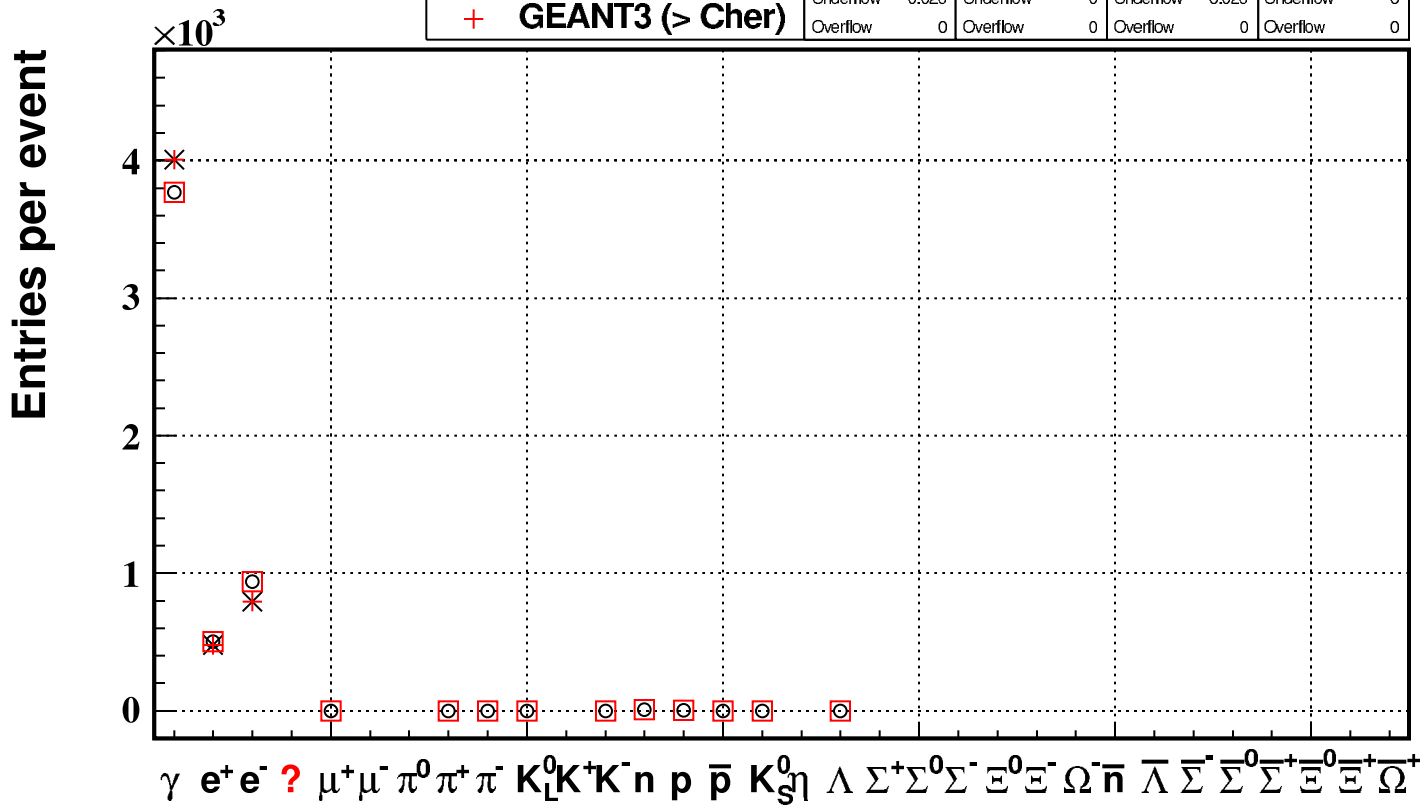


100 GeV Primary γ
Secondary

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

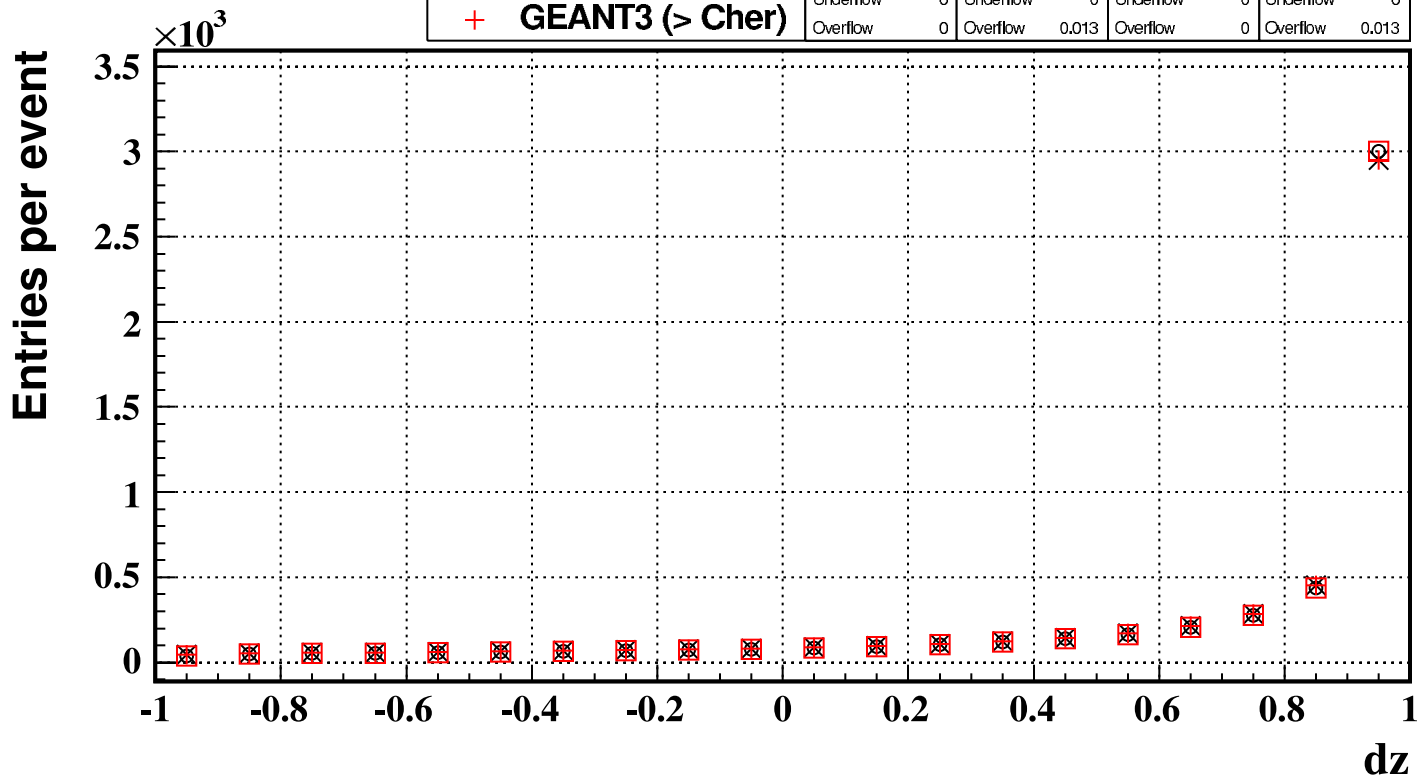
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	5214884	Entries	5274786	Entries	5214884	Entries	5274786
Mean	1.47	Mean	1.39	Mean	1.47	Mean	1.39
RMS	0.889	RMS	0.734	RMS	0.889	RMS	0.734
Underflow	0.026	Underflow	0	Underflow	0.026	Underflow	0
Overflow	0	Overflow	0	Overflow	0	Overflow	0



100 GeV Primary γ
Secondary

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

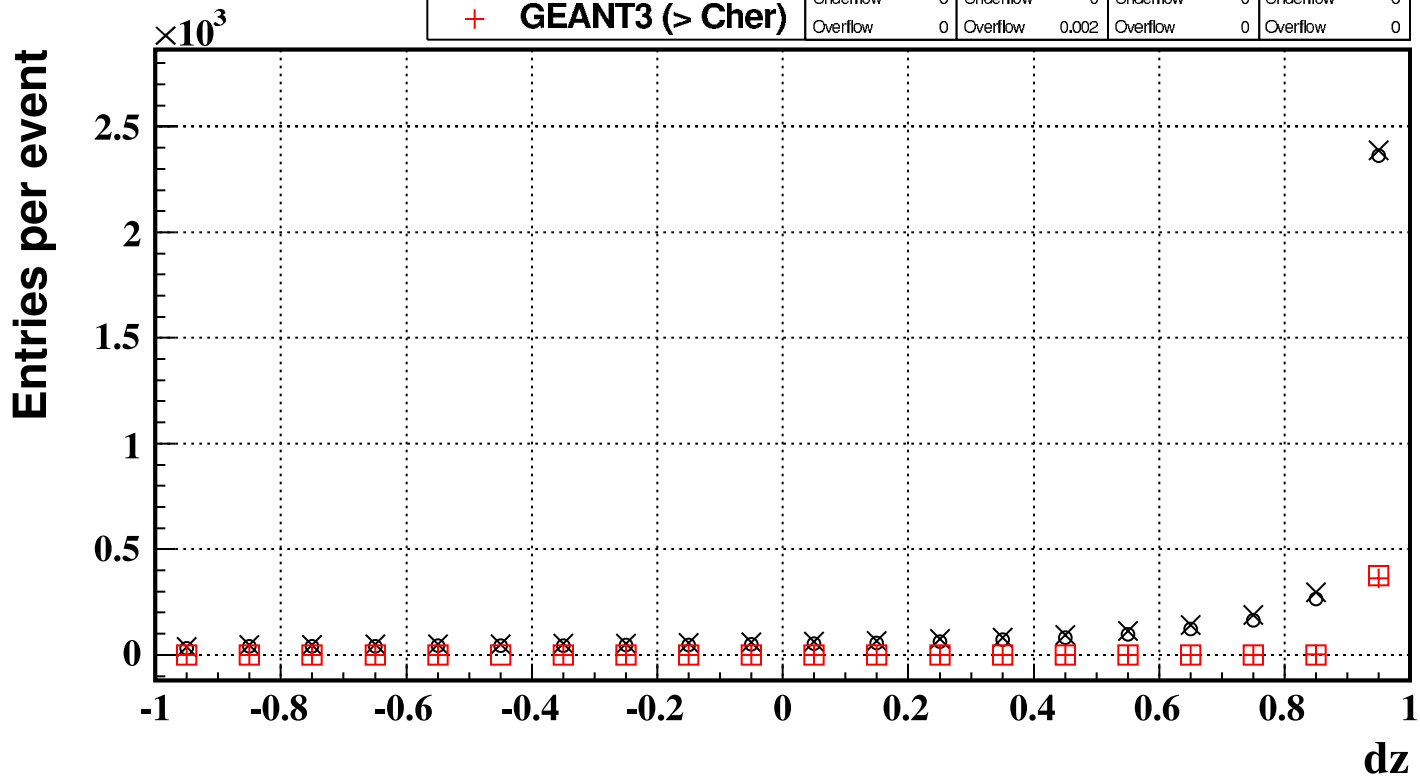
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	5214884	Entries	5274786	Entries	5214884	Entries	5274786
Mean	0.697	Mean	0.682	Mean	0.697	Mean	0.682
RMS	0.477	RMS	0.488	RMS	0.477	RMS	0.488
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	0	Overflow	0.013	Overflow	0	Overflow	0.013



100 GeV Primary γ
Secondary γ

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

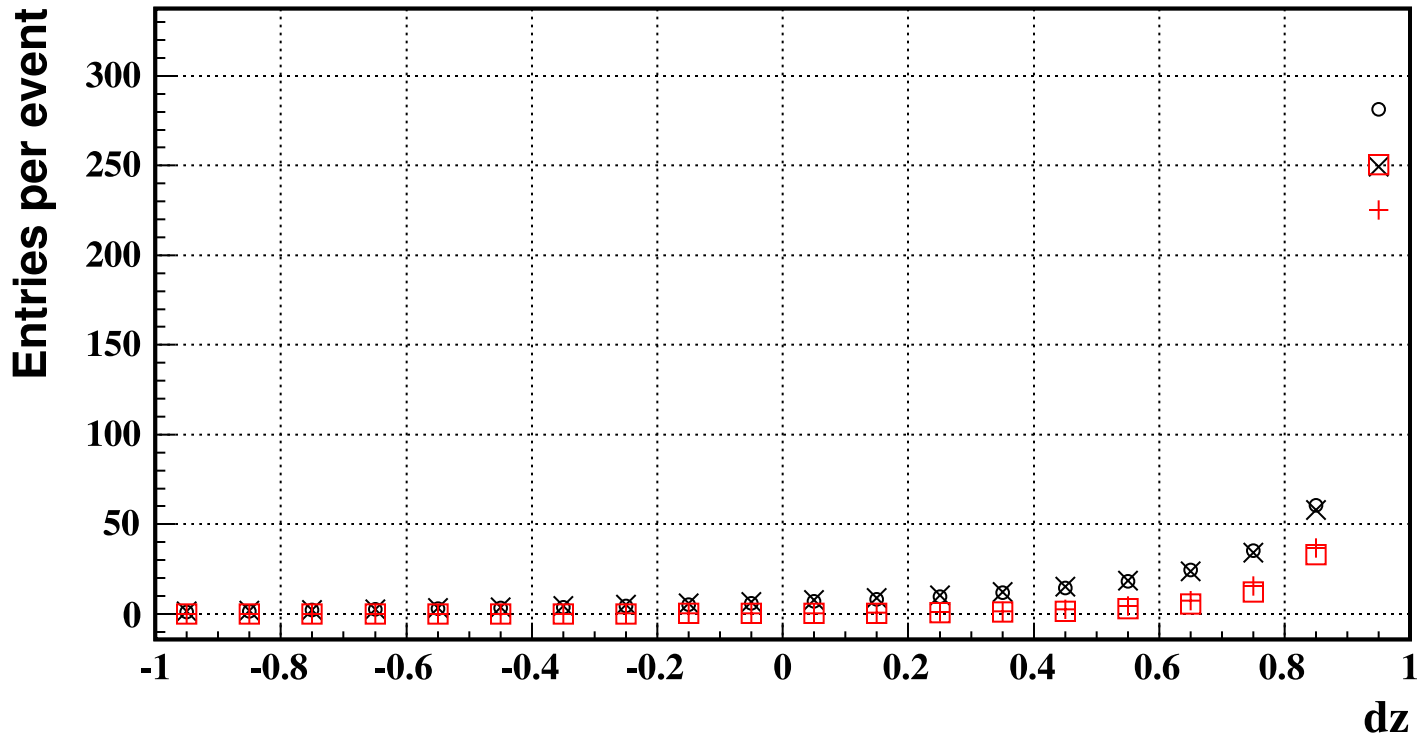
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	3766386	Entries	4005133	Entries	375184	Entries	364894
Mean	0.716	Mean	0.691	Mean	0.995	Mean	0.994
RMS	0.486	RMS	0.5	RMS	0.0281	RMS	0.0213
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	0	Overflow	0.002	Overflow	0	Overflow	0



