

Optics Update

Min Huang

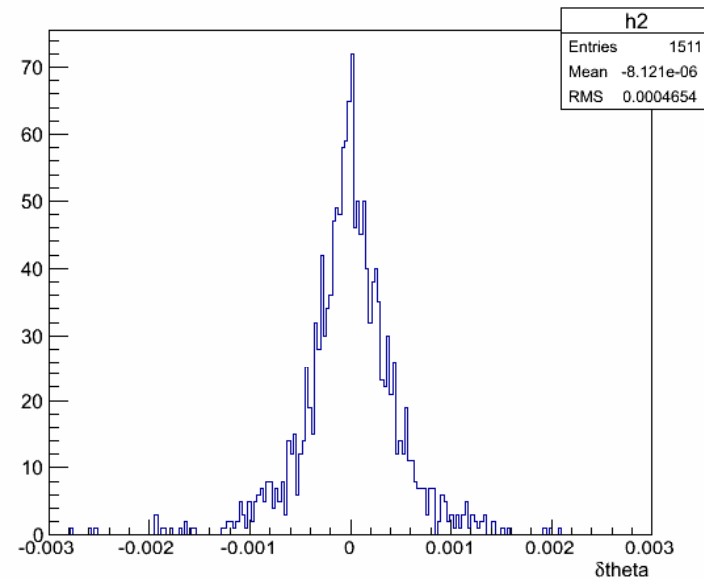
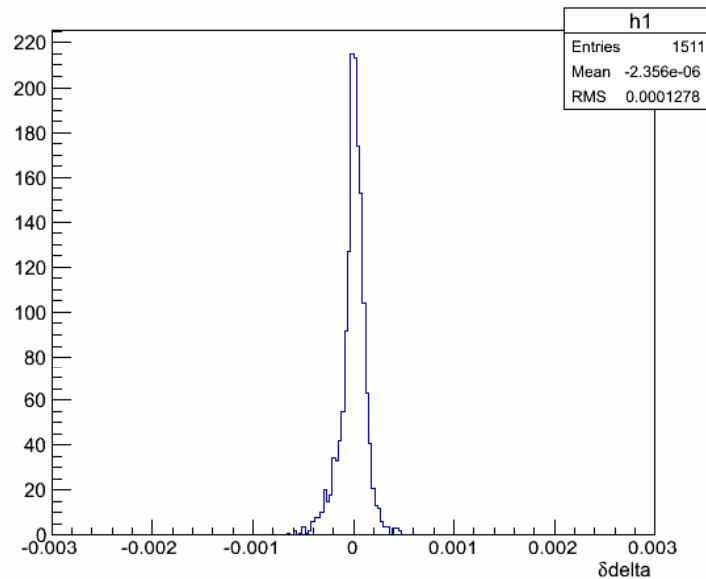
10/02/2013

New Transport Functions

- Trajectories from latest Snake simulation
- Setting:
 - $E = 2.254$ GeV, no raster
 - Target Z=-136271mm 40mil Carbon foil
 - No target field
 - 484816 septum field map
 - Parameters taken from survey/epics, and optimized for 3/4 (first straight through, better beam position, with LHe) runs
- Fitting between target plane and focal plane, forward and backward

