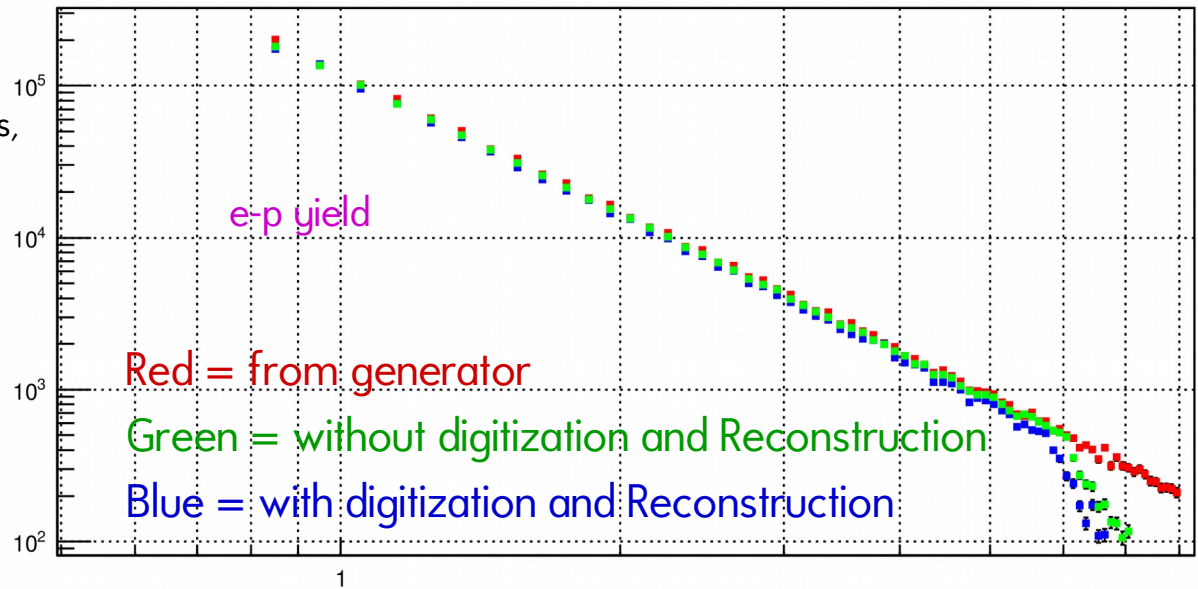


Preliminary HyCal acceptance

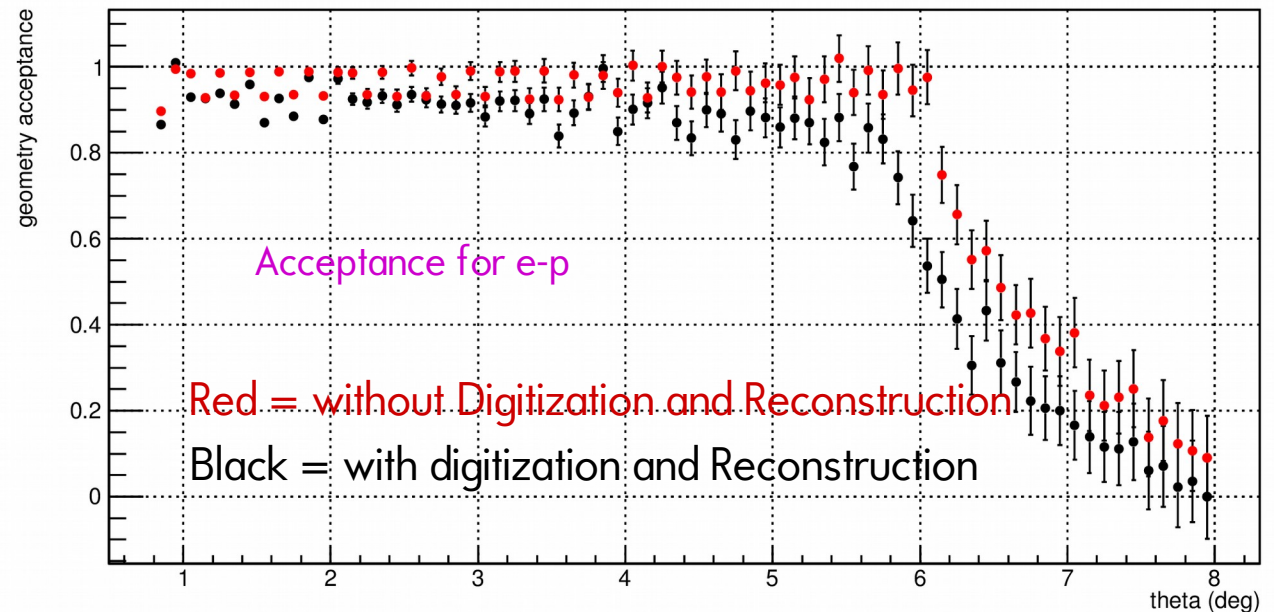
Test the effect from HyCal digitization

In simulation:

- Removed Vacuum Chamber, beam line, windows, etc.
- Point-like target.
- 5 sigma cut.
- Before digitization and Reconstruction: Average acceptance = 95.9%
- After digitization and Reconstruction: Average acceptance = 92.7%



without digitization and Reconstruction:
→ Means only smear with HyCal energy resolution in simulation.

