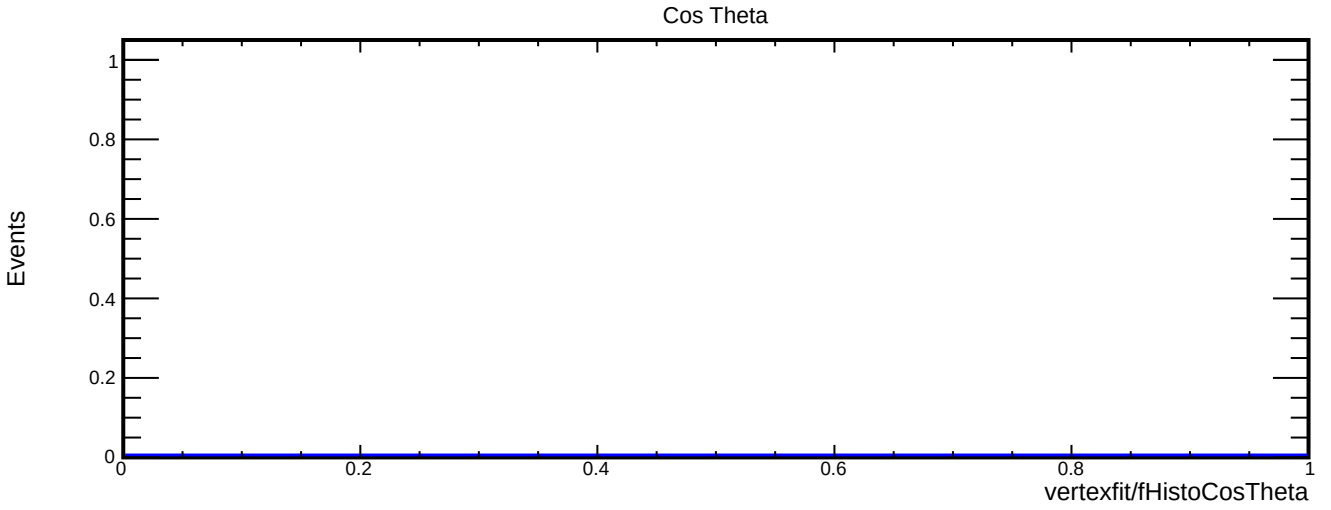
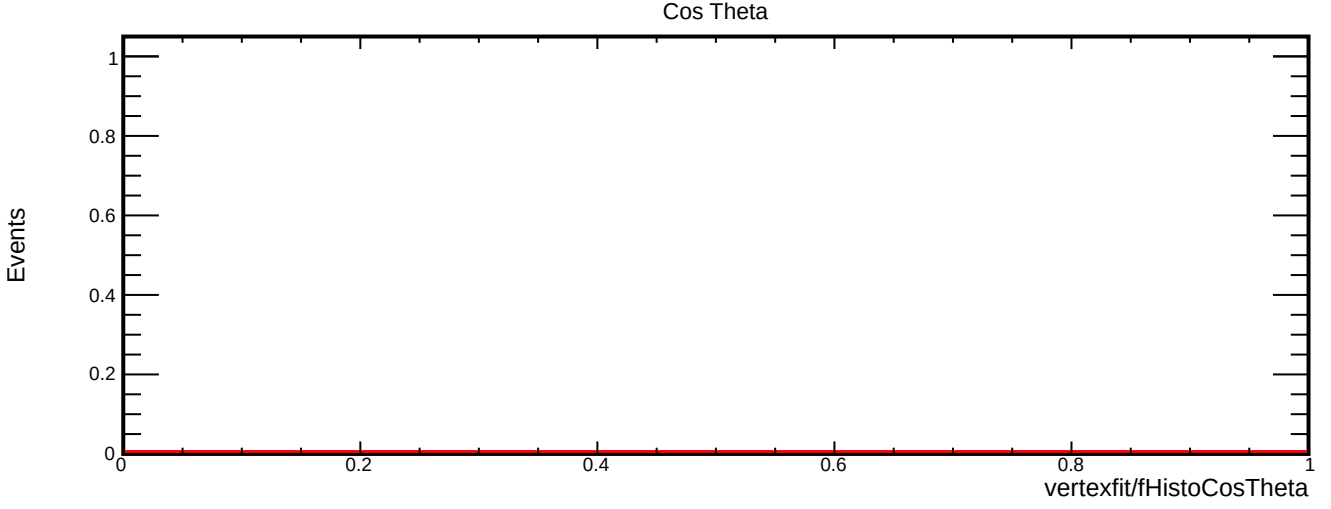
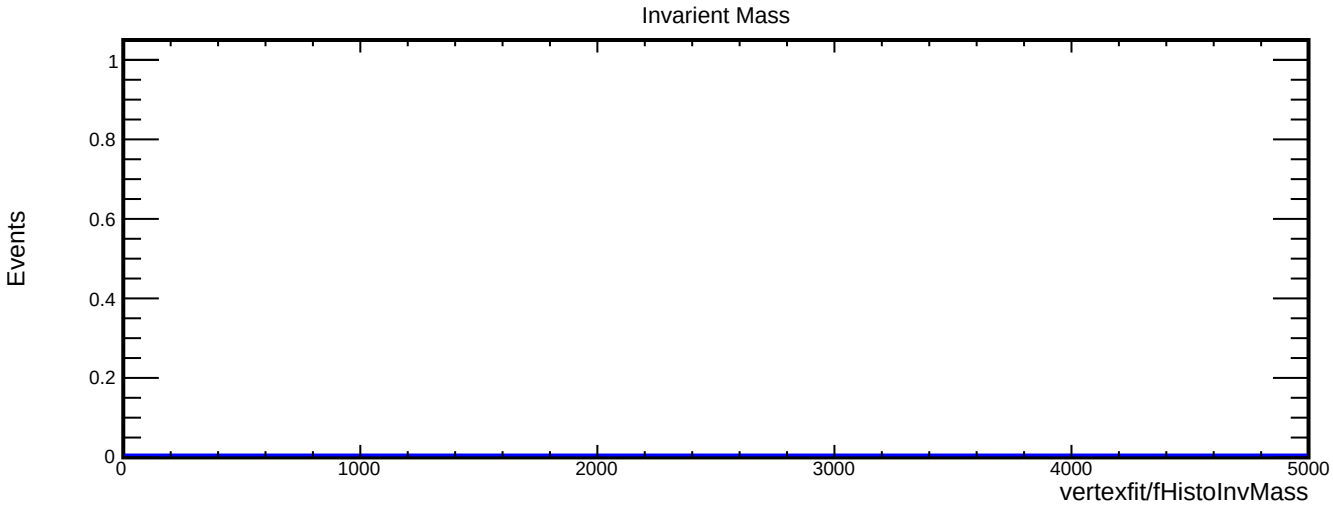
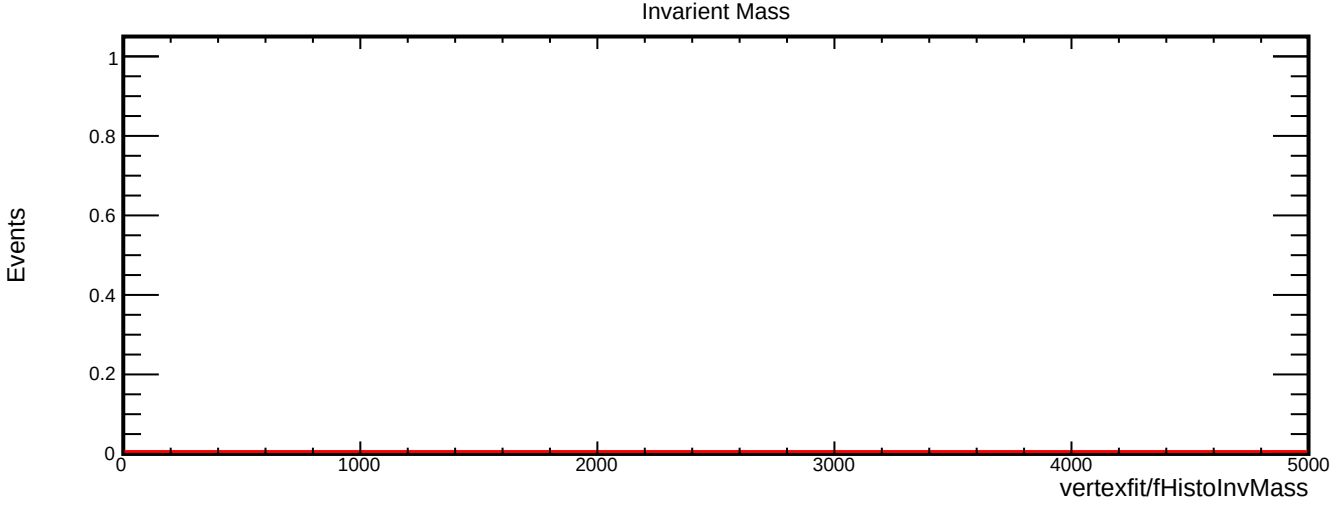
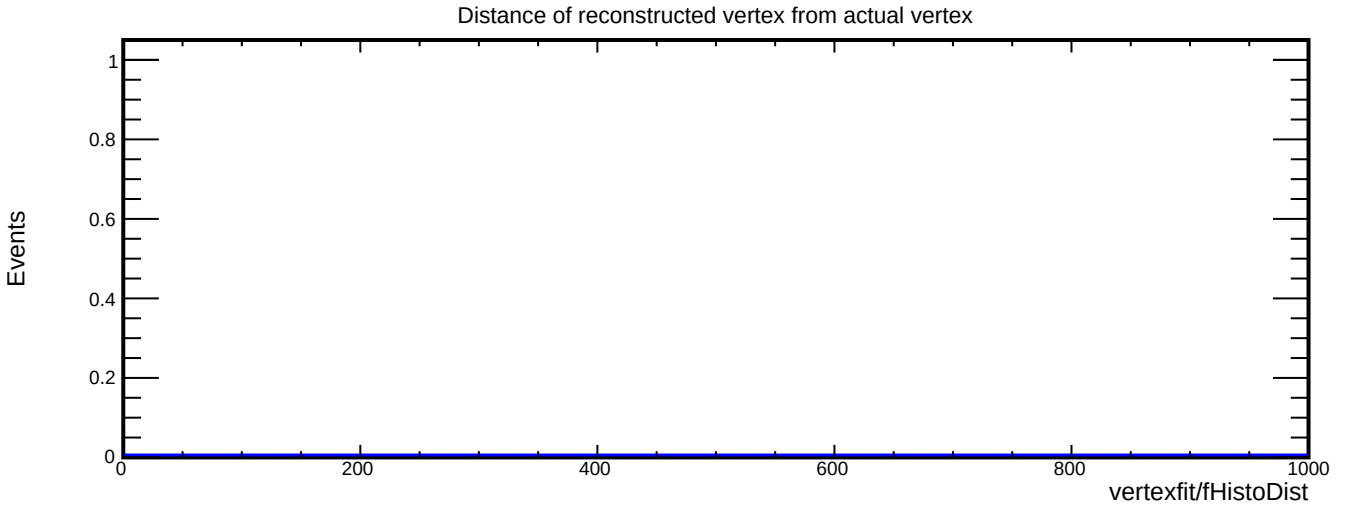
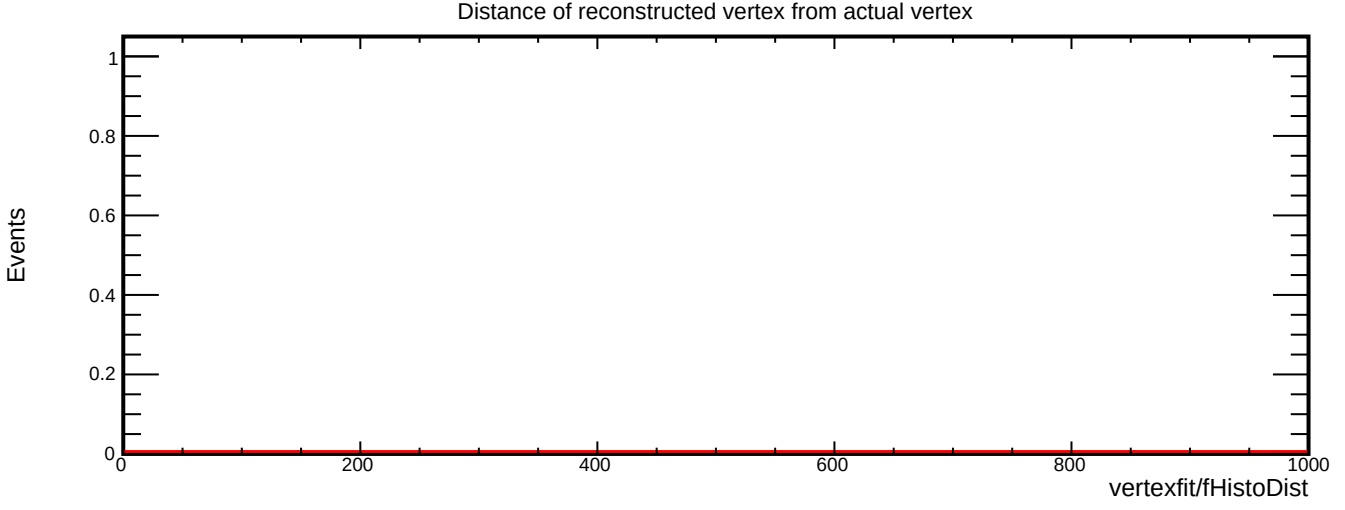

Cos Theta
Events
1
0.8
0.6
0.4
0.2
0
0
0.2
0.4
0.6
0.8
1
vertexfit/fHistoCosTheta

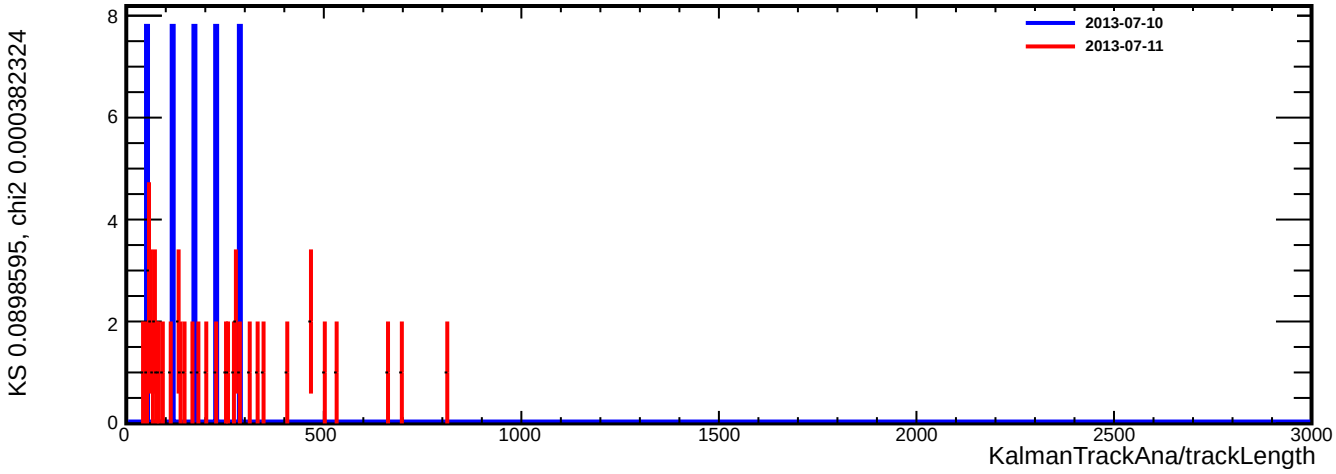

Cos Theta
Events
1
0.8
0.6
0.4
0.2
0
0
0.2
0.4
0.6
0.8
1
vertexfit/fHistoCosTheta

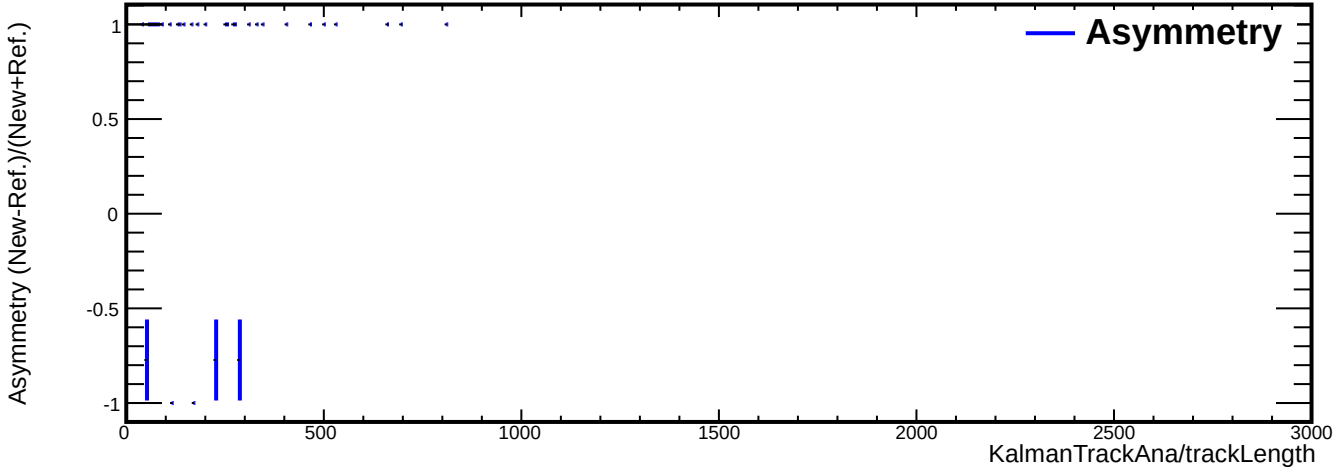

Invarient Mass
Events
1
0.8
0.6
0.4
0.2
0
0
1000
2000
3000
4000
5000
vertexfit/fHistoInvMass

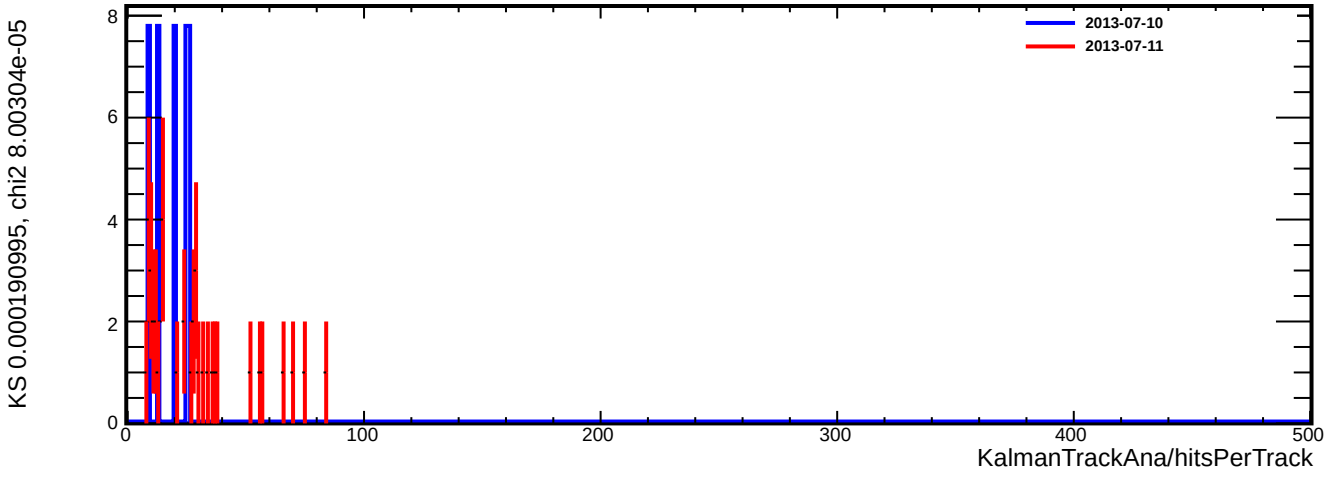

Invarient Mass
Events
1
0.8
0.6
0.4
0.2
0
0
1000
2000
3000
4000
5000
vertexfit/fHistoInvMass

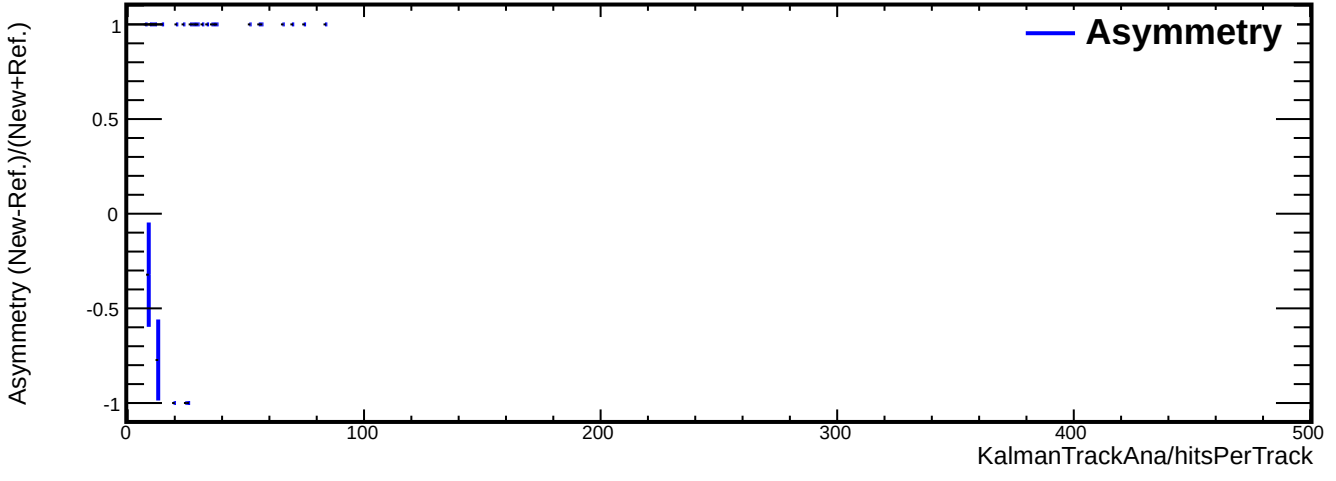

Distance of reconstructed vertex from actual vertex
Events
1
0.8
0.6
0.4
0.2
0
0
200
400
600
800
1000
vertexfit/fHistoDist

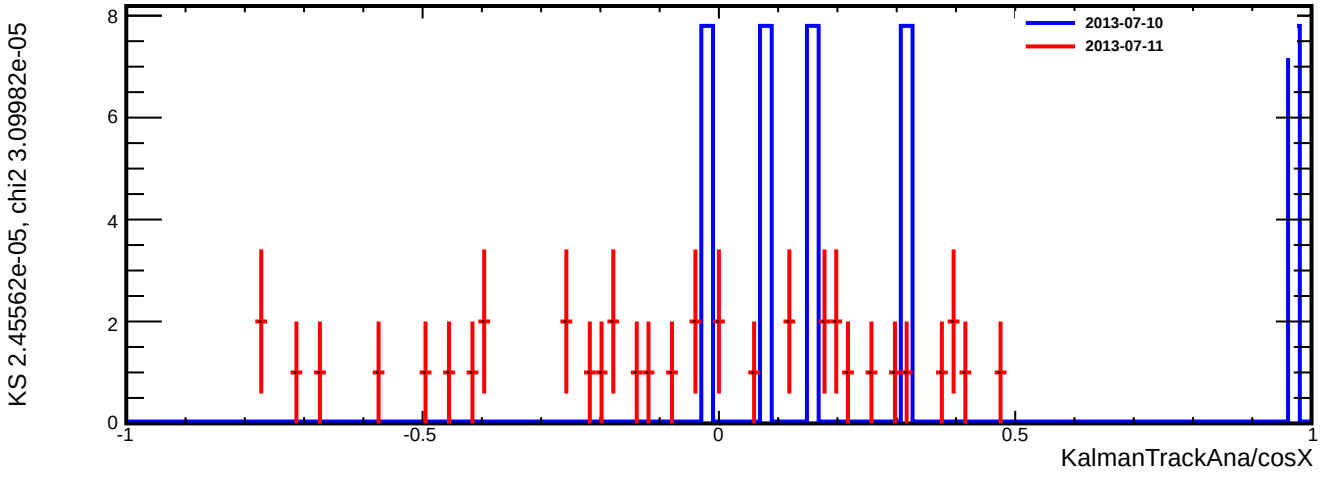

Distance of reconstructed vertex from actual vertex
Events
1
0.8
0.6
0.4
0.2
0
0
200
400
600
800
1000
vertexfit/fHistoDist

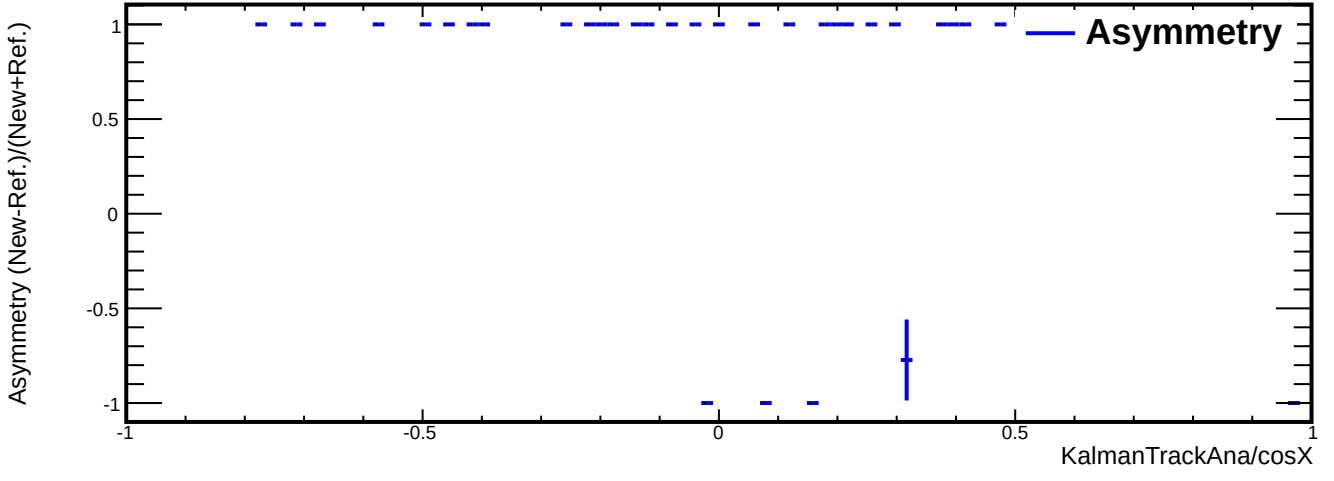

KS 0.0898595, chi2 0.000382324
2013-07-10
2013-07-11
KalmanTrackAna/trackLength

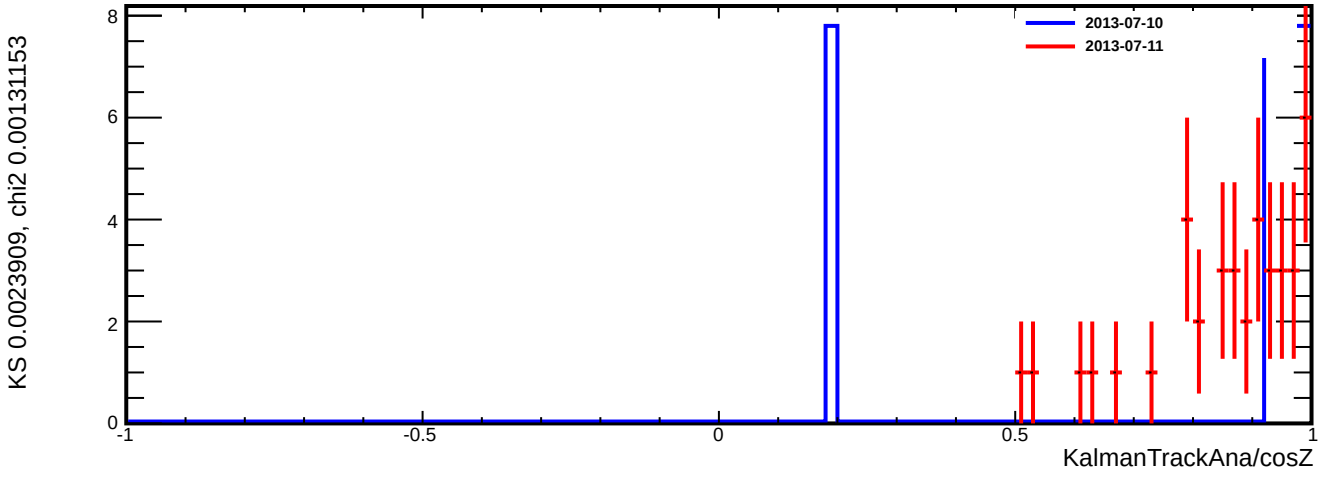

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
KalmanTrackAna/trackLength

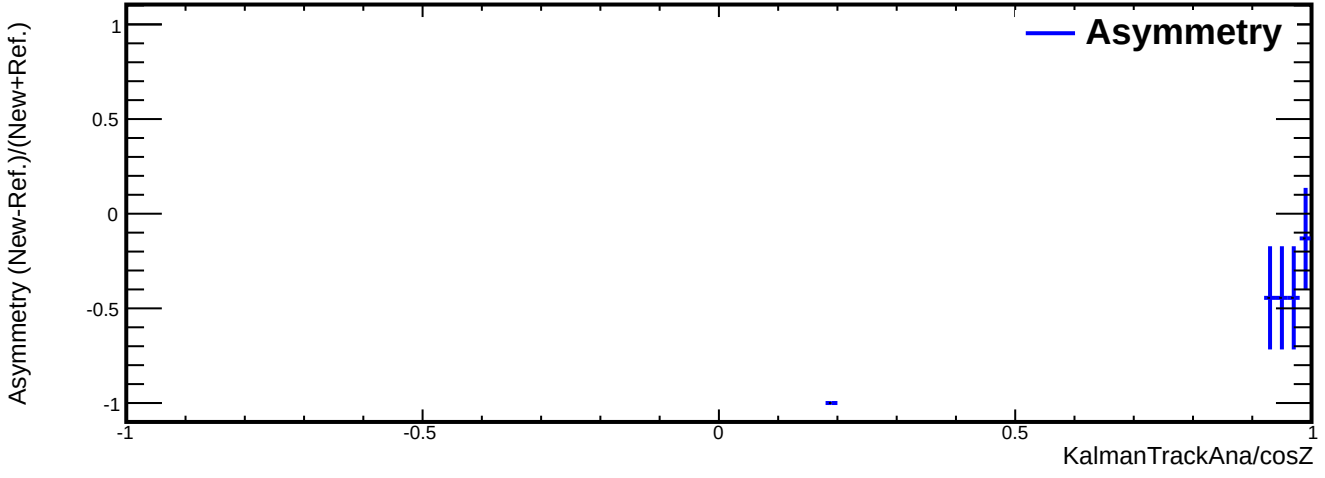

KS 0.000190995, chi2 8.00304e-05
2013-07-10
2013-07-11
KalmanTrackAna/hitsPerTrack

