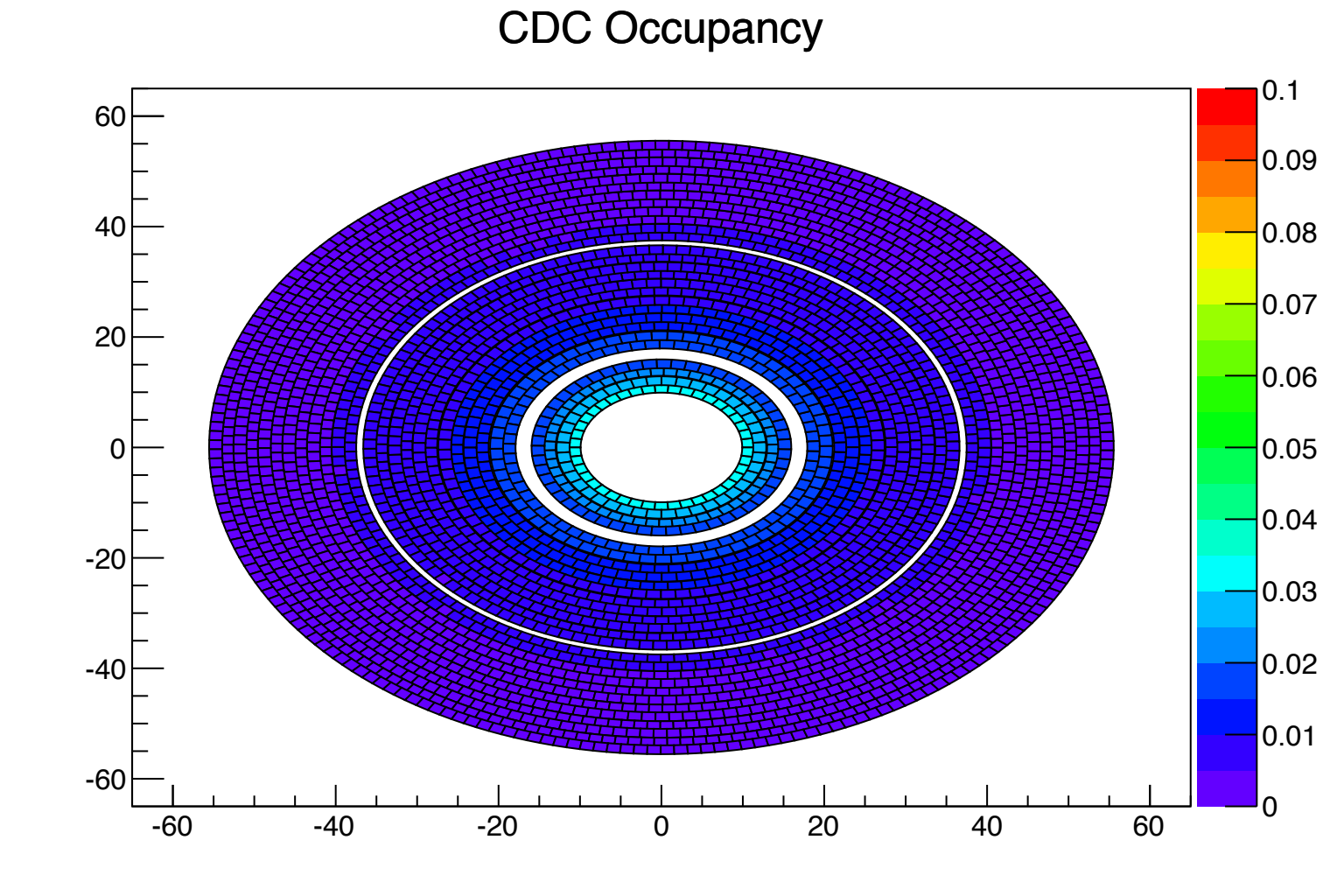
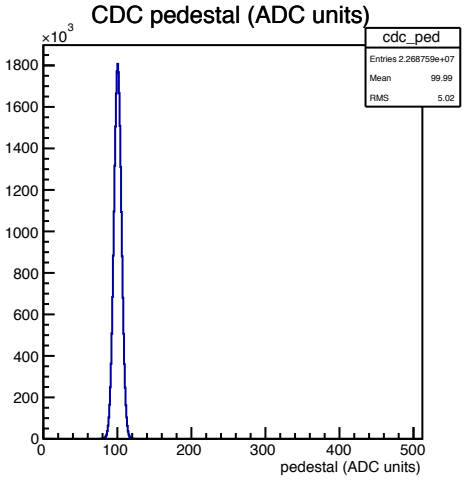
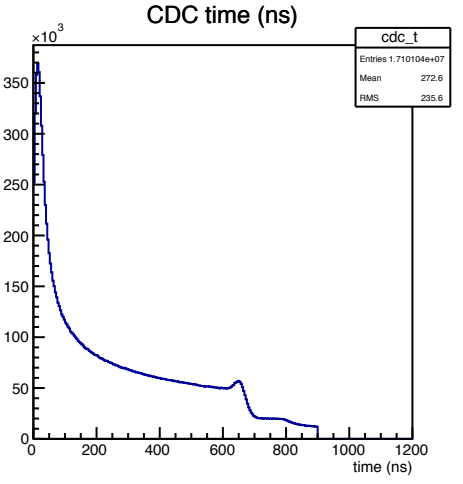
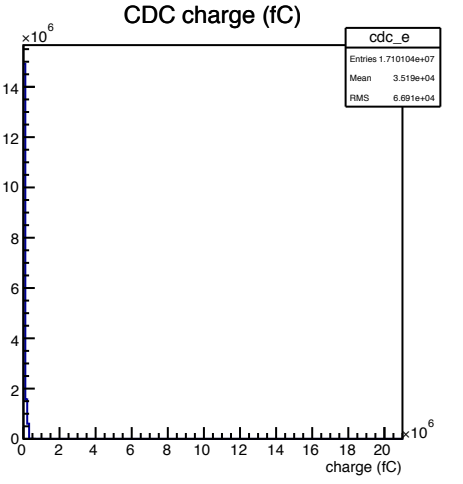
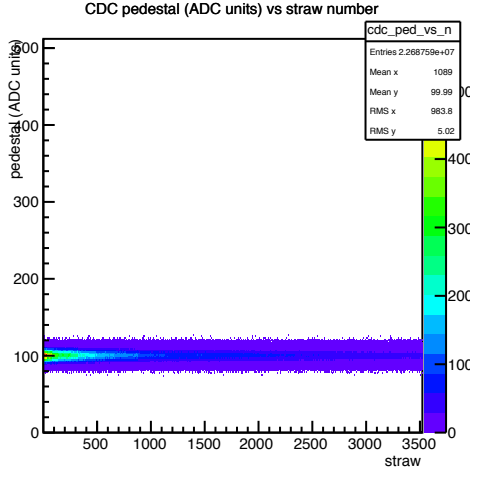
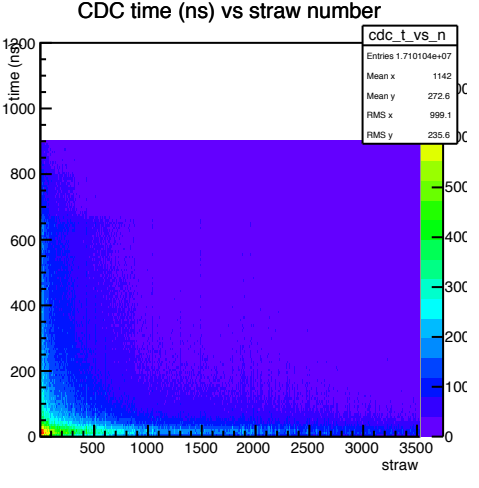

CDC Occupancy
60
40
20
0
-20
-40
-60
-60
-40
-20
0
20
40
60
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0

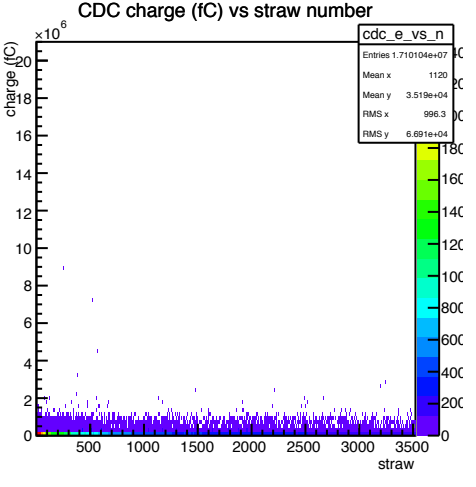

CDC pedestal (ADC units)
cdc_ped
Entries 2.268759e+07
Mean 99.99
RMS 5.02
×10^3
pedestal (ADC units)

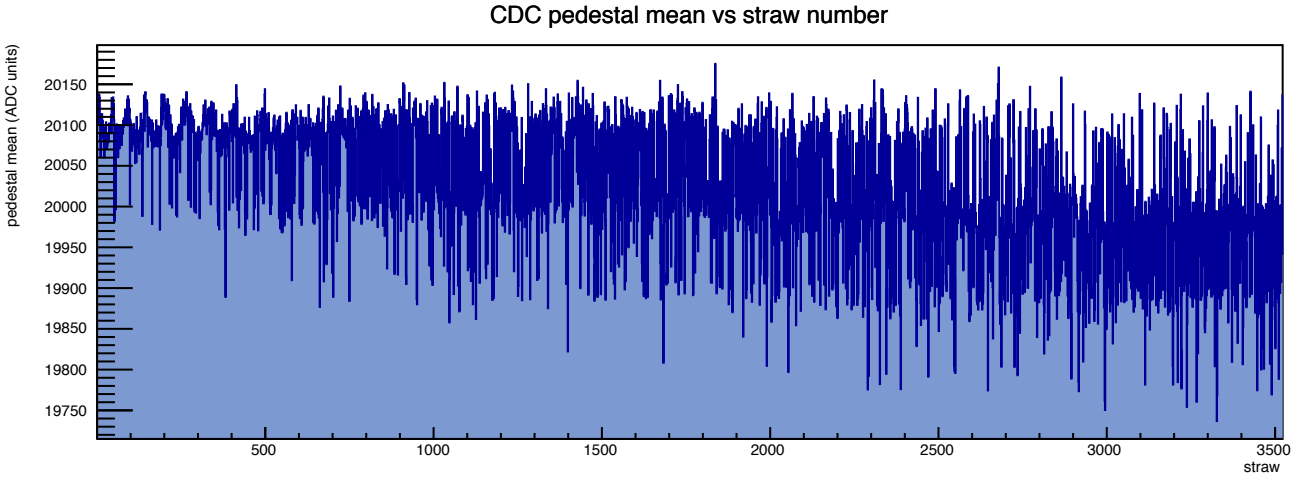

CDC time (ns)
cdc_t
Entries 1.710104e+07
Mean 272.6
RMS 235.6
×10^3
time (ns)

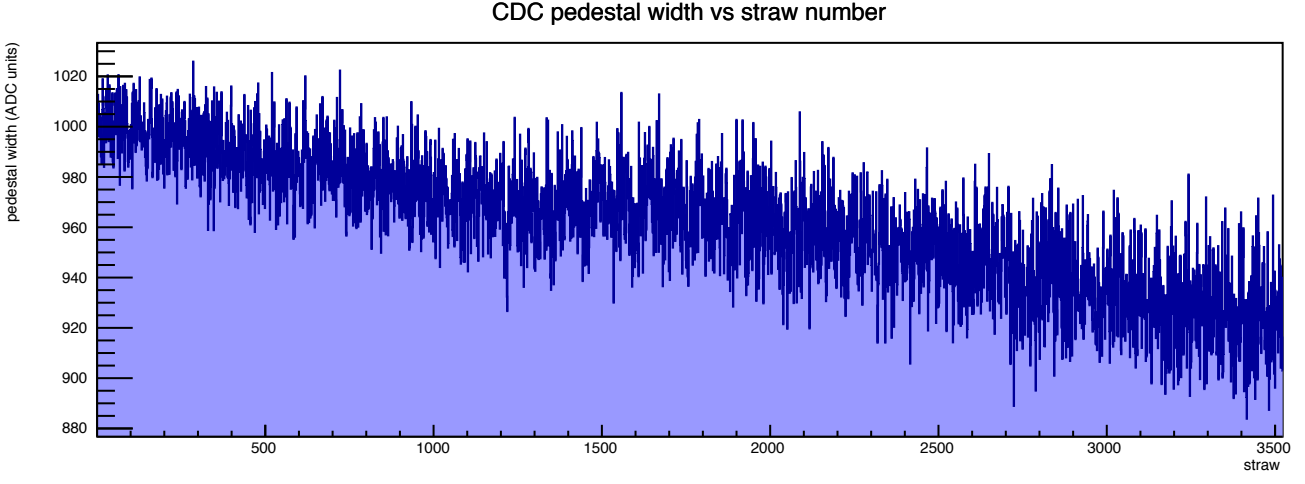

CDC charge (fC)
cdc_e
Entries 1.710104e+07
Mean 3.519e+04
RMS 6.691e+04
×10^6
charge (fC)

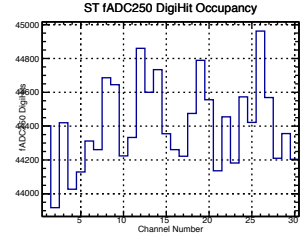

CDC pedestal (ADC units) vs straw number
cdc_ped_vs_n
Entries 2.268759e+07
Mean x 1089
Mean y 99.99
RMS x 983.8
RMS y 5.02
pedestal (ADC units)
straw

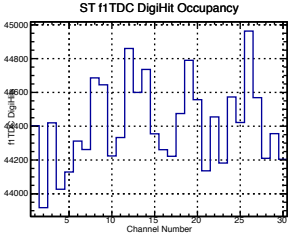

CDC time (ns) vs straw number
cdc_t_vs_n
Entries 1.710104e+07
Mean x 1142
Mean y 272.6
RMS x 999.1
RMS y 235.6
time (ns)
straw

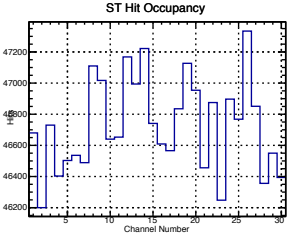

CDC charge (fC) vs straw number
cdc_e_vs_n
Entries 1.710104e+07
Mean x 1120
Mean y 3.519e+04
RMS x 996.3
RMS y 6.691e+04
×10^6
charge (fC)
straw

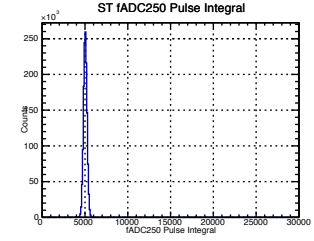

CDC pedestal mean vs straw number
pedestal mean (ADC units)
20150
20100
20050
20000
19950
19900
19850
19800
19750
500
1000
1500
2000
2500
3000
3500
straw

