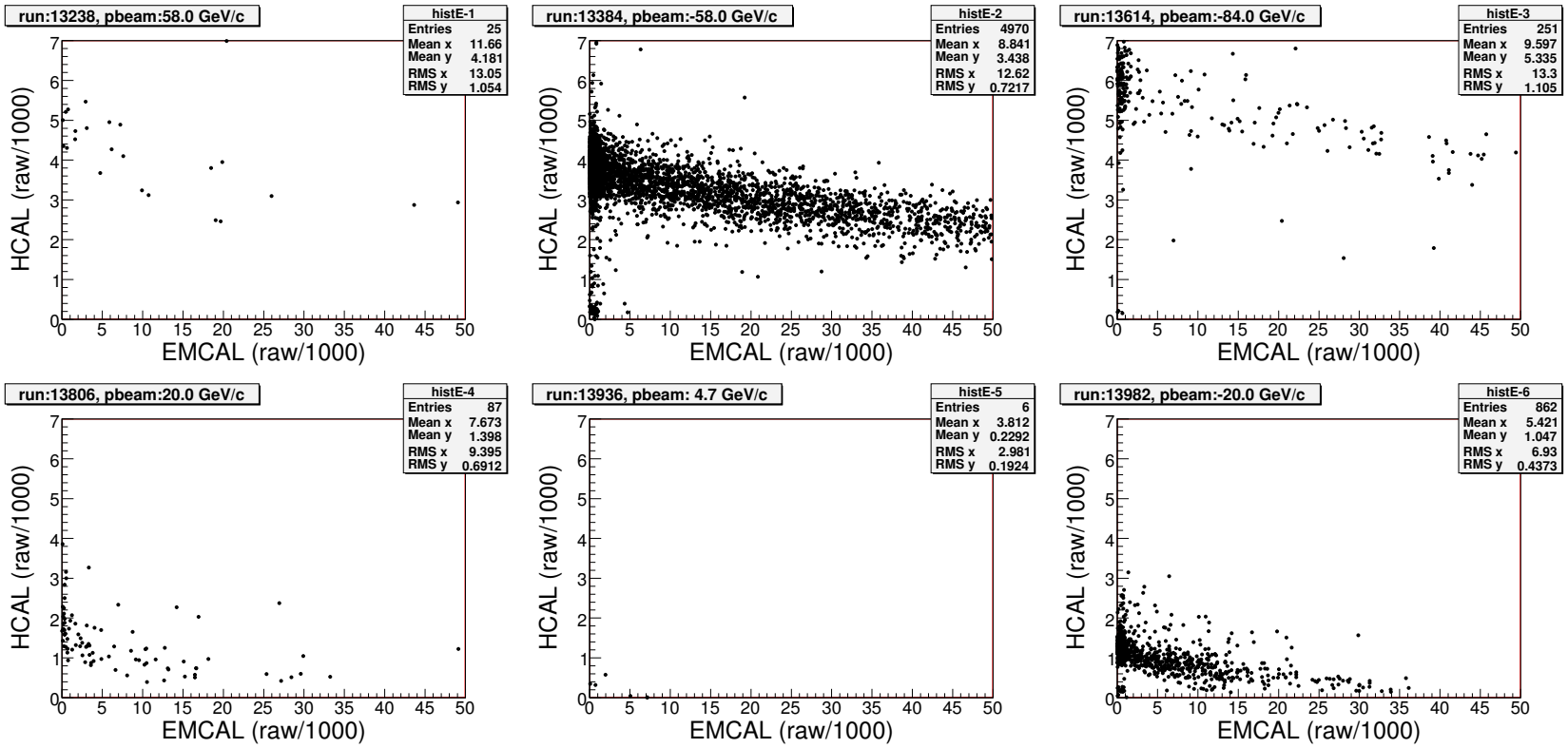
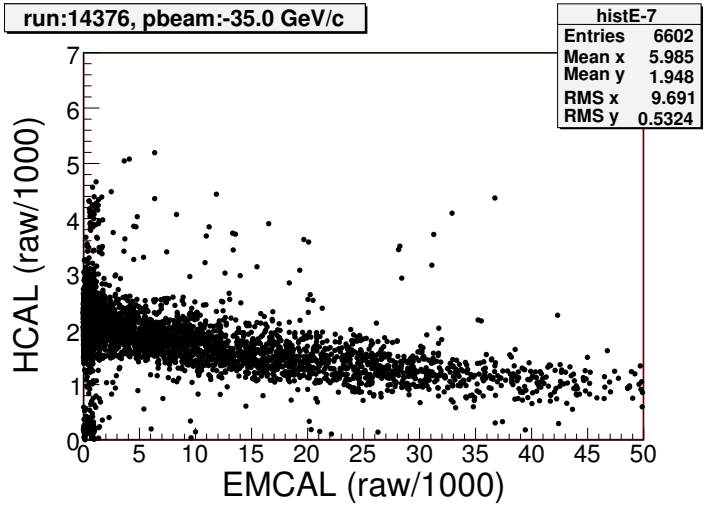
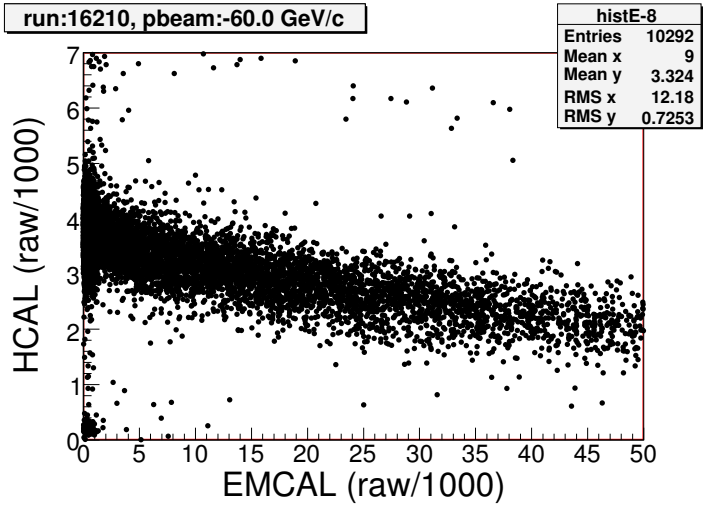
pass2: $HCAL\ vs\ EMCAL$

