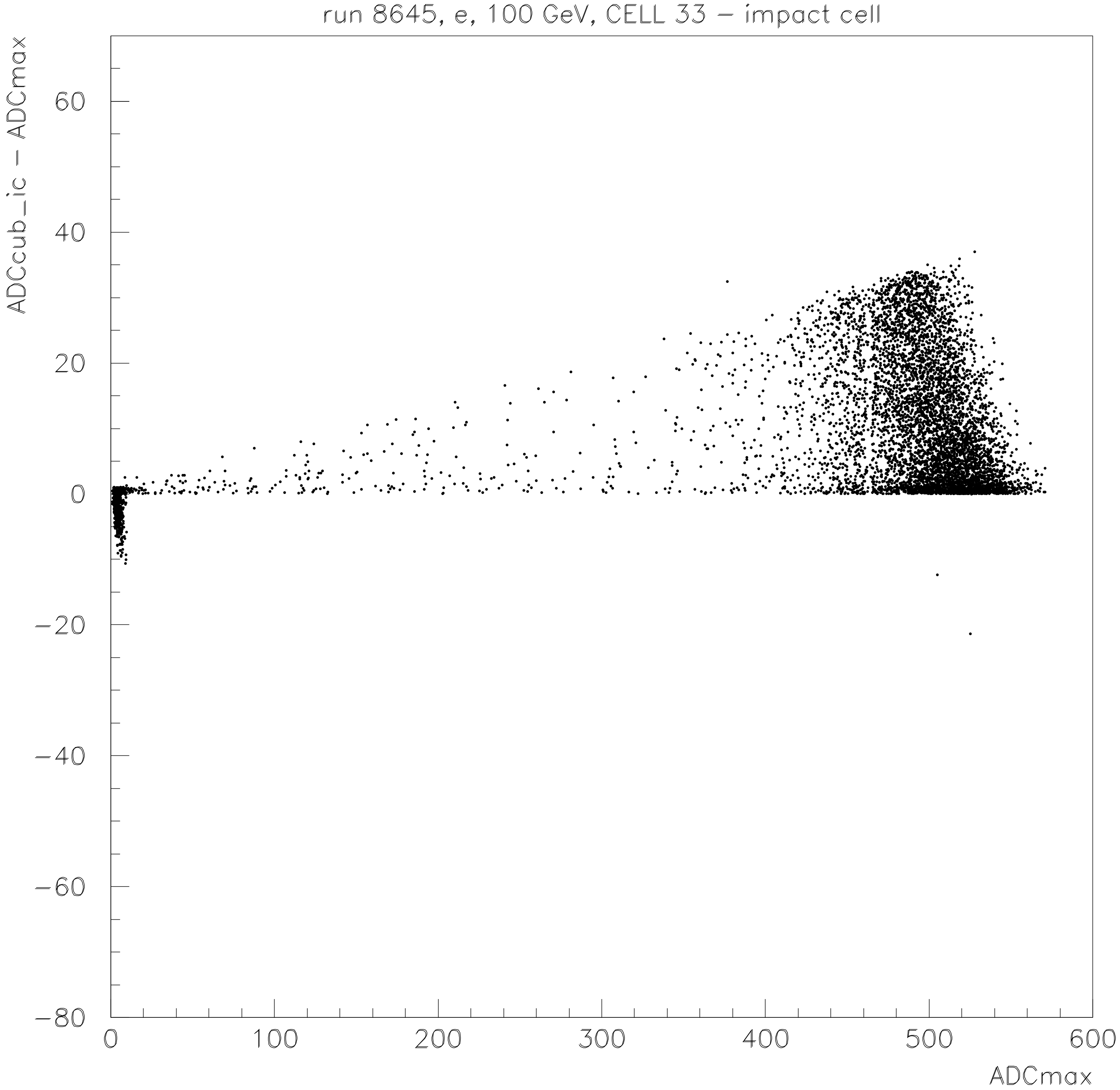
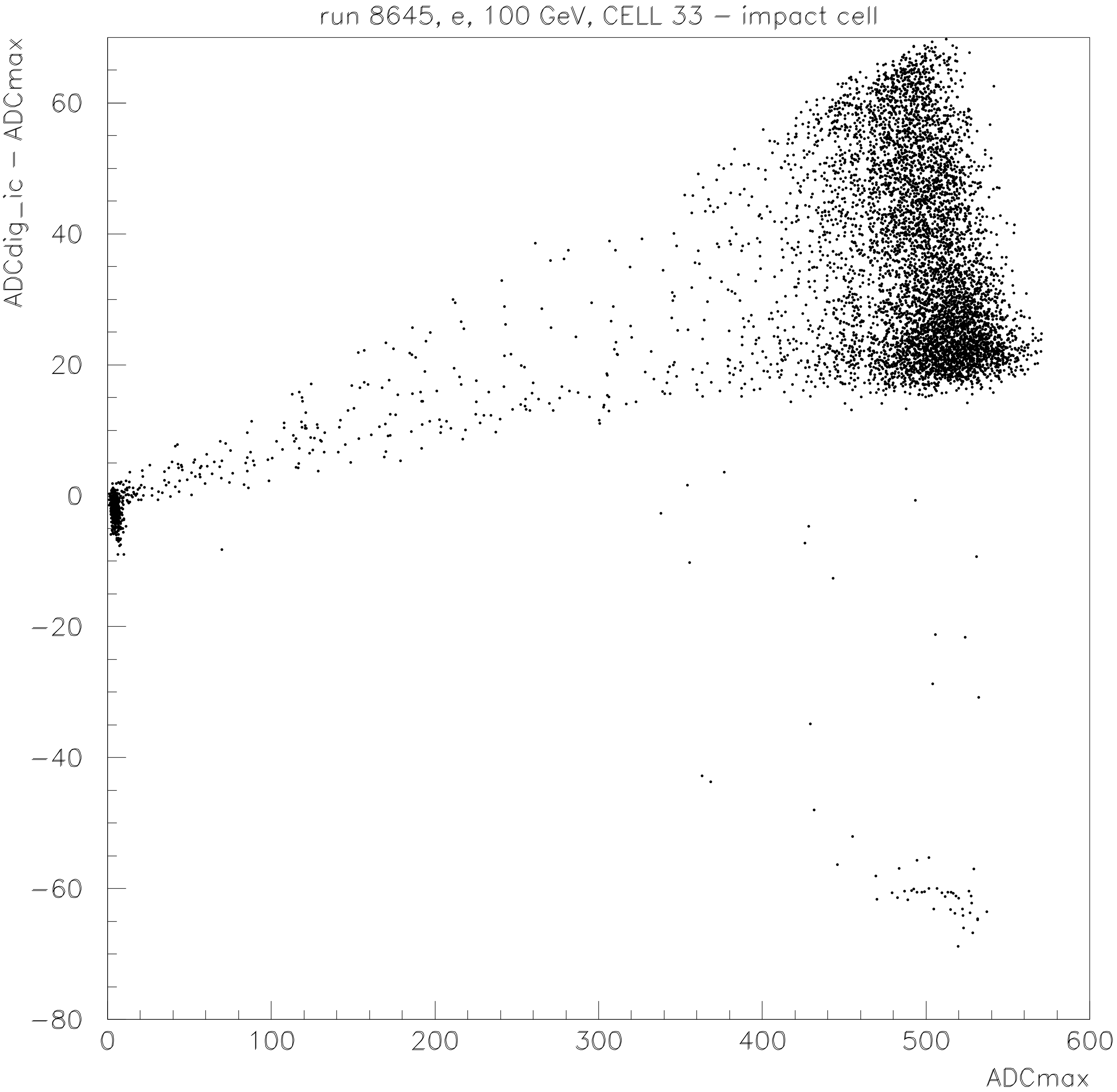
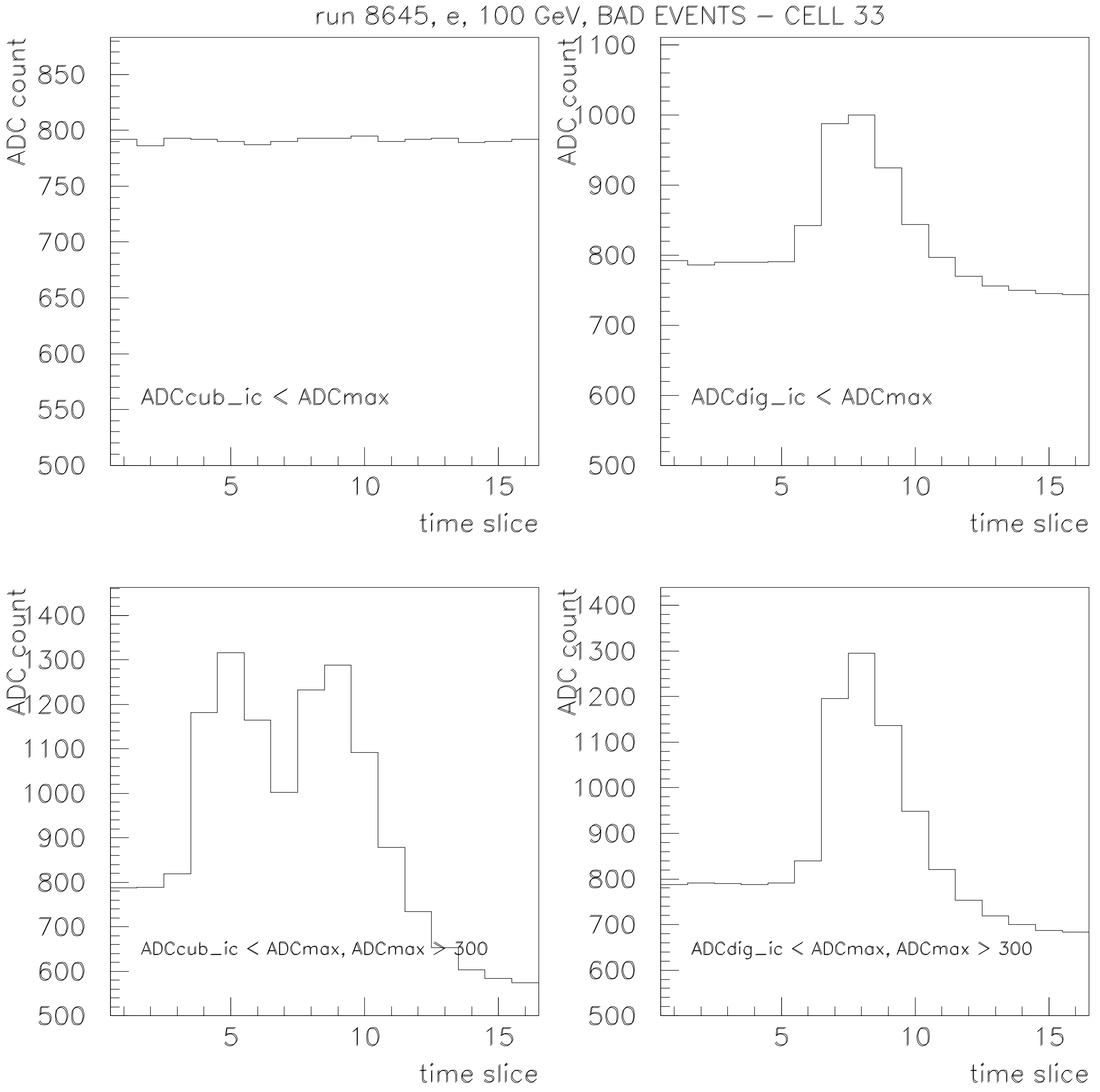
A.Cheplakov,G.Gogiberidze,N.Javadov,V.Kukhtin,I.Pisarev (JINR)
LAr HEC Test Beam, 09/12/99