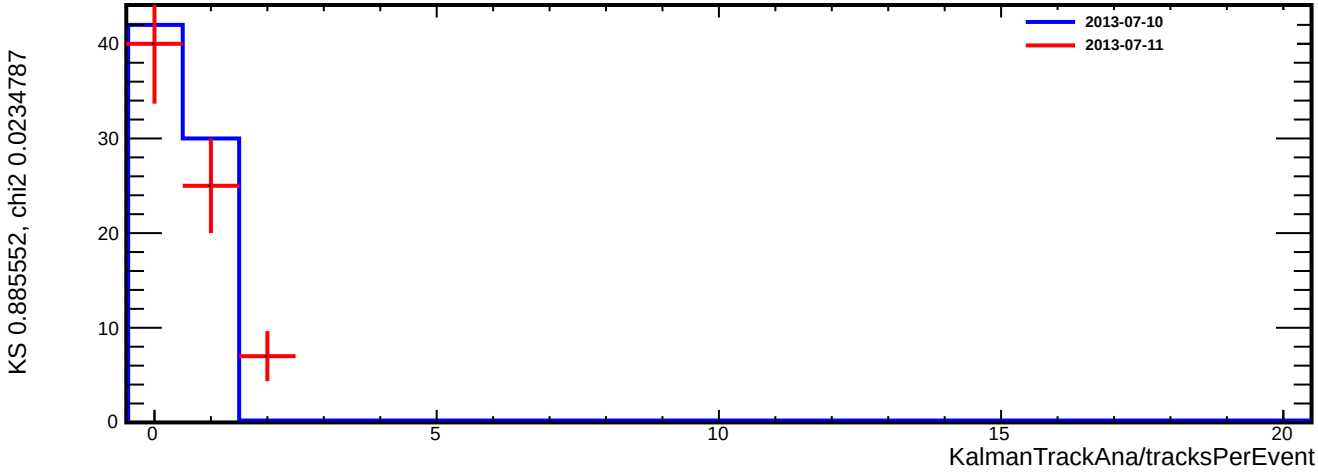

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
KalmanTrackAna/hitsPerTrack

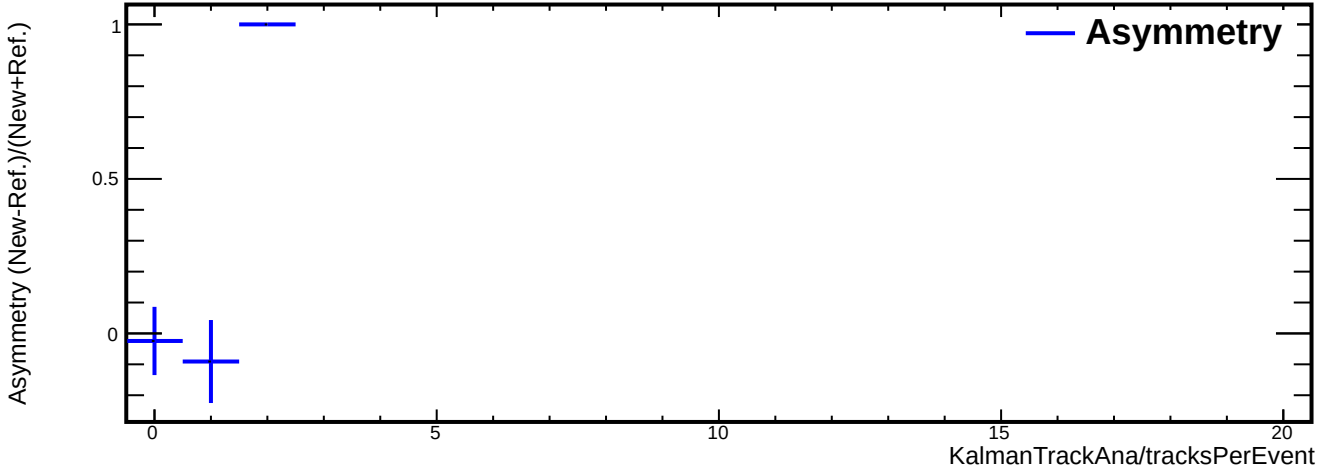

KS 2.45562e-05, chi2 3.09982e-05
2013-07-10
2013-07-11
KalmanTrackAna/cosX

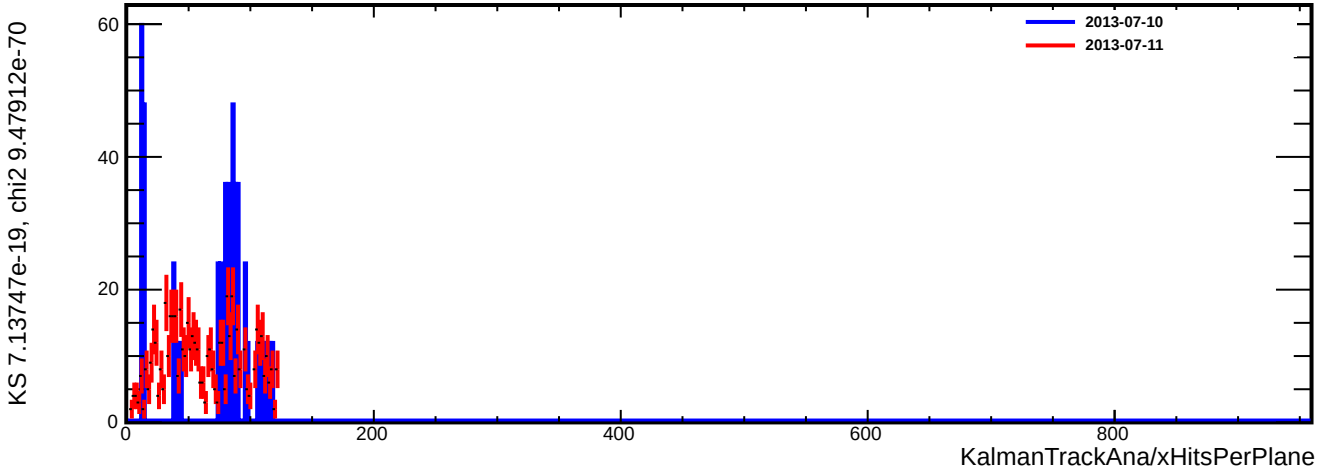

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
KalmanTrackAna/cosX

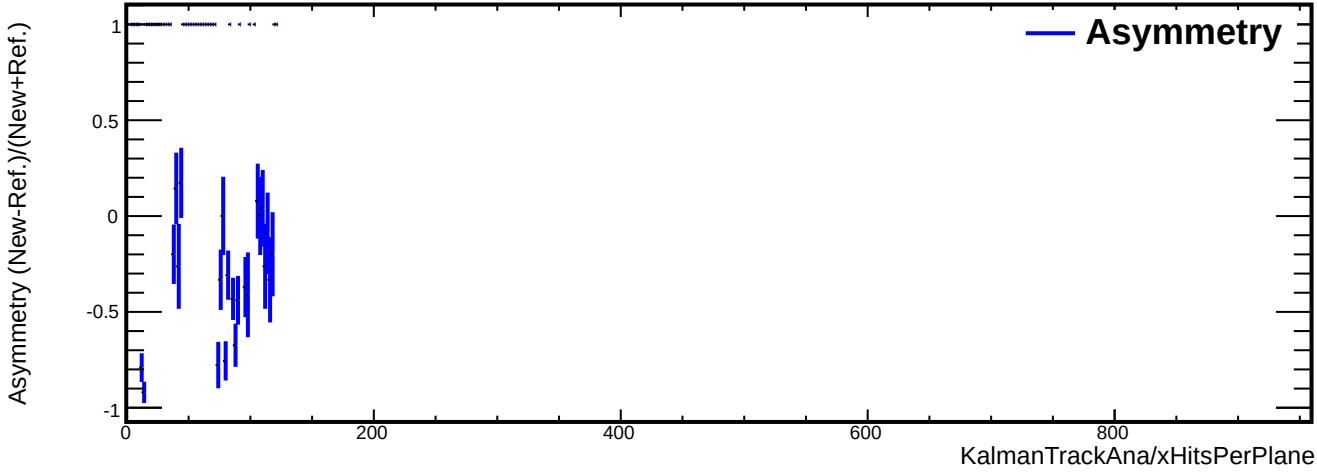

KS 0.0023909, chi2 0.00131153
2013-07-10
2013-07-11
KalmanTrackAna/cosZ

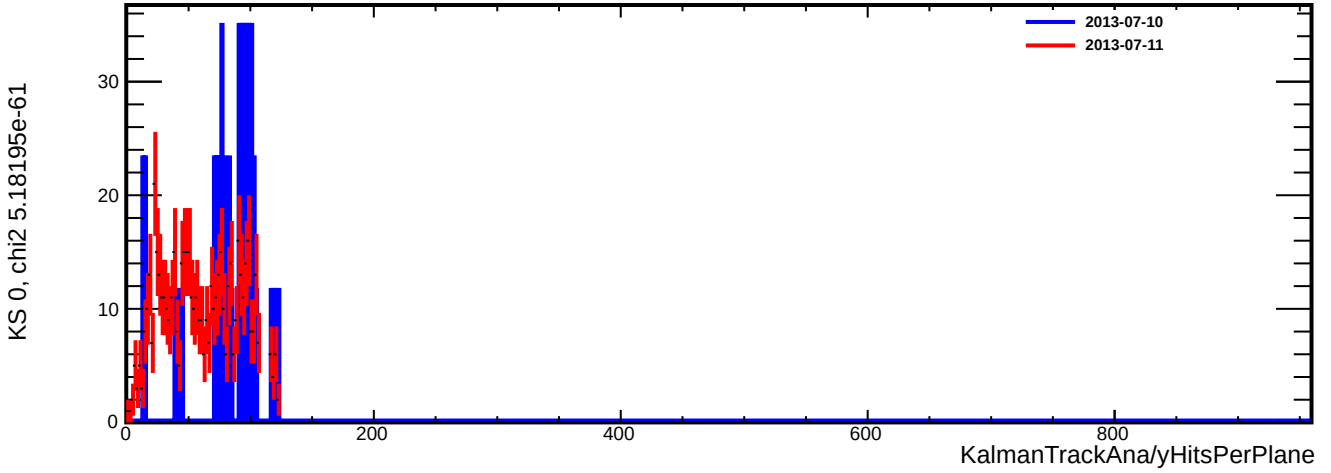

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
KalmanTrackAna/cosZ

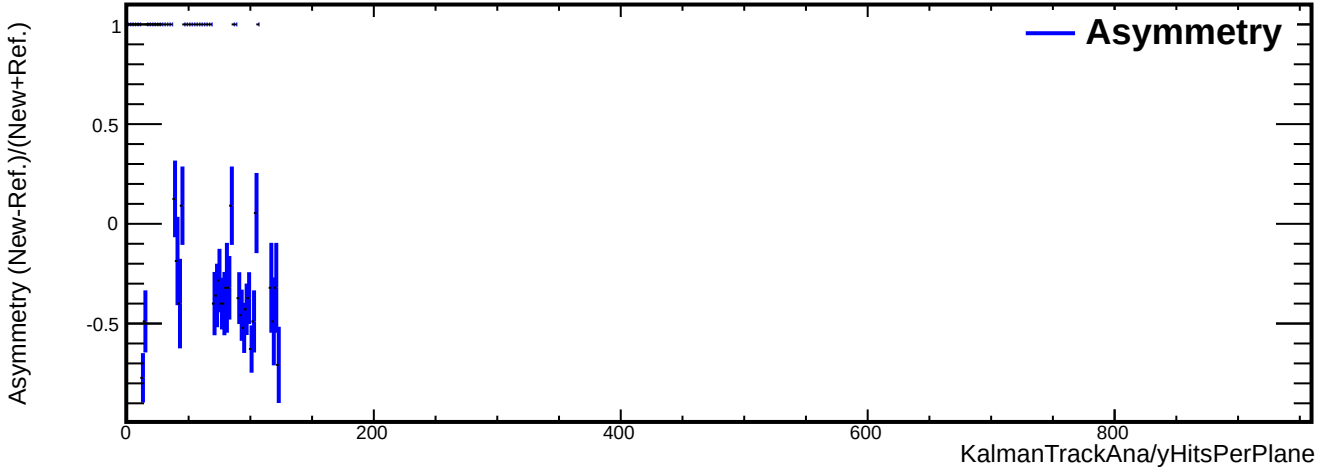

KS 0.885552, chi2 0.0234787
2013-07-10
2013-07-11
0
10
20
30
40
0
5
10
15
20
KalmanTrackAna/tracksPerEvent

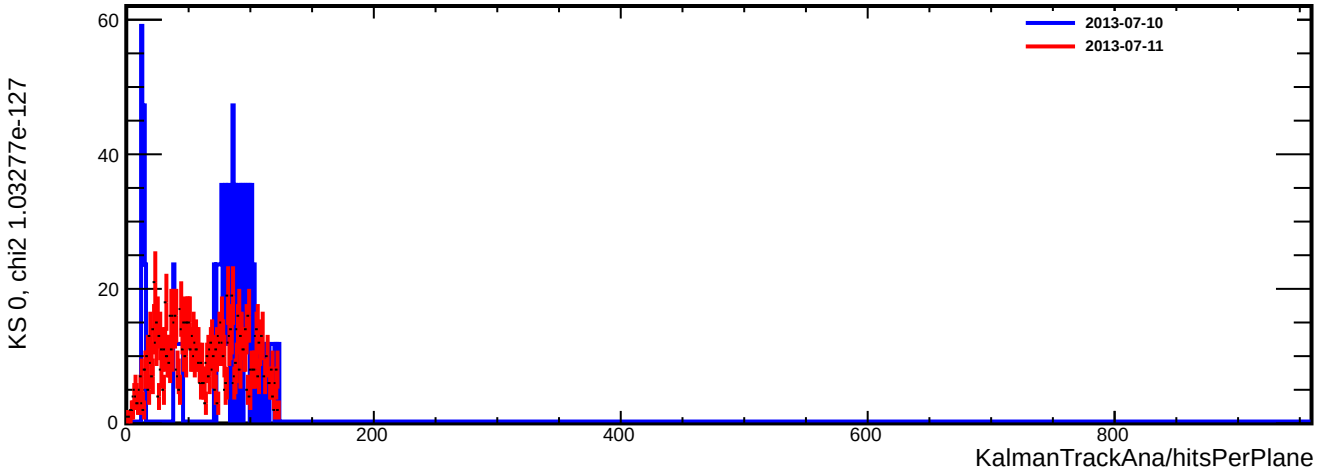

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
0
5
10
15
20
KalmanTrackAna/tracksPerEvent

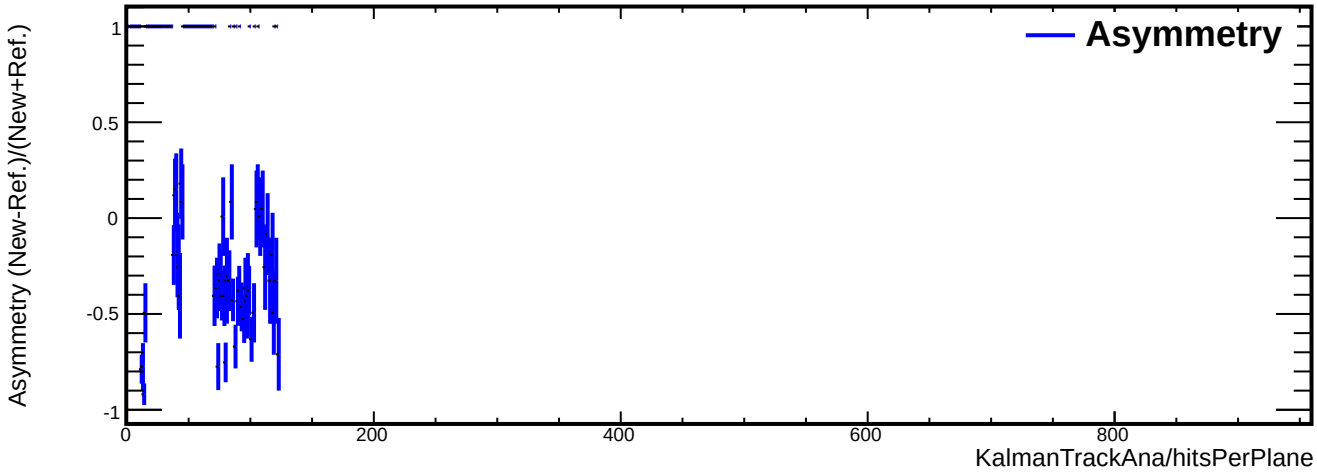

KS 7.13747e-19, chi2 9.47912e-70
2013-07-10
2013-07-11
0
20
40
60
0
200
400
600
800
KalmanTrackAna/xHitsPerPlane

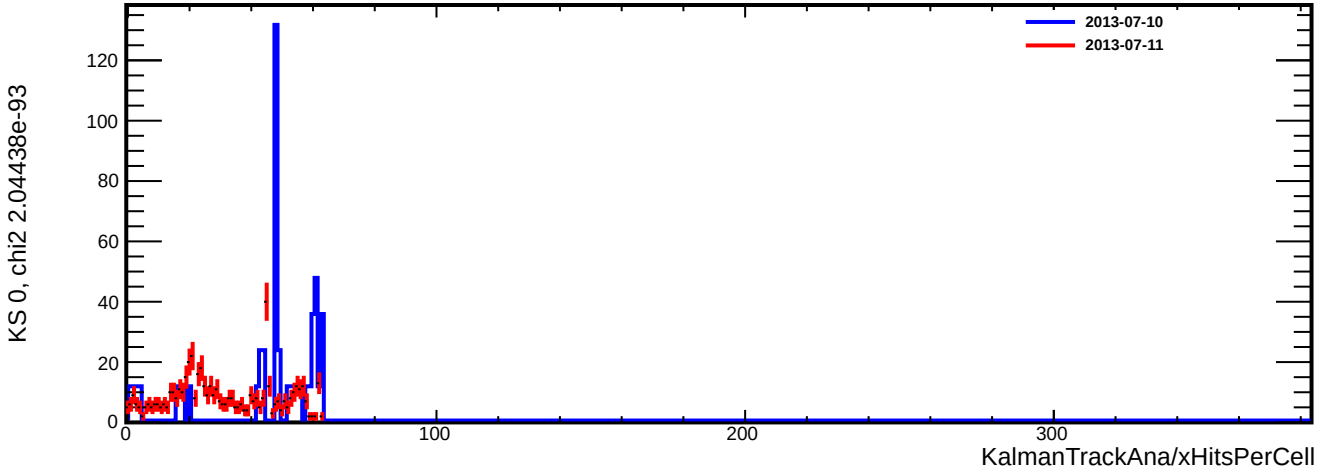

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
0
200
400
600
800
KalmanTrackAna/xHitsPerPlane

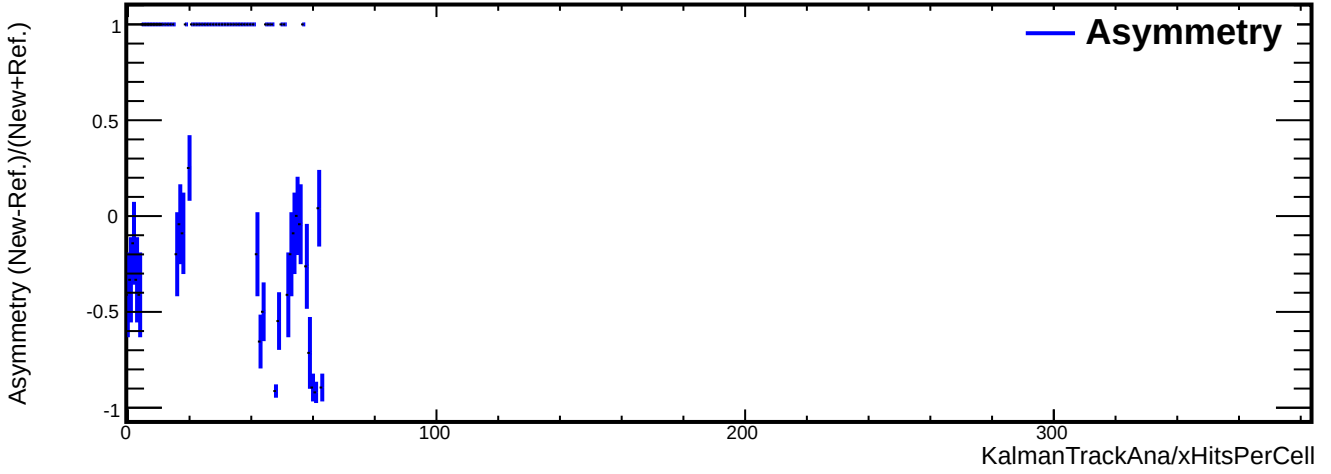

KS 0, chi2 5.18195e-61
2013-07-10
2013-07-11
0
10
20
30
0
200
400
600
800
KalmanTrackAna/yHitsPerPlane

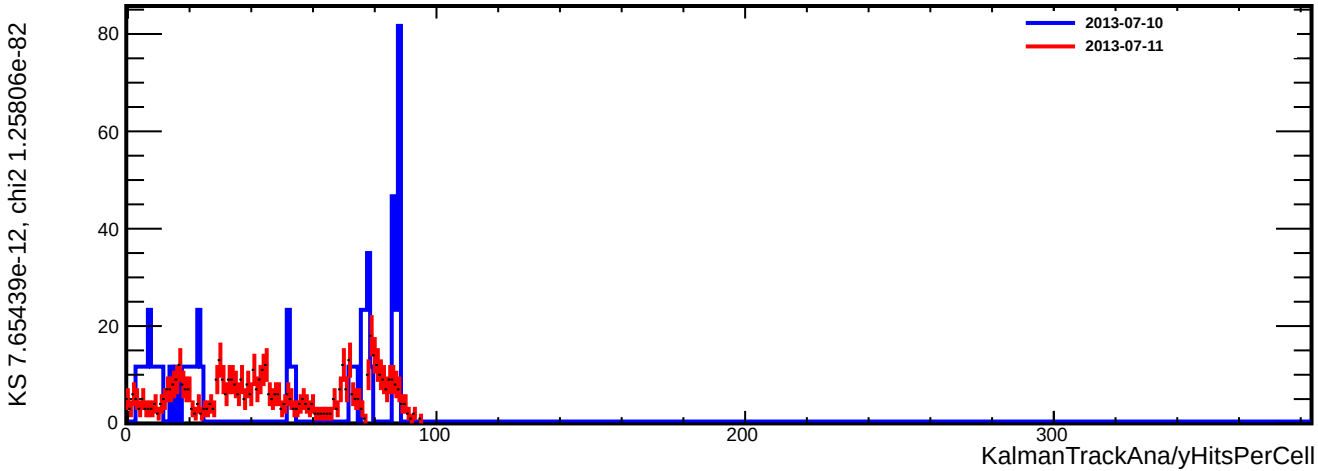

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
0
200
400
600
800
KalmanTrackAna/yHitsPerPlane

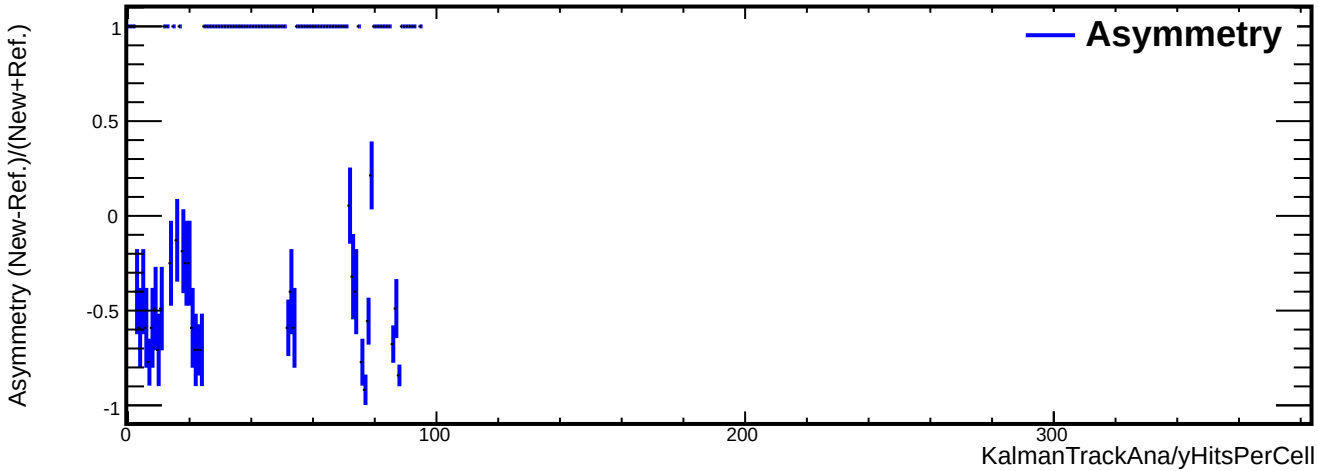

KS 0, chi2 1.03277e-127
60
40
20
0
0
200
400
600
800
KalmanTrackAna/hitsPerPlane
2013-07-10
2013-07-11

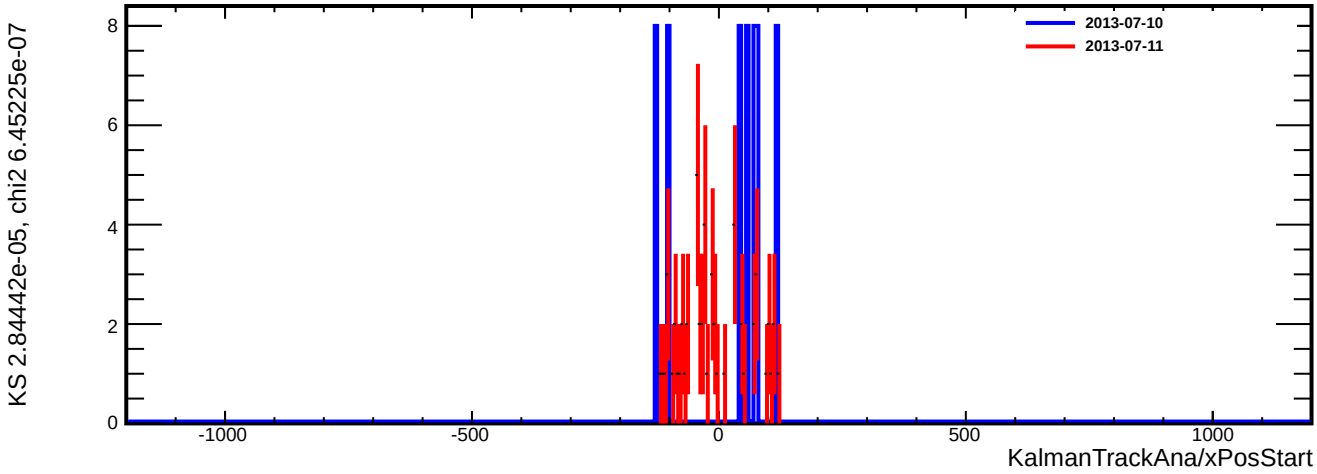

Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
200
400
600
800
KalmanTrackAna/hitsPerPlane
Asymmetry

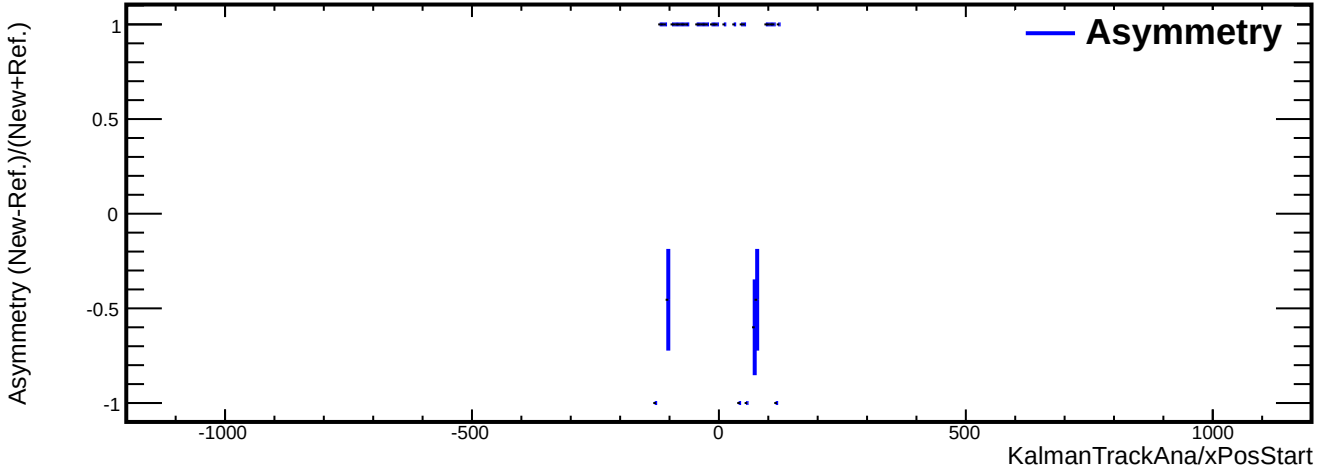

2013-07-10
2013-07-11
KS 0, chi2 2.04438e-93
0
20
40
60
80
100
120
0
100
200
300
KalmanTrackAna/xHitsPerCell

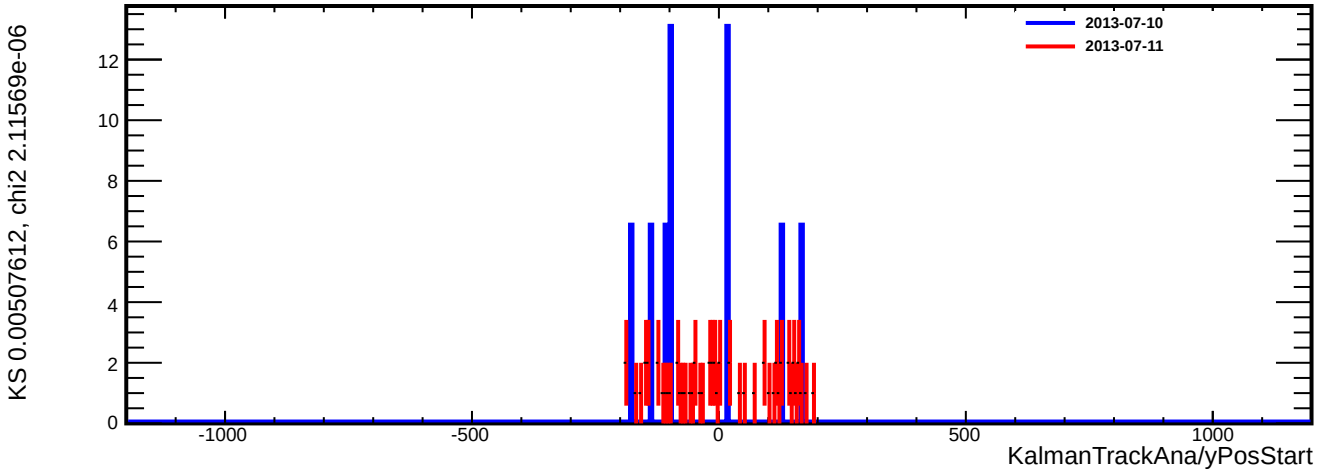

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
100
200
300
KalmanTrackAna/xHitsPerCell