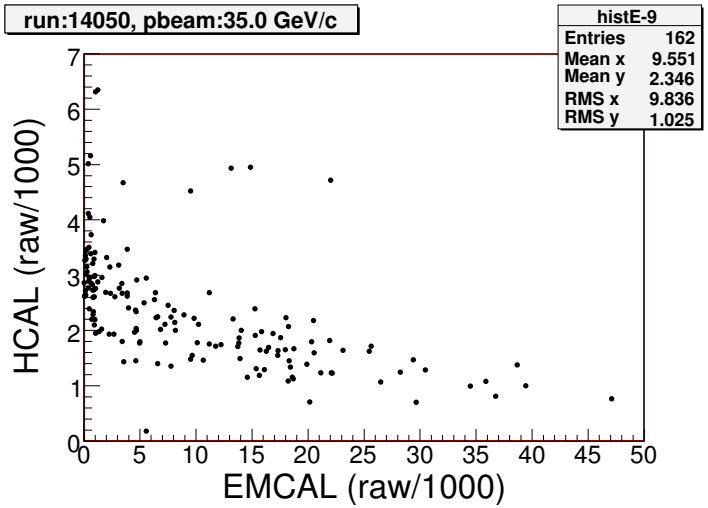


Brief studies of pass 2 data. HCAL vs EMCAL scatter plots for the hadrons: a)top left: +58 GeV/c, b)top middle: -58 GeV/c, c)top right: -84 GeV/c, d)bottom left: +20 GeV/c, e)bottom middle: +4.7 GeV/c and f)bottom right: -20 GeV/c.