Status of analysis at Dubna

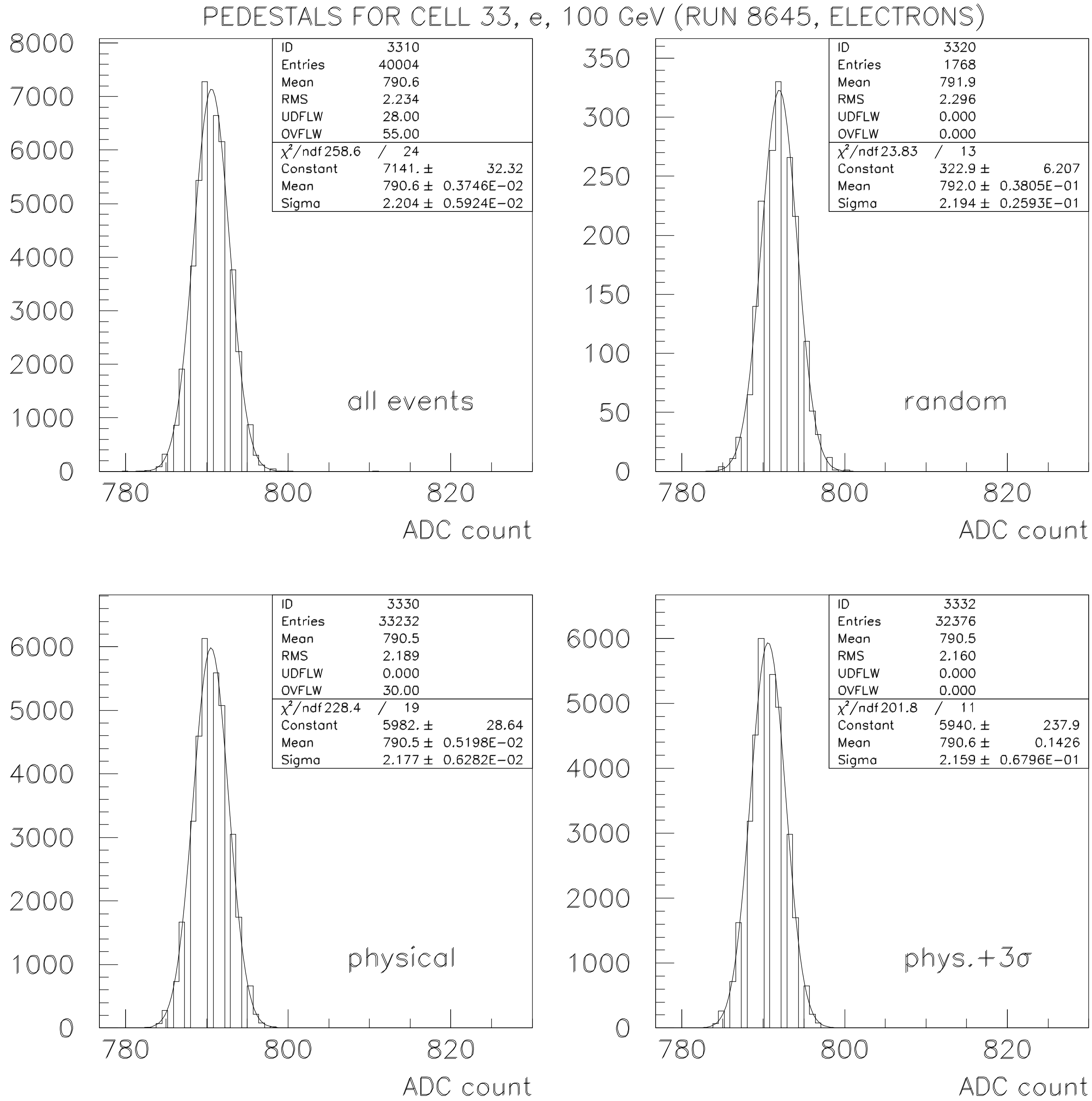

run 8645, e, 100 GeV, CELL 33 - impact cell
ADCcub_ic - ADCmax
60
40
20
0
−20
−40
−60
−80
0
100
200
300
400
500
600
ADCmax



run 8645, e, 100 GeV, CELL 33 – impact cell
ADCdig_ic – ADCmax
ADCmax
60
40
20
0
−20
−40
−60
−80
0
100
200
300
400
500
600



run 8645, e, 100 GeV, BAD EVENTS – CELL 33
ADC count
time slice
ADCcub_ic < ADCmax
ADCdig_ic < ADCmax
ADCcub_ic < ADCmax, ADCmax > 300
ADCdig_ic < ADCmax, ADCmax > 300


PEDESTALS FOR CELL 33, e, 100 GeV (RUN 8645, ELECTRONS)
ID 3310
Entries 40004
Mean 790.6
RMS 2.234
UDFLW 28.00
OVFLW 55.00
χ²/ndf 258.6 / 24
Constant 7141. ± 32.32
Mean 790.6 ± 0.3746E-02
Sigma 2.204 ± 0.5924E-02
all events
ID 3320
Entries 1768
Mean 791.9
RMS 2.296
UDFLW 0.000
OVFLW 0.000
χ²/ndf 23.83 / 13
Constant 322.9 ± 6.207
Mean 792.0 ± 0.3805E-01
Sigma 2.194 ± 0.2593E-01
random
ID 3330
Entries 33232
Mean 790.5
RMS 2.189
UDFLW 0.000
OVFLW 30.00
χ²/ndf 228.4 / 19
Constant 5982. ± 28.64
Mean 790.5 ± 0.5198E-02
Sigma 2.177 ± 0.6282E-02
physical
ID 3332
Entries 32376
Mean 790.5
RMS 2.160
UDFLW 0.000
OVFLW 0.000
χ²/ndf 201.8 / 11
Constant 5940. ± 237.9
Mean 790.6 ± 0.1426
Sigma 2.159 ± 0.6796E-01
phys.+3σ
ADC count

RUN 8645, ELECTRONS, e, 100 GeV, POINT M

ALL		EVENTS	-	10000	
RANDOM		EVENTS	-	442	
PHYSICS		EVENTS	-	8307	
	BAD	EVENTS	-	214	(ADC_{1-4} above $3\sigma_{ped}$ for any of 33, 58, 34 cells)
	GOOD	EVENTS	-	8093	
EPI		EVENTS	-	8255	
EPI	GOOD	EVENTS	-	8045	
E		EVENTS	-	6249	
E	GOOD	EVENTS	-	6092	
PI		EVENTS	-	2006	
PI	GOOD	EVENTS	-	1953	