KS 7.65439e-12, chi2 1.25806e-82
2013-07-10
2013-07-11
80
60
40
20
0
0
100
200
300
KalmanTrackAna/yHitsPerCell


Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
0
100
200
300
KalmanTrackAna/yHitsPerCell


KS 2.84442e-05, chi2 6.45225e-07
2013-07-10
2013-07-11
KalmanTrackAna/xPosStart


Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
KalmanTrackAna/xPosStart


KS 0.00507612, chi2 2.11569e-06
2013-07-10
2013-07-11
0
2
4
6
8
10
12
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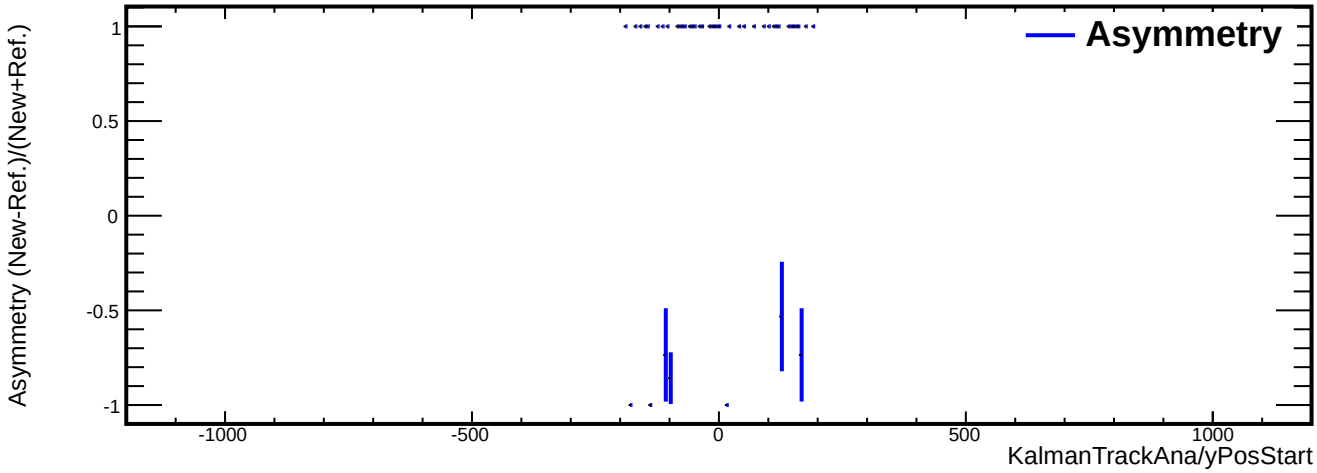
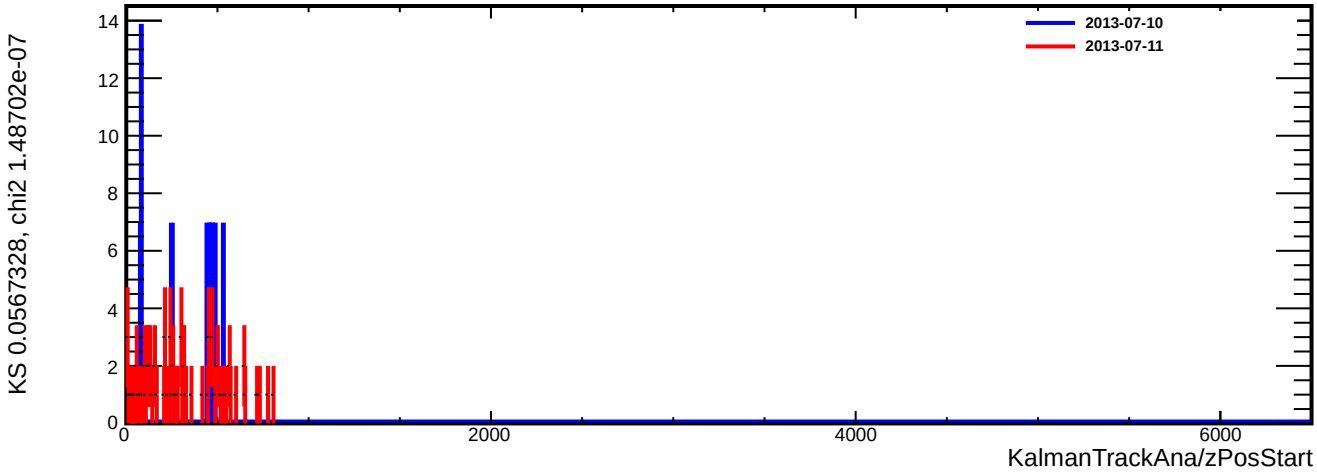
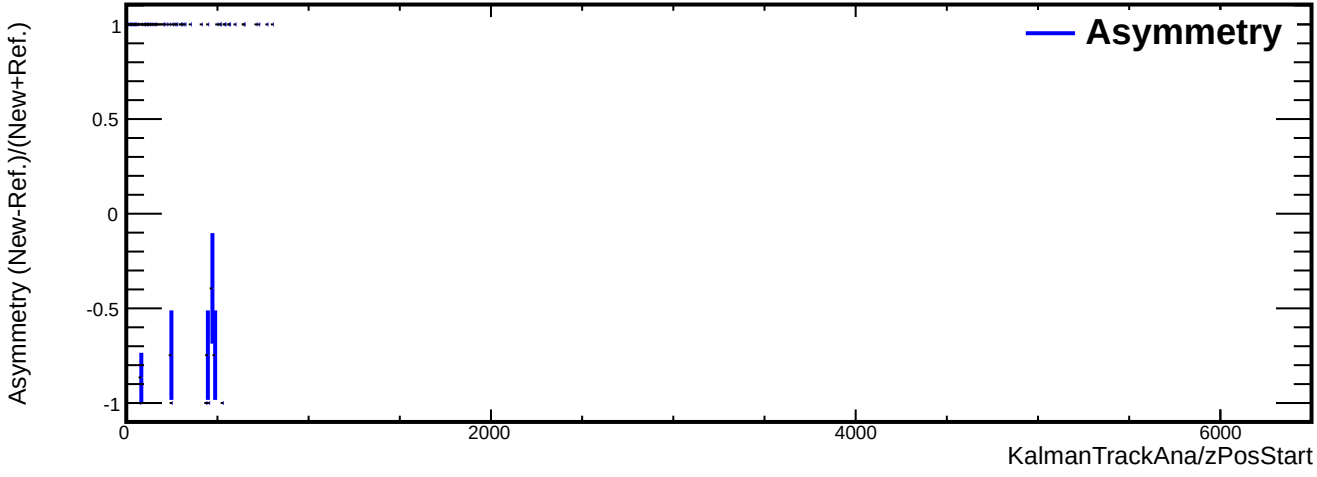
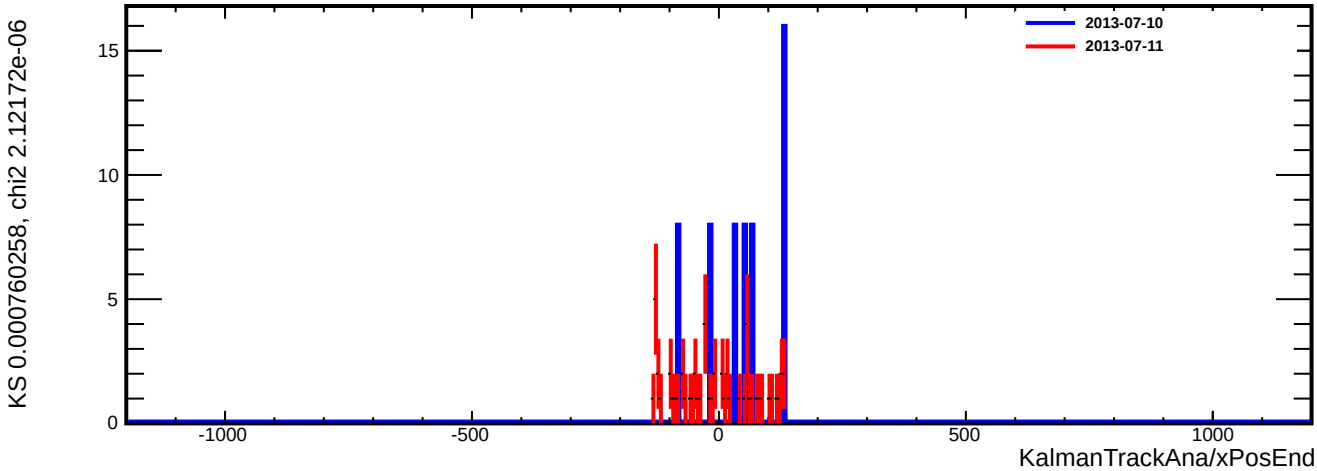
-500
0
500
1000
KalmanTrackAna/yPosStart


Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
-1000
-500
0
500
1000
KalmanTrackAna/yPosStart


KS 0.0567328, chi2 1.48702e-07
2013-07-10
2013-07-11
KalmanTrackAna/zPosStart


Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
KalmanTrackAna/zPosStart


KS 0.000760258, chi2 2.12172e-06
2013-07-10
2013-07-11
15
10
5
0
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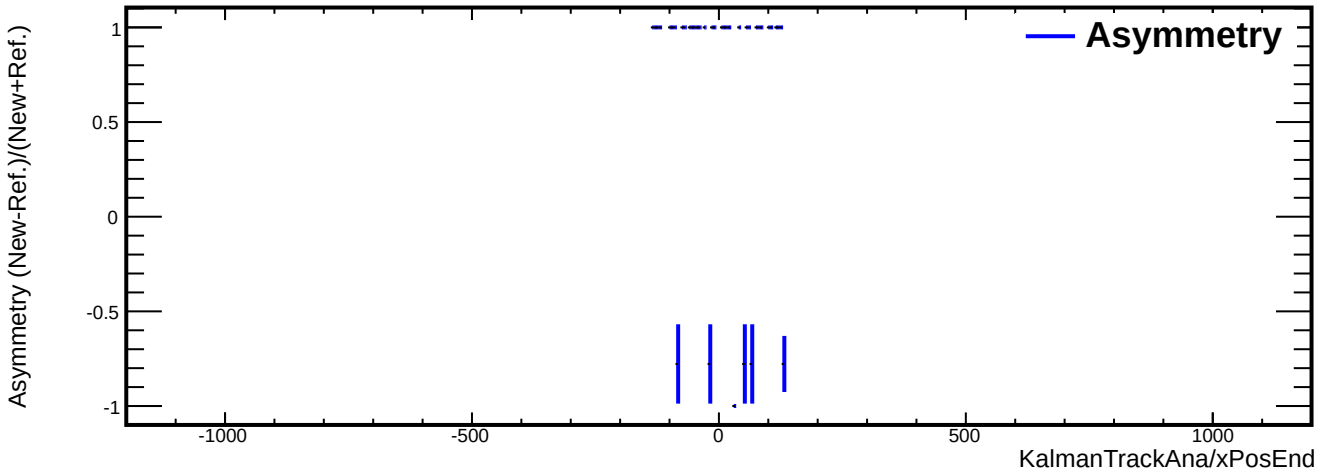
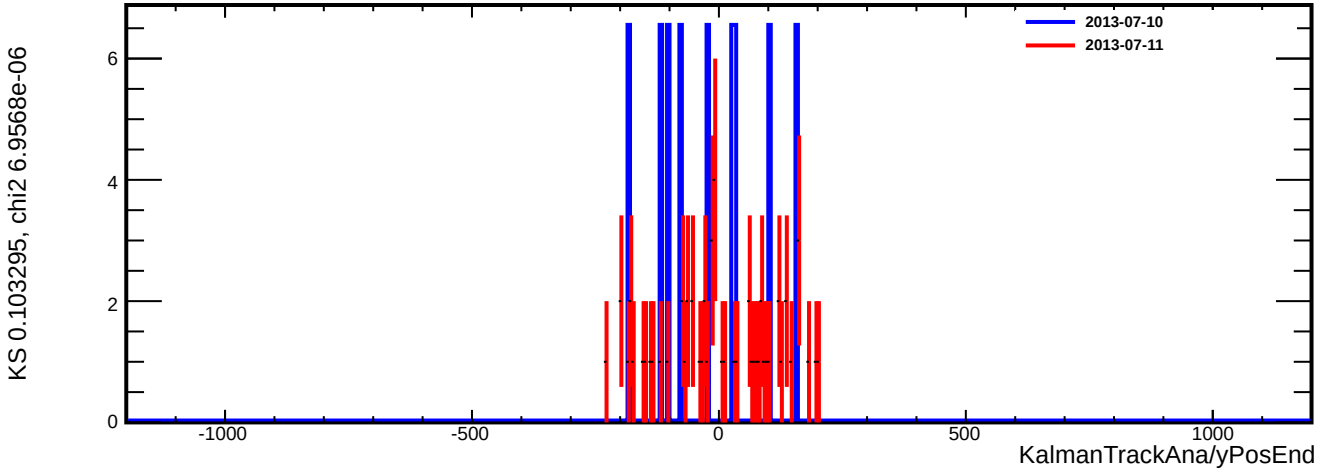
-500
0
500
1000
KalmanTrackAna/xPosEnd


Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
-1000
-500
0
500
1000
KalmanTrackAna/xPosEnd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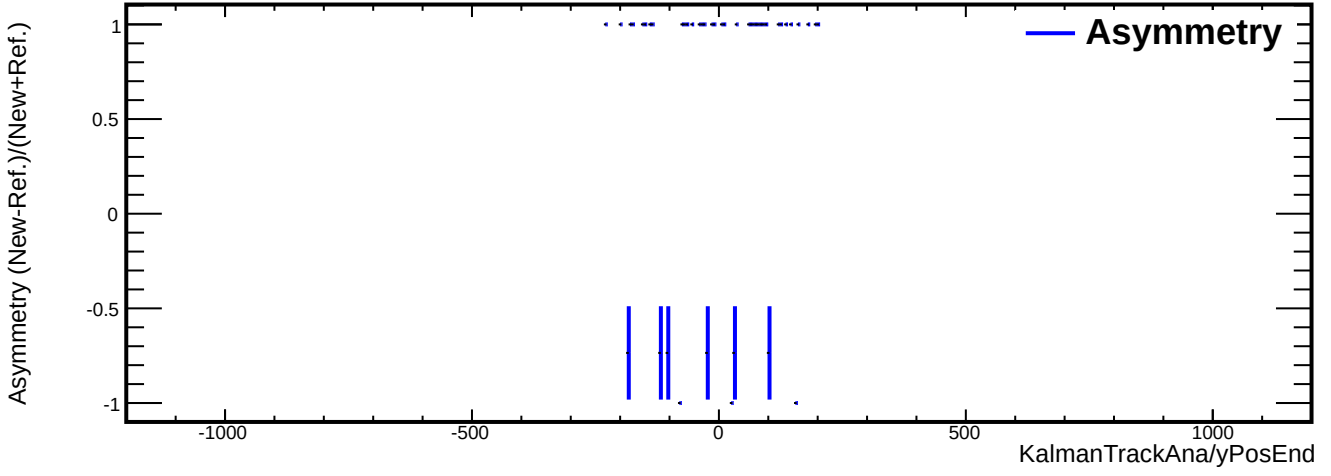
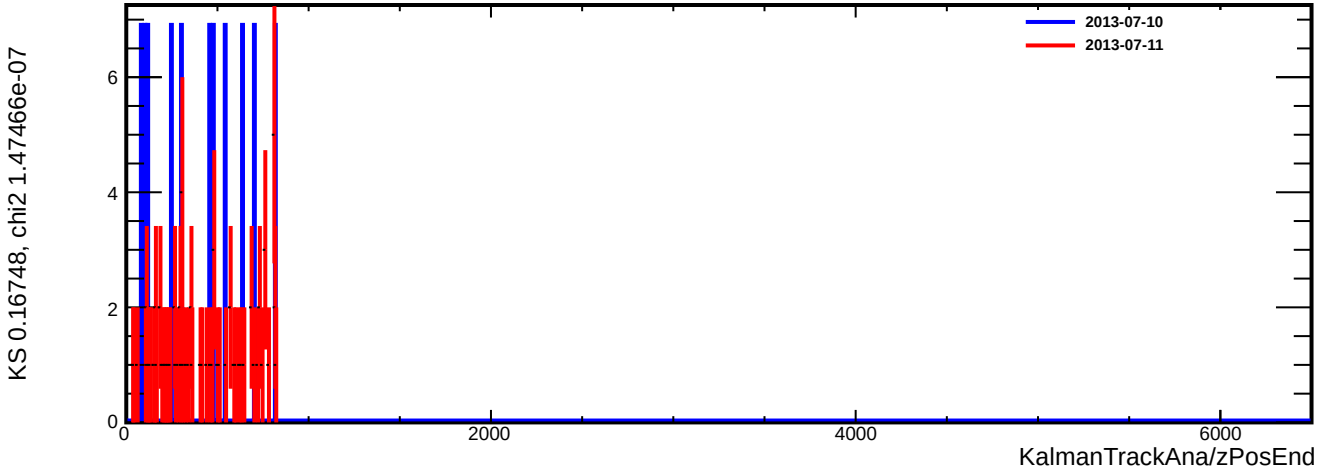
2013-07-10
2013-07-11
KalmanTrackAna/yPosEnd


Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
KalmanTrackAna/yPosEnd


KS 0.16748, chi2 1.47466e-07
2013-07-10
2013-07-11
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2
4
6
0
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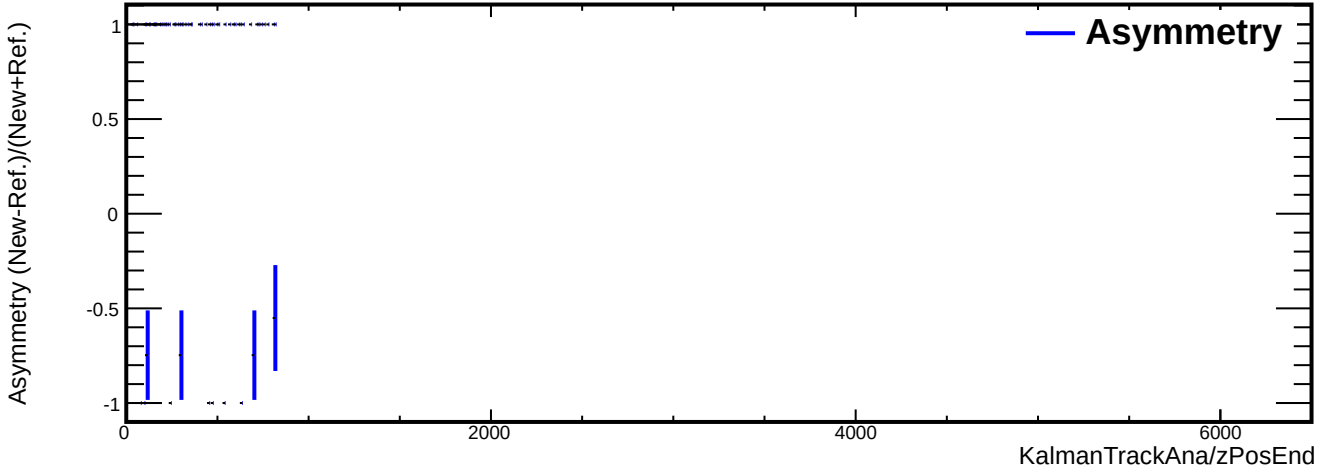
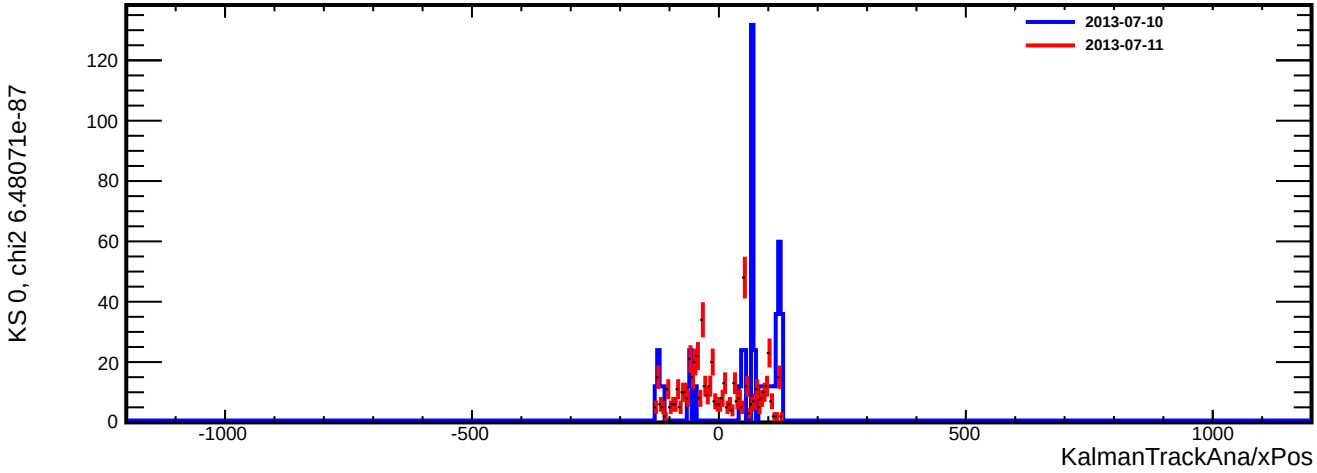
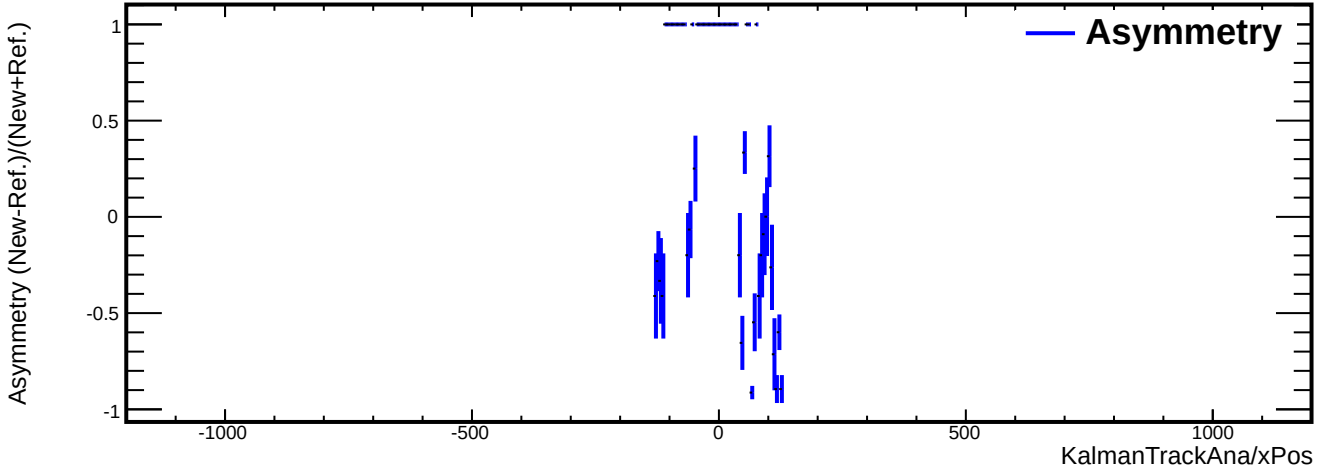
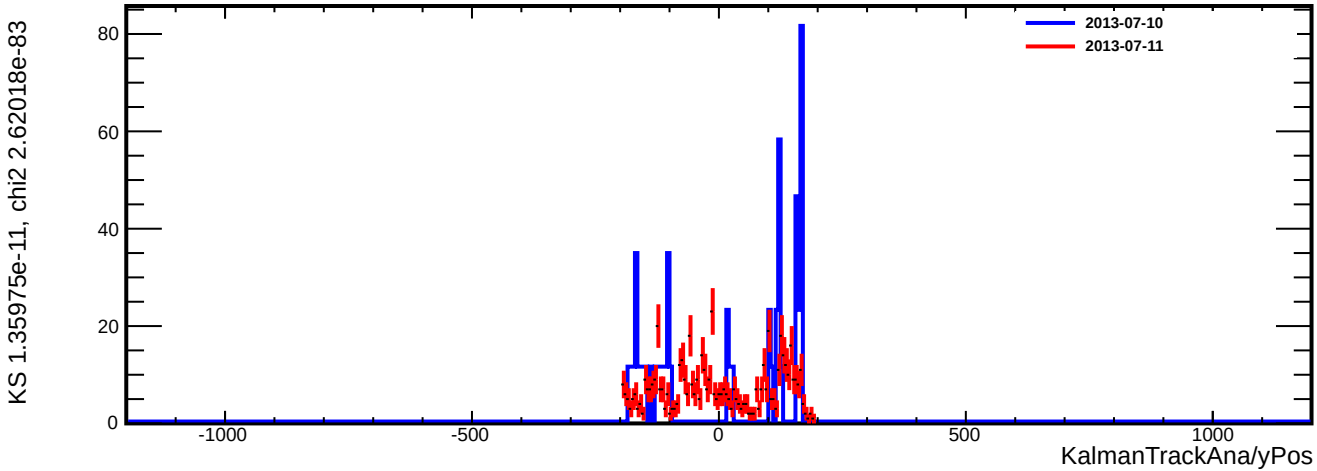
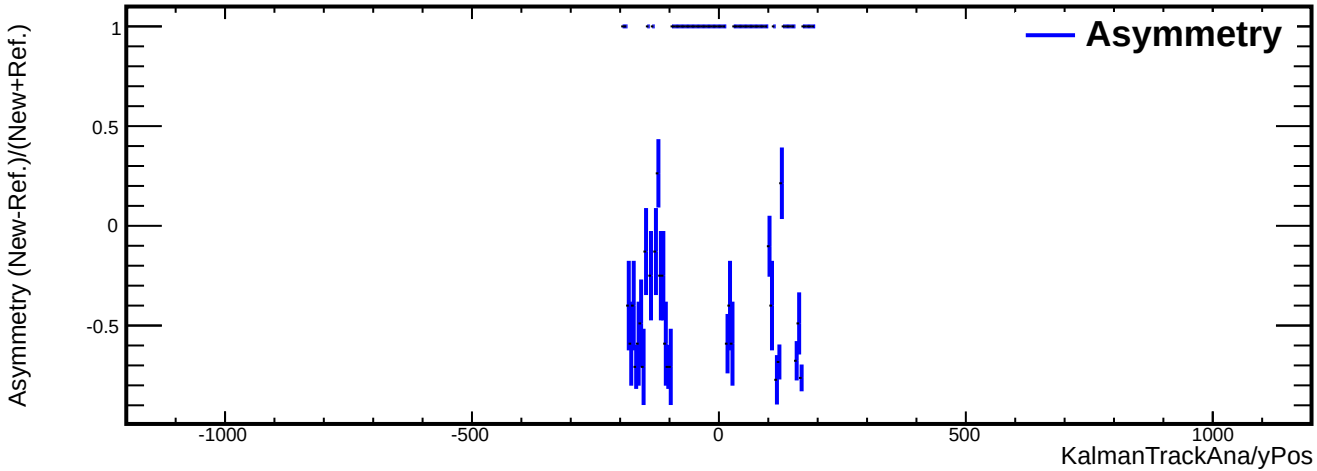
4000
6000
KalmanTrackAna/zPosEnd

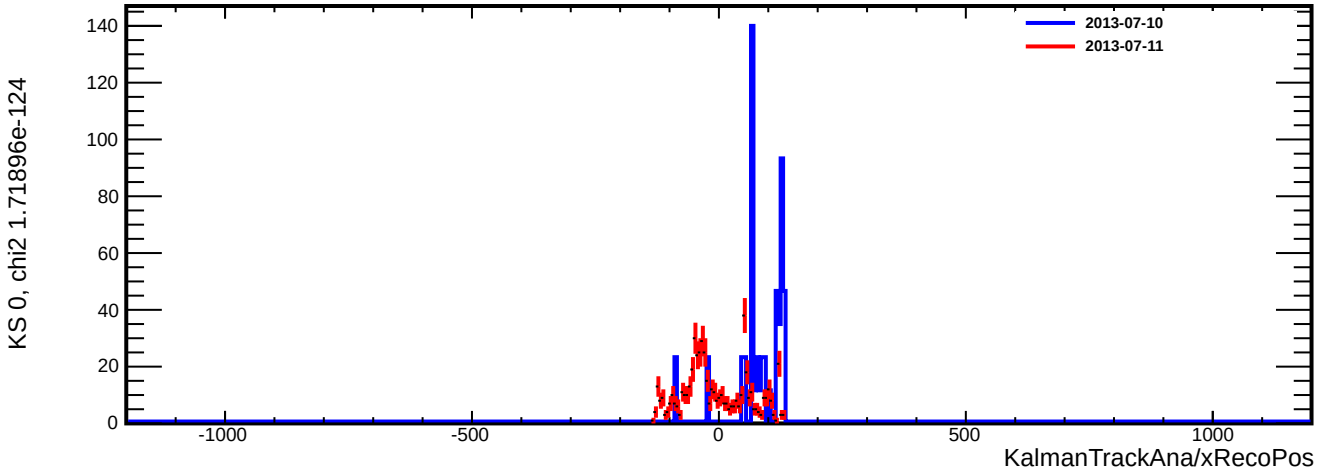

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
0
2000
4000
6000
KalmanTrackAna/zPosEnd

