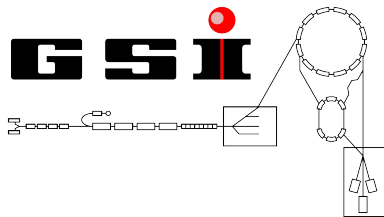
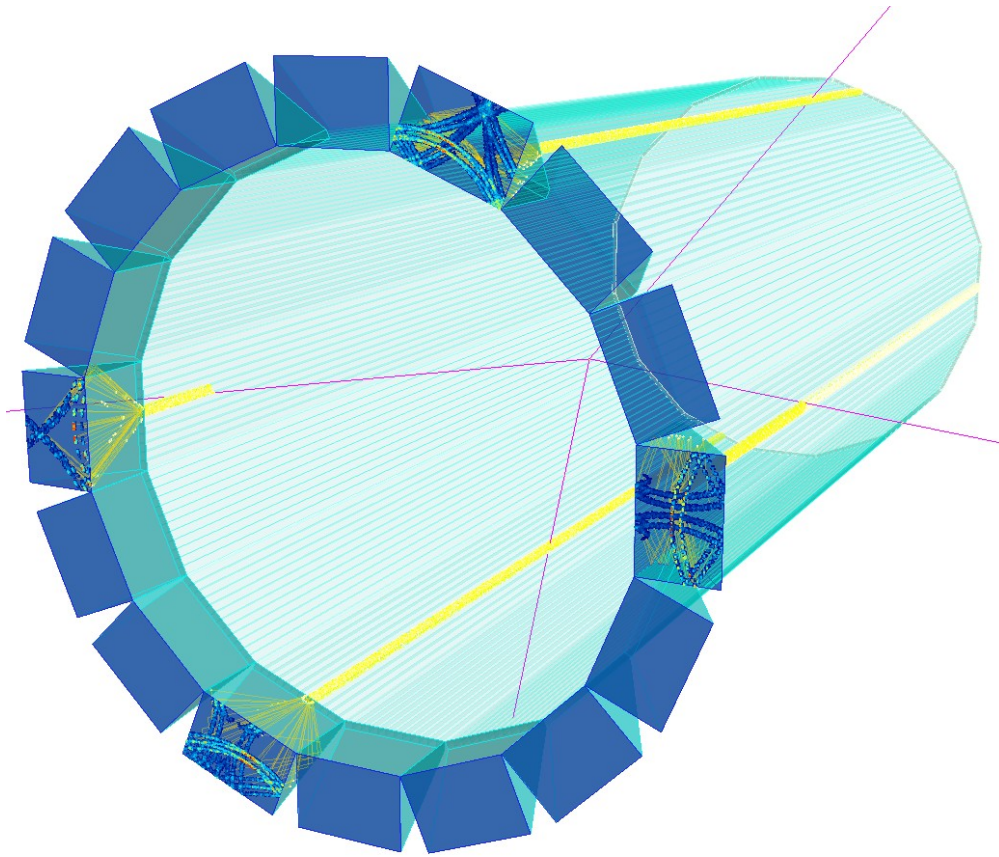


# Status of eicdirc simulations with Geant4

Roman Dzhygadlo



- Code location
- Results with LUT reco
- Lenses
- Sensor's dimension

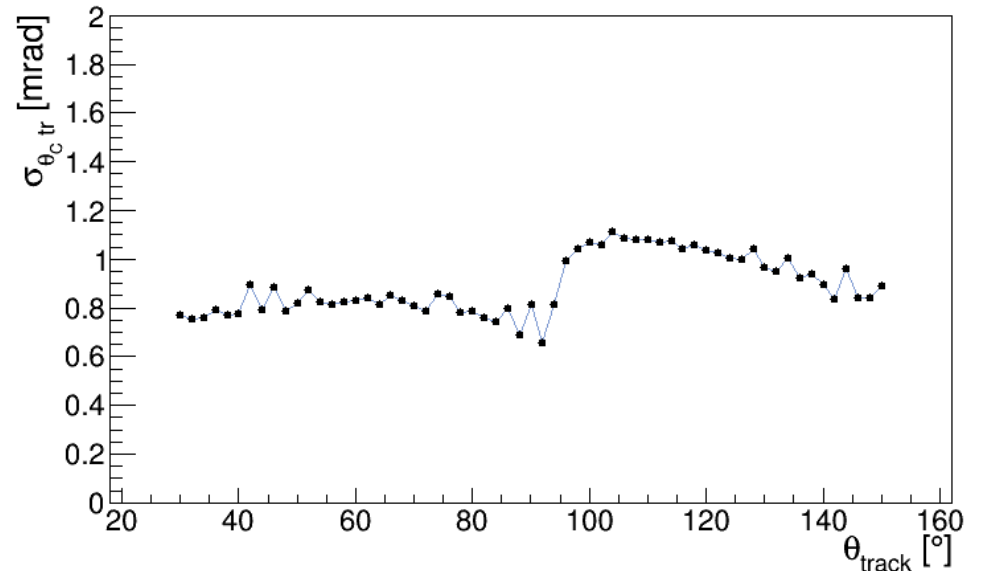
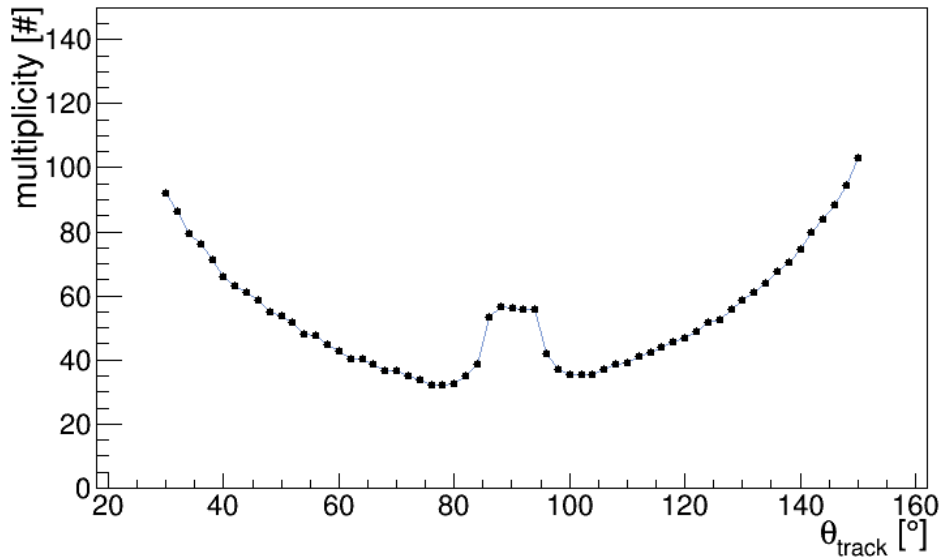
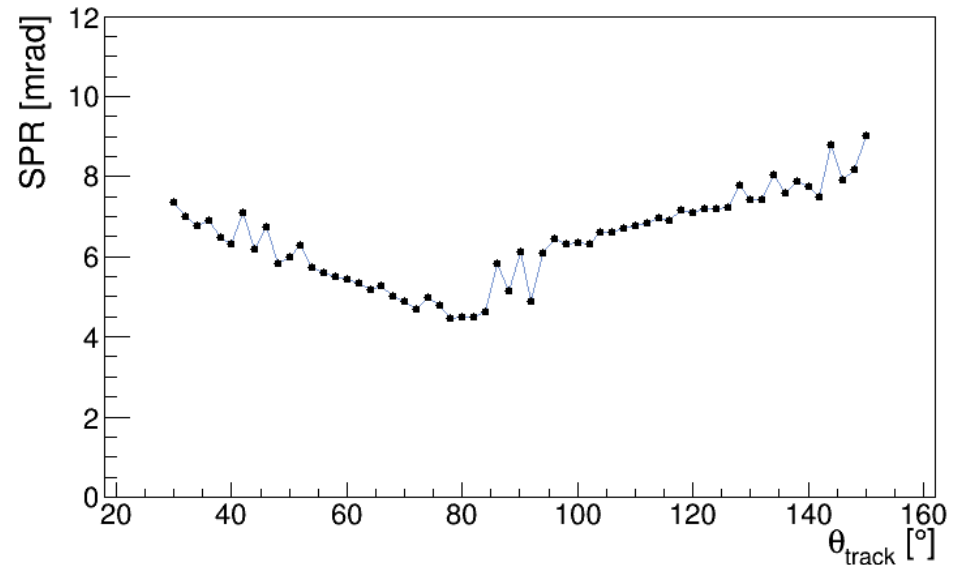
# eicdirc code location

```
> git clone https://github.com/rdom/eicdirc.git eicdirc
> cd eicdirc
> mkdir build
> cd build
> cmake -DGeant4_DIR=/path/to/geant4/installation ..
> make -j4
> eicdirc -g 1 -h 12
```

