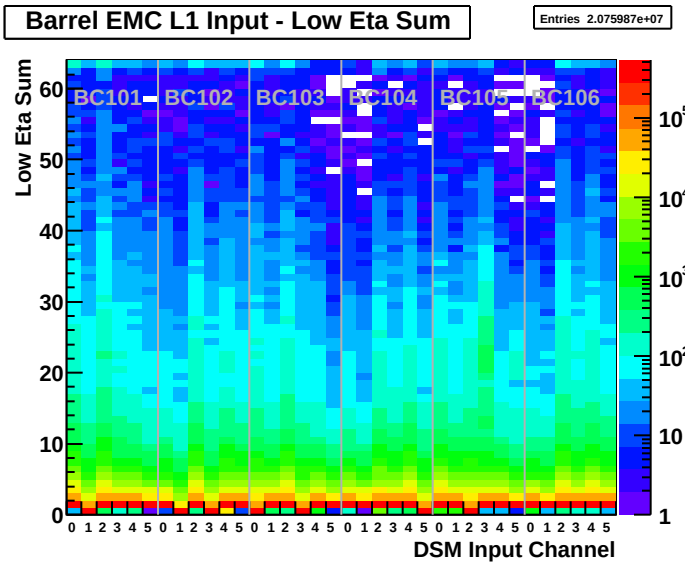
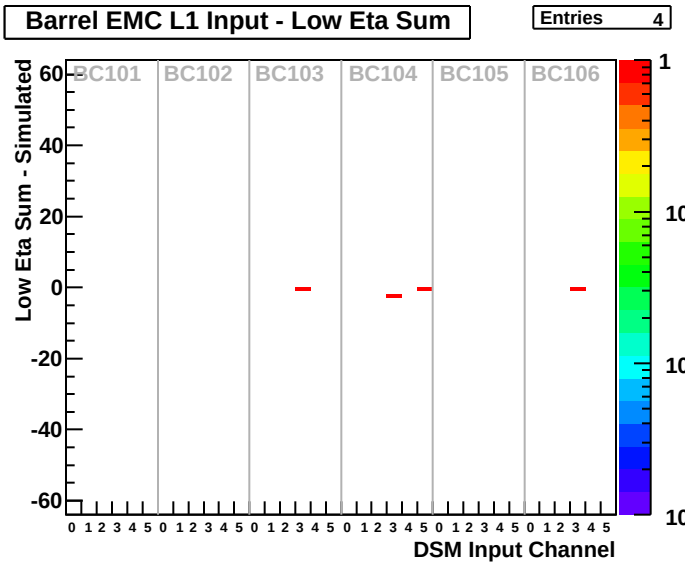
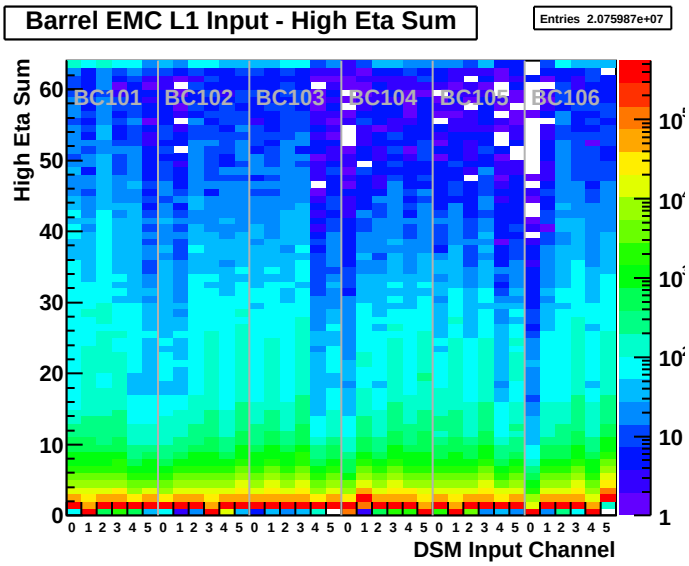
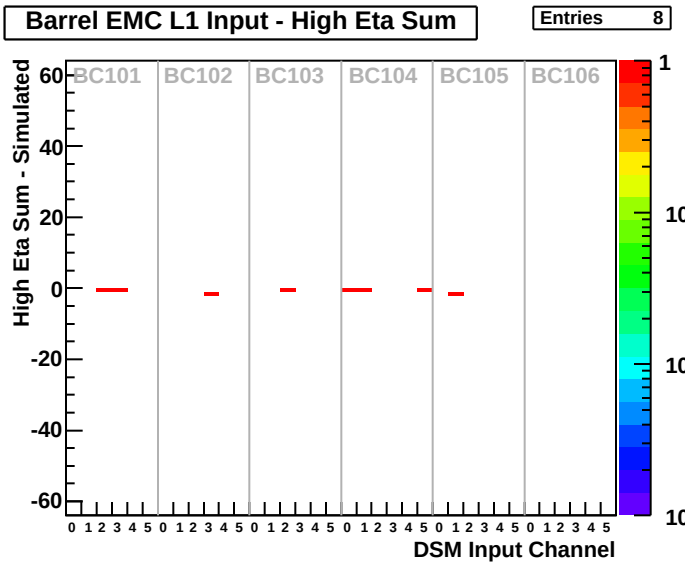
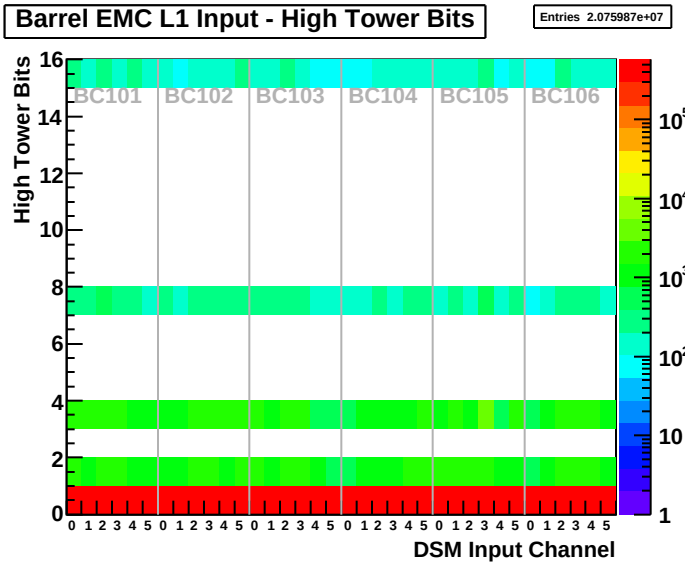
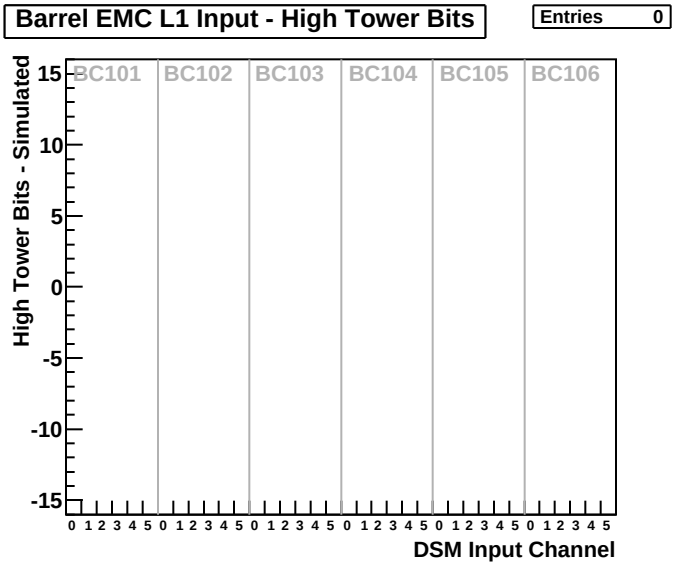

Barrel EMC L1 Input - Low Eta Sum
Entries 2.075987e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

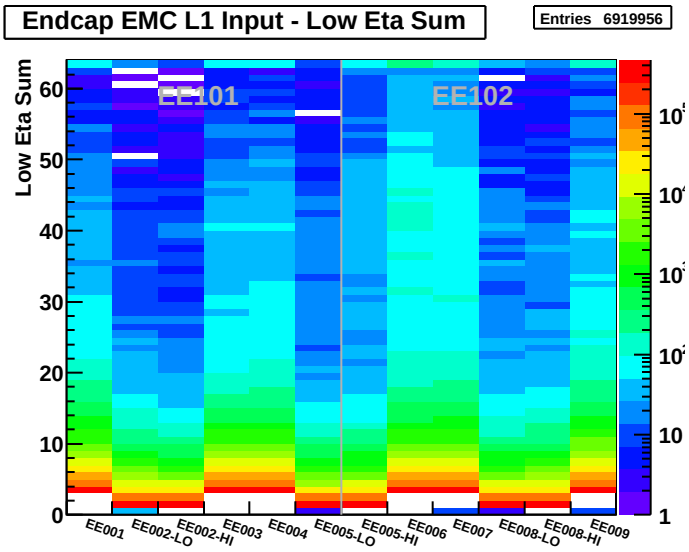

Barrel EMC L1 Input - Low Eta Sum
Entries 4
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

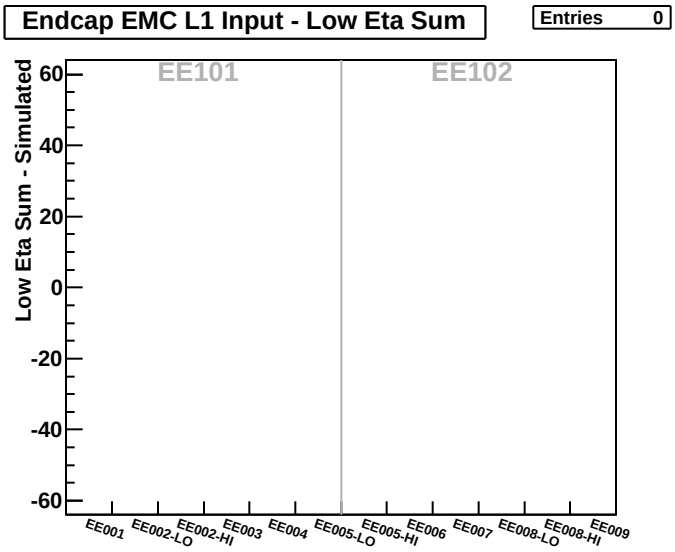

Barrel EMC L1 Input - High Eta Sum
Entries 2.075987e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

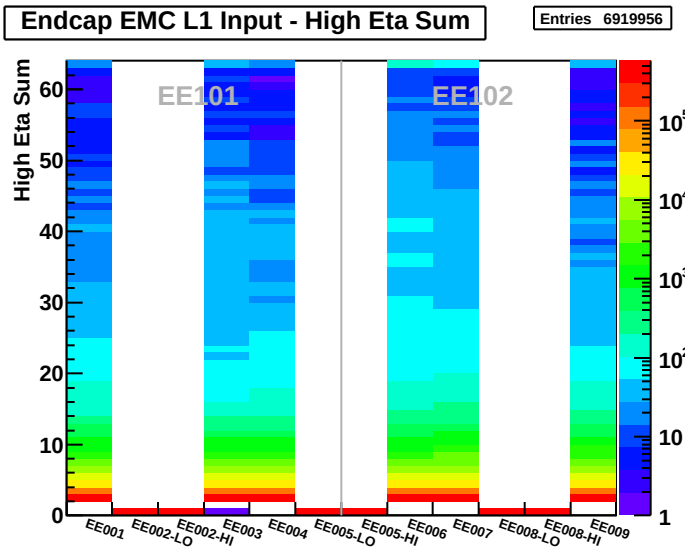

Barrel EMC L1 Input - High Eta Sum
Entries 8
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

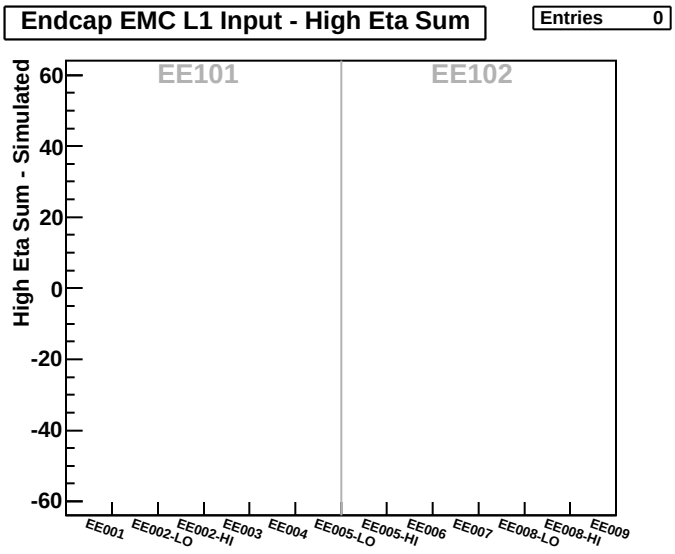

Barrel EMC L1 Input - High Tower Bits
Entries 2.075987e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

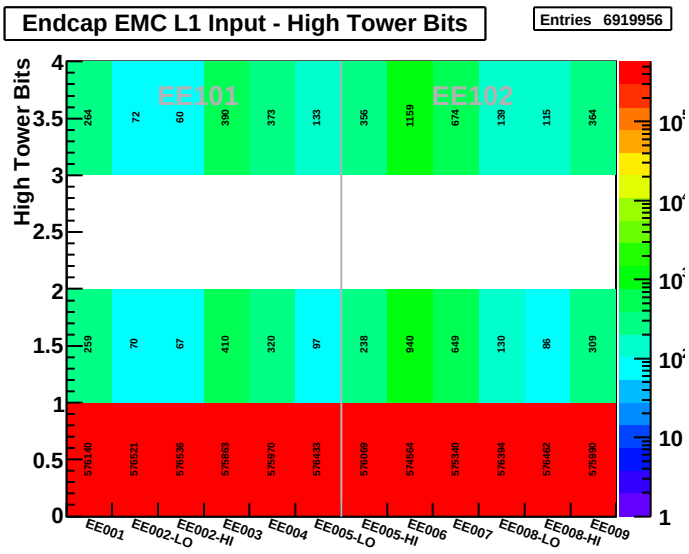

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

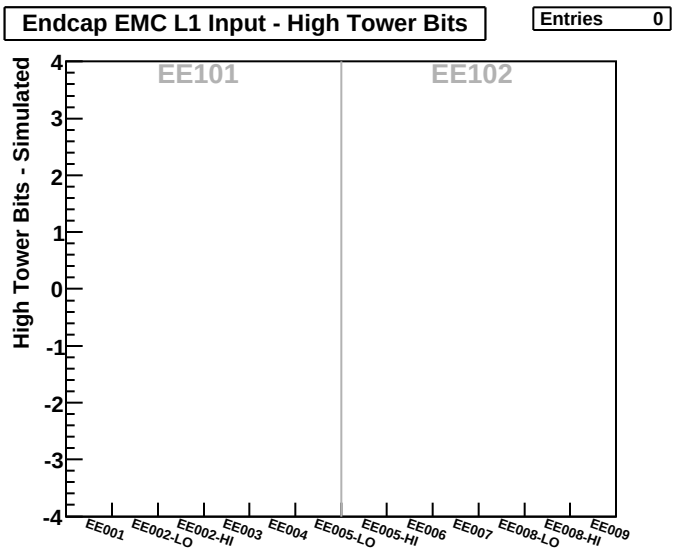

Endcap EMC L1 Input - Low Eta Sum
Entries 6919956
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

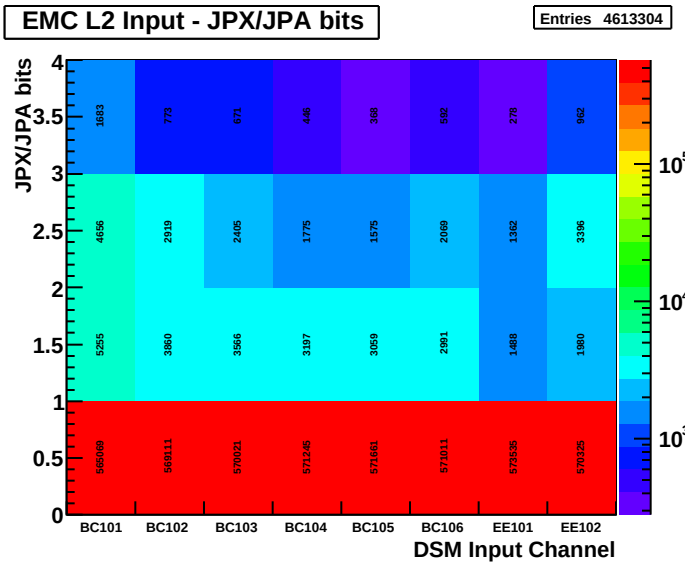

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

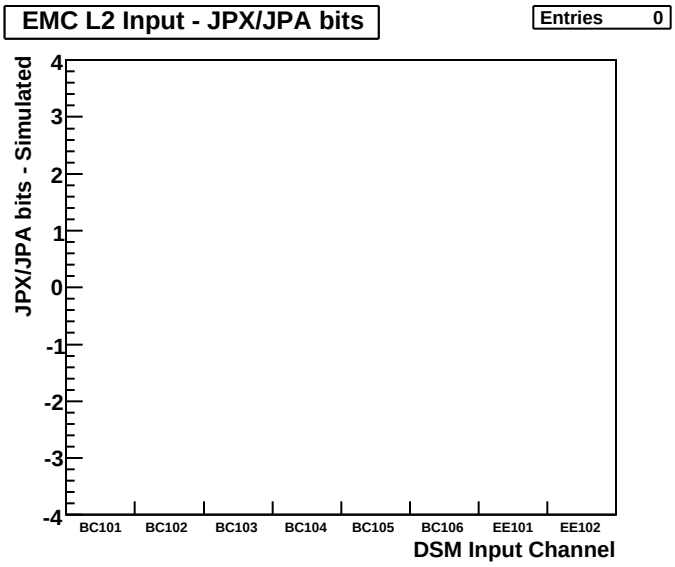

Endcap EMC L1 Input - High Eta Sum
Entries 6919956
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

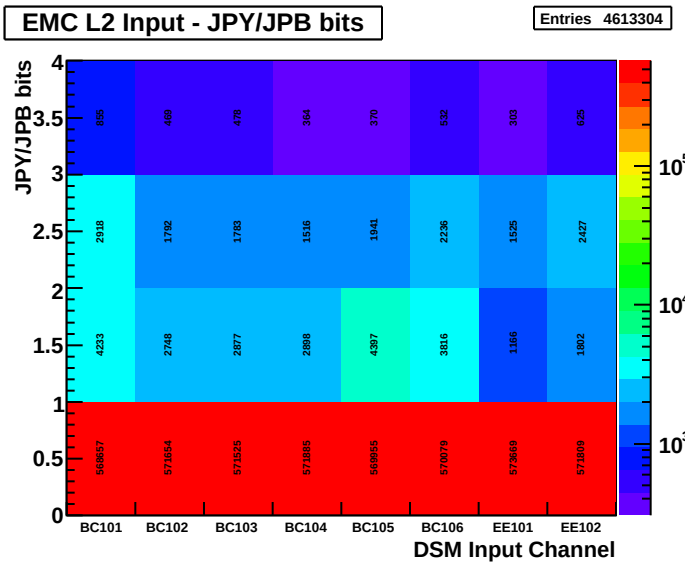

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

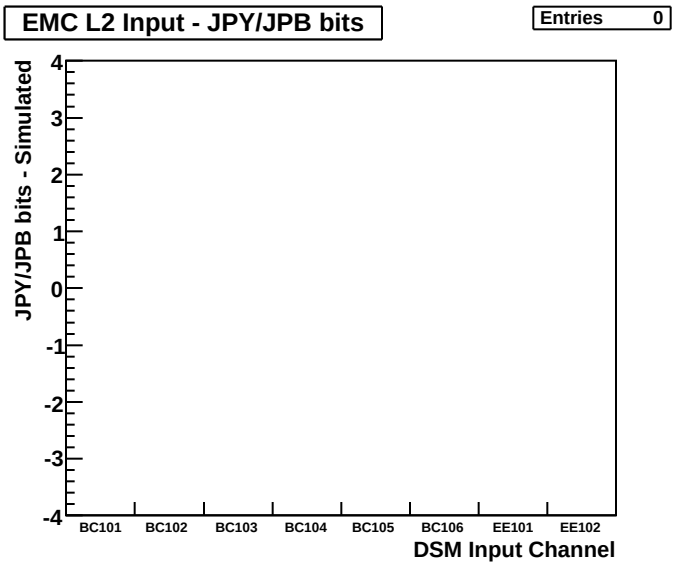

Endcap EMC L1 Input - High Tower Bits
Entries 6919956
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