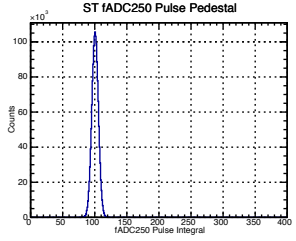

CDC pedestal width vs straw number
pedestal width (ADC units)
1020
1000
980
960
940
920
900
880
500
1000
1500
2000
2500
3000
3500
straw

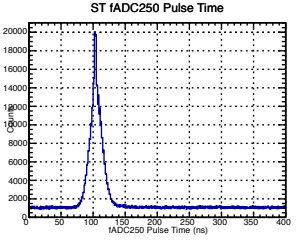

ST fADC250 DigiHit Occupancy
fADC250 DigiHits
Channel Number

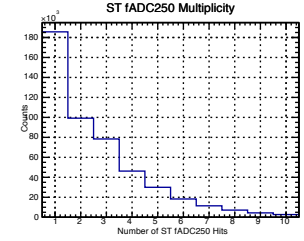

ST f1TDC DigiHit Occupancy
f1TDC DigiHits
Channel Number

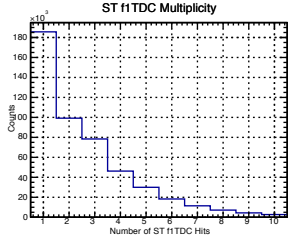

ST Hit Occupancy
Hits
Channel Number

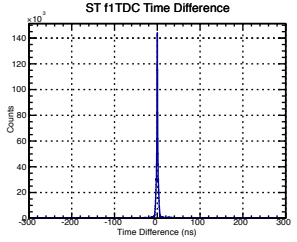

ST fADC250 Pulse Integral
Counts
fADC250 Pulse Integral

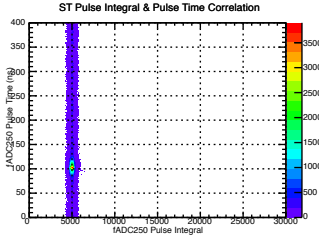

ST fADC250 Pulse Pedestal
Counts
fADC250 Pulse Integral

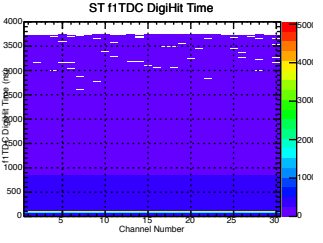

ST fADC250 Pulse Time
Counts
fADC250 Pulse Time (ns)

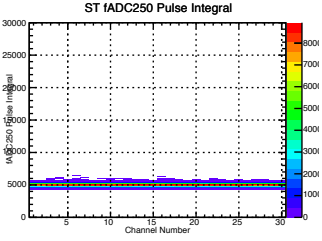

ST fADC250 Multiplicity
Counts
Number of ST fADC250 Hits

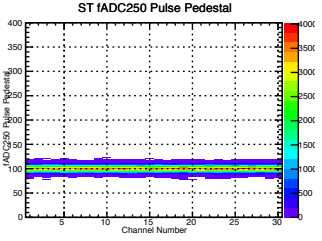

ST f1TDC Multiplicity
Counts
Number of ST f1TDC Hits

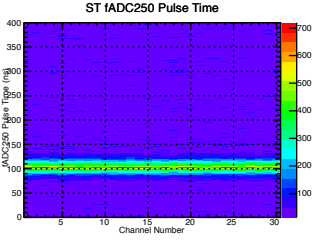

ST f1TDC Time Difference
Counts
Time Difference (ns)

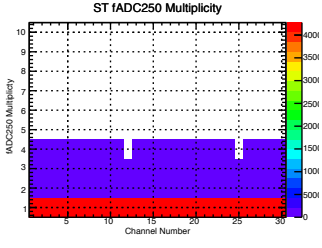

ST Pulse Integral & Pulse Time Correlation
fADC250 Pulse Time (ns)
fADC250 Pulse Integral

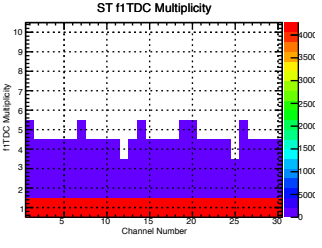

ST f1TDC DigiHit Time
f1TDC DigiHit Time (ns)
Channel Number

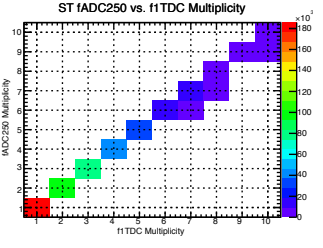

ST fADC250 Pulse Integral
fADC250 Pulse Integral
Channel Number

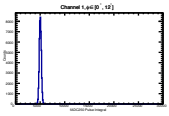

ST fADC250 Pulse Pedestal
fADC250 Pulse Pedestal
Channel Number

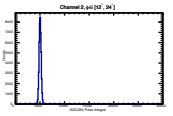

ST fADC250 Pulse Time
fADC250 Pulse Time (ns)
Channel Number

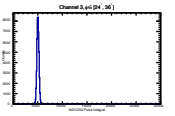

ST fADC250 Multiplicity
fADC250 Multiplicity
Channel Number

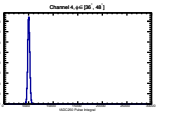

ST f1TDC Multiplicity
f1TDC Multiplicity
Channel Number

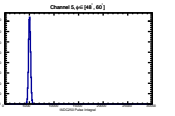

ST fADC250 vs. f1TDC Multiplicity
fADC250 Multiplicity
f1TDC Multiplicity

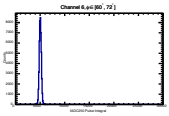

Channel 1, φ∈[0 , 12]

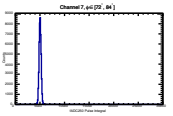

Channel 2, φ∈[12 , 24]

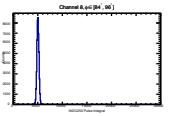

Channel 3, φ∈[24 , 36]

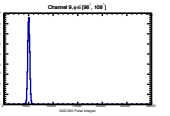

Channel 4, φ∈[36 , 48]

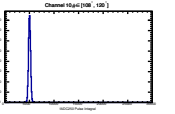

Channel 5, φ∈[48 , 60]

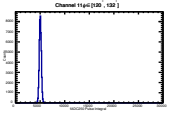

Channel 6, φ∈[60 , 72]

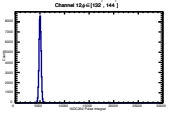

Channel 7, φ∈[72 , 84]

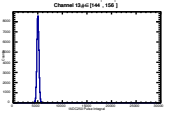

Channel 8, φ∈[84 , 96]

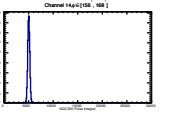

Channel 9, φ∈[96 , 108]

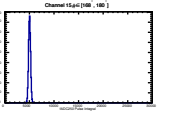

Channel 10, φ∈[108 , 120]

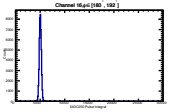

Channel 11, φ∈[120 , 132]

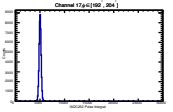

Channel 12, φ∈[132 , 144]

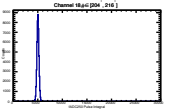

Channel 13, φ∈[144 , 156]

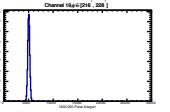

Channel 14, φ∈[156 , 168]

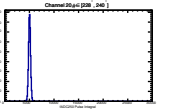

Channel 15, φ∈[168 , 180]

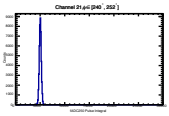

Channel 16, φ∈[180 , 192]

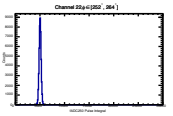

Channel 17, φ∈[192 , 204]

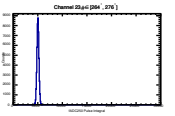

Channel 18, φ∈[204 , 216]

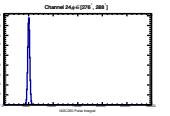

Channel 19, φ∈[216 , 228]

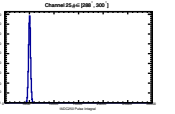

Channel 20, φ∈[228 , 240]

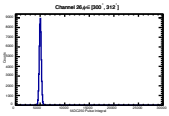

Channel 21, φ∈[240 , 252]

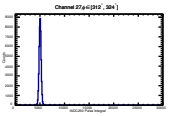

Channel 22, φ∈[252 , 264]

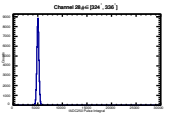

Channel 23, φ∈[264 , 276]

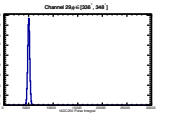

Channel 24, φ∈[276 , 288]

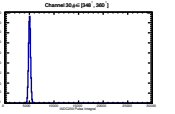

Channel 25, φ∈[288 , 300]

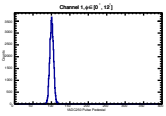

Channel 26, φ∈[300 , 312]

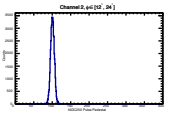

Channel 27, φ∈[312 , 324]

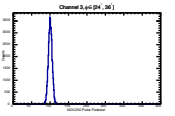

Channel 28, φ∈[324 , 336]


Channel 29, φ∈[336 , 348]


Channel 30, φ∈[348 , 360]


Channel 1, φ∈[0 , 12]
Counts
MDC2/K0 Pulse Postestal


Channel 2, φ∈[12 , 24]
Counts
MDC2/K0 Pulse Postestal


Channel 3, φ∈[24 , 36]
Counts
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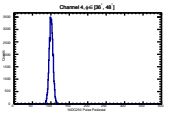
Channel 4, φ∈[36 , 48]
Counts
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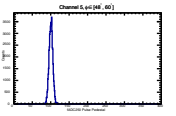
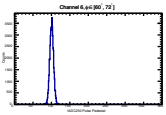
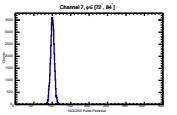
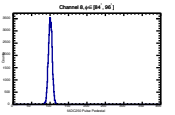
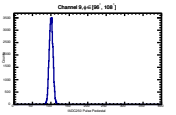
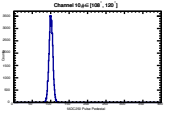

Channel 5, φ∈[48 , 60]
Counts
MDC2/K0 Pulse Postestal


Channel 6, φ∈[60 , 72]
Counts
MDC2/K0 Pulse Postestal


Channel 7, φ∈[72 , 84]
Counts
MDC2/K0 Pulse Postestal


Channel 8, φ∈[84 , 96]
Counts
MDC2/K0 Pulse Postestal


Channel 9, φ∈[96 , 108]
Counts
MDC2/K0 Pulse Postestal


Channel 10, φ∈[108 , 120]
Counts
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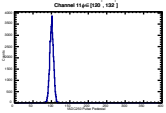
Channel 11, φ∈[120 , 132]
Counts
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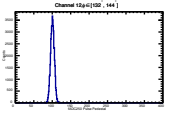
Channel 12, φ∈[132 , 144]
Counts
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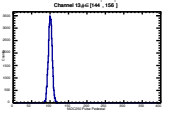
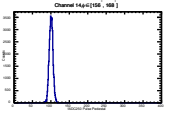
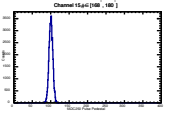

Channel 13, φ∈[144 , 156]
Counts
MDC2/K0 Pulse Postestal


Channel 14, φ∈[156 , 168]
Counts
MDC2/K0 Pulse Postestal


Channel 15, φ∈[168 , 180]
Counts
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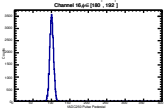
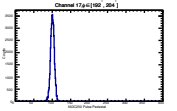
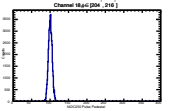

Channel 16, φ∈[180 , 192]
Counts
MDC2/K0 Pulse Postestal


Channel 17, φ∈[192 , 204]
Counts
MDC2/K0 Pulse Postestal


Channel 18, φ∈[204 , 216]
Counts
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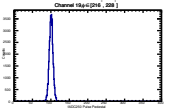
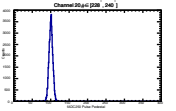
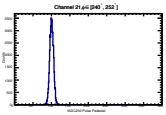
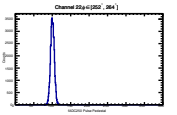

Channel 19, φ∈[216 , 228]
Counts
MDC2/K0 Pulse Postestal


Channel 20, φ∈[228 , 240]
Counts
MDC2/K0 Pulse Postestal


Channel 21, φ∈[240 , 252]
Counts
MDC2/K0 Pulse Postestal


Channel 22, φ∈[252 , 264]
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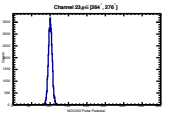
Channel 23, φ∈[264 , 276]
Counts
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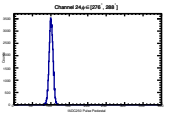
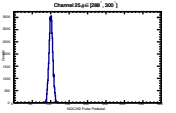

Channel 24, φ∈[276 , 288]
Counts
MDC2/K0 Pulse Postestal


Channel 25, φ∈[288 , 300]
Counts
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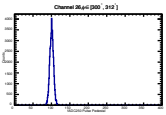
Channel 26, φ∈[300 , 312]
Counts
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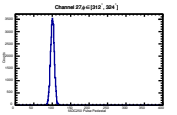
Channel 27, φ∈[312 , 324]
Counts
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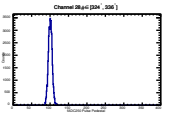
Channel 28, φ∈[324 , 336]
Counts
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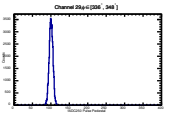
Channel 29, φ∈[336 , 348]
Counts
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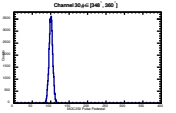
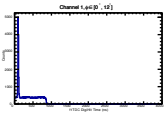

Channel 30, φ∈[348 , 360]
Counts
MDC2/K0 Pulse Postestal


Channel 1, φ∈[0 , 12]
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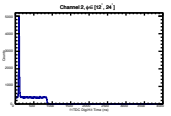
Channel 2, φ∈[12 , 24]
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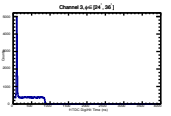
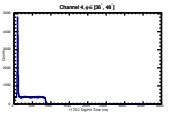
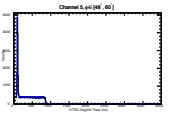
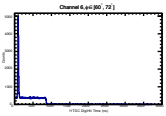

Channel 3, φ∈[24 , 36]
Counts
HTDC Digitrhi Time (ns)