Full list of options is here: <https://github.com/rdom/eicdirc>

# Reconstruction with Look-Up-Tables

- 17x32x4200 mm bars
- 3-component lens.
- 3x3 mm pixels (covers all FP).

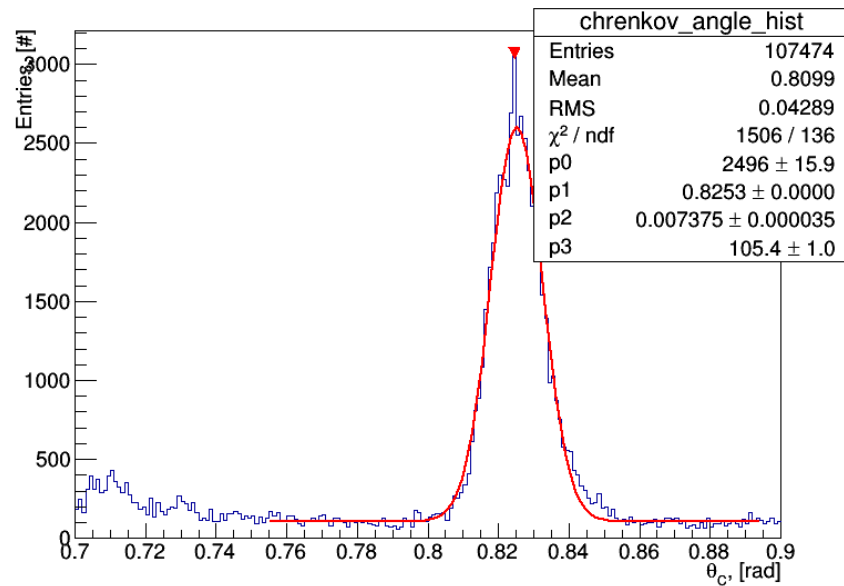


# Examples of fit

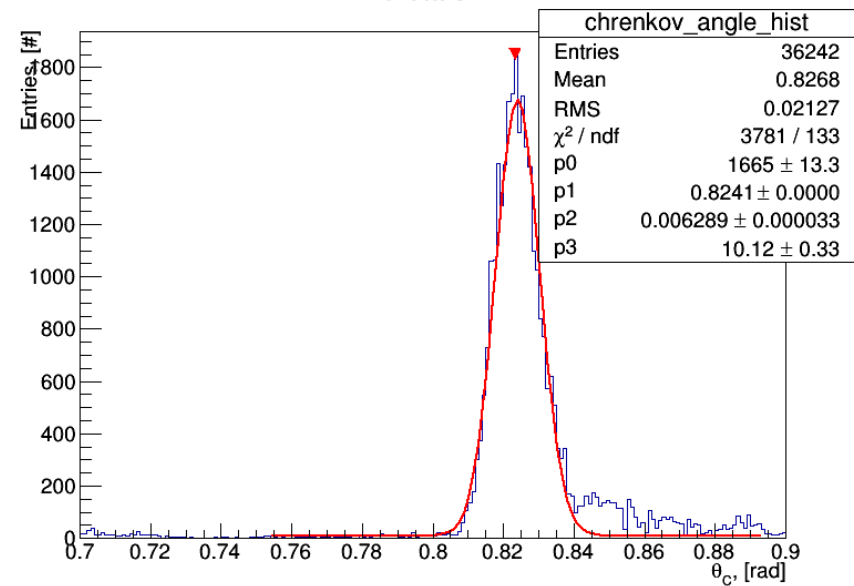
More here:

<http://web-docs.gsi.de/~rdzhigad/www/research/spr-fit-eiddirc>

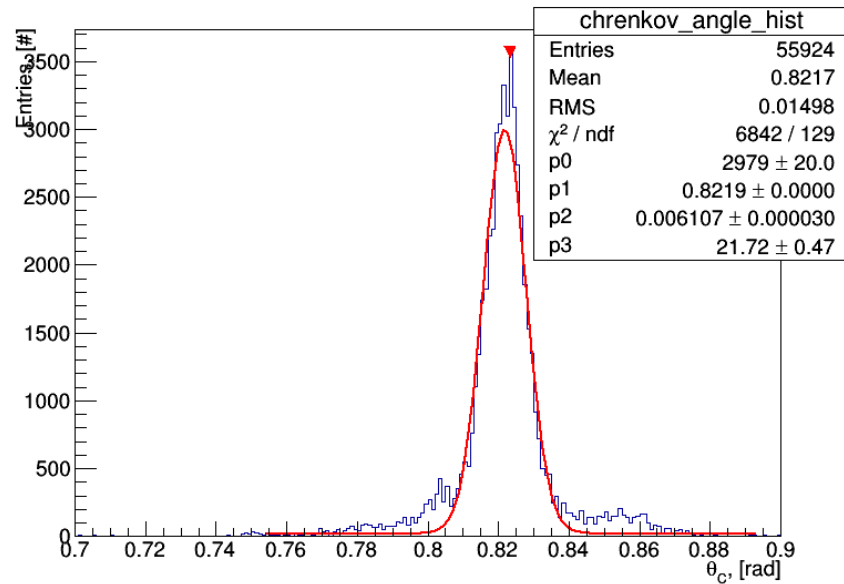
theta 30



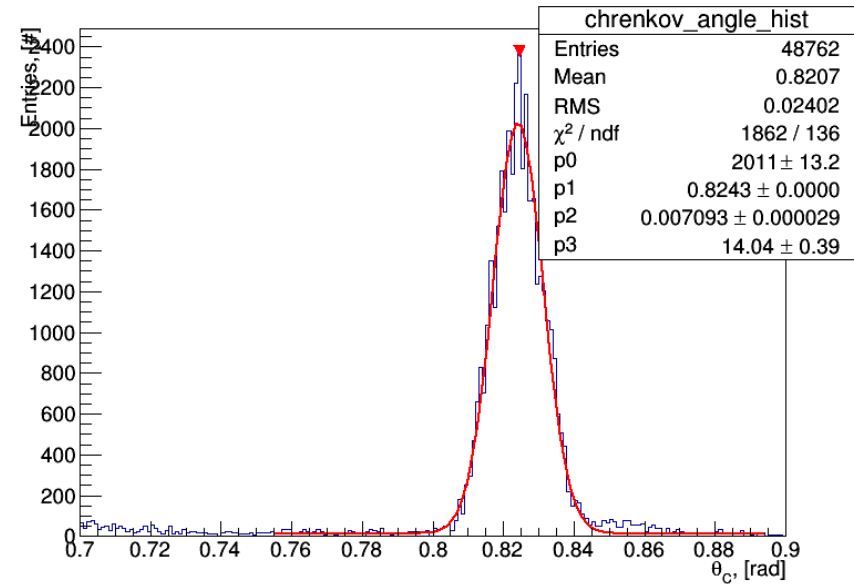
theta 52



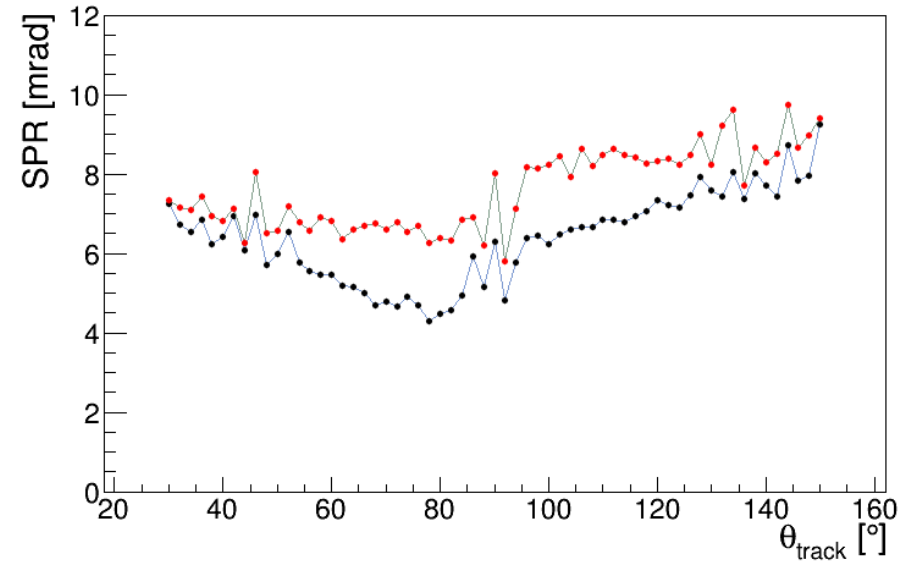
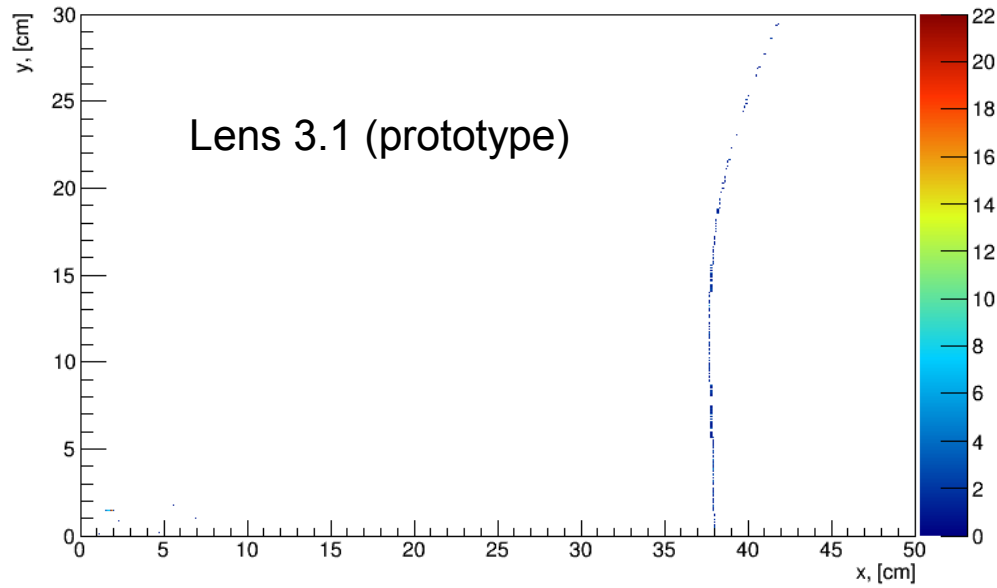
theta 90



