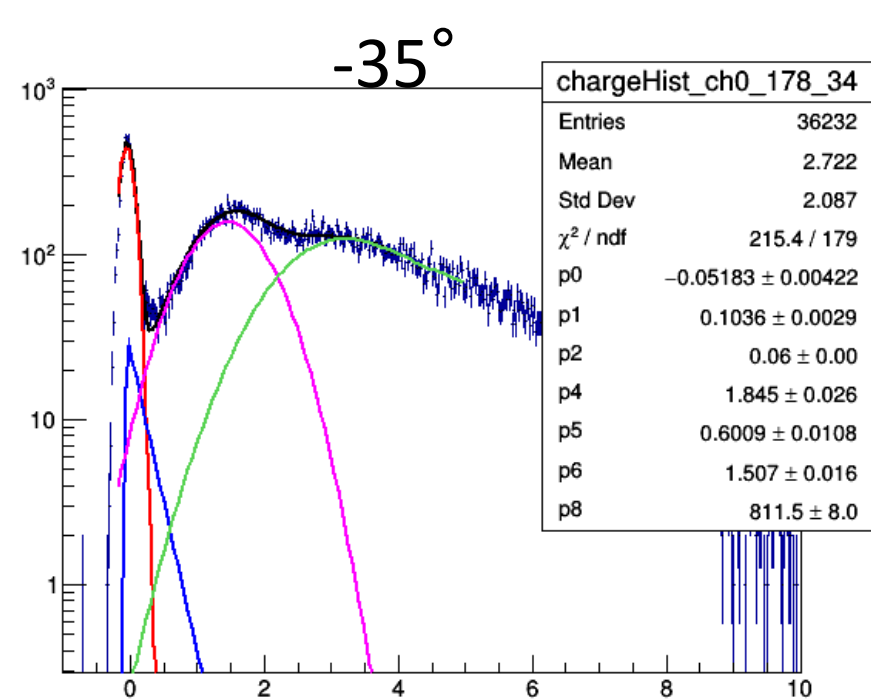
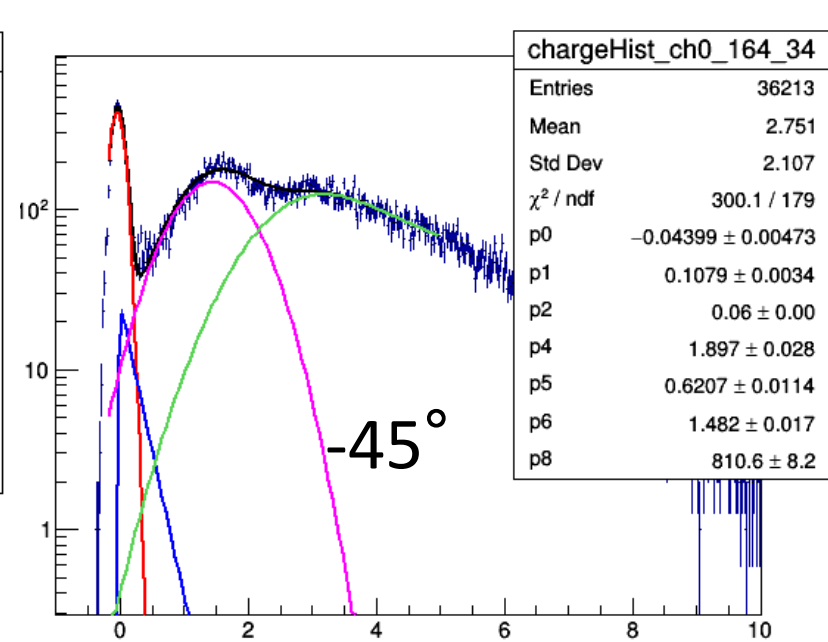
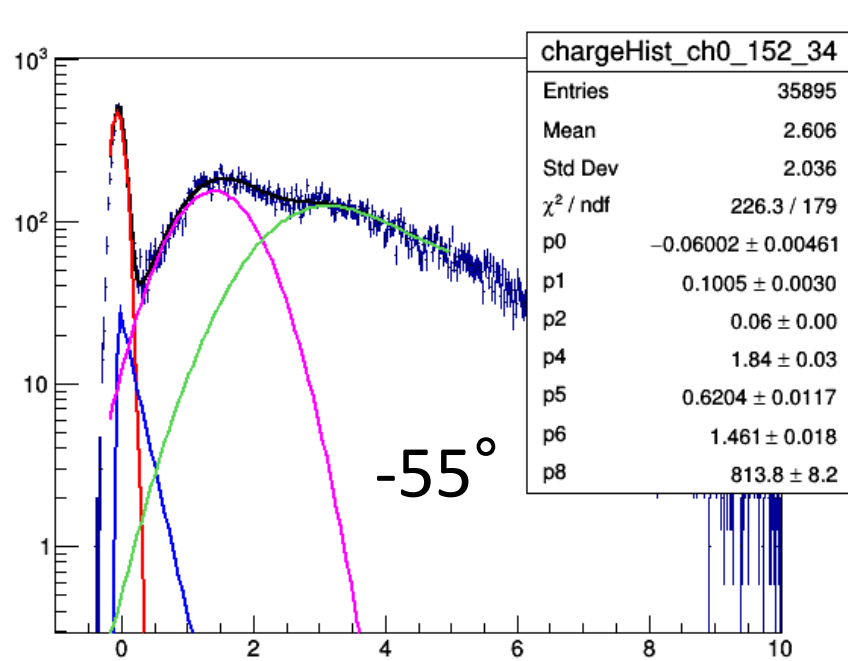
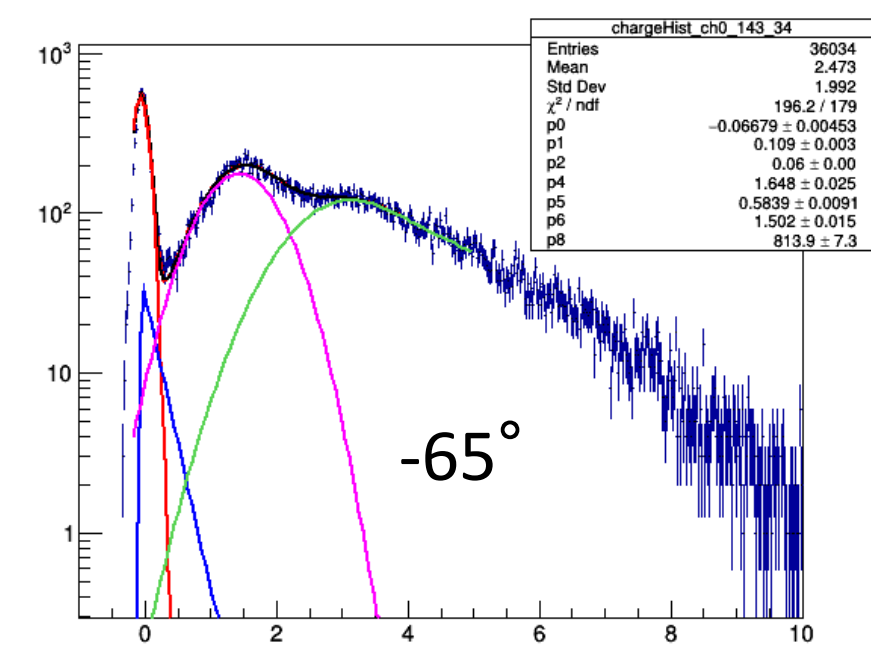