Channel 4, φ∈[36 , 48]
Counts
HTDC Digitrhi Time (ns)


Channel 5, φ∈[48 , 60]
Counts
HTDC Digitrhi Time (ns)


Channel 6, φ∈[60 , 72]
Counts
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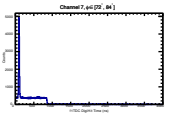
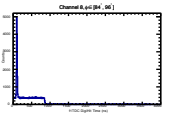

Channel 7, φ∈[72 , 84]
Counts
HTDC Digitrhi Time (ns)


Channel 8, φ∈[84 , 96]
Counts
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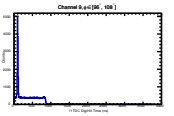
Channel 9, φ∈[96 , 108]
Counts
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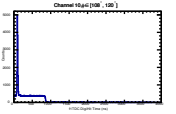
Channel 10, φ∈[108 , 120]
Counts
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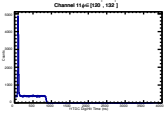
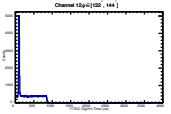
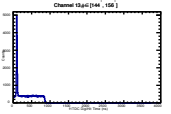
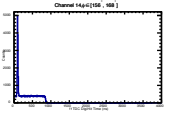
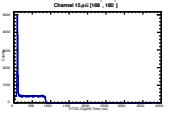
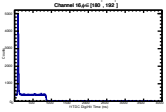

Channel 11, φ∈[120 , 132]
Counts
HTDC Digitrhi Time (ns)

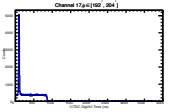

Channel 12, φ∈[132 , 144]
Counts
HTDC Digitrhi Time (ns)

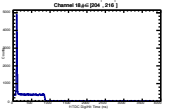

Channel 13, φ∈[144 , 156]
Counts
HTDC Digitrhi Time (ns)

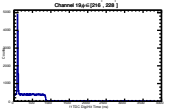

Channel 14, φ∈[156 , 168]
Counts
HTDC Digitrhi Time (ns)


Channel 15, φ∈[168 , 180]
Counts
HTDC Digitrhi Time (ns)


Channel 16, φ∈[180 , 192]
Counts
HTDC Digitrhi Time (ns)


Channel 17, φ∈[192 , 204]
Counts
HTDC Digitrhi Time (ns)


Channel 18, φ∈[204 , 216]
Counts
HTDC Digitrhi Time (ns)


Channel 19, φ∈[216 , 228]
Counts
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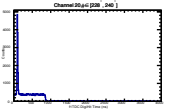
Channel 20, φ∈[228 , 240]
Counts
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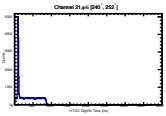
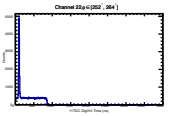

Channel 21, φ∈[240 , 252]
Counts
HTDC Digitrhi Time (ns)


Channel 22, φ∈[252 , 264]
Counts
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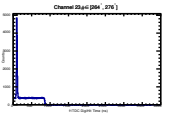
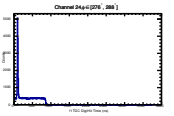
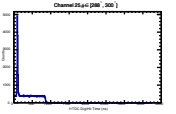
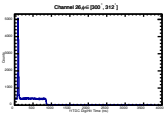
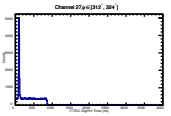
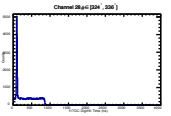

Channel 23, φ∈[264 , 276]
Counts
HTDC Digitrhi Time (ns)

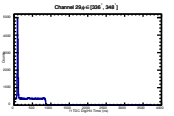

Channel 24, φ∈[276 , 288]
Counts
HTDC Digitrhi Time (ns)

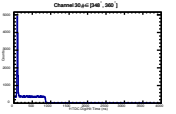

Channel 25, φ∈[288 , 300]
Counts
HTDC Digitrhi Time (ns)

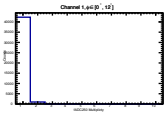

Channel 26, φ∈[300 , 312]
Counts
HTDC Digitrhi Time (ns)


Channel 27, φ∈[312 , 324]
Counts
HTDC Digitrhi Time (ns)


Channel 28, φ∈[324 , 336]
Counts
HTDC Digitrhi Time (ns)


Channel 29, φ∈[336 , 348]
Counts
HTDC Digitrhi Time (ns)


Channel 30, φ∈[348 , 360]
Counts
HTDC Digitrhi Time (ns)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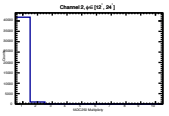
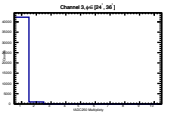
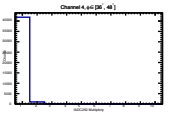
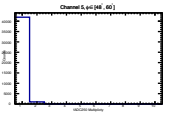
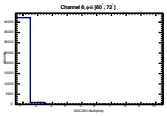
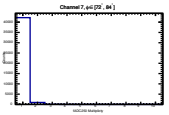
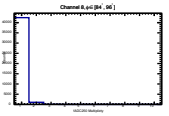
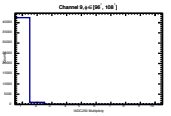
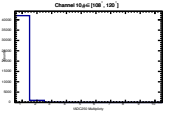
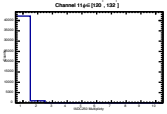
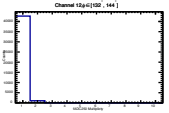
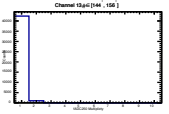
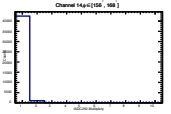
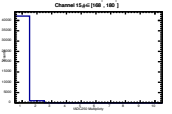
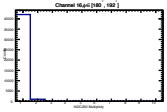
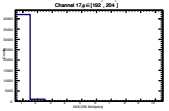
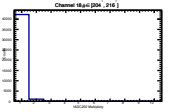
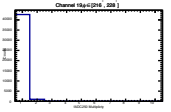
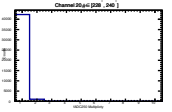
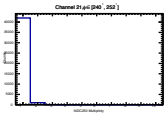
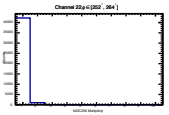
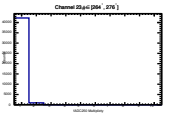
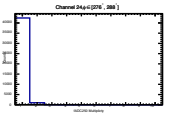
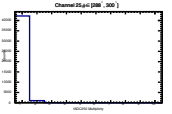
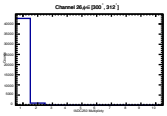
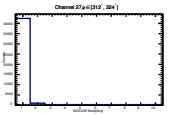
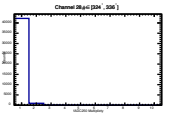
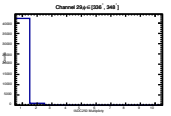
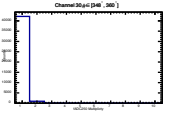
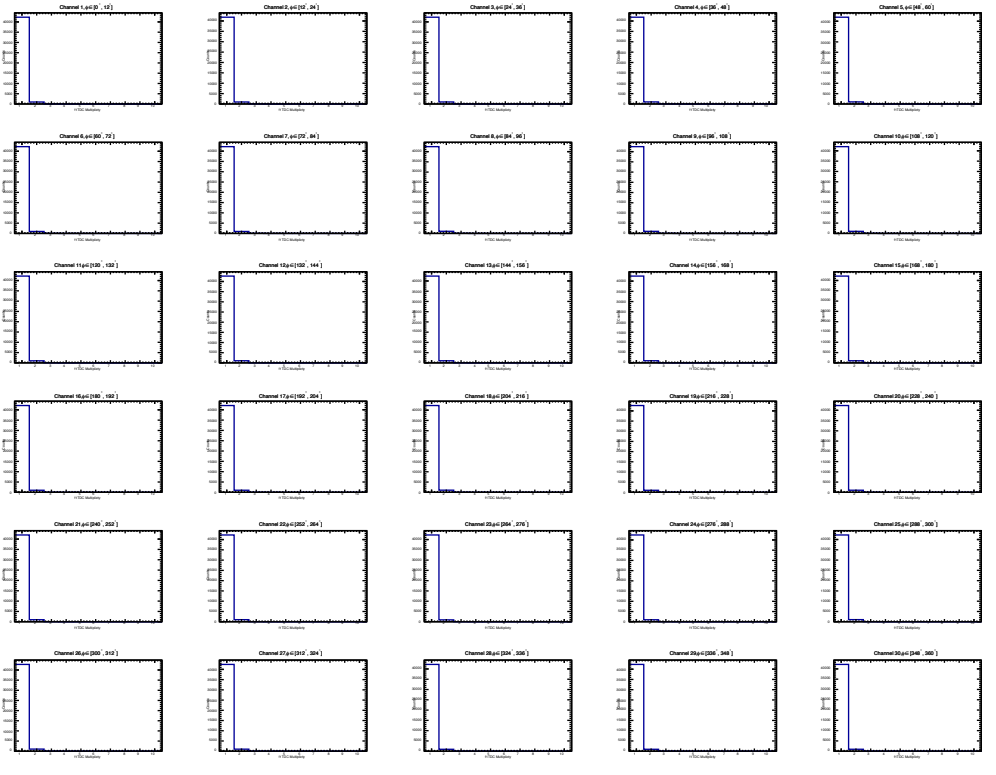
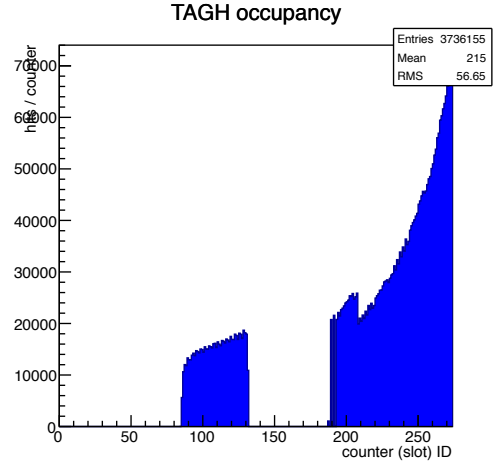
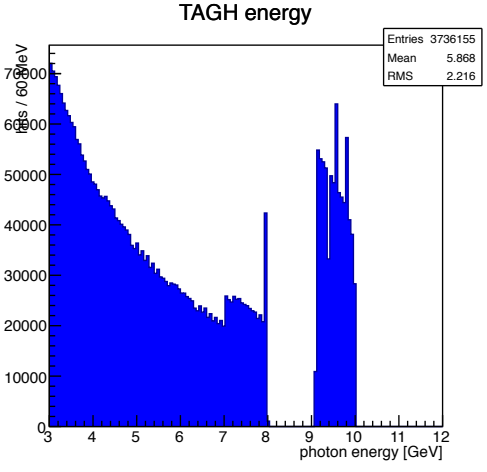
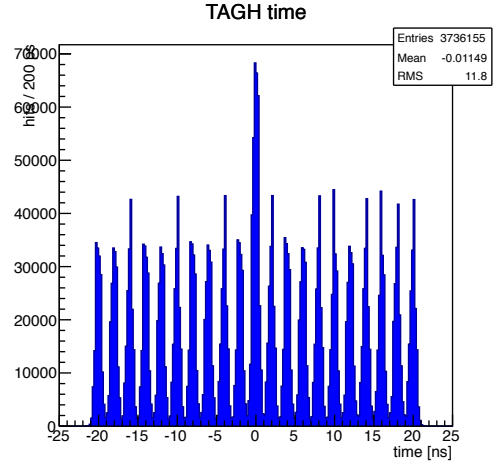
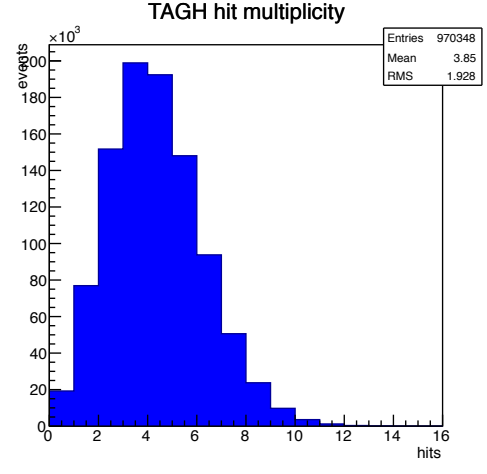

Channel 2, φ∈[12 , 24]

Channel 3, φ∈[24 , 36]

Channel 4, φ∈[36 , 48]

Channel 5, φ∈[48 , 60]

Channel 6, φ∈[60 , 72]

Channel 7, φ∈[72 , 84]

Channel 8, φ∈[84 , 96]

Channel 9, φ∈[96 , 108]

Channel 10, φ∈[108 , 120]

Channel 11, φ∈[120 , 132]

Channel 12, φ∈[132 , 144]

Channel 13, φ∈[144 , 156]

Channel 14, φ∈[156 , 168]

Channel 15, φ∈[168 , 180]

Channel 16, φ∈[180 , 192]

Channel 17, φ∈[192 , 204]

Channel 18, φ∈[204 , 216]

Channel 19, φ∈[216 , 228]

Channel 20, φ∈[228 , 240]

Channel 21, φ∈[240 , 252]

Channel 22, φ∈[252 , 264]

Channel 23, φ∈[264 , 276]

Channel 24, φ∈[276 , 288]

Channel 25, φ∈[288 , 300]

Channel 26, φ∈[300 , 312]

Channel 27, φ∈[312 , 324]

Channel 28, φ∈[324 , 336]

Channel 29, φ∈[336 , 348]

Channel 30, φ∈[348 , 360]