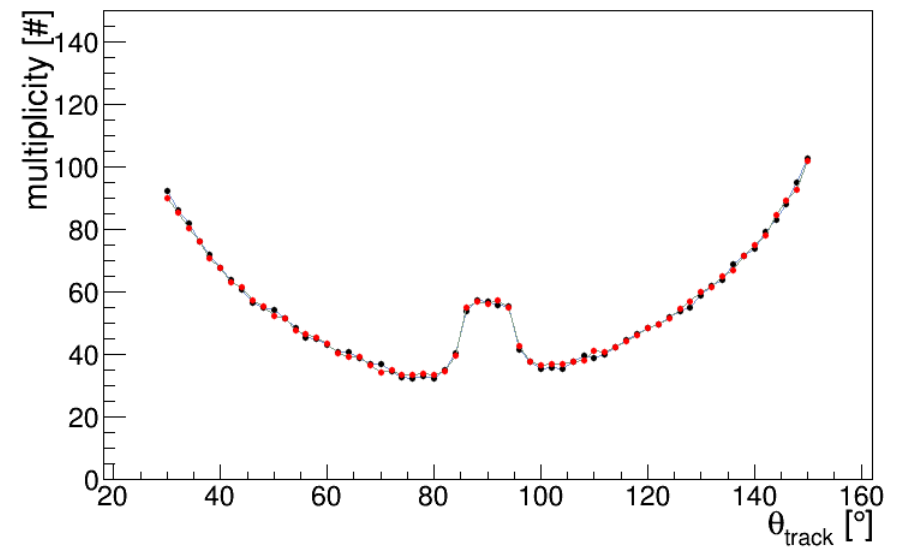
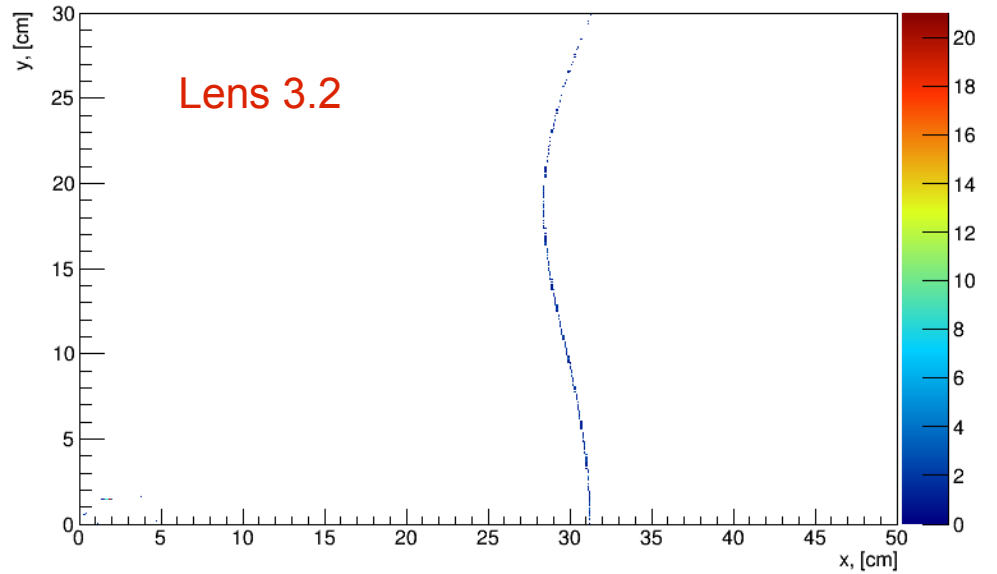
theta 120



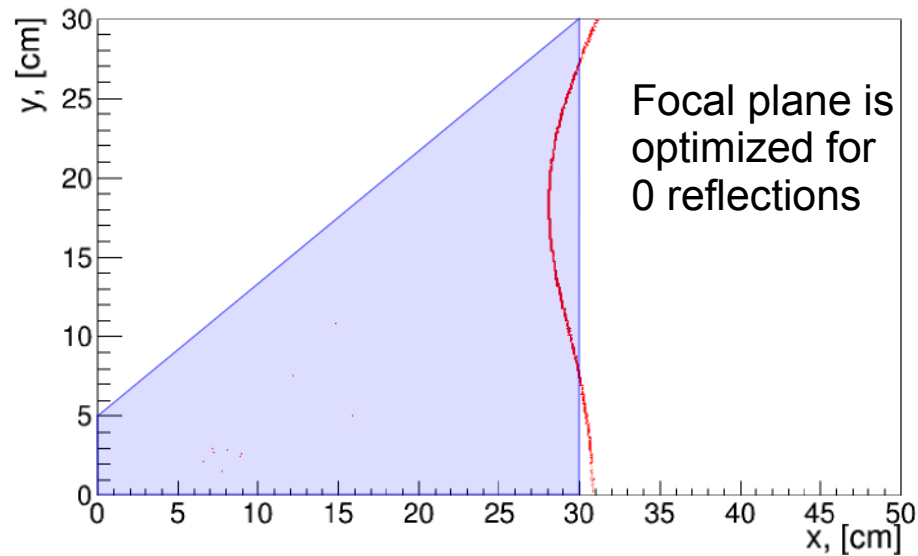
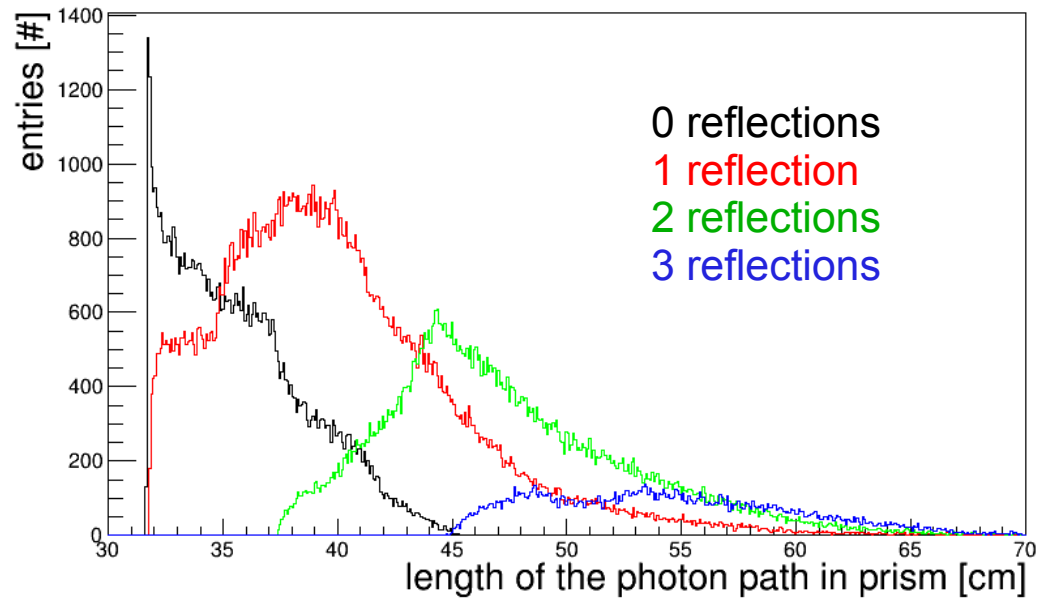
$r_1=48.00$   $r_2=28.75$   $\epsilon=42$