100 GeV Primary γ
Secondary e^+

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

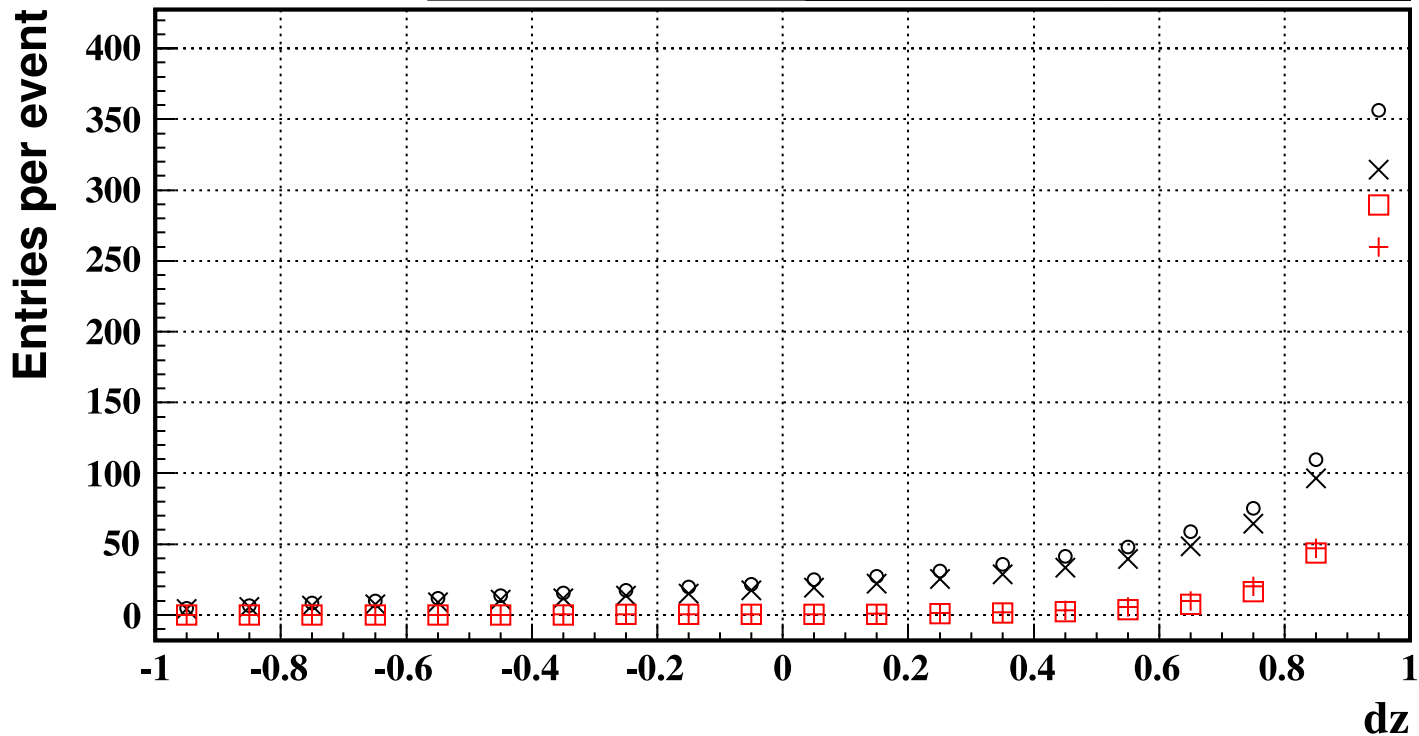
	GEANT4	GEANT3	GEANT4	GEANT3
Entries	503677	476162	310337	296359
Mean	0.756	0.724	0.93	0.915
RMS	0.376	0.401	0.137	0.15
Underflow	0	0	0	0
Overflow	0	0.007	0	0.007



100 GeV Primary γ
Secondary e^-

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

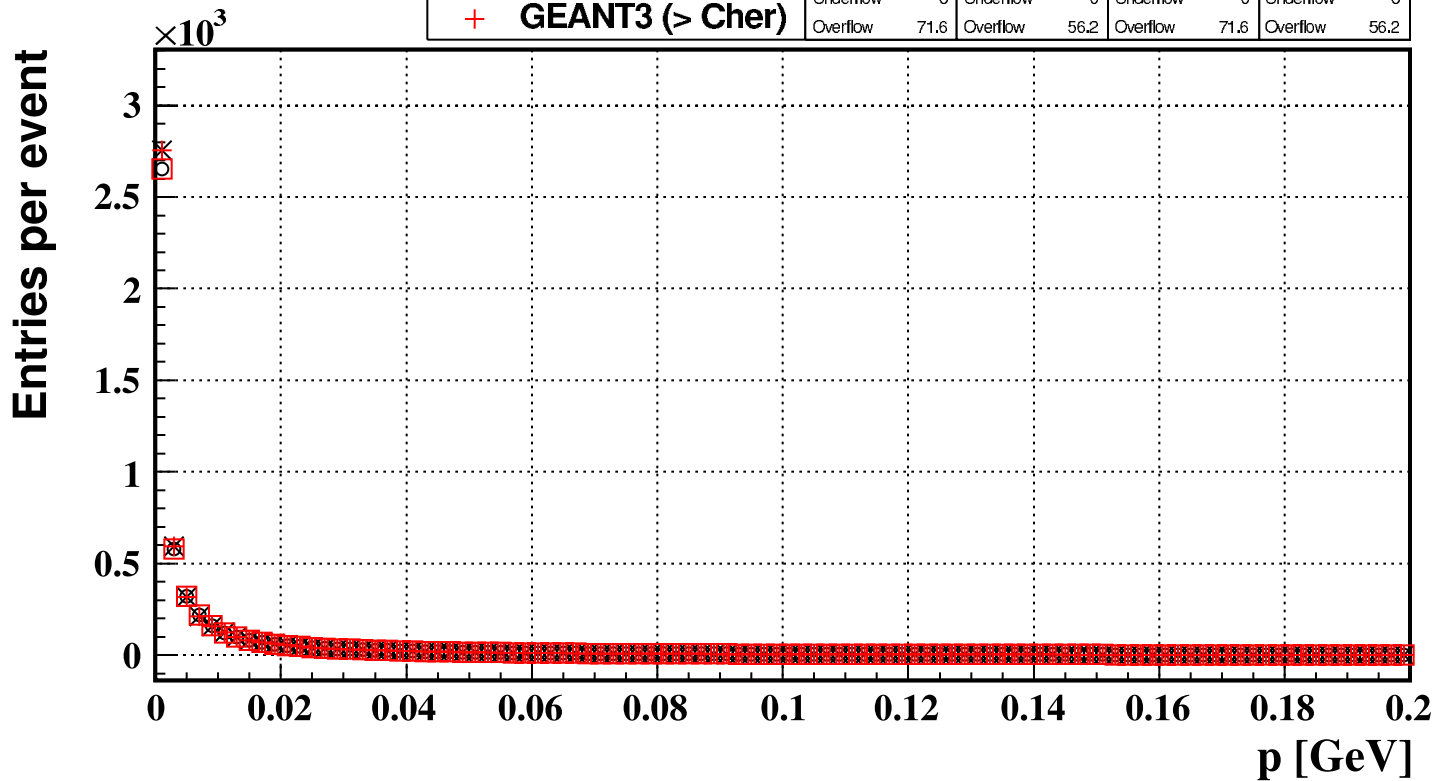
	GEANT4	GEANT3	GEANT4	GEANT3
Entries	937687	793491	368196	352223
Mean	0.593	0.612	0.924	0.909
RMS	0.474	0.466	0.142	0.154
Underflow	0	0	0	0
Overflow	0	0.004	0	0.003



100 GeV Primary γ
Secondary

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

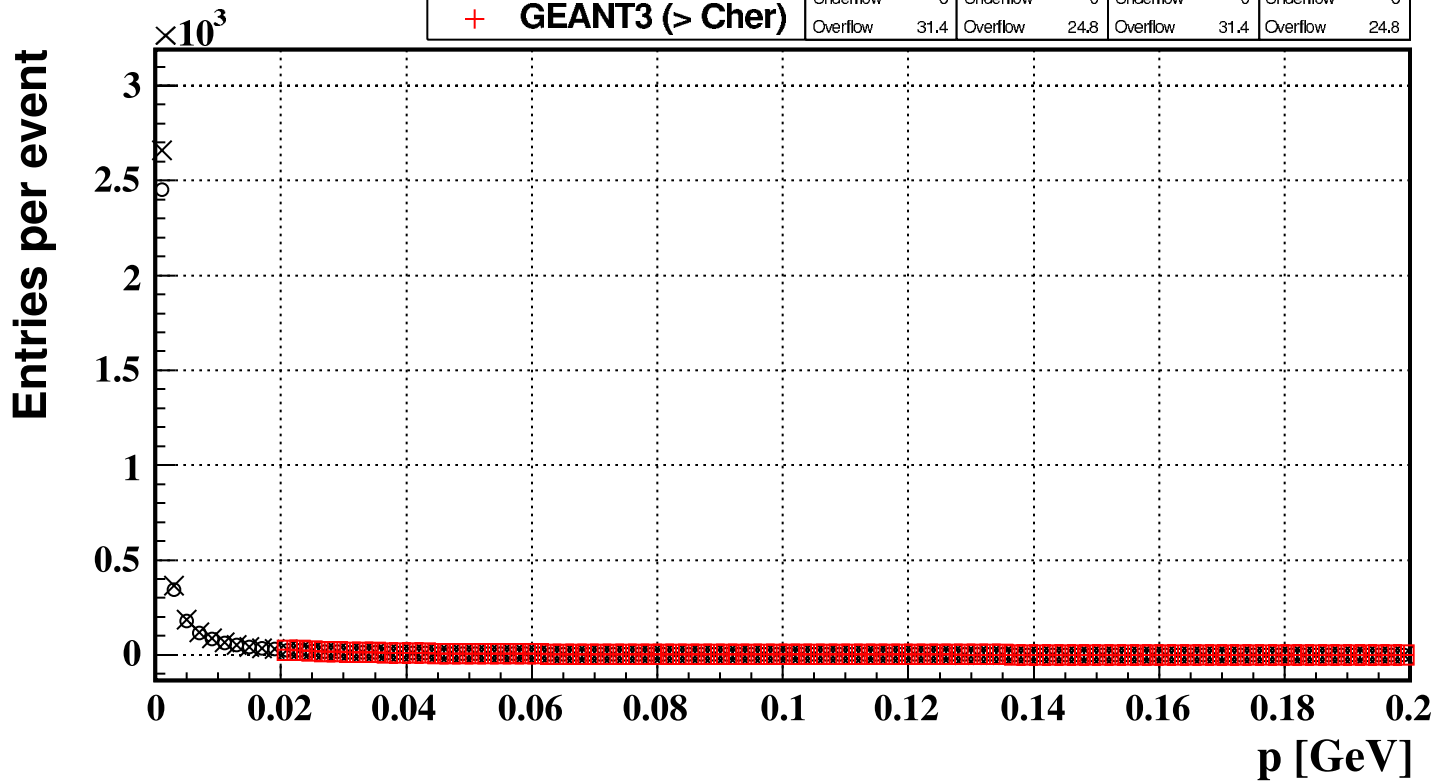
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	5214884	Entries	5274786	Entries	5214884	Entries	5274786
Mean	0.0118	Mean	0.011	Mean	0.0118	Mean	0.011
RMS	0.0261	RMS	0.0247	RMS	0.0261	RMS	0.0247
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	71.6	Overflow	56.2	Overflow	71.6	Overflow	56.2



100 GeV Primary γ
Secondary γ

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

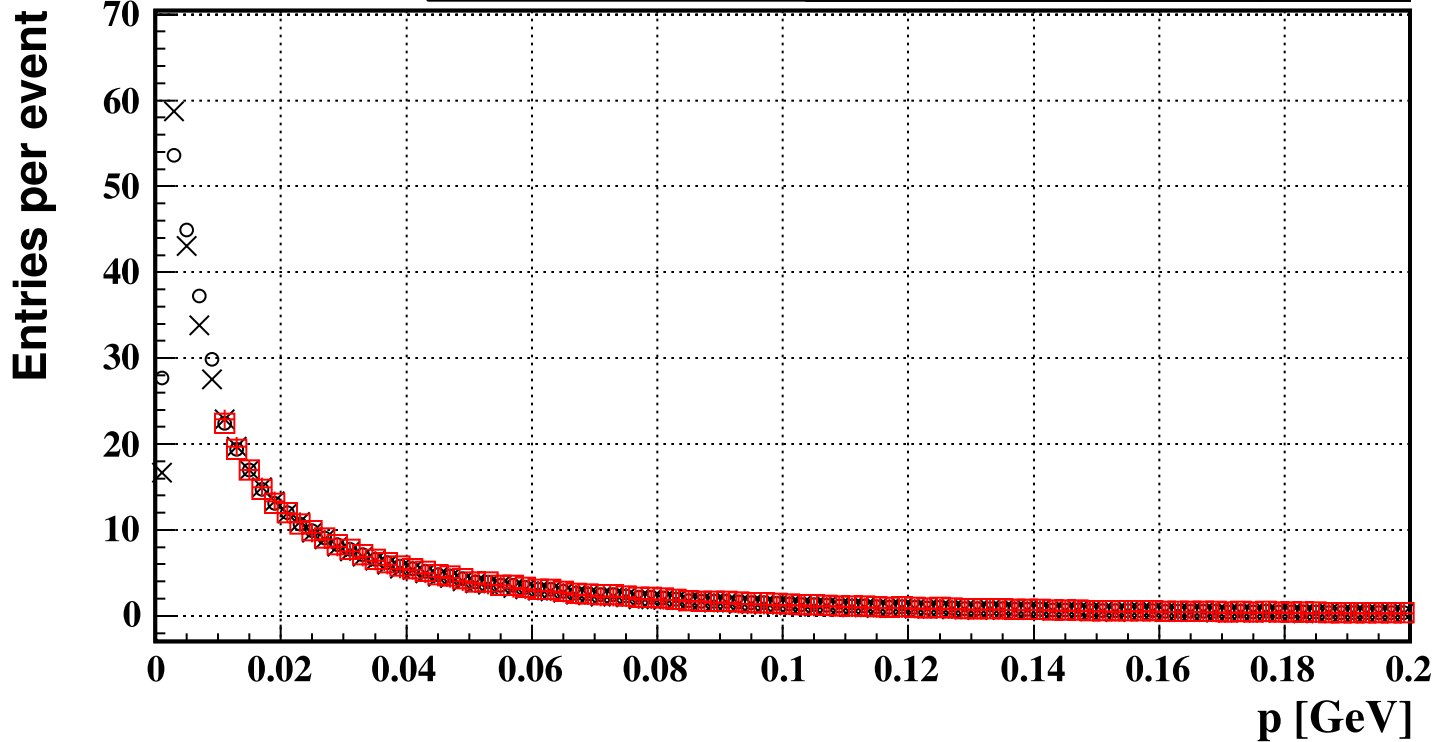
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	3766386	Entries	4005133	Entries	375184	Entries	364894
Mean	0.00738	Mean	0.00683	Mean	0.0574	Mean	0.0559
RMS	0.0204	RMS	0.0192	RMS	0.04	RMS	0.0389
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	31.4	Overflow	24.8	Overflow	31.4	Overflow	24.8



