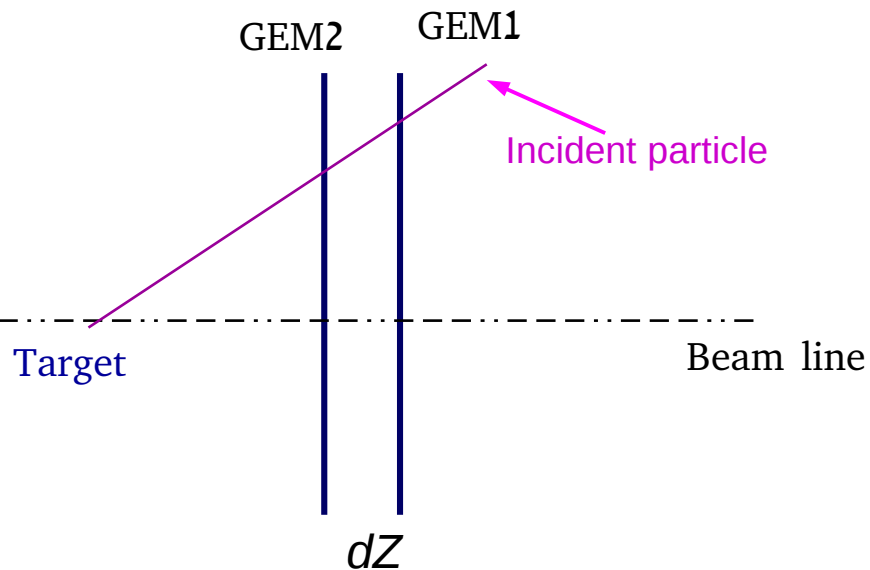
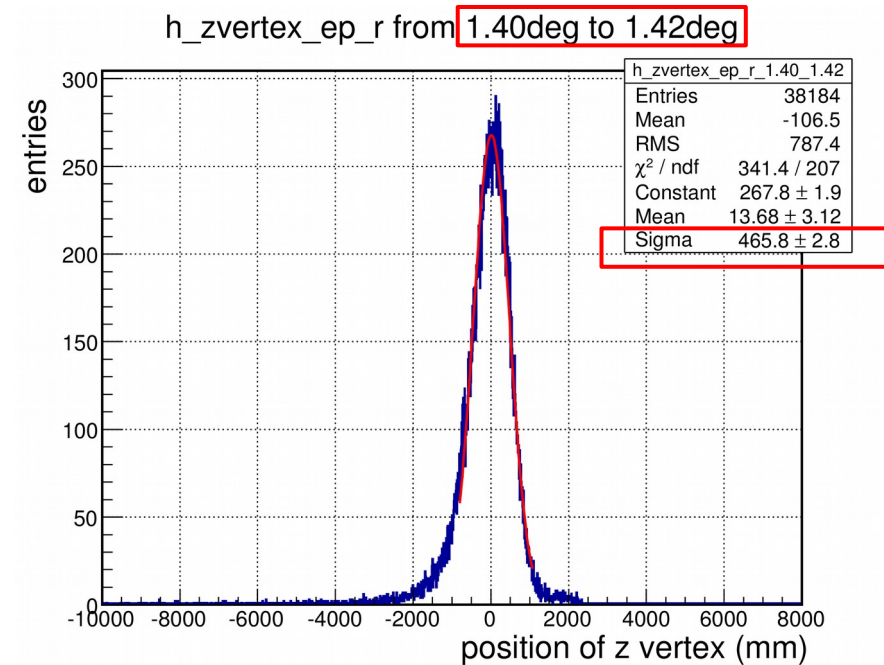
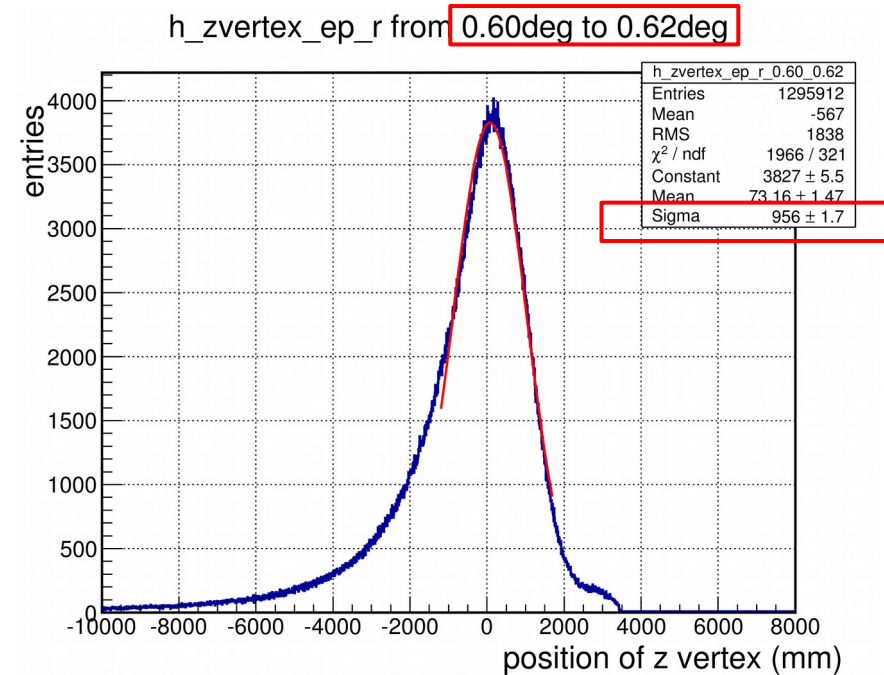