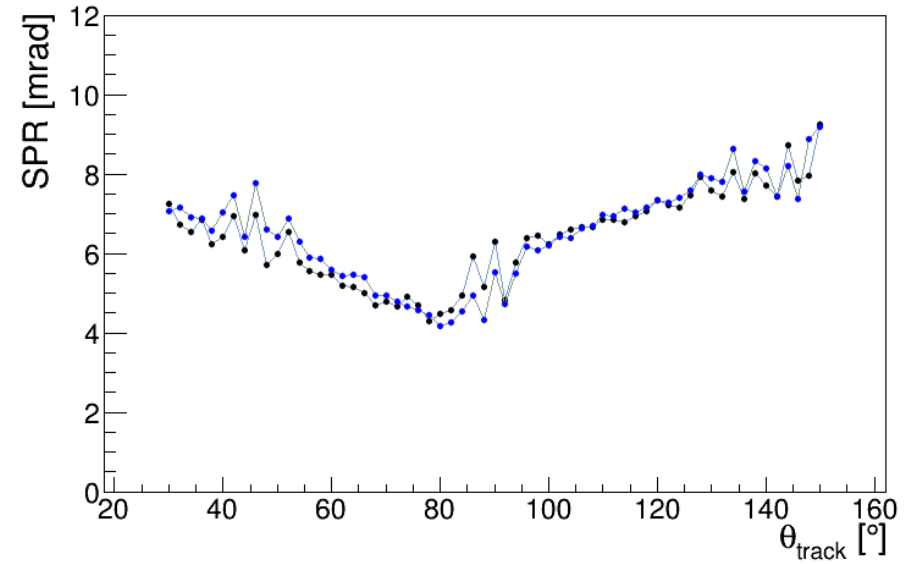
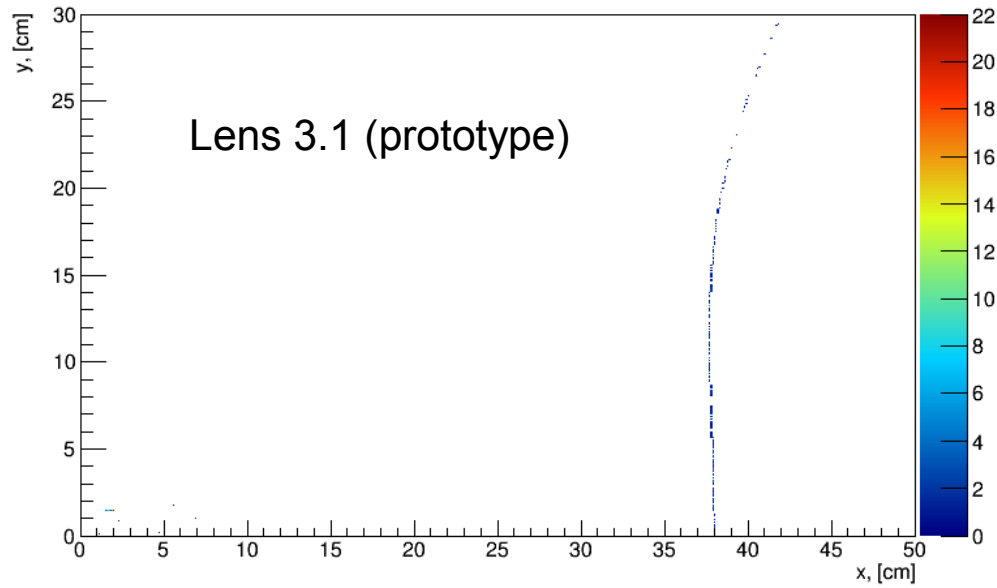
$r_1=69.00$   $r_2=31.25$   $\epsilon=55$



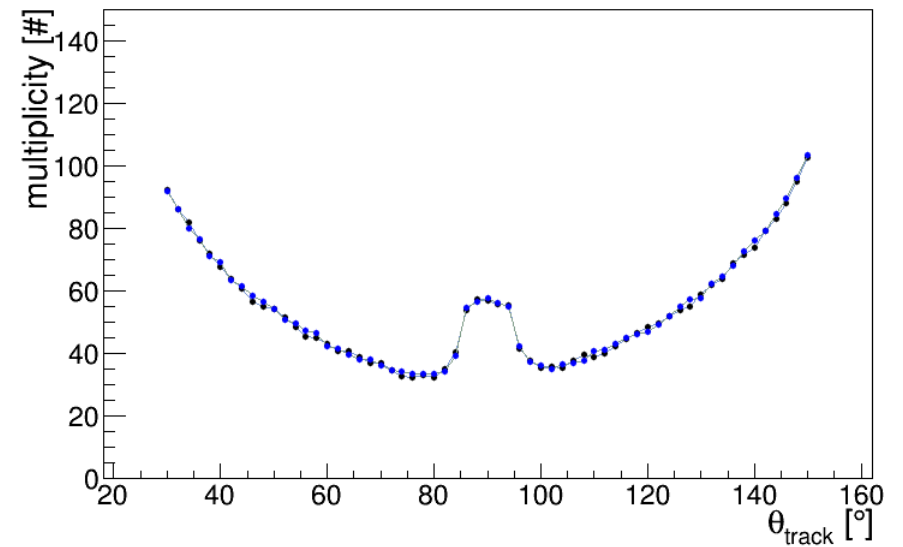
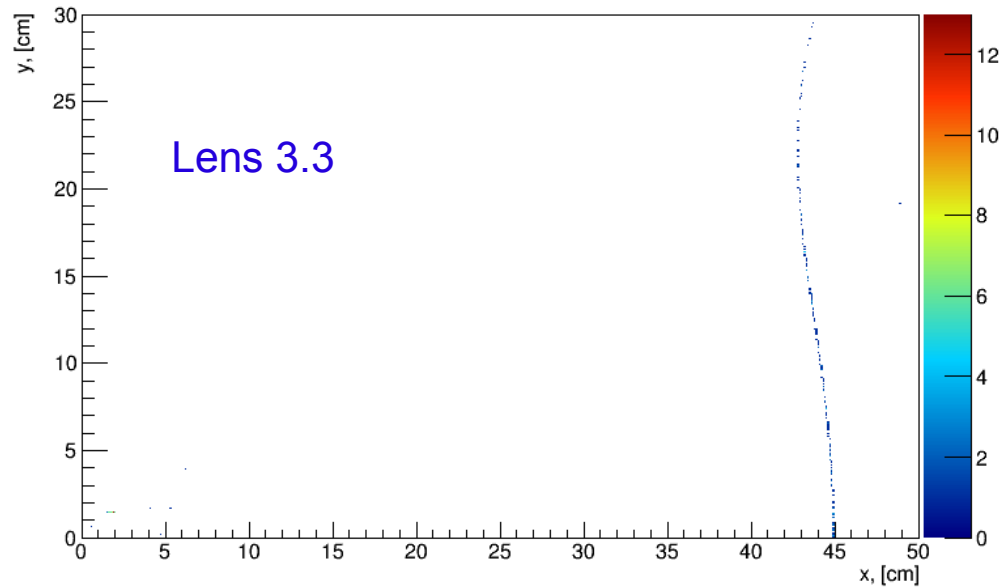
# Lenses