100 GeV Primary γ
Secondary e^+

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

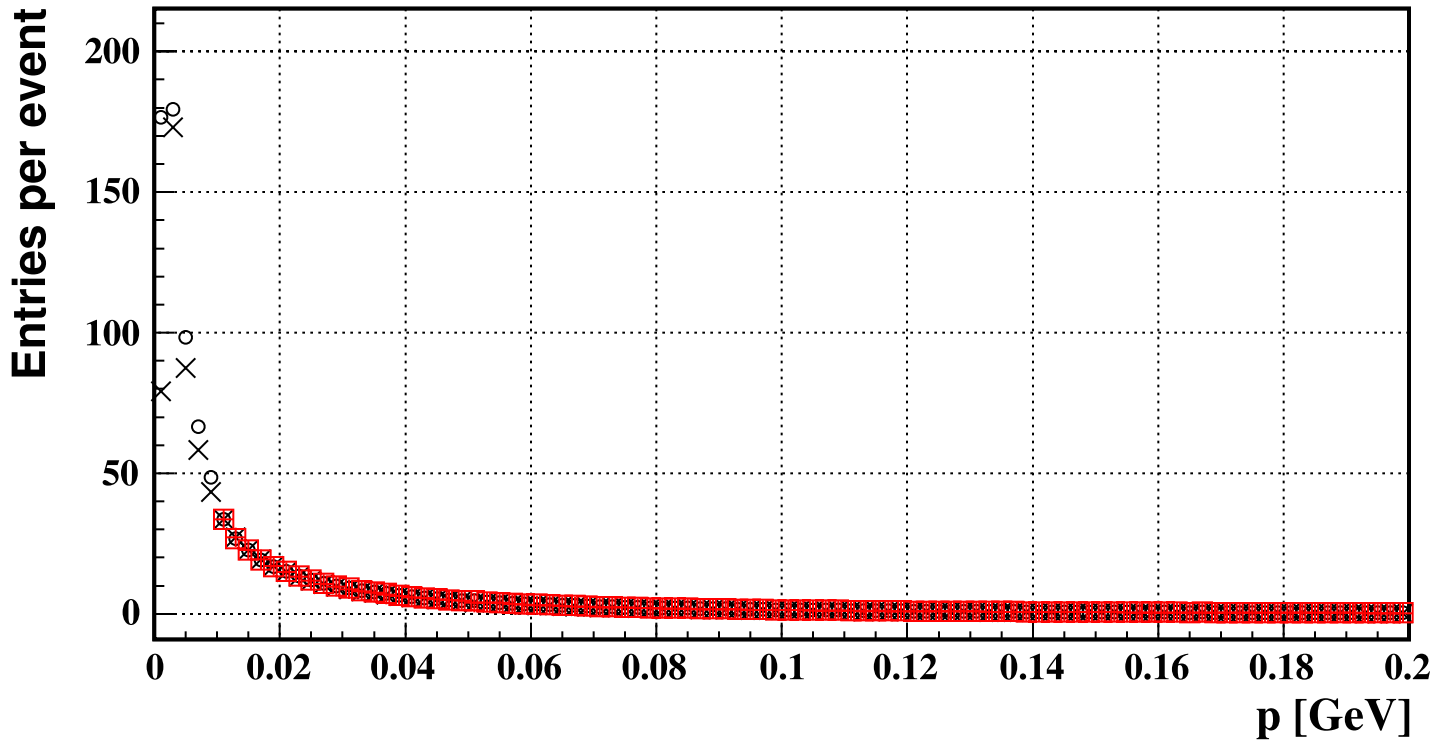
	GEANT4	GEANT3	GEANT4	GEANT3
Entries	503677	476162	310337	296359
Mean	0.0308	0.03	0.048	0.046
RMS	0.0383	0.037	0.0413	0.0398
Underflow	0	0	0	0
Overflow	19.5	15.7	19.5	15.7



100 GeV Primary γ
Secondary e^-

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

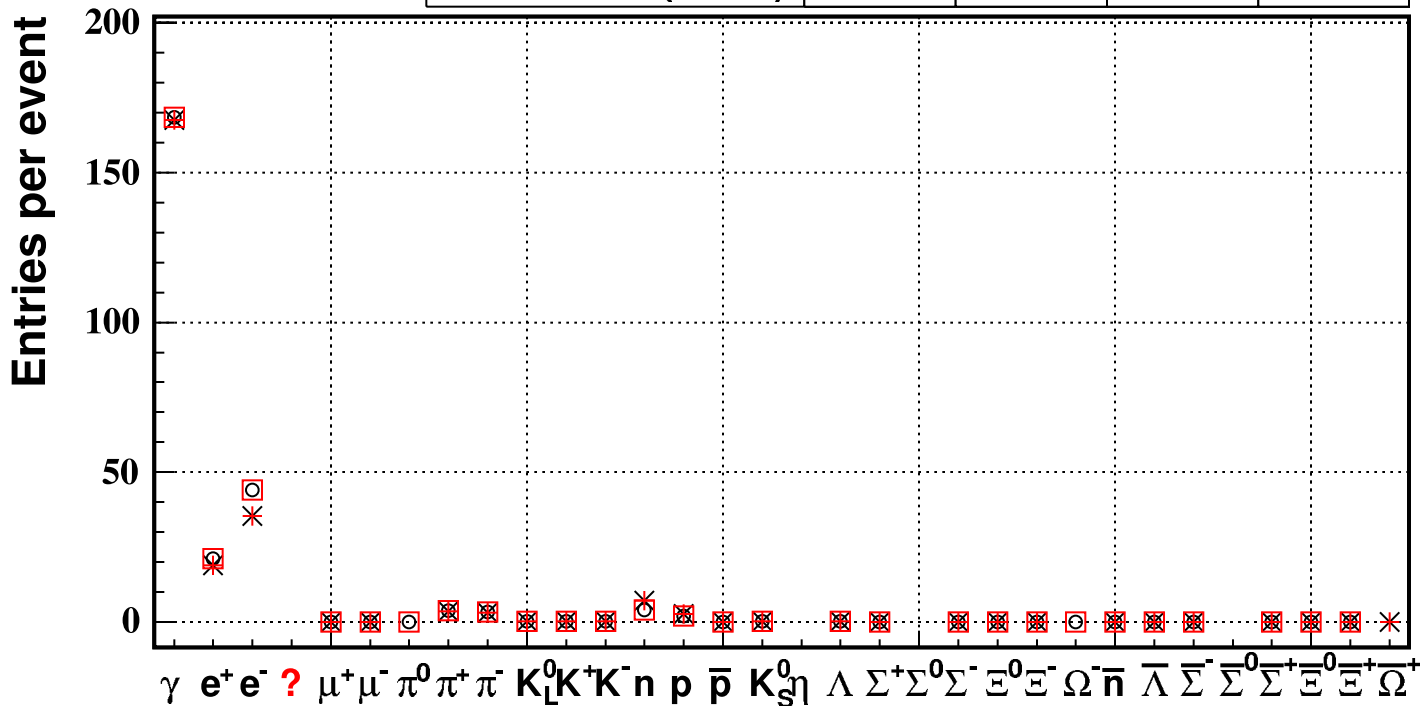
	GEANT4	GEANT3	GEANT4	GEANT3
Entries	937687	793491	368196	352223
Mean	0.0192	0.0208	0.0444	0.0426
RMS	0.0315	0.0317	0.0396	0.0383
Underflow	0	0	0	0
Overflow	19.5	15.7	19.5	15.7



100 GeV Primary π^+
Secondary

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

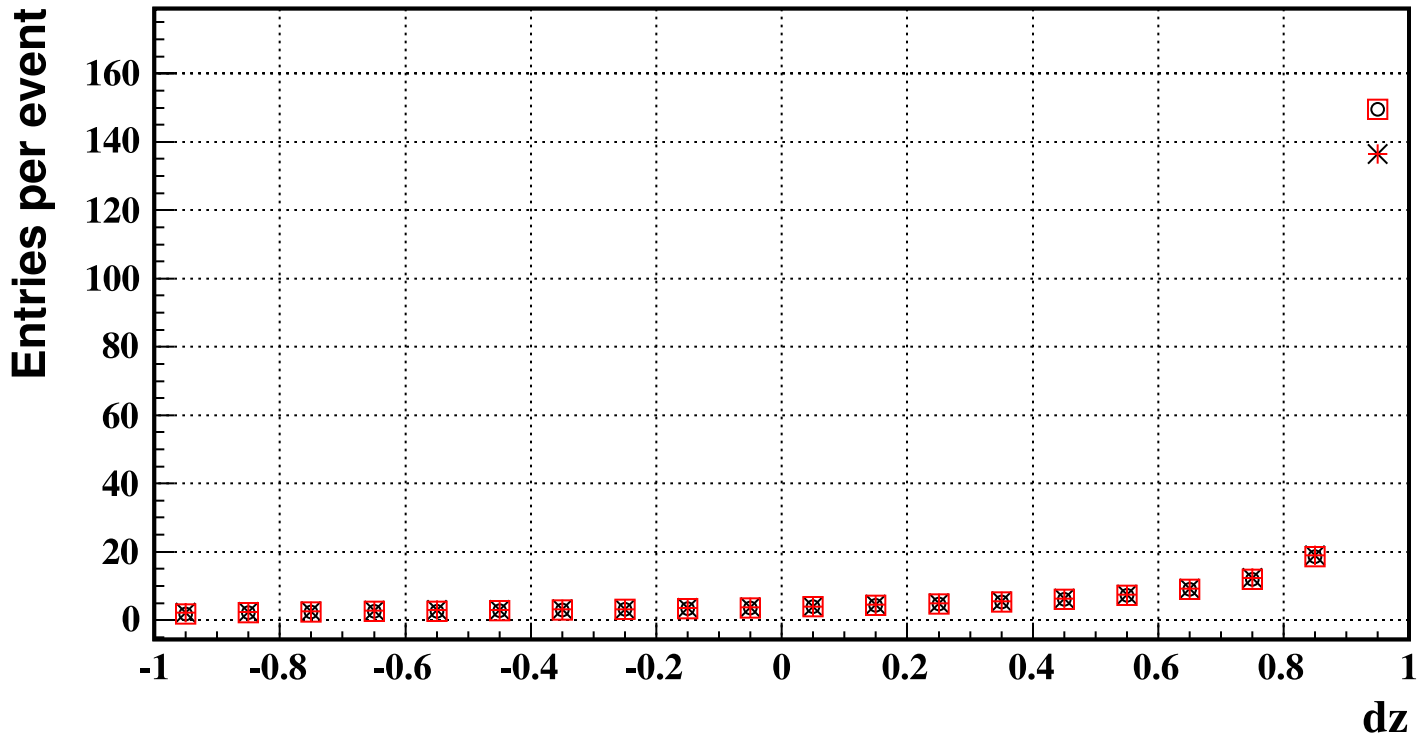
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	2475030	Entries	2392163	Entries	2475030	Entries	2392163
Mean	2	Mean	2.13	Mean	2	Mean	2.13
RMS	2.39	RMS	2.81	RMS	2.39	RMS	2.81
Underflow	0.0658	Underflow	0	Underflow	0.0658	Underflow	0
Overflow	0	Overflow	0.0674	Overflow	0	Overflow	0.0674



100 GeV Primary π^+
Secondary

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

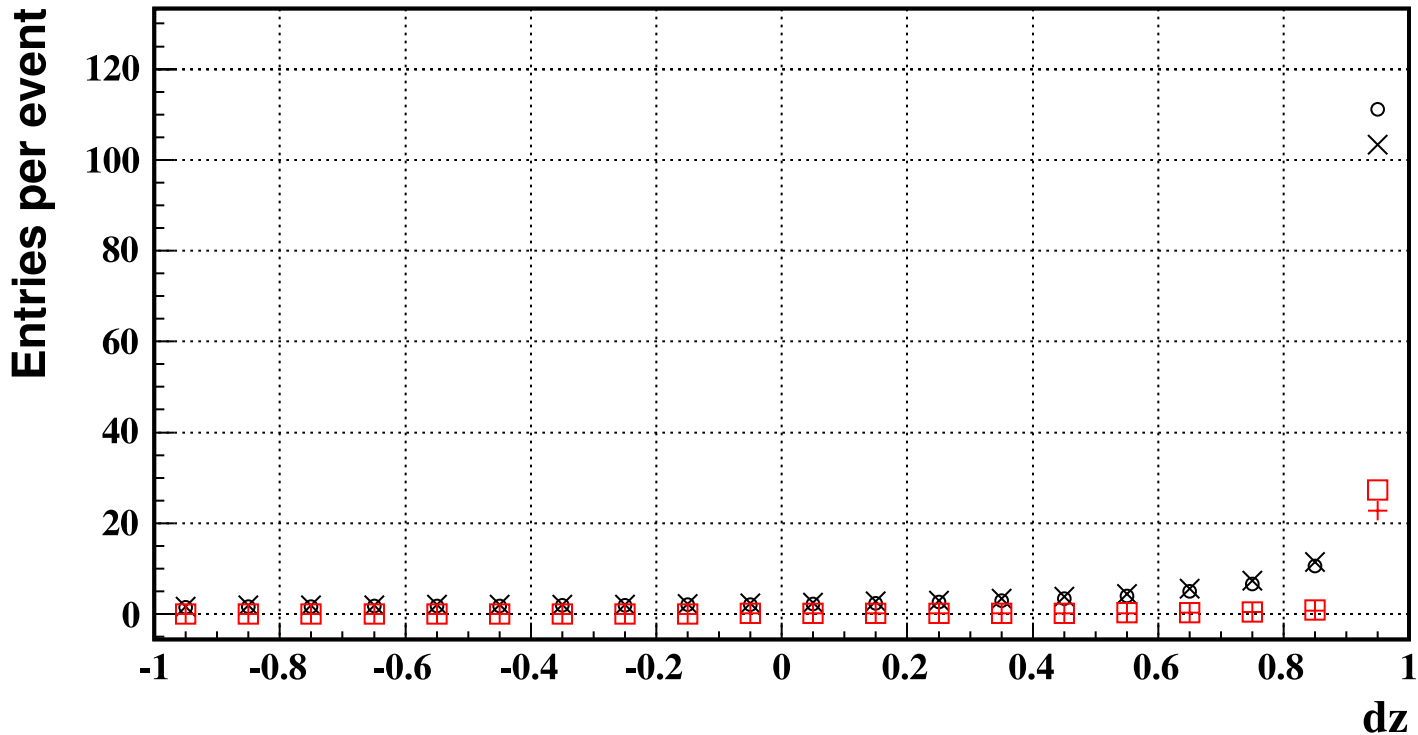
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	2475030	Entries	2392163	Entries	2475030	Entries	2392163
Mean	0.713	Mean	0.683	Mean	0.713	Mean	0.683
RMS	0.473	RMS	0.494	RMS	0.473	RMS	0.494
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	0	Overflow	0.0015	Overflow	0	Overflow	0.0015



100 GeV Primary π^+
Secondary γ

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

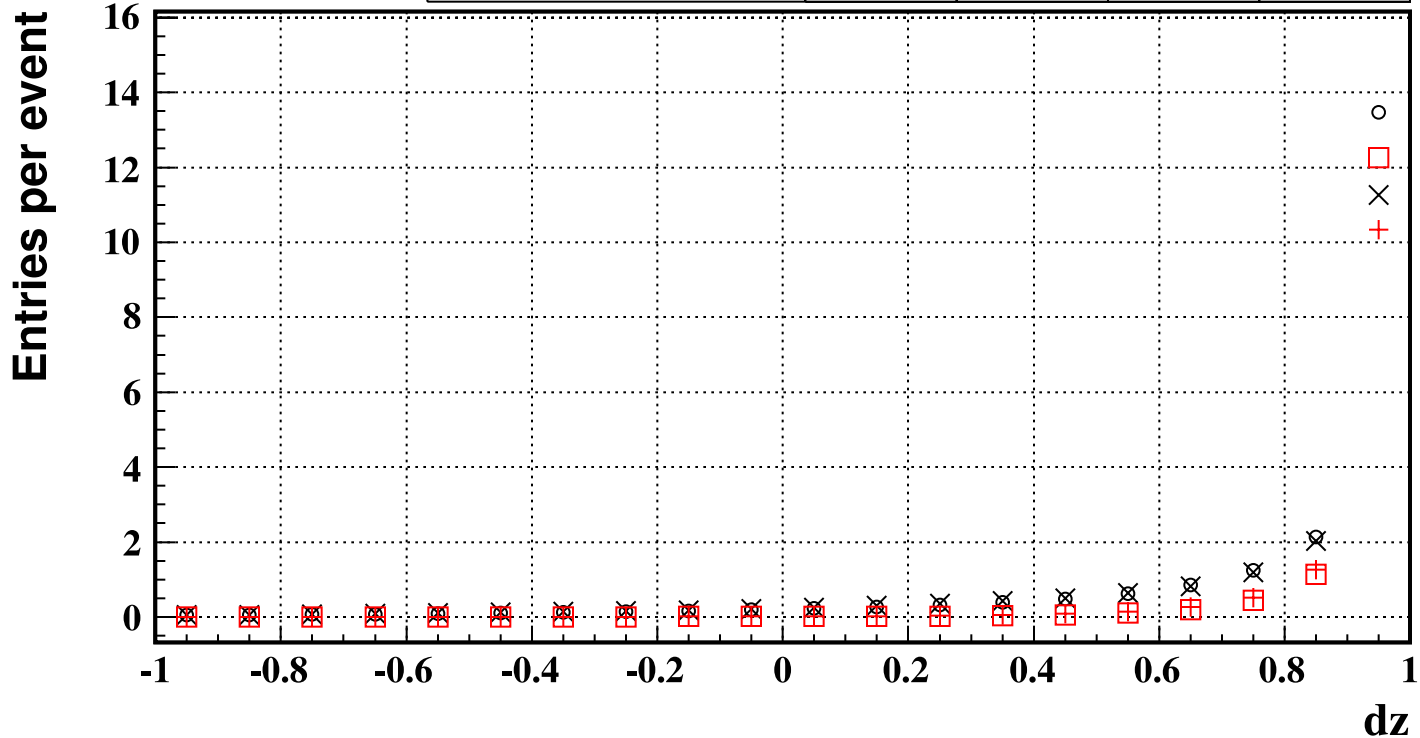
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	1684304	Entries	1675636	Entries	303199	Entries	255512
Mean	0.738	Mean	0.703	Mean	0.944	Mean	0.928
RMS	0.475	RMS	0.497	RMS	0.208	RMS	0.254
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	0	Overflow	0.0004	Overflow	0	Overflow	0.0001



