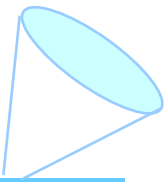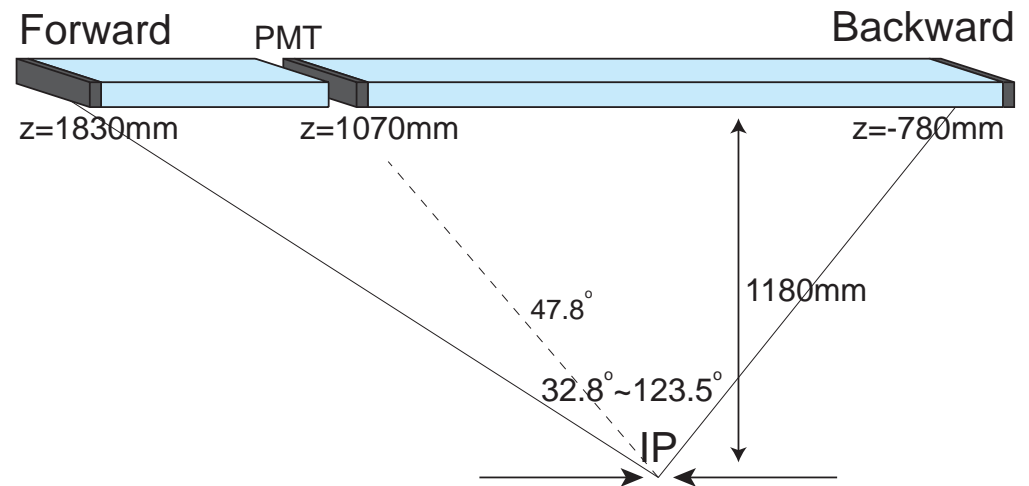# TOP for g4superb
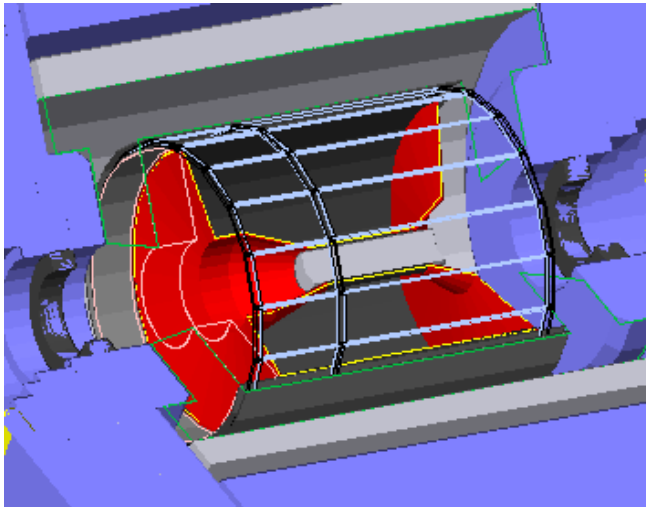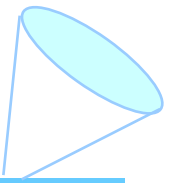
- ## Geometry
  - ### 18 TOP modules
    - 3-readout type for g4superb
  - ### Support structures
    - Honeycomb plates
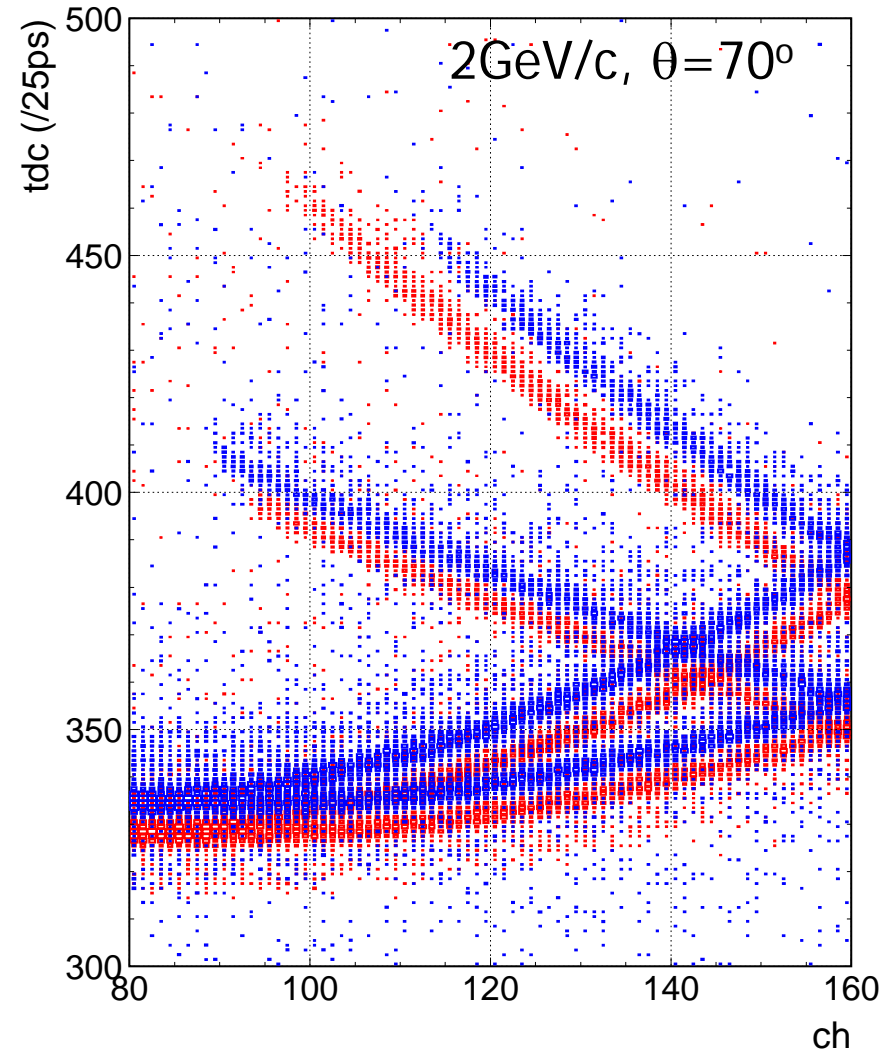   - Aluminum cylinders