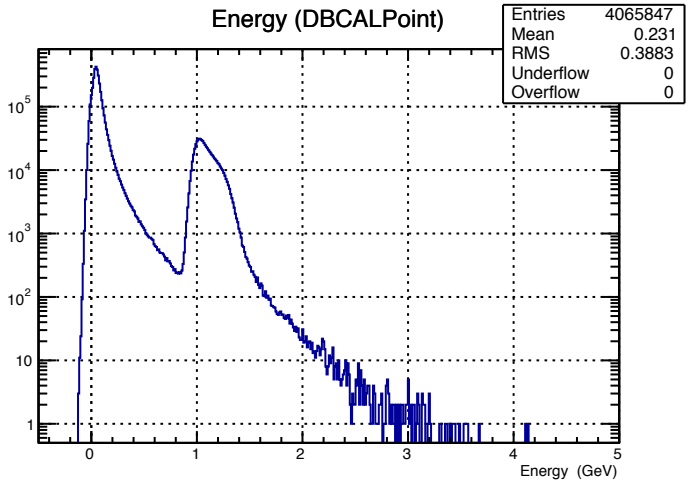

Channel 1,φ∈[0 , 12]
Channel 2,φ∈[12 , 24]
Channel 3,φ∈[24 , 36]
Channel 4,φ∈[36 , 48]
Channel 5,φ∈[48 , 60]
Channel 6,φ∈[60 , 72]
Channel 7,φ∈[72 , 84]
Channel 8,φ∈[84 , 96]
Channel 9,φ∈[96 , 108]
Channel 10,φ∈[108 , 120]
Channel 11,φ∈[120 , 132]
Channel 12,φ∈[132 , 144]
Channel 13,φ∈[144 , 156]
Channel 14,φ∈[156 , 168]
Channel 15,φ∈[168 , 180]
Channel 16,φ∈[180 , 192]
Channel 17,φ∈[192 , 204]
Channel 18,φ∈[204 , 216]
Channel 19,φ∈[216 , 228]
Channel 20,φ∈[228 , 240]
Channel 21,φ∈[240 , 252]
Channel 22,φ∈[252 , 264]
Channel 23,φ∈[264 , 276]
Channel 24,φ∈[276 , 288]
Channel 25,φ∈[288 , 300]
Channel 26,φ∈[300 , 312]
Channel 27,φ∈[312 , 324]
Channel 28,φ∈[324 , 336]
Channel 29,φ∈[336 , 348]
Channel 30,φ∈[348 , 360]

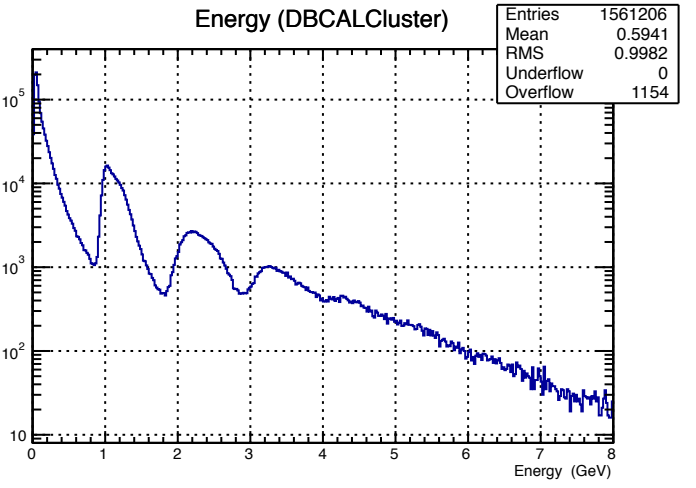

TAGH occupancy
Entries 3736155
Mean 215
RMS 56.65
hits / counter
counter (slot) ID

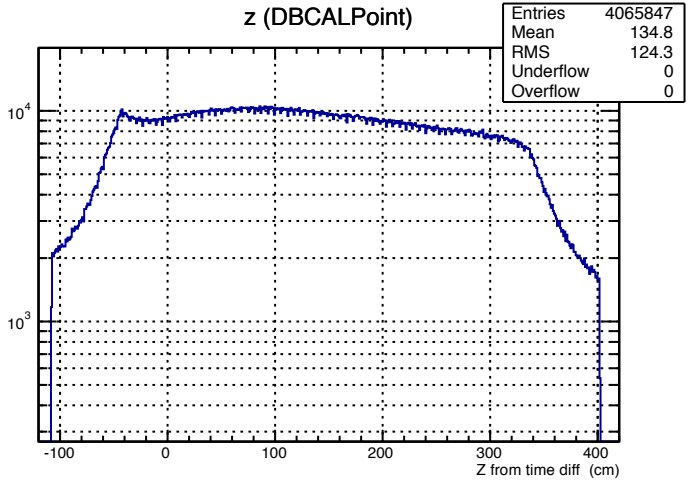

TAGH energy
Entries 3736155
Mean 5.868
RMS 2.216
hits / 60 MeV
photon energy [GeV]

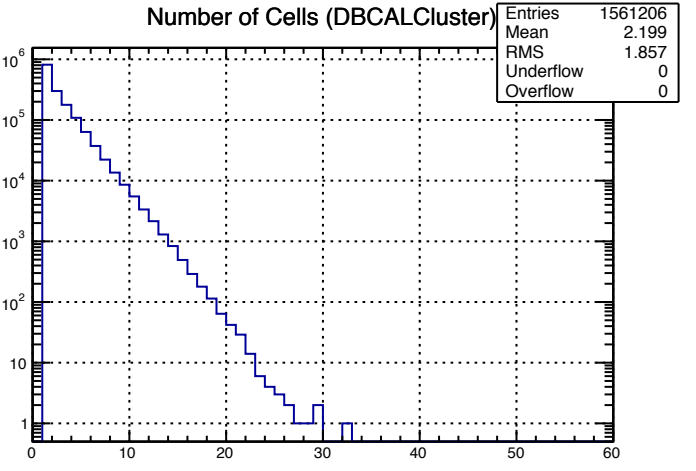

TAGH time
Entries 3736155
Mean -0.01149
RMS 11.8
hits / 200 ps
time [ns]

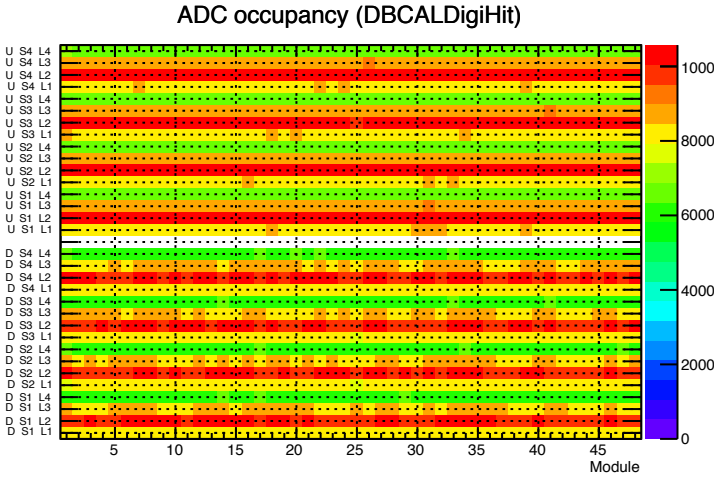

TAGH hit multiplicity
Entries 970348
Mean 3.85
RMS 1.928
events
hits

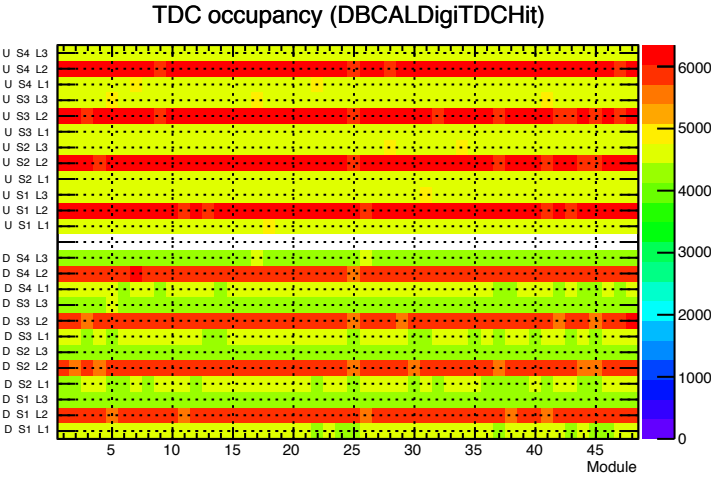

Energy (DBCALPoint)
Entries 4065847
Mean 0.231
RMS 0.3883
Underflow 0
Overflow 0
Energy (GeV)

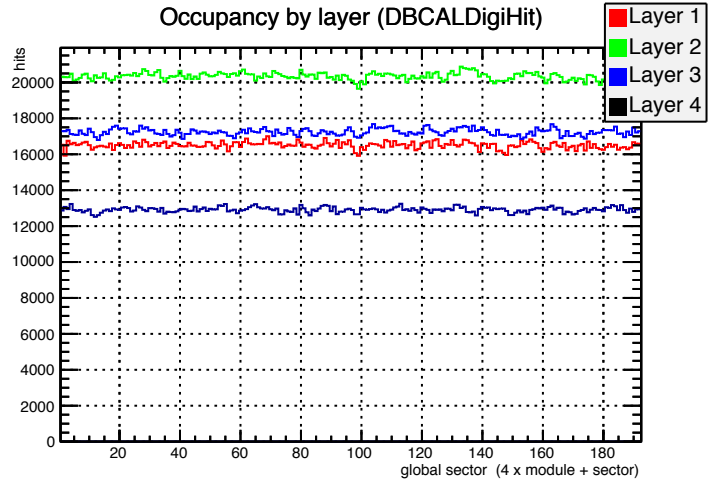

Energy (DBCALCluster)
Entries 1561206
Mean 0.5941
RMS 0.9982
Underflow 0
Overflow 1154
Energy (GeV)

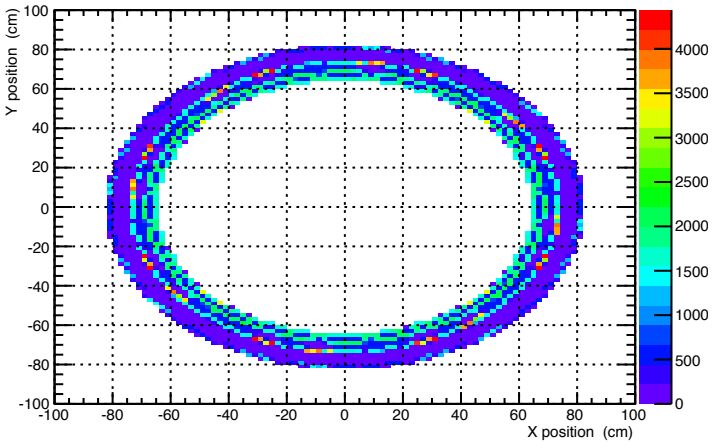

z (DBCALPoint)
Entries 4065847
Mean 134.8
RMS 124.3
Underflow 0
Overflow 0
Z from time diff (cm)

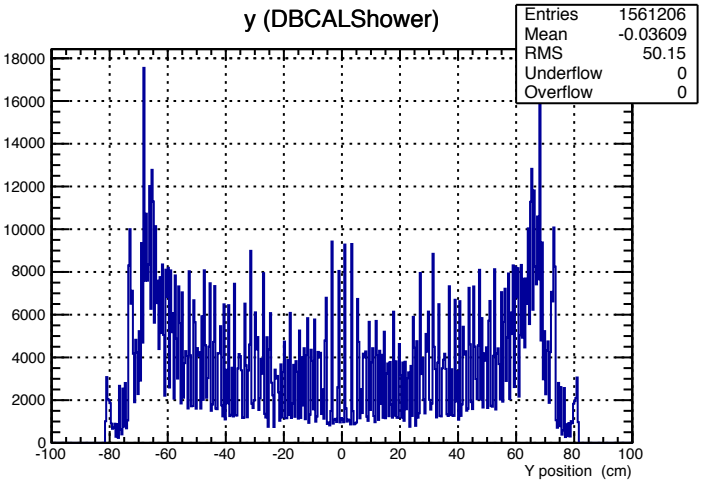

Number of Cells (DBCALCluster)
Entries 1561206
Mean 2.199
RMS 1.857
Underflow 0
Overflow 0

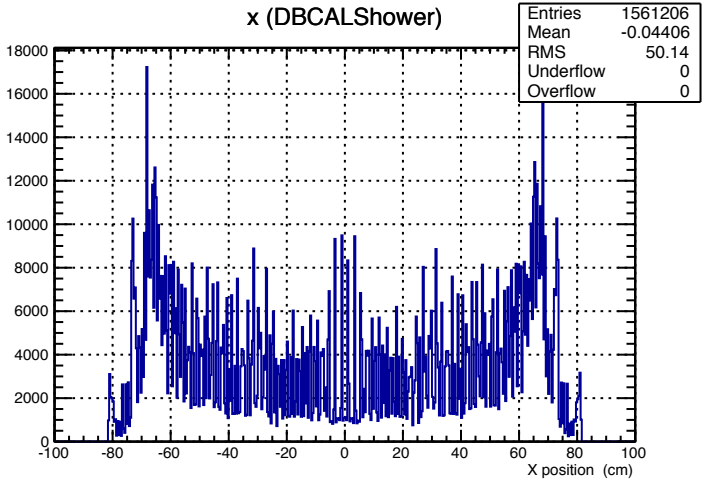

ADC occupancy (DBCALDigiHit)
U S4 L4
U S4 L3
U S4 L2
U S4 L1
U S3 L4
U S3 L3
U S3 L2
U S3 L1
U S2 L4
U S2 L3
U S2 L2
U S2 L1
U S1 L4
U S1 L3
U S1 L2
U S1 L1
D S4 L4
D S4 L3
D S4 L2
D S4 L1
D S3 L4
D S3 L3
D S3 L2
D S3 L1
D S2 L4
D S2 L3
D S2 L2
D S2 L1
D S1 L4
D S1 L3
D S1 L2
D S1 L1
5 10 15 20 25 30 35 40 45
Module
0 2000 4000 6000 8000 1000

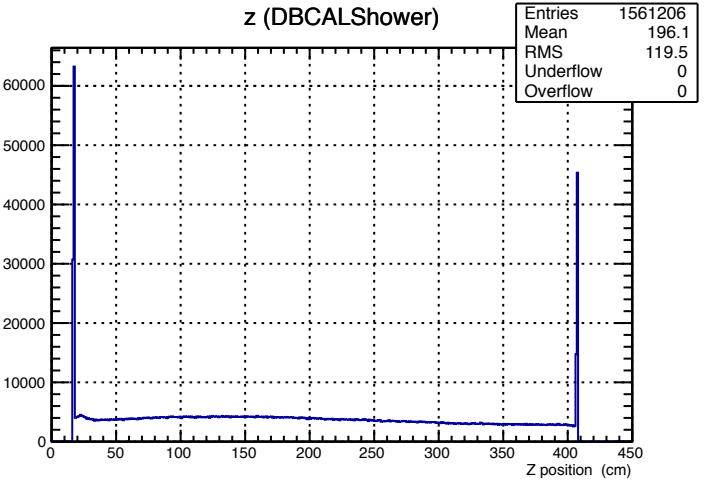

TDC occupancy (DBCALDigiTDCHit)
U S4 L3
U S4 L2
U S4 L1
U S3 L3
U S3 L2
U S3 L1
U S2 L3
U S2 L2
U S2 L1
U S1 L3
U S1 L2
U S1 L1
D S4 L3
D S4 L2
D S4 L1
D S3 L3
D S3 L2
D S3 L1
D S2 L3
D S2 L2
D S2 L1
D S1 L3
D S1 L2
D S1 L1
5 10 15 20 25 30 35 40 45
Module
0 1000 2000 3000 4000 5000 6000