100 GeV Primary π^+
Secondary e^+

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

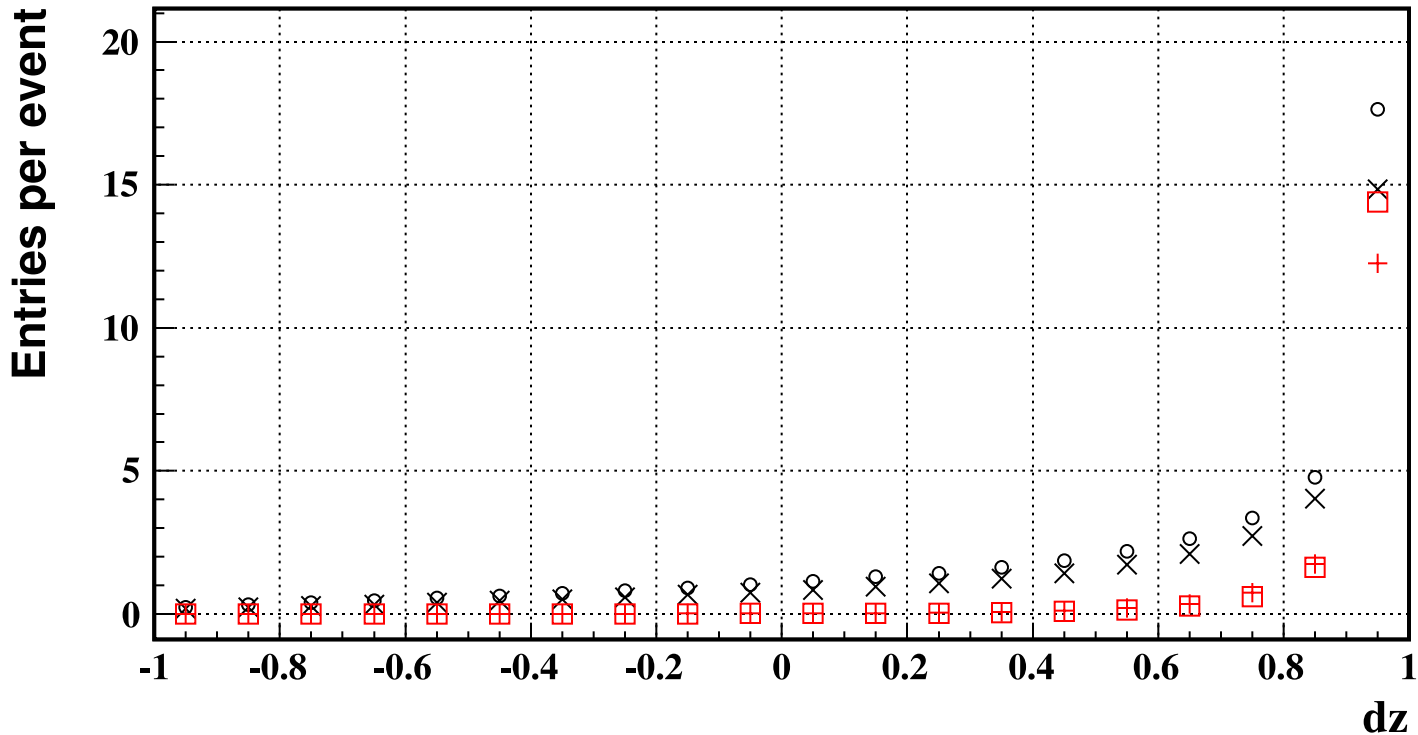
	GEANT4	GEANT3	GEANT4	GEANT3
Entries	211033	189921	143513	128050
Mean	0.801	0.767	0.944	0.928
RMS	0.35	0.379	0.134	0.152
Underflow	0	0	0	0
Overflow	0	0.0006	0	0.0006



100 GeV Primary π^+
Secondary e^-

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

	GEANT4	GEANT3	GEANT4	GEANT3
Entries	440552	353463	173564	156781
Mean	0.599	0.625	0.937	0.921
RMS	0.479	0.465	0.139	0.154
Underflow	0	0	0	0
Overflow	0	0.0005	0	0.0004

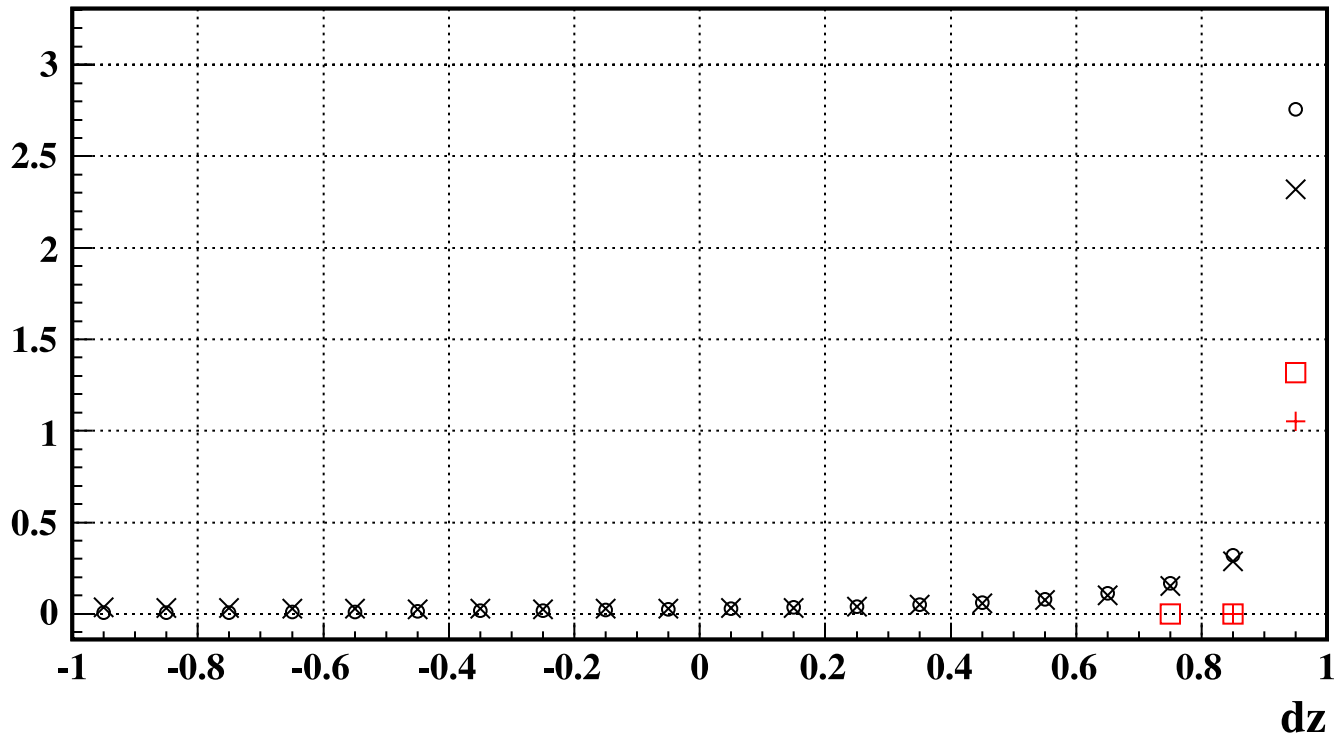


100 GeV Primary π^+
Secondary π^+

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

	GEANT4	GEANT3	GEANT4	GEANT3
Entries	37937	34391	13186	10544
Mean	0.853	0.771	0.997	0.996
RMS	0.31	0.445	0.00766	0.0096
Underflow	0	0	0	0
Overflow	0	0	0	0

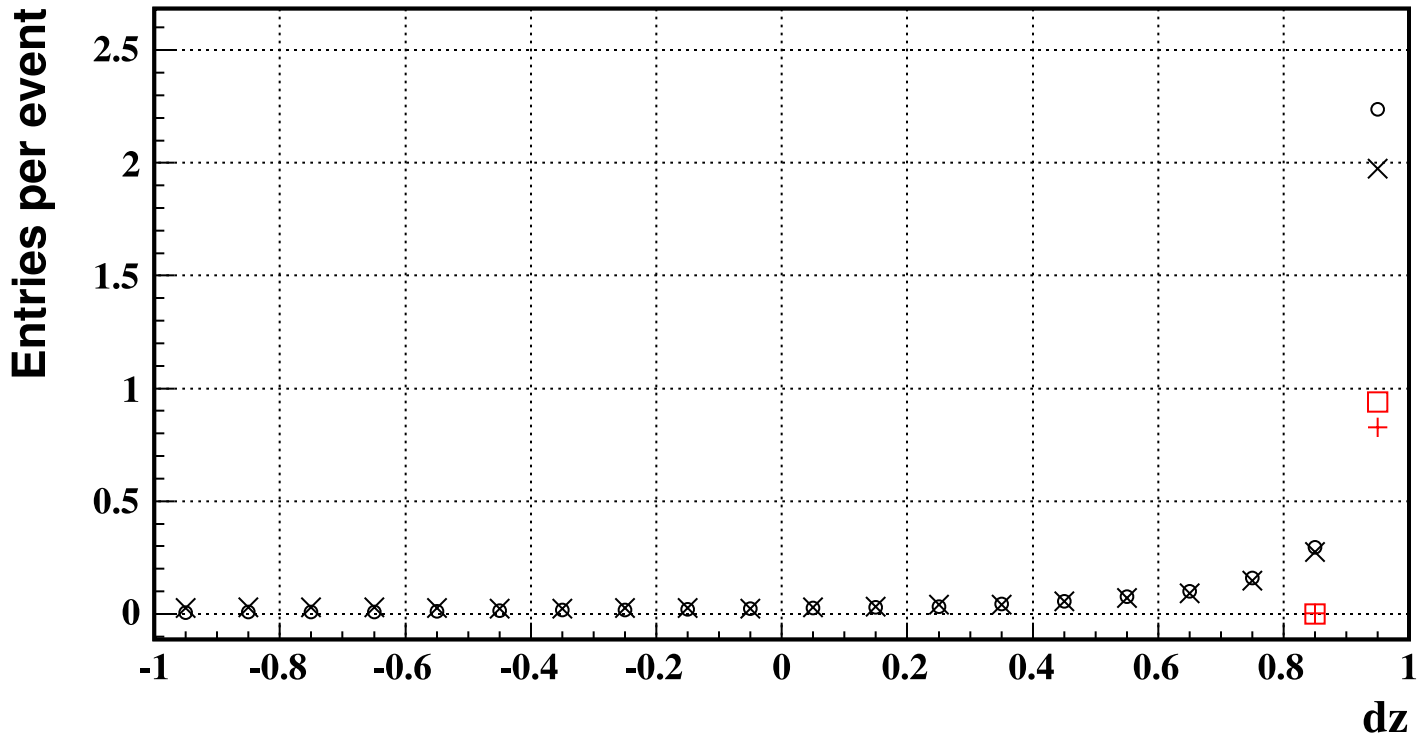
Entries per event



100 GeV Primary π^+
Secondary π^-

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

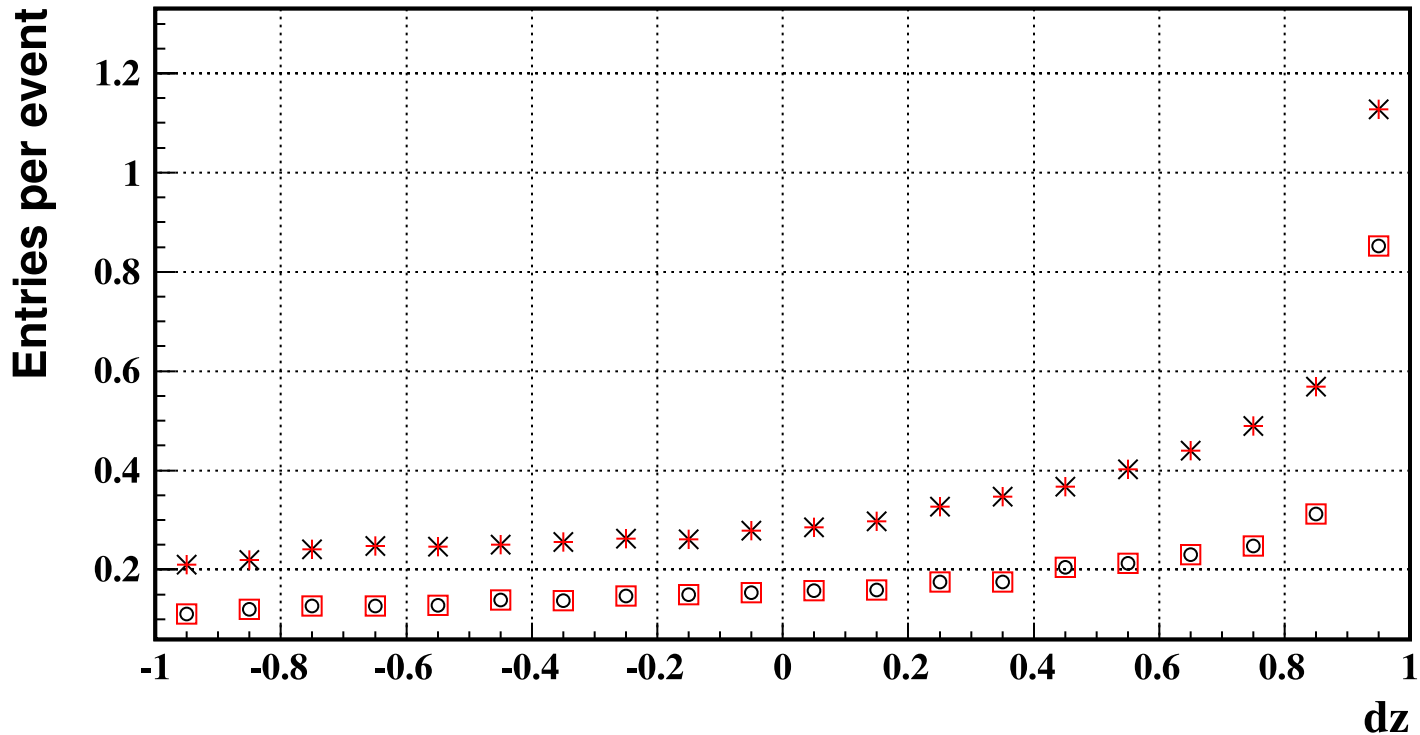
	GEANT4	GEANT3	GEANT4	GEANT3
Entries	31878	30175	9393	8284
Mean	0.84	0.764	0.996	0.995
RMS	0.322	0.444	0.00756	0.01
Underflow	0	0	0	0
Overflow	0	0	0	0