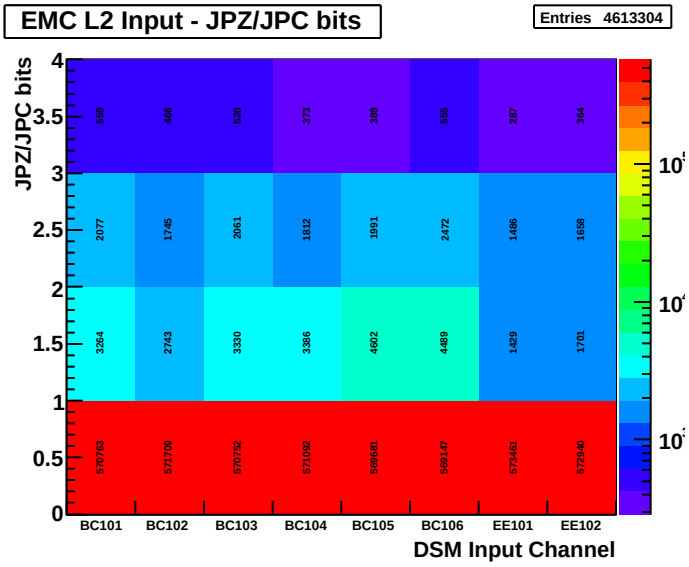

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

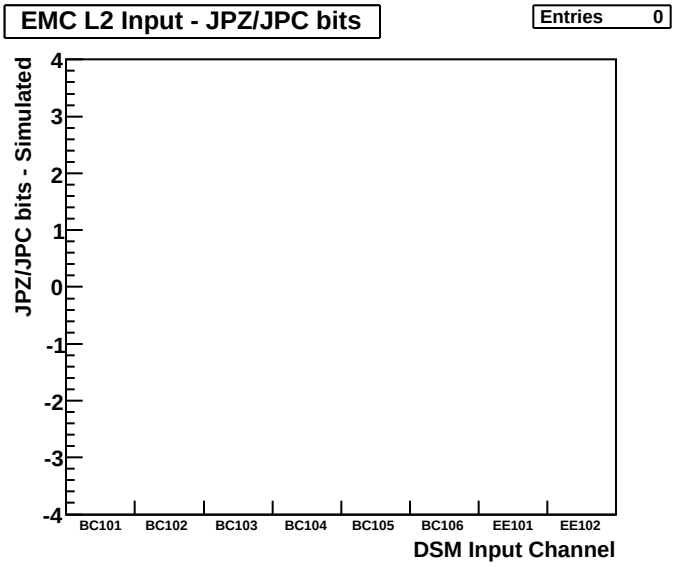

EMC L2 Input - JPX/JPA bits
Entries 4613304
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1683 773 671 446 368 592 278 962
4656 2919 2405 1775 1575 2069 1362 3396
5255 3860 3566 3197 3059 2991 1488 1980
565069 569111 570021 571245 571661 571011 573535 570325

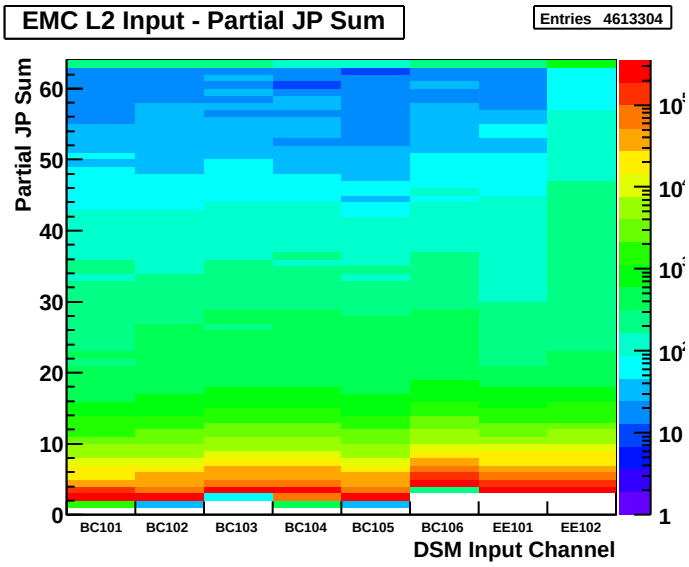

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

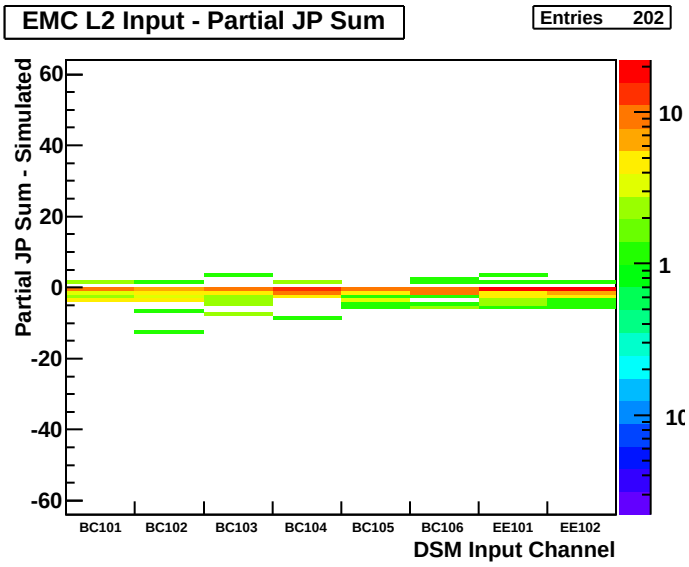

EMC L2 Input - JPY/JPB bits
Entries 4613304
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
655 469 478 364 370 532 303 625
2918 1792 1783 1516 1941 2236 1525 2427
4233 2748 2877 2898 4397 3016 1166 1802
568857 571654 571525 571885 569955 570079 573669 571809

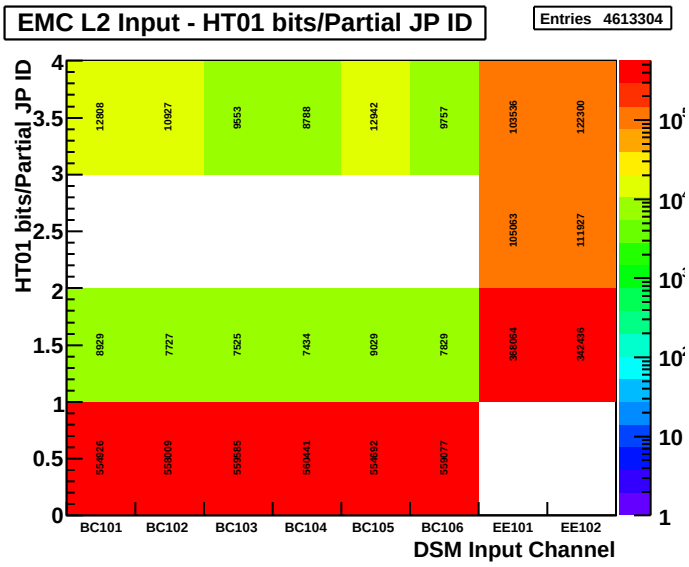

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

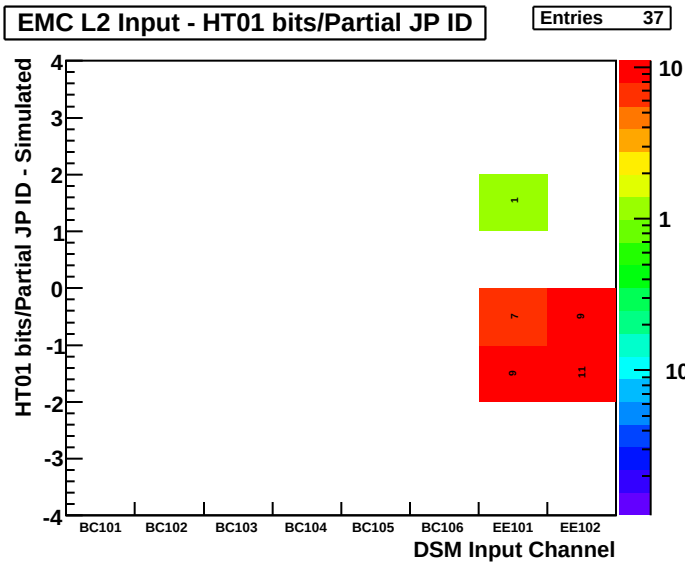

EMC L2 Input - JPZ/JPC bits
Entries 4613304
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
539 466 520 373 389 555 287 364
2077 1745 2061 1812 1991 2472 1486 1658
3264 2743 3330 3386 4602 4489 1429 1701
570763 571709 570752 571092 569681 569147 573461 572940

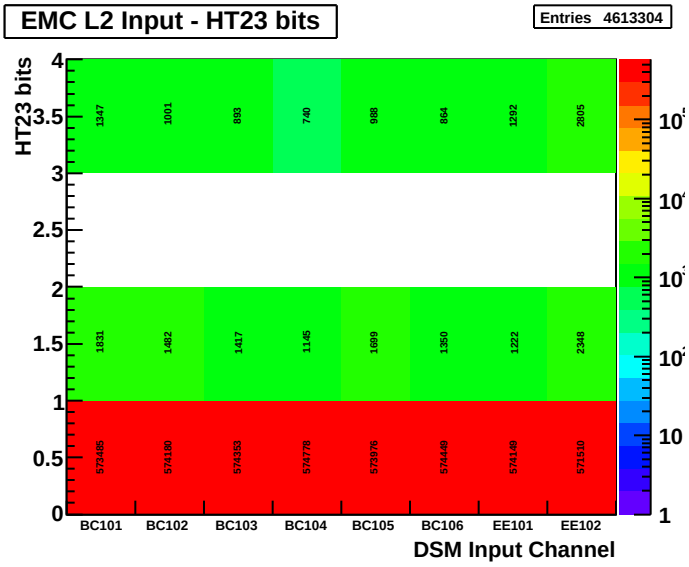

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

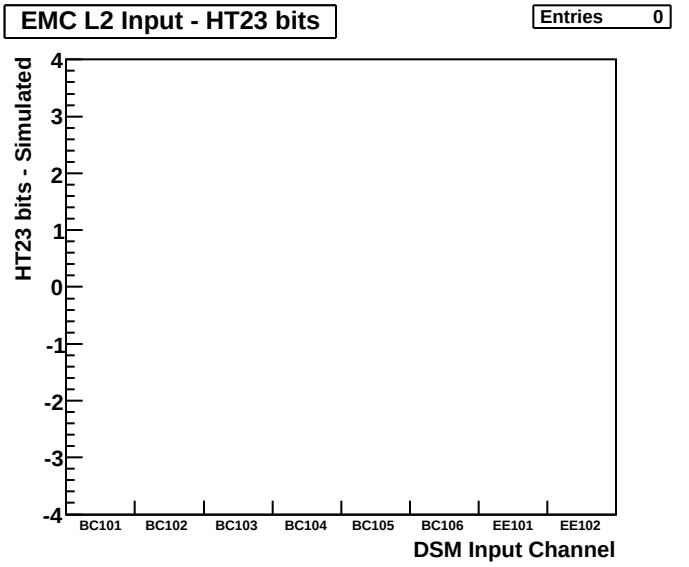

EMC L2 Input - Partial JP Sum
Entries 4613304
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

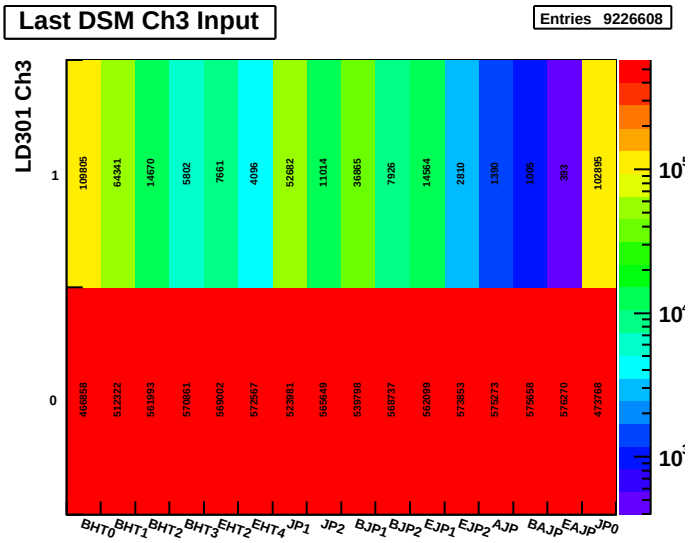

EMC L2 Input - Partial JP Sum
Entries 202
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

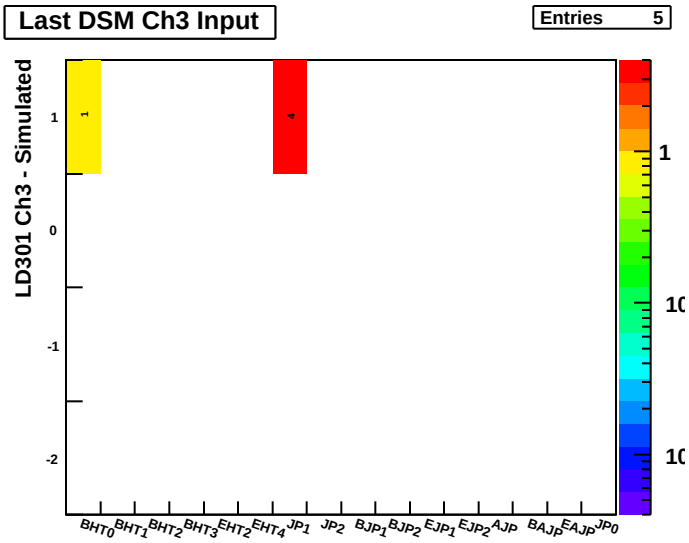

EMC L2 Input - HT01 bits/Partial JP ID
Entries 4613304
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

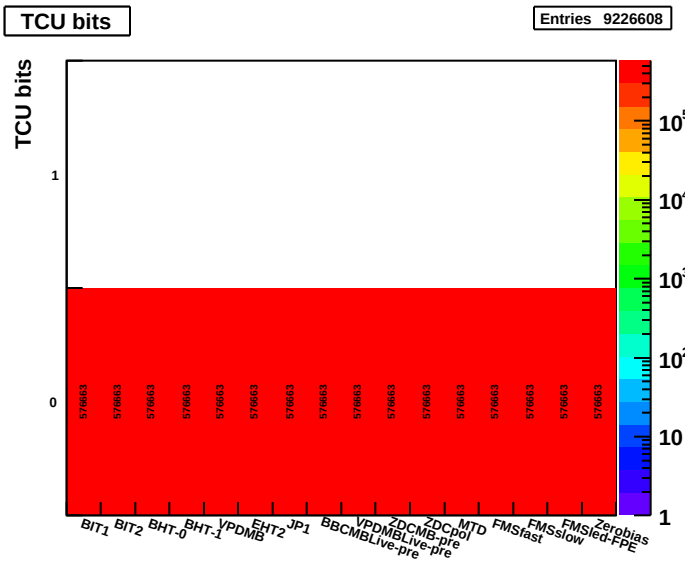

EMC L2 Input - HT01 bits/Partial JP ID
Entries 37
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

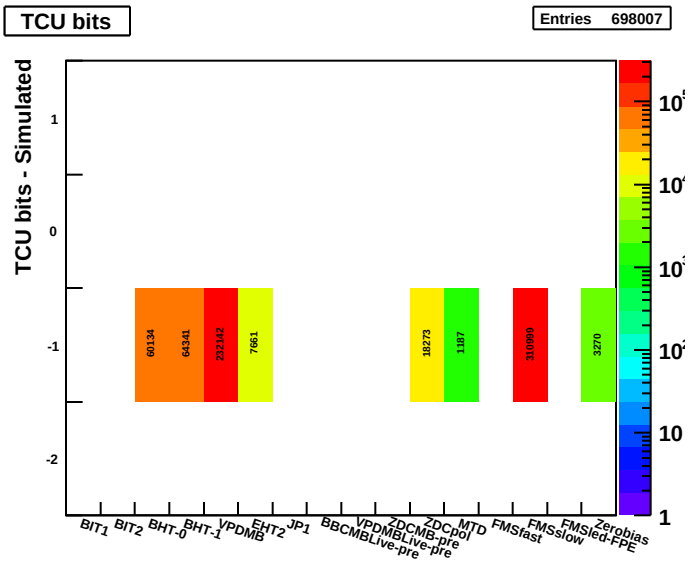

EMC L2 Input - HT23 bits
Entries 4613304
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

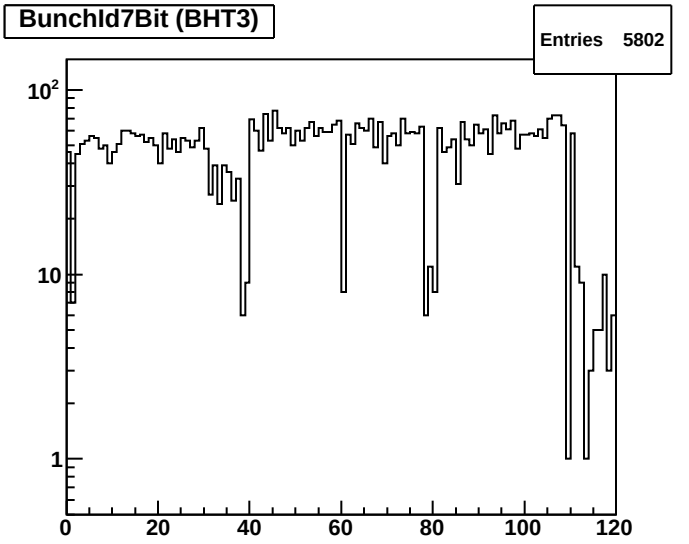

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

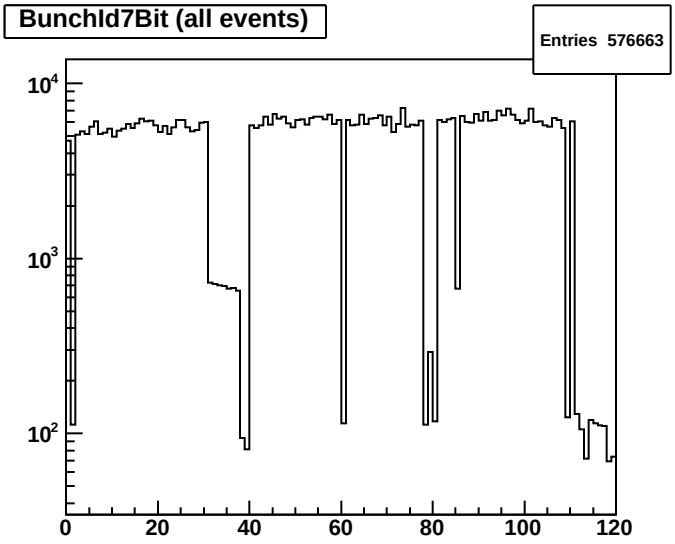

Last DSM Ch3 Input
Entries 9226608
LD301 Ch3
1
0
109805 64341 14670 5802 7661 4096 52682 11014 36865 7926 14564 2810 1390 1005 393 102895
466858 512322 561993 570861 569102 572567 523981 565649 539798 568737 562099 573853 575273 575658 576270 473768
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

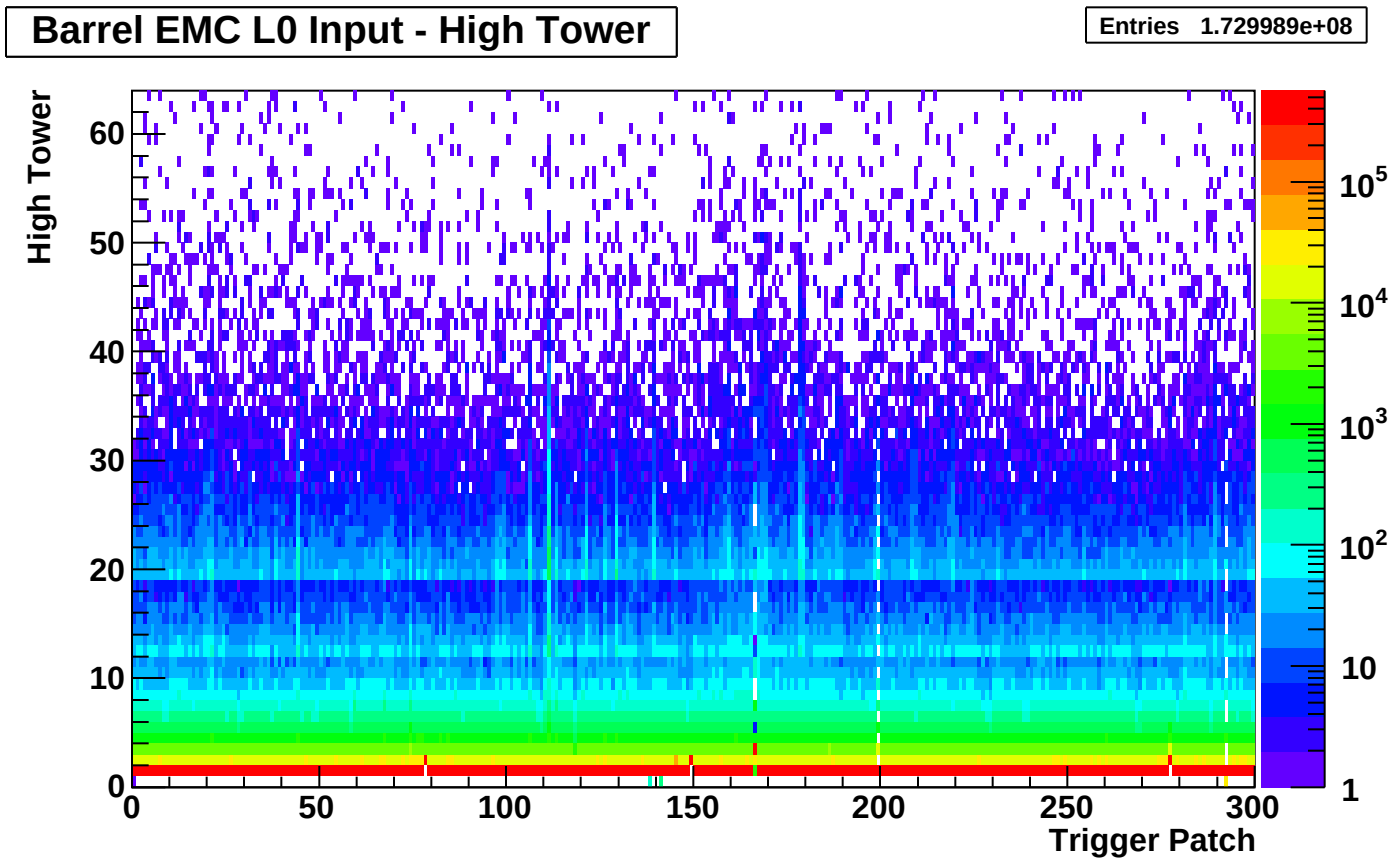

Last DSM Ch3 Input
Entries 5
LD301 Ch3 - Simulated
1
0
-1
-2
1 4
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