Self Check

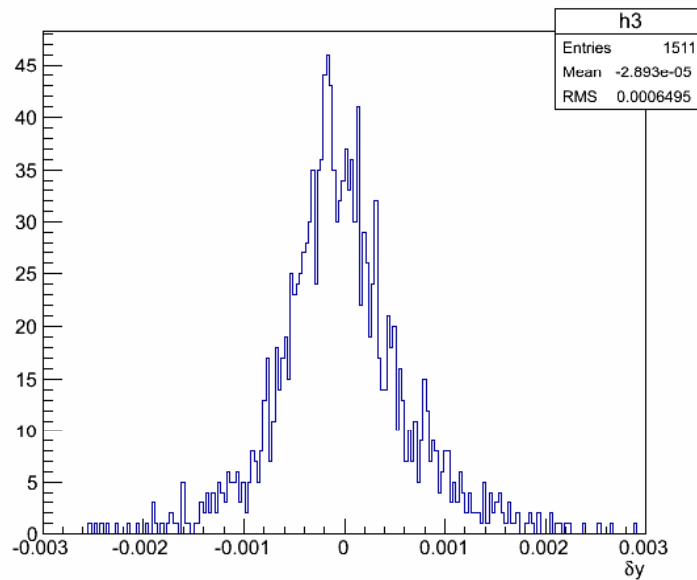
reverse test



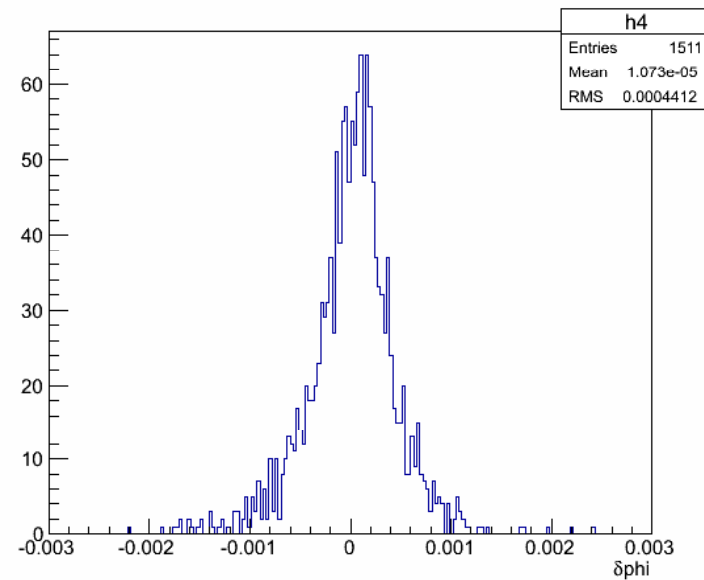
No raster

No smearing, just functions

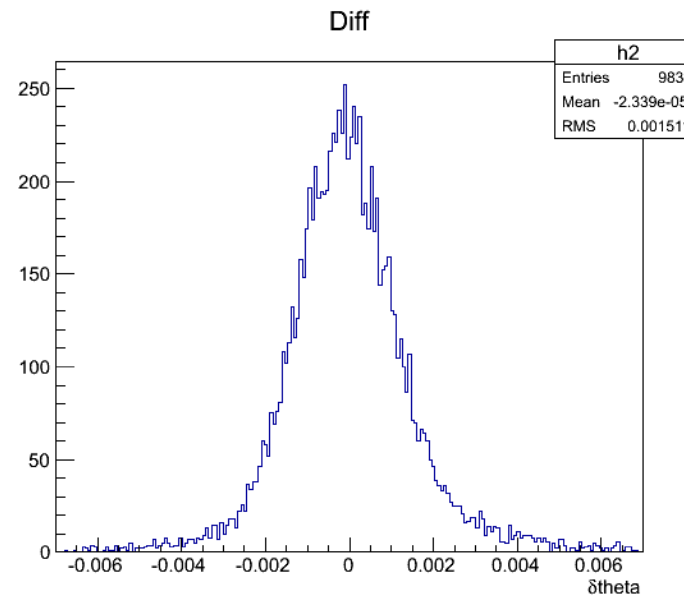
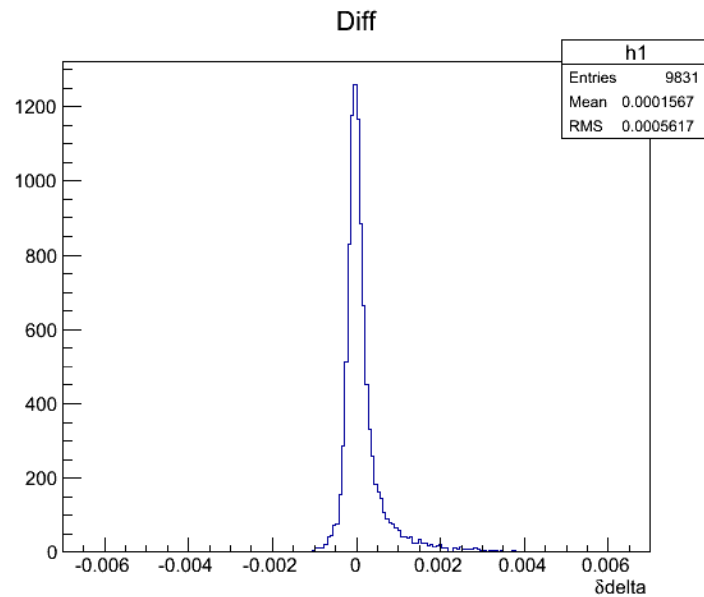
h3