100 GeV Primary π^+
Secondary n

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

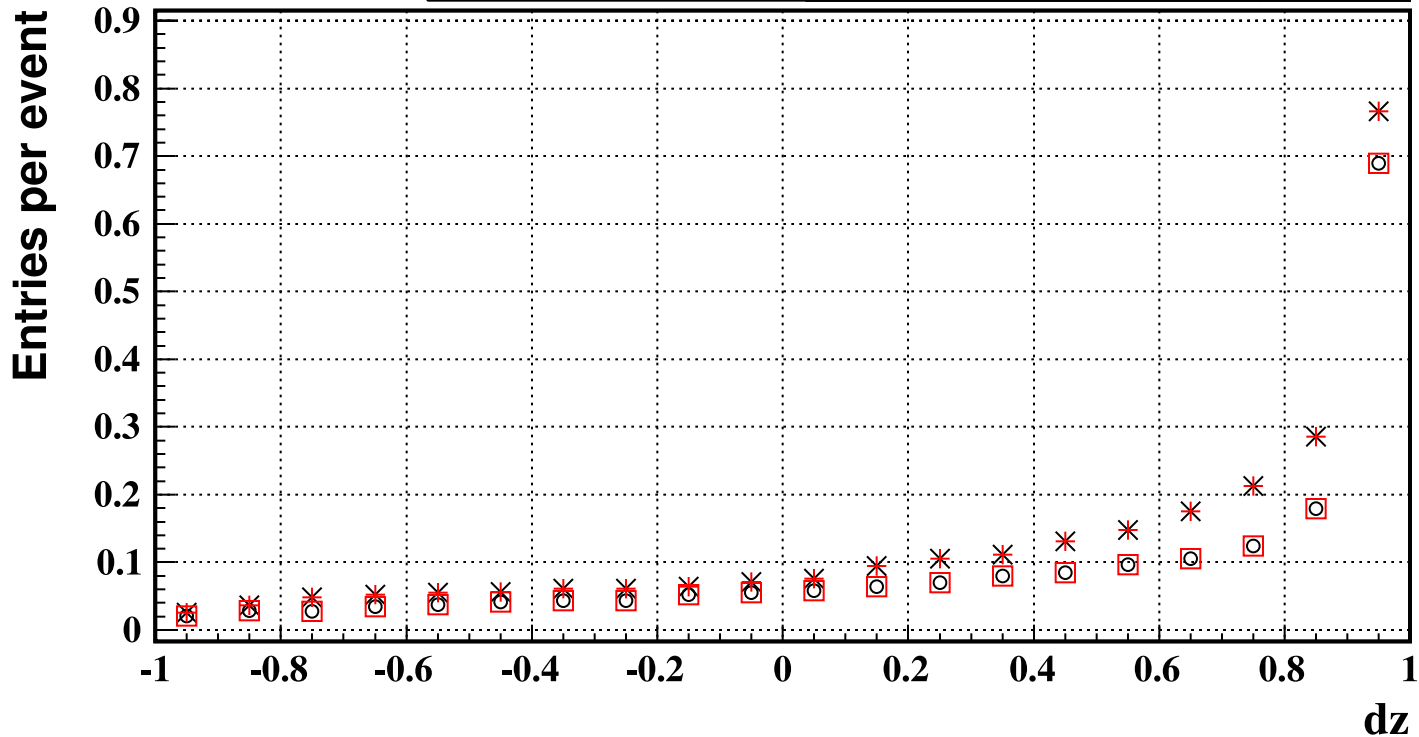
	GEANT4	GEANT3	GEANT4	GEANT3
Entries	40626	71220	40626	71220
Mean	0.281	0.237	0.281	0.237
RMS	0.607	0.6	0.607	0.6
Underflow	0	0	0	0
Overflow	0	0	0	0



100 GeV Primary π^+
Secondary p

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

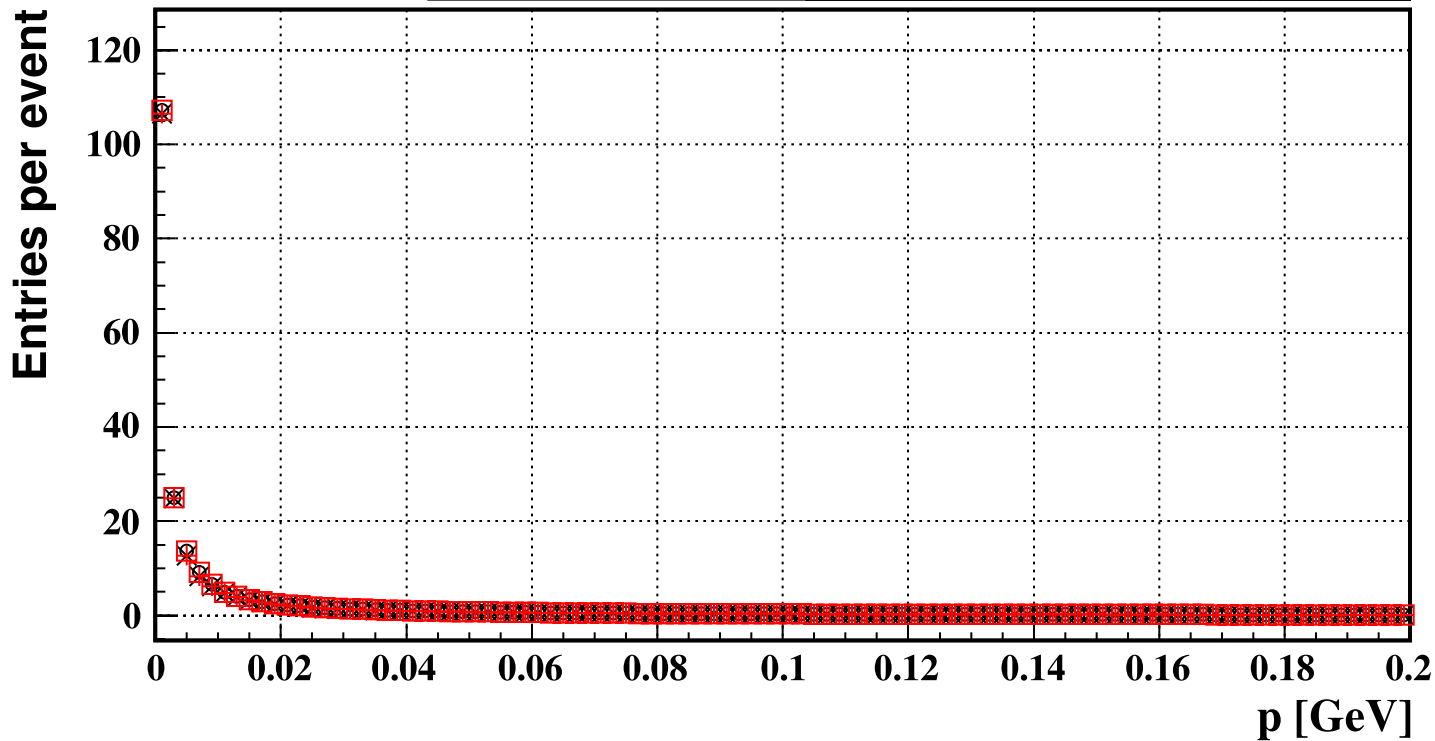
	GEANT4		GEANT3		GEANT4		GEANT3	
Entries	19358		26354		19358		26354	
Mean	0.503		0.476		0.503		0.476	
RMS	0.543		0.537		0.543		0.537	
Underflow	0		0		0		0	
Overflow	0		0		0		0	



100 GeV Primary π^+
Secondary

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

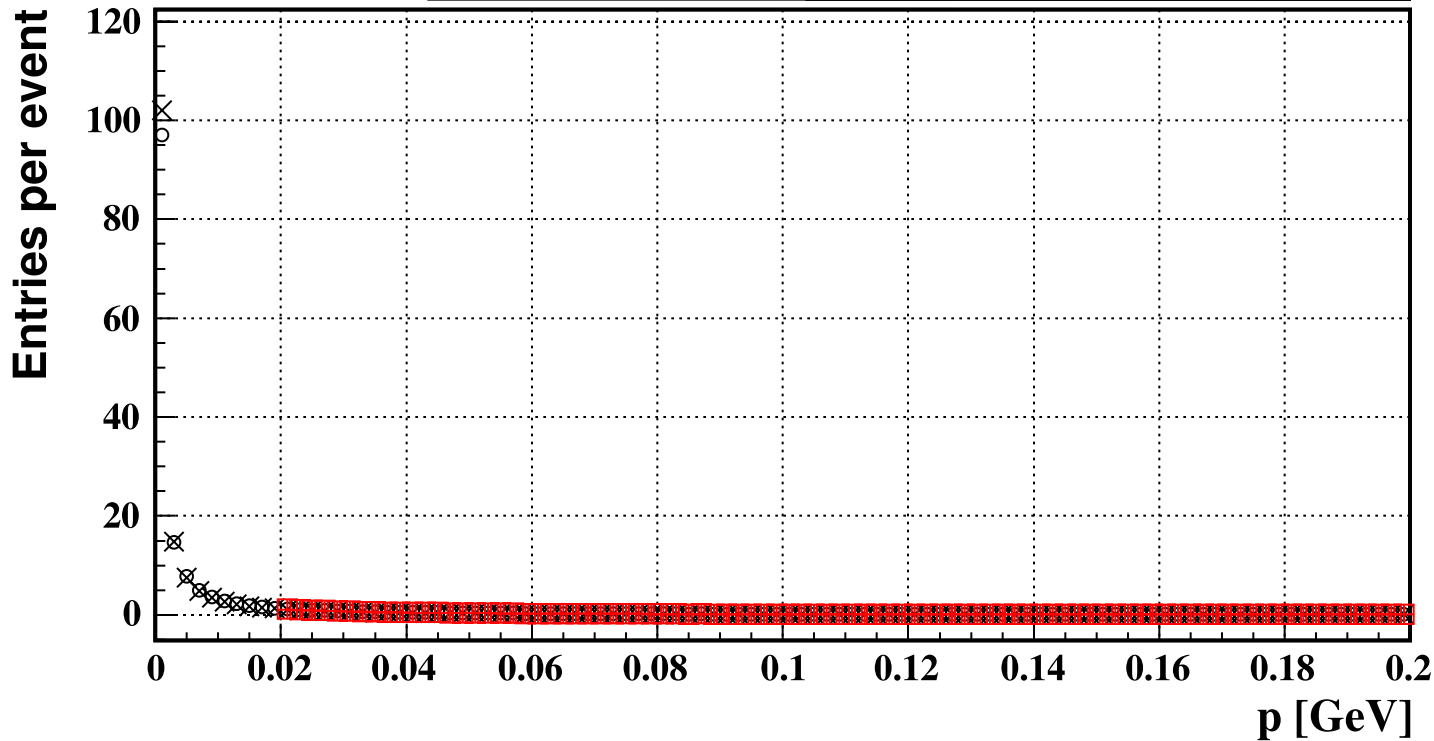
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	2475030	Entries	2392163	Entries	2475030	Entries	2392163
Mean	0.0157	Mean	0.0154	Mean	0.0157	Mean	0.0154
RMS	0.0331	RMS	0.033	RMS	0.0331	RMS	0.033
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	26.5	Overflow	23.8	Overflow	26.5	Overflow	23.8



100 GeV Primary π^+
Secondary γ

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

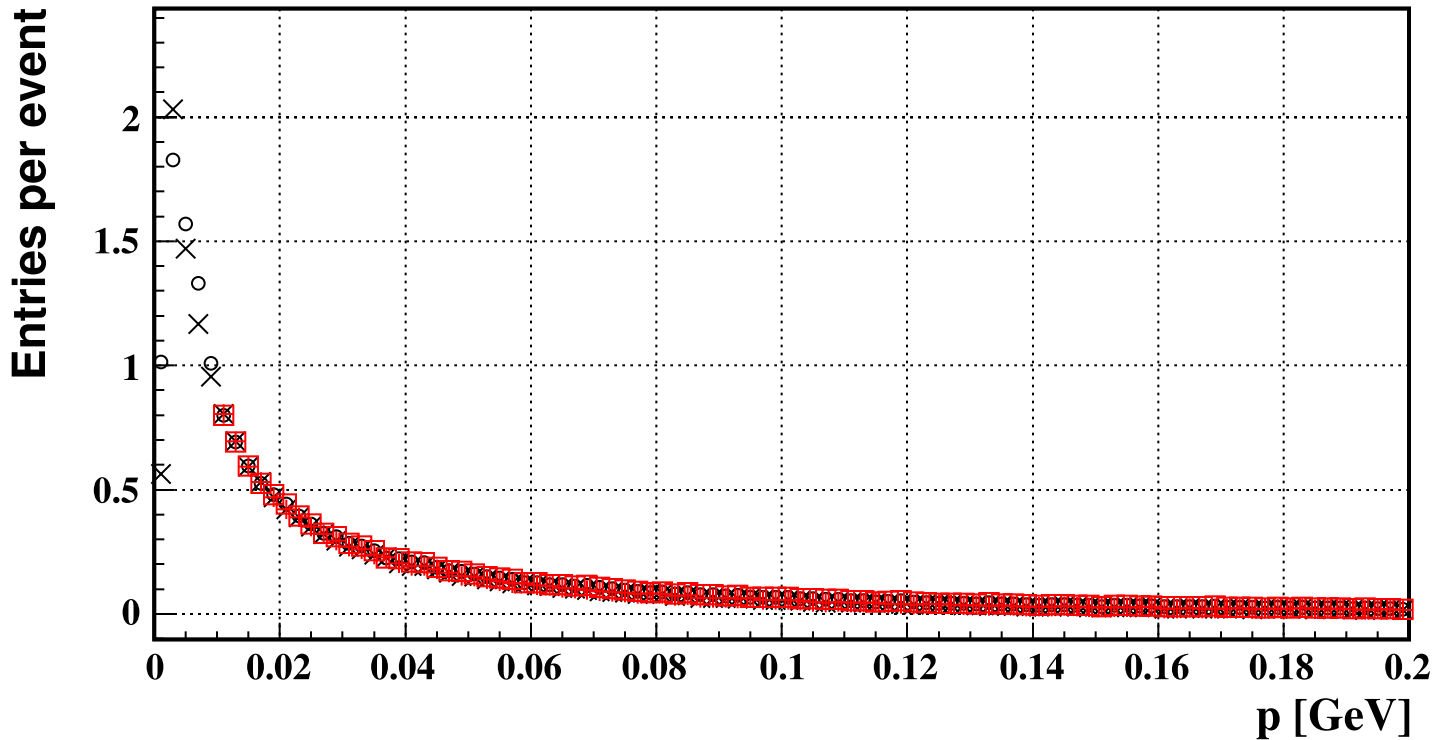
GEANT4		GEANT3		GEANT4		GEANT3	
Entries	1684304	Entries	1675636	Entries	303199	Entries	255512
Mean	0.011	Mean	0.00958	Mean	0.0676	Mean	0.0661
RMS	0.0278	RMS	0.0257	RMS	0.0463	RMS	0.0456
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	9.66	Overflow	7.35	Overflow	9.66	Overflow	7.35