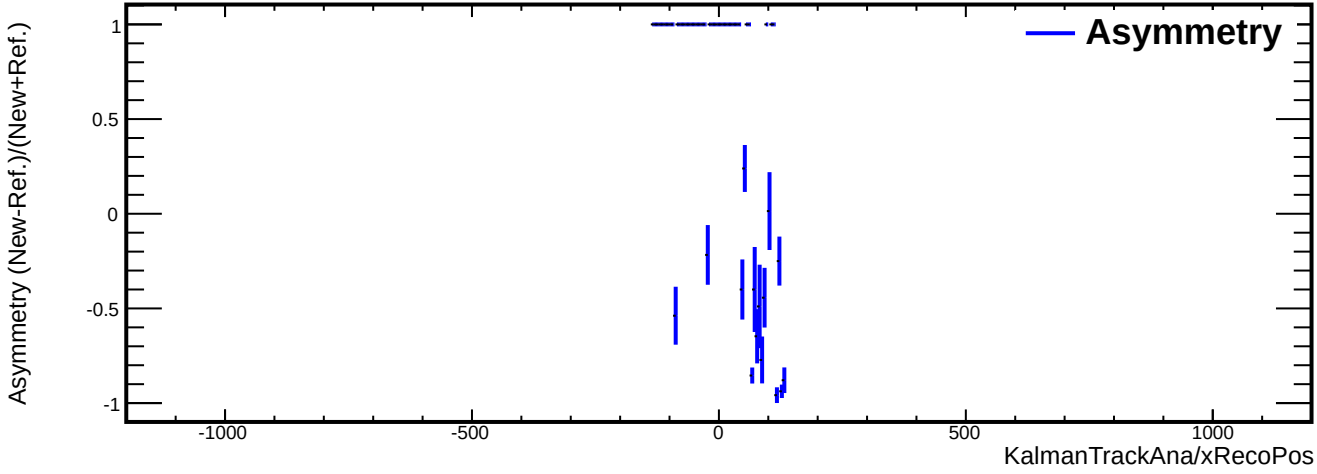

2013-07-10
2013-07-11
KS 0, chi2 6.48071e-87
120
100
80
60
40
20
0
-1000
-500
0
500
1000
KalmanTrackAna/xPos

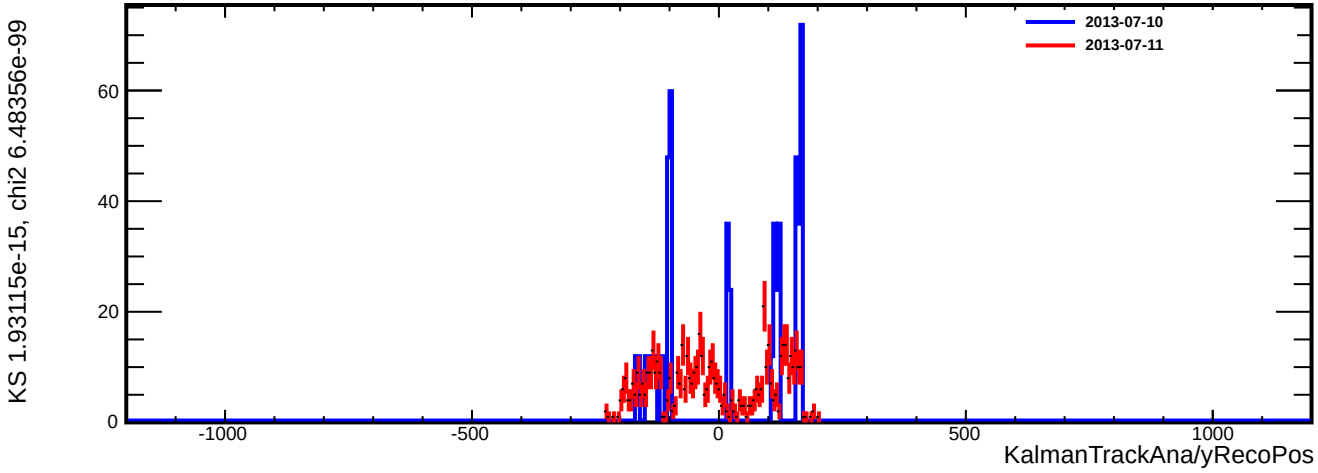

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1000
-500
0
500
1000
KalmanTrackAna/xPos

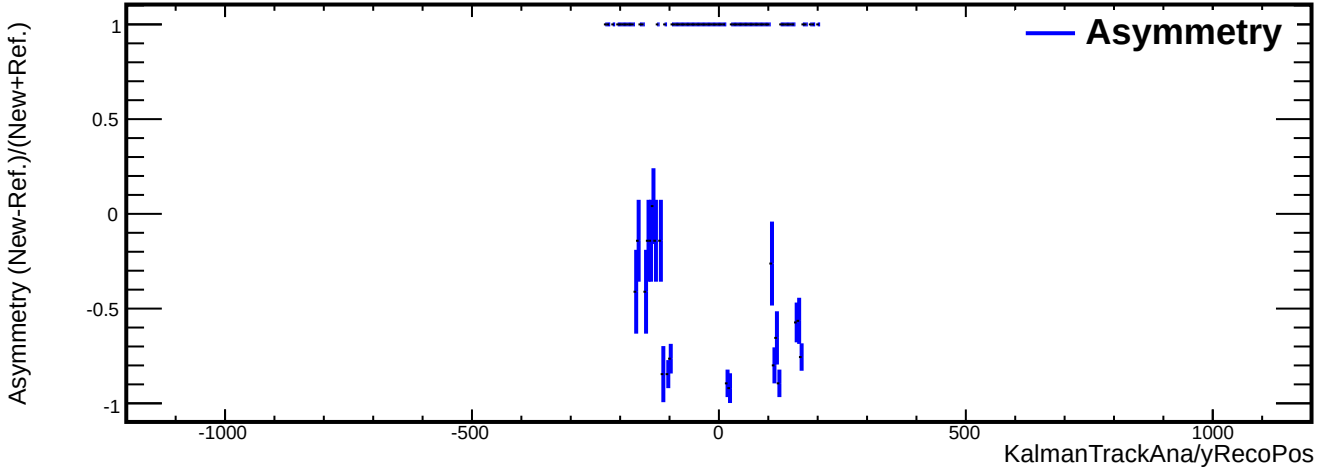

KS 1.35975e-11, chi2 2.62018e-83
2013-07-10
2013-07-11
80
60
40
20
0
-1000
-500
0
500
1000
KalmanTrackAna/yPos

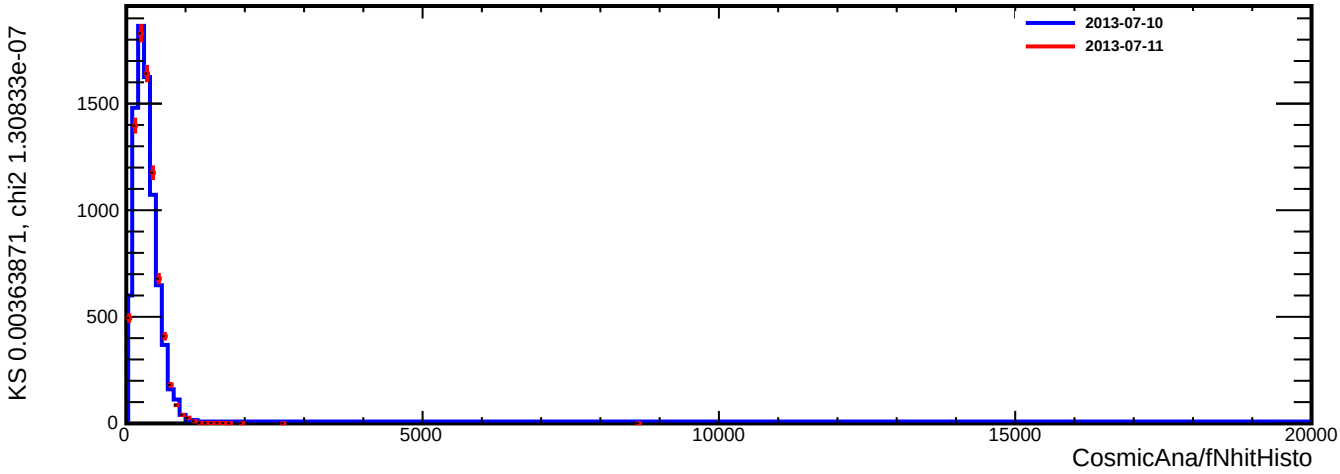

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1000
-500
0
500
1000
KalmanTrackAna/yPos

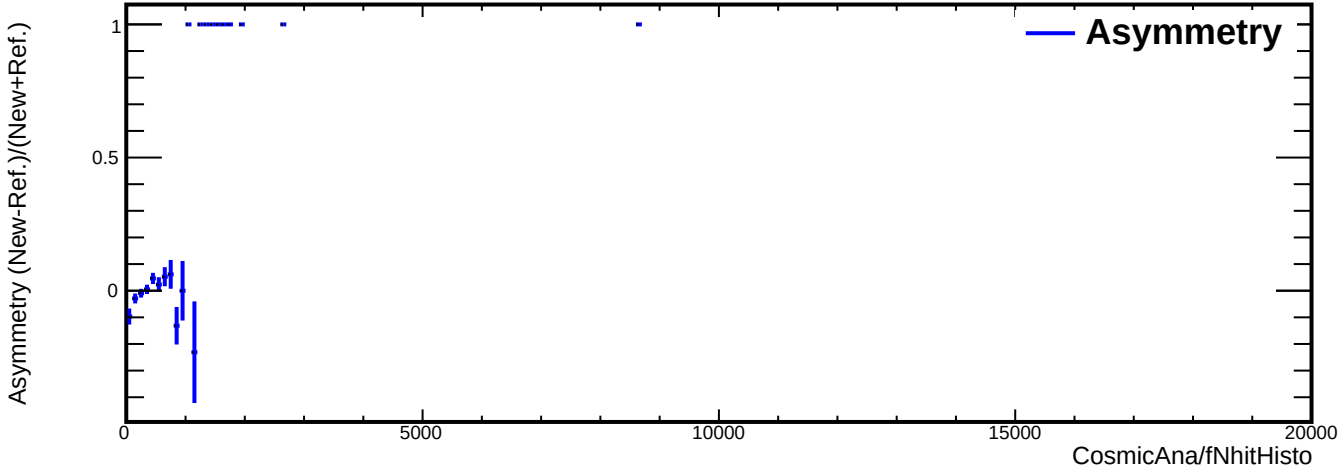

KS 0, chi2 1.71896e-124
140
120
100
80
60
40
20
0
-1000
-500
0
500
1000
KalmanTrackAna/xRecoPos
2013-07-10
2013-07-11

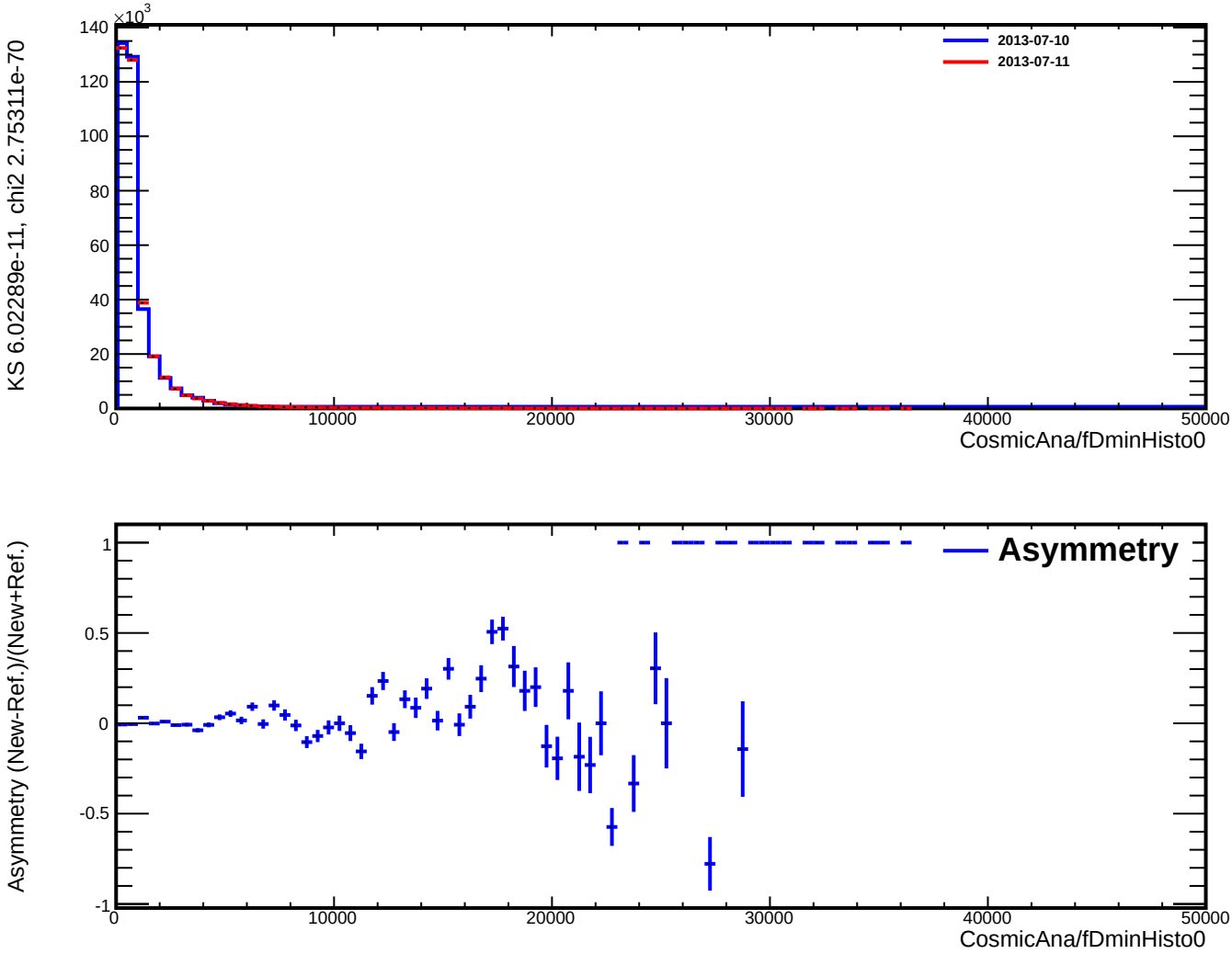

Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1000
-500
0
500
1000
KalmanTrackAna/xRecoPos
Asymmetry

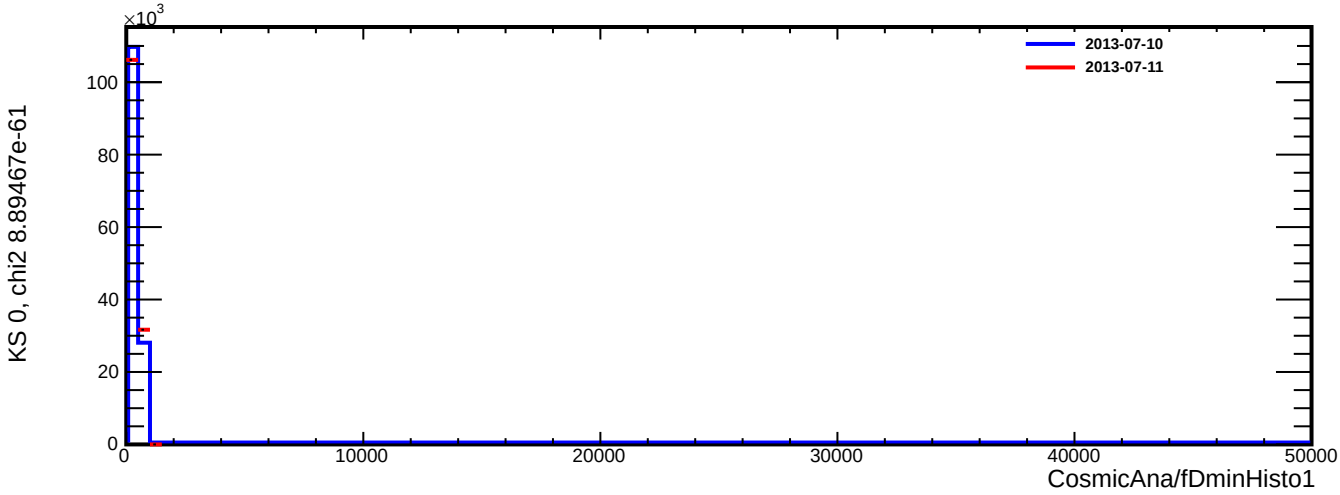

KS 1.93115e-15, chi2 6.48356e-99
2013-07-10
2013-07-11
60
40
20
0
-1000
-500
0
500
1000
KalmanTrackAna/yRecoPos

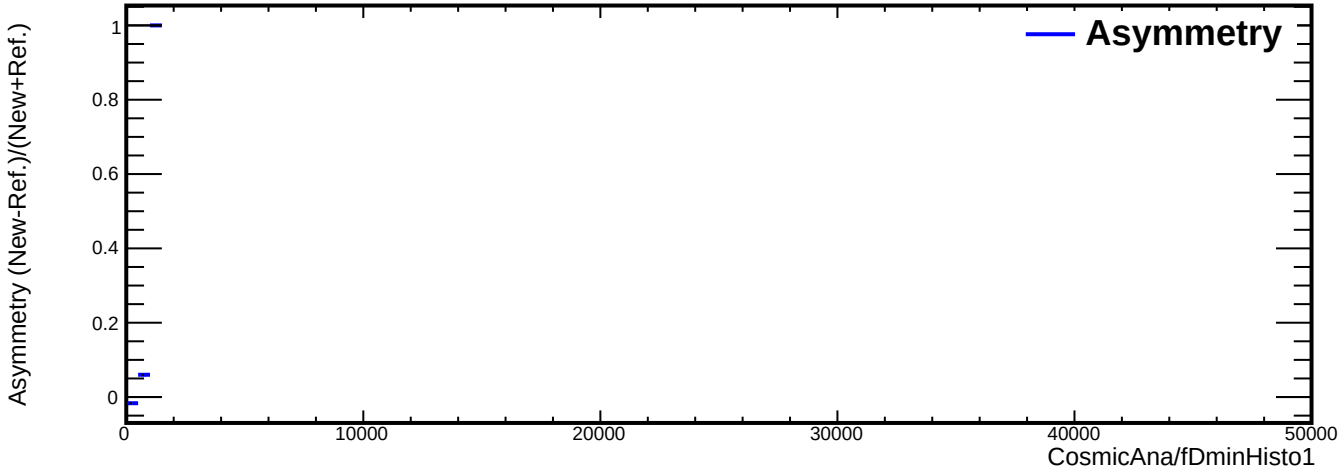

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
-1000
-500
0
500
1000
KalmanTrackAna/yRecoPos

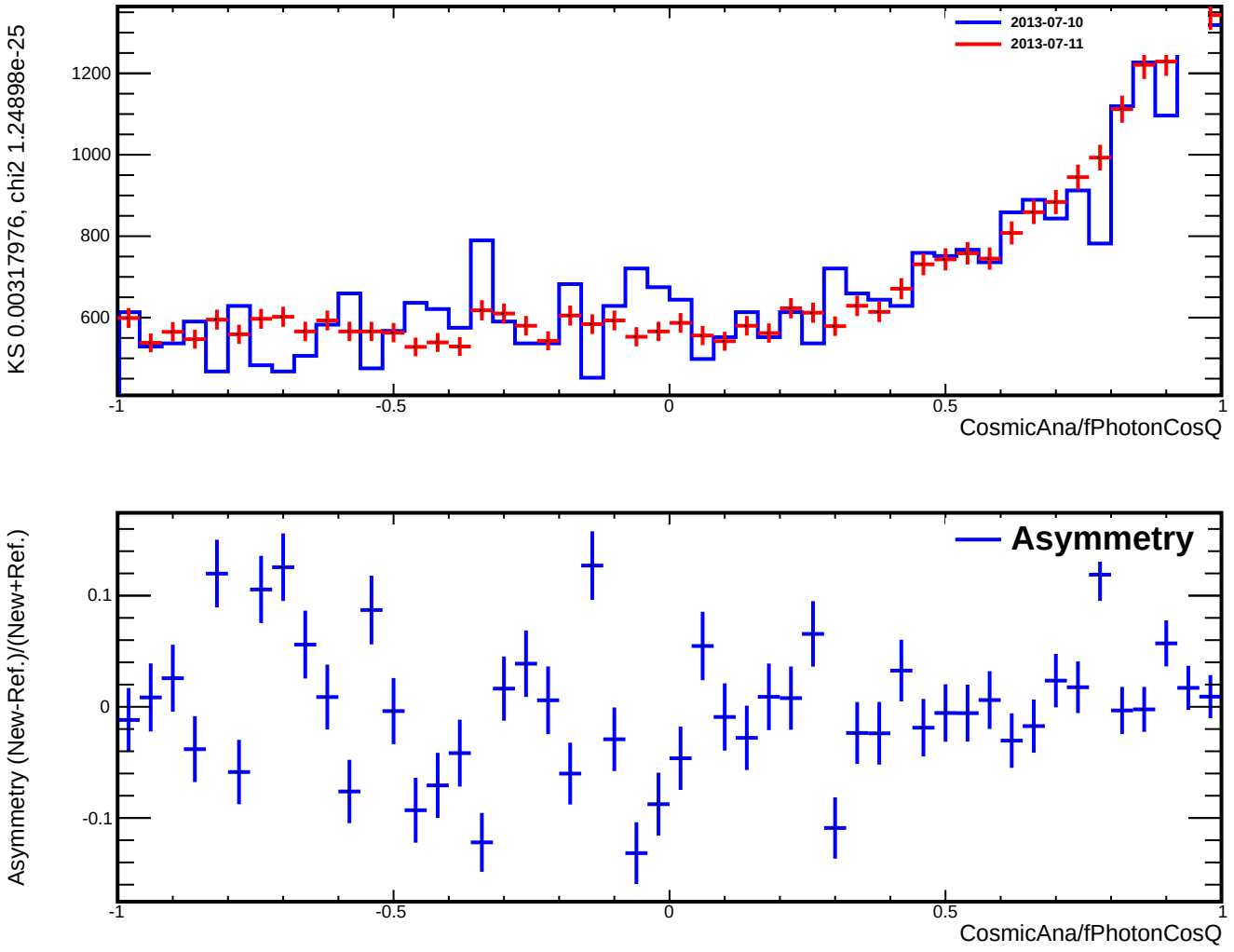

KS 0.00363871, chi2 1.30833e-07
2013-07-10
2013-07-11
1500
1000
500
0
0
5000
10000
15000
20000
CosmicAna/fNhitHisto

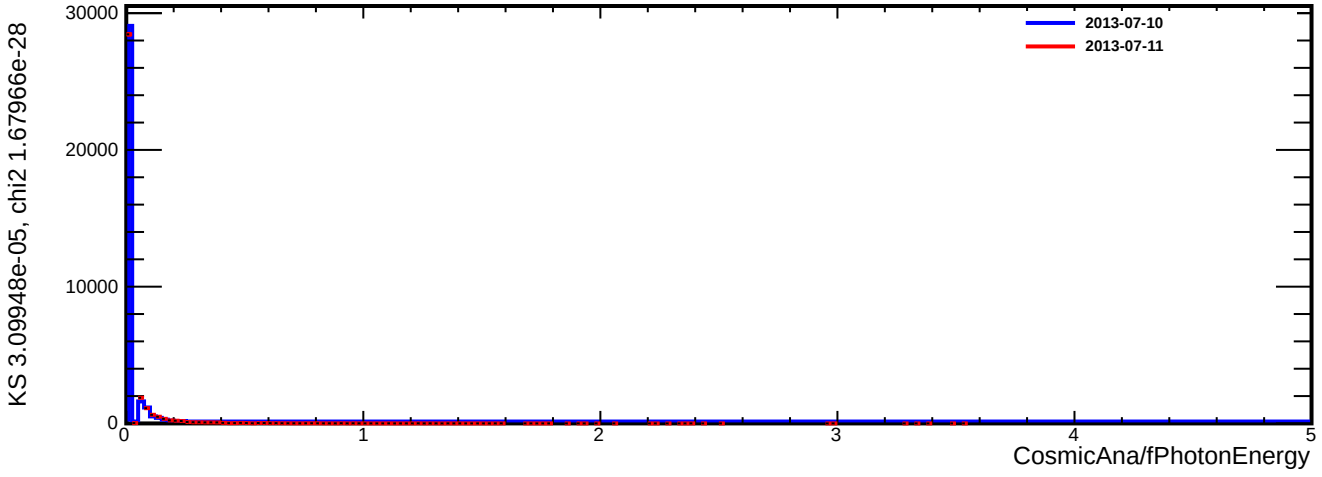

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
0
5000
10000
15000
20000
CosmicAna/fNhitHisto

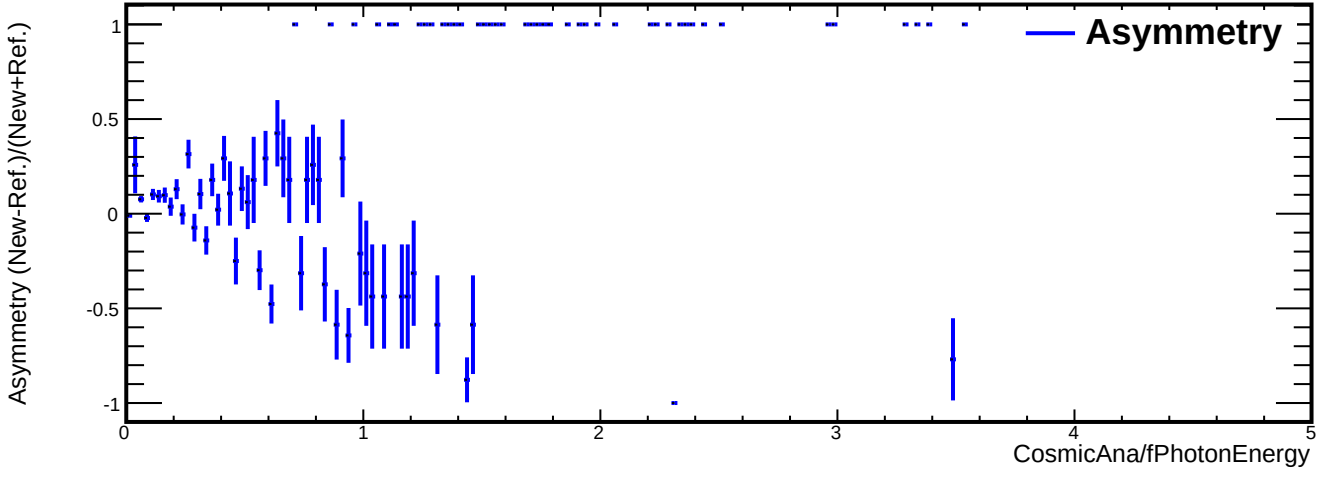

KS 6.02289e-11, chi2 2.75311e-70
×10^3
140
120
100
80
60
40
20
0
0
10000
20000
30000
40000
50000
CosmicAna/fDminHisto0
2013-07-10
2013-07-11
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
Asymmetry
CosmicAna/fDminHisto0

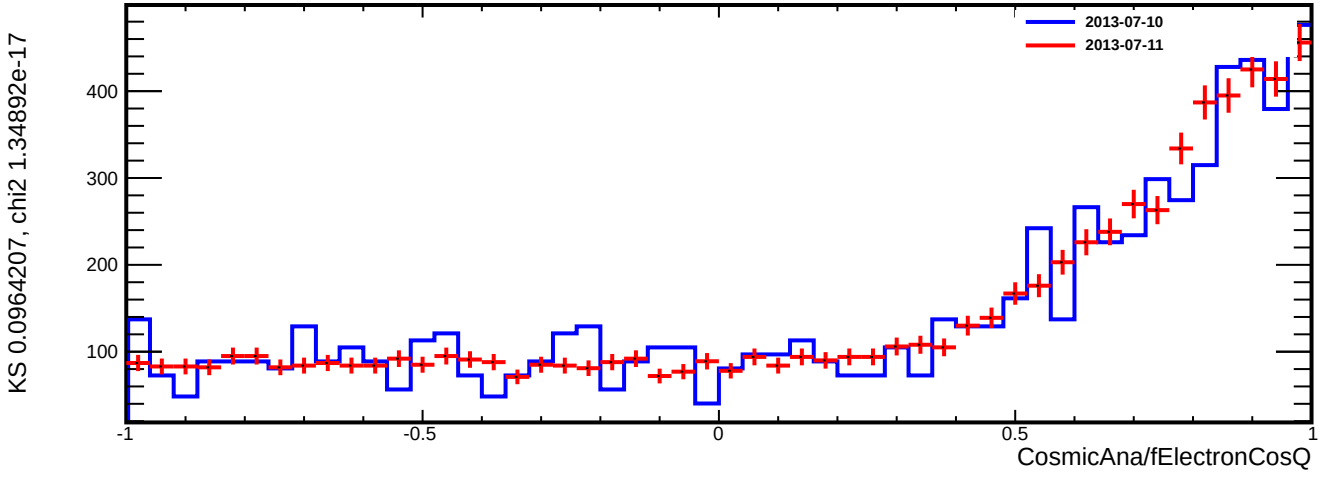

×10^3
100
80
60
40
20
0
0
10000
20000
30000
40000
50000
KS 0, chi2 8.89467e-61
CosmicAna/fDminHisto1
2013-07-10
2013-07-11

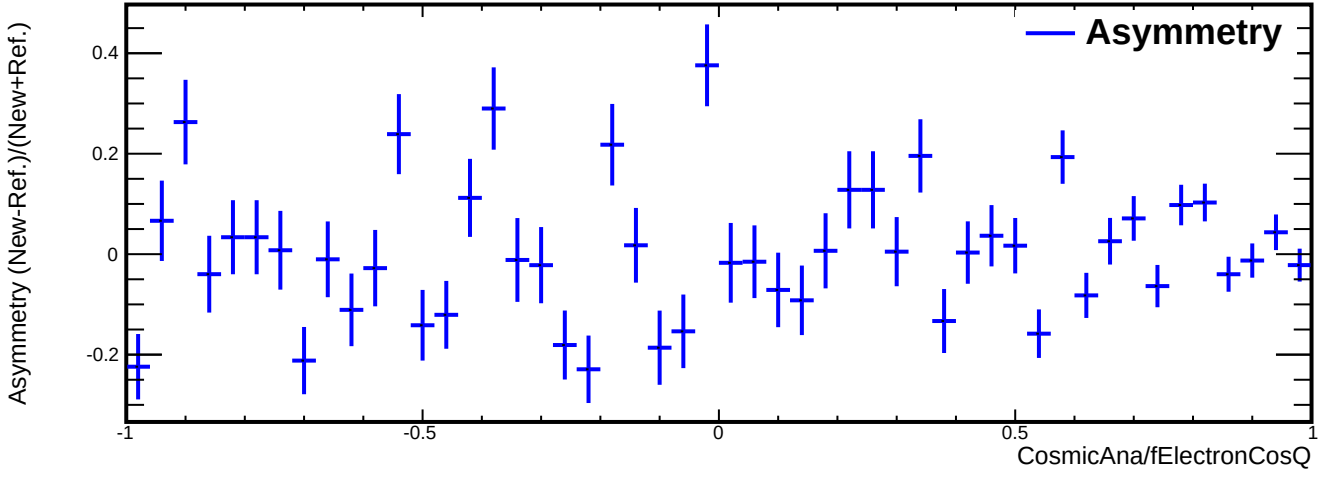

1
0.8
0.6
0.4
0.2
0
0
10000
20000
30000
40000
50000
Asymmetry (New-Ref.)/(New+Ref.)
CosmicAna/fDminHisto1
Asymmetry