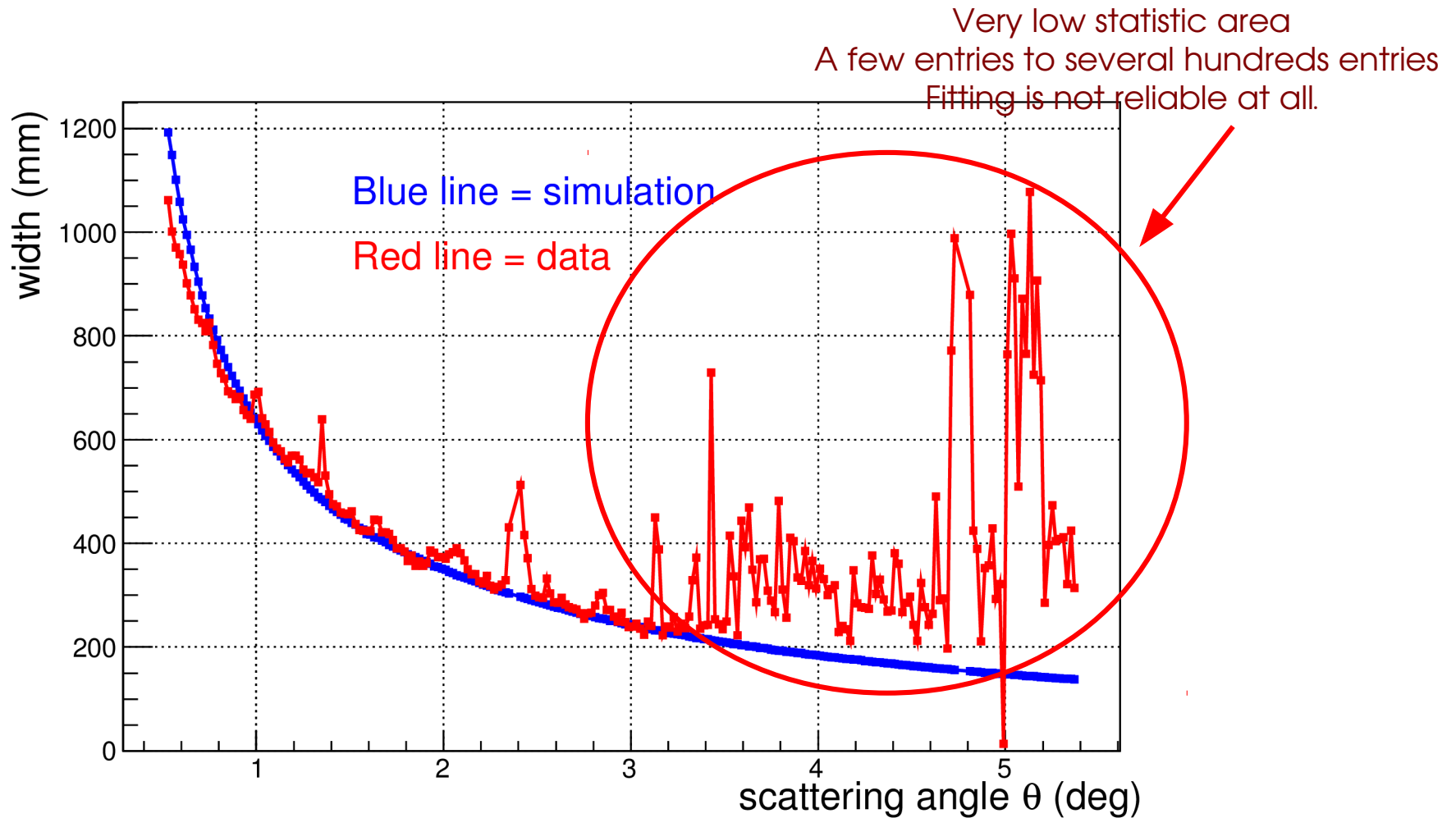
Using overlap GEM clusters to reconstruct Target Z