100 GeV Primary π^+
Secondary e^+

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

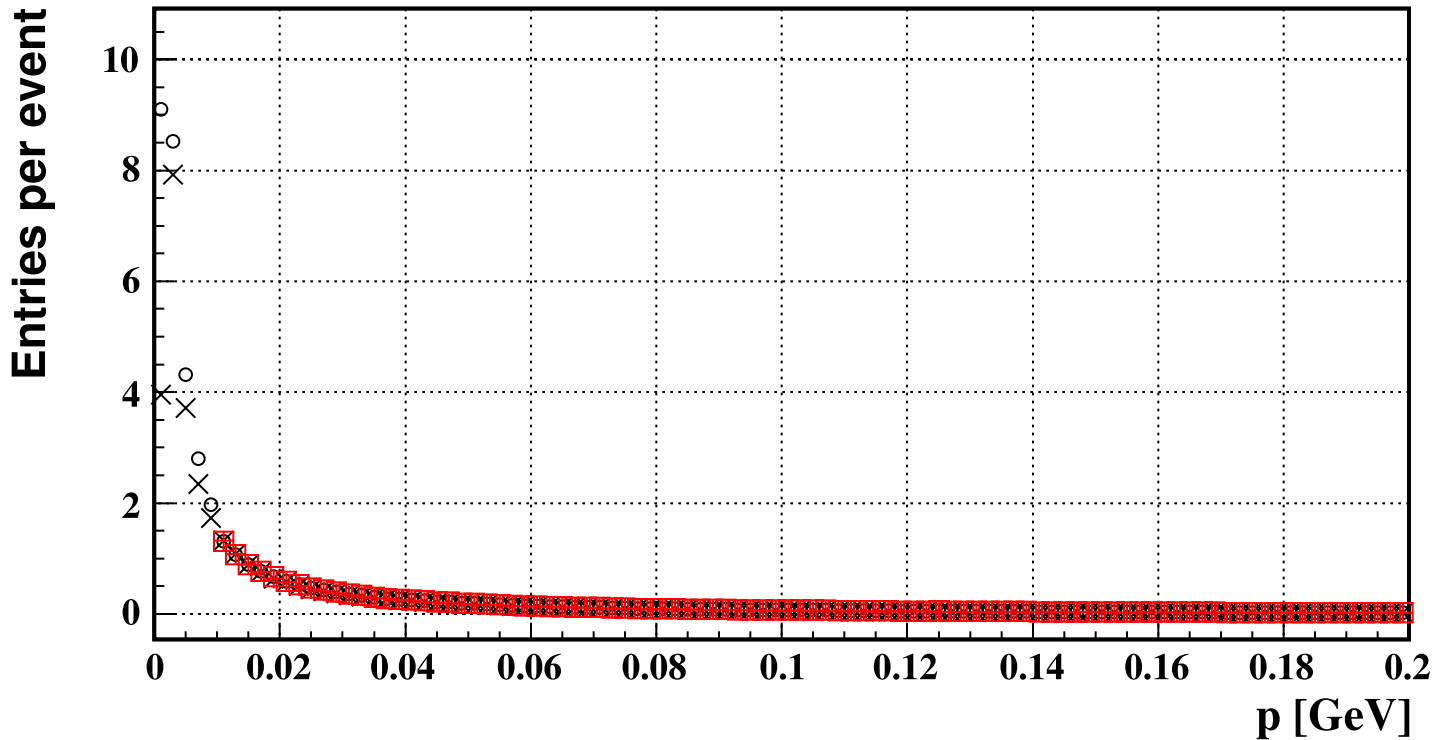
	GEANT4	GEANT3	GEANT4	GEANT3
Entries	211033	189921	143513	128050
Mean	0.0355	0.0338	0.0534	0.0505
RMS	0.0429	0.041	0.0452	0.0435
Underflow	0	0	0	0
Overflow	2.85	2.07	2.85	2.07



100 GeV Primary π^+
Secondary e^-

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

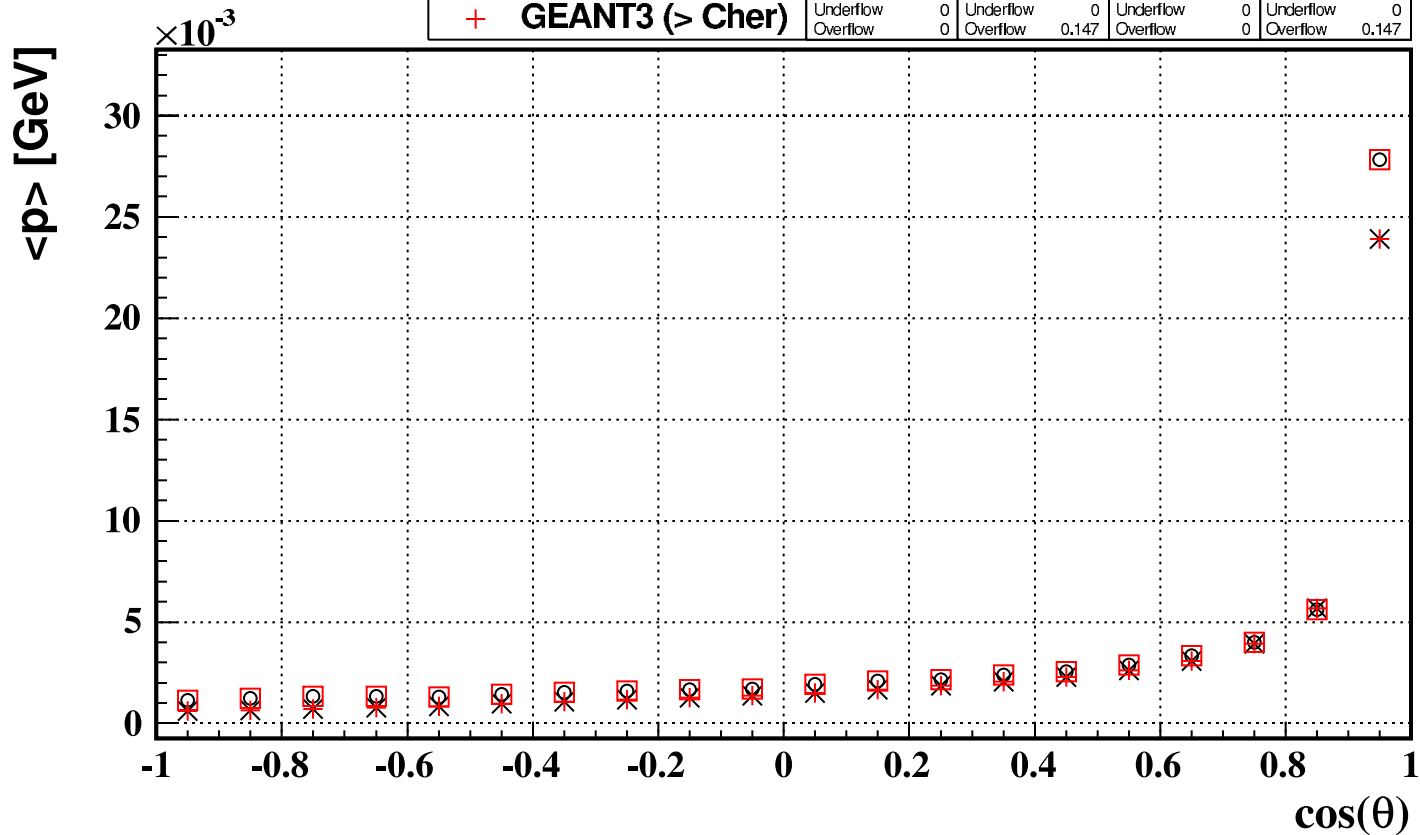
	GEANT4	GEANT3	GEANT4	GEANT3
Entries	440552	353463	173564	156781
Mean	0.0193	0.0211	0.0483	0.0458
RMS	0.0335	0.0336	0.0433	0.0416
Underflow	0	0	0	0
Overflow	2.89	2.11	2.89	2.11



100 GeV Primary γ
Secondary

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

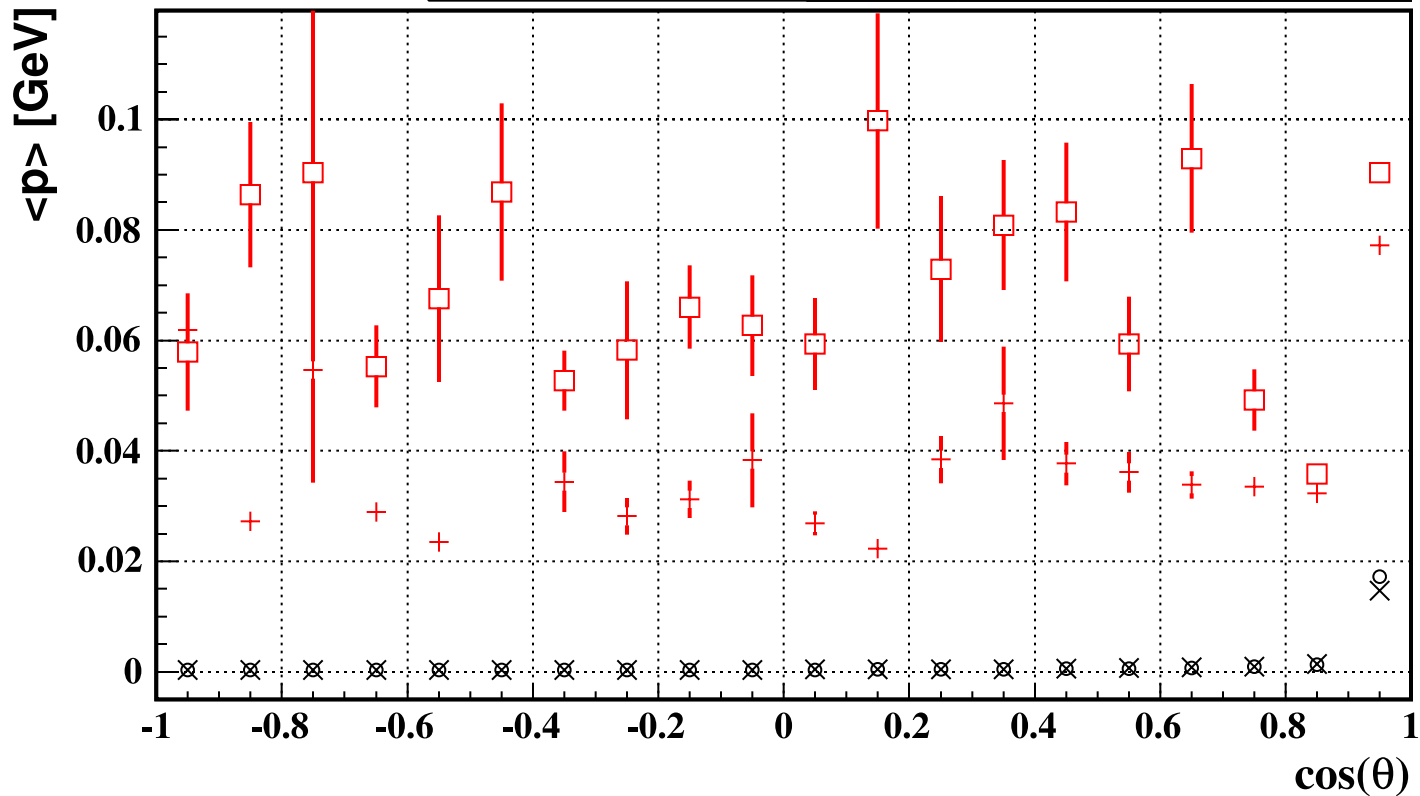
	GEANT4_pfx		GEANT3_pfx		GEANT4_pfx		GEANT3_pfx	
Entries	5214884		5274786		5214884		5274786	
Mean	0.678		0.664		0.678		0.664	
Mean y	0.0173		0.0146		0.0173		0.0146	
RMS	0.466		0.477		0.466		0.477	
RMS y	0.0973		0.048		0.0973		0.048	
Underflow	0		0		0		0	
Overflow	0		0.147		0		0.147	



100 GeV Primary γ
Secondary γ

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

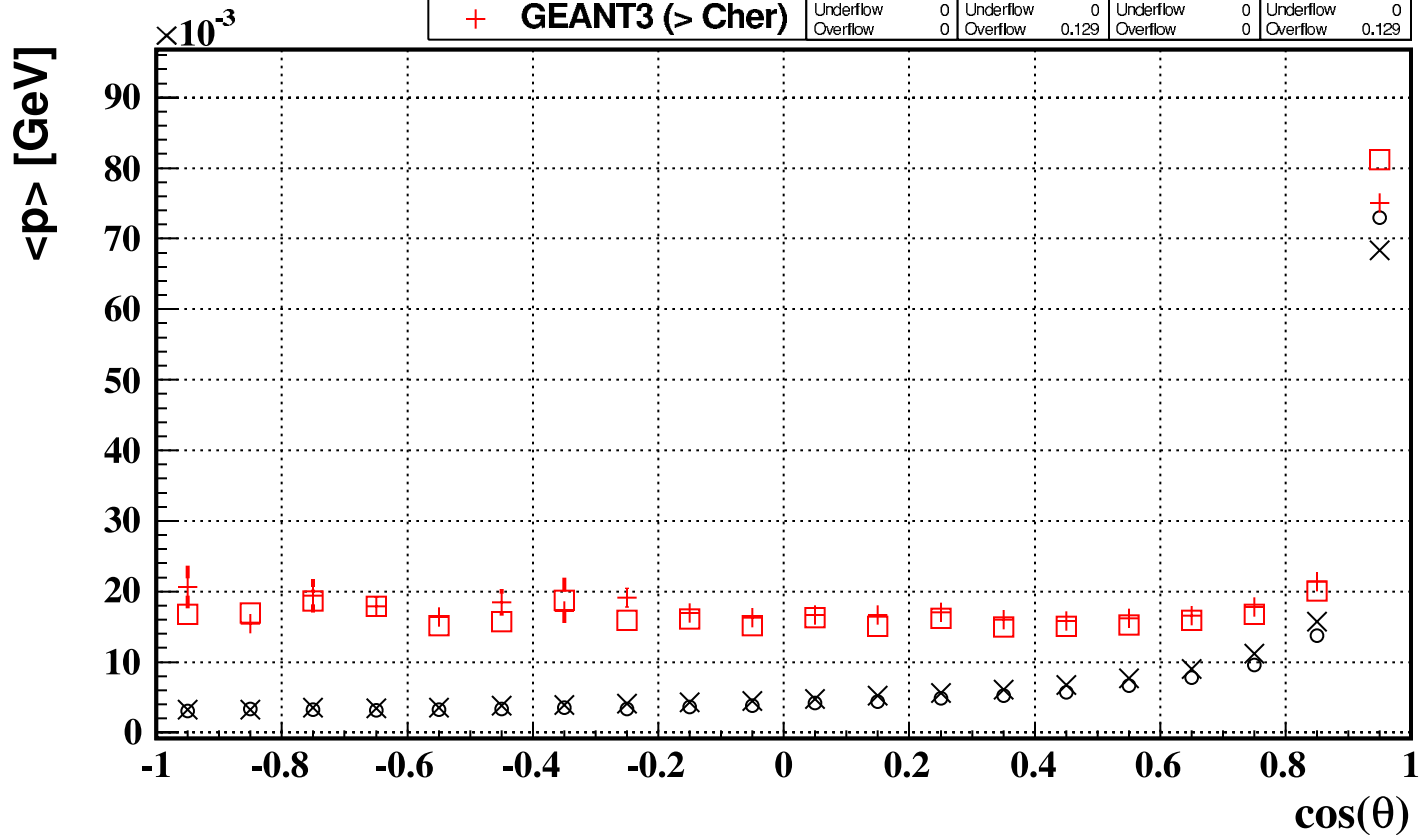
	GEANT4_pfx	GEANT3_pfx	GEANT4_pfx	GEANT3_pfx
Entries	3766386	Entries 4005133	Entries 375184	Entries 364894
Mean	0.694	Mean 0.67	Mean 0.949	Mean 0.949
Mean y	0.0111	Mean y 0.00906	Mean y 0.0903	Mean y 0.077
RMS	0.473	RMS 0.488	RMS 0.0256	RMS 0.0173
RMS y	0.0895	RMS y 0.0388	RMS y 0.271	RMS y 0.106
Underflow	0	Underflow 0	Underflow 0	Underflow 0
Overflow	0	Overflow 0.00655	Overflow 0	Overflow 0