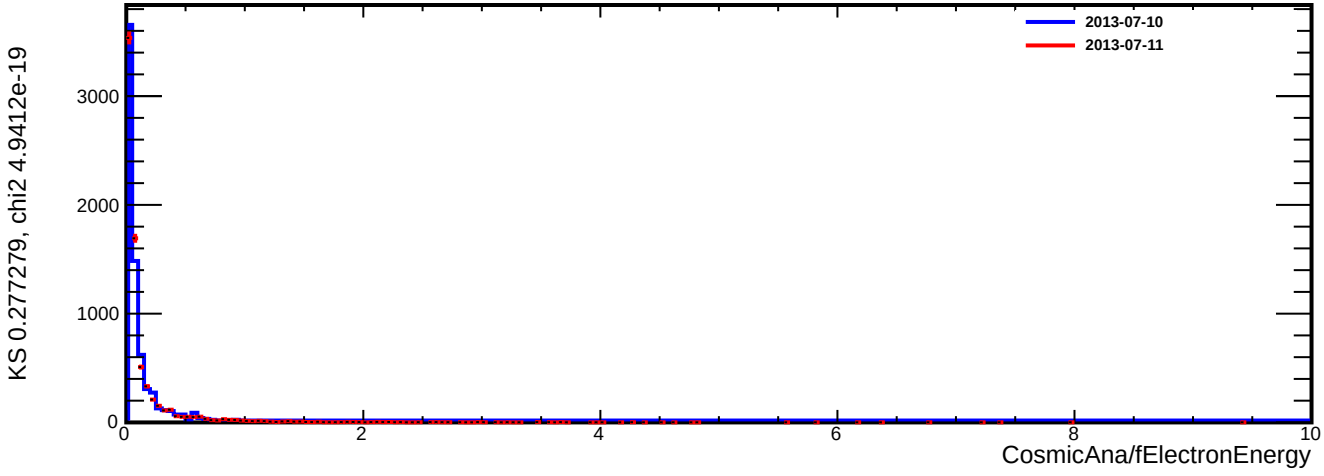

KS 0.00317976, chi2 1.24898e-25
2013-07-10
2013-07-11
1200
1000
800
600
-1
-0.5
0
0.5
1
CosmicAna/fPhotonCosQ
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
0.1
0
-0.1
-1
-0.5
0
0.5
1
CosmicAna/fPhotonCosQ

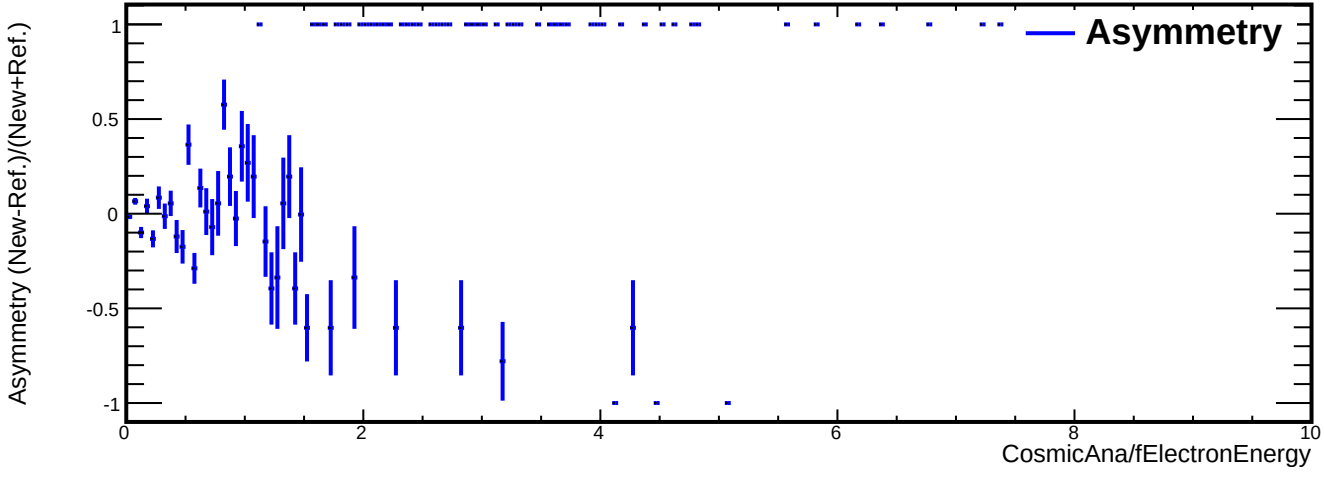

KS 3.09948e-05, chi2 1.67966e-28
30000
20000
10000
0
0
1
2
3
4
5
CosmicAna/fPhotonEnergy
2013-07-10
2013-07-11

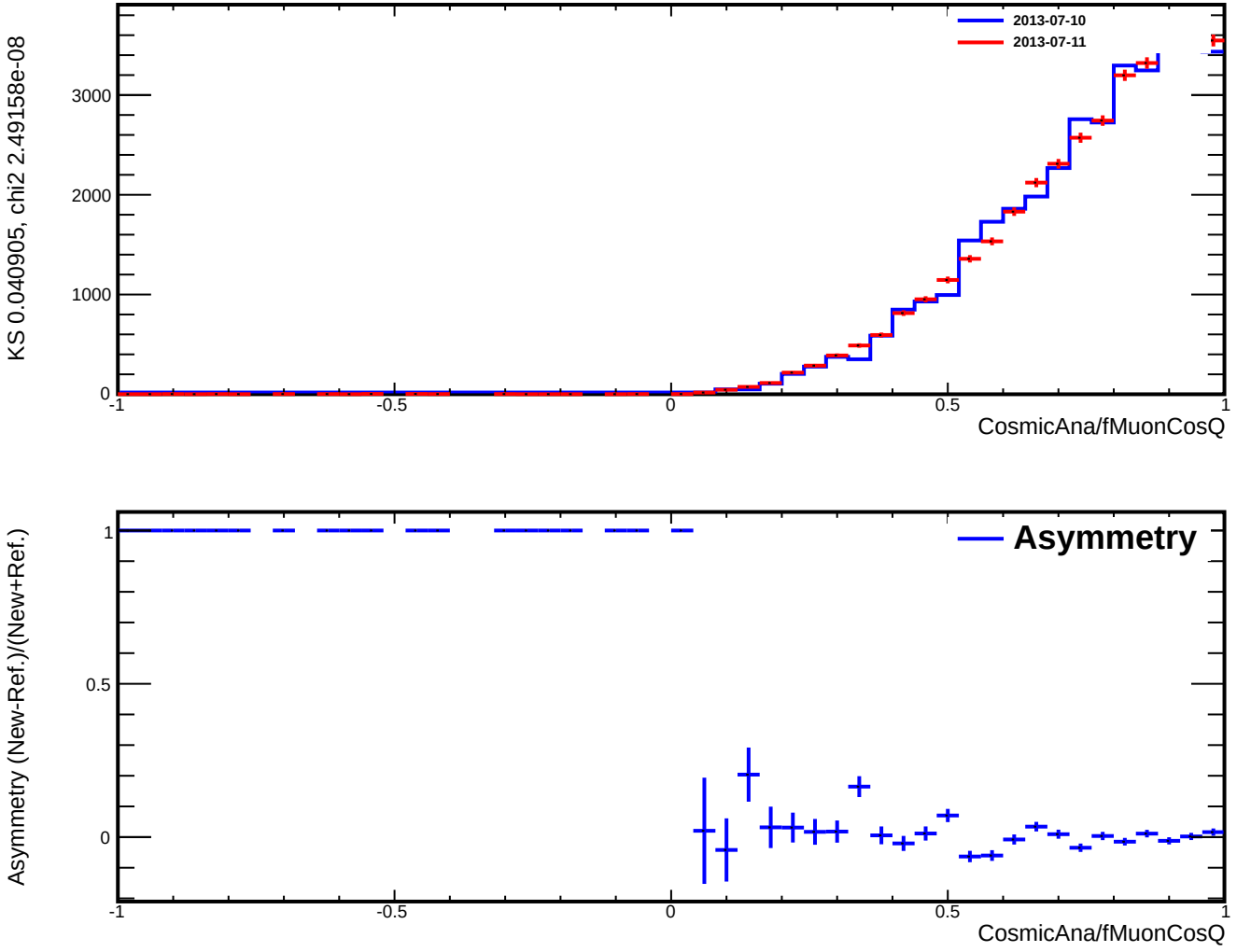

Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
1
2
3
4
5
CosmicAna/fPhotonEnergy
Asymmetry

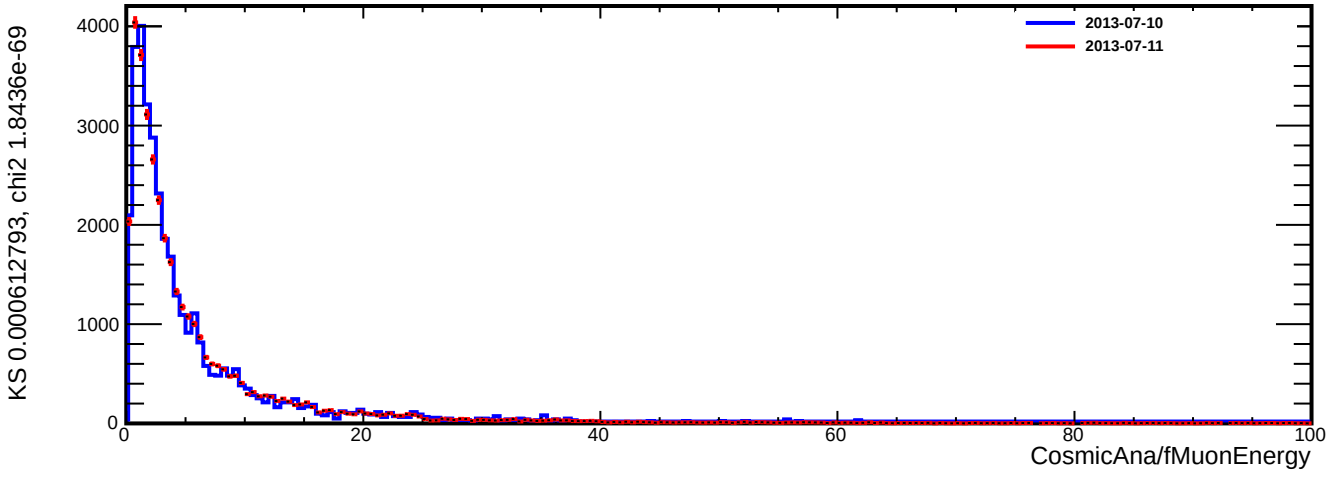

KS 0.0964207, chi2 1.34892e-17
2013-07-10
2013-07-11
400
300
200
100
-1
-0.5
0
0.5
1
CosmicAna/fElectronCosQ

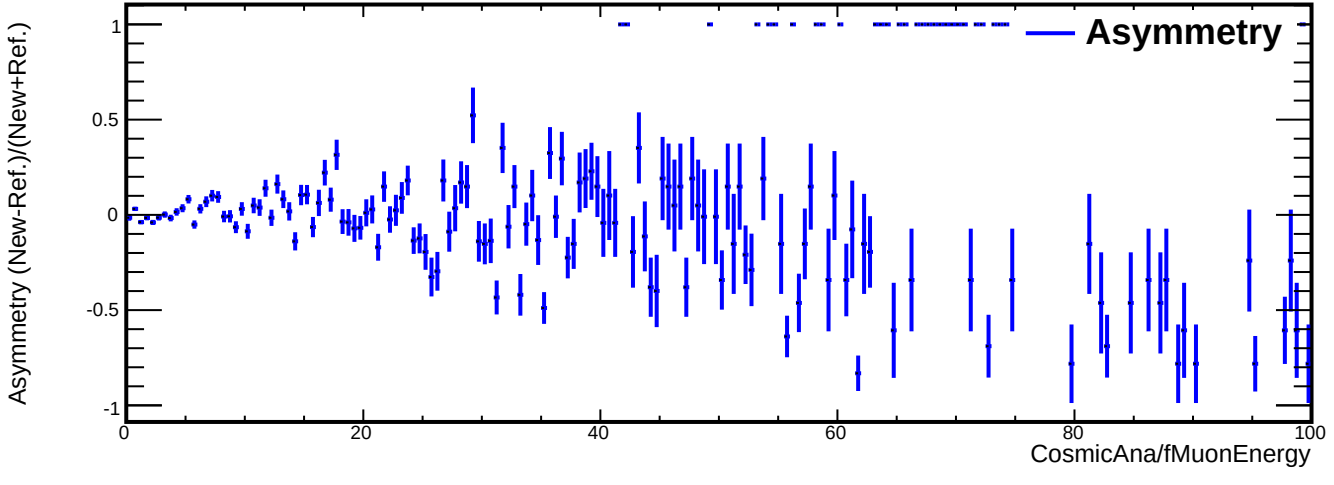

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
0.4
0.2
0
-0.2
-1
-0.5
0
0.5
1
CosmicAna/fElectronCosQ

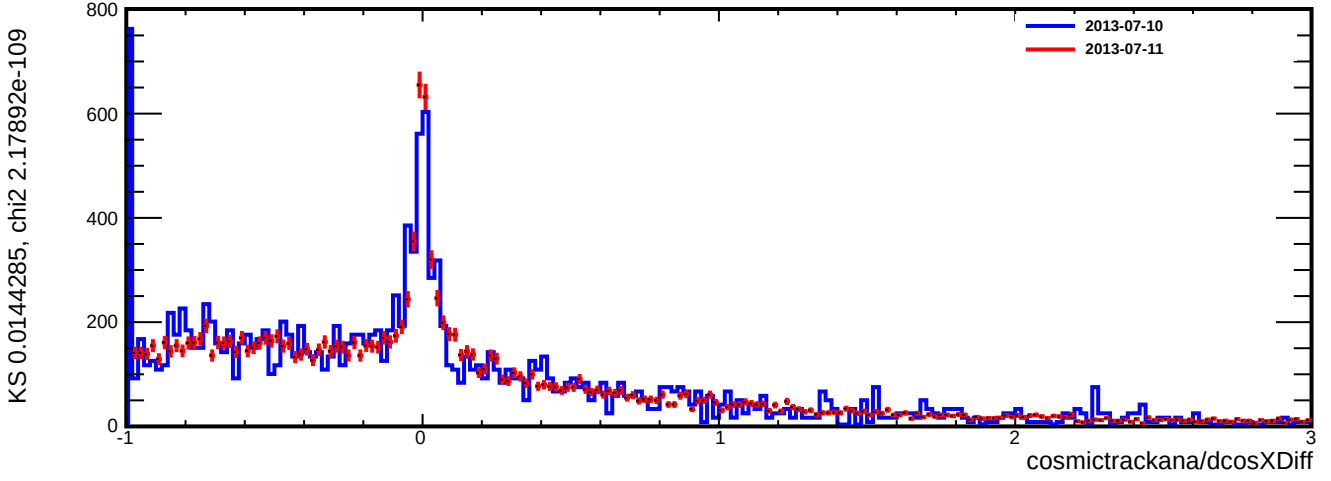

KS 0.277279, chi2 4.9412e-19
2013-07-10
2013-07-11
3000
2000
1000
0
0
2
4
6
8
10
CosmicAna/fElectronEnergy

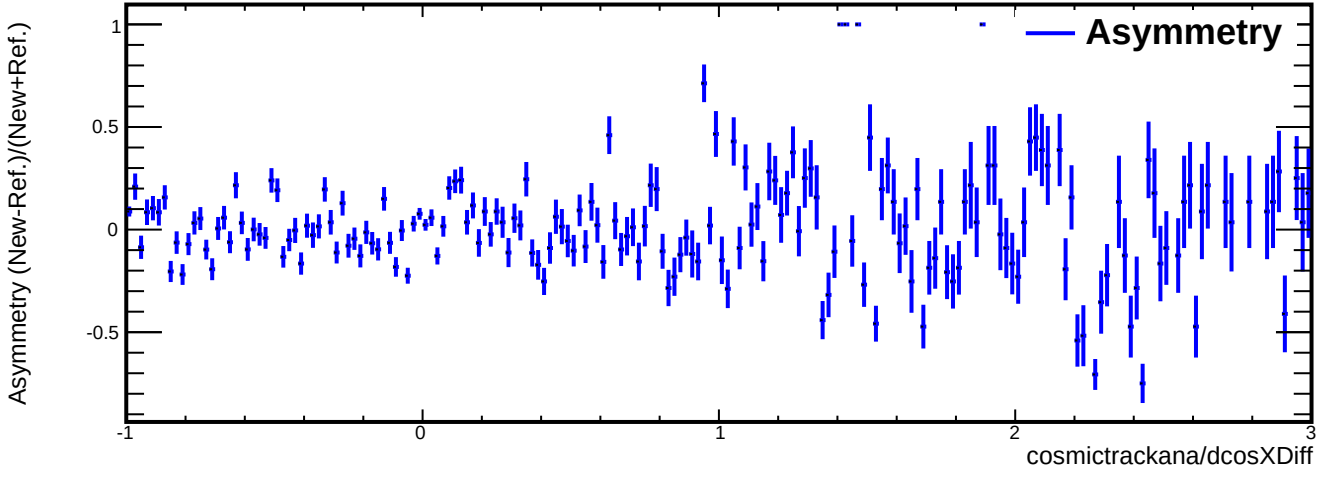

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
0
2
4
6
8
10
CosmicAna/fElectronEnergy

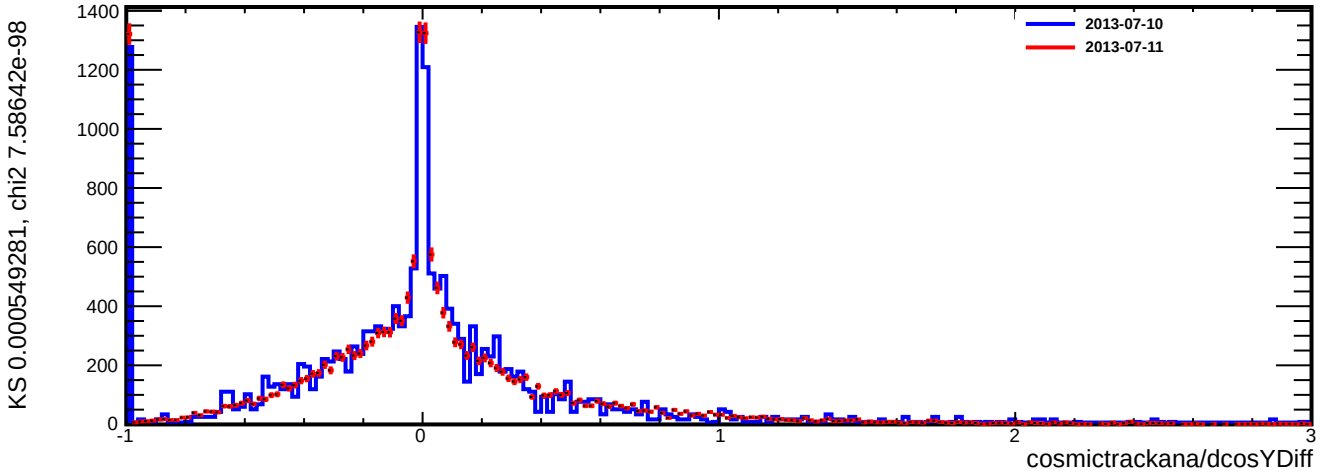

KS 0.040905, chi2 2.49158e-08
2013-07-10
2013-07-11
3000
2000
1000
0
-1
-0.5
0
0.5
1
CosmicAna/fMuonCosQ
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-1
-0.5
0
0.5
1
CosmicAna/fMuonCosQ