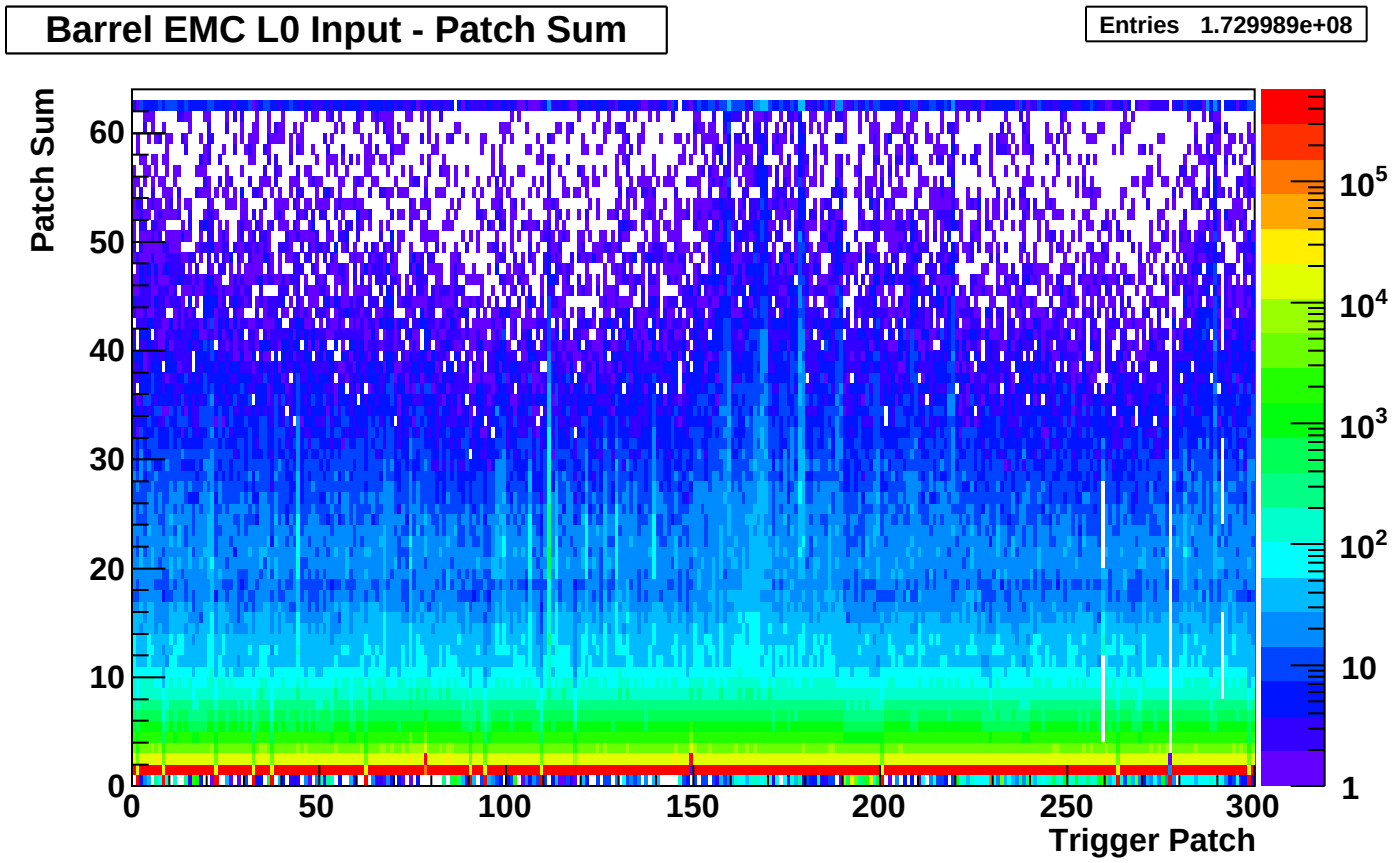

TCU bits
Entries 9226608
TCU bits
1
0
576663 576663 576663 576663 576663 576663 576663 576663 576663 576663 576663 576663 576663 576663 576663 576663
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDC-pol MTD FMSfast FMSslow FMSled-FPE Zerobias

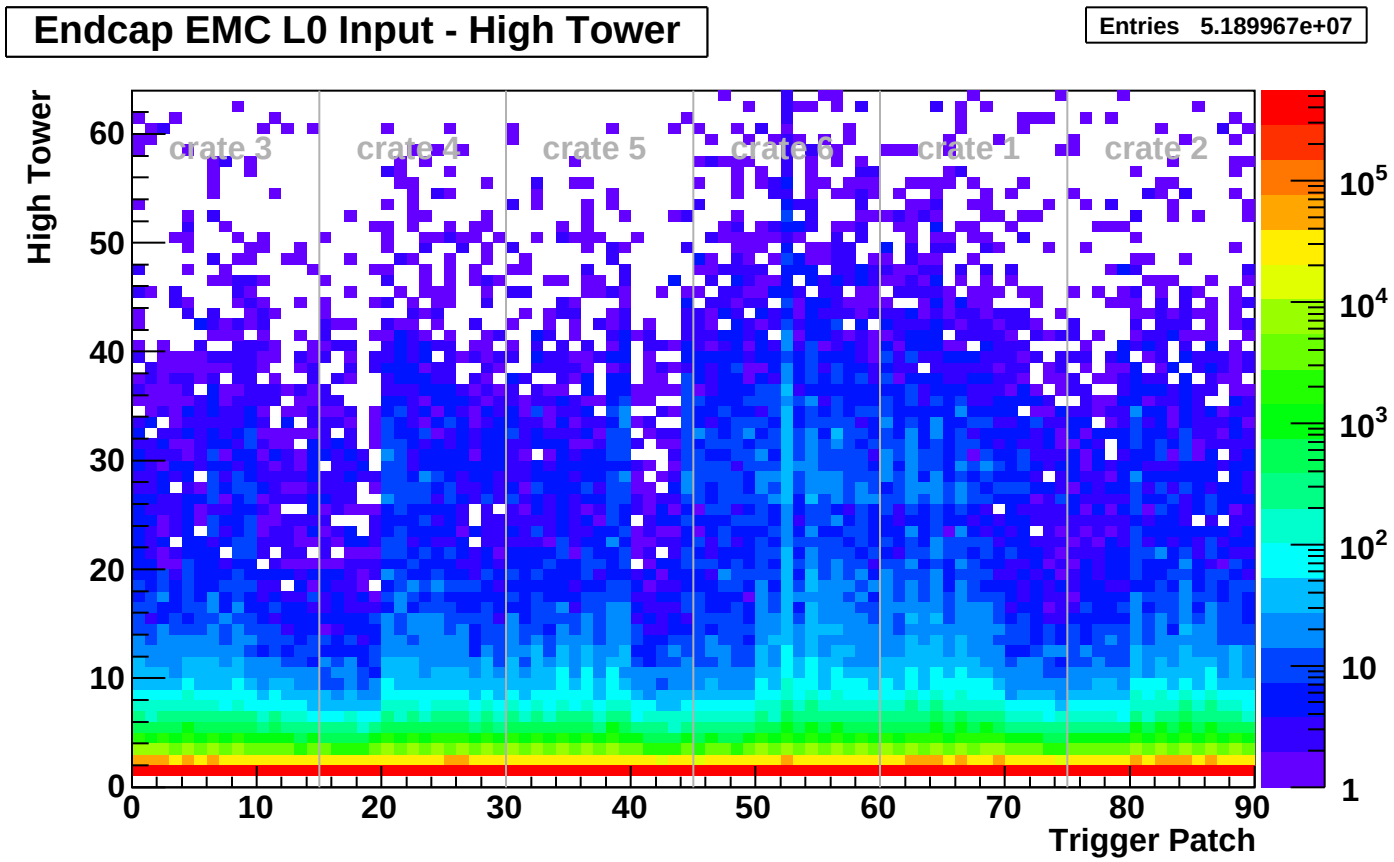

TCU bits
Entries 698007
TCU bits - Simulated
1
0
-1
-2
60134 64341 232142 7661 18273 1187 310999 3270
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDC-pol MTD FMSfast FMSslow FMSled-FPE Zerobias

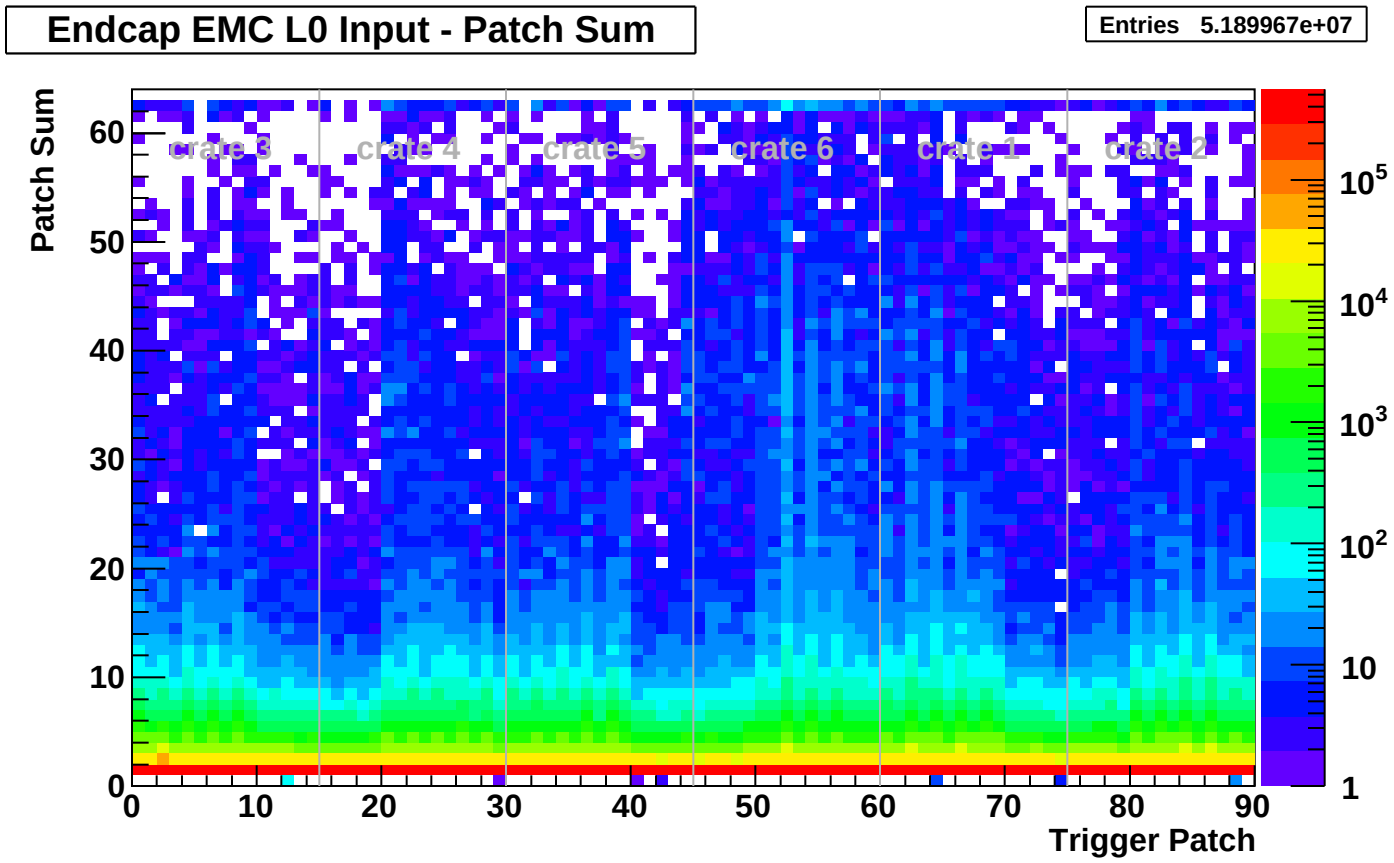

BunchId7Bit (BHT3)
Entries 5802
10²
10
1
0 20 40 60 80 100 120

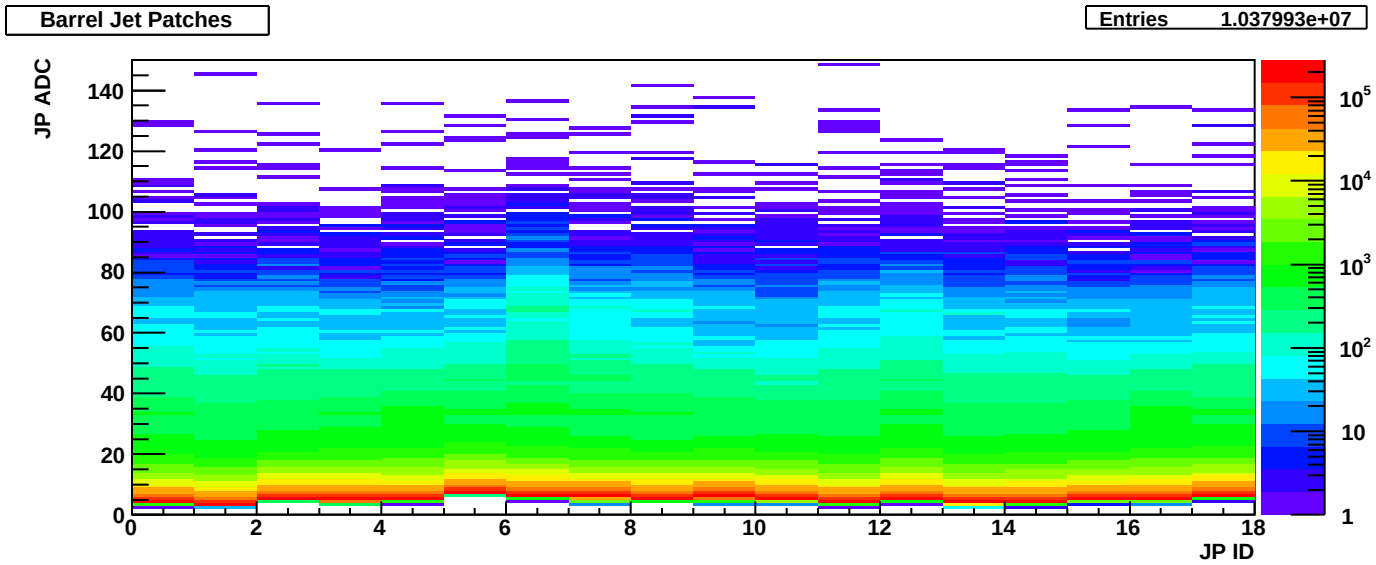

BunchId7Bit (all events)
Entries 576663
10⁴
10³
10²
0 20 40 60 80 100 120

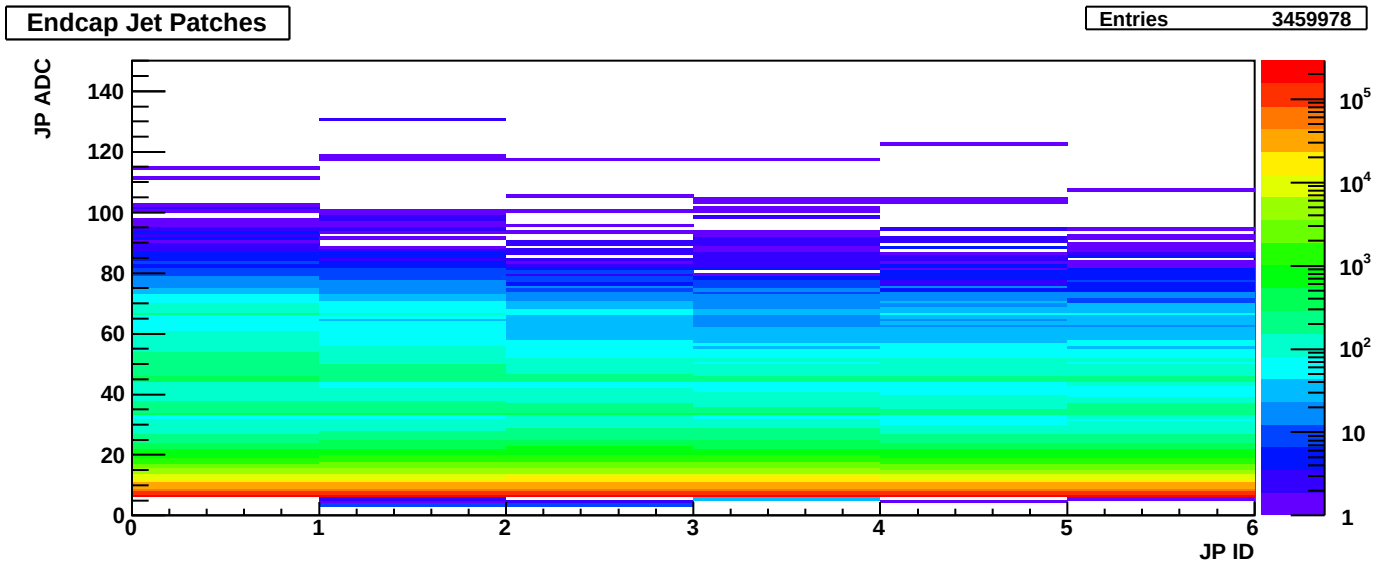

Barrel EMC L0 Input - High Tower
Entries 1.729989e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

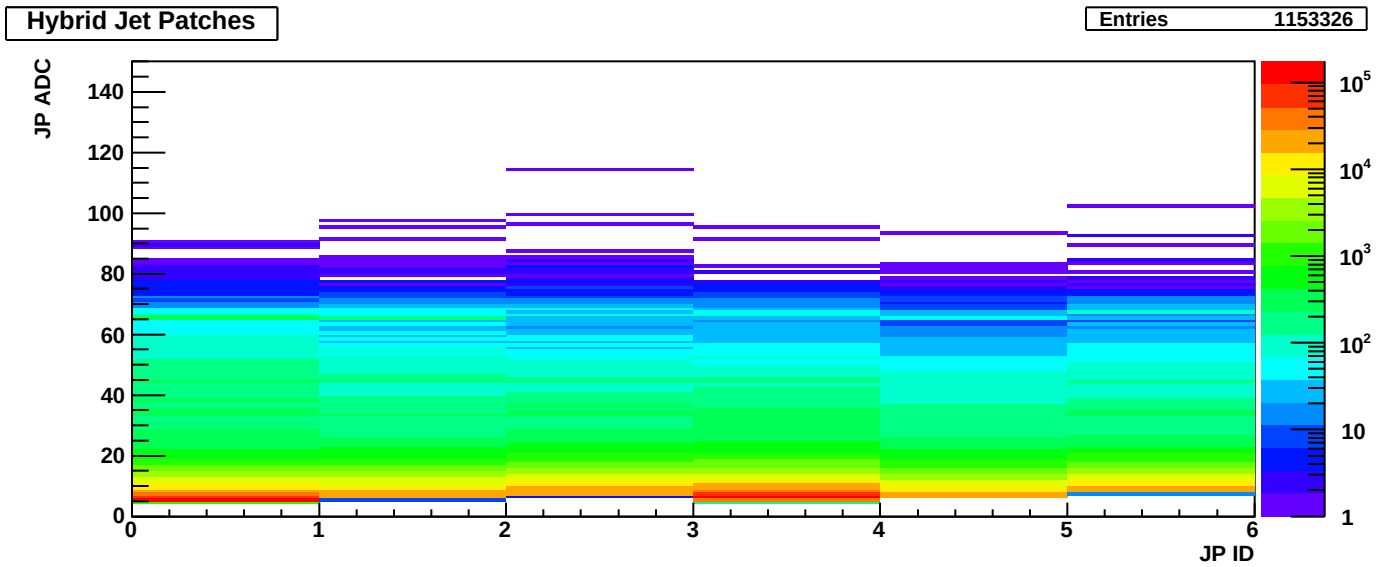

Barrel EMC L0 Input - Patch Sum
Entries 1.729989e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

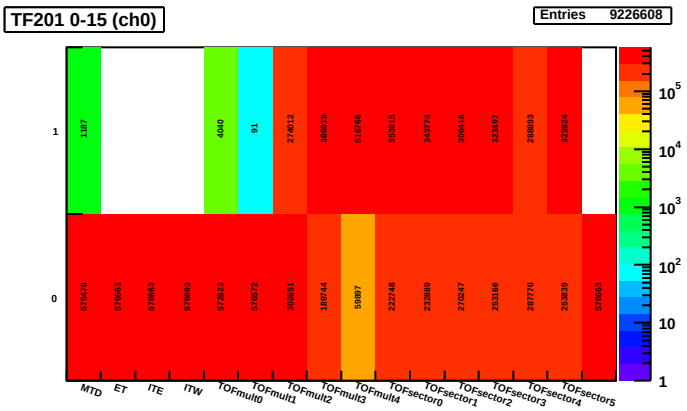

Endcap EMC L0 Input - High Tower
Entries 5.189967e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

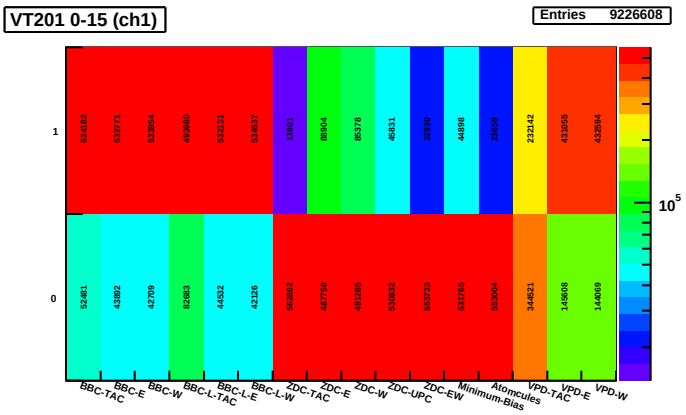

Endcap EMC L0 Input - Patch Sum
Entries 5.189967e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

