Update on SNAKE Matching Data

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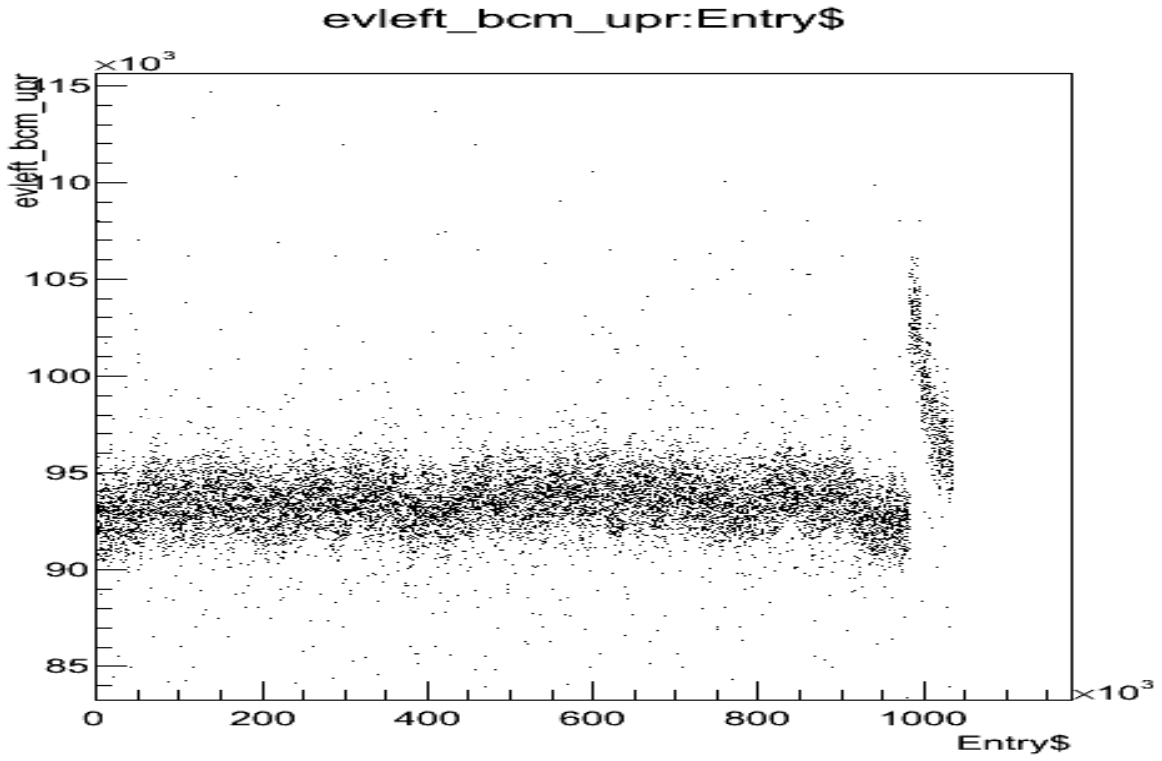
5/10/2013