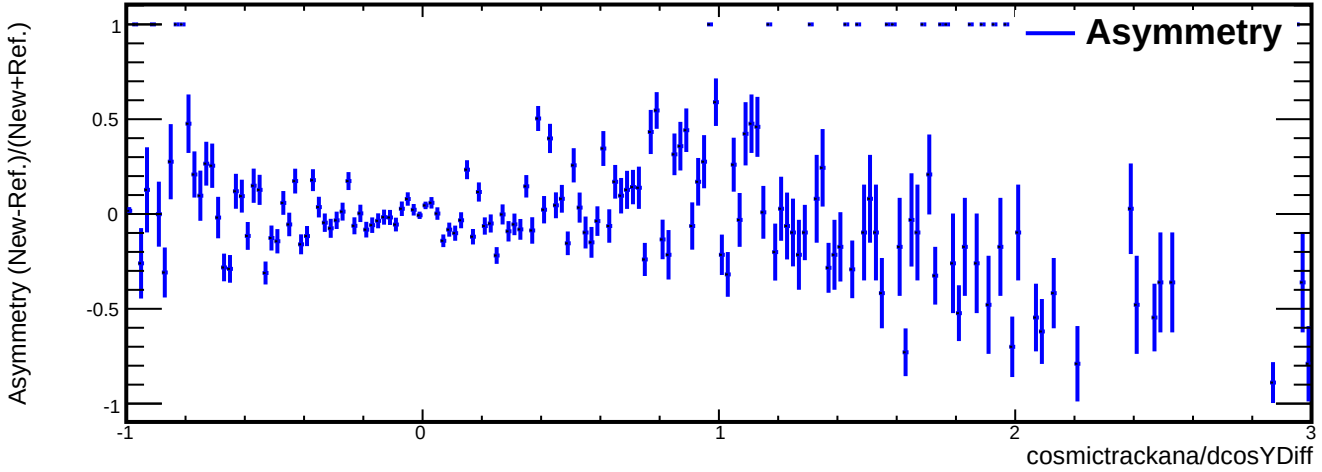

KS 0.000612793, chi2 1.8436e-69
2013-07-10
2013-07-11
CosmicAna/fMuonEnergy

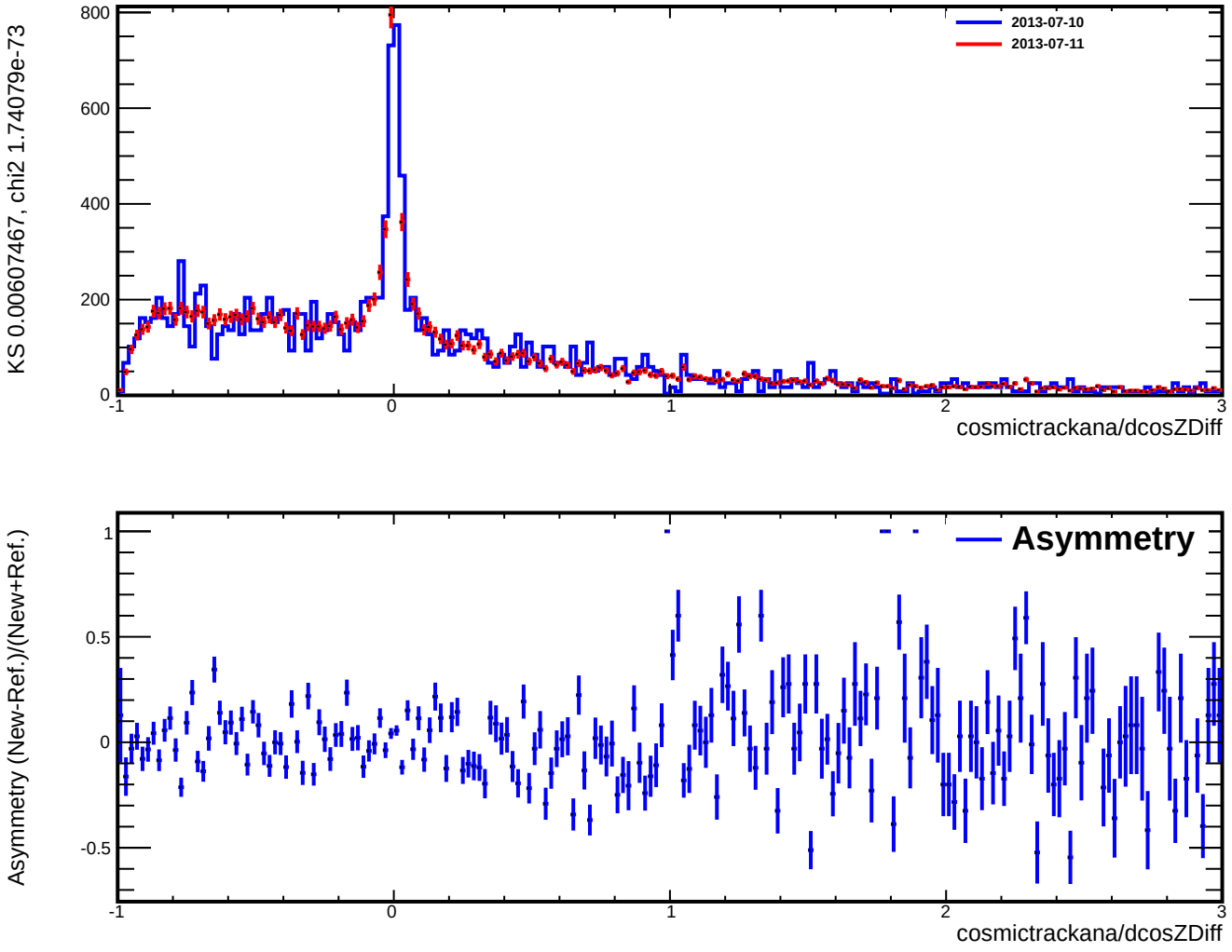

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
CosmicAna/fMuonEnergy

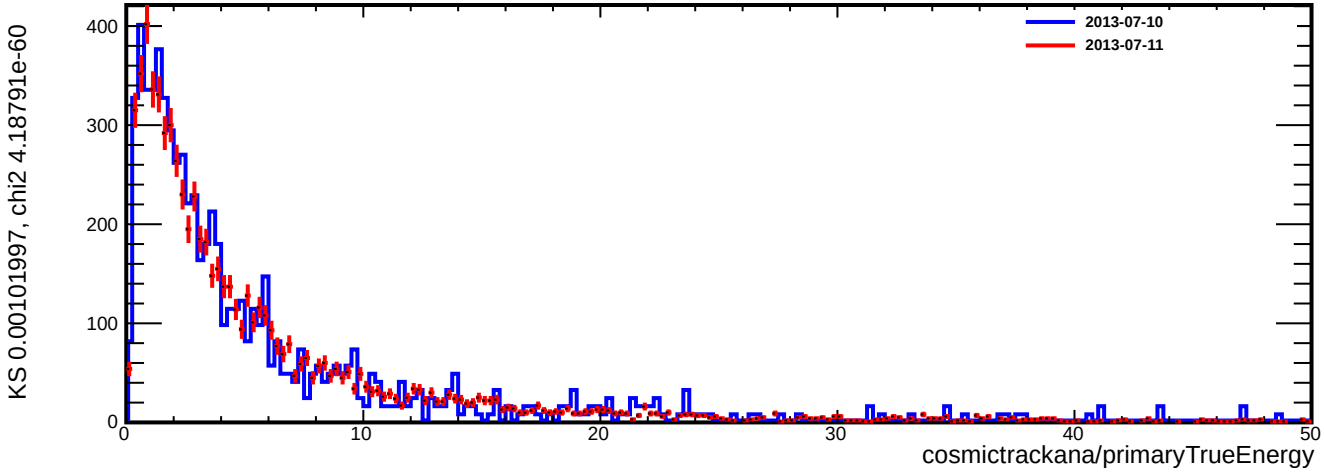

KS 0.0144285, chi2 2.17892e-109
2013-07-10
2013-07-11
cosmictrackana/dcosXDiff

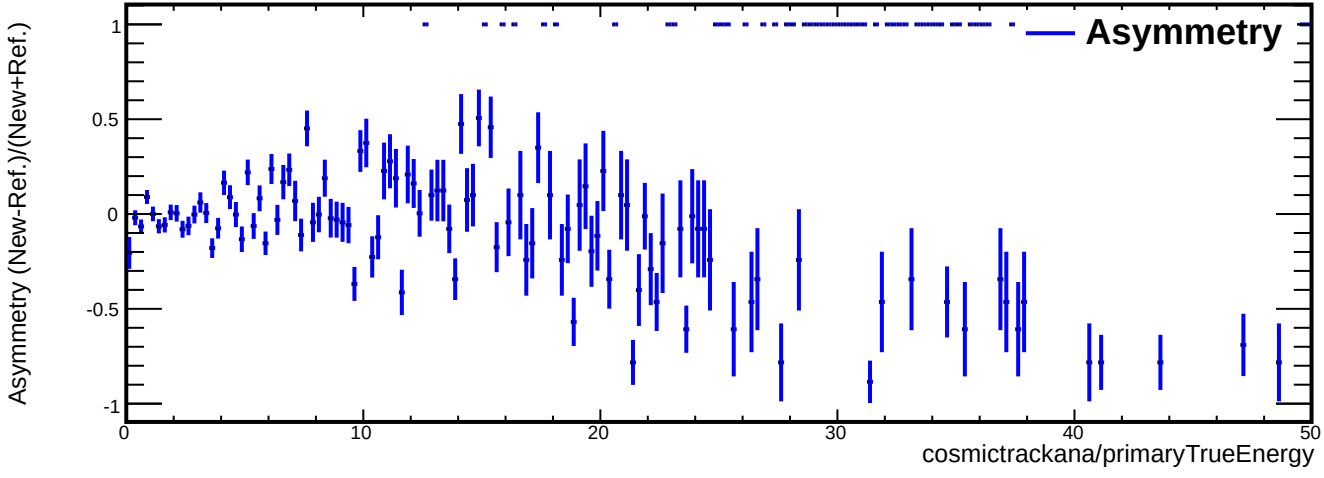

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
cosmictrackana/dcosXDiff

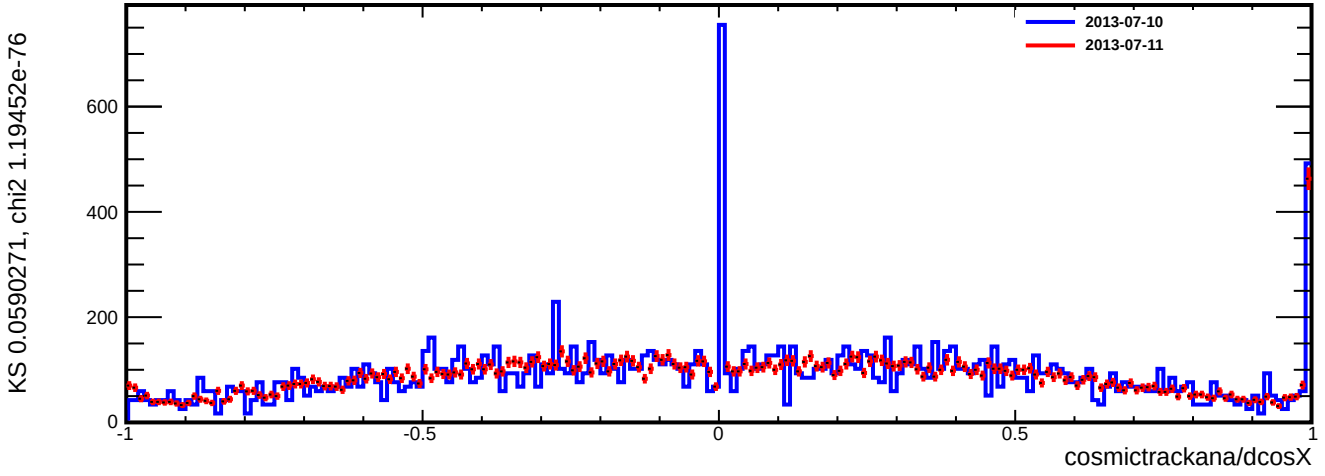

KS 0.000549281, chi2 7.58642e-98
2013-07-10
2013-07-11
cosmictrackana/dcosYDiff

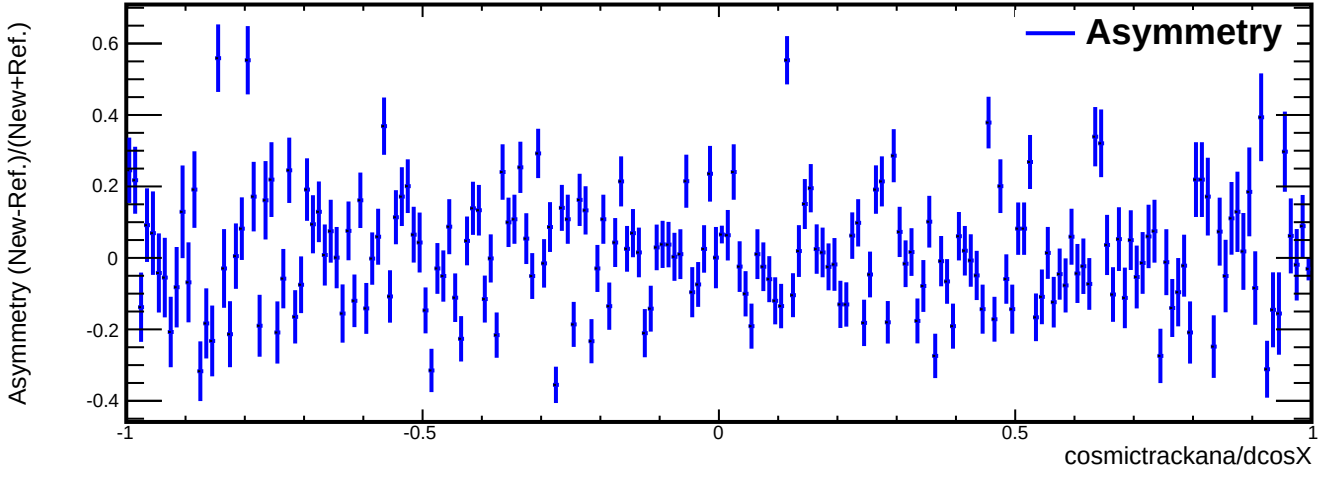

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
cosmictrackana/dcosYDiff

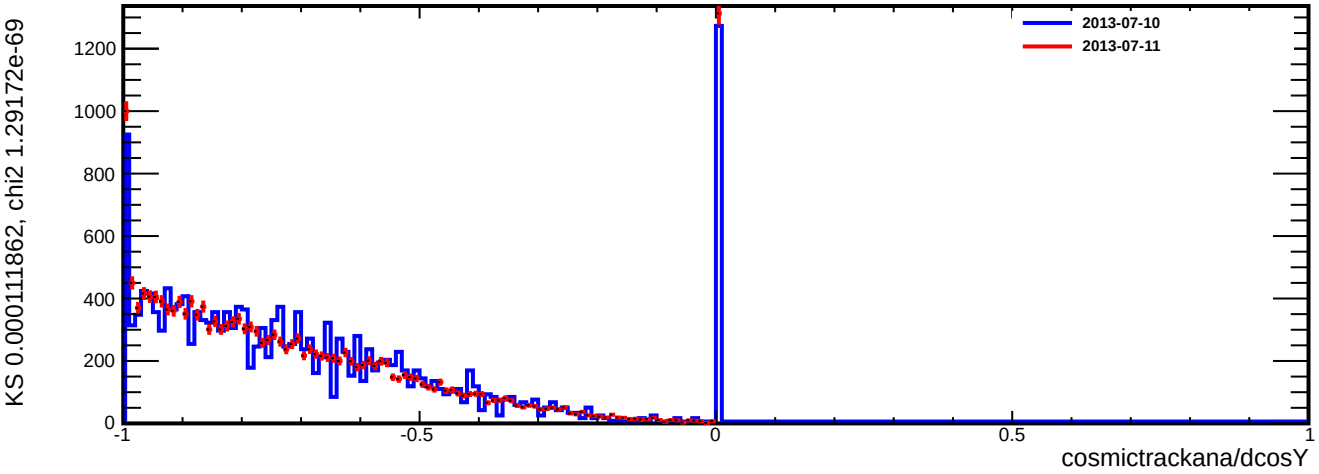

KS 0.00607467, chi2 1.74079e-73
2013-07-10
2013-07-11
cosmictrackana/dcosZDiff
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
cosmictrackana/dcosZDiff

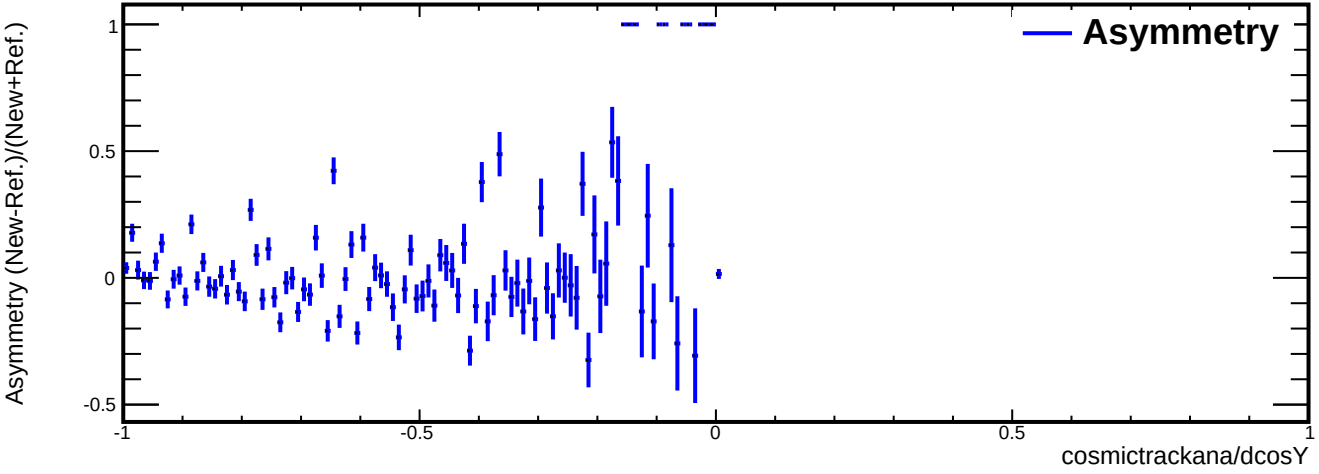

KS 0.00101997, chi2 4.18791e-60
2013-07-10
2013-07-11
cosmictrackana/primaryTrueEnergy

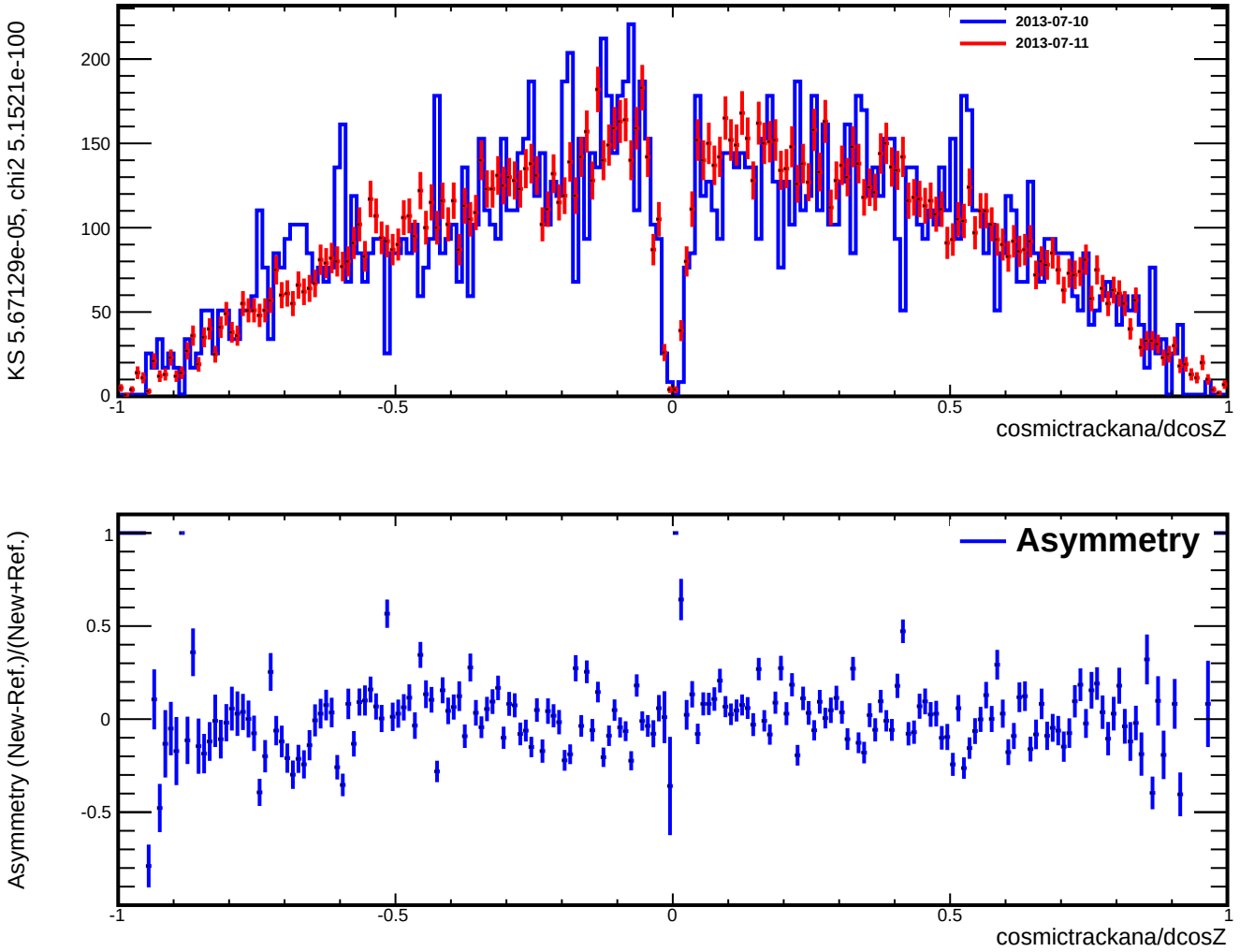

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
cosmictrackana/primaryTrueEnergy

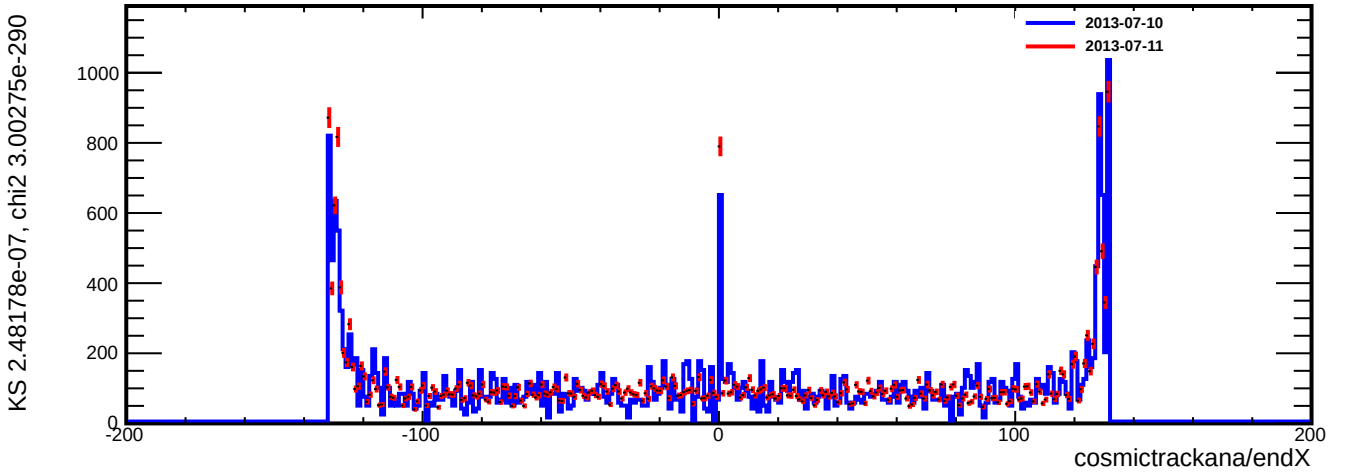

KS 0.0590271, chi2 1.19452e-76
2013-07-10
2013-07-11
600
400
200
0
-1
-0.5
0
0.5
1
cosmictrackana/dcosX

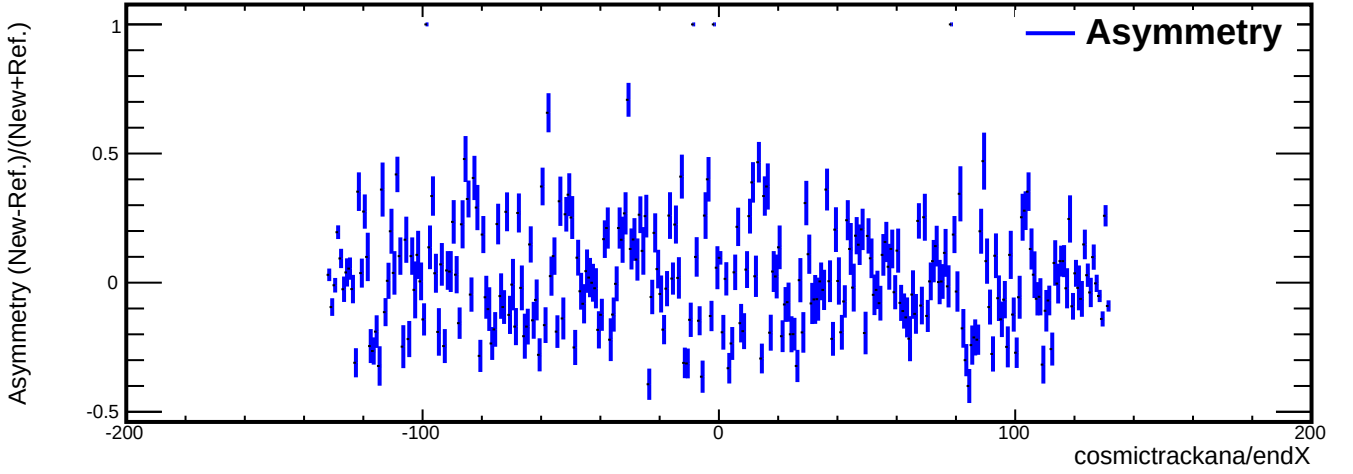

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
0.6
0.4
0.2
0
-0.2
-0.4
-1
-0.5
0
0.5
1
cosmictrackana/dcosX

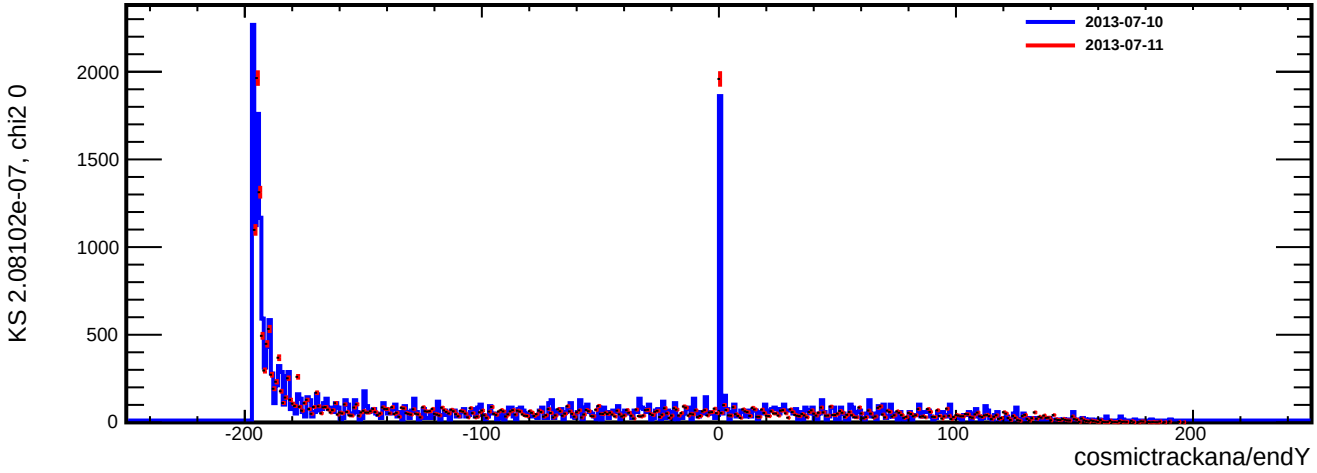

KS 0.000111862, chi2 1.29172e-69
2013-07-10
2013-07-11
1200
1000
800
600
400
200
0
-1
-0.5
0
0.5
1
cosmictrackana/dcosY

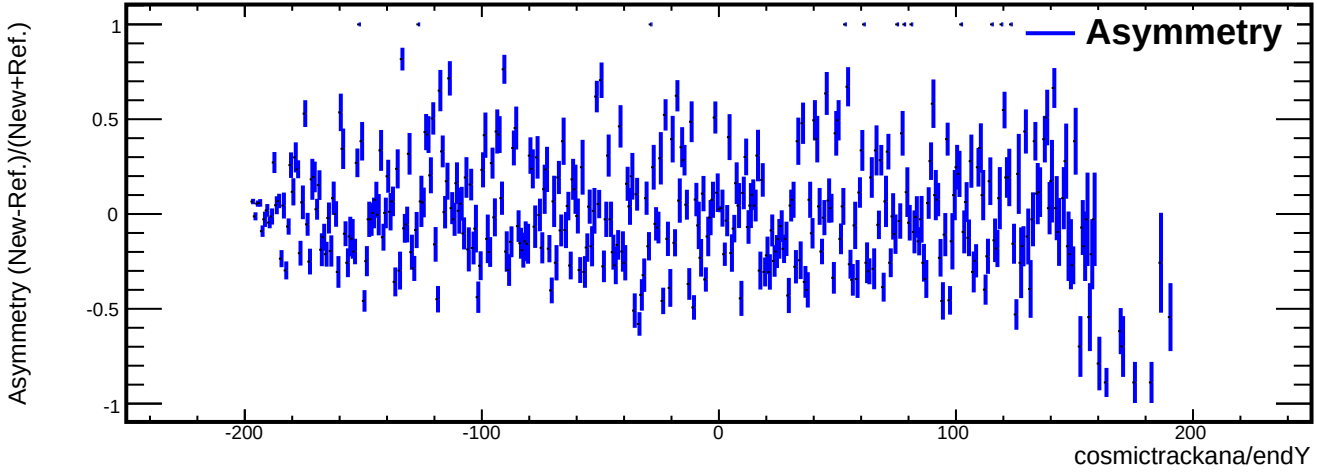

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
-0.5
0
0.5
1
cosmictrackana/dcosY

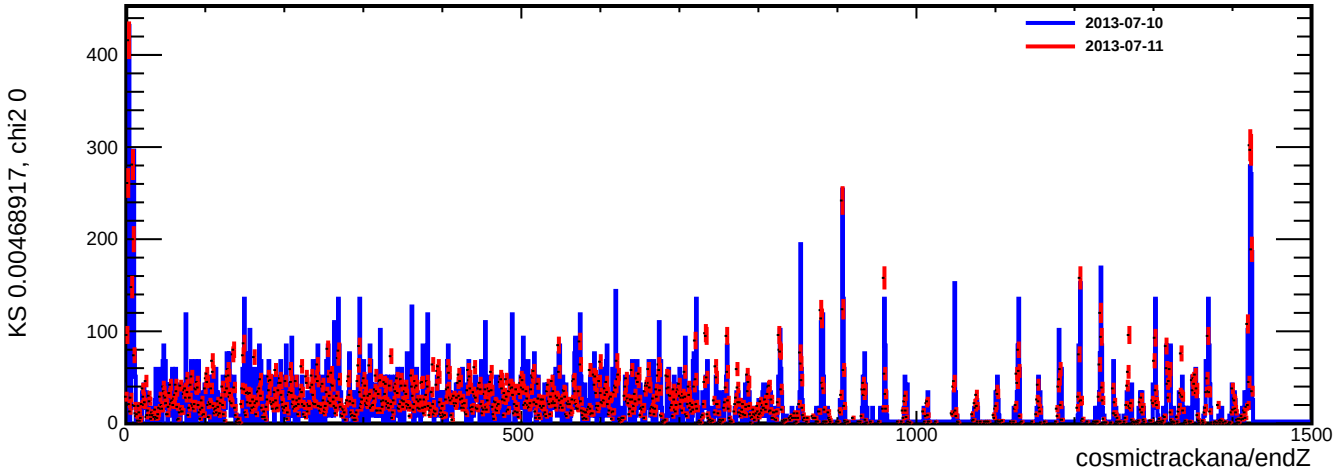

KS 5.67129e-05, chi2 5.1521e-100
2013-07-10
2013-07-11
cosmictrackana/dcosZ
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
cosmictrackana/dcosZ

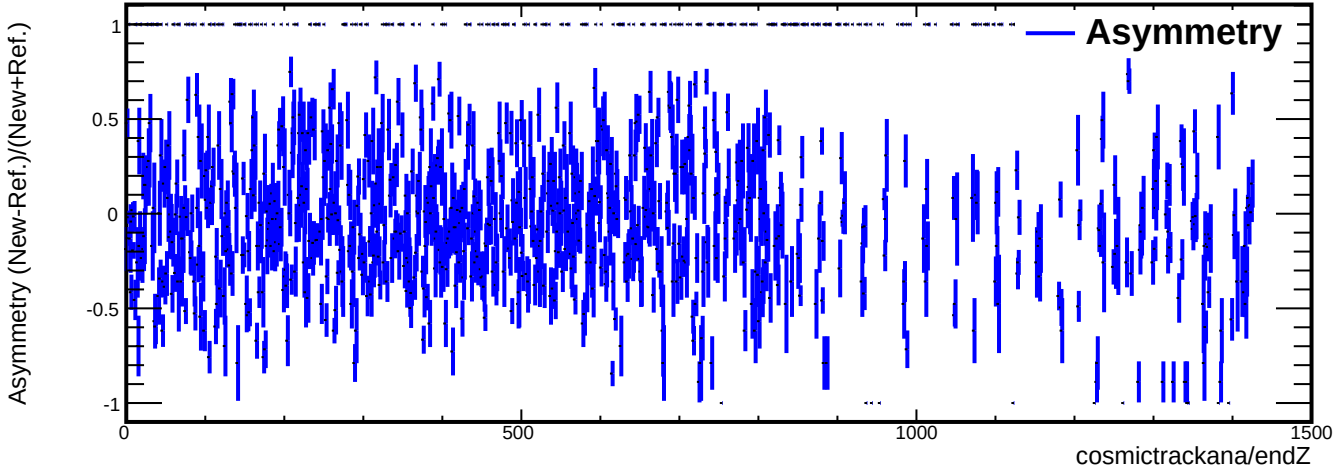

KS 2.48178e-07, chi2 3.00275e-290
2013-07-10
2013-07-11
1000
800
600
400
200
0
-200
-100
0
100
200
cosmictrackana/endX

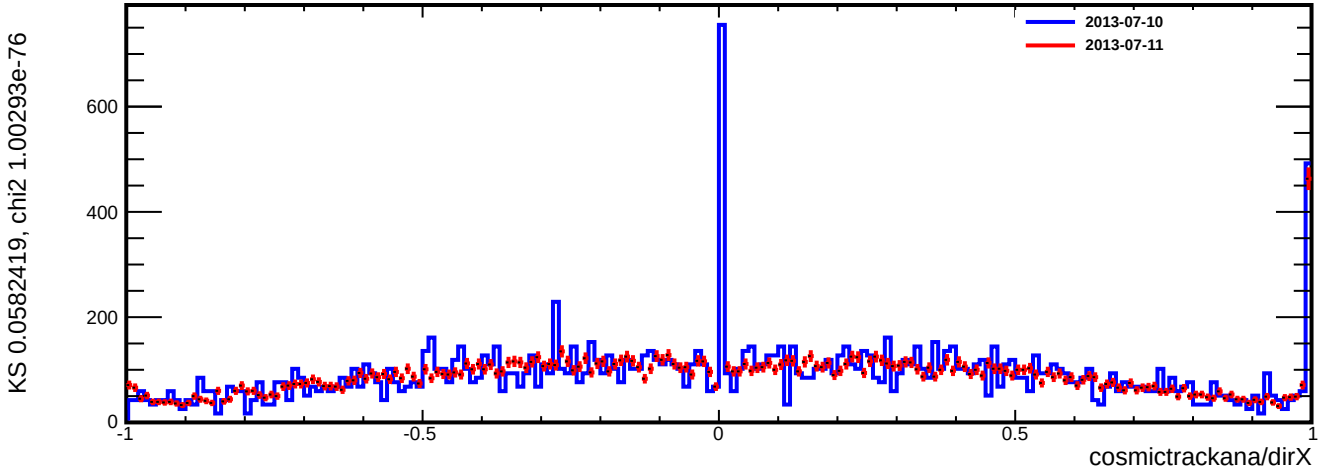

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-200
-100
0
100
200
cosmictrackana/endX

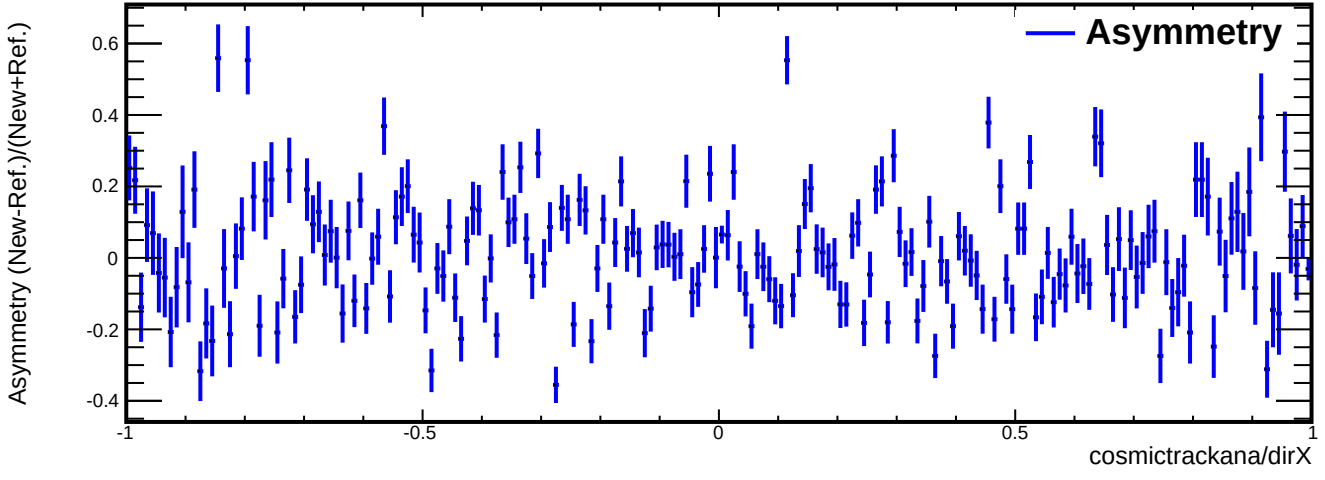

2013-07-10
2013-07-11
KS 2.08102e-07, chi2 0
2000
1500
1000
500
0
-200
-100
0
100
200
cosmictrackana/endY

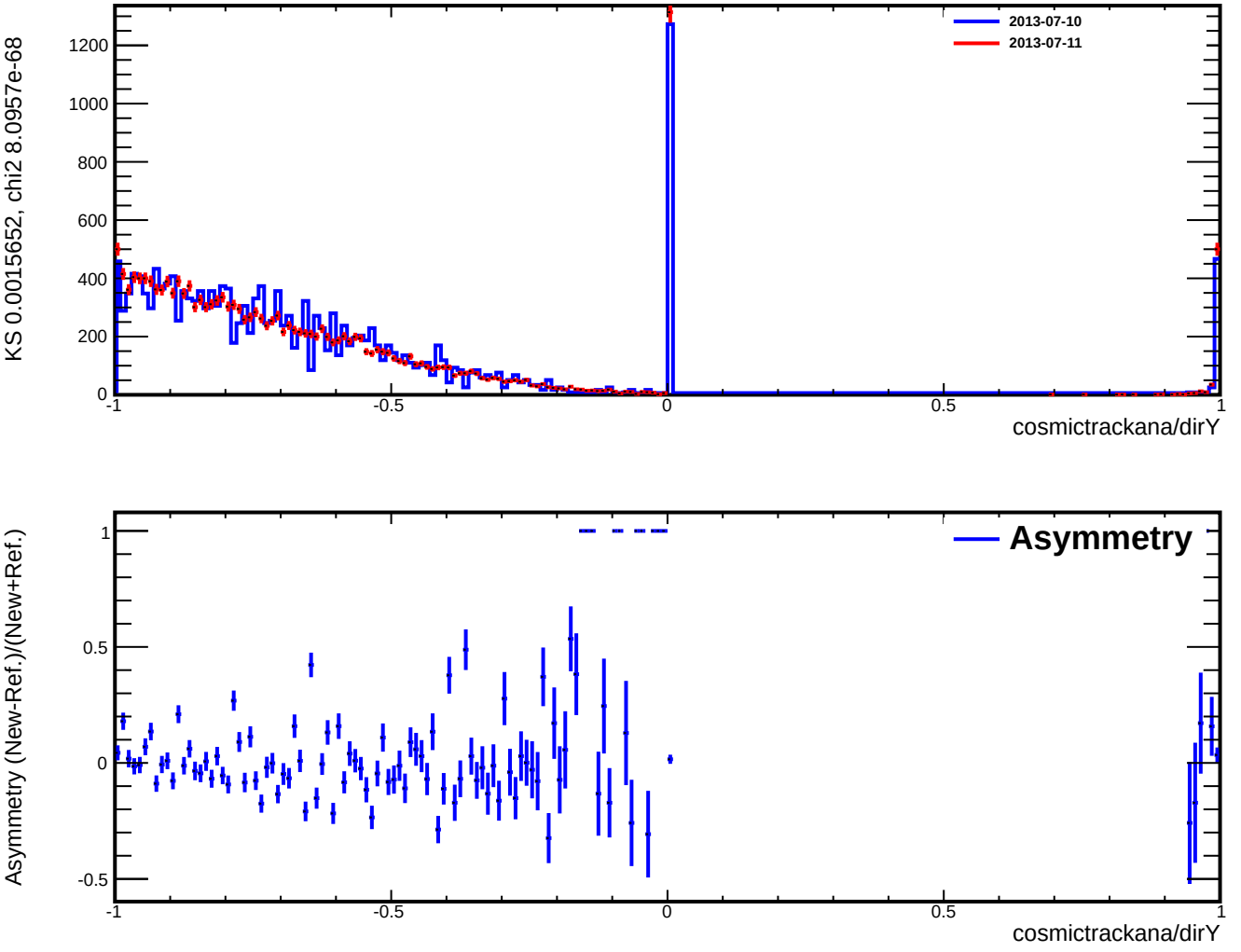

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-200
-100
0
100
200
cosmictrackana/endY