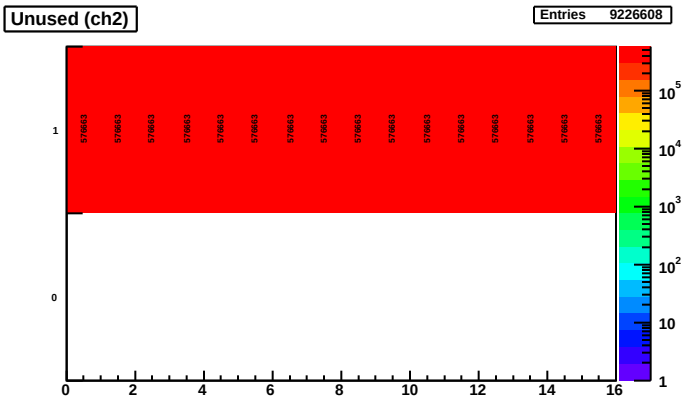

Barrel Jet Patches
Entries 1.037993e+07
JP ADC
JP ID

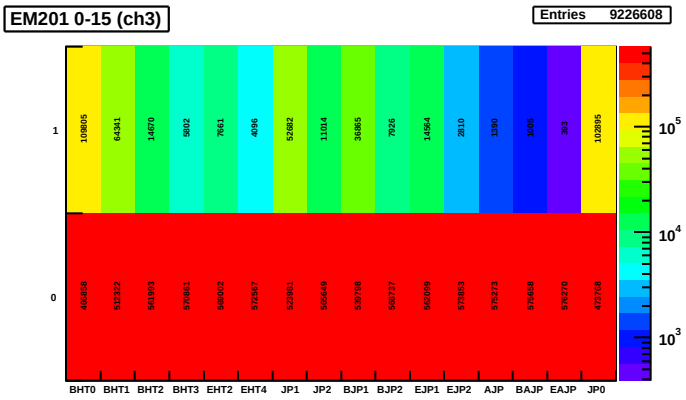

Endcap Jet Patches
Entries 3459978
JP ADC
JP ID

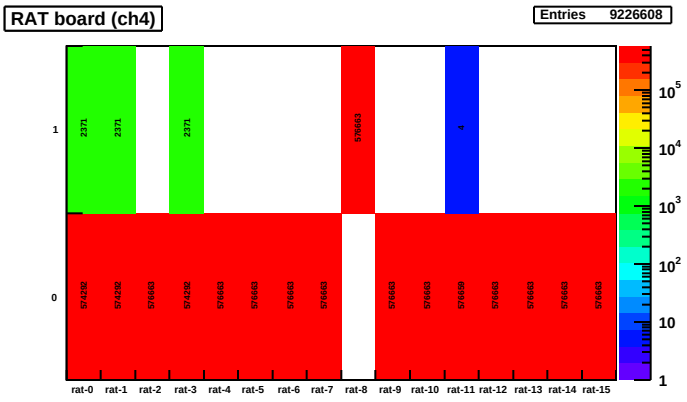

Hybrid Jet Patches
Entries 1153326
JP ADC
JP ID

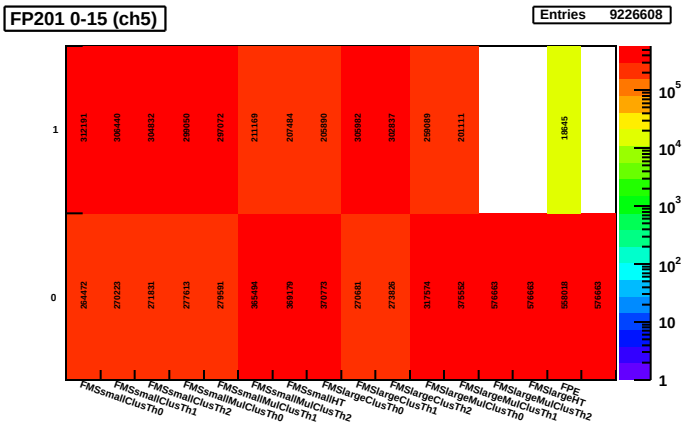

TF201 0-15 (ch0)
Entries 9226608
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5

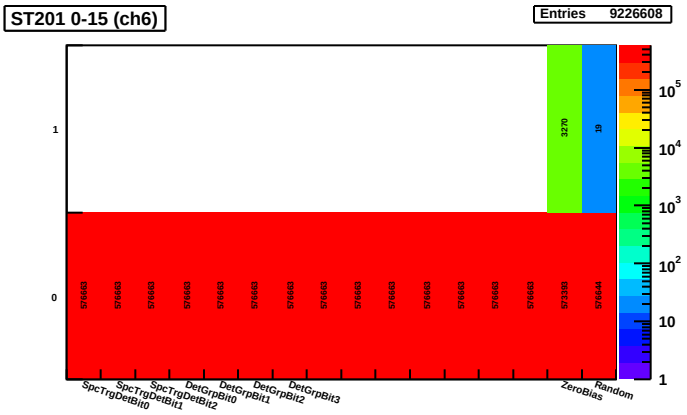

VT201 0-15 (ch1)
Entries 9226608
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-UPC ZDC-EW Minimum-Bias Atomcules VPD-TAC VPD-E VPD-W

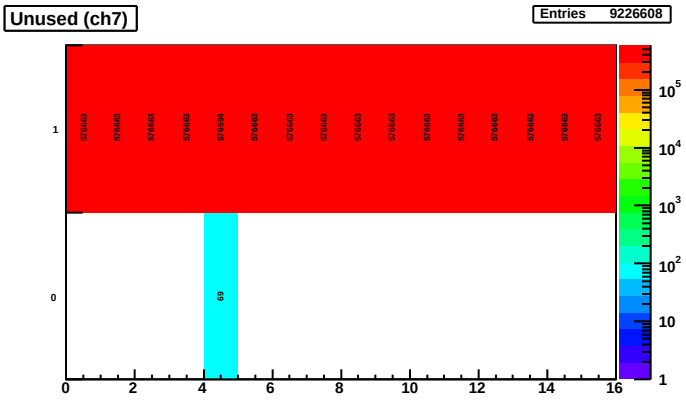

Unused (ch2)
Entries 9226608

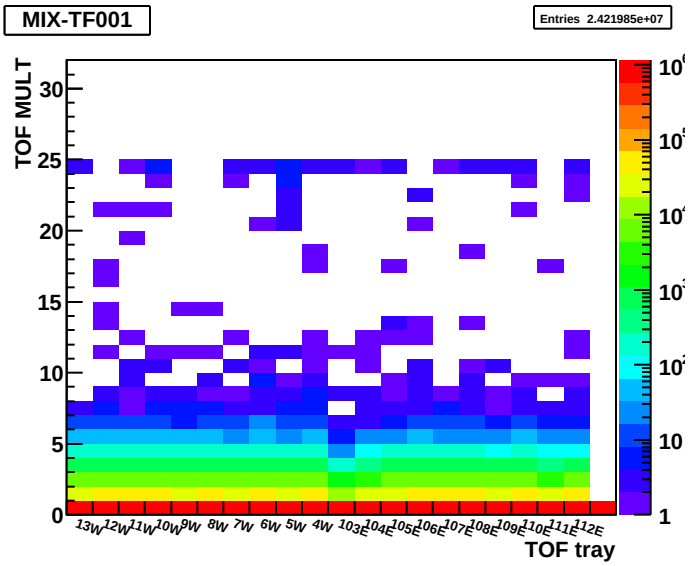

EM201 0-15 (ch3)
Entries 9226608
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

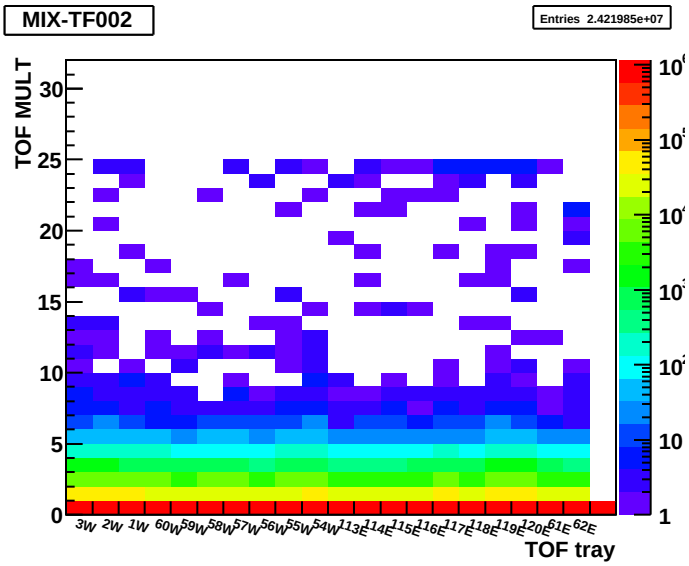

RAT board (ch4)
Entries 9226608
rat-0 rat-1 rat-2 rat-3 rat-4 rat-5 rat-6 rat-7 rat-8 rat-9 rat-10 rat-11 rat-12 rat-13 rat-14 rat-15

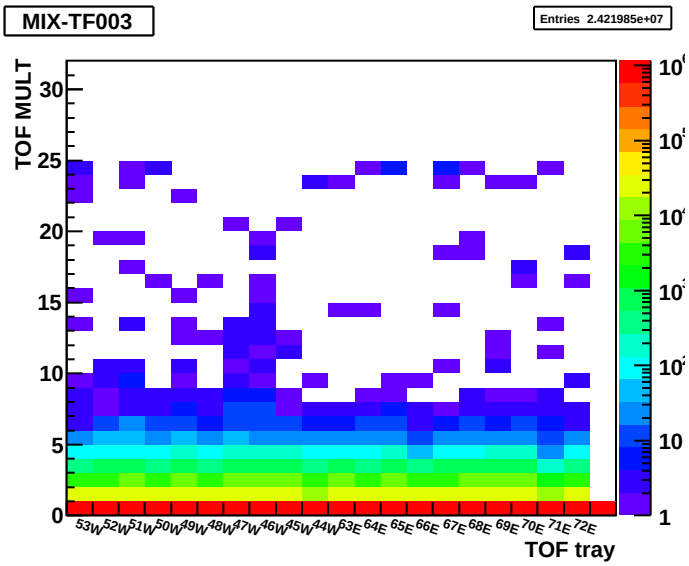

FP201 0-15 (ch5)
Entries 9226608
FMSsmallClusTh0 FMSsmallClusTh1 FMSsmallClusTh2 FMSsmallMulClusTh0 FMSsmallMulClusTh1 FMSsmallMulClusTh2 FMSsmallHT FMSlargeClusTh0 FMSlargeClusTh1 FMSlargeClusTh2 FMSlargeMulClusTh0 FMSlargeMulClusTh1 FMSlargeMulClusTh2 FMSlargeHT FPE

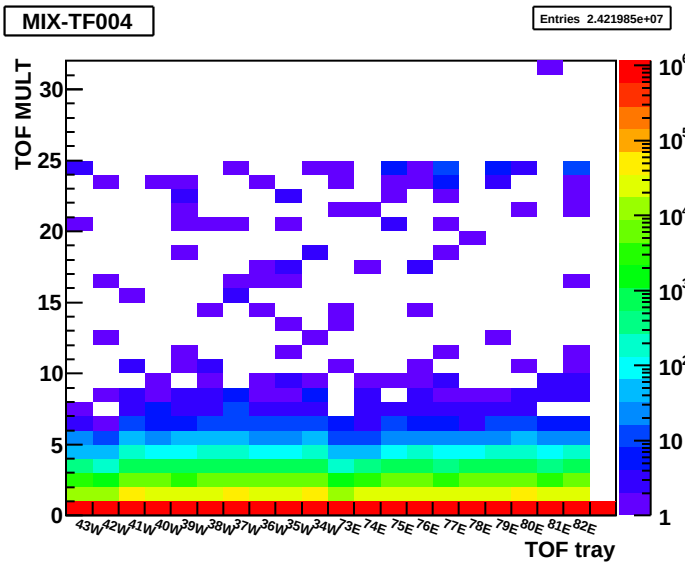

ST201 0-15 (ch6)
Entries 9226608
SpcTrgDetBit0 SpcTrgDetBit1 SpcTrgDetBit2 DetGrpBit0 DetGrpBit1 DetGrpBit2 DetGrpBit3 ZeroBias Random

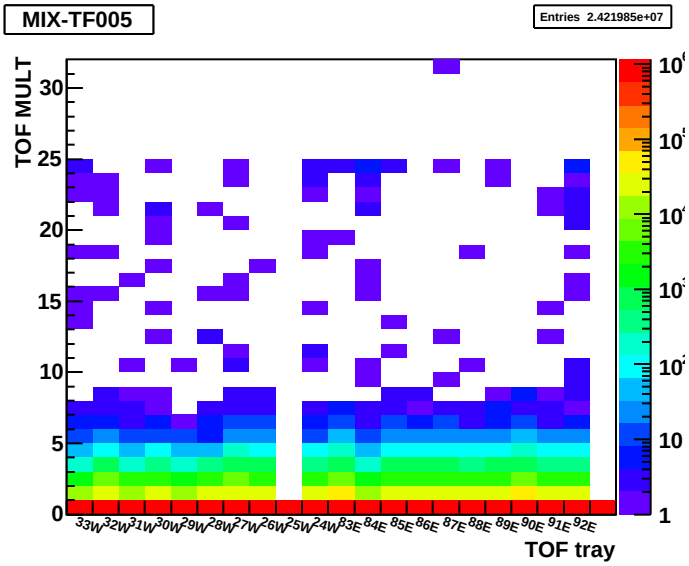

Unused (ch7)
Entries 9226608

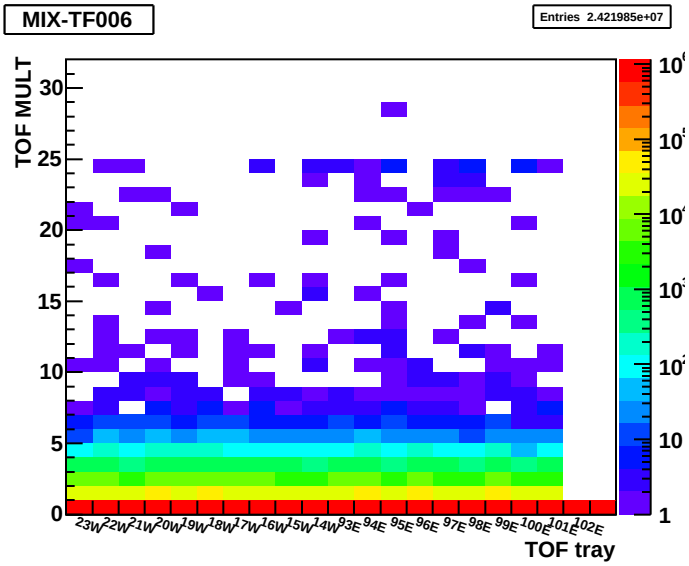

MIX-TF001
Entries 2.421985e+07
TOF MULT
TOF tray

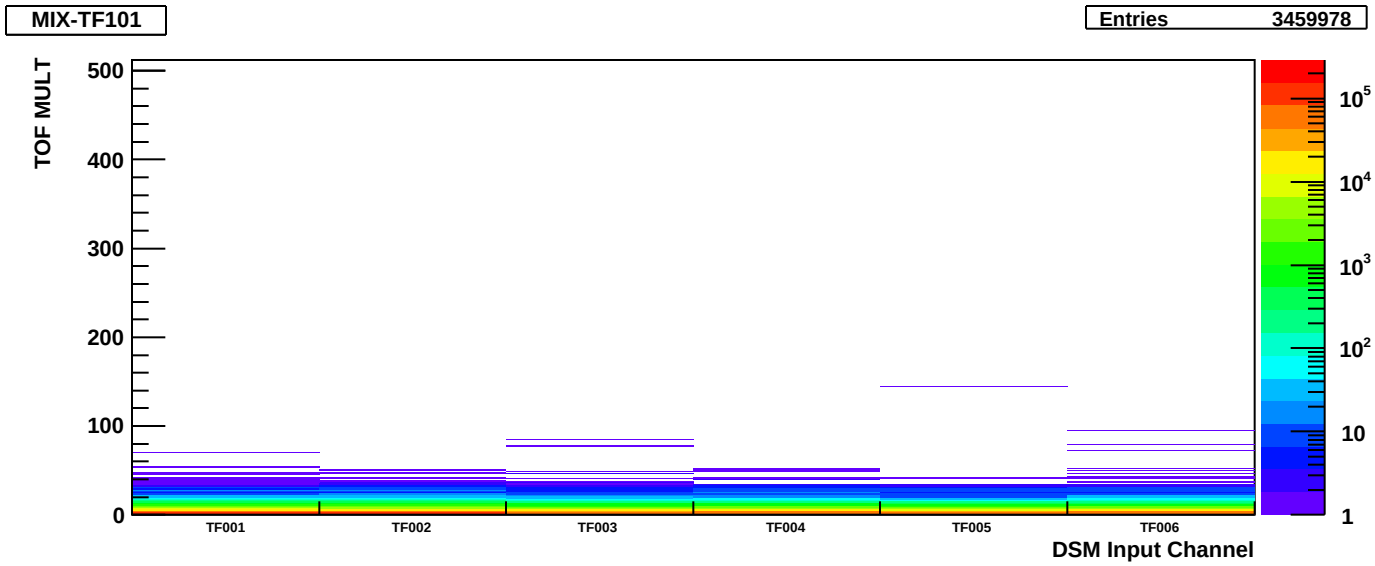

MIX-TF002
Entries 2.421985e+07
TOF MULT
TOF tray

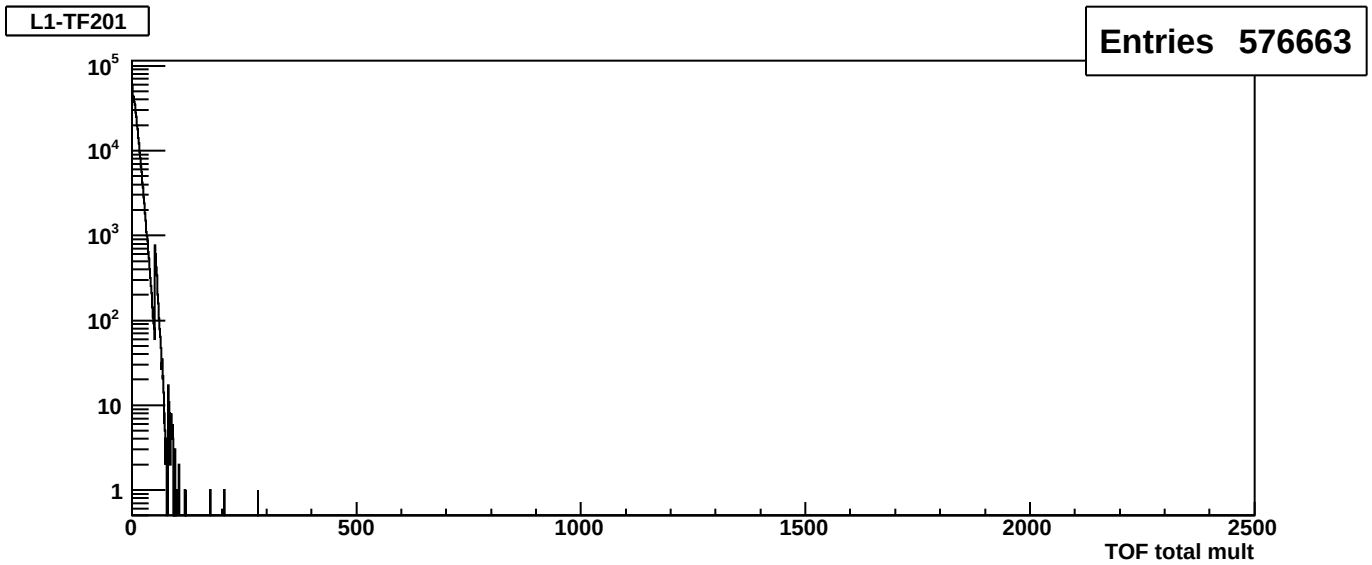

MIX-TF003
Entries 2.421985e+07
TOF MULT
TOF tray

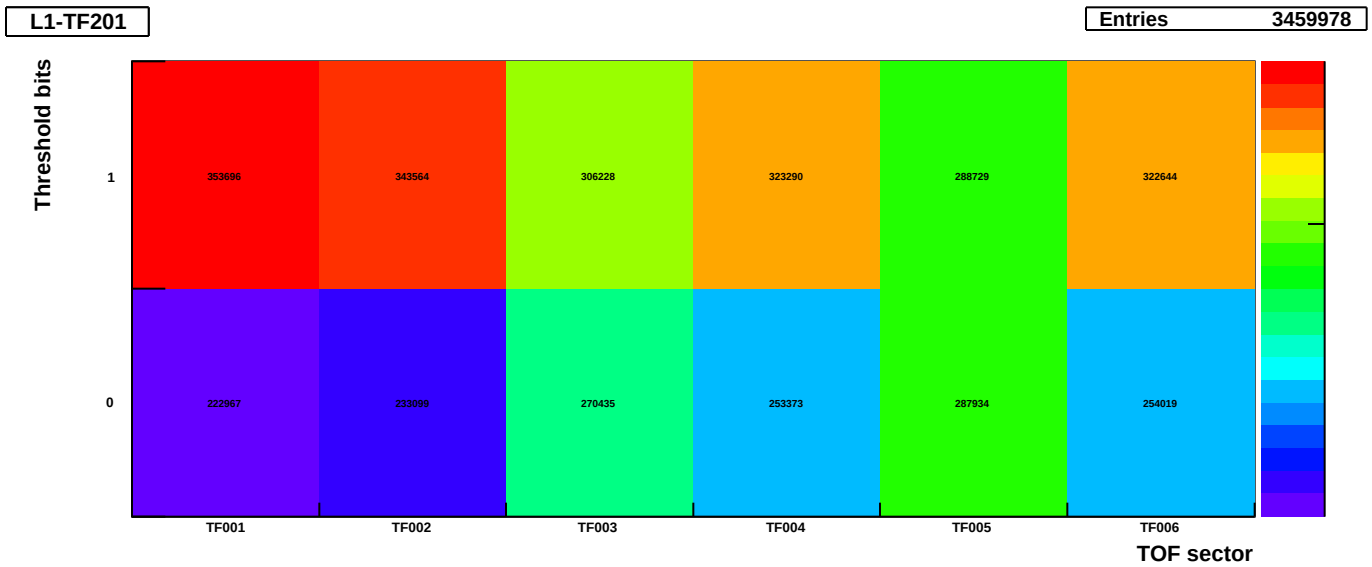

MIX-TF004
Entries 2.421985e+07
TOF MULT
TOF tray

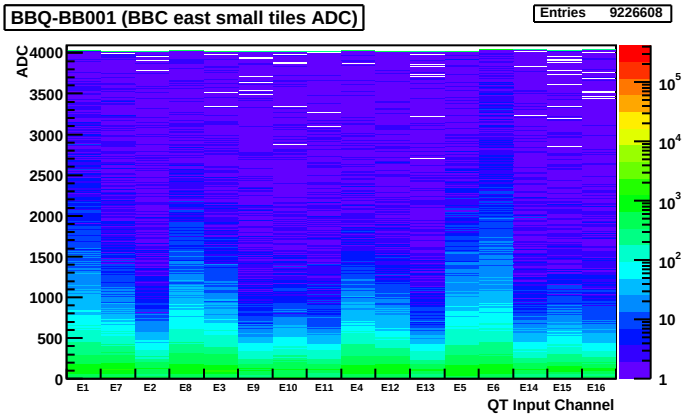

MIX-TF005
Entries 2.421985e+07
TOF MULT
TOF tray

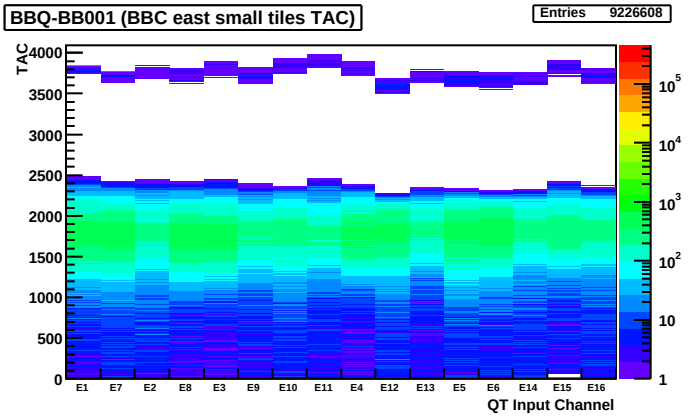

MIX-TF006
Entries 2.421985e+07
TOF MULT
TOF tray

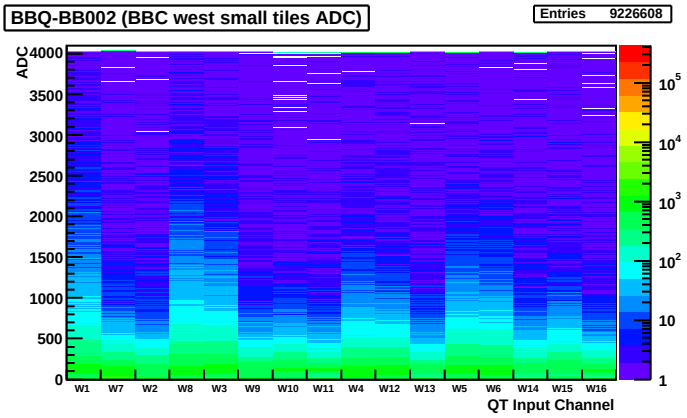

MIX-TF101
Entries 3459978
TOF MULT
500
400
300
200
100
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