Run 2726 on 3/4/2012

beam_x -1.4mm
beam_y 0.6mm
σx 1.2mm
σy 1.2mm

- Carbon foil in LHe,
- Beam current cut
- consider LHe events here

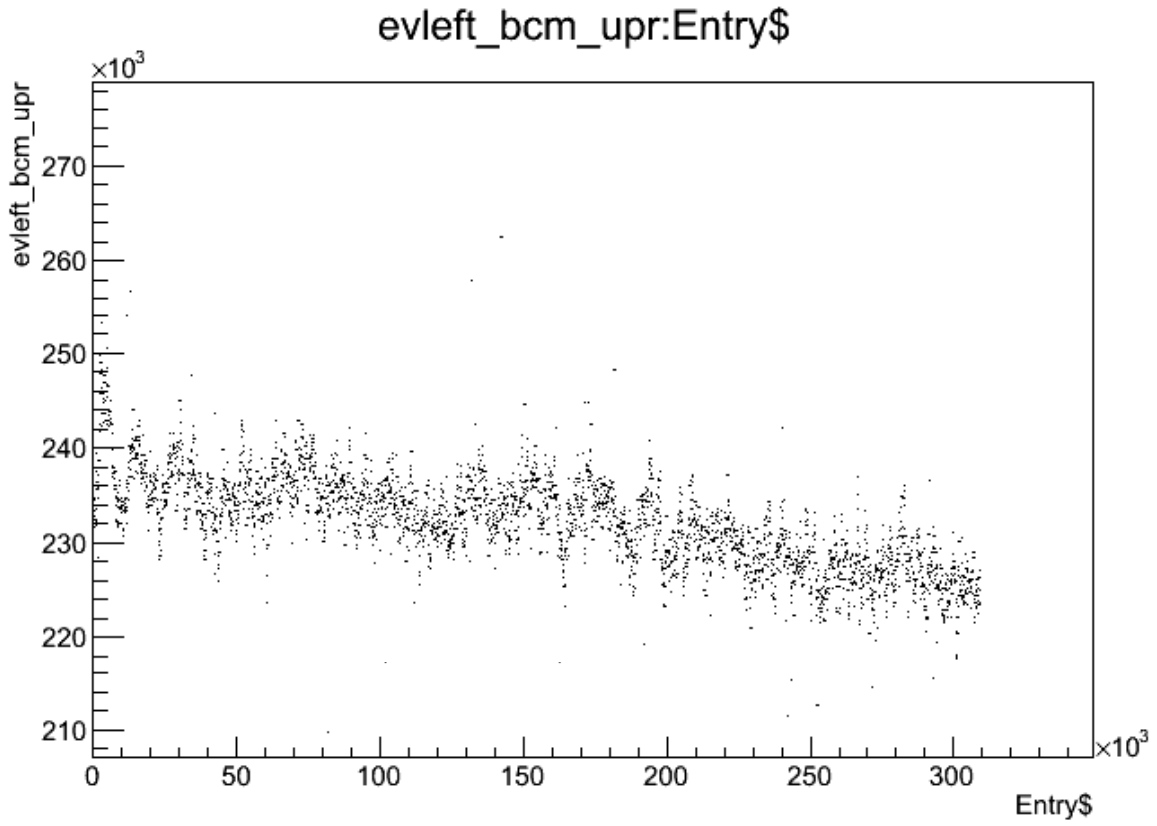


Before

Run 3185 on 3/14/2012

beam_x 4.3mm
beam_y 1.3mm
σx 1.8mm
σy 1.1mm

- Carbon foil
- Beam current



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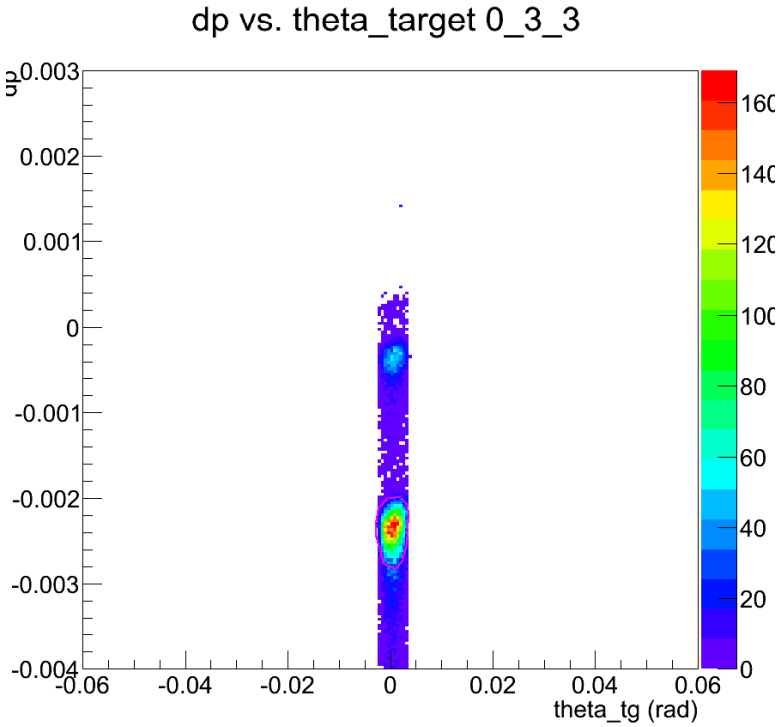