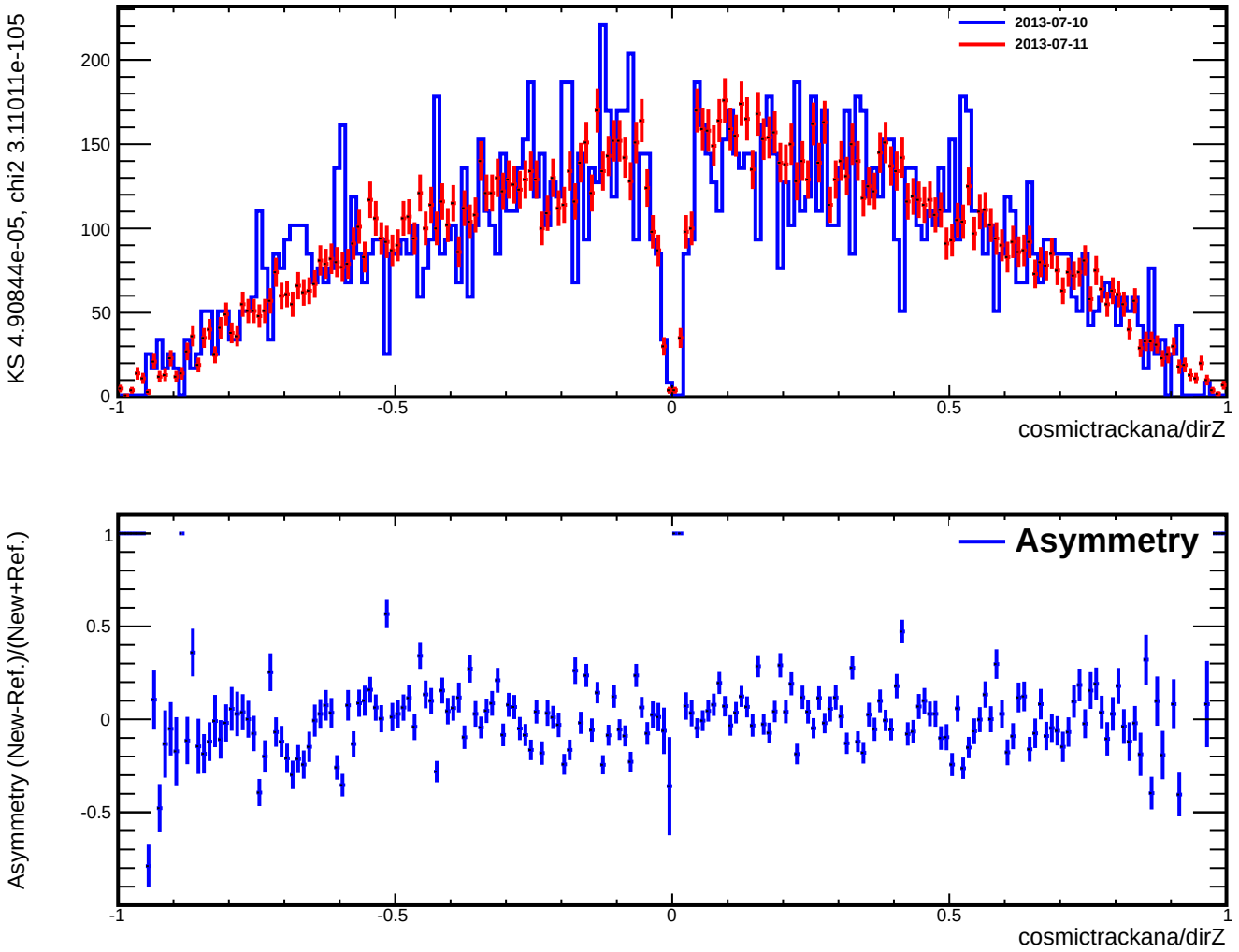

2013-07-10
2013-07-11
KS 0.00468917, chi2 0
400
300
200
100
0
0
500
1000
1500
cosmictrackana/endZ

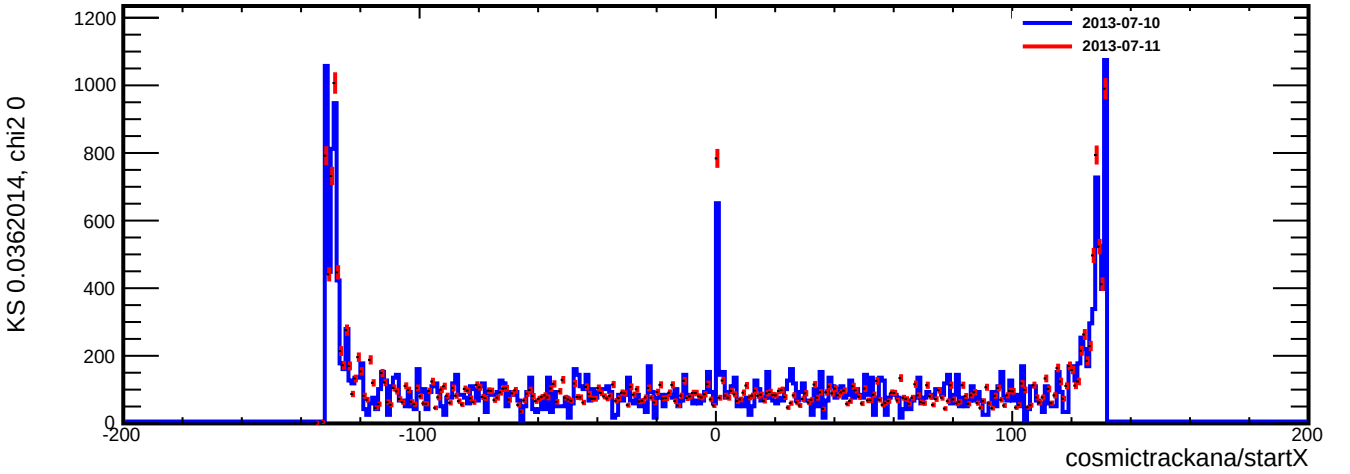

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
500
1000
1500
cosmictrackana/endZ

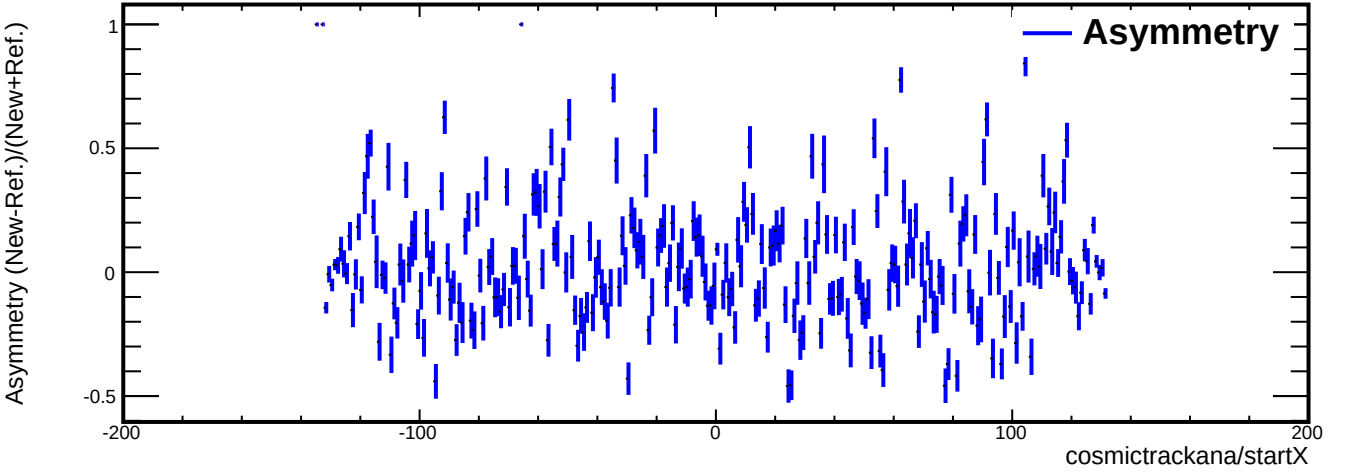

KS 0.0582419, chi2 1.00293e-76
2013-07-10
2013-07-11
600
400
200
0
-1
-0.5
0
0.5
1
cosmictrackana/dirX

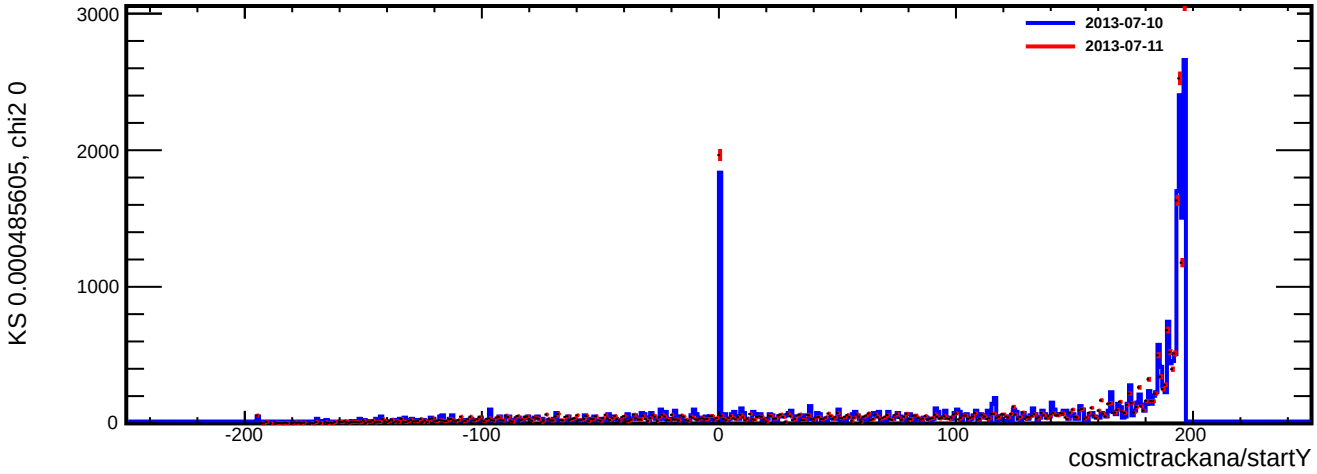

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
0.6
0.4
0.2
0
-0.2
-0.4
-1
-0.5
0
0.5
1
cosmictrackana/dirX

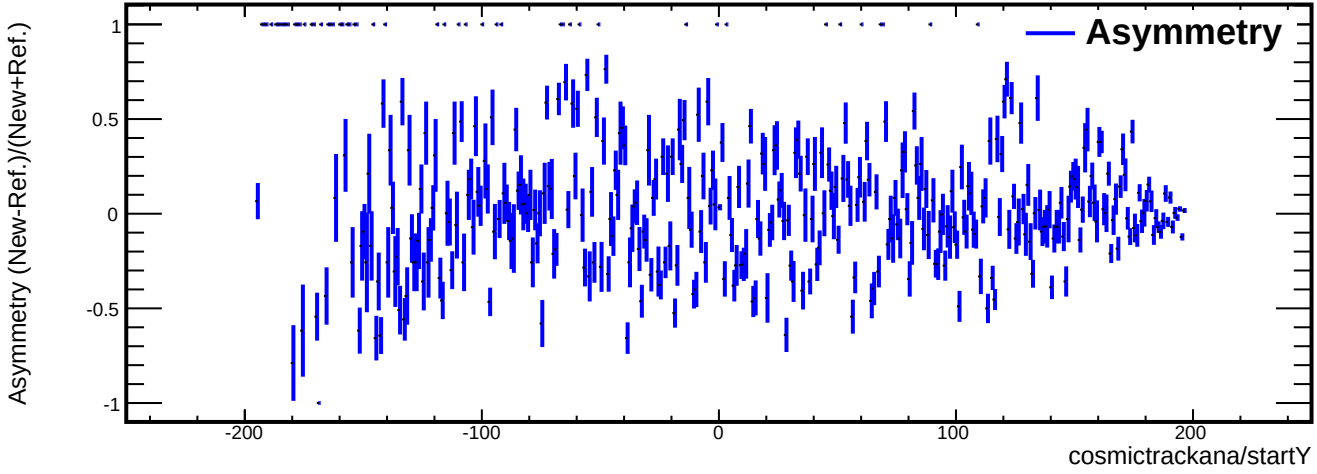

KS 0.0015652, chi2 8.0957e-68
2013-07-10
2013-07-11
cosmictrackana/dirY
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
cosmictrackana/dirY

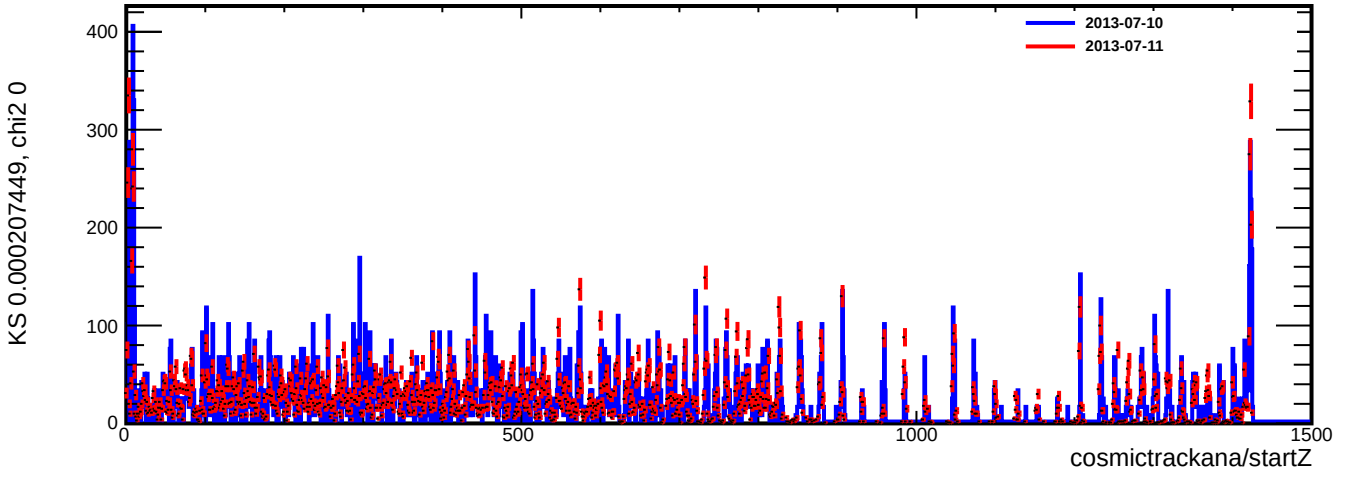

KS 4.90844e-05, chi2 3.11011e-105
2013-07-10
2013-07-11
cosmictrackana/dirZ
Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
cosmictrackana/dirZ

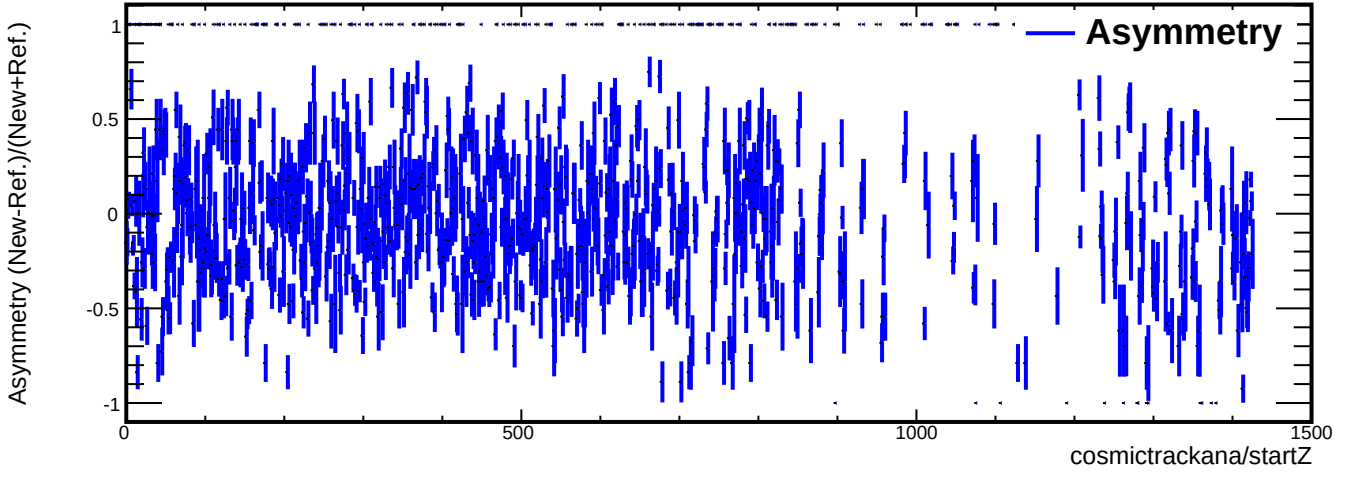

2013-07-10
2013-07-11
KS 0.0362014, chi2 0
cosmictrackana/startX
1200
1000
800
600
400
200
0
-200
-100
0
100
200

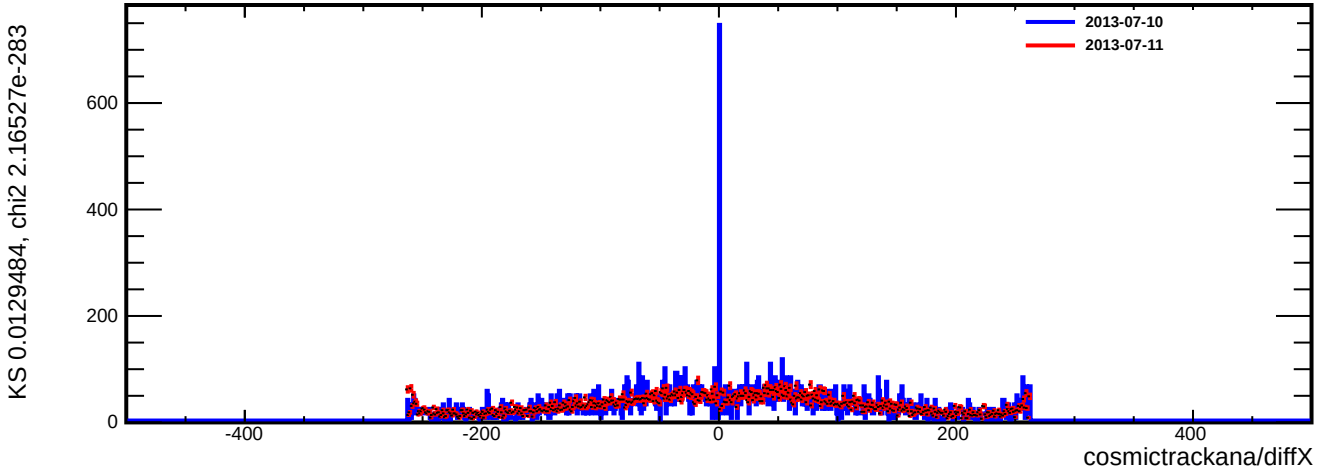

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
cosmictrackana/startX
1
0.5
0
-0.5
-200
-100
0
100
200

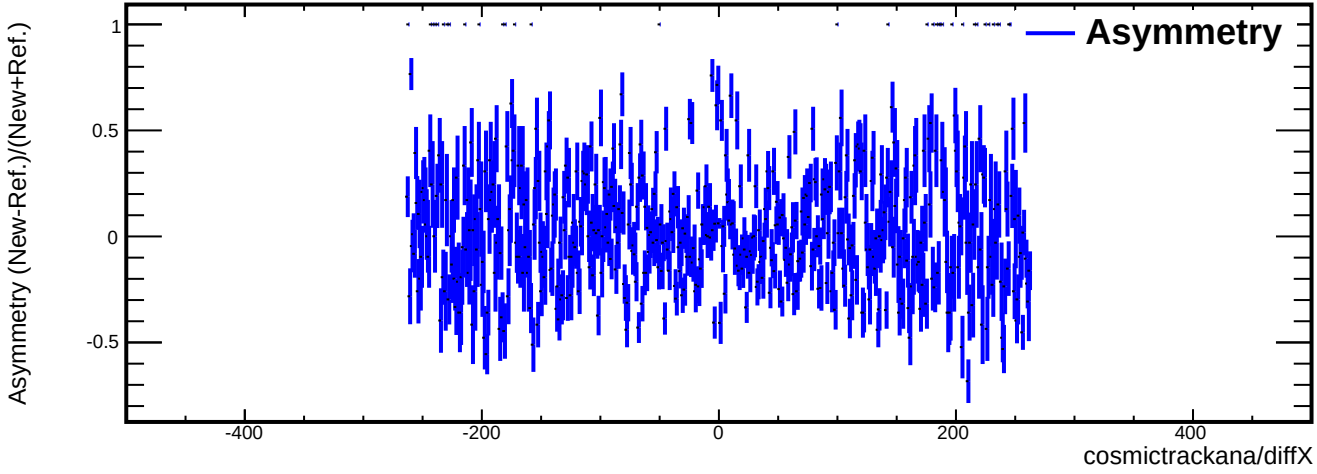

KS 0.000485605, chi2 0
3000
2000
1000
0
-200
-100
0
100
200
cosmictrackana/startY
2013-07-10
2013-07-11

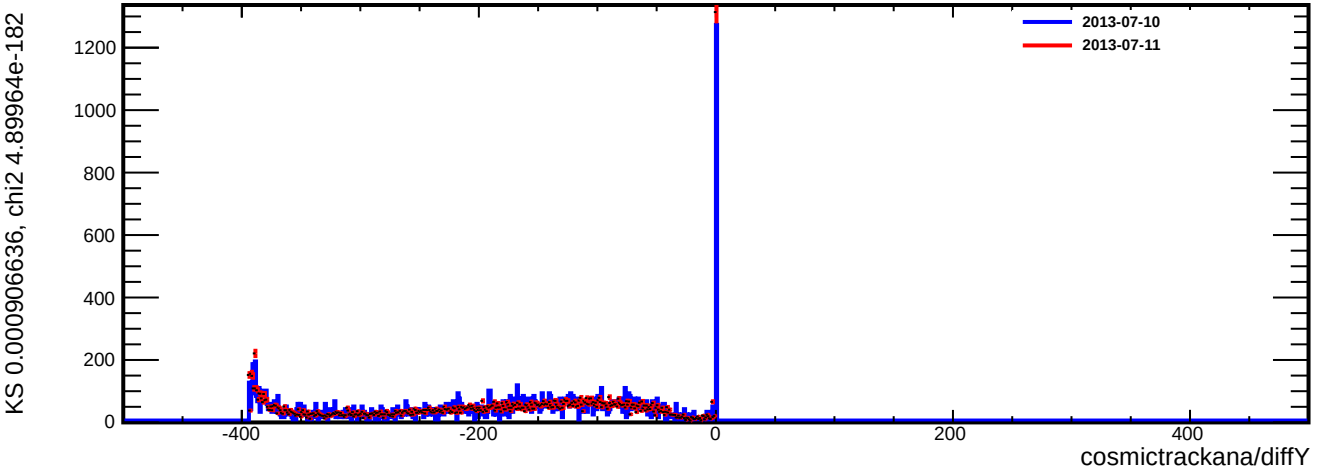

Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-200
-100
0
100
200
cosmictrackana/startY
Asymmetry

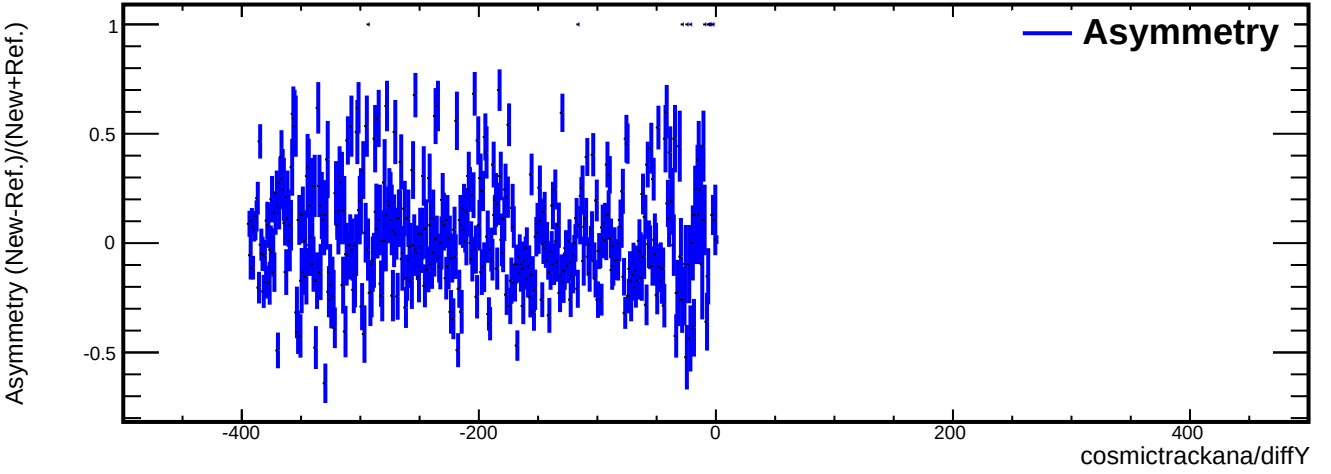

KS 0.000207449, chi2 0
400
300
200
100
0
0
500
1000
1500
cosmictrackana/startZ
2013-07-10
2013-07-11

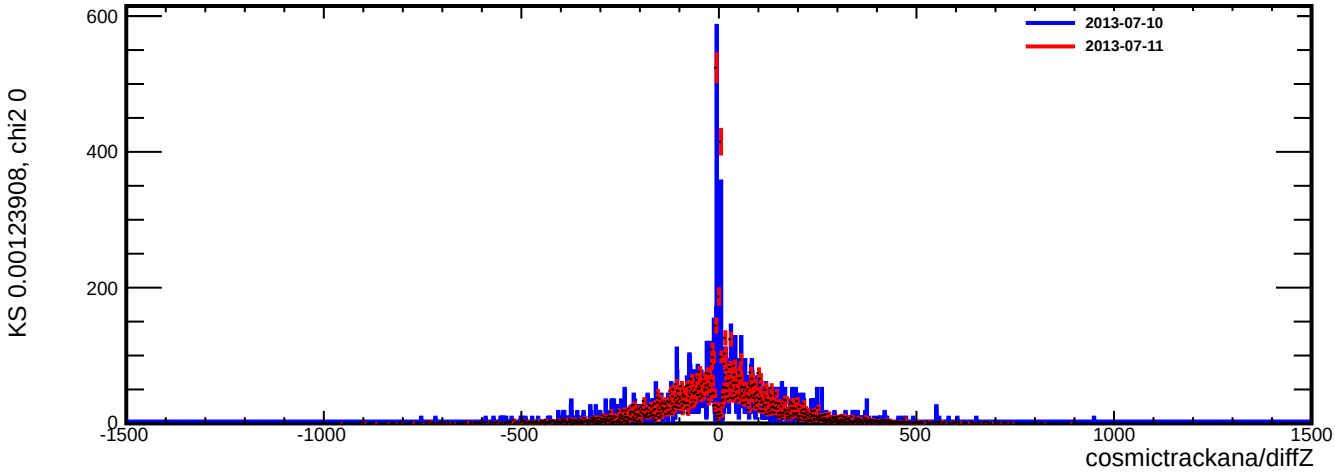

Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
500
1000
1500
cosmictrackana/startZ
Asymmetry

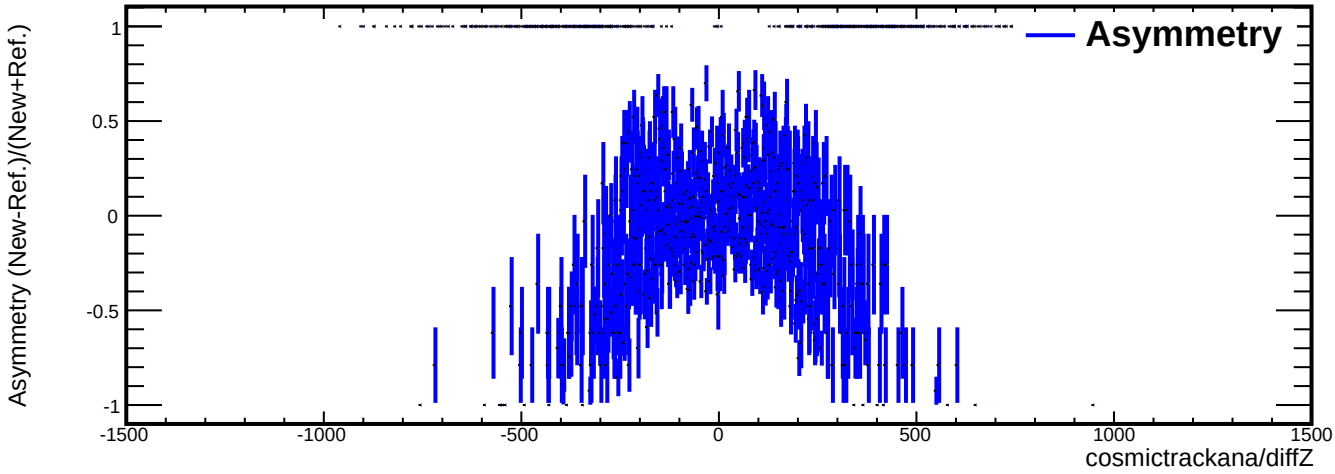

KS 0.0129484, chi2 2.16527e-283
2013-07-10
2013-07-11
600
400
200
0
-400
-200
0
200
400
cosmictrackana/diffX