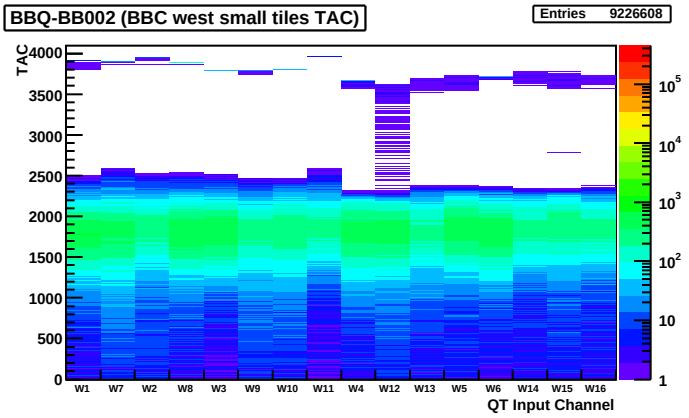

L1-TF201
Entries 576663
10^5
10^4
10^3
10^2
10
1
0
500
1000
1500
2000
2500
TOF total mult

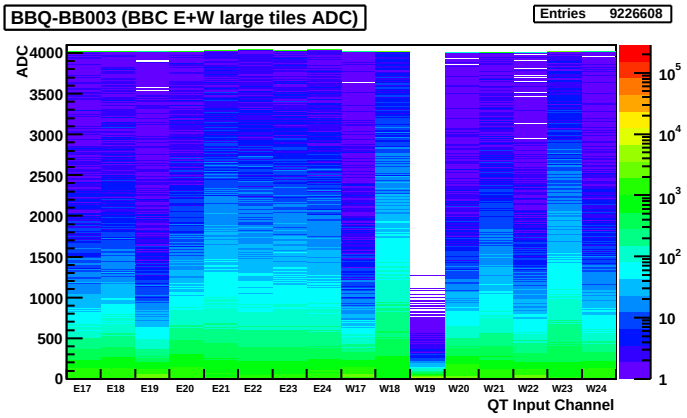

L1-TF201
Entries 3459978
Threshold bits
1
0
353696
343564
306228
323290
288729
322644
222967
233099
270435
253373
287934
254019
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

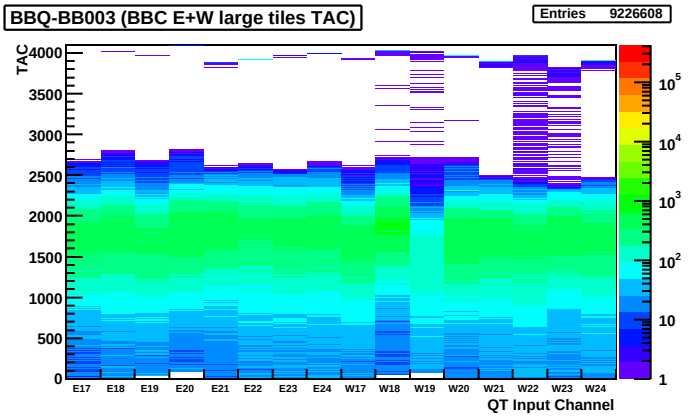

BBQ-BB001 (BBC east small tiles ADC)
Entries 9226608
ADC
QT Input Channel

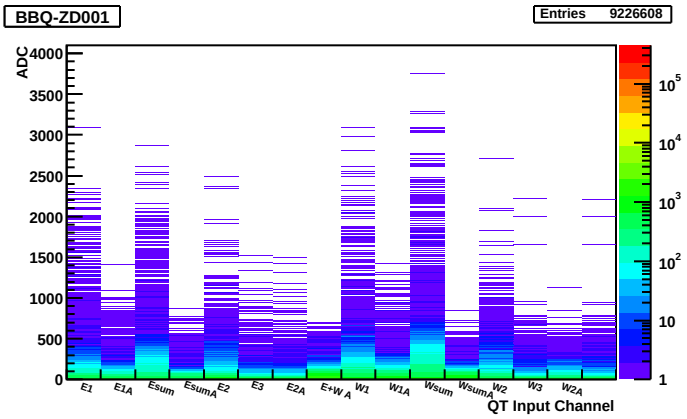

BBQ-BB001 (BBC east small tiles TAC)
Entries 9226608
TAC
QT Input Channel

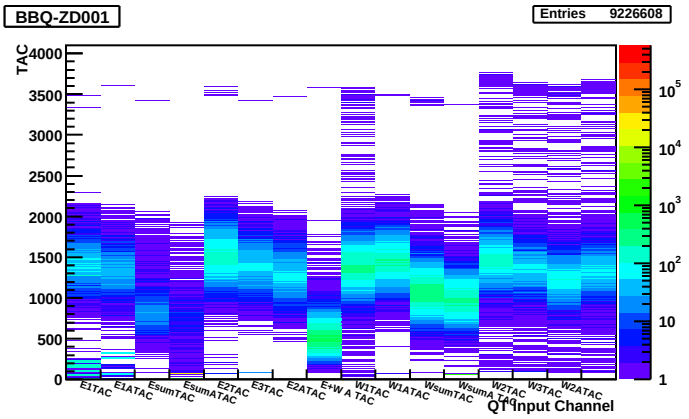

BBQ-BB002 (BBC west small tiles ADC)
Entries 9226608
ADC
QT Input Channel

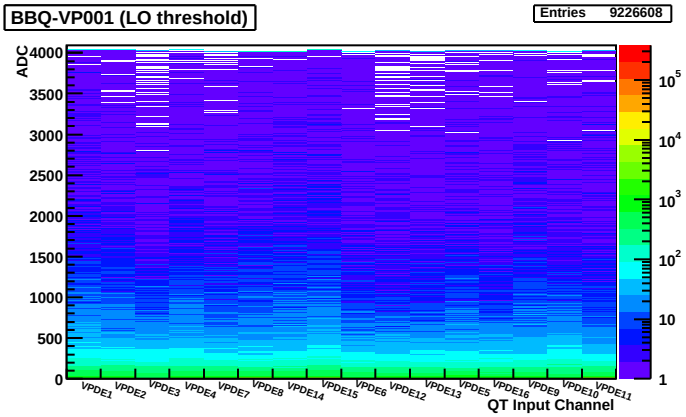

BBQ-BB002 (BBC west small tiles TAC)
Entries 9226608
TAC
QT Input Channel

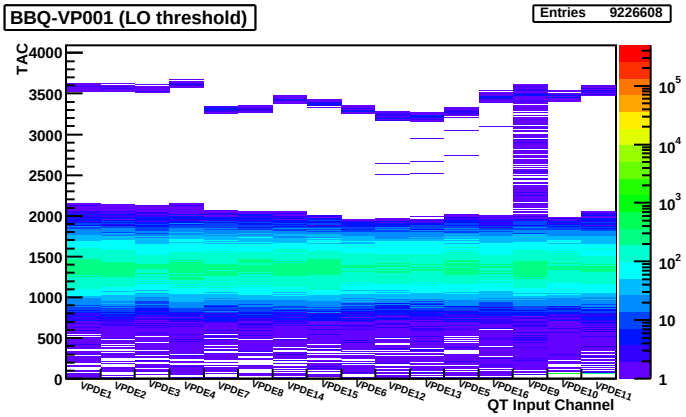

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 9226608
ADC
QT Input Channel

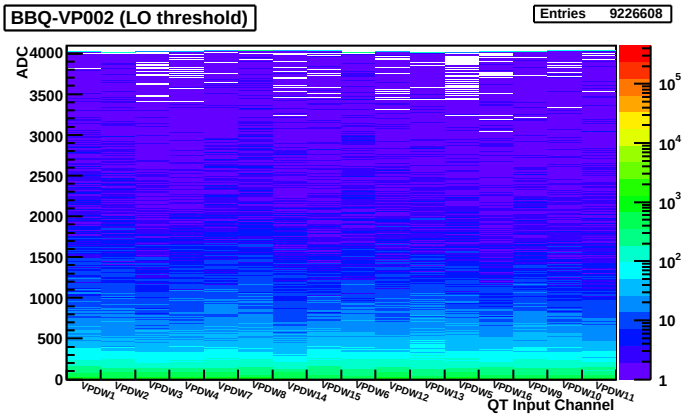

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 9226608
TAC
QT Input Channel