pass2: $HCAL\ vs\ EMCAL$, $cont$

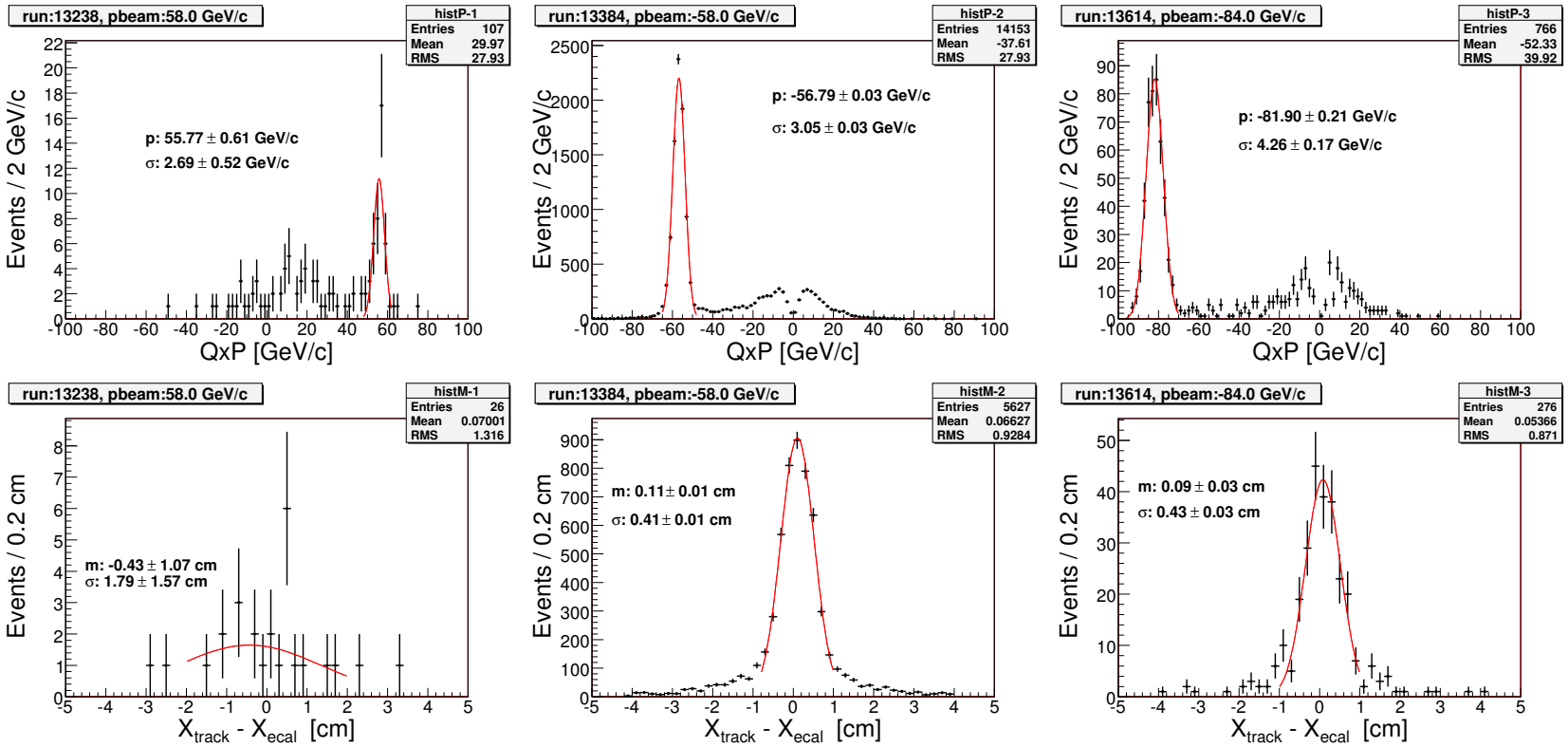






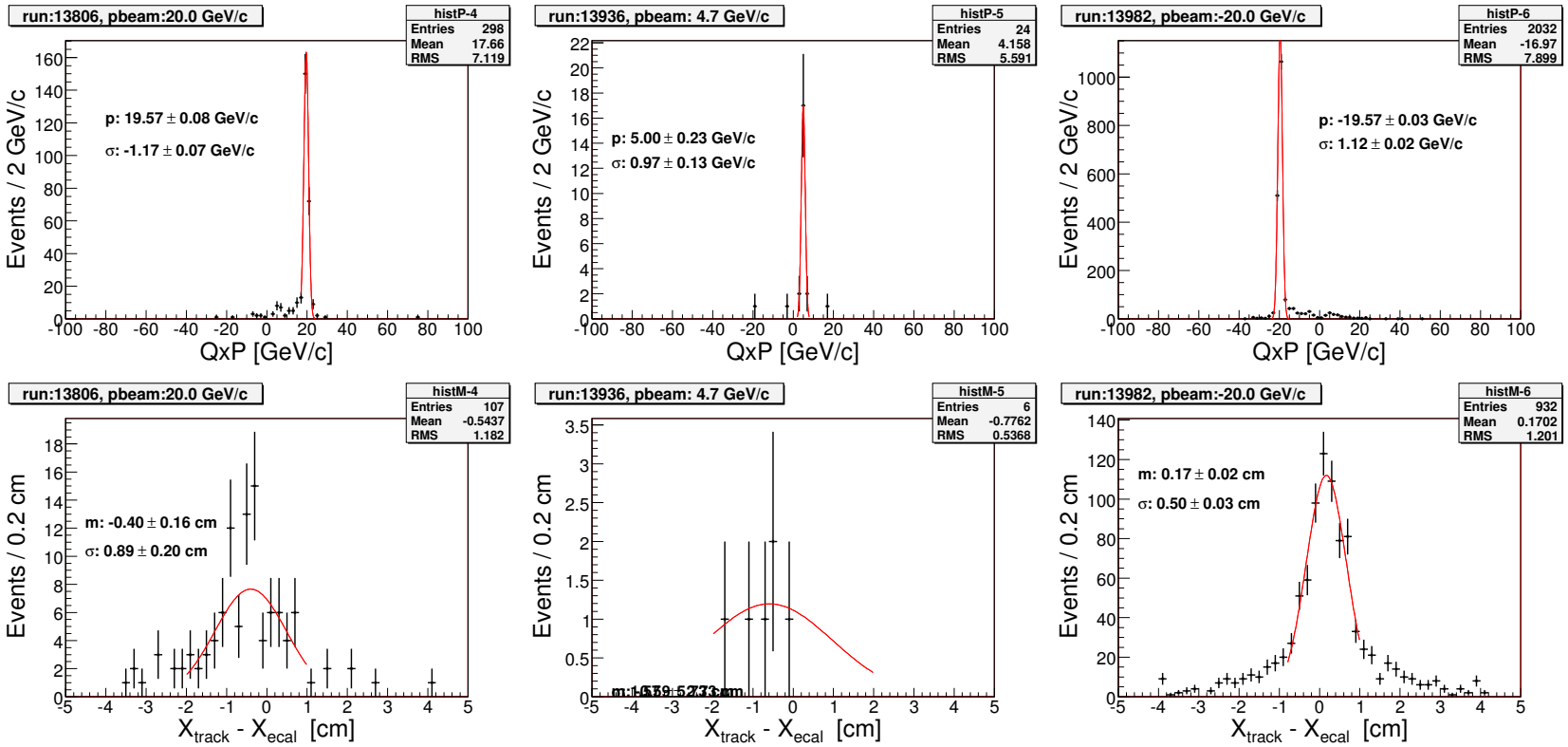
HCAL vs EMCAL scatter plots for the hadrons: top left: -35 GeV/c, top right: -60 GeV/c and bottom +35 GeV/c data.