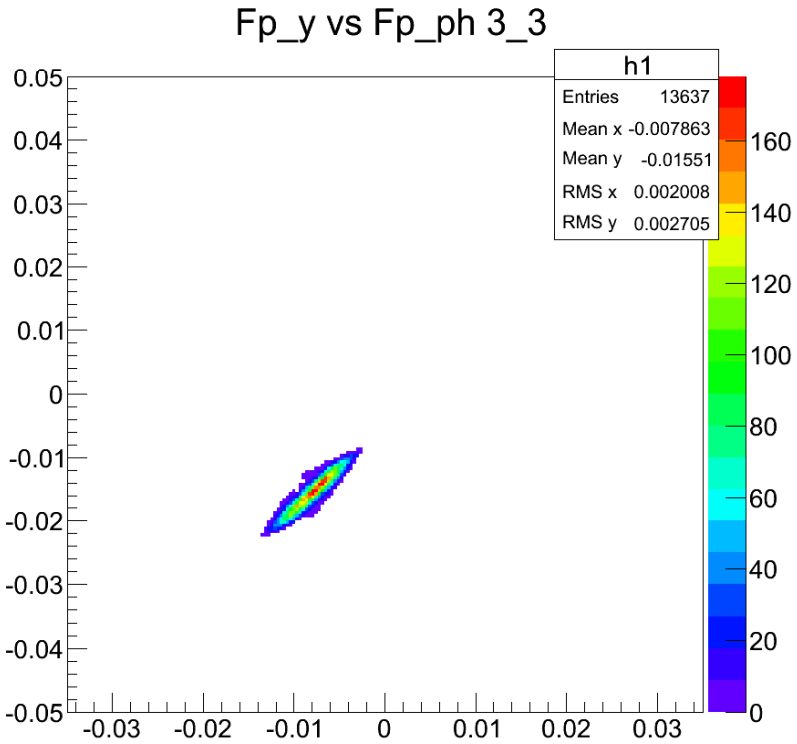

Uncertainty from First Order Matrix

	x0	theta0	y0	phi0	delta
x	-2.4269	-0.0038	-0.1460	-0.0986	1.34E+01
Theta	-0.2196	-0.4120	-0.0146	0.0050	2.33E+00
Y	0.0070	0.1059	-0.0879	-2.0715	0.29695
phi	-0.0226	0.1549	0.4837	-1.1092	0.133477

HRS with 1.96mm left offset, w.r.t. trajectory from C foil to sieve center

Run 2726

δy0=1.2mm, δφ0=1.5mrad (L=800mm), **y0 φ0 are linearly correlated**

→ δy=3.2mm, δφ=1.1mrad

Current Result

Run 2726 on 3/4/2012

- Carbon foil in LHe, consider LHe events here
- Tuning septum field, consider δφ=1.5mrad to match

	Y(mm)	Phi(mrad)
data	-15.5	-7.9
SNAKE (middle)	-12.2	-9.4

- y difference is about 3.3mm, δy=3.2mm

To do

- Consider the energy loss in LHe
- Study the effect on cross section of this difference → reverse first order matrix?
- Check all the sieve holes distribution
- Any suggestion from this meeting