Forward   PMT   Backward

z=1830mm   z=1070mm   z=-780mm

$47.8°$

$1180mm$

$32.8°\!\sim\!123.5°$

IP

g4superb-top

- ## Hits

  - ### Light propagation in quartz

  - ### TDC output to panther table with PMT smearing

2GeV/c, $\theta=70^{o}$

(y-axis: tdc (/25ps), x-axis: ch)

rectop

- ## Reconstruction code
  - ### For 3-readout type

  - ### Reconstruct ring image (=P.D.F.)
  - ### Input
    - #### PMT hit; Dattop_pmt
      - ##### Channel number, TDC
    - #### Tracking info; rectrk
      - ##### Incident position and angle

  - ### Output
    - #### Likelihood for e, μ, π, K, p assumptions

Forward   PMT   Backward

z=1830mm   z=1070mm   z=-780mm
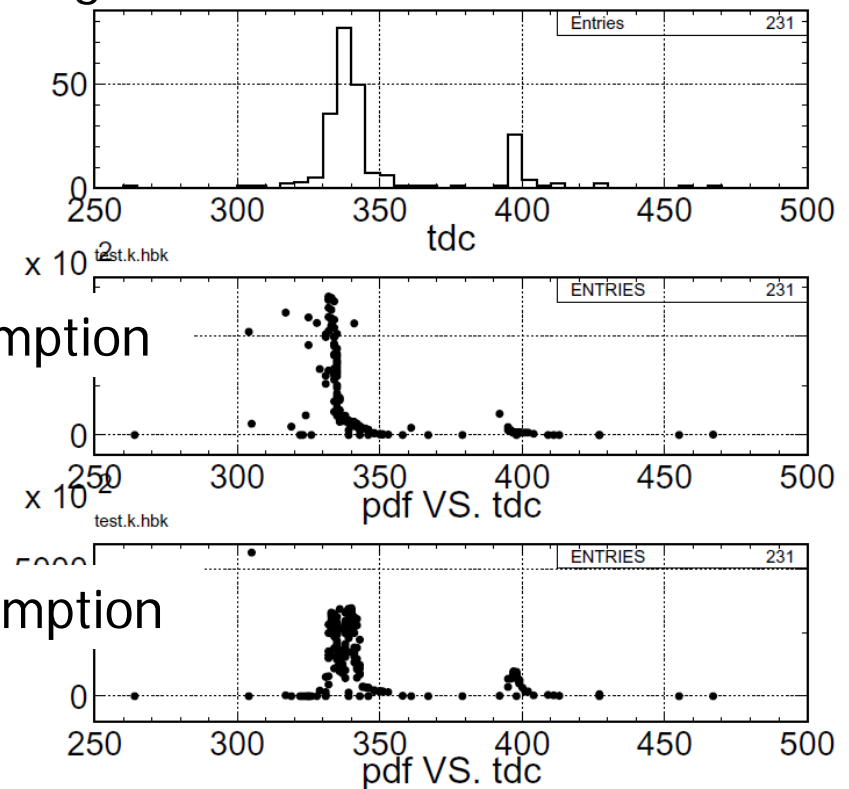
47.8°

1180mm

32.8°~123.5°

IP

P.D.F. distributions

π^- incidence   2GeV/c, θ=70deg. K^- incidence

π assumption

K assumption
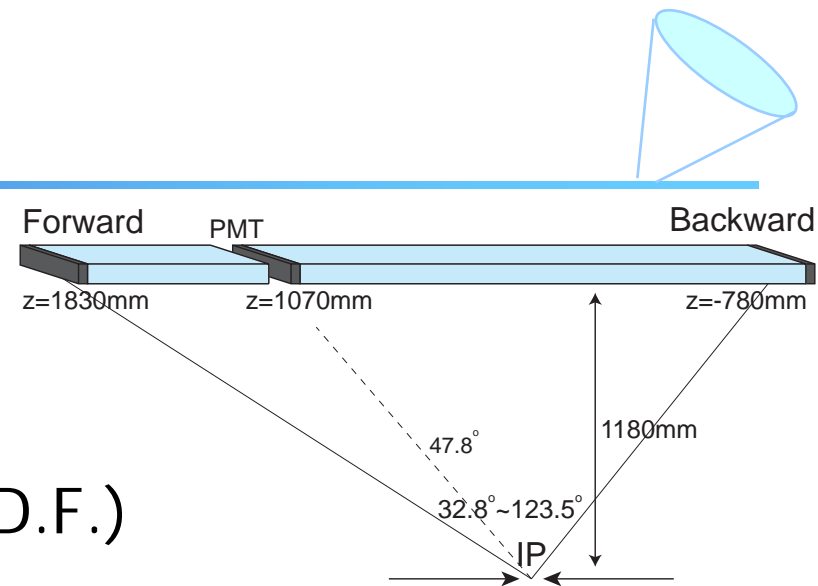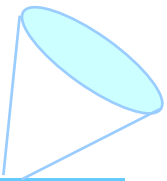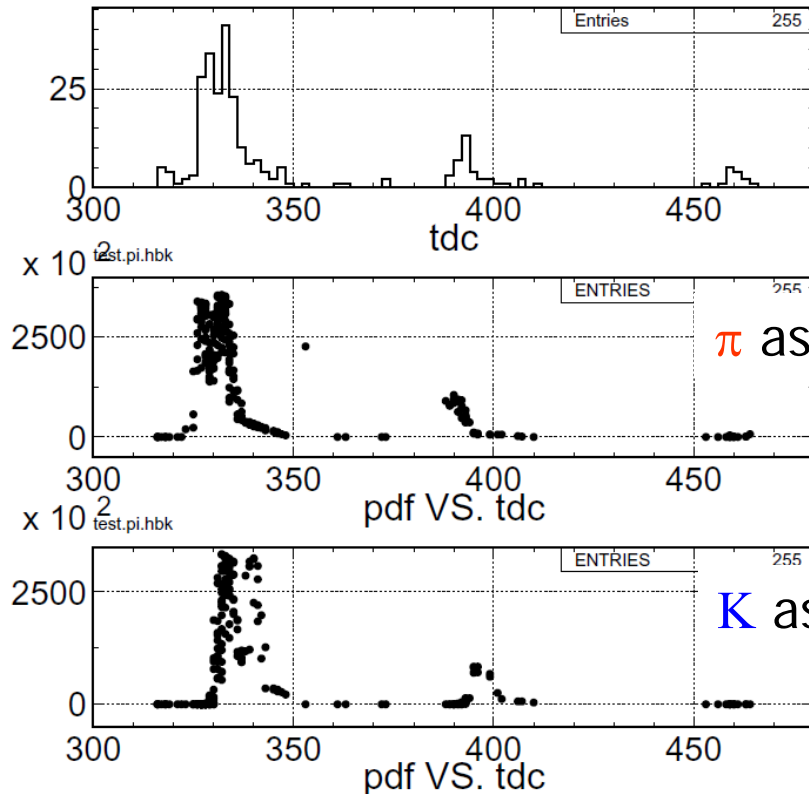
- ## Well reconstructed P.D.F.