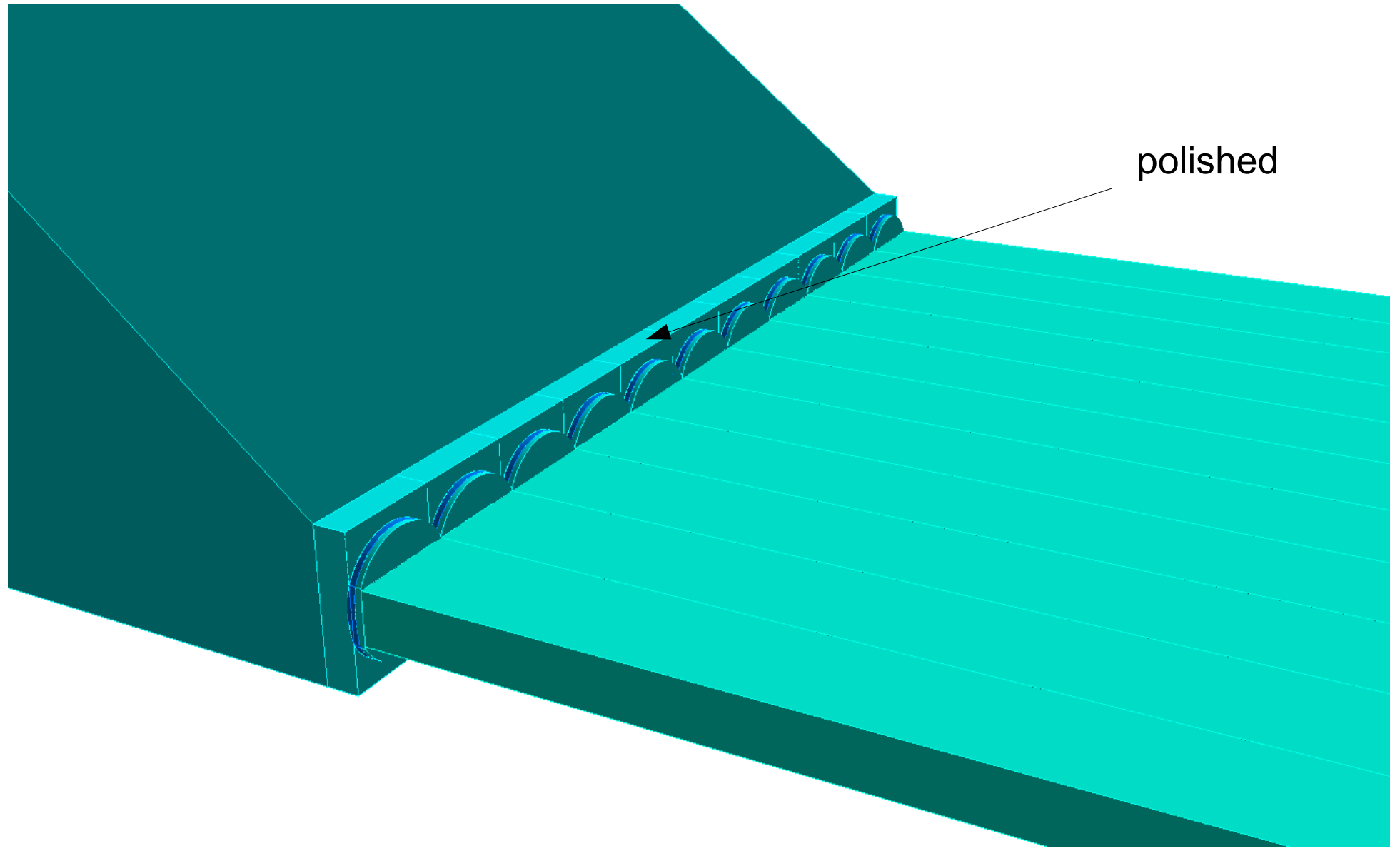
$r_1=48.00$   $r_2=28.75$   $\epsilon=42$