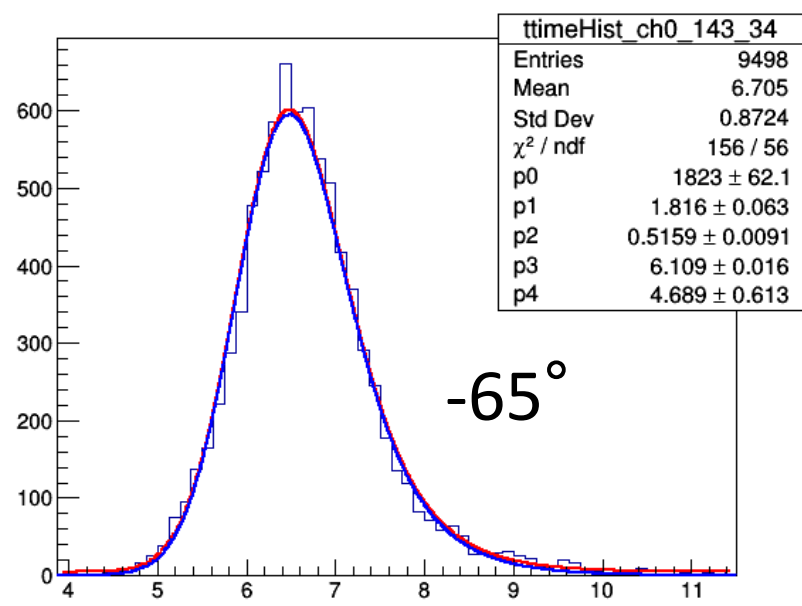
The difference between before and after rotation got smaller.