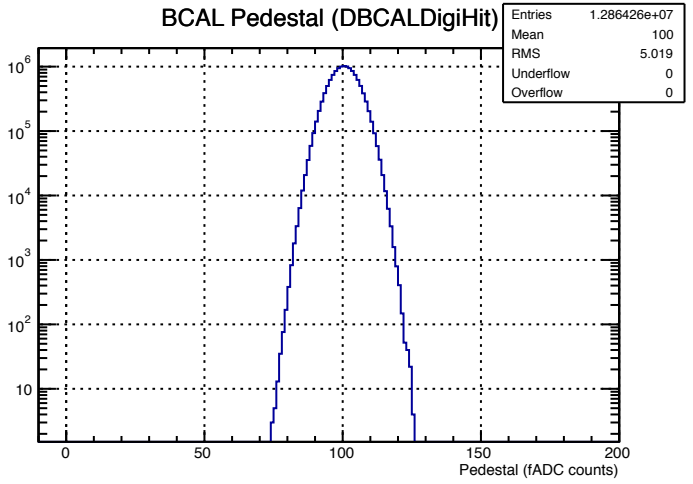

Occupancy by layer (DBCALDigiHit)
Layer 1
Layer 2
Layer 3
Layer 4
hits
0 2000 4000 6000 8000 10000 12000 14000 16000 18000 20000
20 40 60 80 100 120 140 160 180
global sector (4 x module + sector)

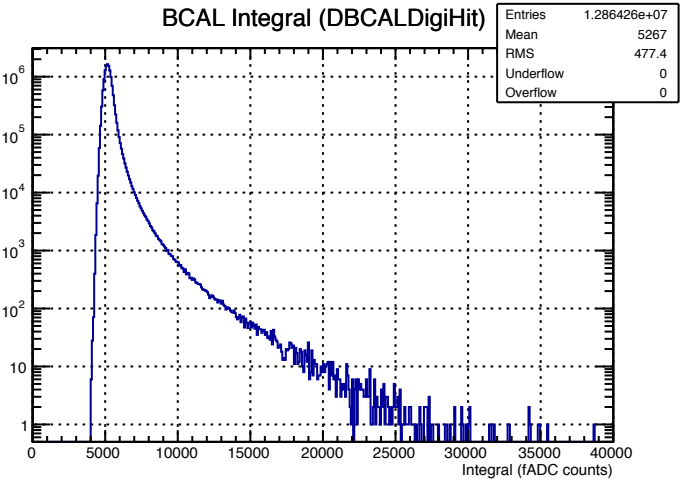

Shower position (DBCALShower)
Y position (cm)
X position (cm)

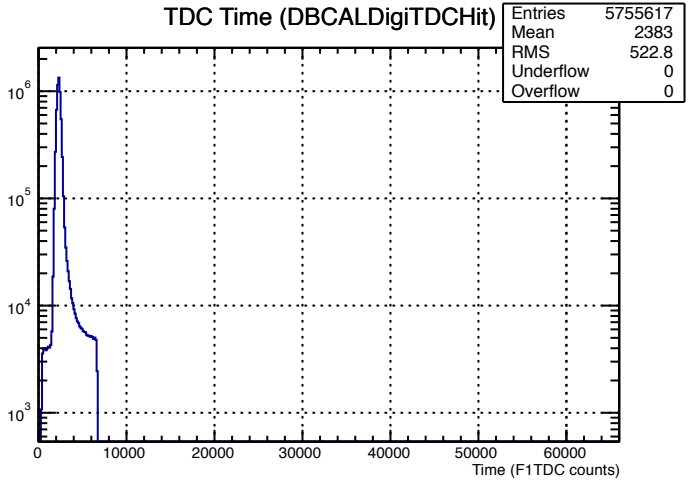

y (DBCALShower)
Entries 1561206
Mean -0.03609
RMS 50.15
Underflow 0
Overflow 0
Y position (cm)

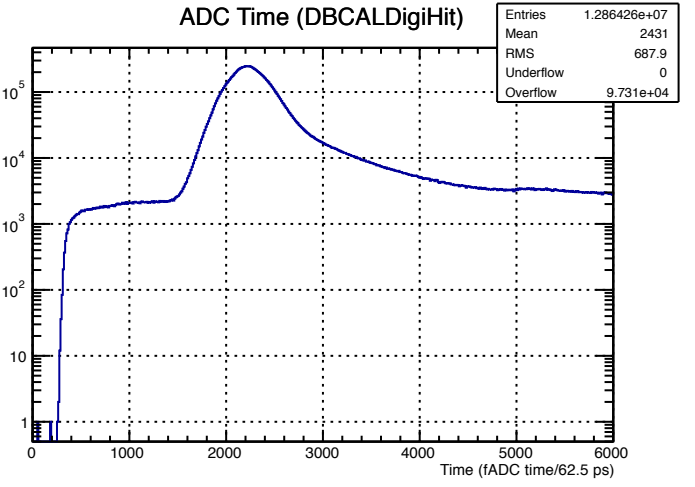

x (DBCALShower)
Entries 1561206
Mean -0.04406
RMS 50.14
Underflow 0
Overflow 0
X position (cm)

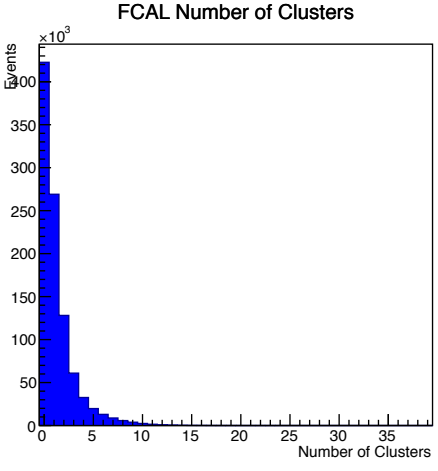

z (DBCALShower)
Entries 1561206
Mean 196.1
RMS 119.5
Underflow 0
Overflow 0
Z position (cm)

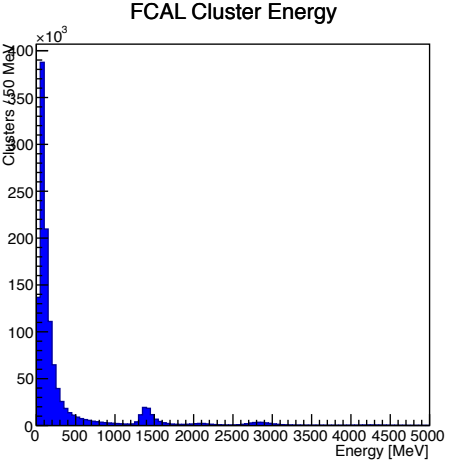

BCAL Pedestal (DBCALDigiHit)
Entries 1.286426e+07
Mean 100
RMS 5.019
Underflow 0
Overflow 0
Pedestal (fADC counts)

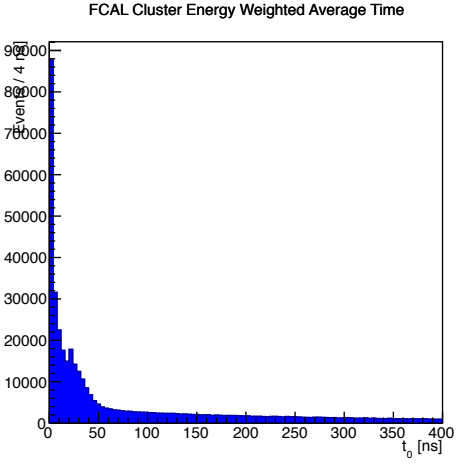

BCAL Integral (DBCALDigiHit)
Entries 1.286426e+07
Mean 5267
RMS 477.4
Underflow 0
Overflow 0
Integral (fADC counts)

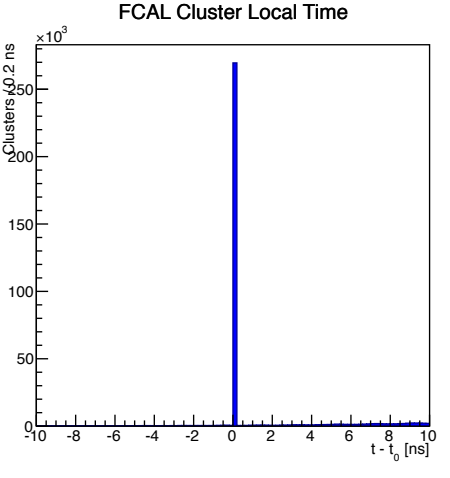

TDC Time (DBCALDigiTDCHit)
Entries 5755617
Mean 2383
RMS 522.8
Underflow 0
Overflow 0
Time (F1TDC counts)


ADC Time (DBCALDigiHit)
Entries 1.286426e+07
Mean 2431
RMS 687.9
Underflow 0
Overflow 9.731e+04
Time (fADC time/62.5 ps)

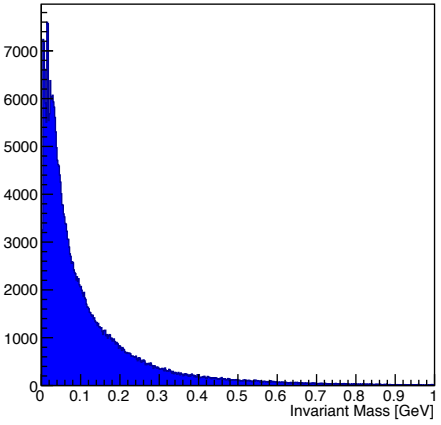

FCAL Number of Clusters
×10^3
Events
Number of Clusters


FCAL Cluster Energy
×10^3
Clusters / 50 MeV
Energy [MeV]

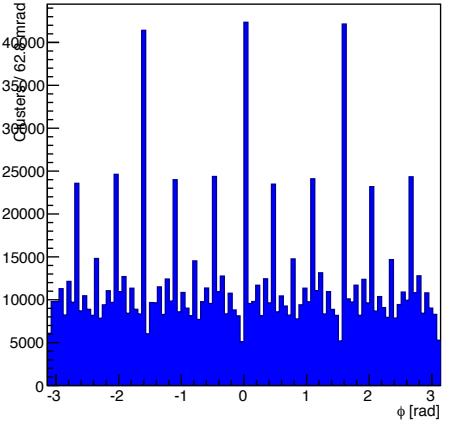

FCAL Cluster Energy Weighted Average Time
Events / 4 [ns]
t0 [ns]


FCAL Cluster Local Time
×10^3
Clusters / 0.2 ns
t - t0 [ns]

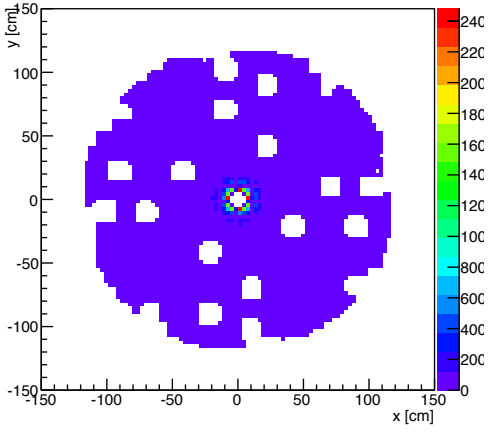
FCAL 2 Cluster Invariant Mass E > 200 MeV



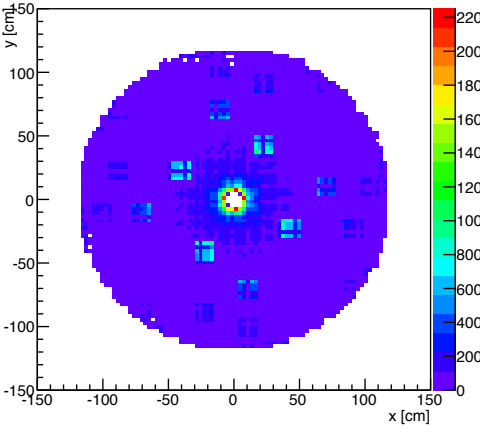
FCAL Cluster ϕ

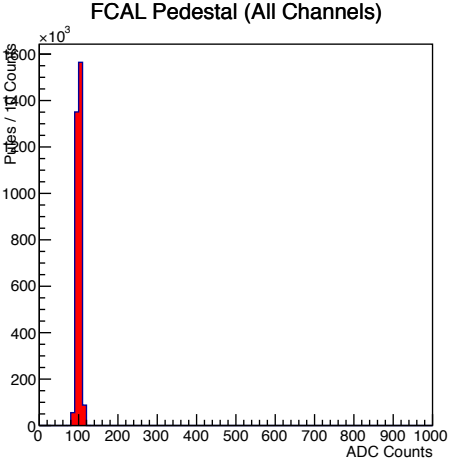


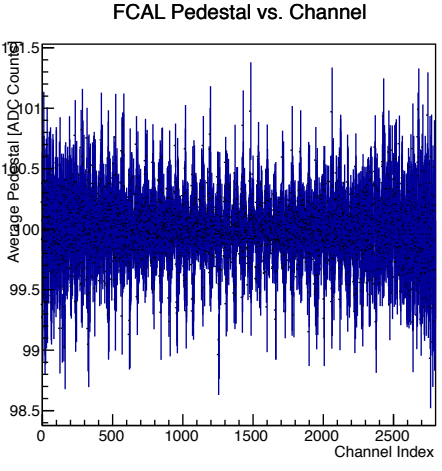
FCAL Cluster Positions (E < 200 MeV)

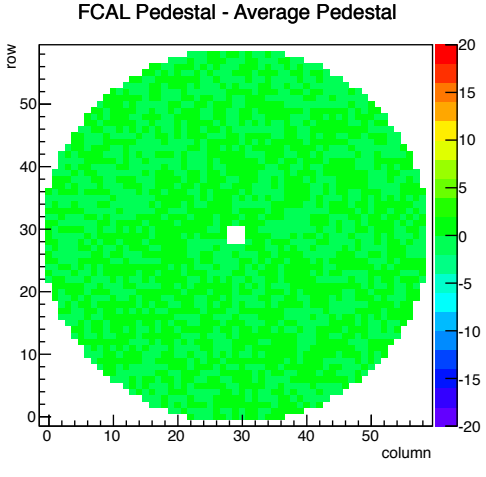


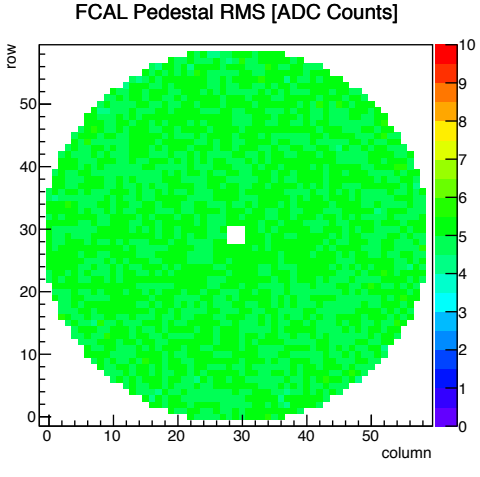
FCAL Cluster Positions (E > 200 MeV)