h4



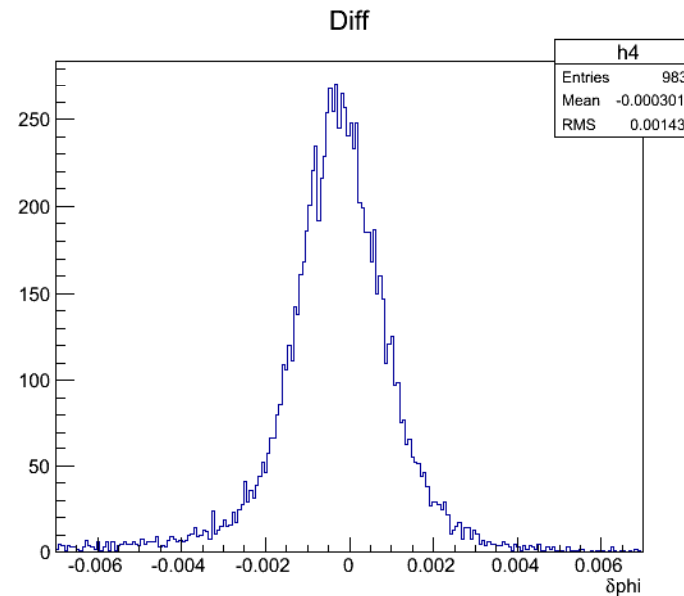
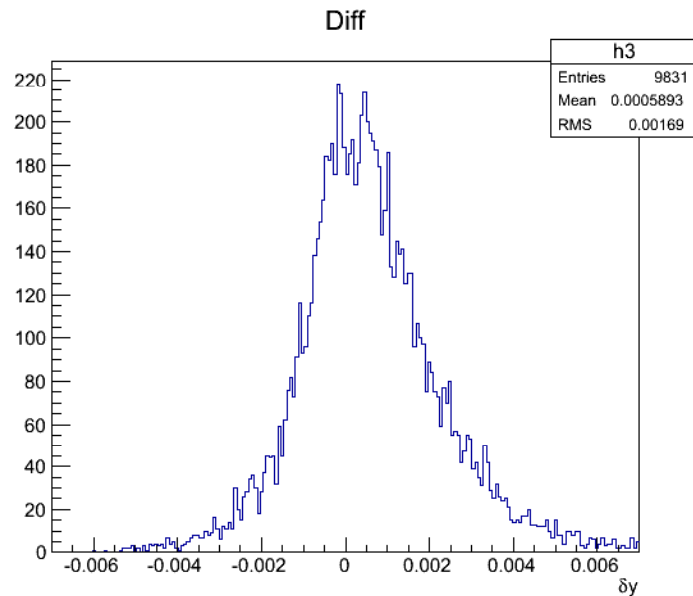
Incorporated the transport functions into g2psim