$r_1=60.00$   $r_2=35.00$   $\epsilon=32$

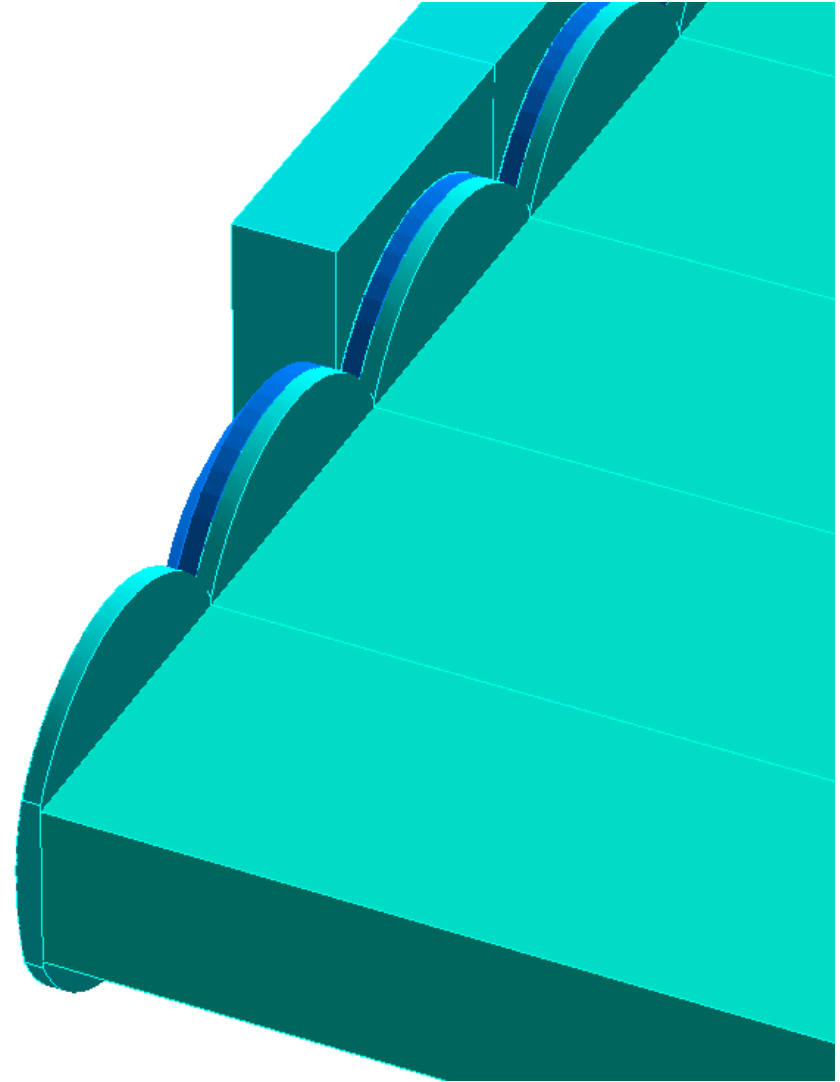
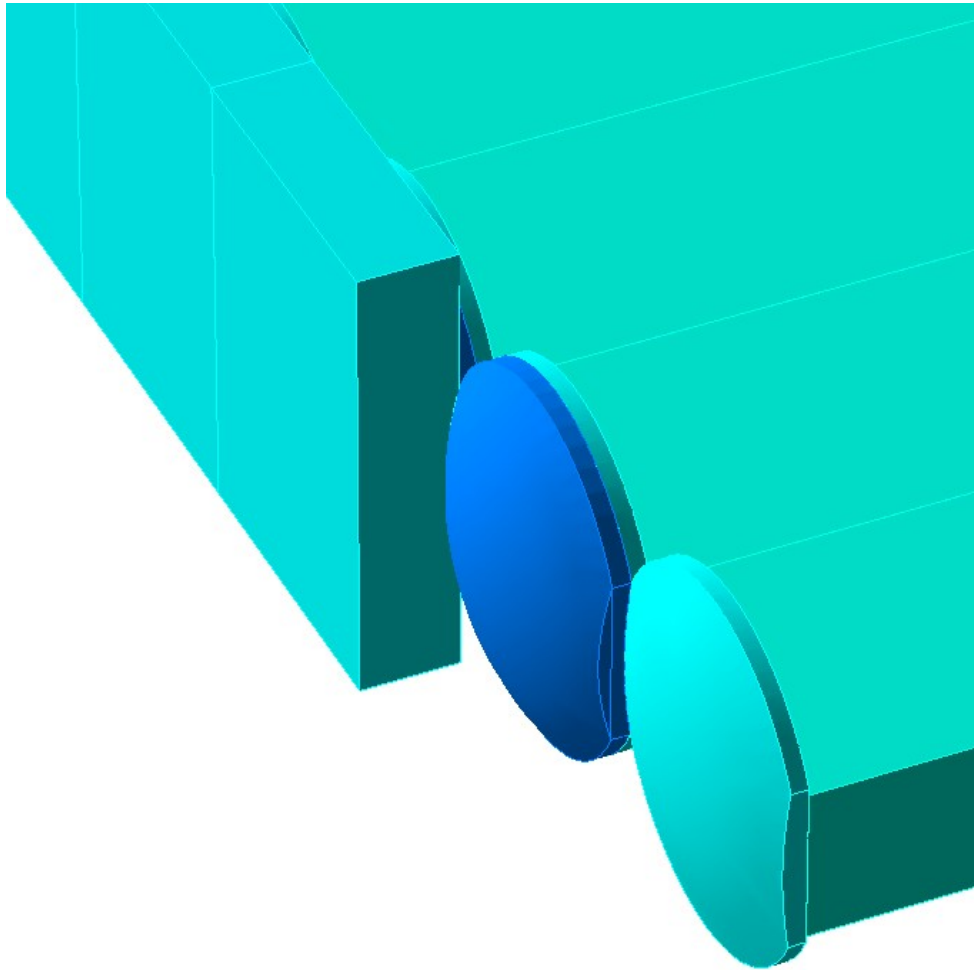


# Lenses



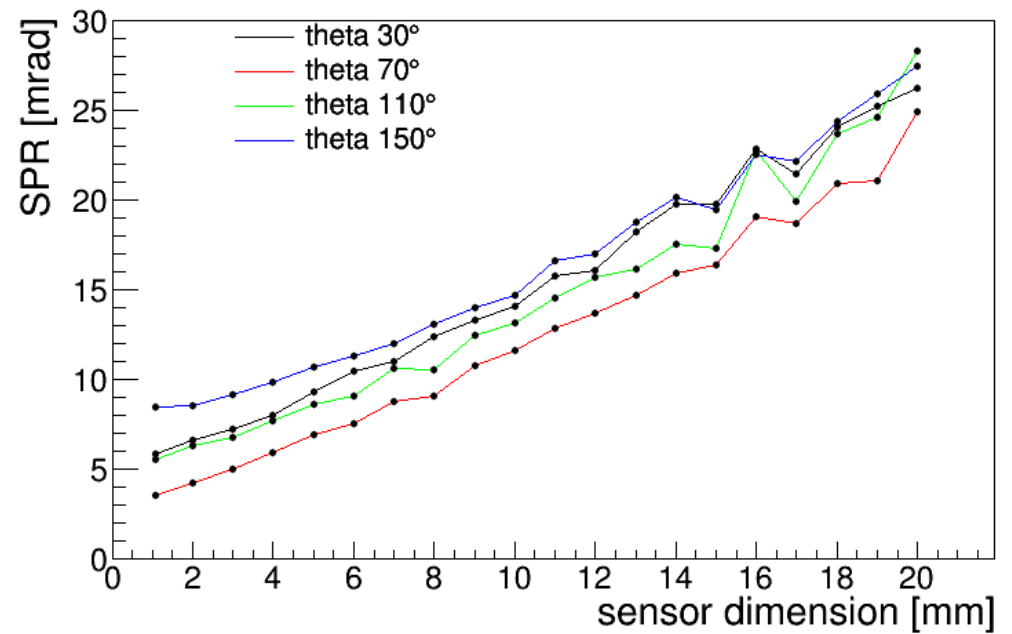
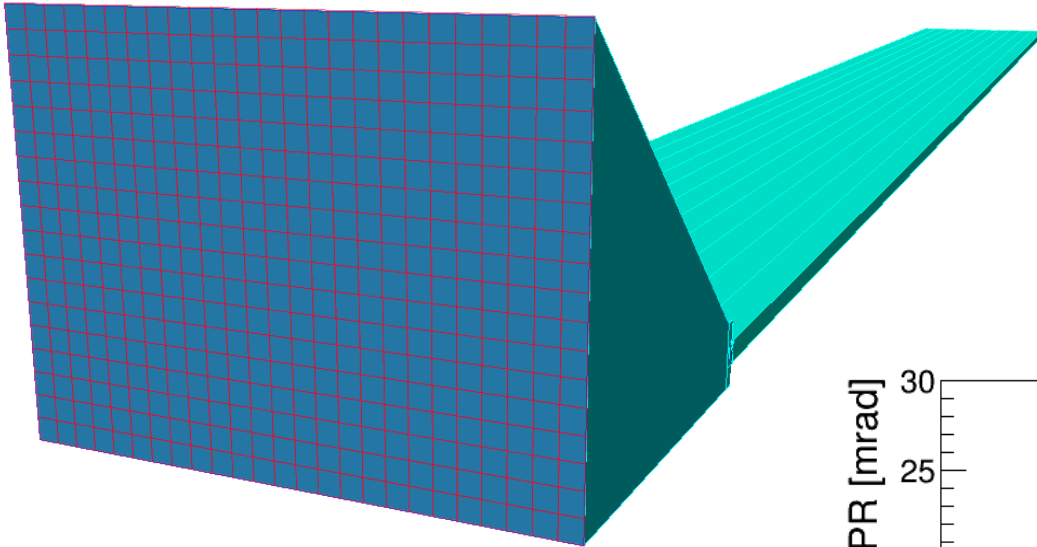