- To check the source of background in e-p yield
- To check the bump of e-p yield in lower scattering bin
- Using GEM overlap area e-p events
- Using two GEM clusters to find Z position

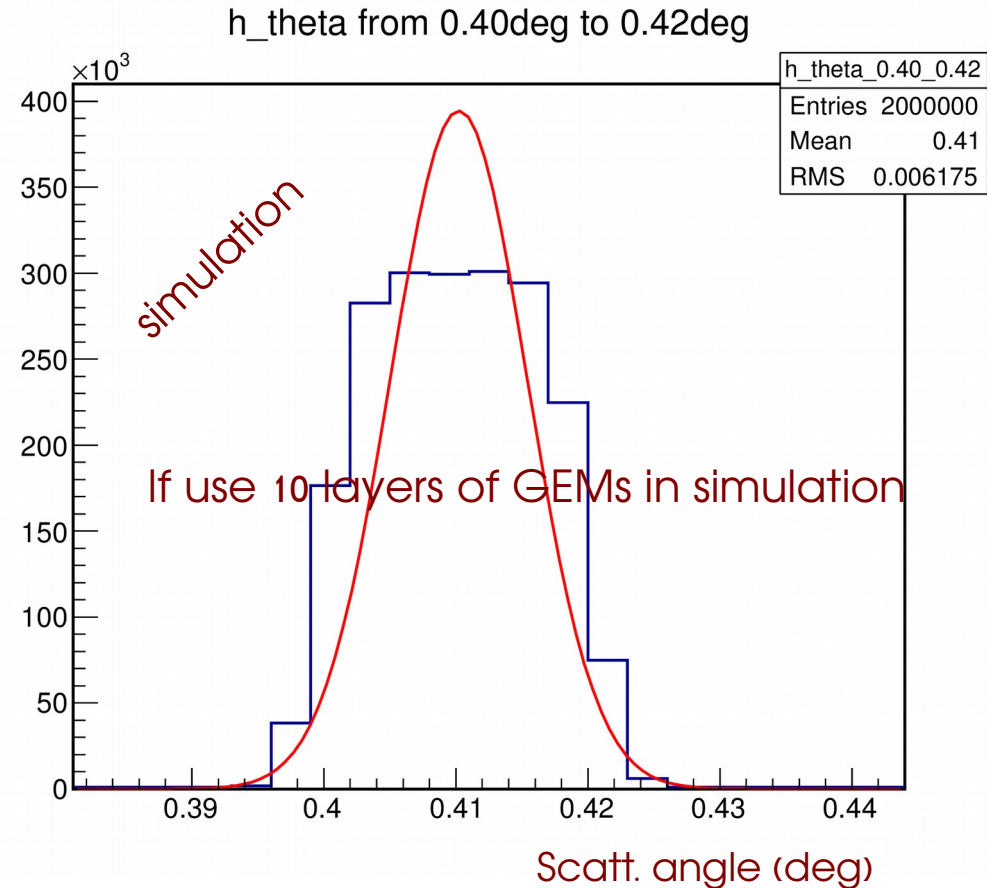
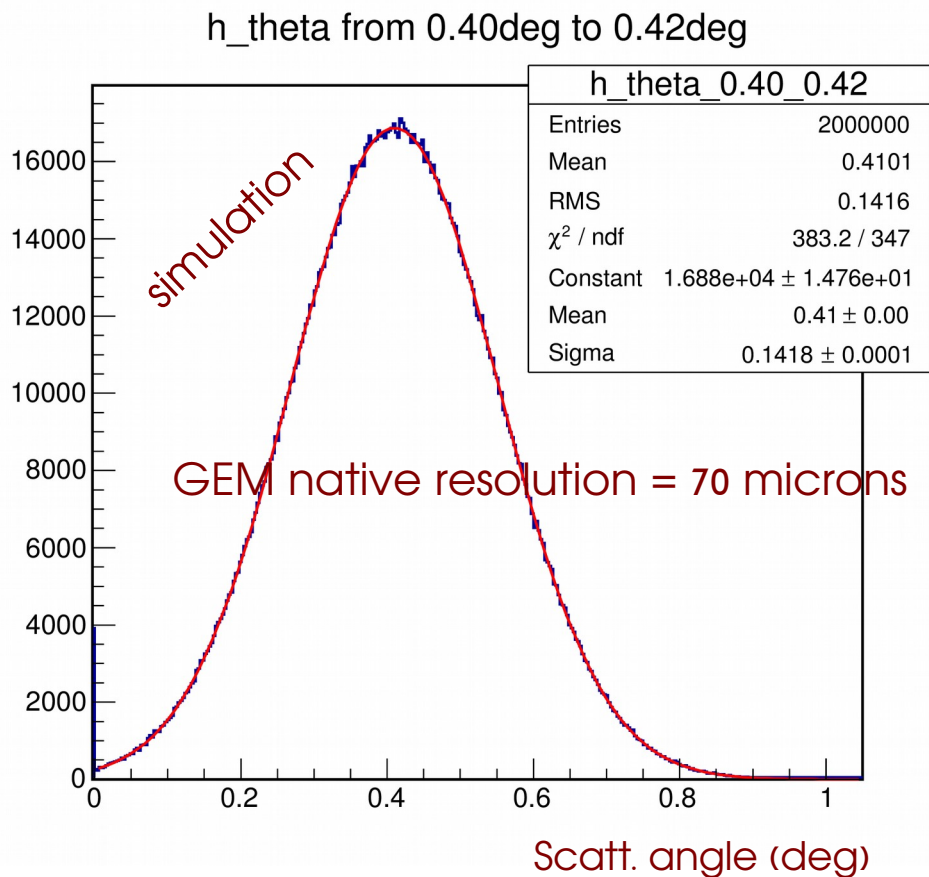


Reconstructed z vertex sigma in different angle bins



- In simulation, suppose GEM native resolution = 70 microns

Reconstructed angle sigma in different angle bins



- Z vertex distribution have different **sigma**'s in different scattering angle bin (refer to last page).
- Not like z vertex distribution, reconstructed **angle resolution** only depend on GEM resolution and the distance between two GEM chambers and how many layers of GEMs were used.
- In simulation, angle was uniformly distributed between (0.4, → 0.42) degree. When use 2 layers of GEMs, the reconstructed angle distribution cannot see that uniform distribution. If use more layers of GEMs, we can clearly see the uniform distribution.