100 GeV Primary γ
Secondary e^+

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

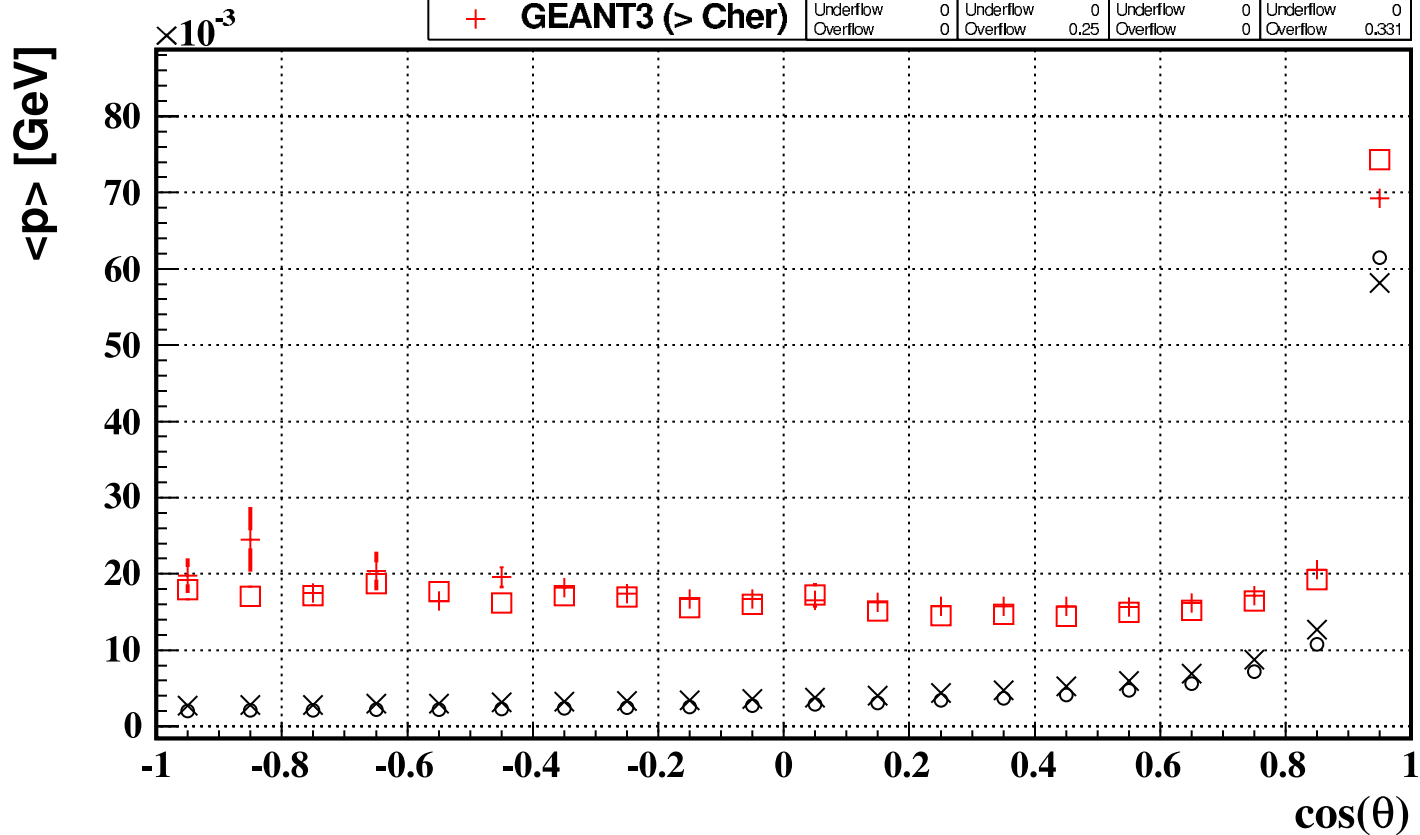
	GEANT4_pfx	GEANT3_pfx	GEANT4_pfx	GEANT3_pfx
Entries	503677	476162	310337	296359
Mean	0.742	0.712	0.908	0.896
Mean y	0.0444	0.0403	0.0691	0.0616
RMS	0.368	0.394	0.13	0.142
RMS y	0.134	0.0744	0.166	0.0876
Underflow	0	0	0	0
Overflow	0	0.129	0	0.129



100 GeV Primary γ
Secondary e^-

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

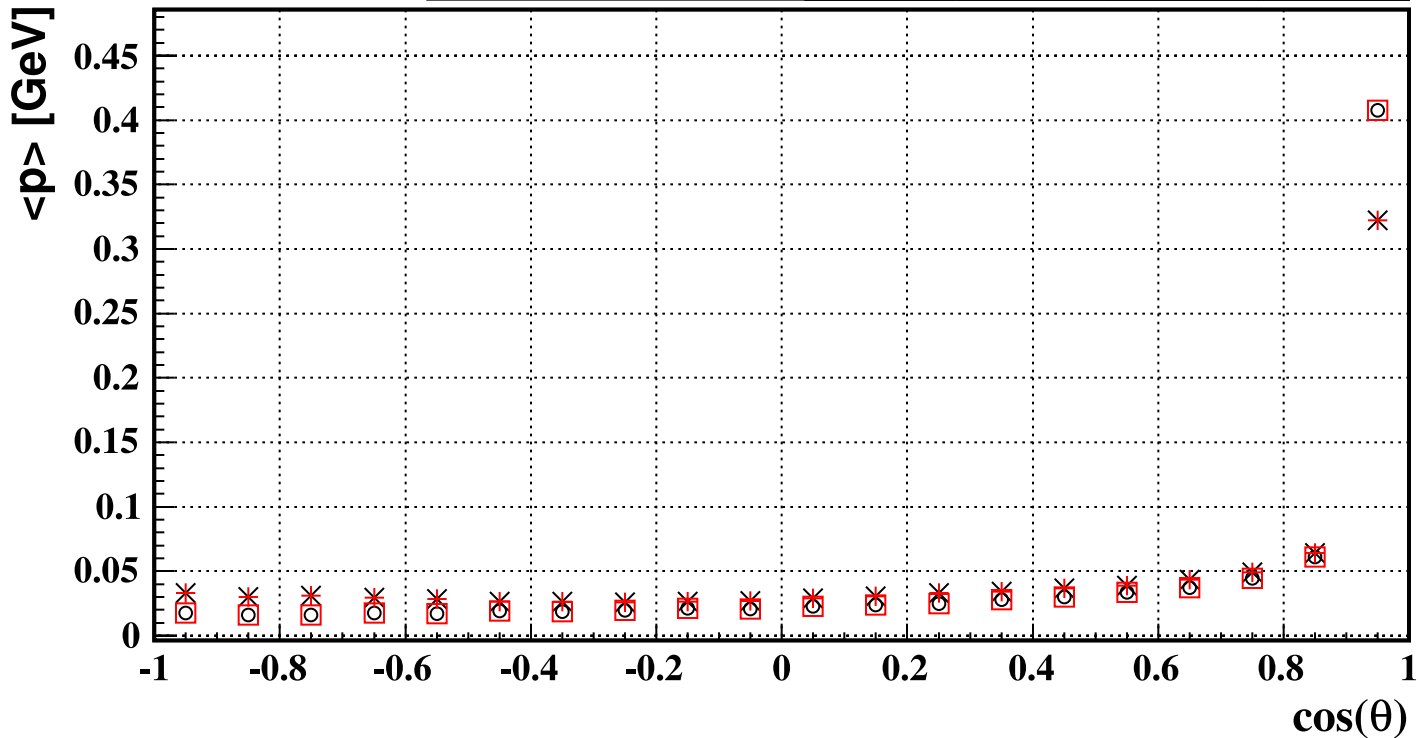
	GEANT4_pfx	GEANT3_pfx	GEANT4_pfx	GEANT3_pfx
Entries	937687	793491	368196	352223
Mean	0.584	0.604	0.904	0.891
Mean y	0.0267	0.0272	0.0622	0.056
RMS	0.468	0.459	0.134	0.147
RMS y	0.085	0.0604	0.128	0.0821
Underflow	0	0	0	0
Overflow	0	0.25	0	0.331



100 GeV Primary π^+
Secondary

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

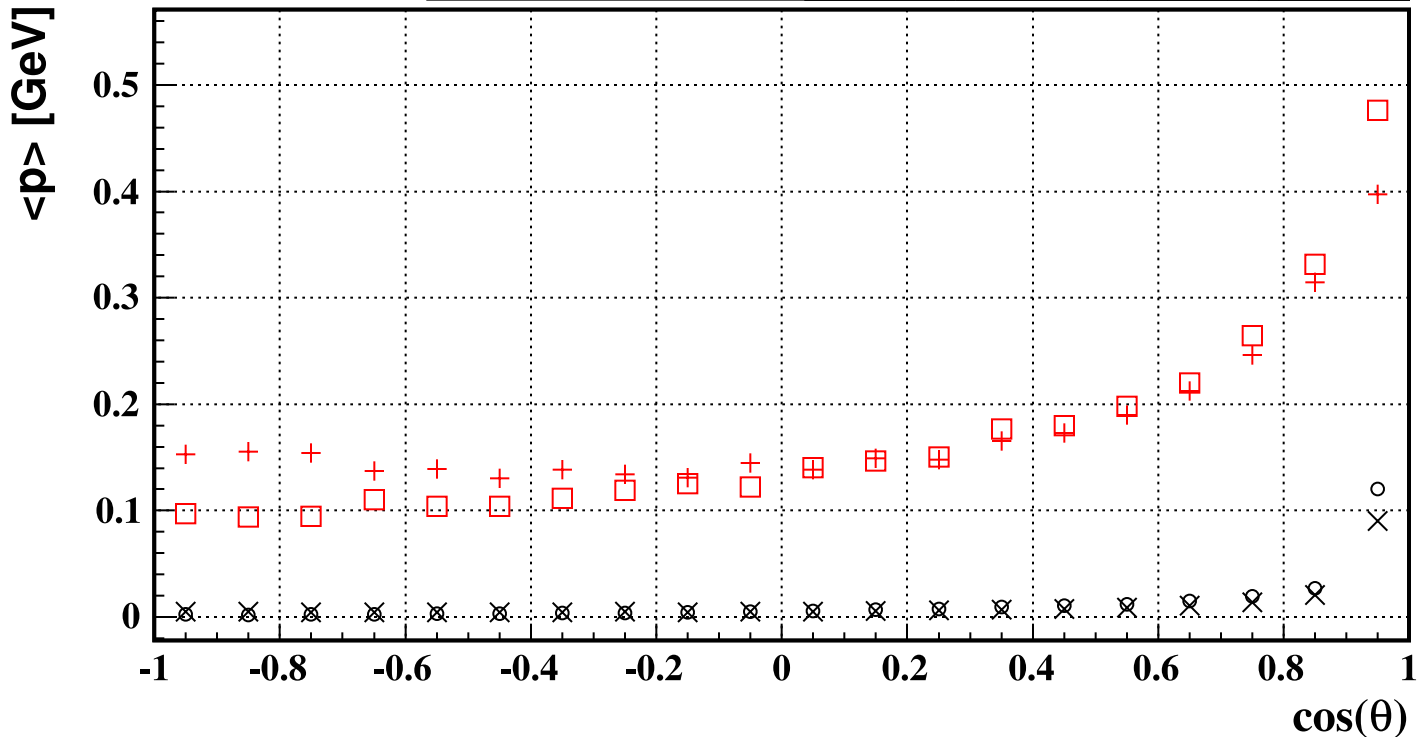
GEANT4_pfx		GEANT3_pfx		GEANT4_pfx		GEANT3_pfx	
Entries	2475030	Entries	2392163	Entries	2475030	Entries	2392163
Mean	0.691	Mean	0.663	Mean	0.691	Mean	0.663
Mean y	0.26	Mean y	0.201	Mean y	0.26	Mean y	0.201
RMS	0.461	RMS	0.482	RMS	0.461	RMS	0.482
RMS y	2.11	RMS y	1.35	RMS y	2.11	RMS y	1.35
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	0	Overflow	0.171	Overflow	0	Overflow	0.171



**100 GeV Primary π^+
Secondary γ**

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

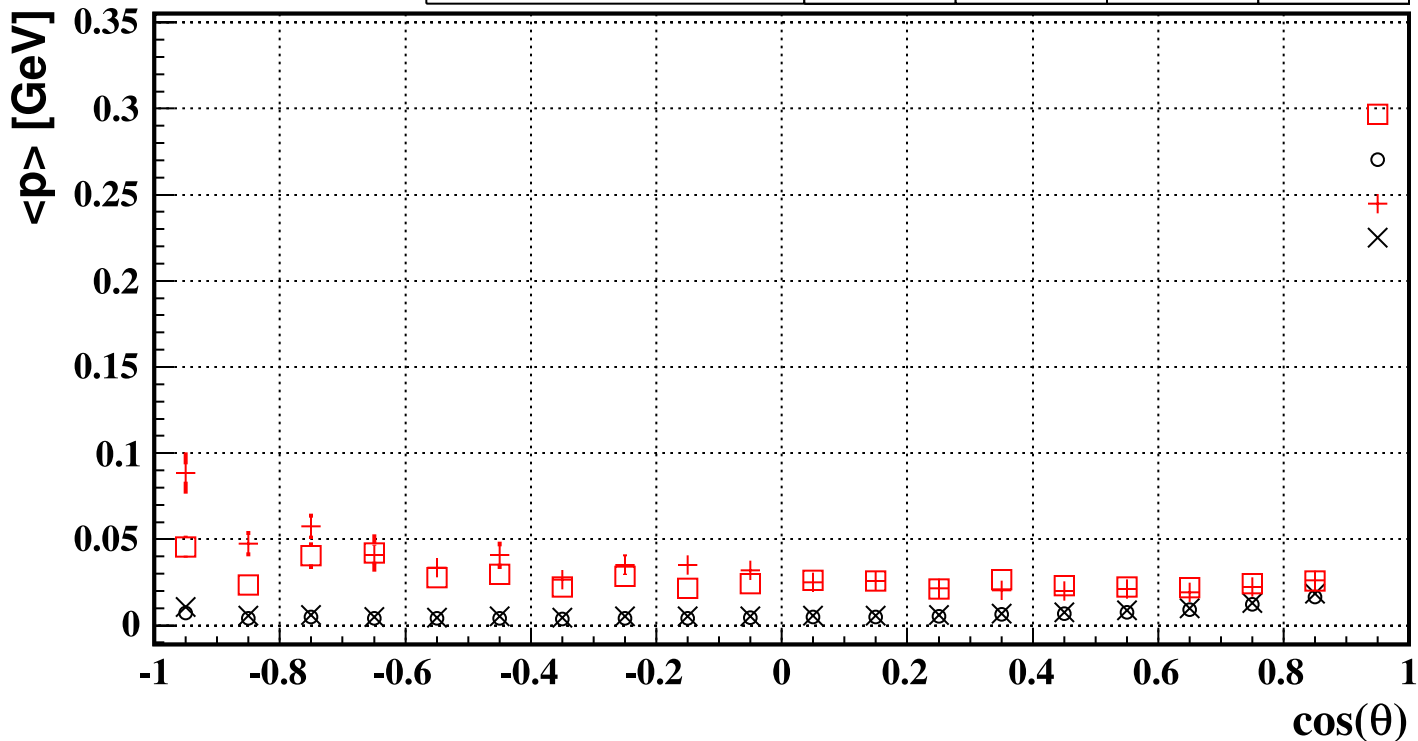
GEANT4_pfx		GEANT3_pfx		GEANT4_pfx		GEANT3_pfx	
Entries	1684304	Entries	1675636	Entries	303199	Entries	255512
Mean	0.713	Mean	0.681	Mean	0.904	Mean	0.889
Mean y	0.0834	Mean y	0.0596	Mean y	0.452	Mean y	0.378
RMS	0.462	RMS	0.484	RMS	0.198	RMS	0.244
RMS y	0.653	RMS y	0.472	RMS y	1.49	RMS y	1.16
Underflow	0	Underflow	0	Underflow	0	Underflow	0
Overflow	0	Overflow	0.0715	Overflow	0	Overflow	0.253