# Lenses

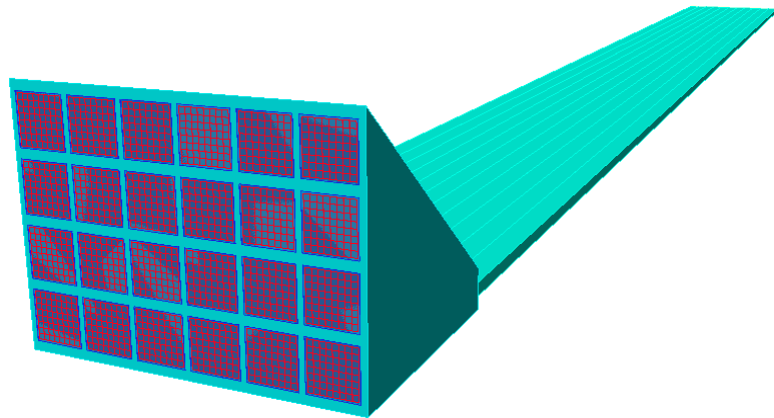


# Sensor's dimension

Full coverage of FP  
e.g. 15x15 mm

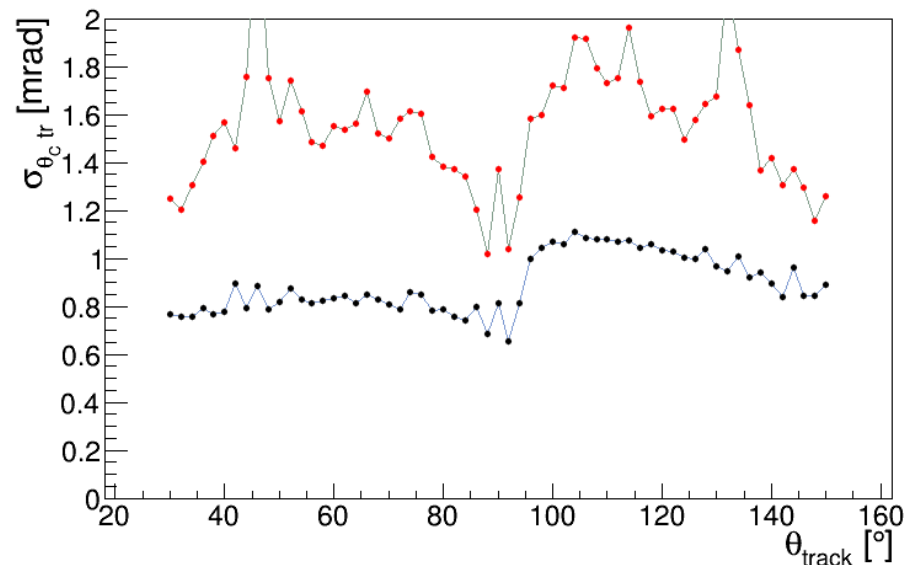
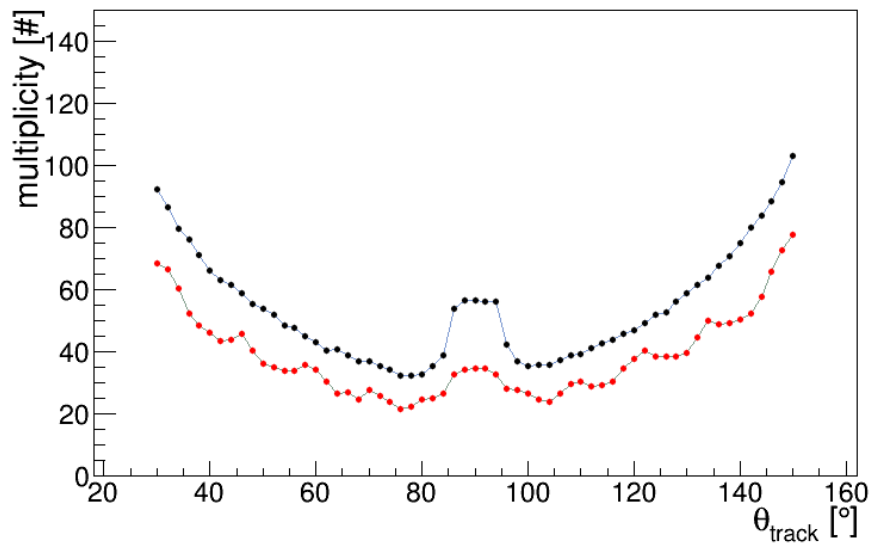
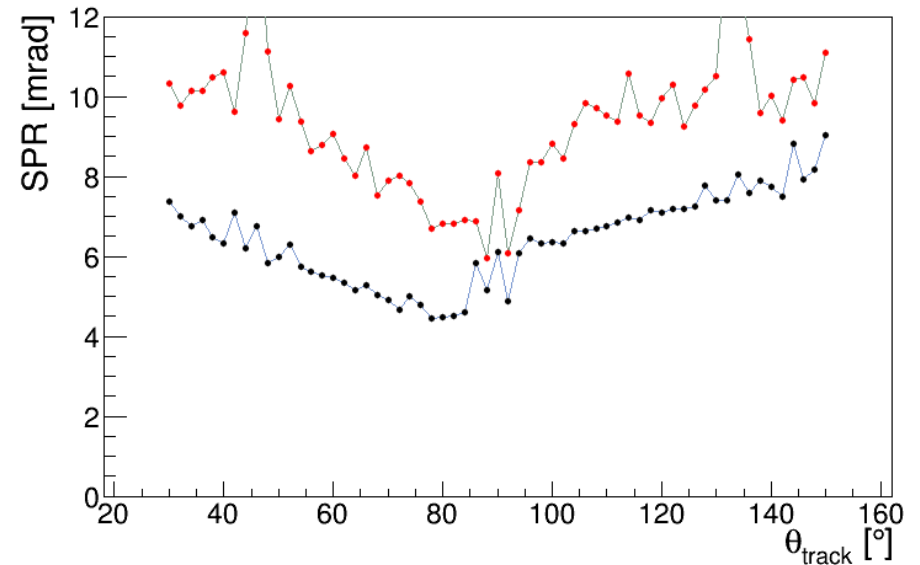


# PMT MCPs vs. full coverage



Full coverage with 3x3 mm

Partial coverage with PMT MCPs 6.5x6.5 mm



# Focusing with lenses