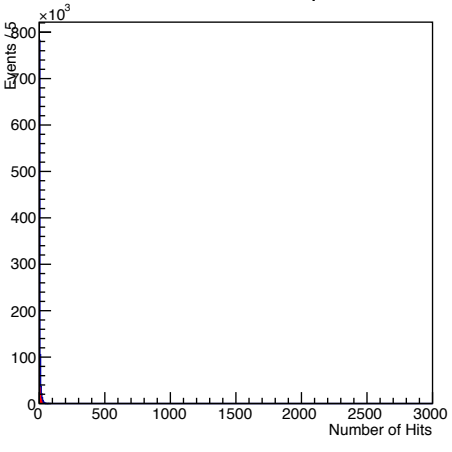

FCAL Pedestal (All Channels)
×10^3
Pixels / 1 ADC Counts
ADC Counts


FCAL Pedestal vs. Channel
Average Pedestal [ADC Counts]
Channel Index

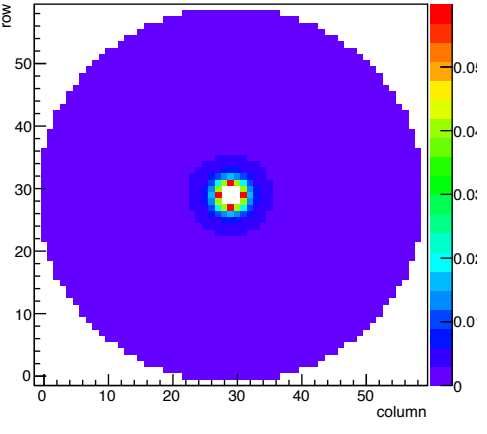

FCAL Pedestal - Average Pedestal
row
column


FCAL Pedestal RMS [ADC Counts]
row
column

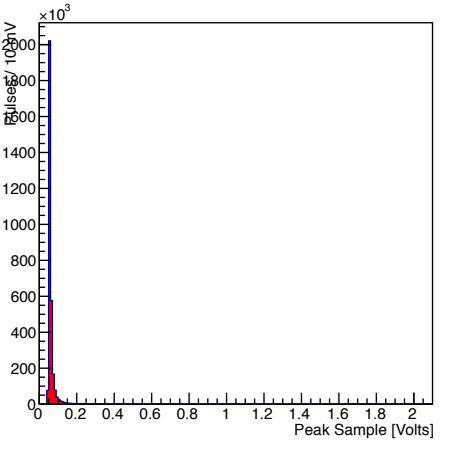
FCAL Number of Raw Hits per Event



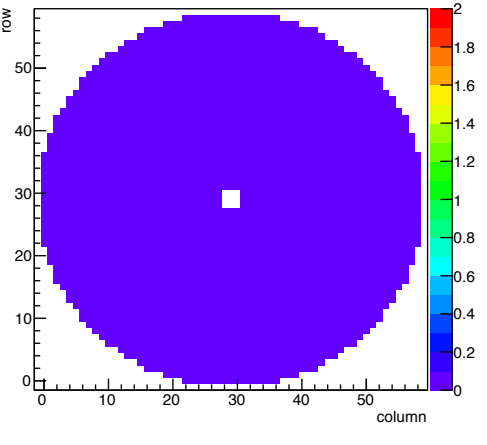
FCAL Pulse Occupancy per Event

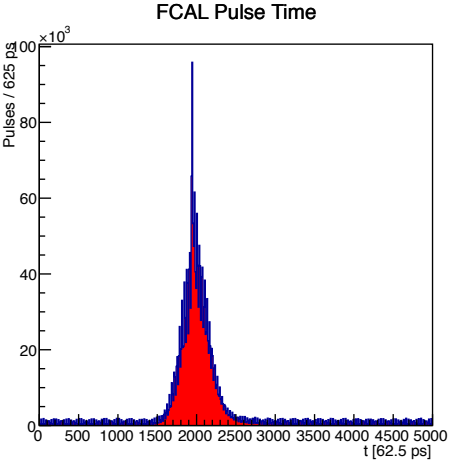


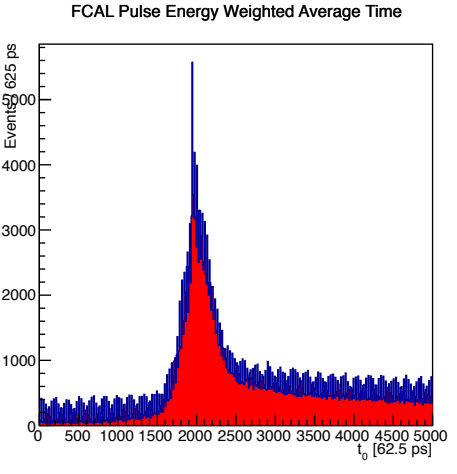
FCAL Pulse Peak

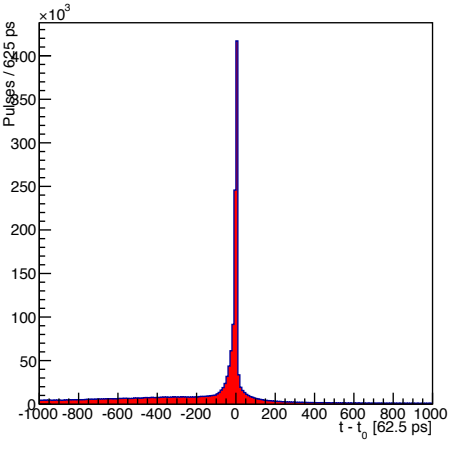


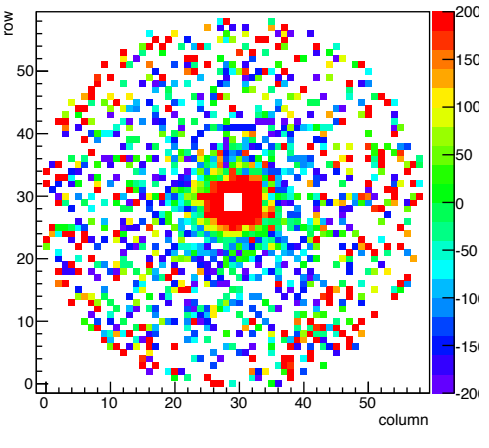
FCAL Pulse Peak [Volts]

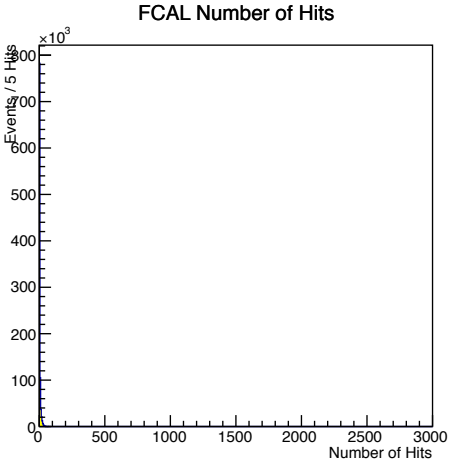


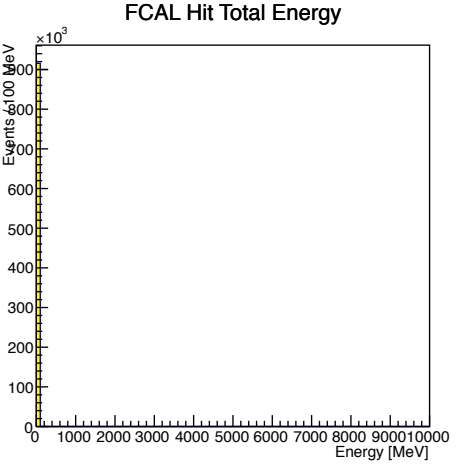

FCAL Pulse Time
Pulses / 625 ps
×10^3
t [62.5 ps]

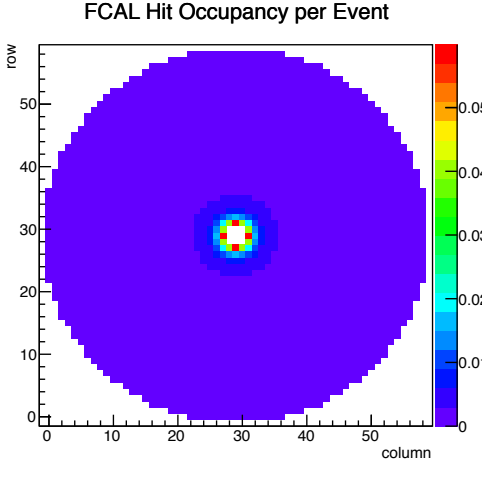

FCAL Pulse Energy Weighted Average Time
Events / 625 ps
t_0 [62.5 ps]

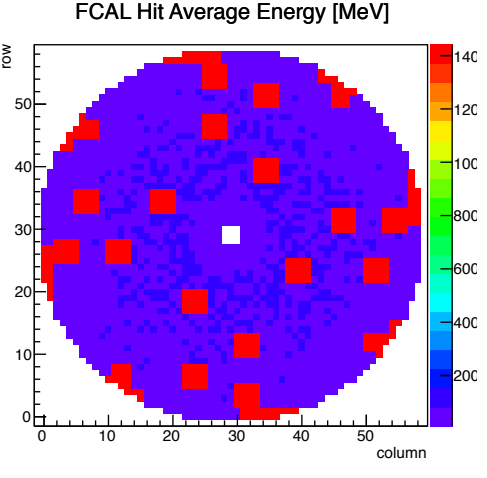

FCAL Pulse Local Time
Pulses / 625 ps
×10^3
t - t_0 [62.5 ps]


FCAL Pulse Local Time [62.5 ps]
row
column

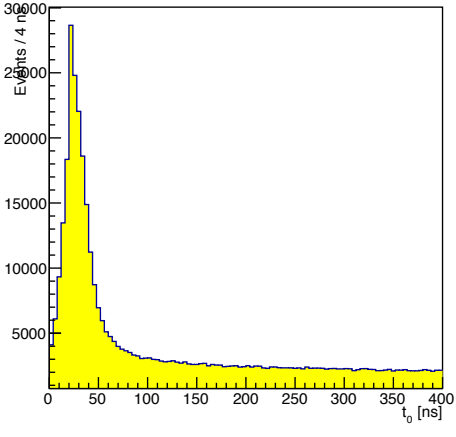

FCAL Number of Hits
×10^3
Events / 5 Hits
Number of Hits


FCAL Hit Total Energy
×10^3
Events / 100 MeV
Energy [MeV]

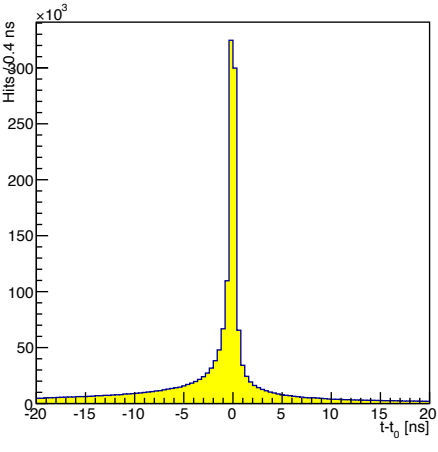

FCAL Hit Occupancy per Event
row
column


FCAL Hit Average Energy [MeV]
row
column

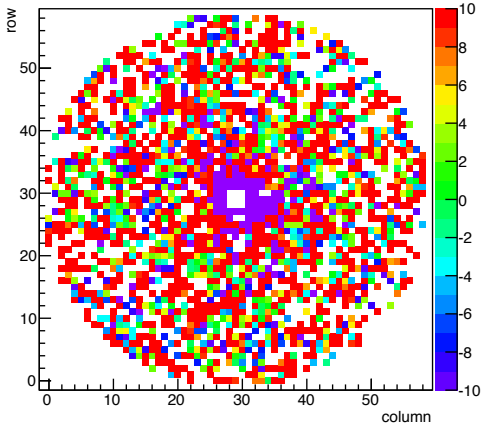
FCAL Hit Energy Weighted Average Time



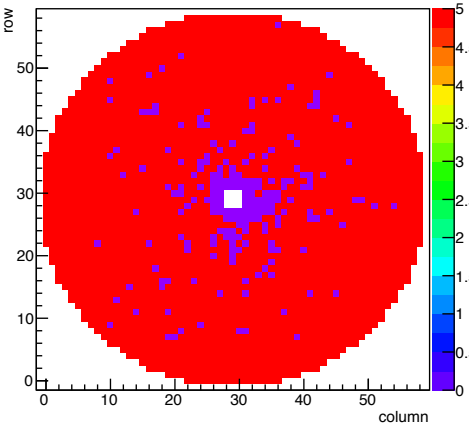
FCAL Hit Local Time

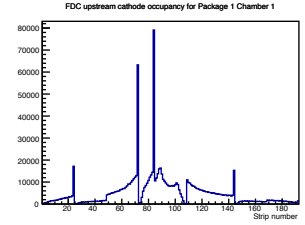


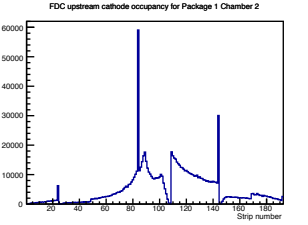
FCAL Hit Local Time [ns]

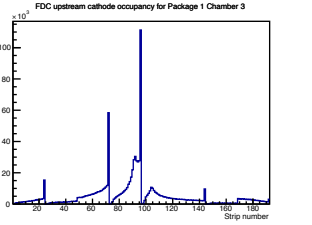


FCAL Local Hit Time RMS [ns]




FDC upstream cathode occupancy for Package 1 Chamber 1
Strip number


FDC upstream cathode occupancy for Package 1 Chamber 2
Strip number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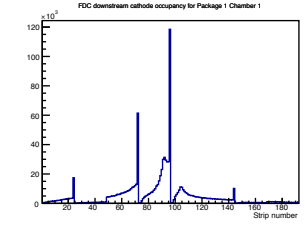
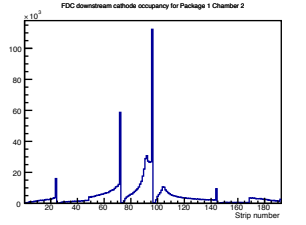
Strip number