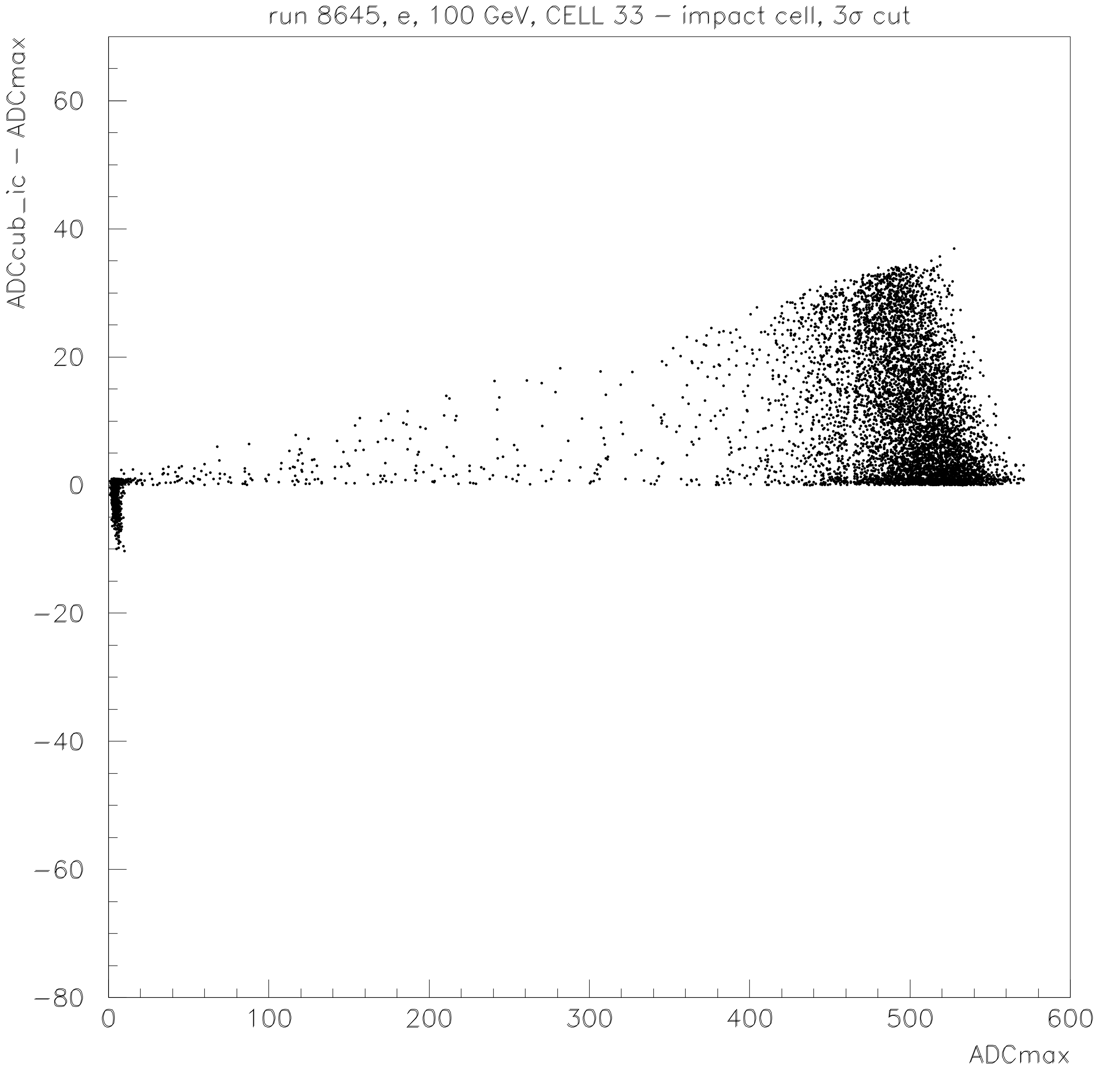
TRIGGER EPI, NO σ CUT

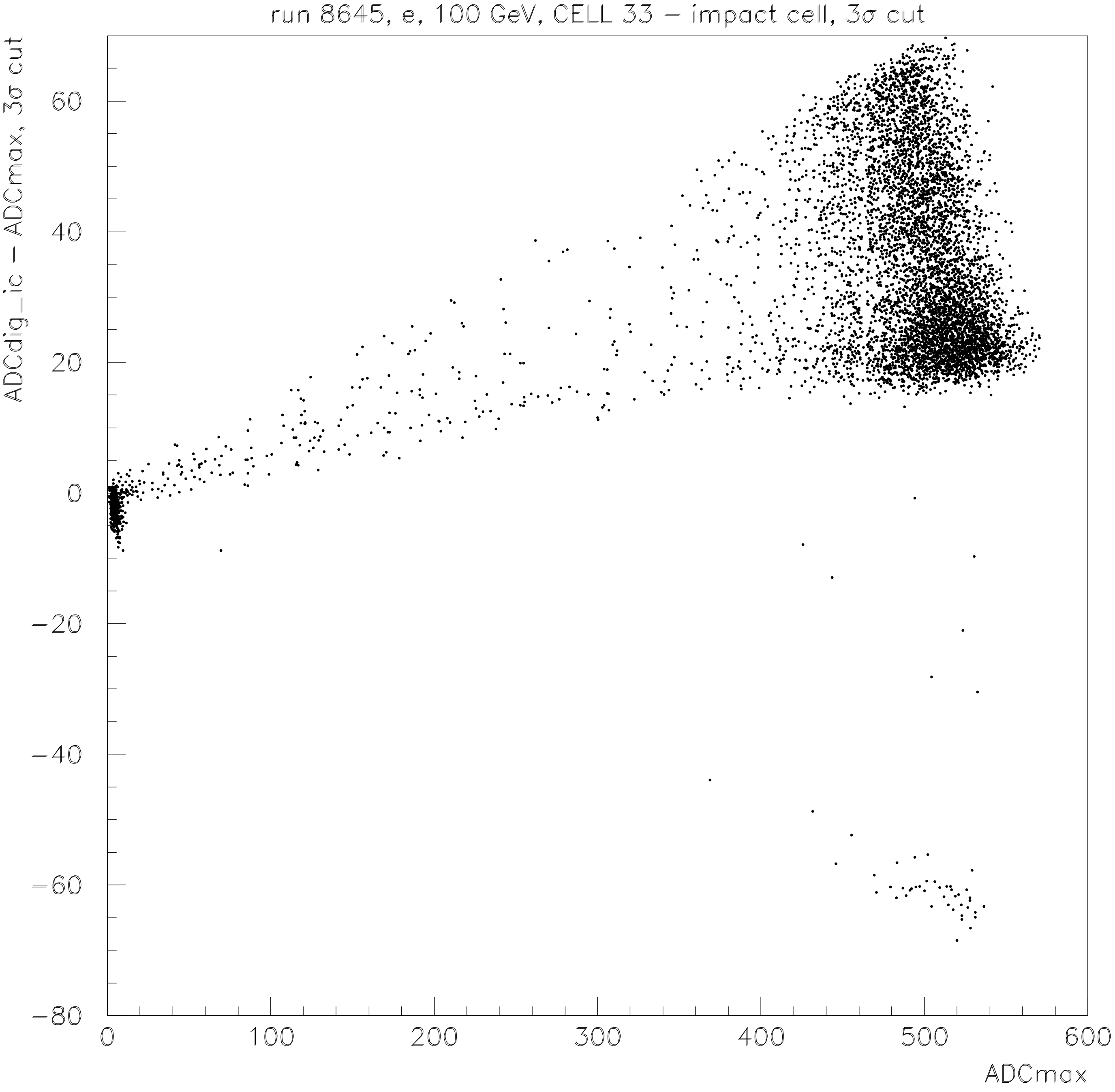
1	2	3	4	5	6	7	8
33	700	982	665	2	79	2	66
58	601	2926	534	70	2182	0	1