No bpm
resolution

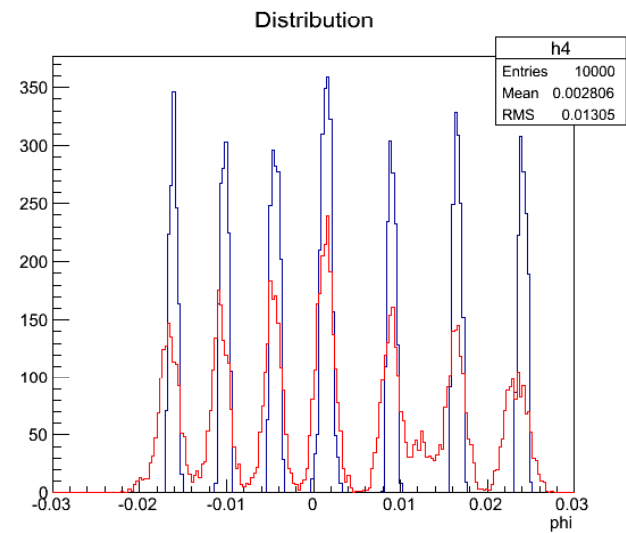
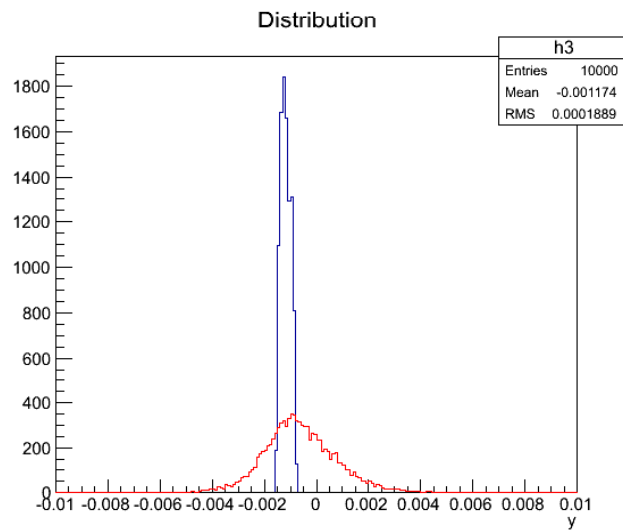
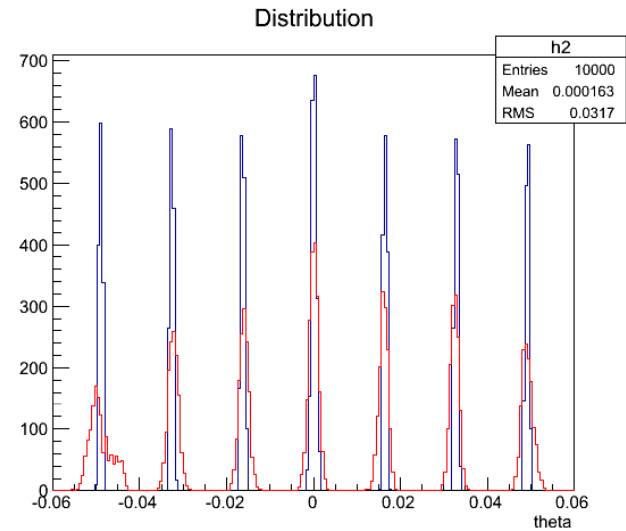
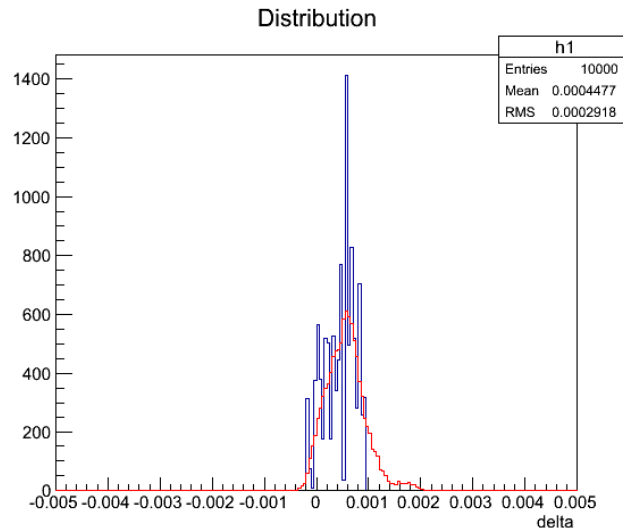
No raster
beam spot size
0.1mm