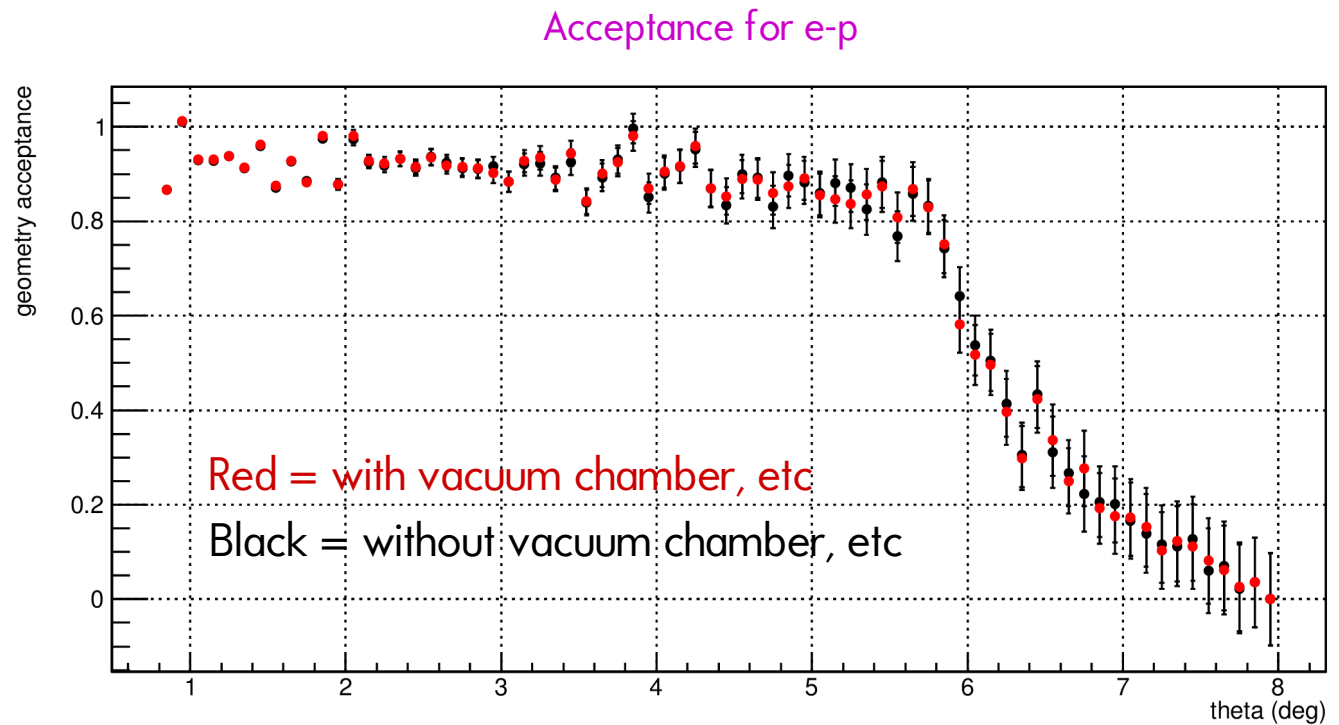


Test the effect from beam line

In simulation:

- Only remove the aluminum window for Vac chamber.
- Using digitization and Reconstruction.
- 5 sigma cut.

- Without Vac box, target chamber, beam pipe, etc:
Average acceptance $\sim 92.7\%$
- With Vac box, target chamber, beam pipe, etc:
Average acceptance $\sim 92.7\%$