34	5827	7834	5659	32	191	0	0

TRIGGER EPI, 3σ CUT

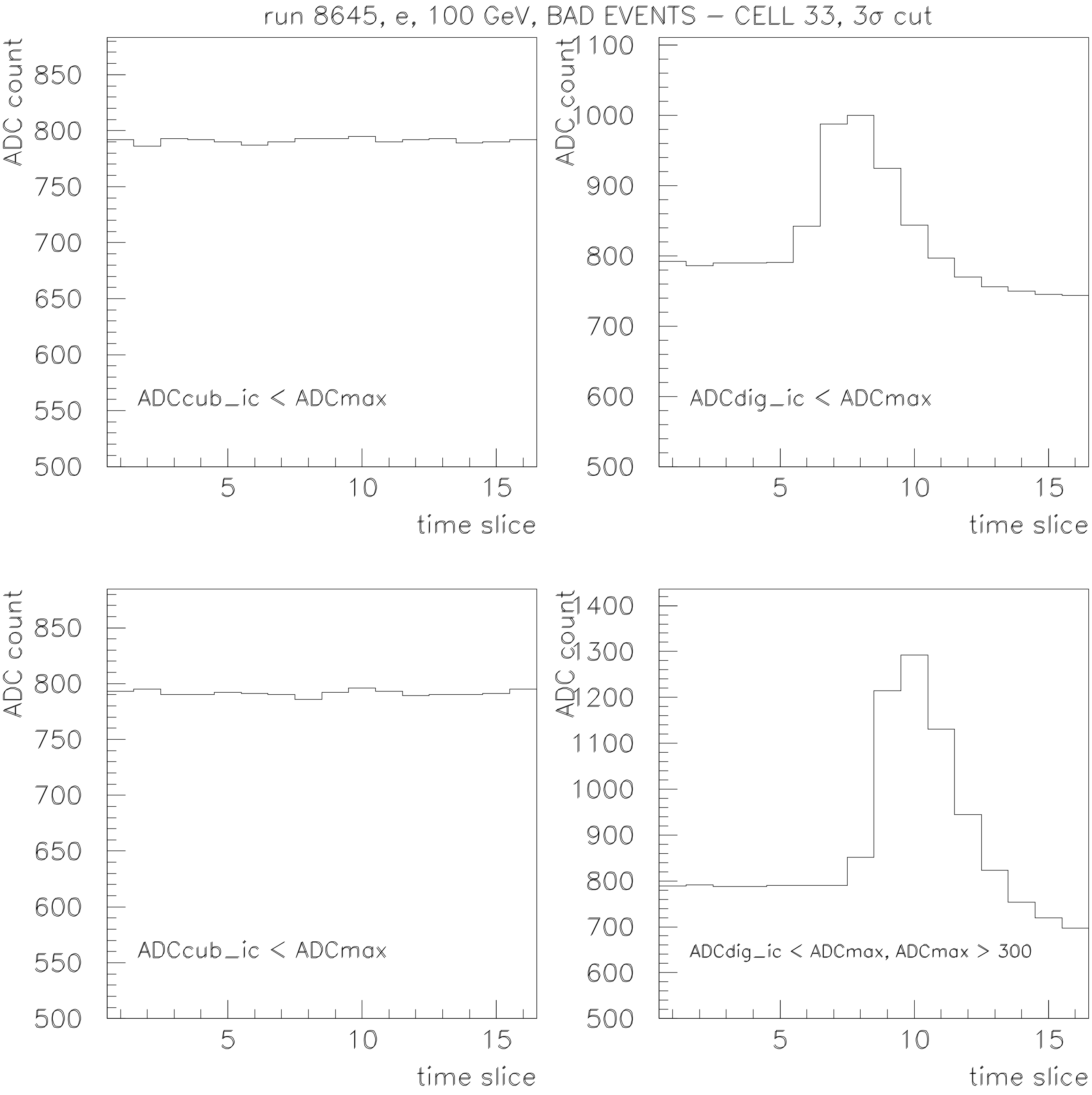
1	2	3	4	5	6	7	8
33	681	951	647	0	71	0	58
58	586	2835	520	65	2111	0	1
34	5670	7636	5511	31	184	0	0