100 GeV Primary π^+
Secondary e^+

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

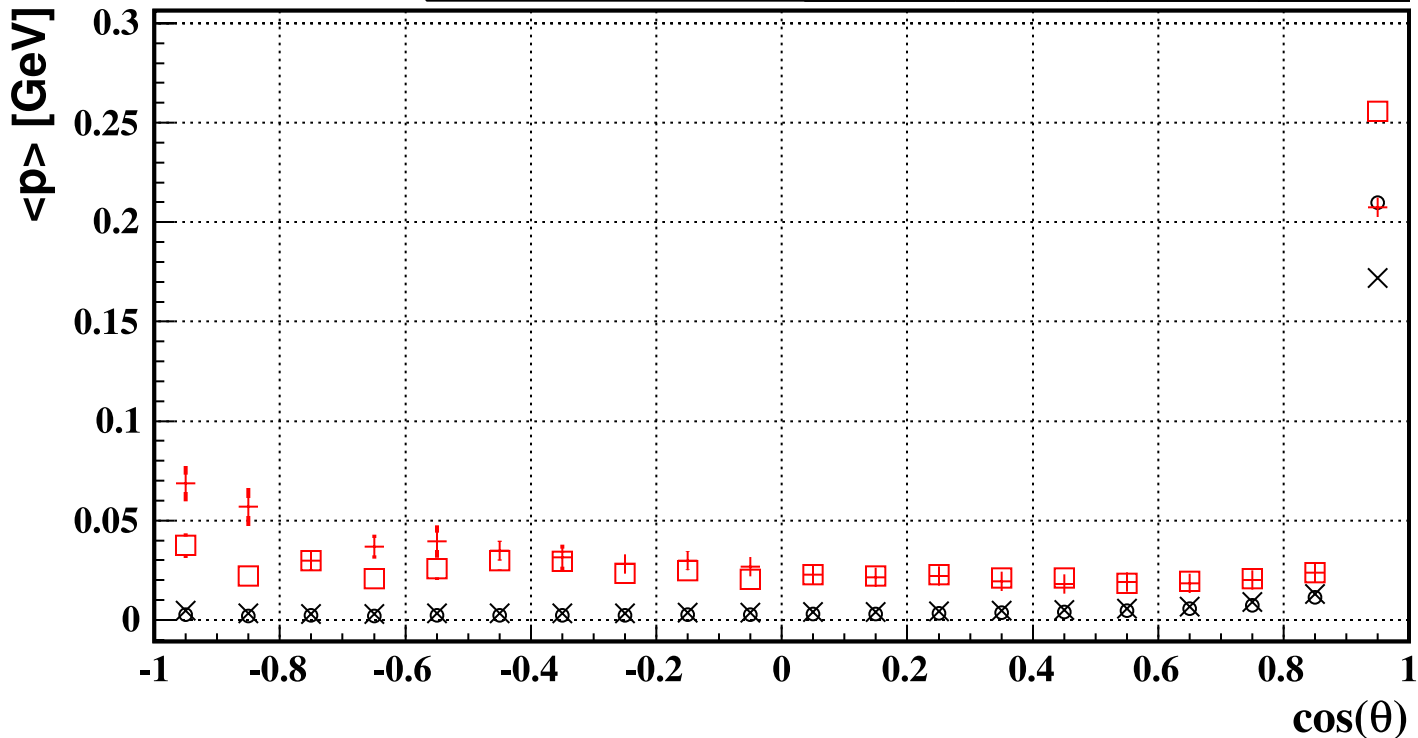
	GEANT4_pfx	GEANT3_pfx	GEANT4_pfx	GEANT3_pfx
Entries	211033	189921	143513	128050
Mean	0.782	0.75	0.916	0.904
Mean y	0.176	0.138	0.257	0.202
RMS	0.341	0.37	0.126	0.144
RMS y	0.777	0.632	0.932	0.761
Underflow	0	0	0	0
Overflow	0	0,275	0	0,275



100 GeV Primary π^+
Secondary e^-

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

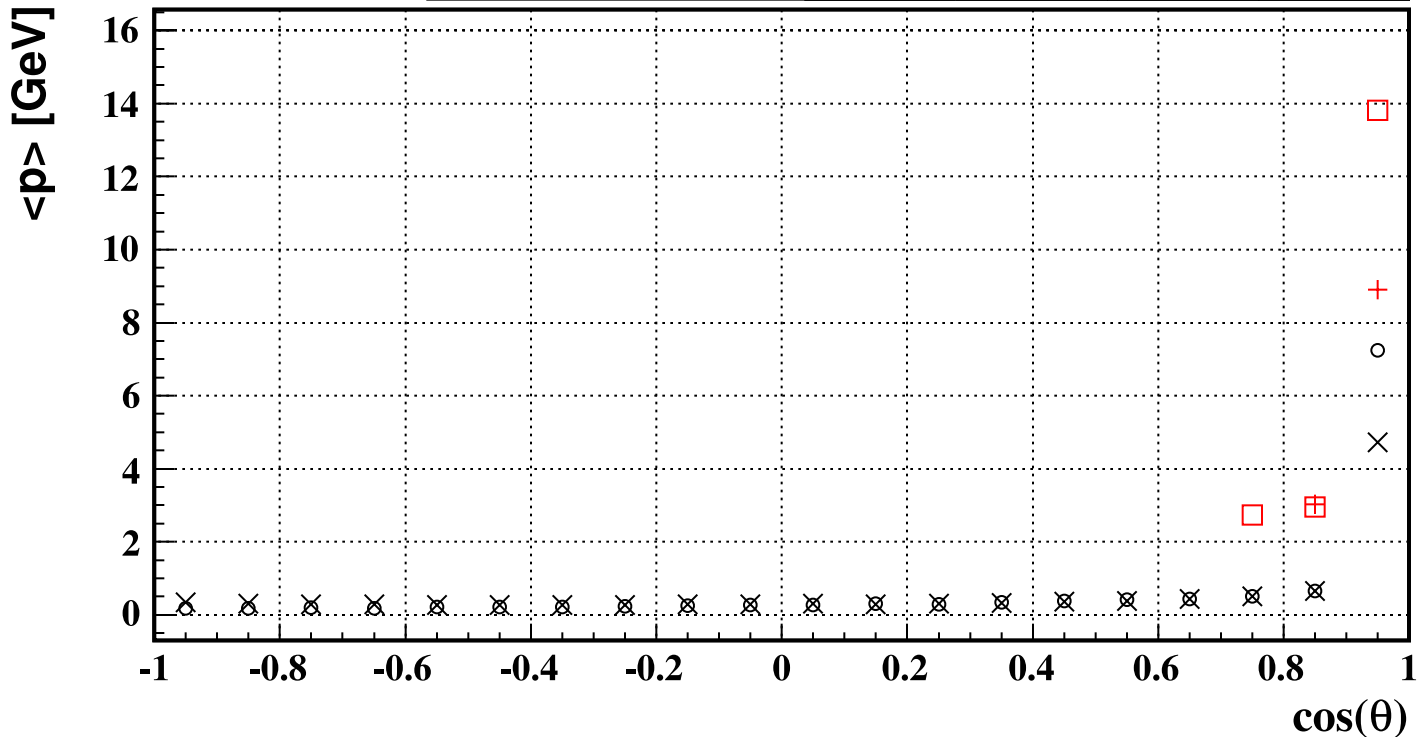
	GEANT4_pfx	GEANT3_pfx	GEANT4_pfx	GEANT3_pfx
Entries	440552	353463	173564	156781
Mean	0.588	0.614	0.912	0.899
Mean y	0.0872	0.0762	0.216	0.167
RMS	0.472	0.458	0.13	0.146
RMS y	0.545	0.416	0.852	0.612
Underflow	0	0	0	0
Overflow	0	0.126	0	0.155



100 GeV Primary π^+
Secondary π^+

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- +
- +

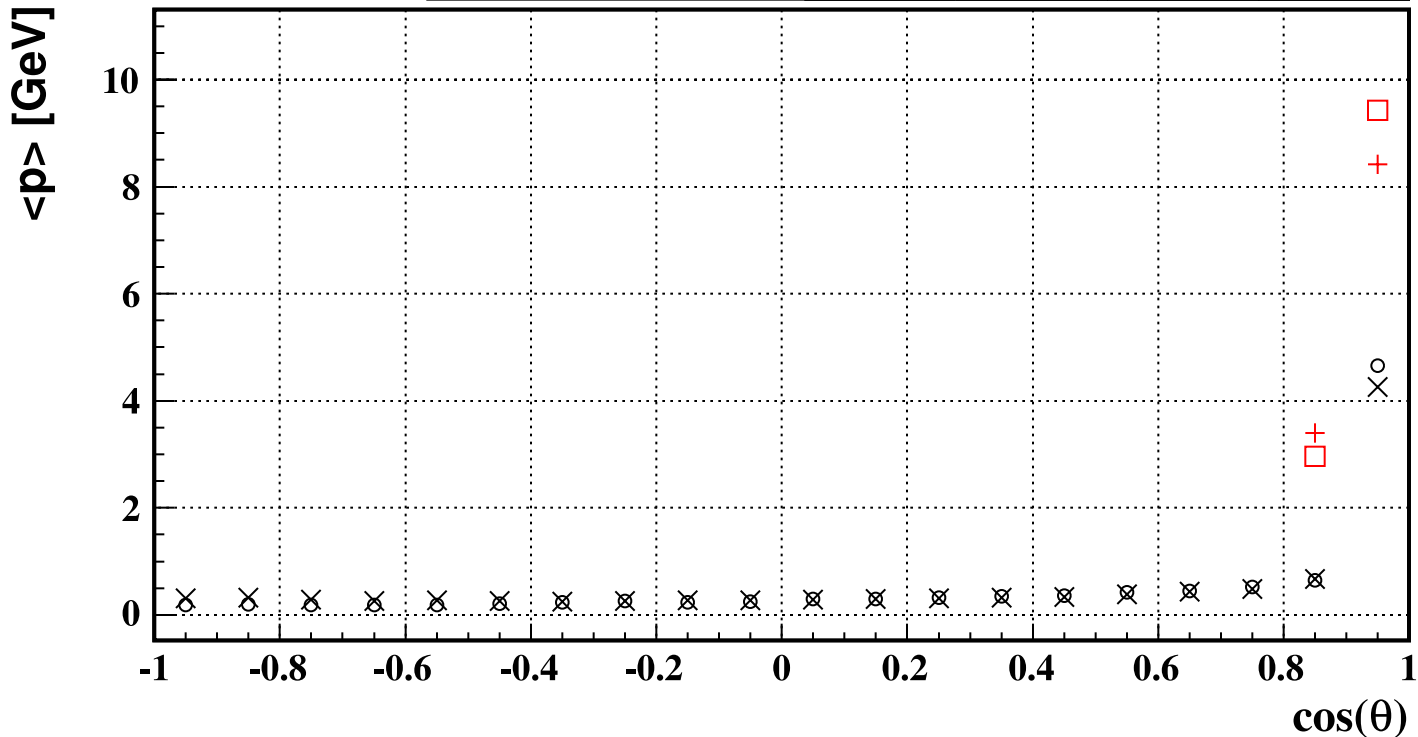
	GEANT4_pfx	GEANT3_pfx	GEANT4_pfx	GEANT3_pfx
Entries	37937	Entries 34391	Entries 13186	Entries 10544
Mean	0.828	Mean 0.749	Mean 0.95	Mean 0.95
Mean y	5.39	Mean y 3.33	Mean y 13.8	Mean y 8.9
RMS	0.299	RMS 0.434	RMS 0.00314	RMS 0.00275
RMS y	12.4	RMS y 5.47	RMS y 18.3	RMS y 7.2
Underflow	0	Underflow 0	Underflow 0	Underflow 0
Overflow	0	Overflow 0	Overflow 0	Overflow 0



100 GeV Primary π^+
Secondary π^-

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

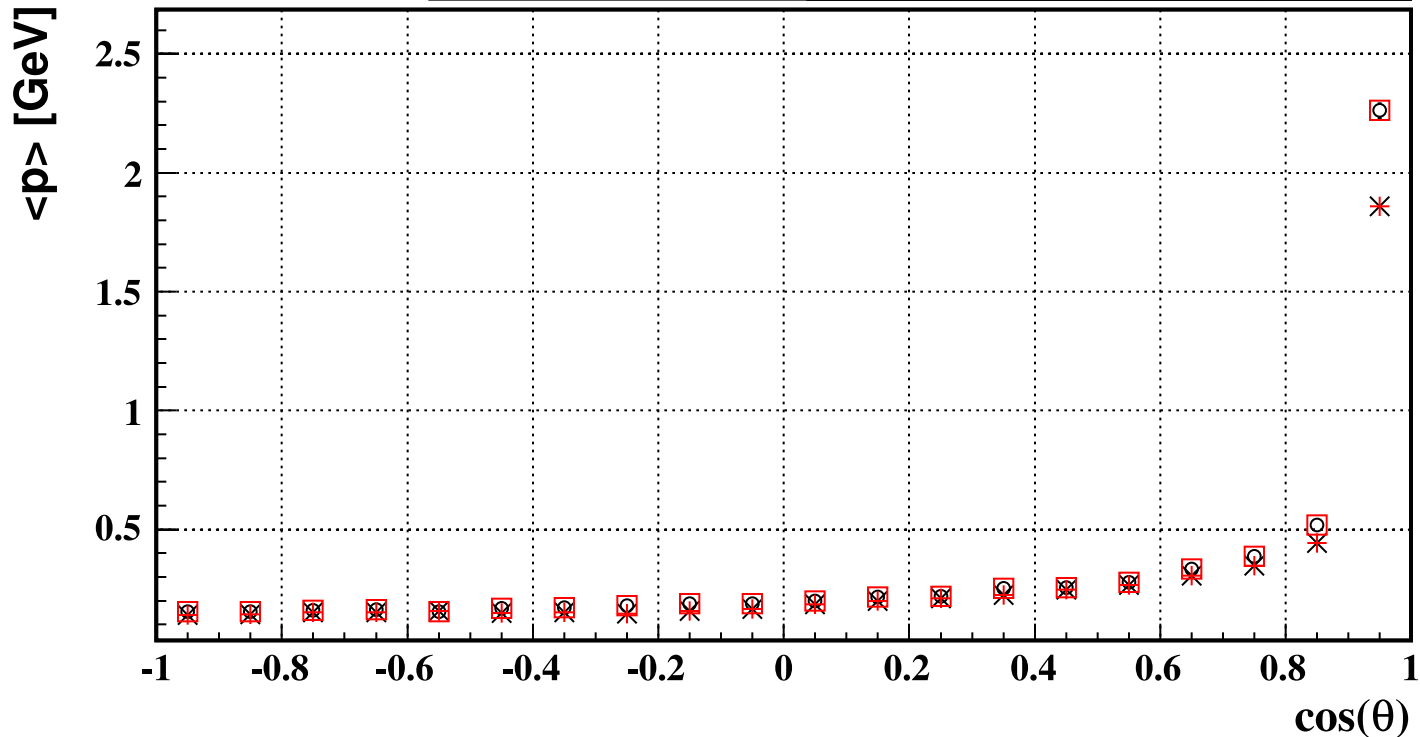
	GEANT4_pfx		GEANT3_pfx		GEANT4_pfx		GEANT3_pfx	
Entries	31878		30175		9393		8284	
Mean	0.817		0.743		0.95		0.95	
Mean y	3.41		2.94		9.42		8.41	
RMS	0.312		0.434		0.00206		0.00396	
RMS y	6.22		5.31		8.88		7.77	
Underflow	0		0		0		0	
Overflow	0		0		0		0	



100 GeV Primary π^+
Secondary n

○ GEANT4
× GEANT3
□ GEANT4 (> Cher)
+ GEANT3 (> Cher)

	GEANT4_pfx	GEANT3_pfx	GEANT4_pfx	GEANT3_pfx
Entries	40626	71220	40626	71220
Mean	0.277	0.235	0.277	0.235
Mean y	0.676	0.49	0.676	0.49
RMS	0.602	0.596	0.602	0.596
RMS y	1.73	1.48	1.73	1.48
Underflow	0	0	0	0
Overflow	0	0	0	0



100 GeV Primary π^+
Secondary p

- GEANT4
- × GEANT3
- GEANT4 (> Cher)
- + GEANT3 (> Cher)

	GEANT4_pfx		GEANT3_pfx		GEANT4_pfx		GEANT3_pfx	
Entries	19358	Entries	26354	Entries	19358	Entries	26354	
Mean	0.494	Mean	0.469	Mean	0.494	Mean	0.469	
Mean y	1.26	Mean y	1.05	Mean y	1.26	Mean y	1.05	
RMS	0.536	RMS	0.531	RMS	0.536	RMS	0.531	
RMS y	2.35	RMS y	2.29	RMS y	2.35	RMS y	2.29	
Underflow	0	Underflow	0	Underflow	0	Underflow	0	
Overflow	0	Overflow	0	Overflow	0	Overflow	0	