  - ### Maybe small time offset
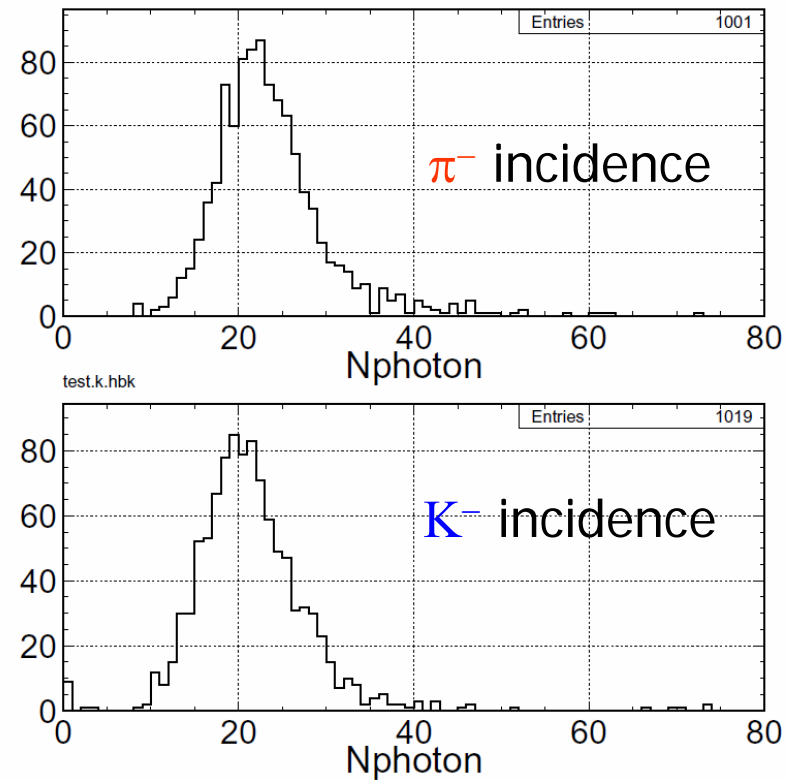
Output
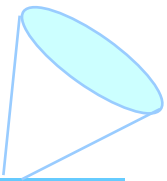
- ## Likelihood ratio (π/K)
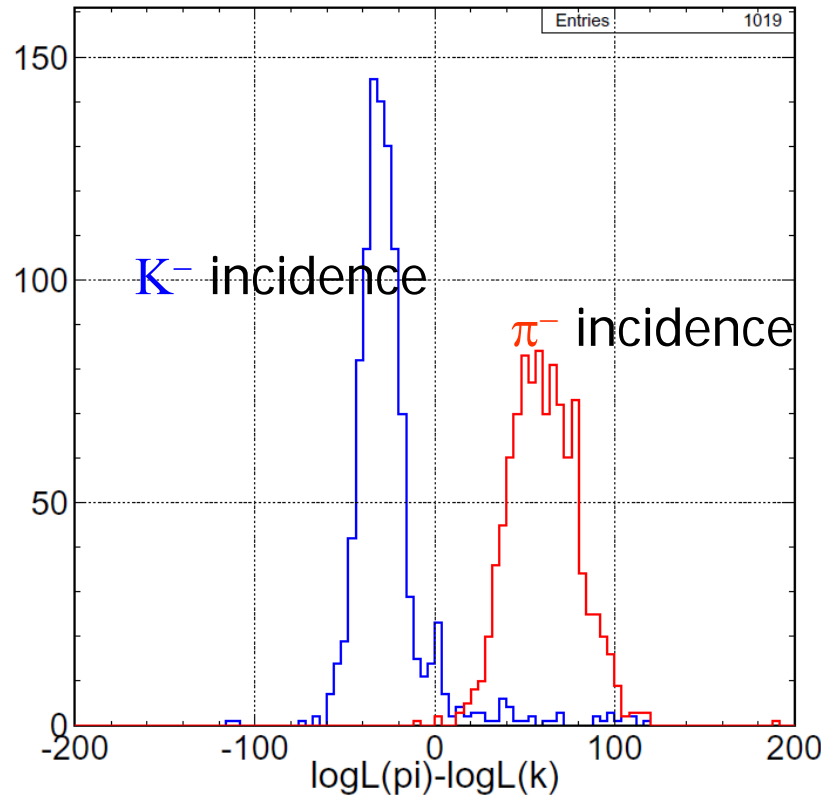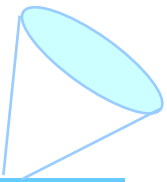

- ## Number of photons

- **Reasonable output**

Summary

- **Basically working well**
  - Correct light propagation and TDC distribution
  - Proper Ring image reconstruction
  - Output likelihood as expected

- **To Do**
  - Check performance for several incident momenta and angles