# Future plan

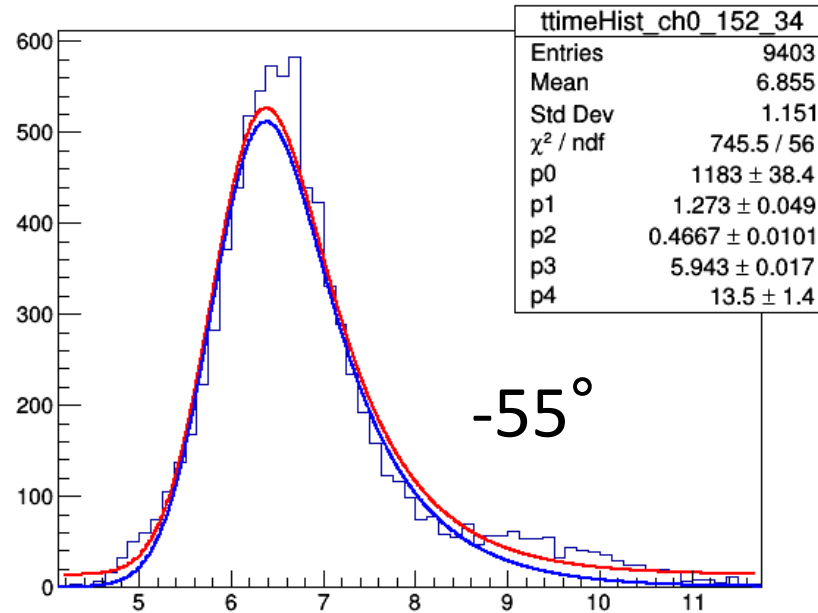
- Position measurement with collimeter
- Measurement moving the laser orthogonal to the photocathode