1 - Cell number
2 - ADC_cub < ADC_max
3 - ADC_dig < ADC_max
4 - ADC_cub< ADC_max and ADC_dig < ADC_max
5 - ADC_cub < ADC_max and ADC_max > 10
6 - ADC_dig < ADC_max and ADC_max > 10
5 - ADC_cub < ADC_max and ADC_max > 300
6 - ADC_dig < ADC_max and ADC_max > 300

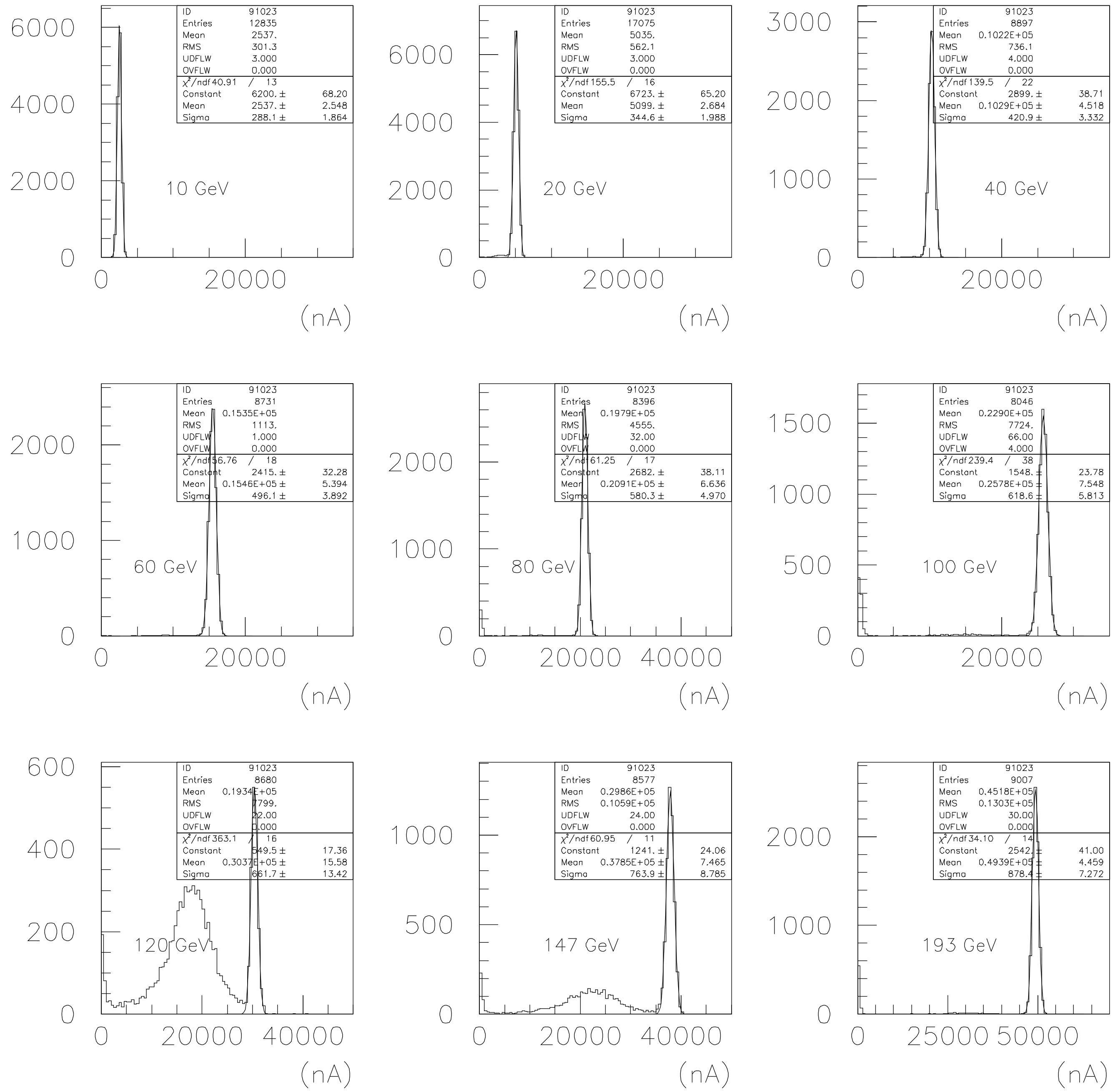

run 8645, e, 100 GeV, CELL 33 – impact cell, 3σ cut
ADCcub_ic – ADCmax
ADCmax
60
40
20
0
−20
−40
−60
−80
0
100
200
300
400
500
600