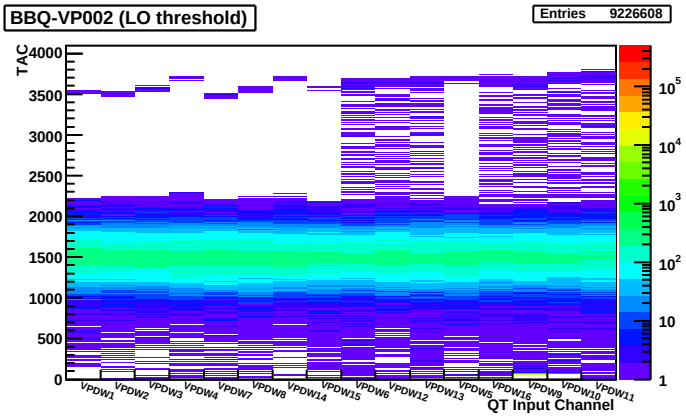

BBQ-ZD001
Entries 9226608
ADC
QT Input Channel

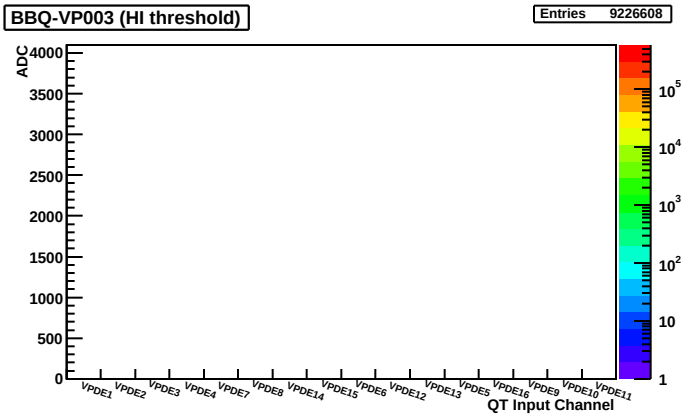

BBQ-ZD001
Entries 9226608
TAC
QT Input Channel

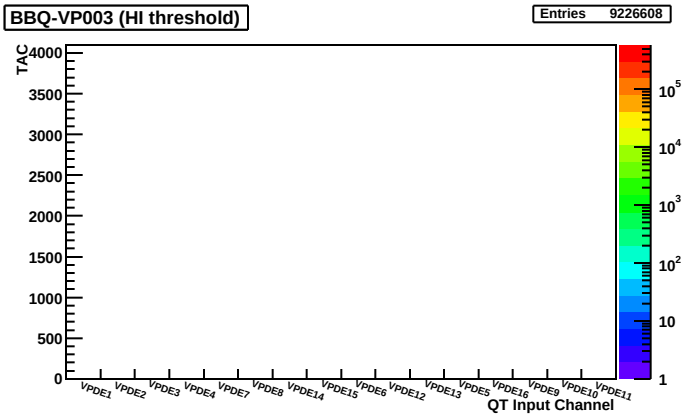

BBQ-VP001 (LO threshold)
Entries 9226608
ADC
QT Input Channel

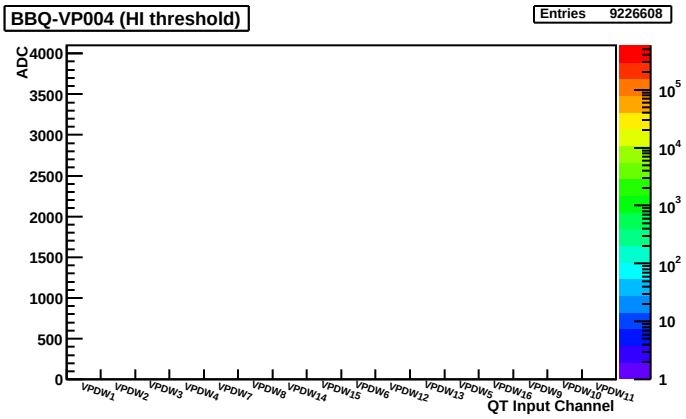

BBQ-VP001 (LO threshold)
Entries 9226608
TAC
QT Input Channel

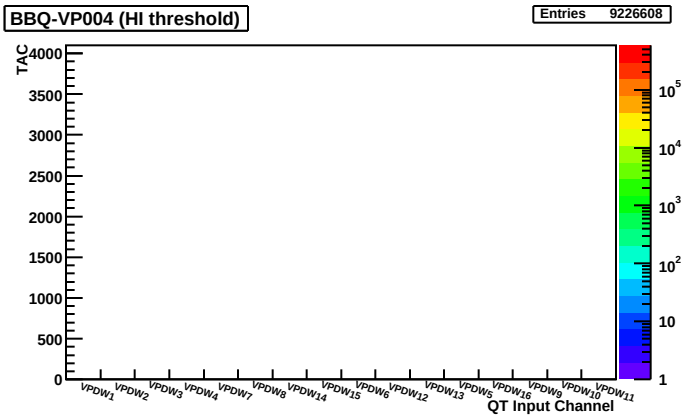

BBQ-VP002 (LO threshold)
Entries 9226608
ADC
QT Input Channel

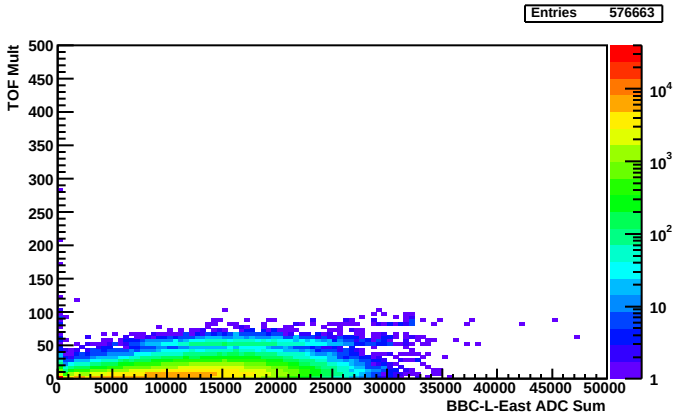

BBQ-VP002 (LO threshold)
Entries 9226608
TAC
QT Input Channel

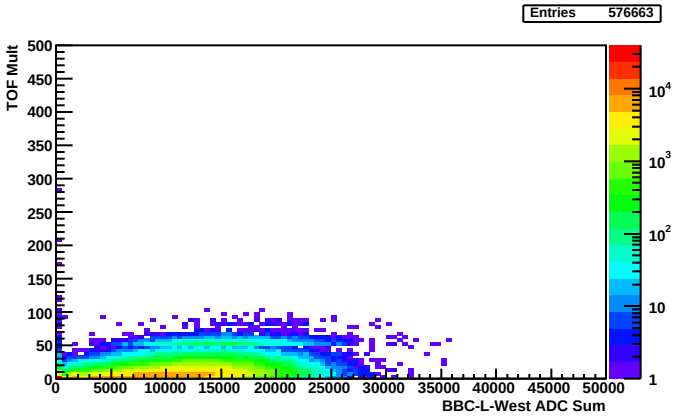

BBQ-VP003 (HI threshold)
Entries 9226608
ADC
QT Input Channel

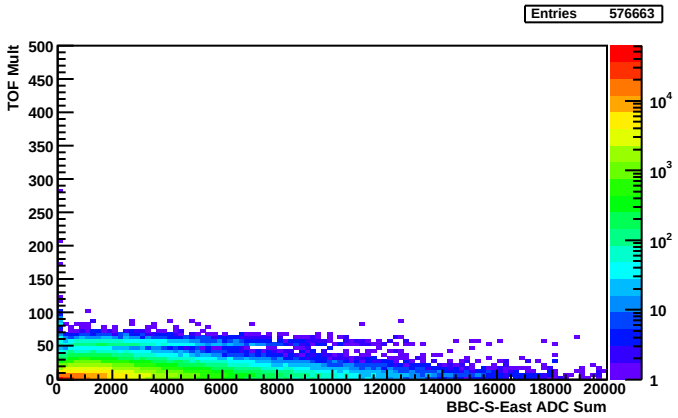

BBQ-VP003 (HI threshold)
Entries 9226608
TAC
QT Input Channel

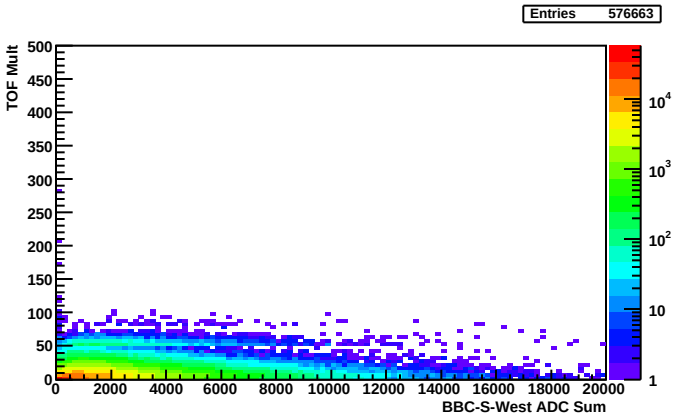

BBQ-VP004 (HI threshold)
Entries 9226608
ADC
QT Input Channel

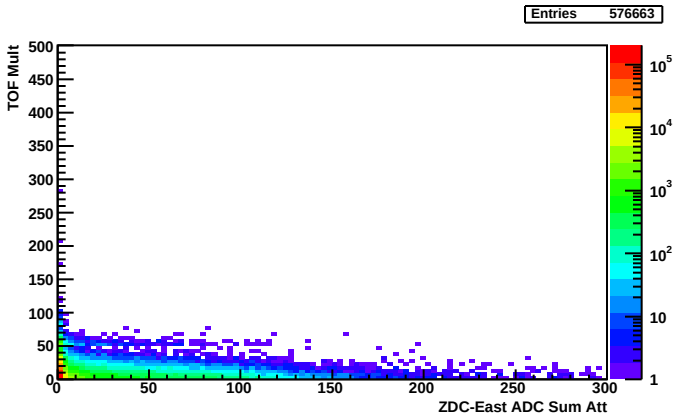

BBQ-VP004 (HI threshold)
Entries 9226608
TAC
QT Input Channel

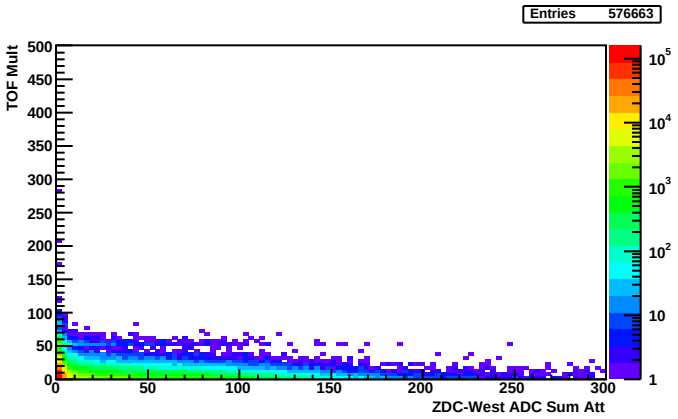

Entries 576663
TOF Mult
BBC-L-East ADC Sum

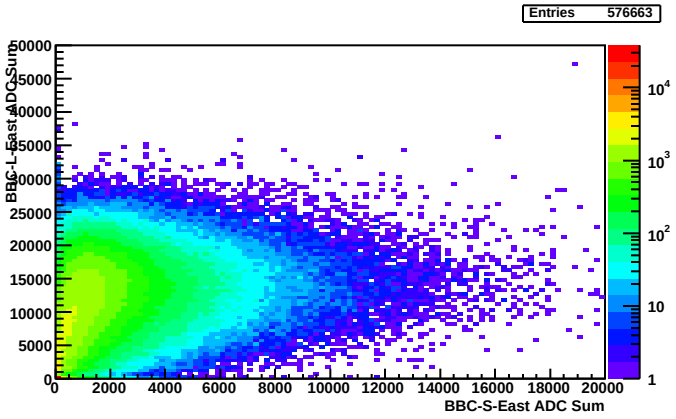

Entries 576663
TOF Mult
BBC-L-West ADC Sum

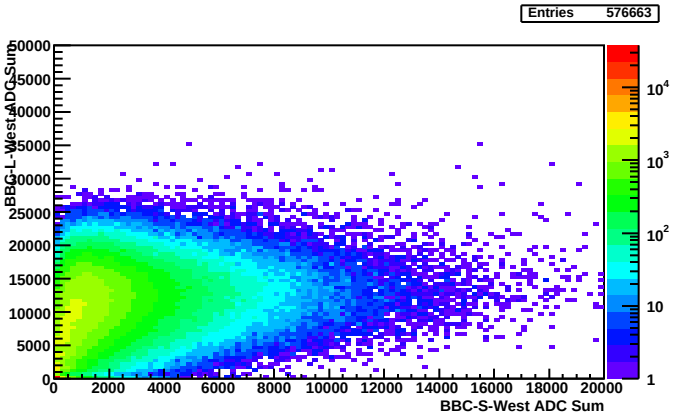

Entries 576663
TOF Mult
BBC-S-East ADC Sum

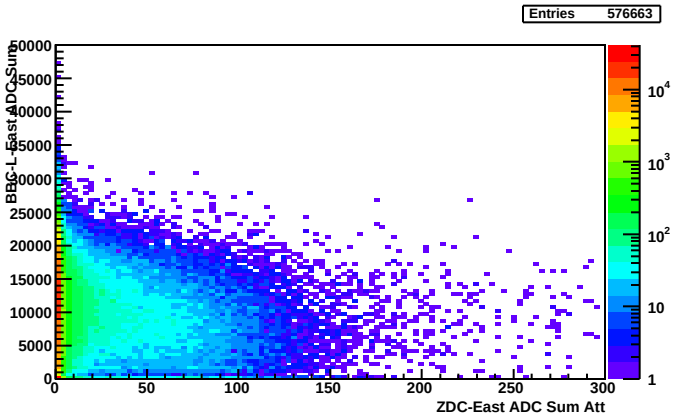

Entries 576663
TOF Mult
BBC-S-West ADC Sum

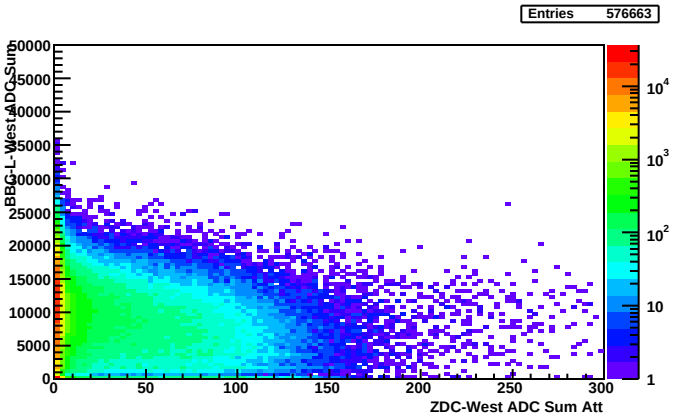

Entries 576663
TOF Mult
ZDC-East ADC Sum Att

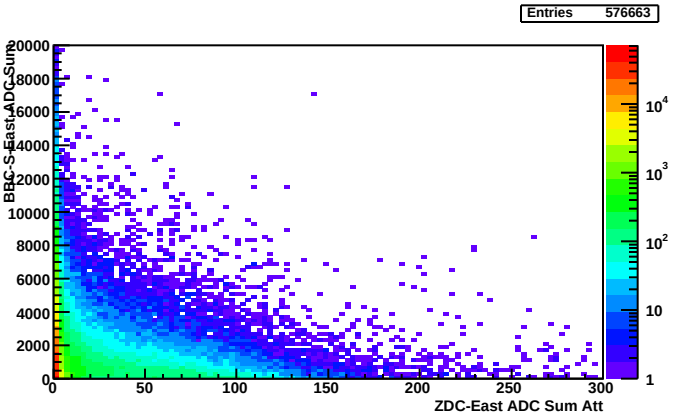

Entries 576663
TOF Mult
ZDC-West ADC Sum Att

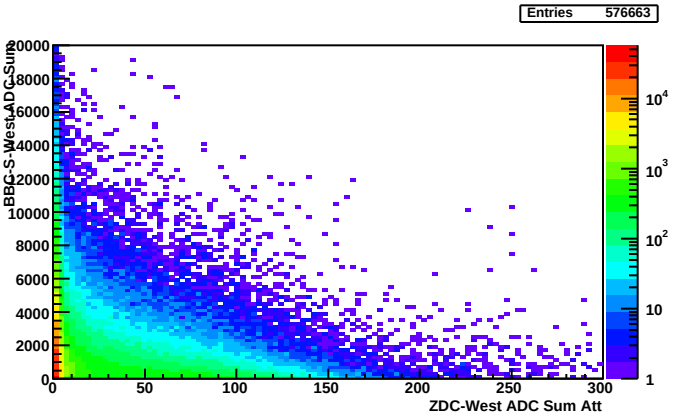

Entries 576663
BBC-L-East ADC Sum
BBC-S-East ADC Sum

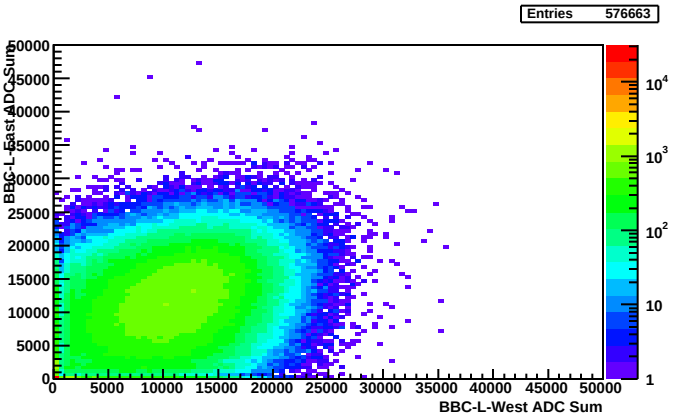

Entries 576663
BBC-L-West ADC Sum
BBC-S-West ADC Sum

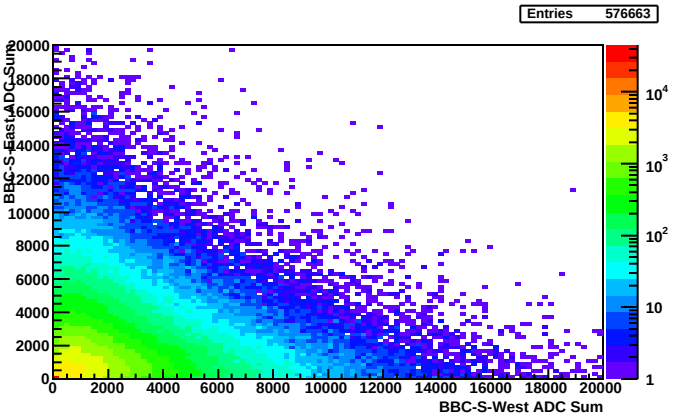

Entries 576663
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

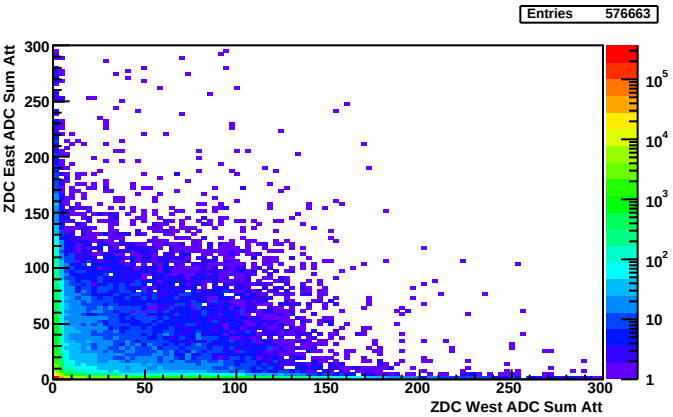

Entries 576663
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

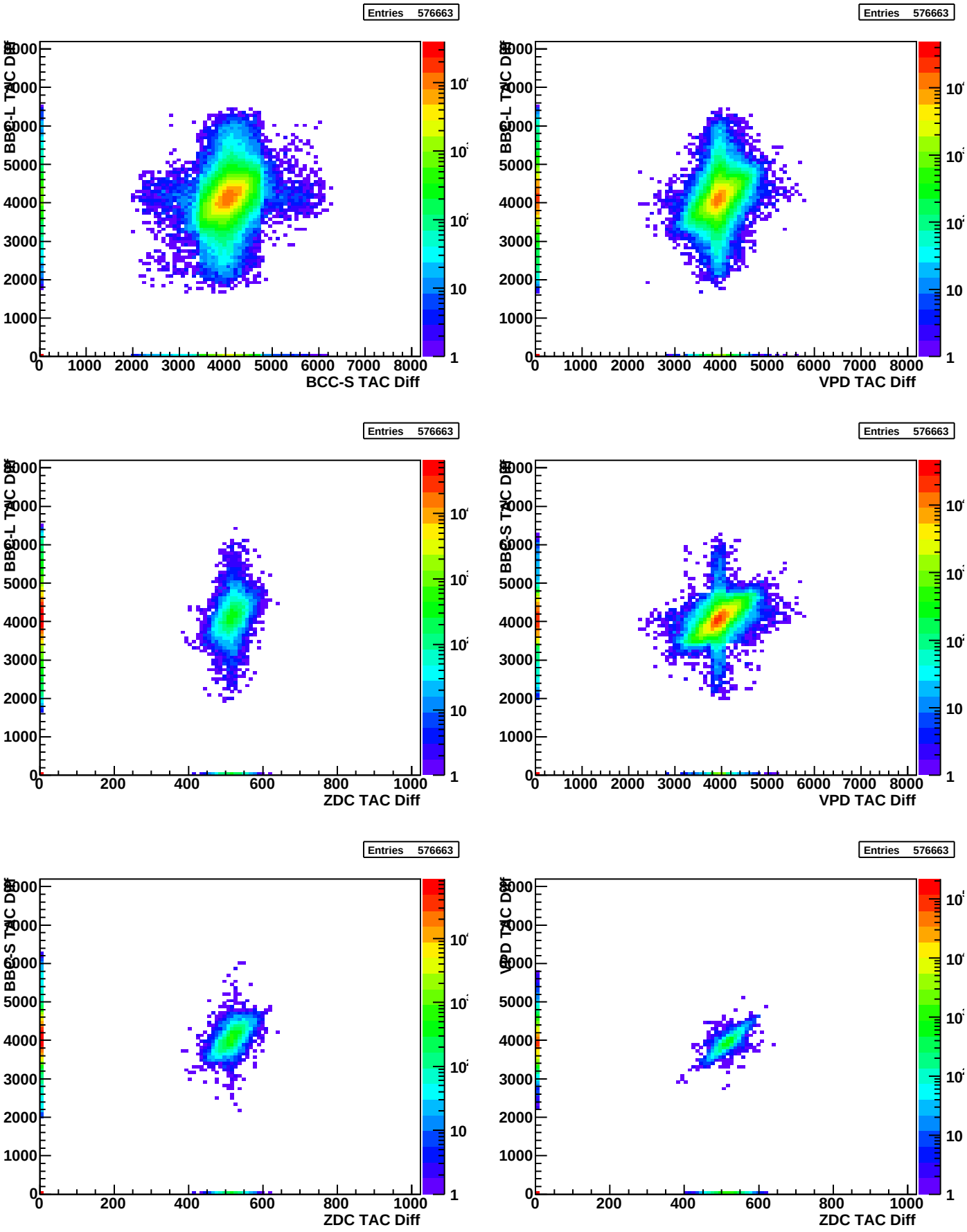

Entries 576663
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

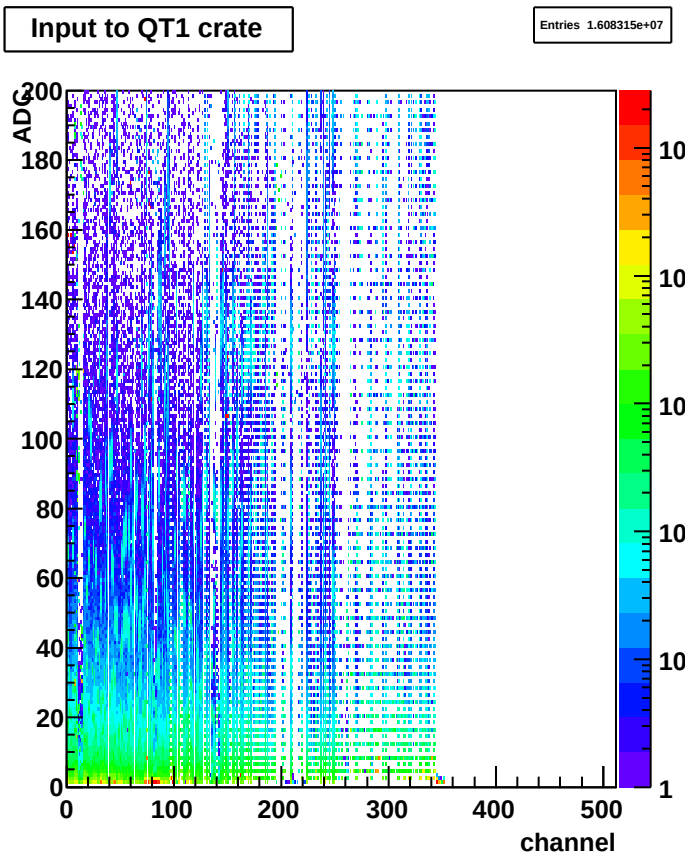

Entries 576663
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

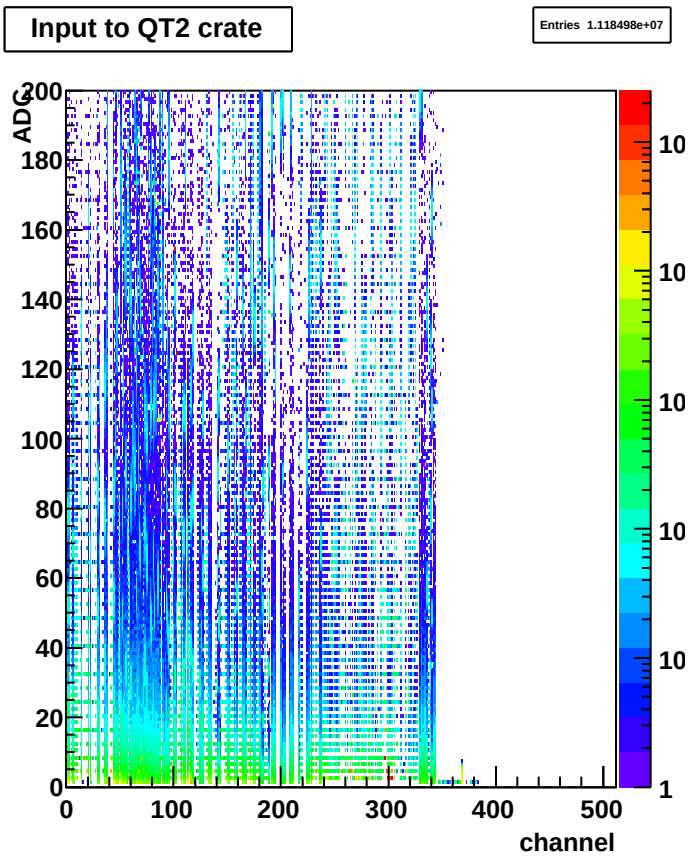

Entries 576663
BBC-L-East ADC Sum
BBC-L-West ADC Sum

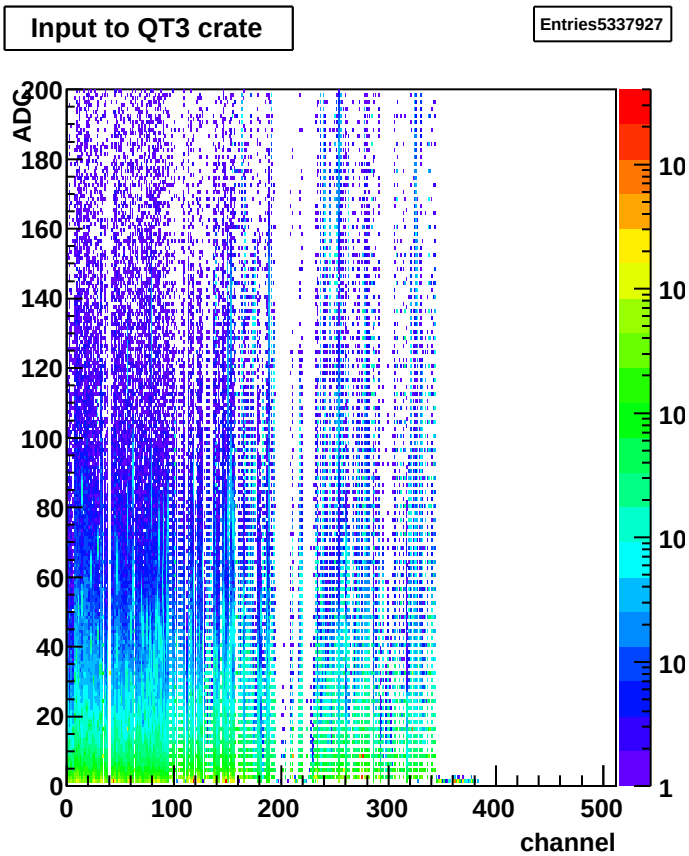

Entries 576663
BBC-S-East ADC Sum
BBC-S-West ADC Sum

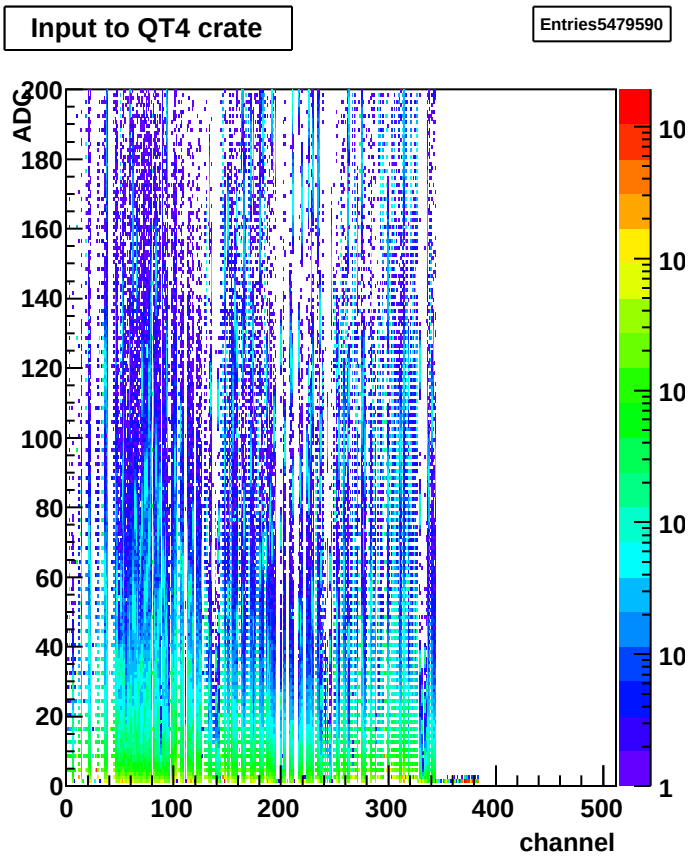

Entries 576663
ZDC East ADC Sum Att
ZDC West ADC Sum Att

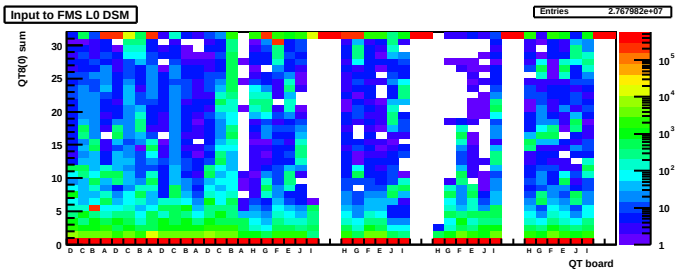

Entries 576663
BBC-L TAC Diff
BCC-S TAC Diff
Entries 576663
BBC-L TAC Diff
VPD TAC Diff
Entries 576663
BBC-L TAC Diff
ZDC TAC Diff
Entries 576663
BBC-S TAC Diff
VPD TAC Diff
Entries 576663
BBC-S TAC Diff
ZDC TAC Diff
Entries 576663
VPD TAC Diff
ZDC TAC Diff