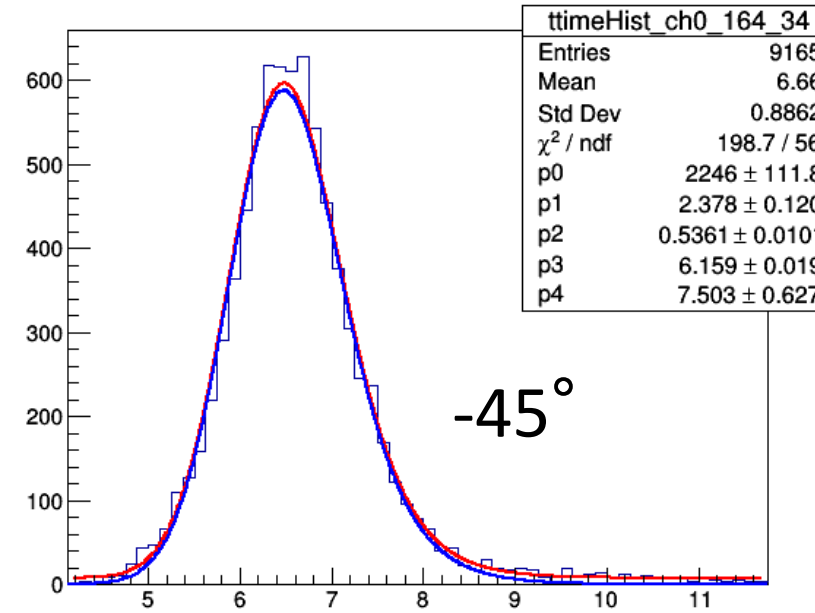




-65°

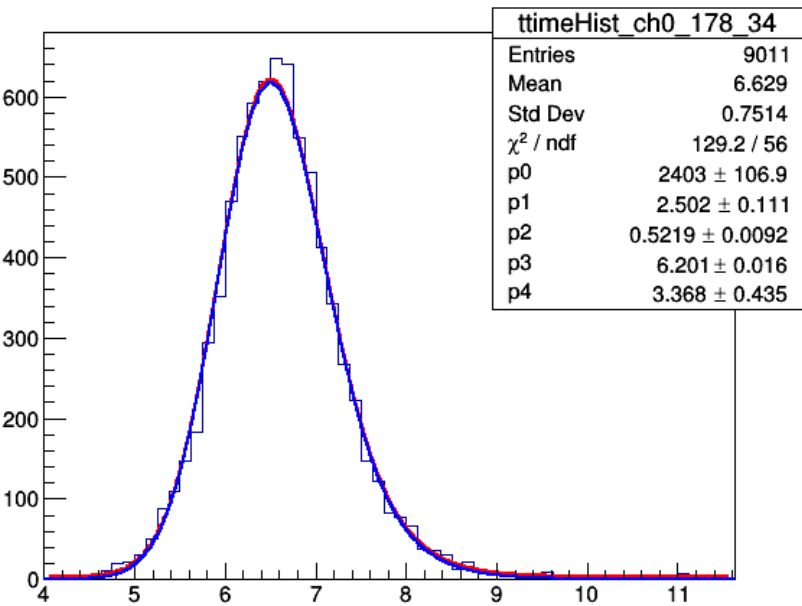


-55°

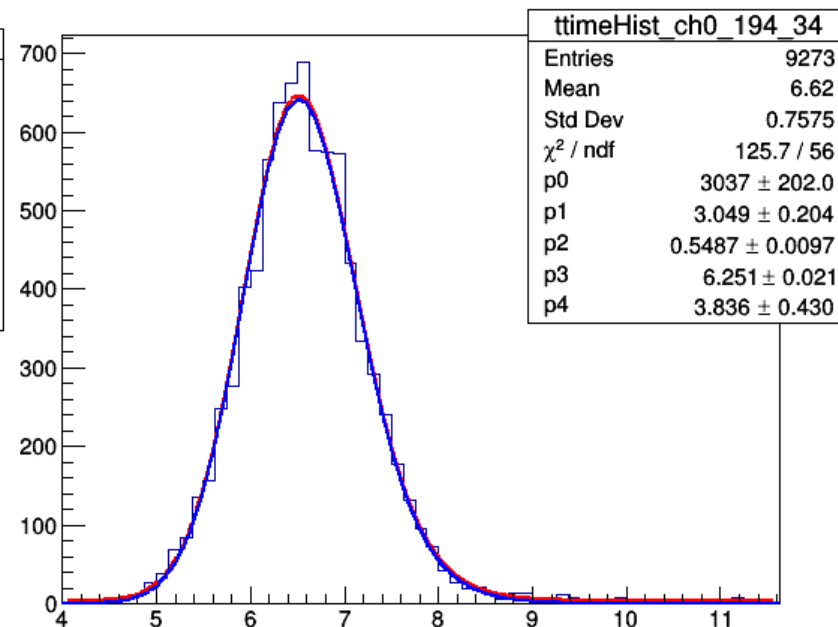


-45°

-35°



-25°



-15°