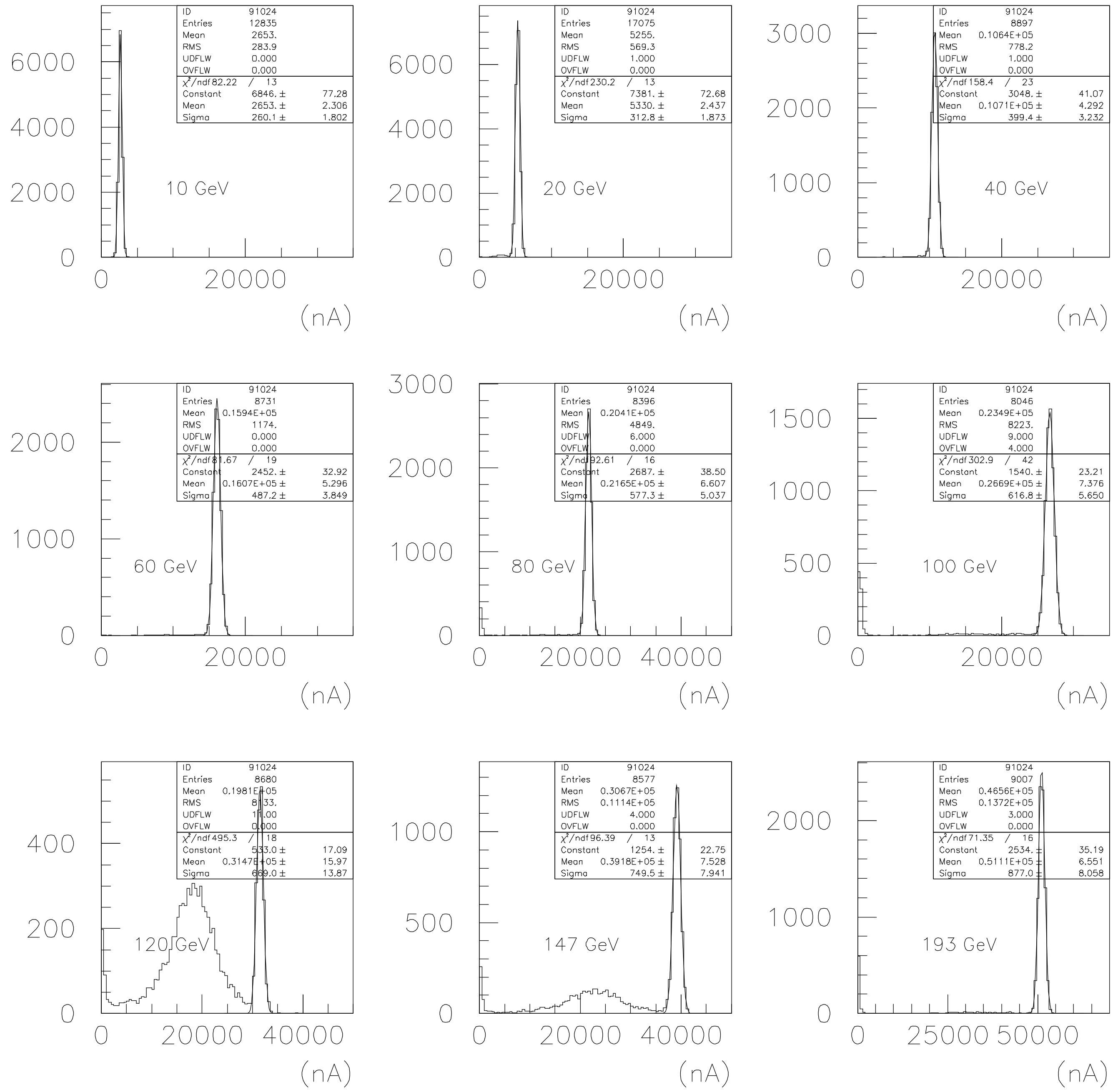
run 8645, e, 100 GeV, CELL 33 – impact cell, 3σ cut
ADCdig_ic – ADCmax, 3σ cut
60
40
20
0
–20
–40
–60
–80
0
100
200
300
400
500
600
ADCmax