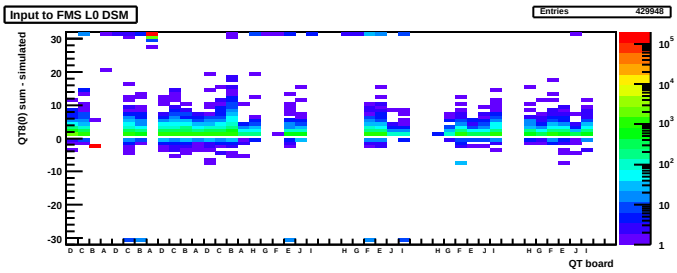

Input to QT1 crate
Entries 1.608315e+07
ADC
channel

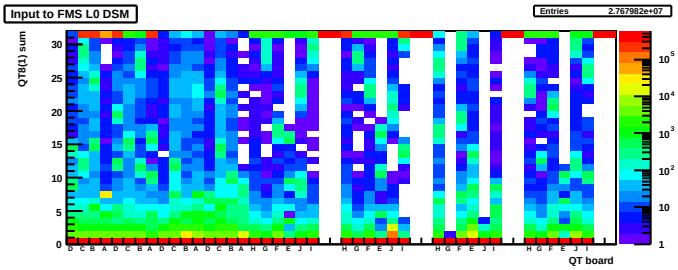

Input to QT2 crate
Entries 1.118498e+07
ADC
channel

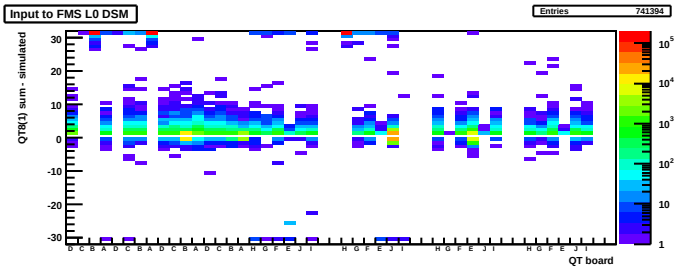

Input to QT3 crate
Entries5337927
ADC
channel

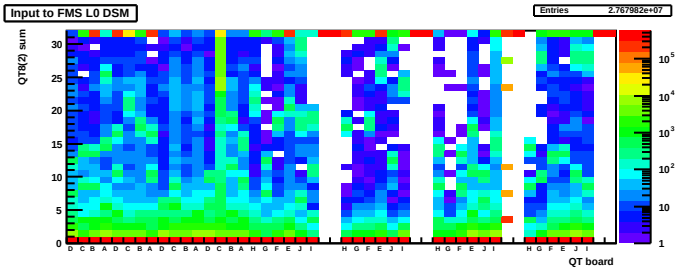

Input to QT4 crate
Entries5479590
ADC
channel

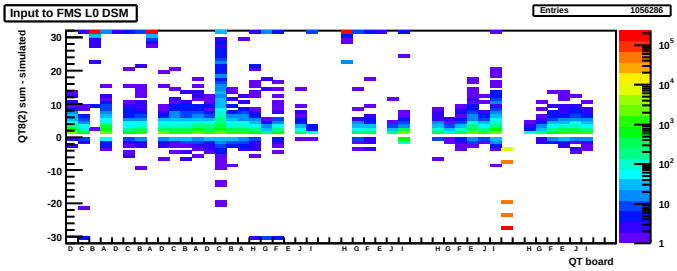

Input to FMS L0 DSM
Entries 2.767982e+07
QT8(0) sum
QT board

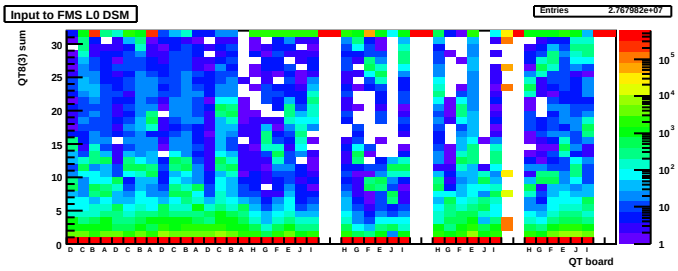

Input to FMS L0 DSM
Entries 429948
QT8(0) sum - simulated
QT board

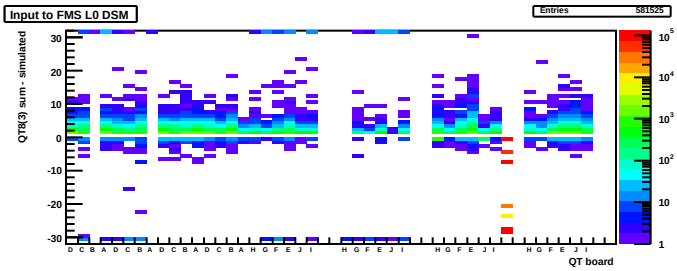

Input to FMS L0 DSM
Entries 2.767982e+07
QT8(1) sum
QT board

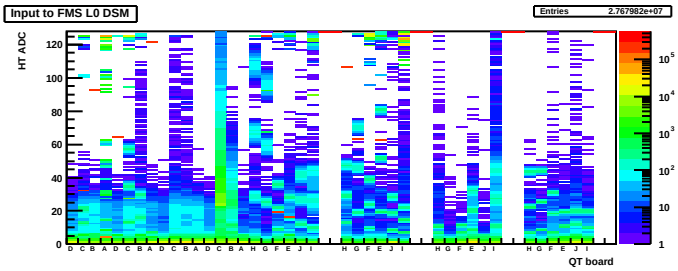

Input to FMS L0 DSM
Entries 741394
QT8(1) sum - simulated
QT board

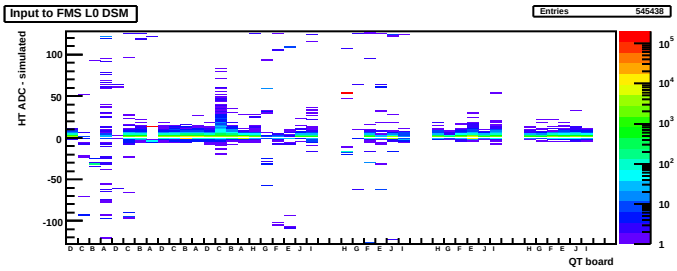

Input to FMS L0 DSM
Entries 2.767982e+07
QT8(2) sum
QT board

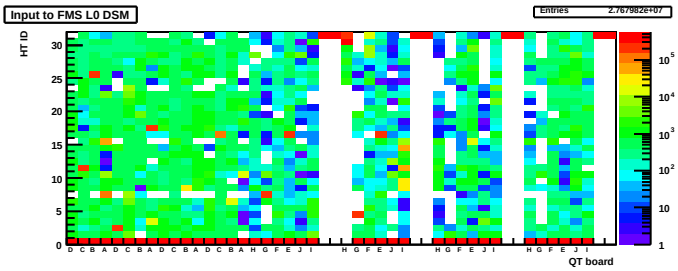

Input to FMS L0 DSM
Entries 1056286
QT8(2) sum - simulated
QT board

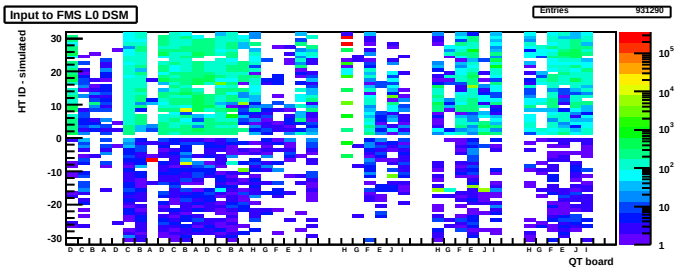

Input to FMS L0 DSM
Entries 2.767982e+07
QT8(3) sum
QT board

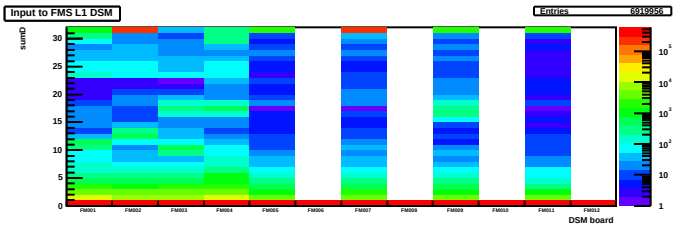

Input to FMS L0 DSM
Entries 581525
QT8(3) sum - simulated
QT board

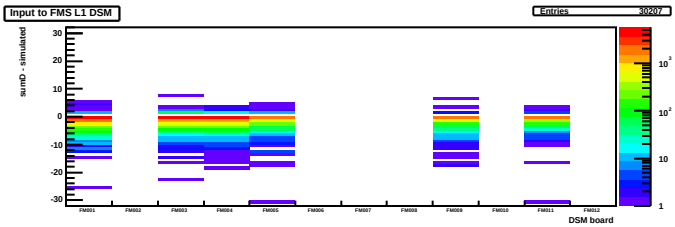

Input to FMS L0 DSM
Entries 2.767982e+07
HT ADC
QT board

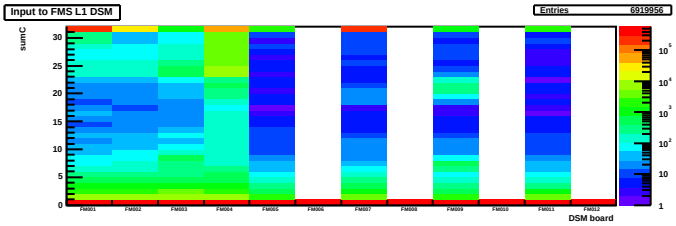

Input to FMS L0 DSM
Entries 545438
HT ADC - simulated
QT board

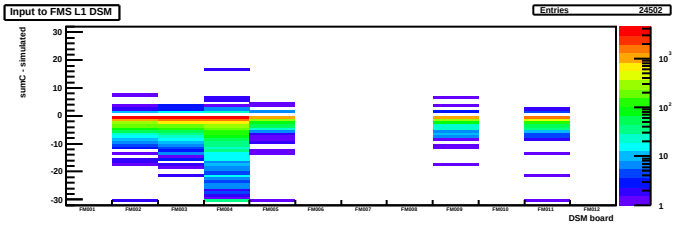

Input to FMS L0 DSM
Entries 2.767982e+07
HT ID
QT board

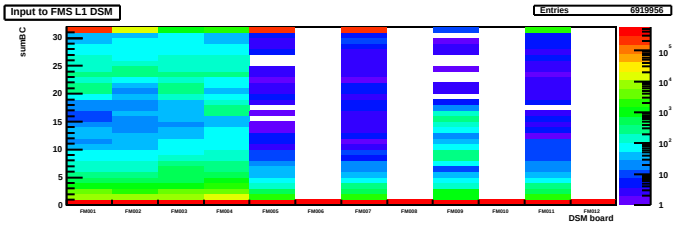

Input to FMS L0 DSM
Entries 931290
HT ID - simulated
QT board

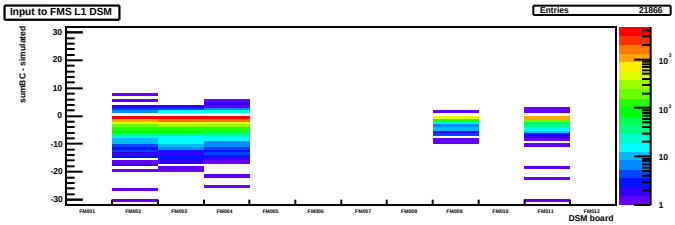

Input to FMS L1 DSM
Entries 6919956
sumD
DSM board

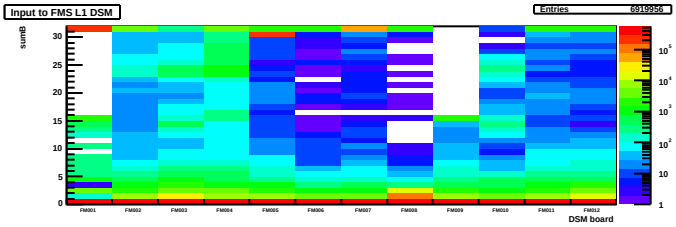

Input to FMS L1 DSM
Entries 30207
sumD - simulated
DSM board

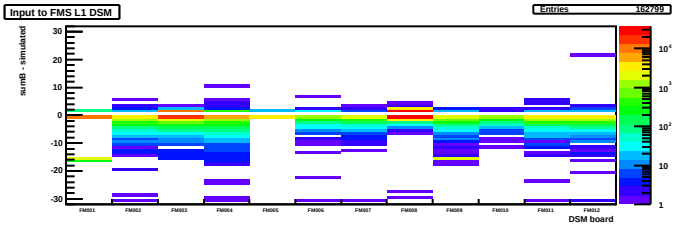

Input to FMS L1 DSM
Entries 6919956
sumC
DSM board

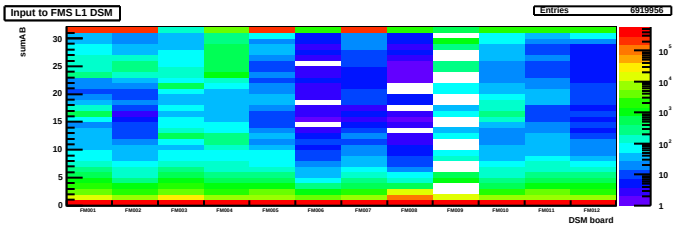

Input to FMS L1 DSM
Entries 24502
sumC - simulated
DSM board

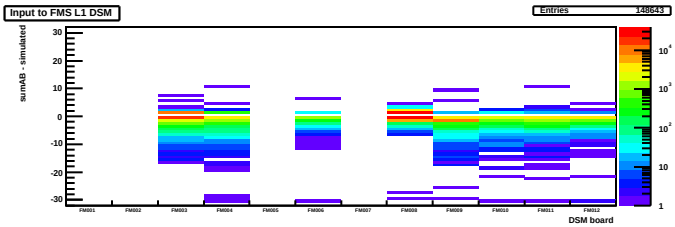

Input to FMS L1 DSM
Entries 6919956
sumBC
DSM board

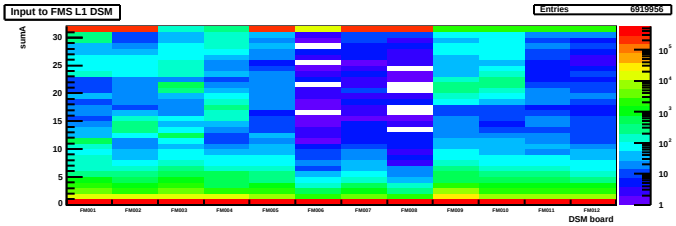

Input to FMS L1 DSM
Entries 21866
sumBC - simulated
DSM board

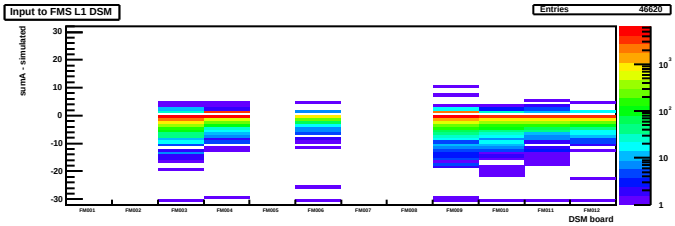

Input to FMS L1 DSM
Entries 6919956
sumB
DSM board

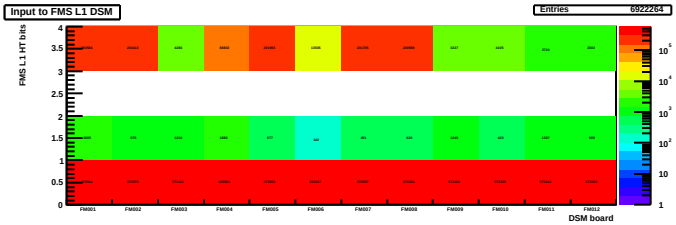

Input to FMS L1 DSM
Entries 162799
sumB - simulated
DSM board

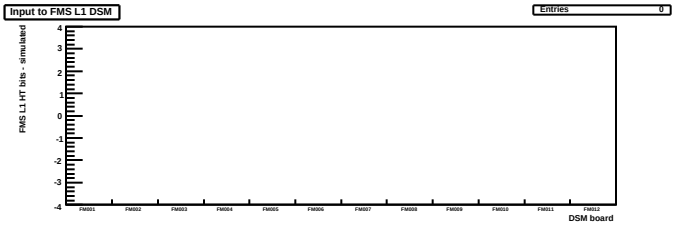

Input to FMS L1 DSM
Entries 6919956
sumAB
DSM board

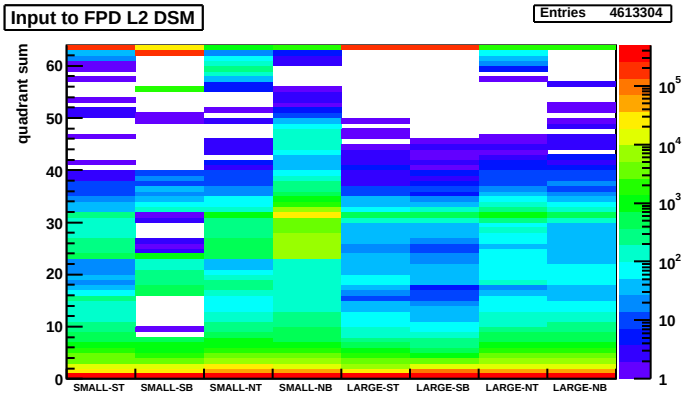

Input to FMS L1 DSM
Entries 148643
sumAB - simulated
DSM board

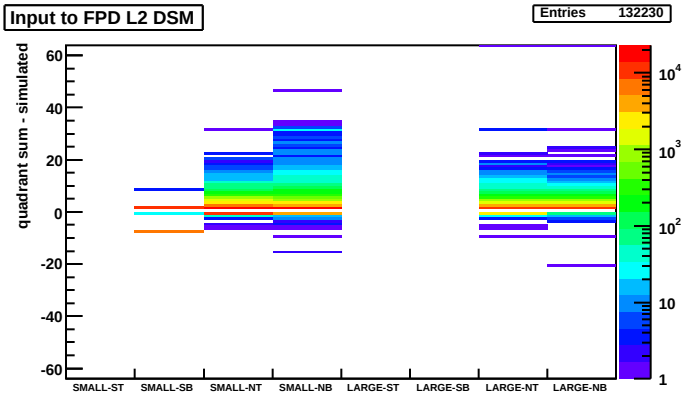

Input to FMS L1 DSM
Entries 6919956
sumA
DSM board

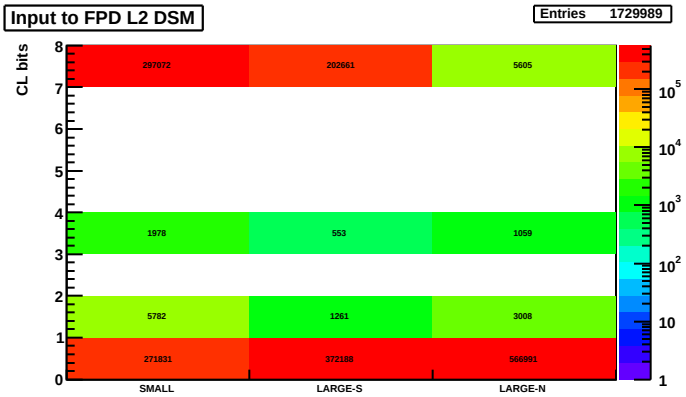

Input to FMS L1 DSM
Entries 46620
sumA - simulated
DSM board

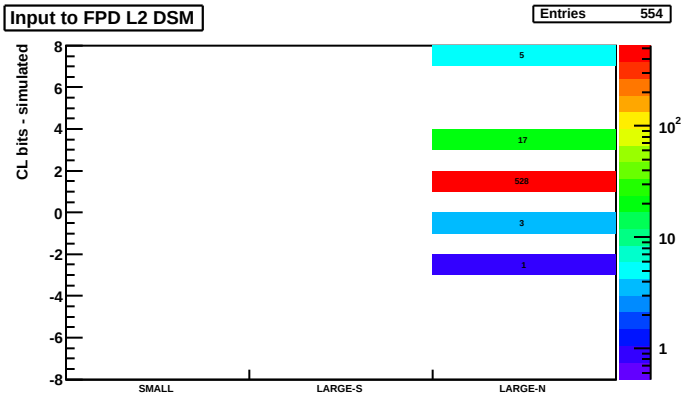

Input to FMS L1 DSM
Entries 6922264
FMS L1 HT bits
DSM board

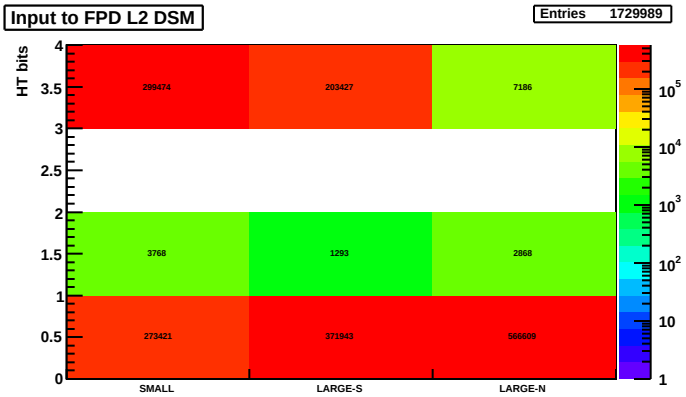

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

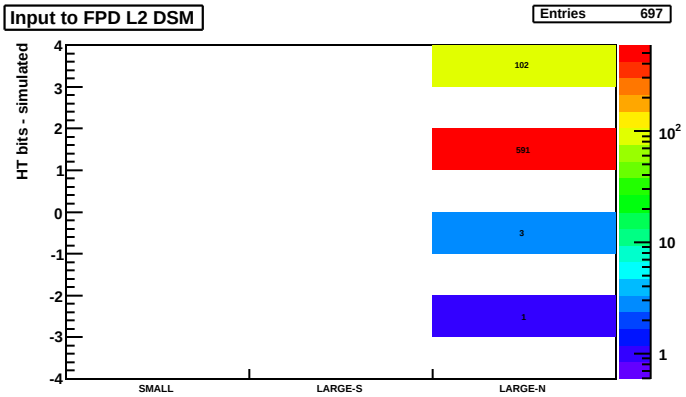

Input to FPD L2 DSM
Entries 4613304
quadrant sum
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