focal plane
resolution:
pos 1.3mm
angle 0.3mr

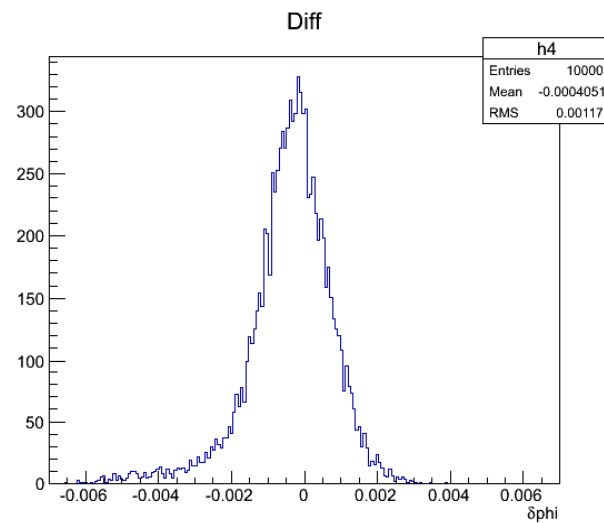
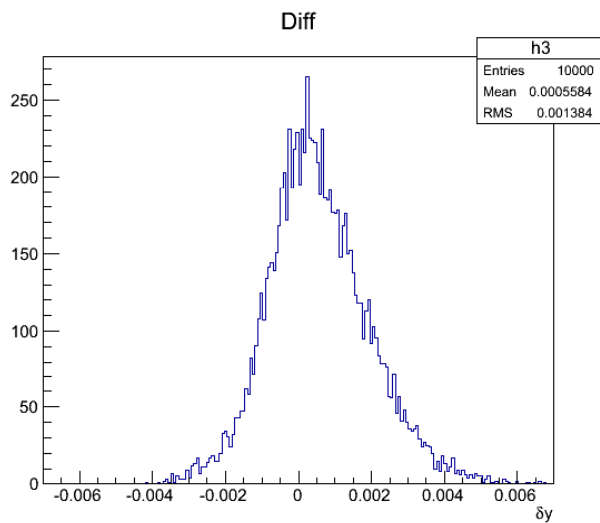
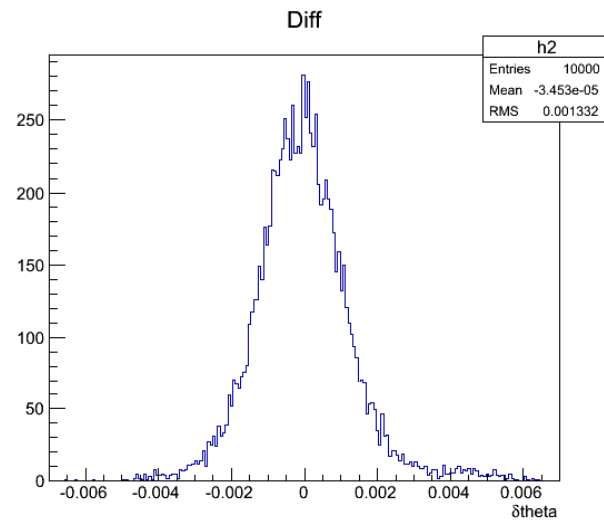
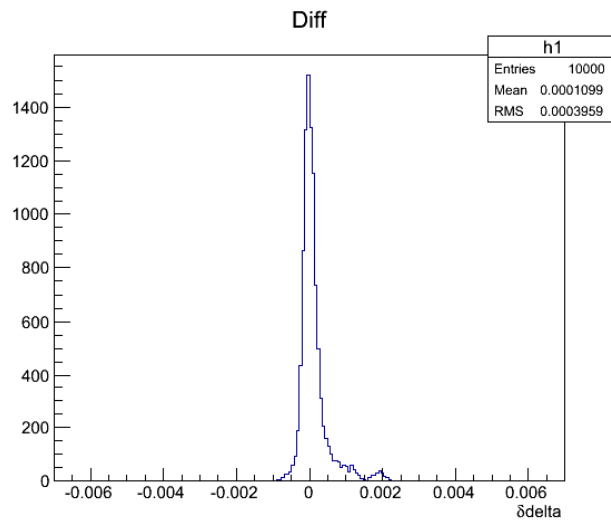


- Look at #2725 (3/4)
- beam_x=-2.6mm
- beam_y=0.1mm

Setting	BPM X_{beam}	Fitted X_{beam}
No LHe	4.5mm	-3.5mm
With LHe	-2.0mm	-2.6mm



- Look at #2725 (3/4)
- beam_x=-2.6mm
- beam_y=0.1mm



Next

- Compare variables at target plane for runs w/o sieve
 - Optics runs
 - Production runs
- Use optimized database and cross section model