FDC downstream cathode occupancy for Package 1 Chamber 1
Strip number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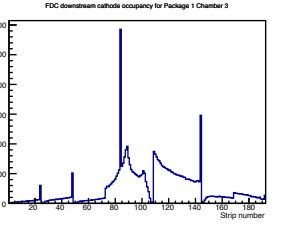
FDC downstream cathode occupancy for Package 1 Chamber 3
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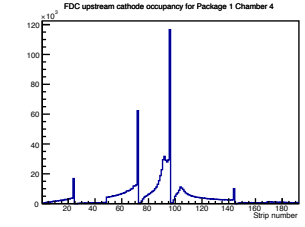
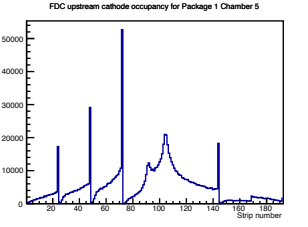
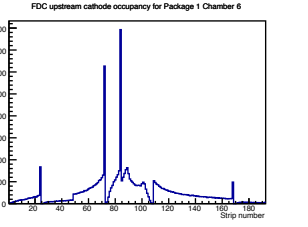
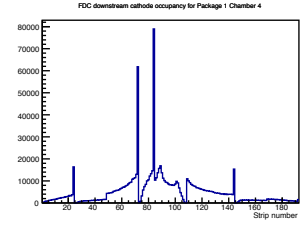
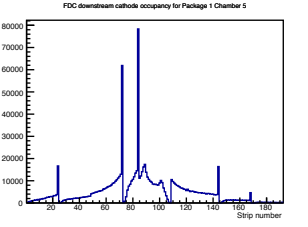
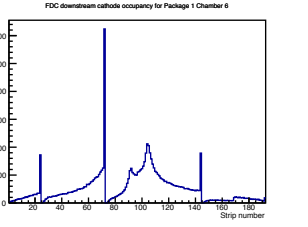

FDC upstream cathode occupancy for Package 1 Chamber 4
Strip number


FDC upstream cathode occupancy for Package 1 Chamber 5
Strip number

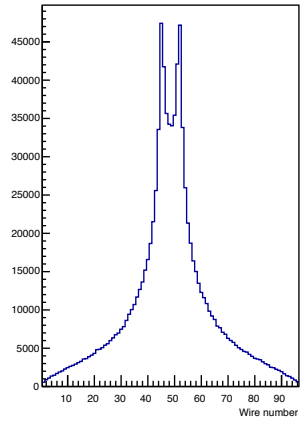

FDC upstream cathode occupancy for Package 1 Chamber 6
Strip number


FDC downstream cathode occupancy for Package 1 Chamber 4
Strip number

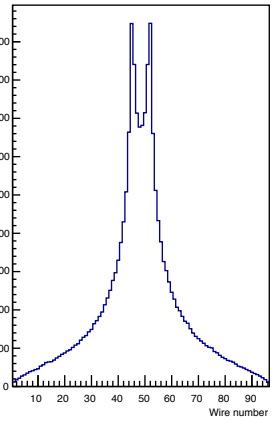

FDC downstream cathode occupancy for Package 1 Chamber 5
Strip number


FDC downstream cathode occupancy for Package 1 Chamber 6
Strip number

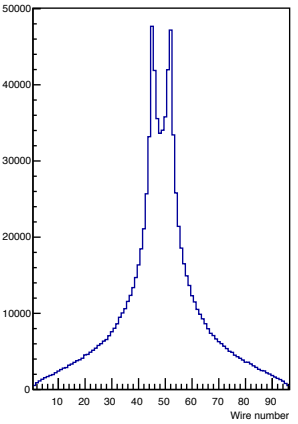
FDC wire occupancy for Package 1 Chamber 1



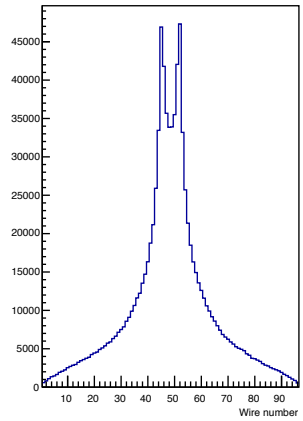
FDC wire occupancy for Package 1 Chamber 2



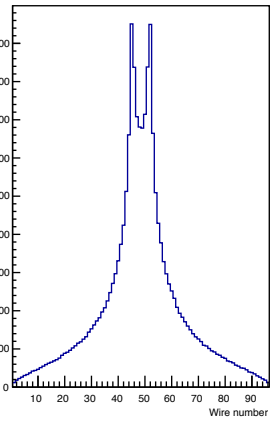
FDC wire occupancy for Package 1 Chamber 3



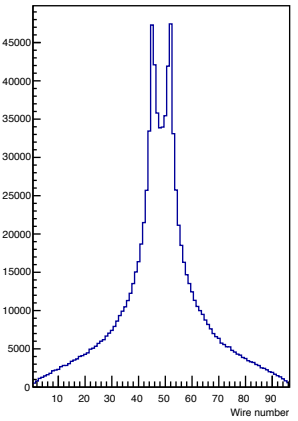
FDC wire occupancy for Package 1 Chamber 4

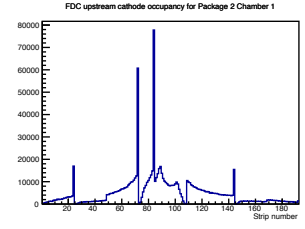


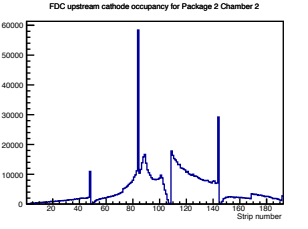
FDC wire occupancy for Package 1 Chamber 5



FDC wire occupancy for Package 1 Chamber 6




FDC upstream cathode occupancy for Package 2 Chamber 1
Strip number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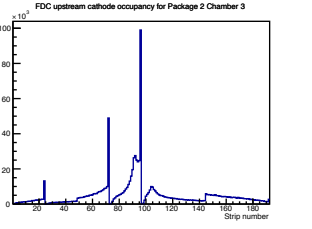
FDC upstream cathode occupancy for Package 2 Chamber 3
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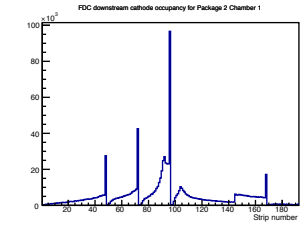
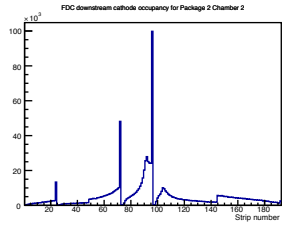

FDC downstream cathode occupancy for Package 2 Chamber 1
Strip number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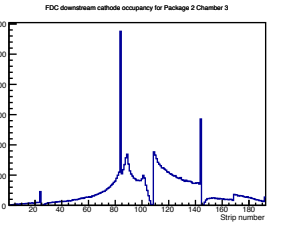
Strip number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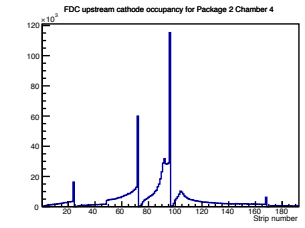
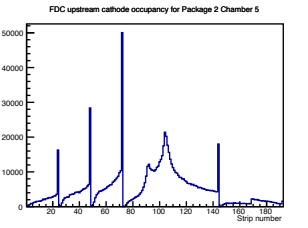
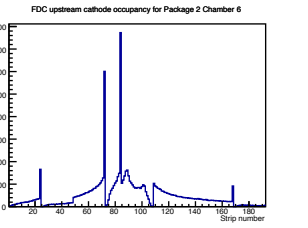
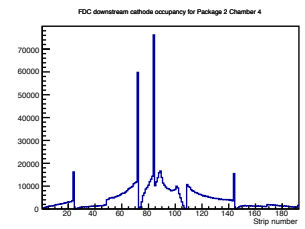
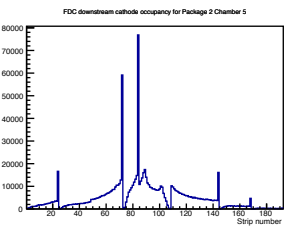
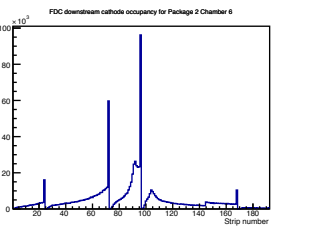

FDC upstream cathode occupancy for Package 2 Chamber 4
Strip number


FDC upstream cathode occupancy for Package 2 Chamber 5
Strip number

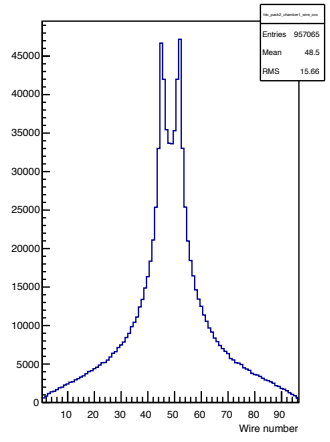

FDC upstream cathode occupancy for Package 2 Chamber 6
Strip number


FDC downstream cathode occupancy for Package 2 Chamber 4
Strip number

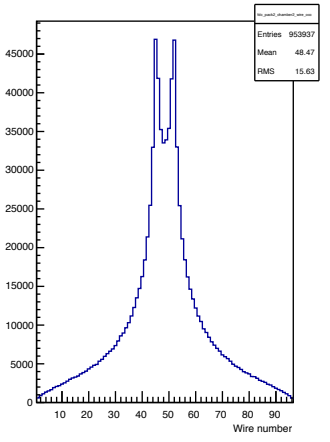

FDC downstream cathode occupancy for Package 2 Chamber 5
Strip number


FDC downstream cathode occupancy for Package 2 Chamber 6
Strip number

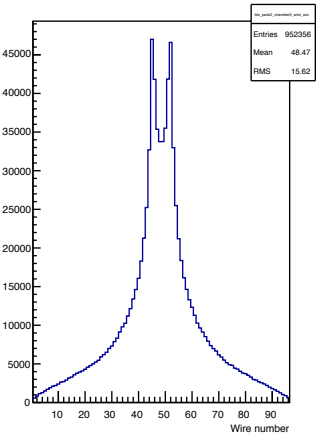
FDC wire occupancy for Package 2 Chamber 1



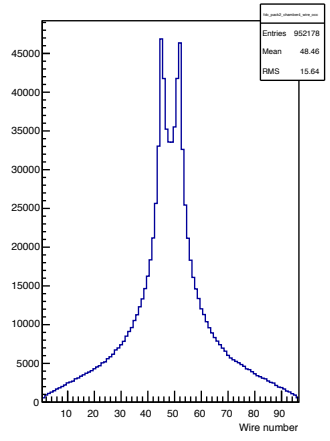
FDC wire occupancy for Package 2 Chamber 2



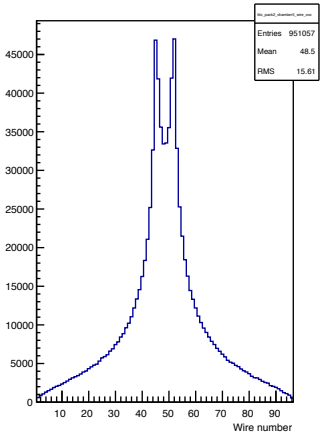
FDC wire occupancy for Package 2 Chamber 3



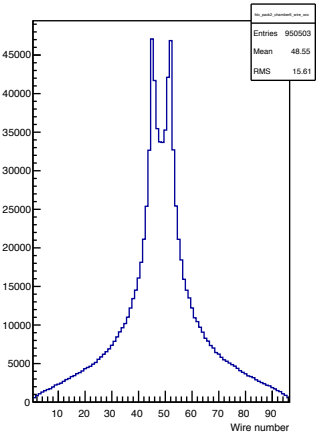
FDC wire occupancy for Package 2 Chamber 4

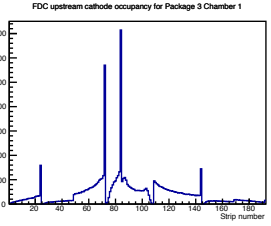


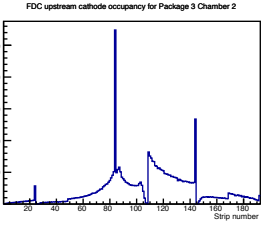
FDC wire occupancy for Package 2 Chamber 5

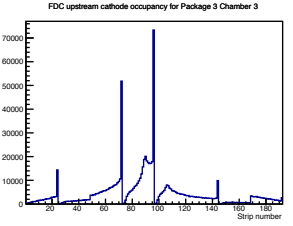


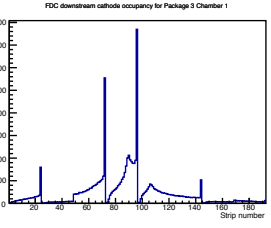
FDC wire occupancy for Package 2 Chamber 6

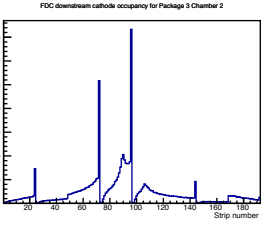



FDC upstream cathode occupancy for Package 3 Chamber 1
Strip number


FDC upstream cathode occupancy for Package 3 Chamber 2
Strip number


FDC upstream cathode occupancy for Package 3 Chamber 3
Strip number


FDC downstream cathode occupancy for Package 3 Chamber 1
Strip number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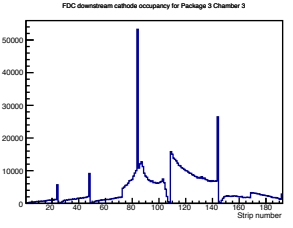
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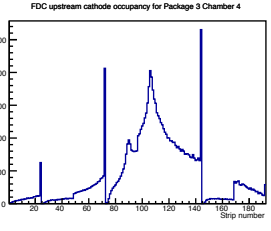
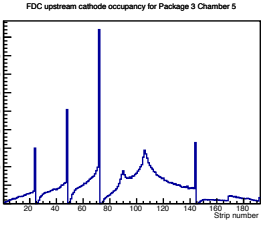
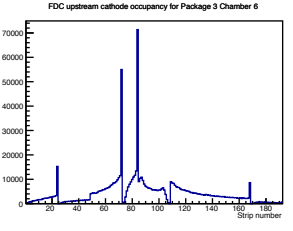
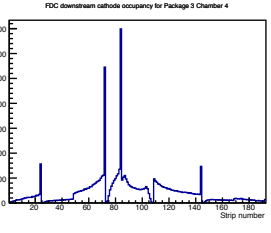
Strip number