pass2: $track - EMCAL\ match1$



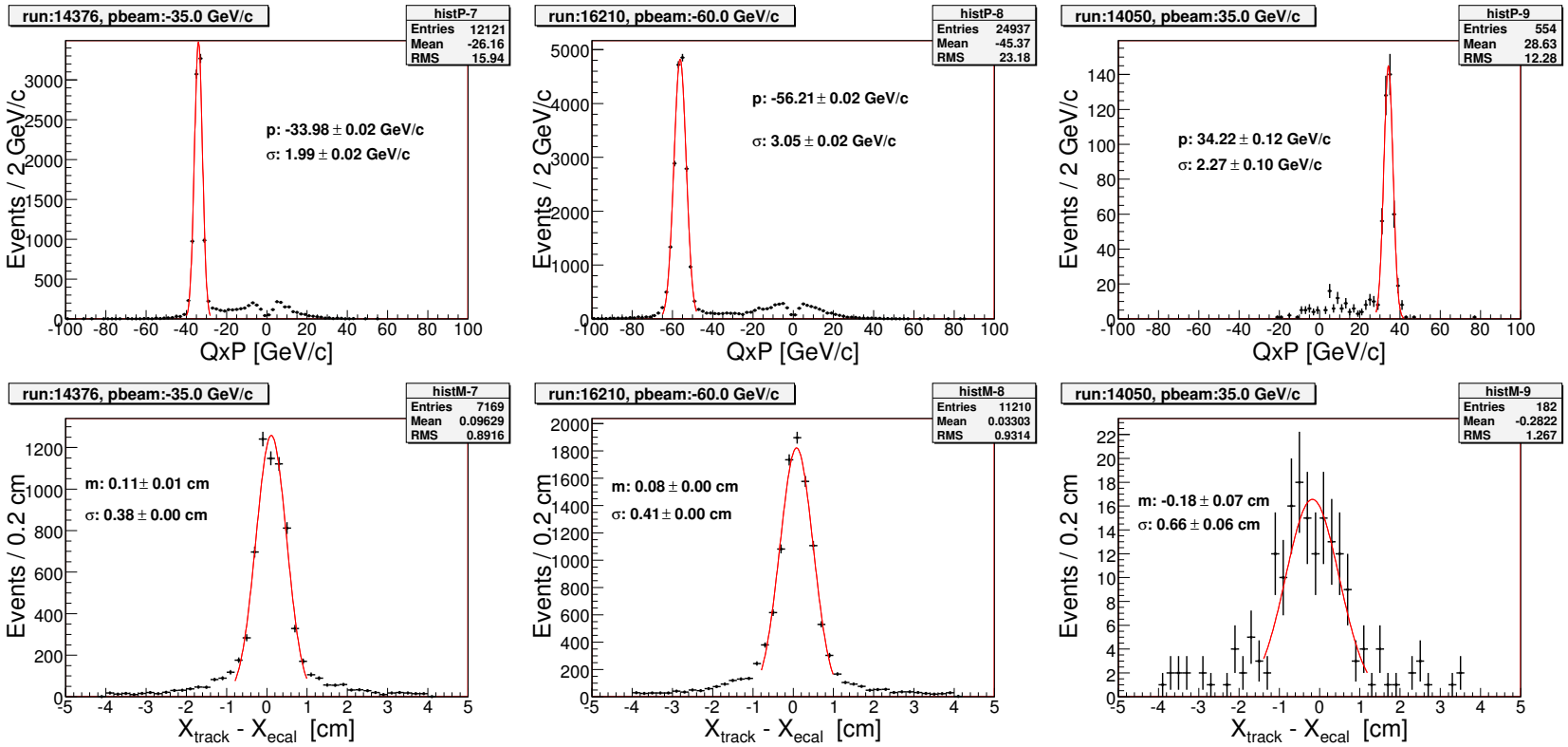
Top plots - momentum distributions (TrkCand) and bottom - track-EMCAL matching based on projections from Seg456. Left plot: +58 GeV/c, middle: -58 GeV/c and right: -84 GeV/c data.

pass2: $track - EMCAL\ match2$



Top plots - momentum distributions (TrkCand) and bottom - track-EMCAL matching based on projections from Seg456. Left plot: +20 GeV/c, middle: +4.7 GeV/c and right: -20 GeV/c data.

pass2: $track - EMCAL\ match3$



Top plots - momentum distributions (TrkCand) and bottom - track-EMCAL matching based on projections from Seg456. Left plot: -35 GeV/c, middle: -60 GeV/c and right: +35 GeV/c data.

pass2: *matching summary*

Momentum(GeV/c)	Runs	offset	comments
+58	13238	n/a	low statistics
-58	13384-13500	0.11$\pm$0.01	
-84	13614	0.09$\pm$0.03	
+20	13806	-0.40$\pm$0.16	low statistics
+4.7	13936	n/a	low statistics
-20	13982	0.17$\pm$0.02	
-35	14376-14452	0.11$\pm$0.01	
-60	16210-16330+..	0.08$\pm$0.00	
+35	14050	-0.18$\pm$0.07	low statistics

matching studies : 20 GeV/c electro

Tracking	X-view offset [cm]	Y-view offset [cm]
SPFit	0.93	0.13
Seg456	0.19	0.05
TrkCand (swimmer)	0.19	0.05

conclusions

- Pass 2 data shows that HCAL and EMCAL responses for the charged hadrons are resonable.
- Track-EMCAL matching (using Seg456 projections) looks stable: offsets are about 0.13 cm in X-view and 0.05 in Y-view. Matching found to be independent of momentum (SPFit has dependence).
- TrkCand tracks with SWIMMER and Seg456 tracks gives the same projection in EMCAL Z-position.