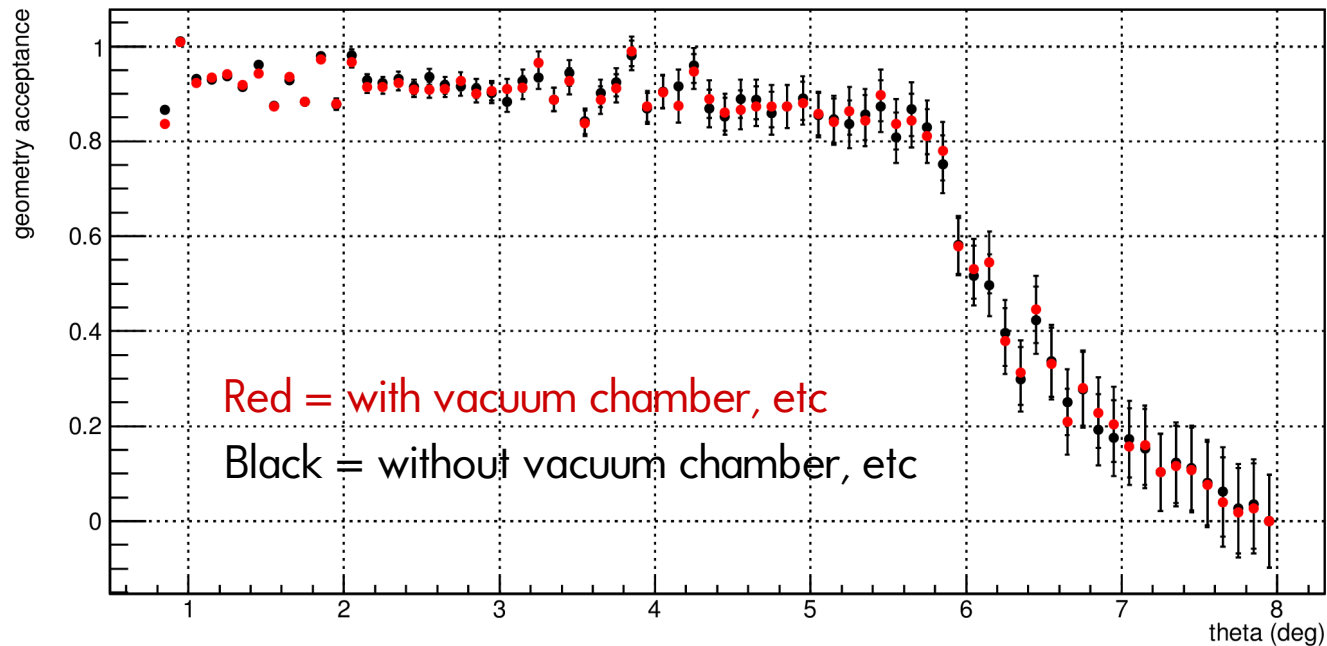
Test the effect from Al window

In simulation:

- Add back the aluminum window for Vac chamber.
- Using digitization and Reconstruction.
- 5 sigma cut.

- Without window:
Average acceptance $\sim 92.7\%$
- With window:
Average acceptance $\sim 92.5\%$

Acceptance for e-p

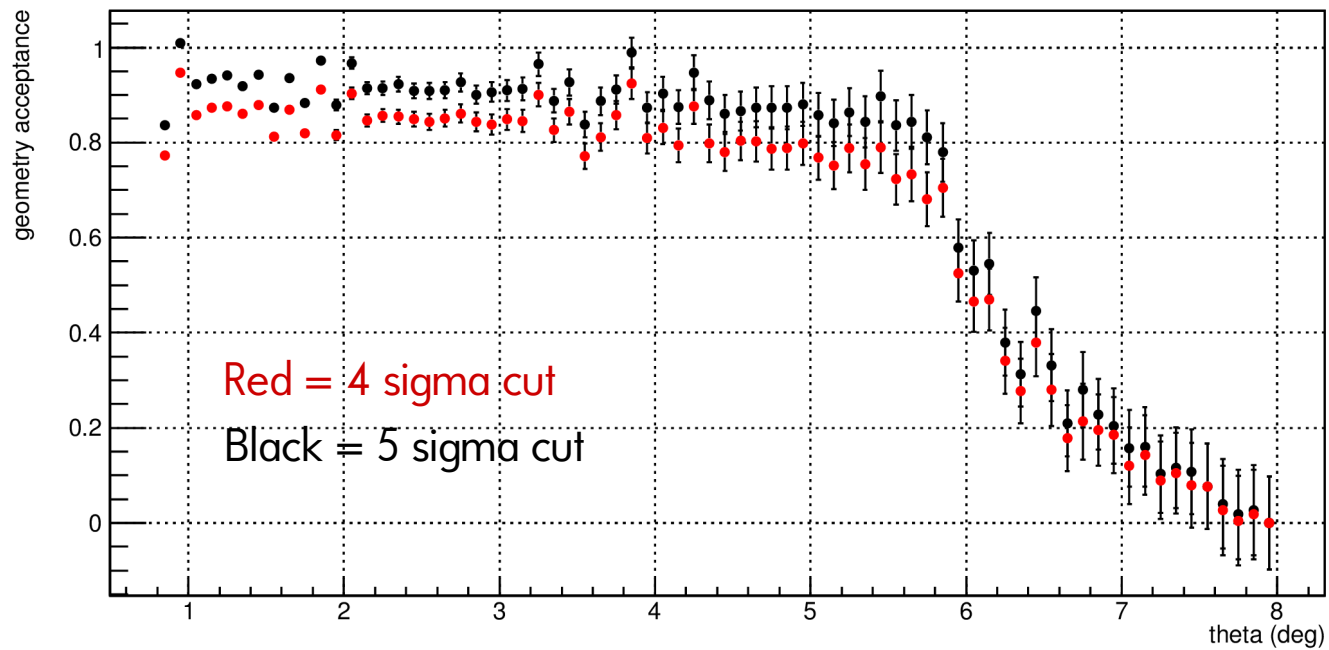


Test the effect for sigma cut

In simulation:

- Full setup
- Using digitization and Reconstruction.
- 5 sigma cut: average acceptance = 92.5%
- 4 sigma cut: average acceptance = 86.1%

Acceptance for e-p



Test the effect for sigma cut