FDC upstream cathode occupancy for Package 3 Chamber 4
Strip number


FDC upstream cathode occupancy for Package 3 Chamber 5
Strip number


FDC upstream cathode occupancy for Package 3 Chamber 6
Strip number


FDC downstream cathode occupancy for Package 3 Chamber 4
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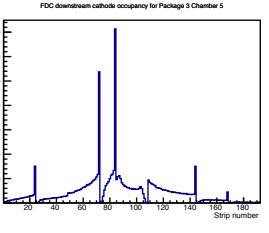
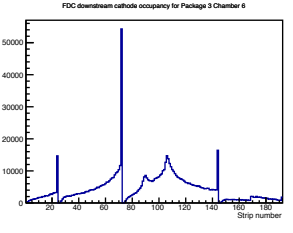
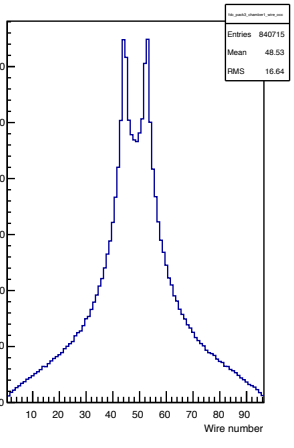
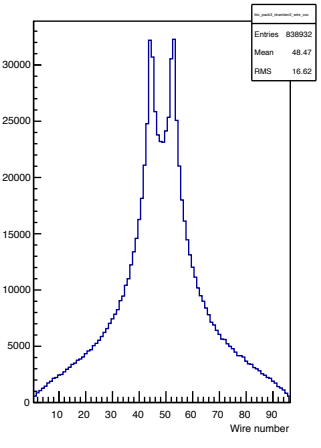

FDC downstream cathode occupancy for Package 3 Chamber 5
Strip number


FDC downstream cathode occupancy for Package 3 Chamber 6
Strip number

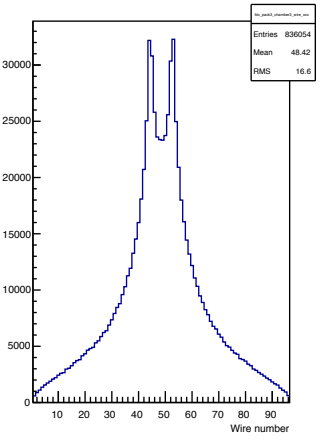
FDC wire occupancy for Package 3 Chamber 1



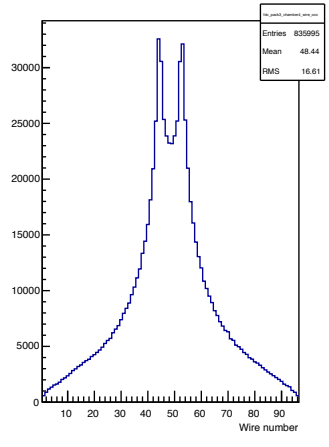
FDC wire occupancy for Package 3 Chamber 2



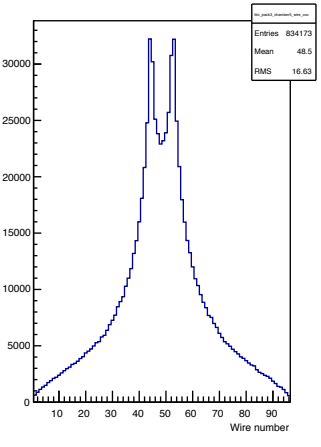
FDC wire occupancy for Package 3 Chamber 3



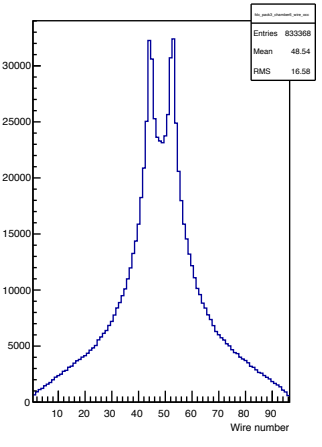
FDC wire occupancy for Package 3 Chamber 4

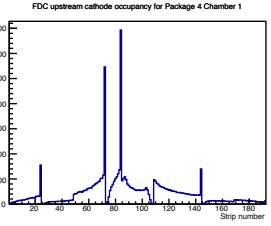


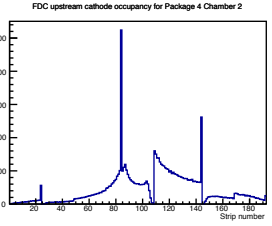
FDC wire occupancy for Package 3 Chamber 5

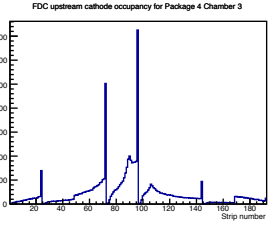


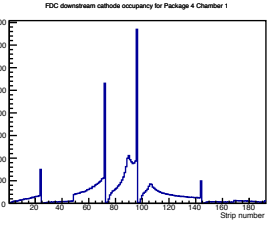
FDC wire occupancy for Package 3 Chamber 6




FDC upstream cathode occupancy for Package 4 Chamber 1
Strip number


FDC upstream cathode occupancy for Package 4 Chamber 2
Strip number


FDC upstream cathode occupancy for Package 4 Chamber 3
Strip number


FDC downstream cathode occupancy for Package 4 Chamber 1
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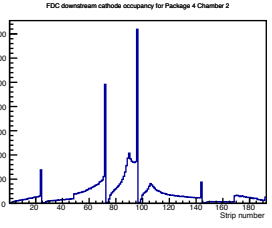
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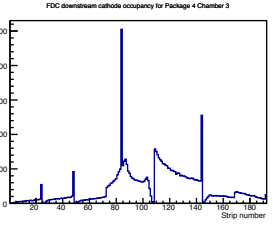
FDC downstream cathode occupancy for Package 4 Chamber 3
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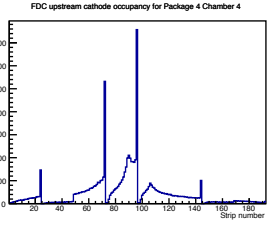
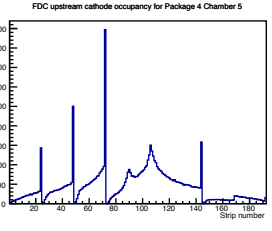
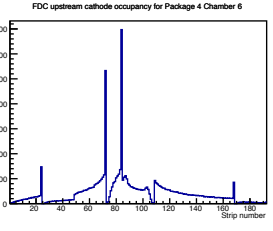
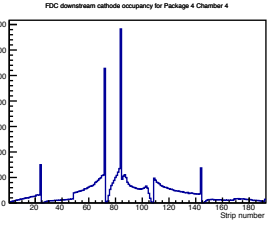
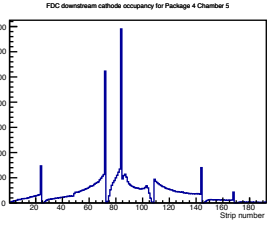
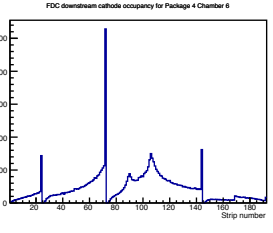

FDC upstream cathode occupancy for Package 4 Chamber 4
Strip number


FDC upstream cathode occupancy for Package 4 Chamber 5
Strip number

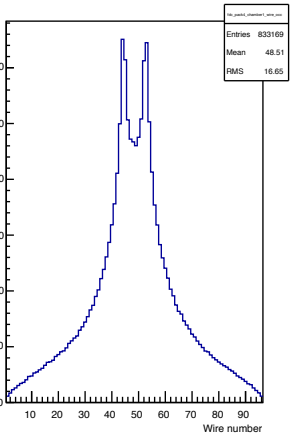

FDC upstream cathode occupancy for Package 4 Chamber 6
Strip number


FDC downstream cathode occupancy for Package 4 Chamber 4
Strip number

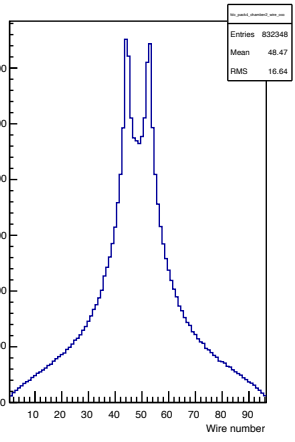

FDC downstream cathode occupancy for Package 4 Chamber 5
Strip number


FDC downstream cathode occupancy for Package 4 Chamber 6
Strip number

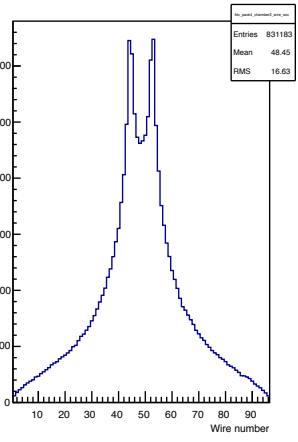
FDC wire occupancy for Package 4 Chamber 1



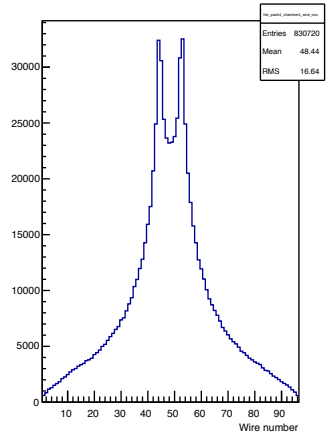
FDC wire occupancy for Package 4 Chamber 2



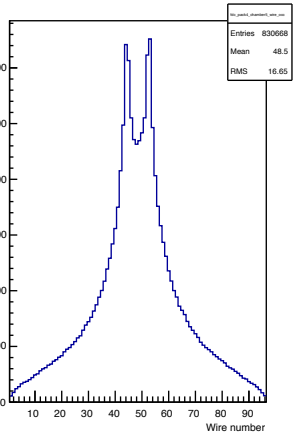
FDC wire occupancy for Package 4 Chamber 3



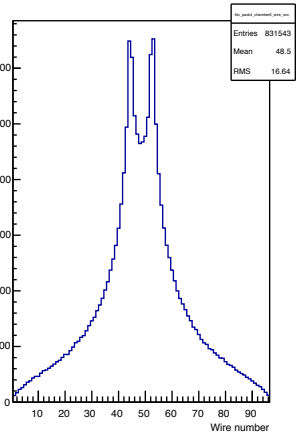
FDC wire occupancy for Package 4 Chamber 4

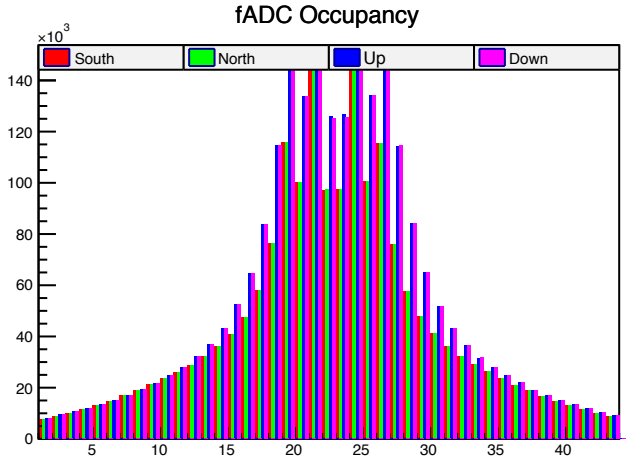


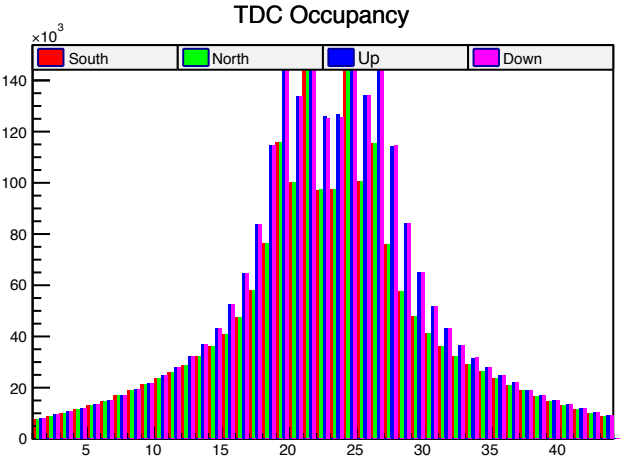
FDC wire occupancy for Package 4 Chamber 5

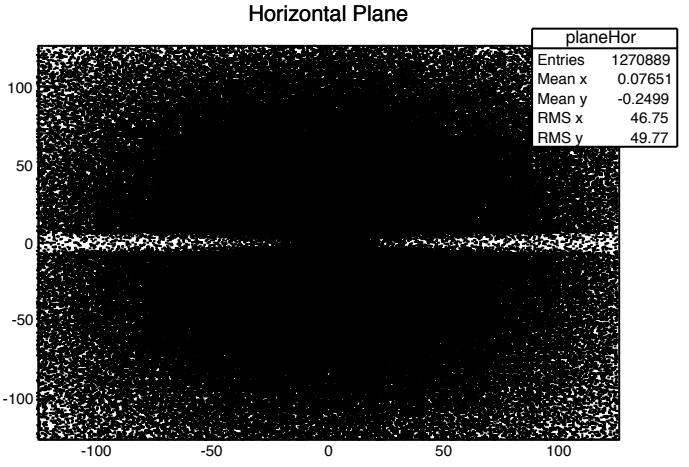


FDC wire occupancy for Package 4 Chamber 6




fADC Occupancy
×10^3
South
North
Up
Down
140
120
100
80
60
40
20
0
5
10
15
20
25
30
35
40


TDC Occupancy
×10^3
South
North
Up
Down
140
120
100
80
60
40
20
0
5
10
15
20
25
30
35
40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Mean y -0.2499
RMS x 46.75
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50
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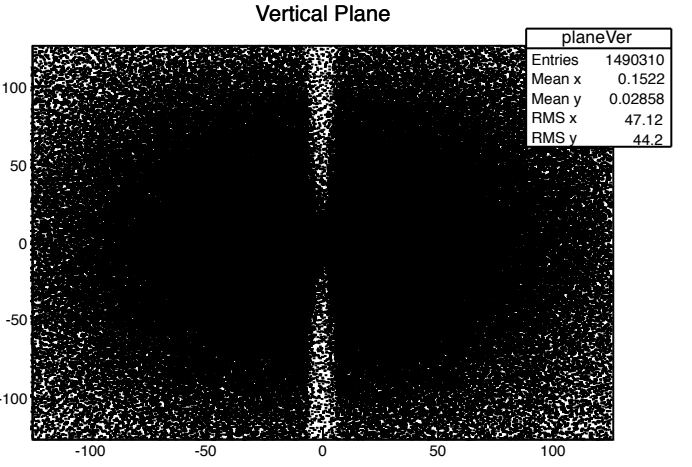
-100
-100
-50
0
50
100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planeVer
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Mean x 0.1522
Mean y 0.02858
RMS x 47.12
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50
0
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-100
-100
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0
50
100