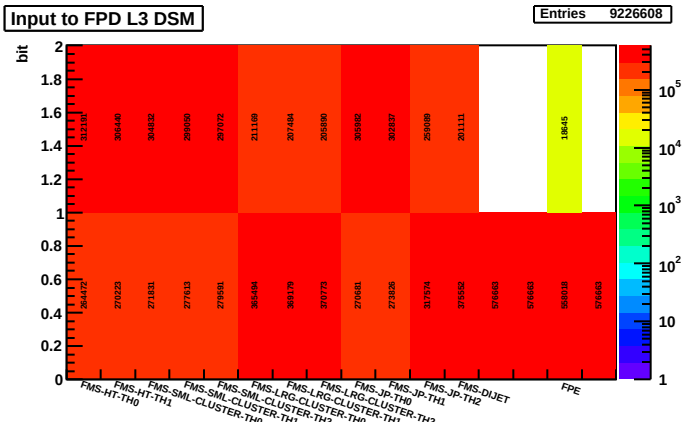

Input to FPD L2 DSM
Entries 132230
quadrant sum - simulated
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

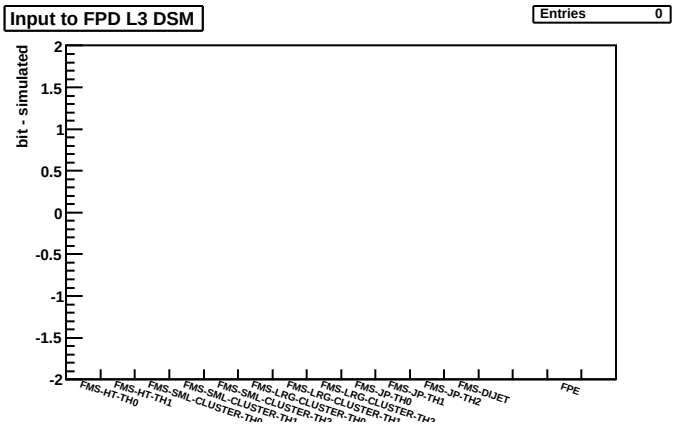

Input to FPD L2 DSM
Entries 1729989
CL bits
297072
202661
5605
1978
553
1059
5782
1261
3008
271831
372188
566991
SMALL
LARGE-S
LARGE-N

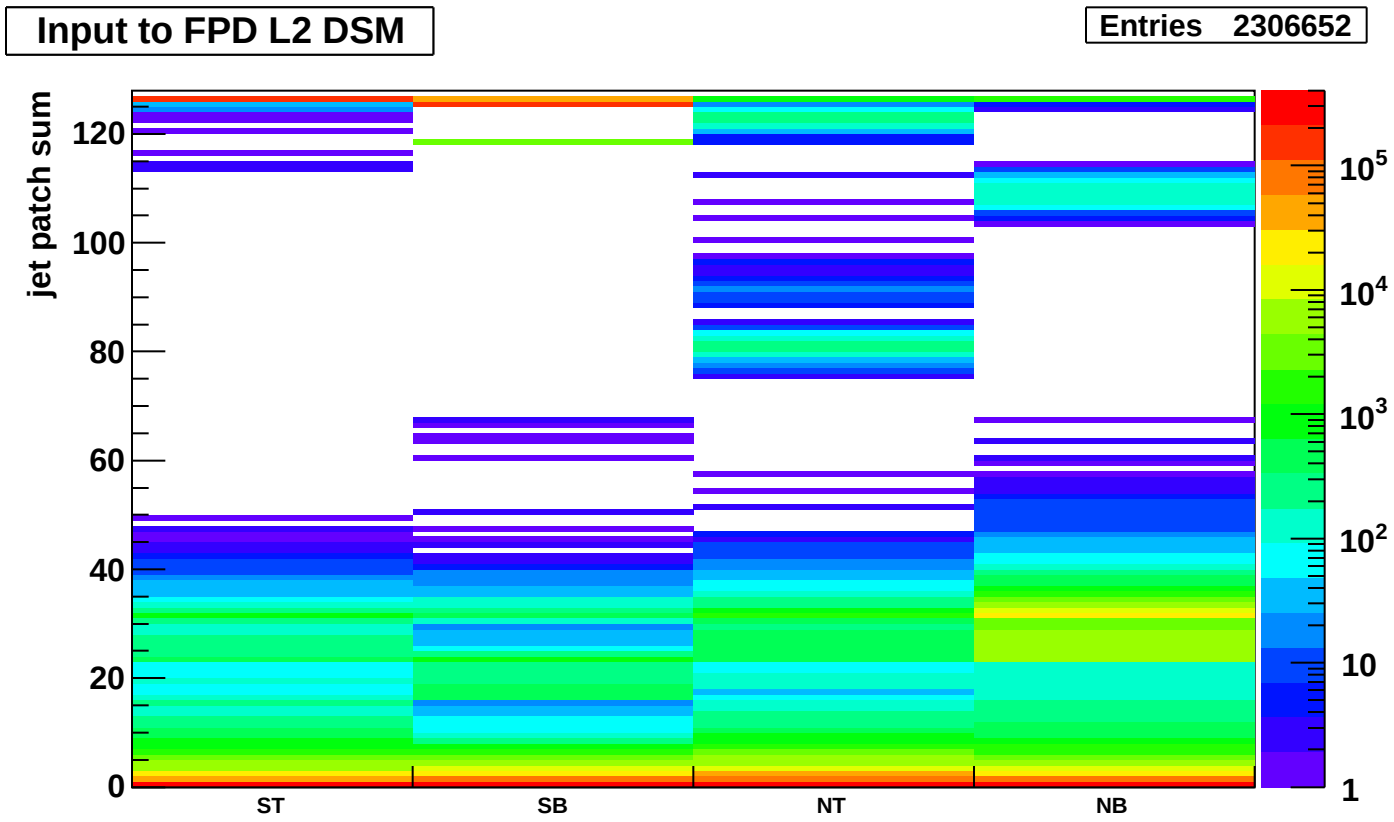

Input to FPD L2 DSM
Entries 554
CL bits - simulated
5
17
528
3
1
SMALL
LARGE-S
LARGE-N

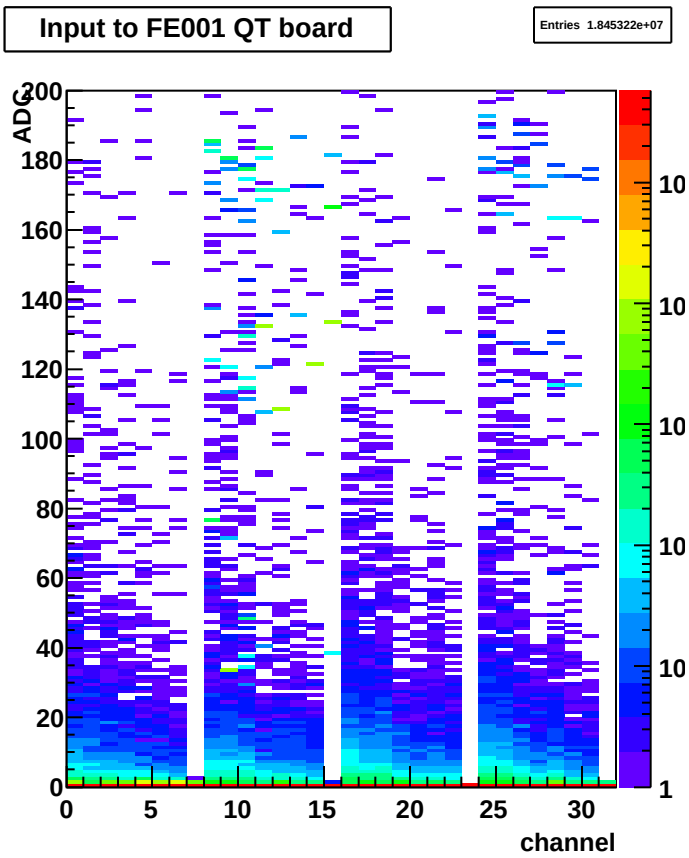

Input to FPD L2 DSM
Entries 1729989
HT bits
299474
203427
7186
3768
1293
2868
273421
371943
566609
SMALL
LARGE-S
LARGE-N

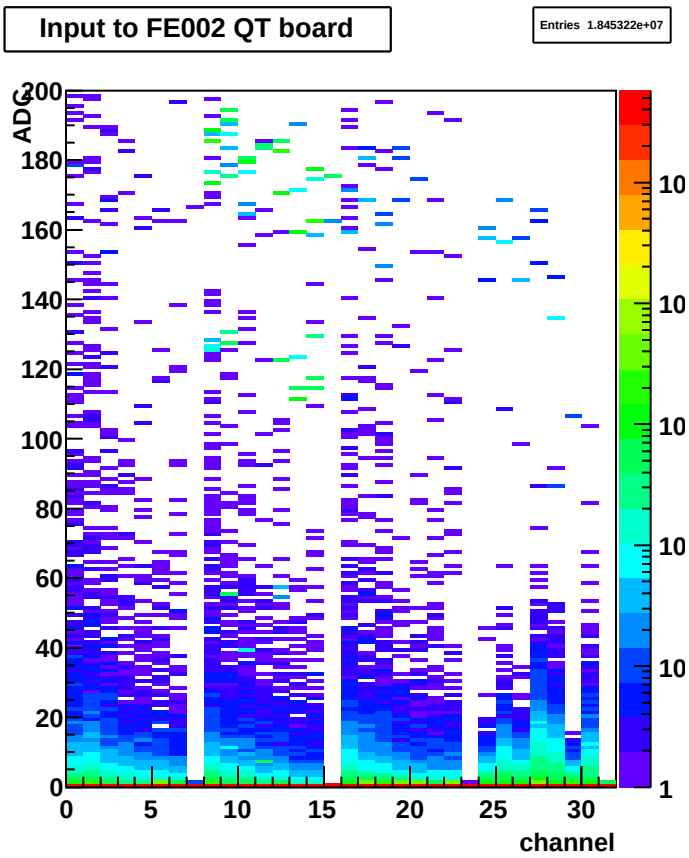

Input to FPD L2 DSM
Entries 697
HT bits - simulated
102
591
3
1
SMALL
LARGE-S
LARGE-N

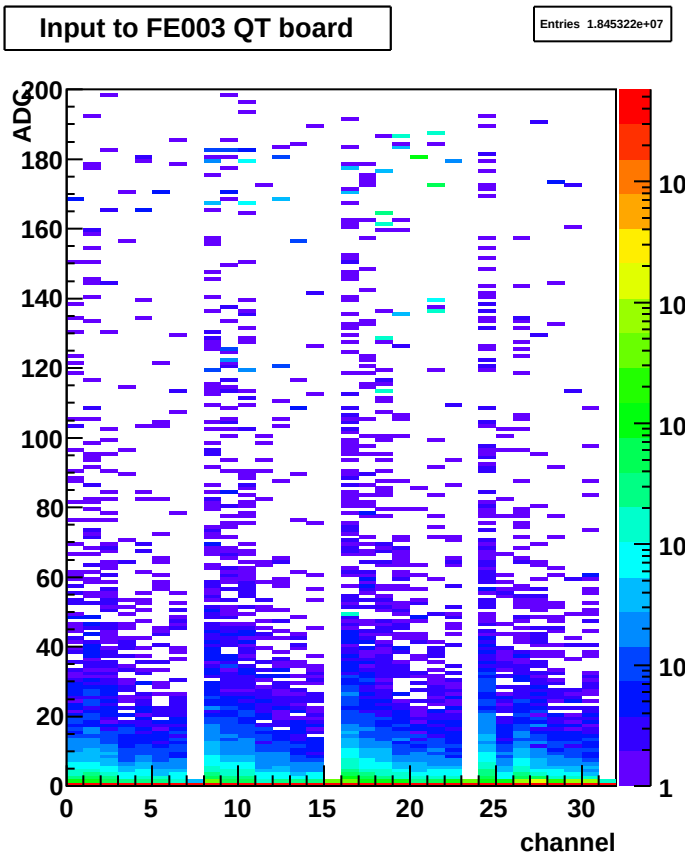

Input to FPD L3 DSM
Entries 9226608
bit
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

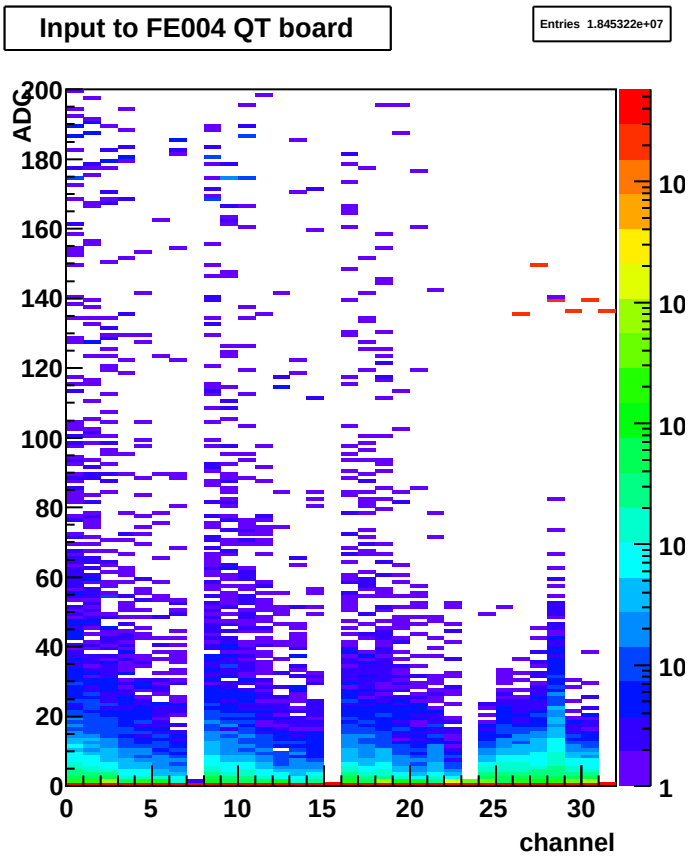

Input to FPD L3 DSM
Entries 0
bit - simulated
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

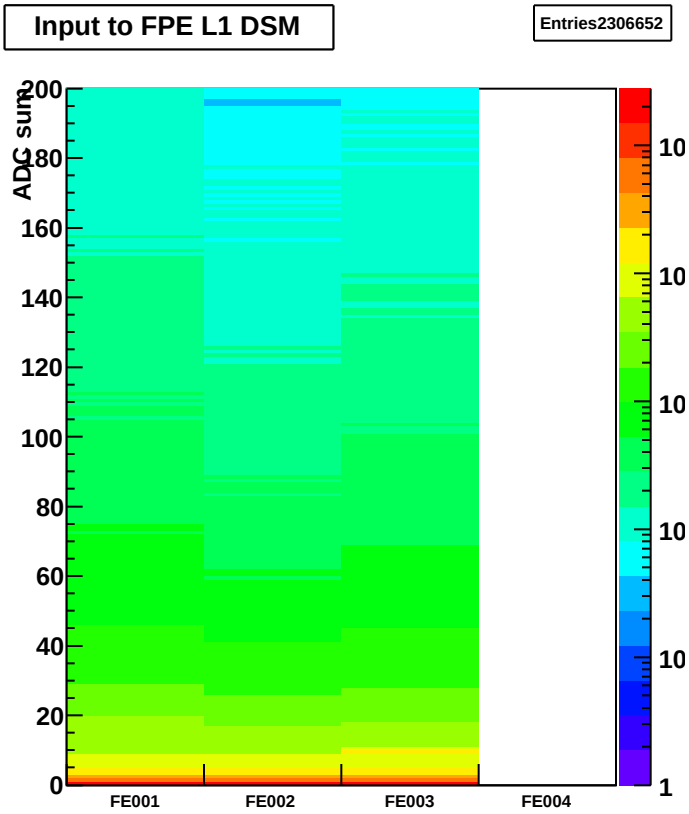

Input to FPD L2 DSM
Entries 2306652
jet patch sum
0
20
40
60
80
100
120
ST
SB
NT
NB
1
10
10^2
10^3
10^4
10^5

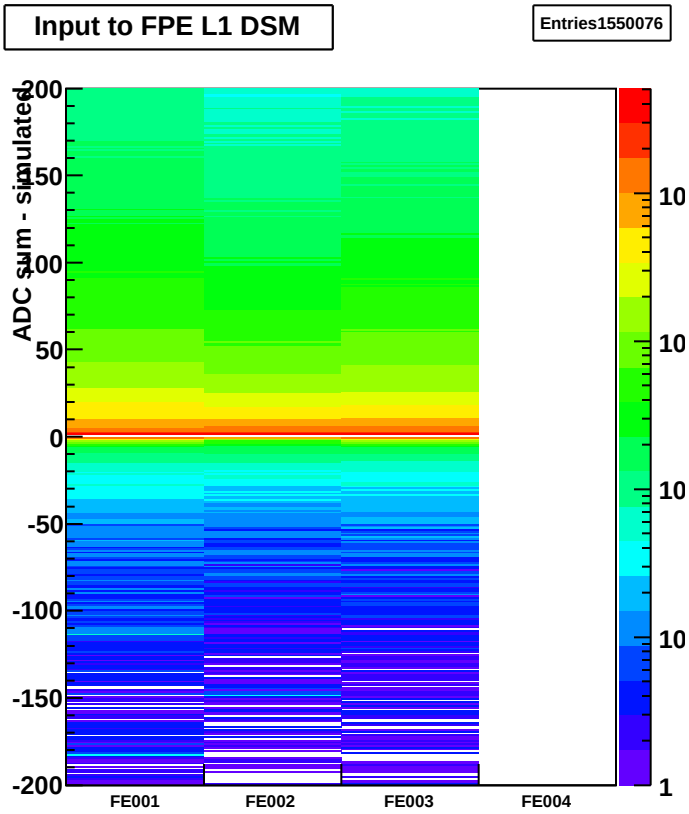

Input to FE001 QT board
Entries 1.845322e+07
ADC
channel

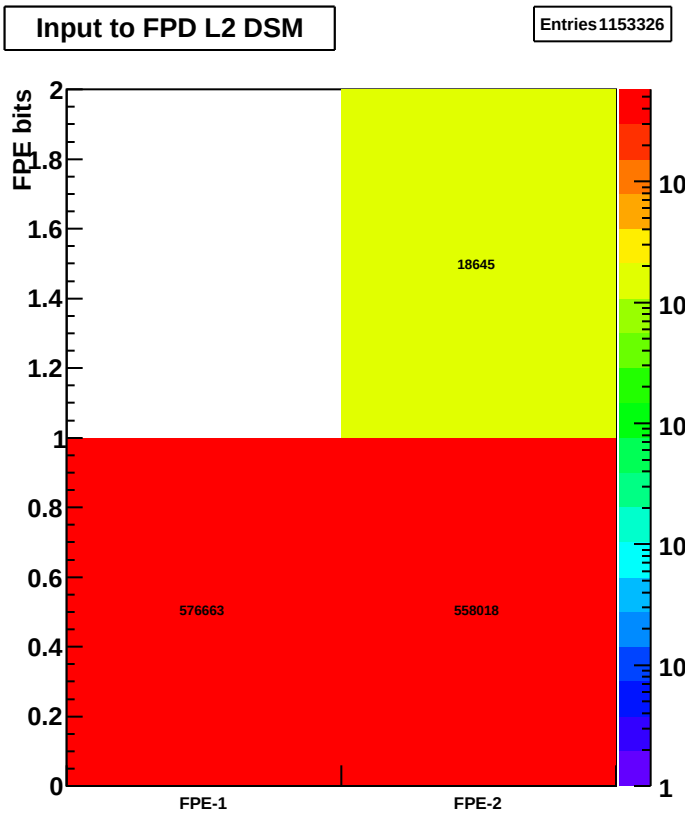

Input to FE002 QT board
Entries 1.845322e+07
ADC
channel

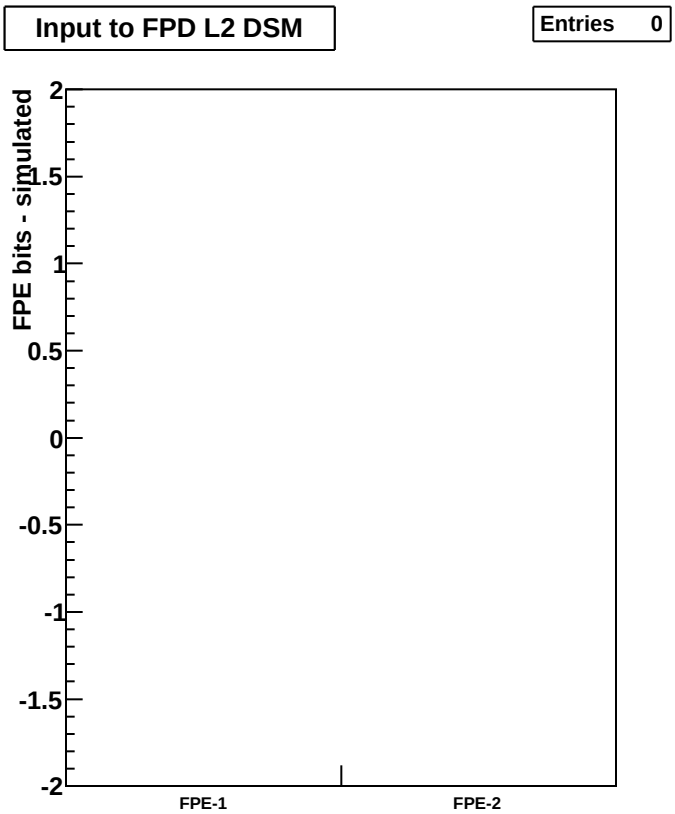

Input to FE003 QT board
Entries 1.845322e+07
ADC
channel


Input to FE004 QT board
Entries 1.845322e+07
ADC
channel


Input to FPE L1 DSM
Entries2306652
ADC sum
FE001
FE002
FE003
FE004


Input to FPE L1 DSM
Entries1550076
ADC sum - simulated
FE001
FE002
FE003
FE004


Input to FPD L2 DSM
Entries1153326
FPE bits
18645
576663
558018
FPE-1
FPE-2


Input to FPD L2 DSM
Entries 0
FPE bits - simulated
FPE-1
FPE-2