

2016 Mollers Summary

Sebouh Paul

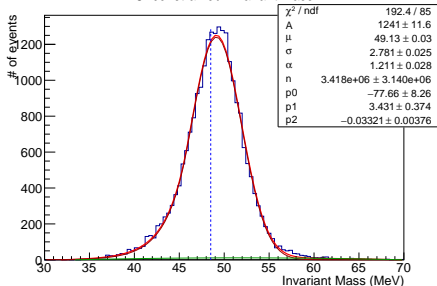
April 2, 2018

Moller Cuts

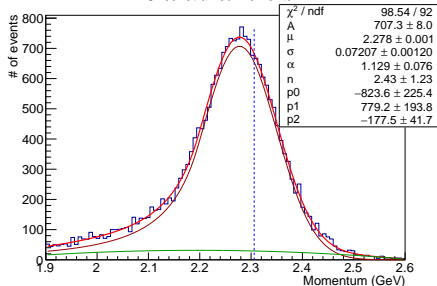
- ▶ Cuts
 - ▶ All flags good.
 - ▶ both track fit $\chi^2/\text{d.o.f.} < 7$
 - ▶ both tracks $p < 1.75$ GeV
 - ▶ track time difference < 3 ns ($\approx 3\sigma_{t_track}$)
 - ▶ 1.8 GeV $< p_{\text{sum}} < 2.9$ GeV
 - ▶ exactly one track matches to a cluster ($n_\sigma < 7$)
 - ▶ Vertex $\chi^2 < 100$
 - ▶ Single 0 trigger

Unconstrained Mollers

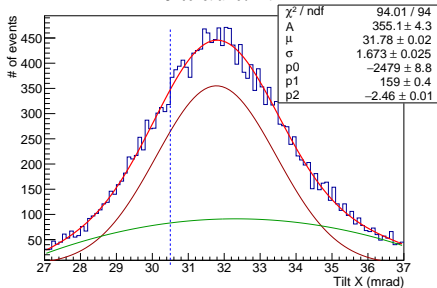
Unconstrained Invariant Mass



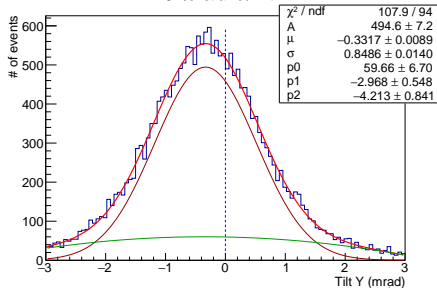
Unconstrained Momentum



Unconstrained Tilt X

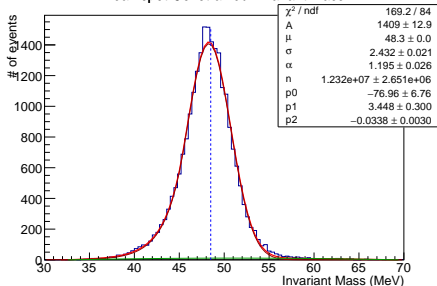


Unconstrained Tilt Y

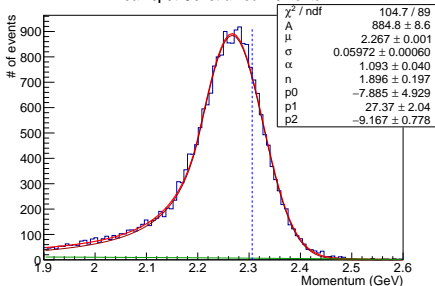


Beamspot-Constrained Mollers

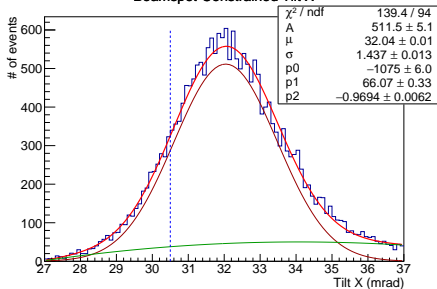
Beamspot-Constrained Invariant Mass



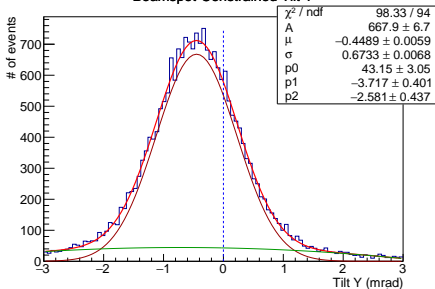
Beamspot-Constrained Momentum



Beamspot-Constrained Tilt X

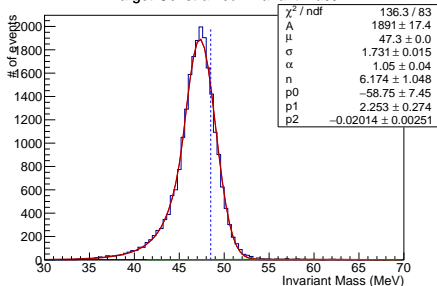


Beamspot-Constrained Tilt Y

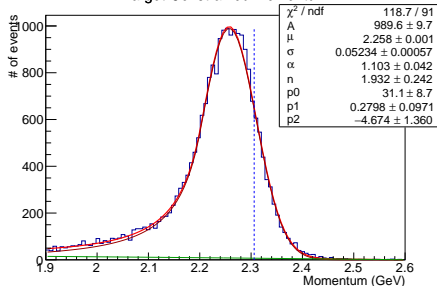


Target-Constrained Mollers

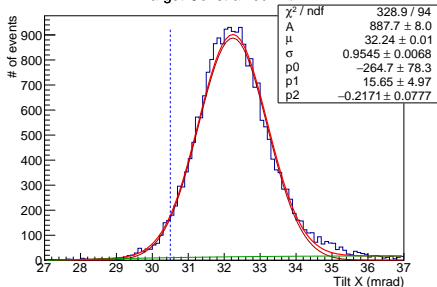
Target-Constrained Invariant Mass



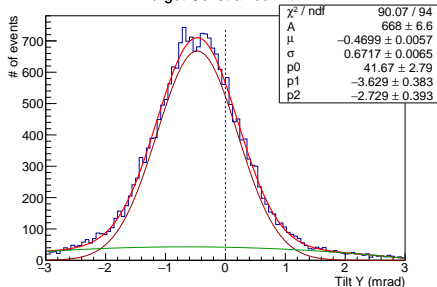
Target-Constrained Momentum



Target-Constrained Tilt X



Target-Constrained Tilt Y



Summary Table

	P Sum (GeV)		Inv. Mass (MeV)		Tilt X (mrad)		Tilt Y (mrad)	
unc	2.28	0.07	49.13	2.78	31.78	1.67	-0.33	0.85
bsc	2.27	0.06	48.30	2.43	32.04	1.44	-0.45	0.67
tar	2.26	0.05	47.30	1.73	32.24	0.95	-0.47	0.67