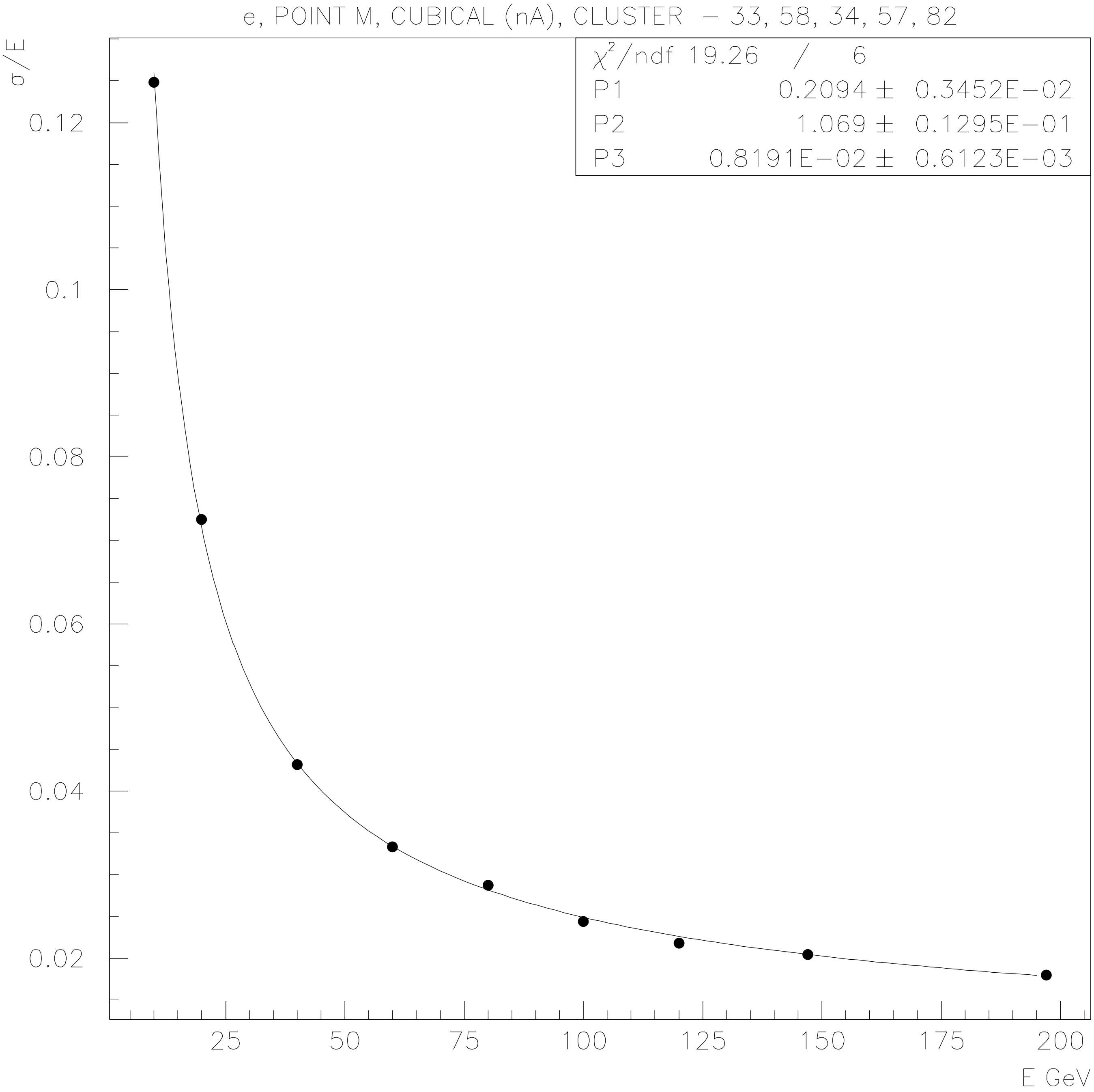

run 8645, e, 100 GeV, BAD EVENTS – CELL 33, 3σ cut
ADC count
time slice
ADCcub_ic < ADCmax
ADCdig_ic < ADCmax
ADCcub_ic < ADCmax
ADCdig_ic < ADCmax, ADCmax > 300

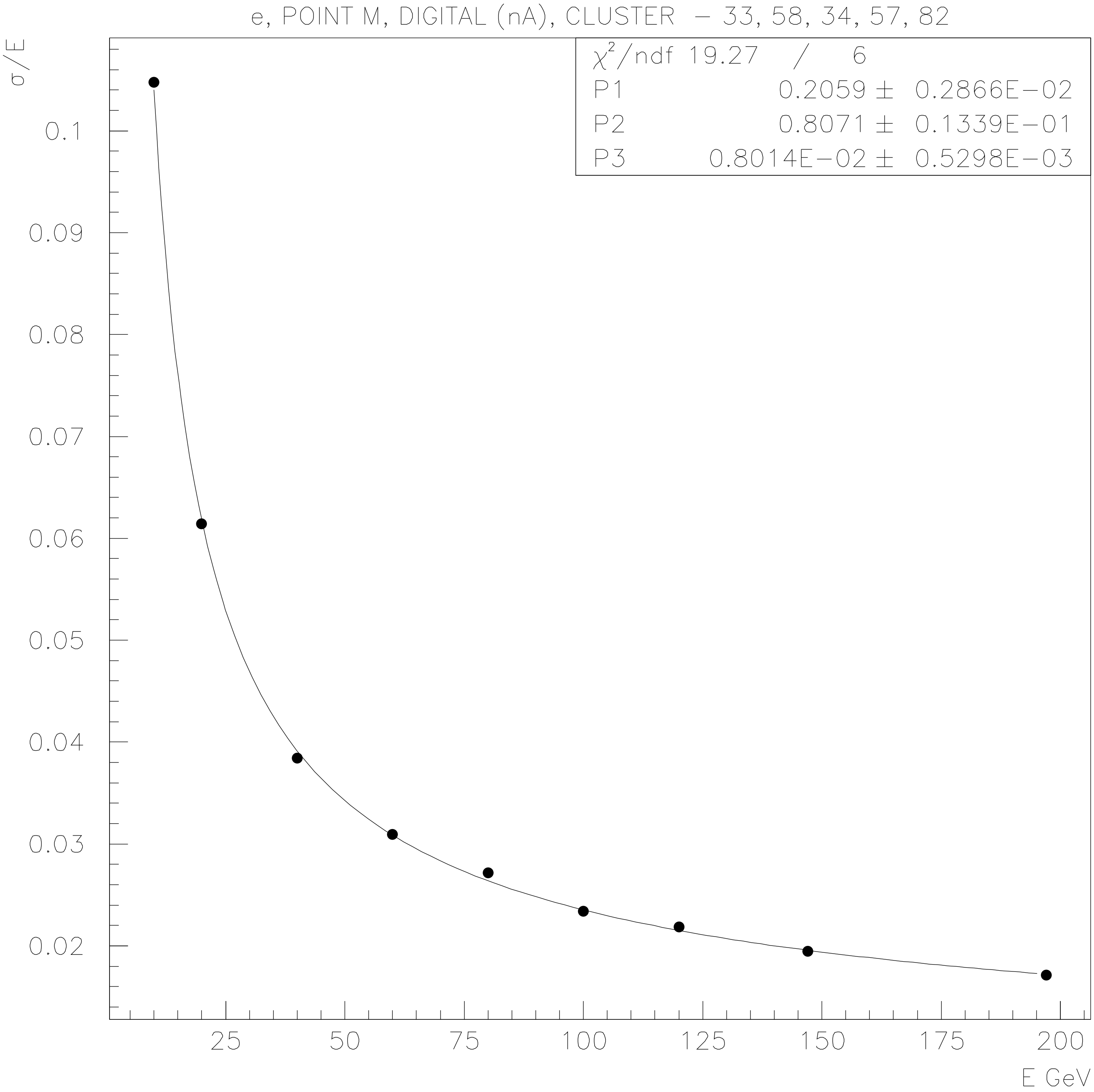
e,10−197 GeV, EPI−TRIGGER,ADCcub (nA), CLUSTER 2 (33,58,34,57)



e,10–197 GeV, EPI–TRIGGER,ADCdig (nA), CLUSTER 2 (33,58,34,57)




e, POINT M, CUBICAL (nA), CLUSTER – 33, 58, 34, 57, 82
χ^2/ndf 19.26 / 6
P1 0.2094 ± 0.3452E-02
P2 1.069 ± 0.1295E-01
P3 0.8191E-02 ± 0.6123E-03
σ/E
0.12
0.1
0.08
0.06
0.04
0.02
25
50
75
100
125
150
175
200
E GeV



e, POINT M, DIGITAL (nA), CLUSTER – 33, 58, 34, 57, 82
χ^2/ndf 19.27 / 6
P1 0.2059 ± 0.2866E-02
P2 0.8071 ± 0.1339E-01
P3 0.8014E-02 ± 0.5298E-03
σ/E
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
25
50
75
100
125
150
175
200
E GeV