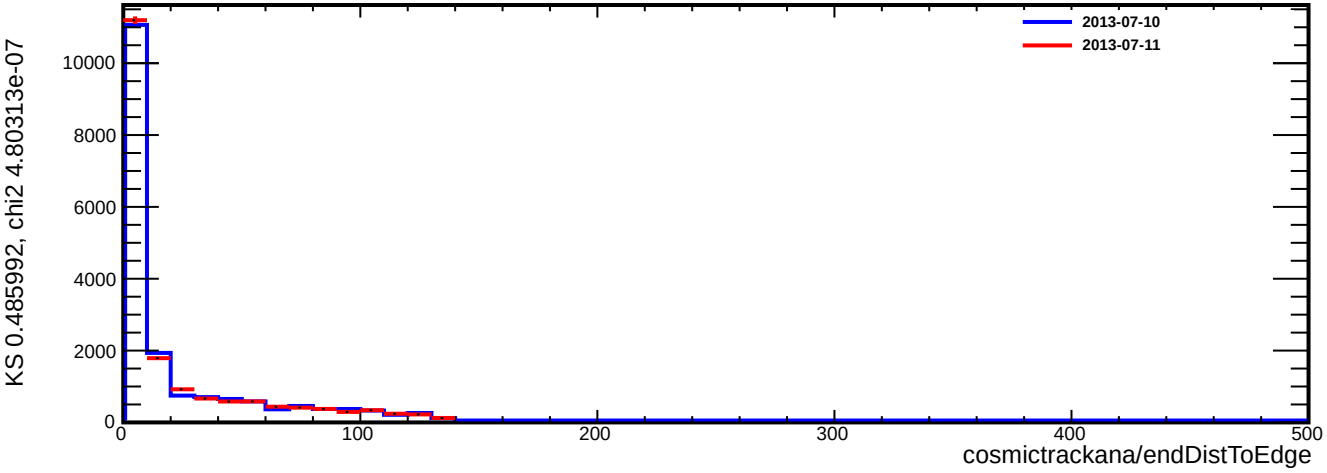

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-400
-200
0
200
400
cosmictrackana/diffX

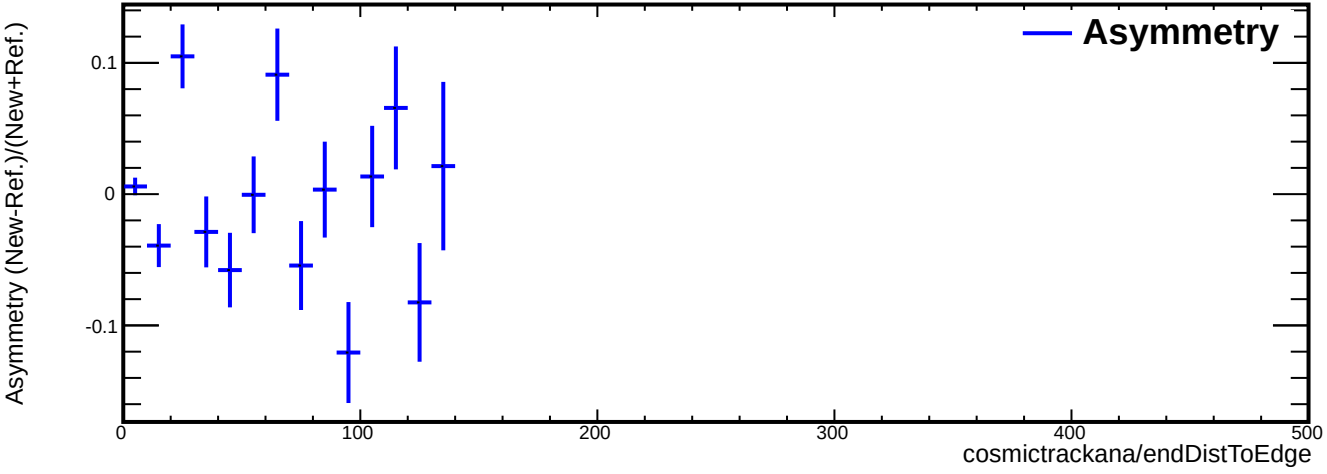

KS 0.000906636, chi2 4.89964e-182
2013-07-10
2013-07-11
1200
1000
800
600
400
200
0
-400
-200
0
200
400
cosmictrackana/diffY

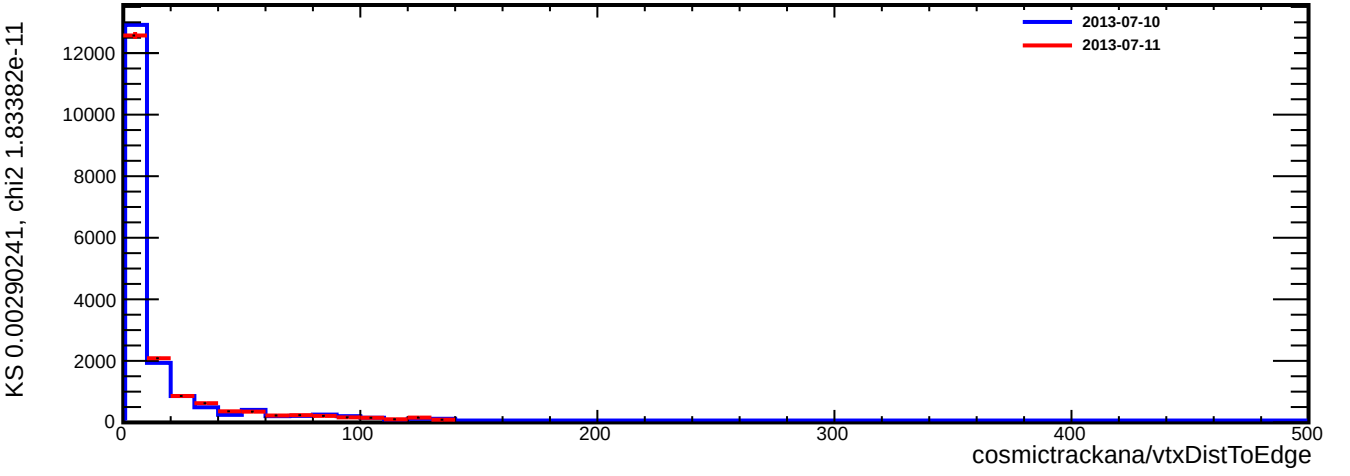

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-400
-200
0
200
400
cosmictrackana/diffY

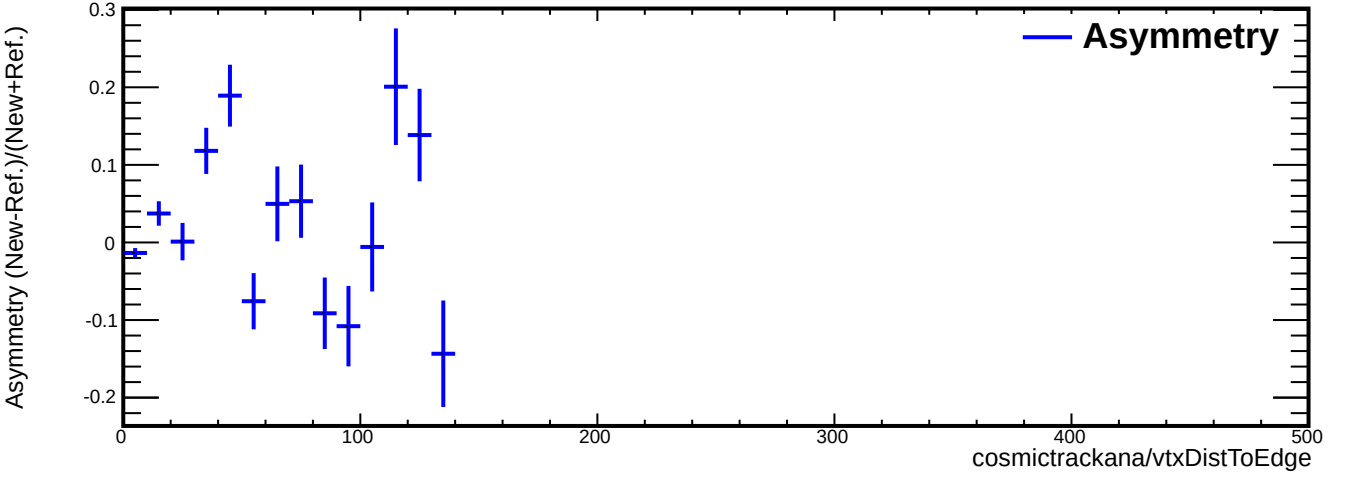

KS 0.00123908, chi2 0
600
400
200
0
-1500
-1000
-500
0
500
1000
1500
cosmictrackana/diffZ
2013-07-10
2013-07-11

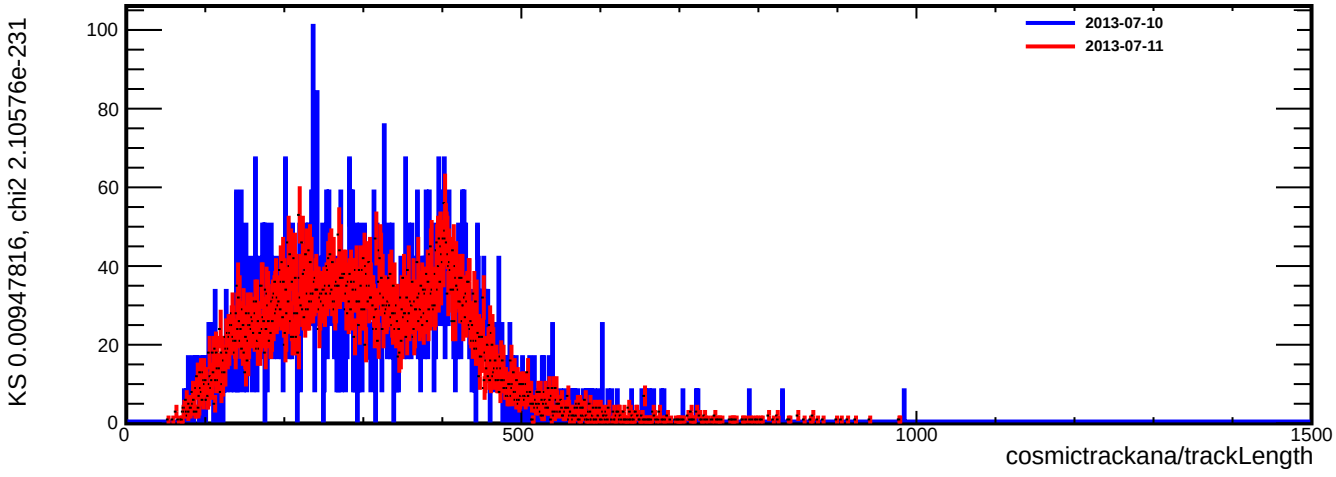

Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1500
-1000
-500
0
500
1000
1500
cosmictrackana/diffZ
Asymmetry

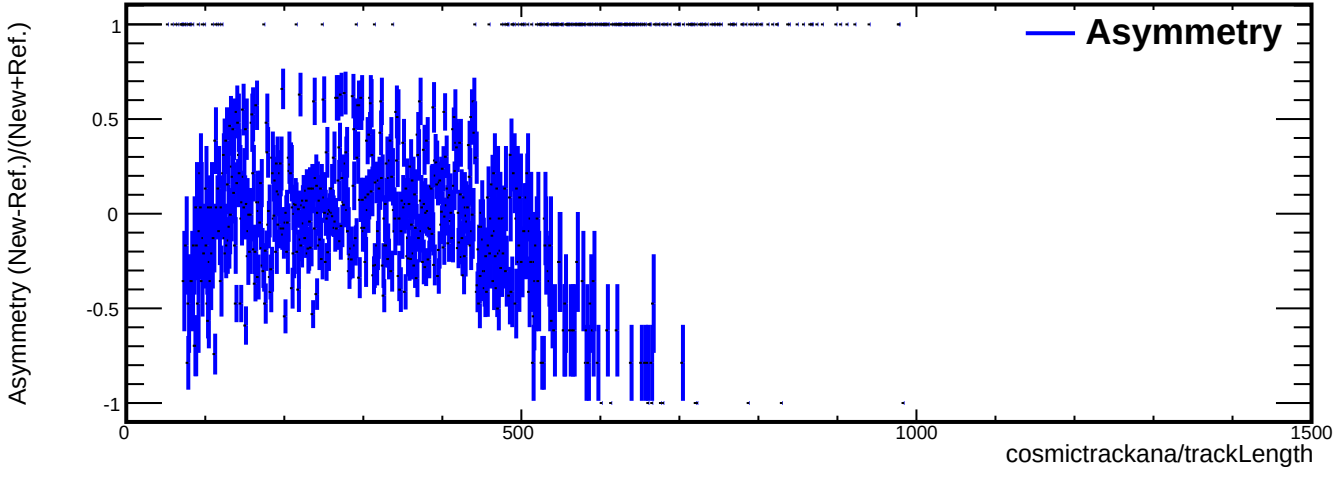

KS 0.485992, chi2 4.80313e-07
2013-07-10
2013-07-11
10000
8000
6000
4000
2000
0
0
100
200
300
400
500
cosmictrackana/endDistToEdge

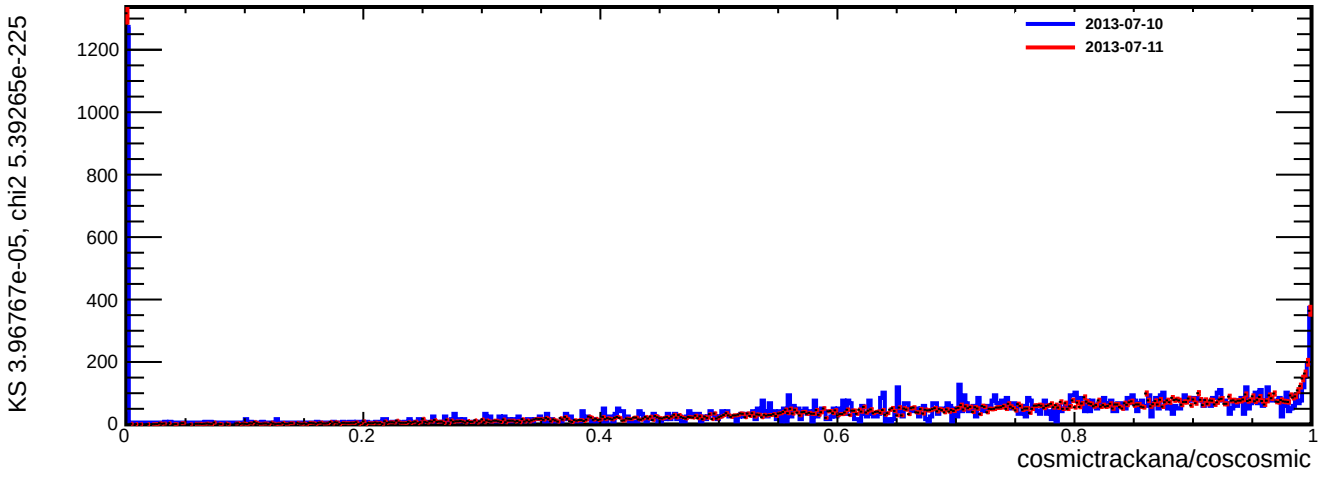

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
0.1
0
-0.1
0
100
200
300
400
500
cosmictrackana/endDistToEdge

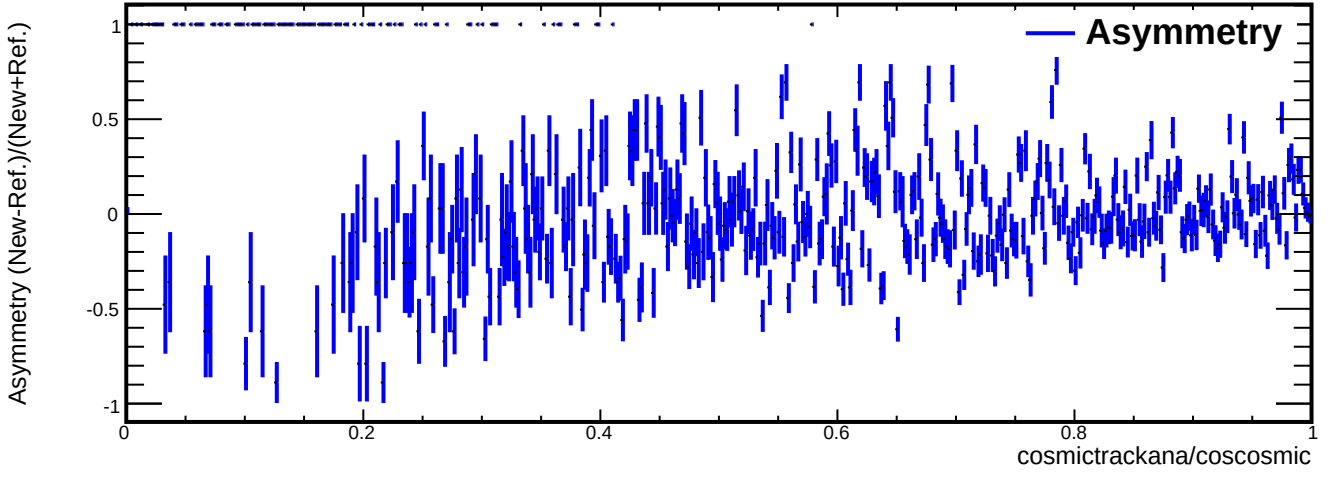

KS 0.00290241, chi2 1.83382e-11
2013-07-10
2013-07-11
12000
10000
8000
6000
4000
2000
0
0
100
200
300
400
500
cosmictrackana/vtxDistToEdge

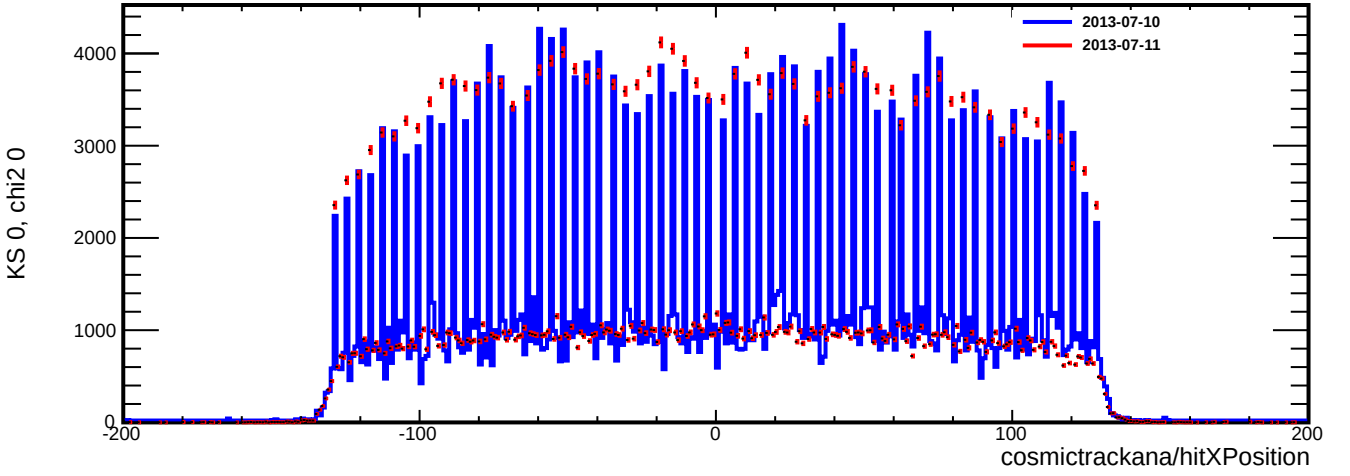

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
0.3
0.2
0.1
0
-0.1
-0.2
0
100
200
300
400
500
cosmictrackana/vtxDistToEdge

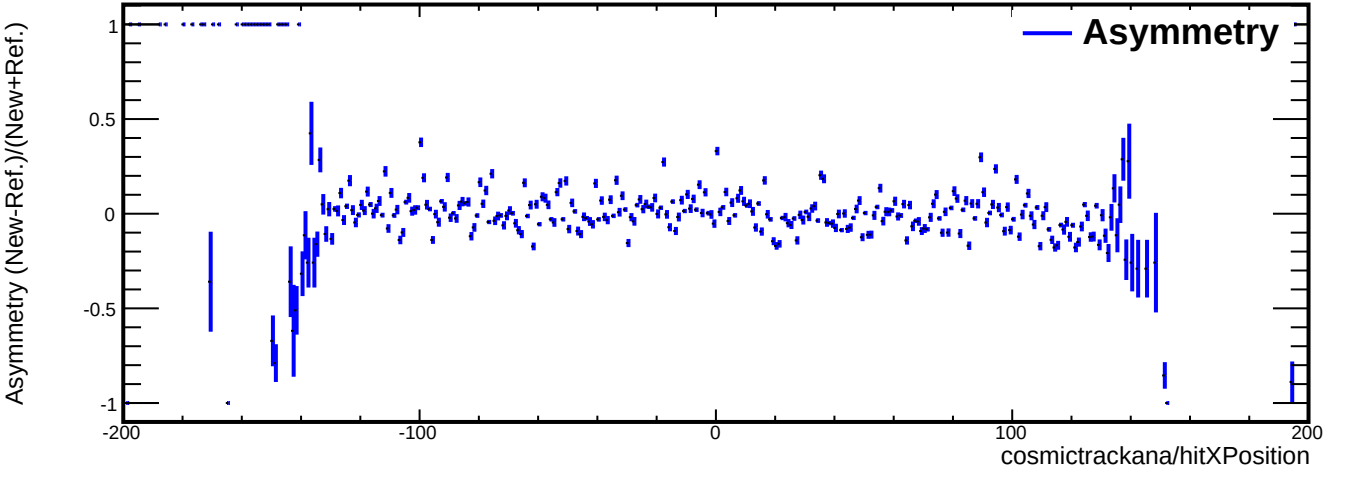

KS 0.00947816, chi2 2.10576e-231
2013-07-10
2013-07-11
100
80
60
40
20
0
0
500
1000
1500
cosmictrackana/trackLength

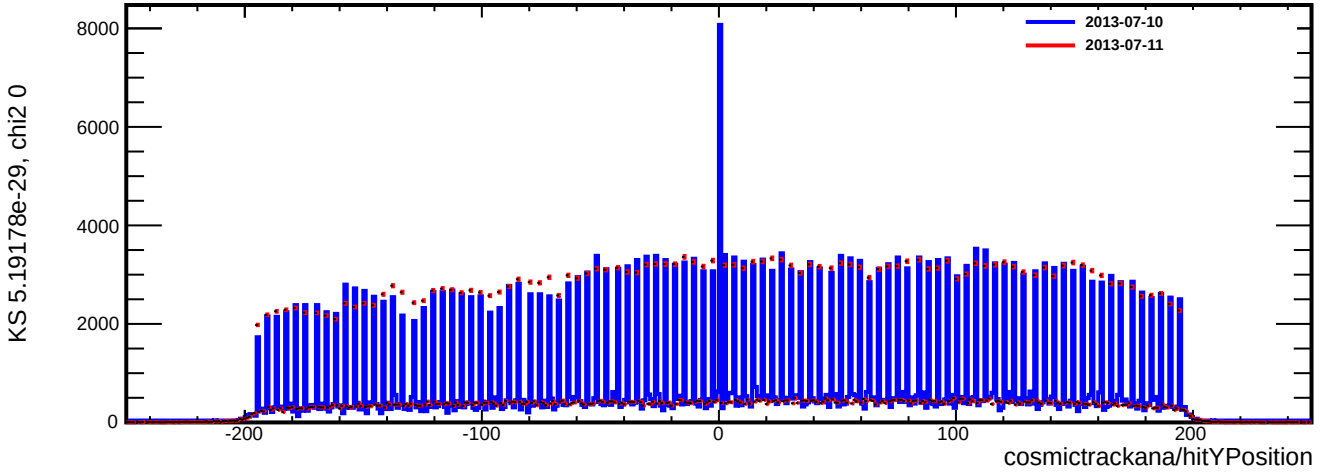

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
0
500
1000
1500
cosmictrackana/trackLength

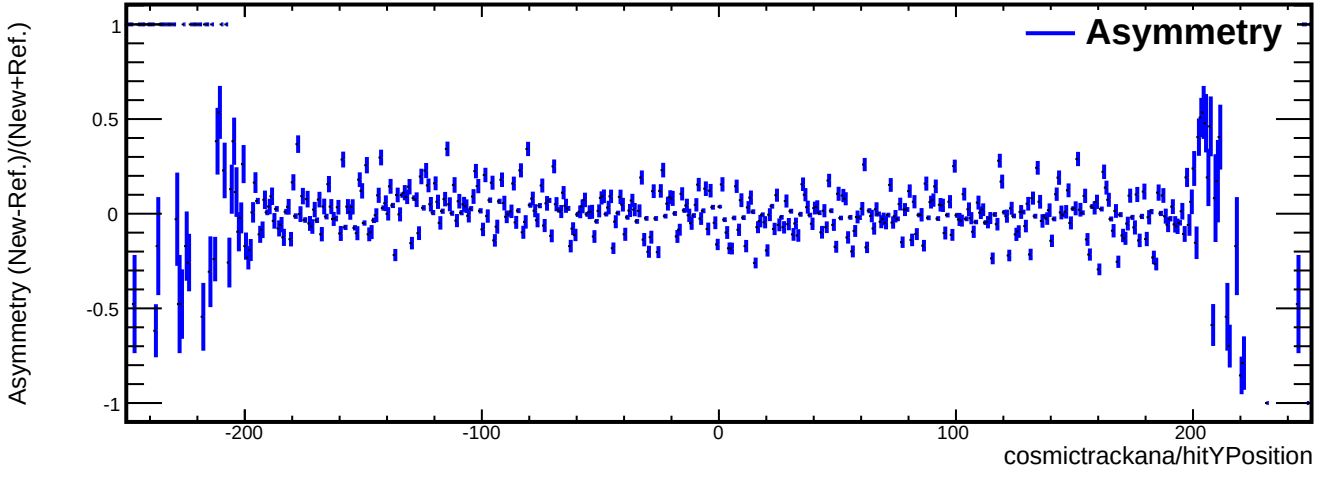

KS 3.96767e-05, chi2 5.39265e-225
2013-07-10
2013-07-11
1200
1000
800
600
400
200
0
0
0.2
0.4
0.6
0.8
1
cosmictrackana/coscosmic

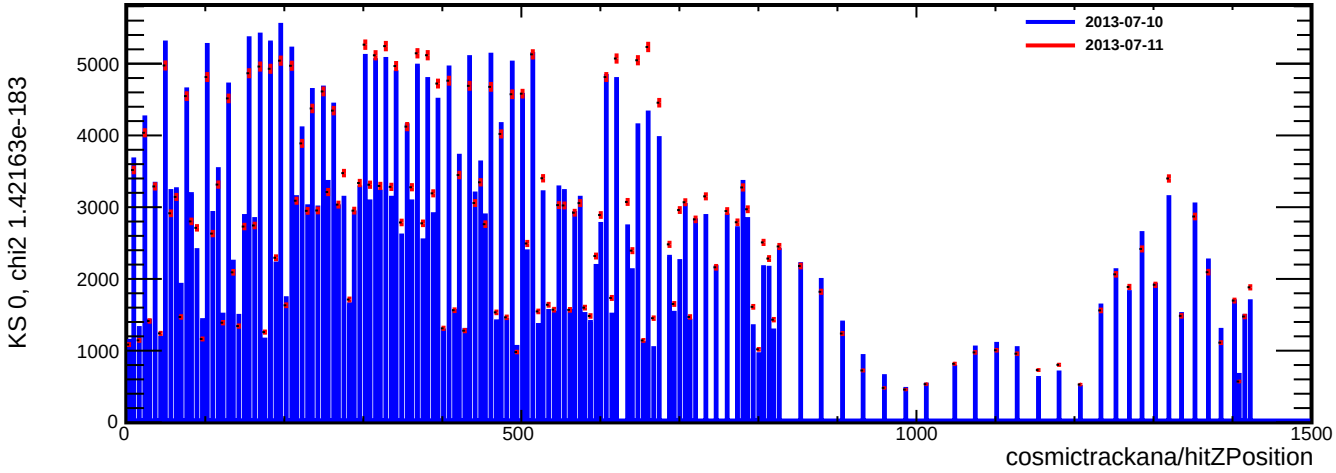

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
0
0.2
0.4
0.6
0.8
1
cosmictrackana/coscosmic

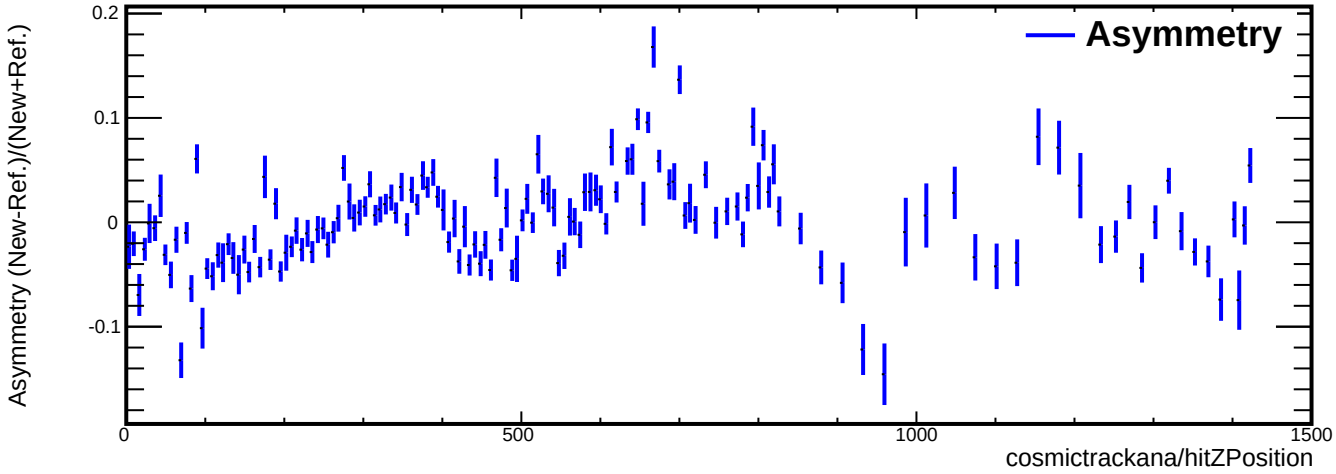

2013-07-10
2013-07-11
KS 0, chi2 0
4000
3000
2000
1000
0
-200
-100
0
100
200
cosmictrackana/hitXPosition

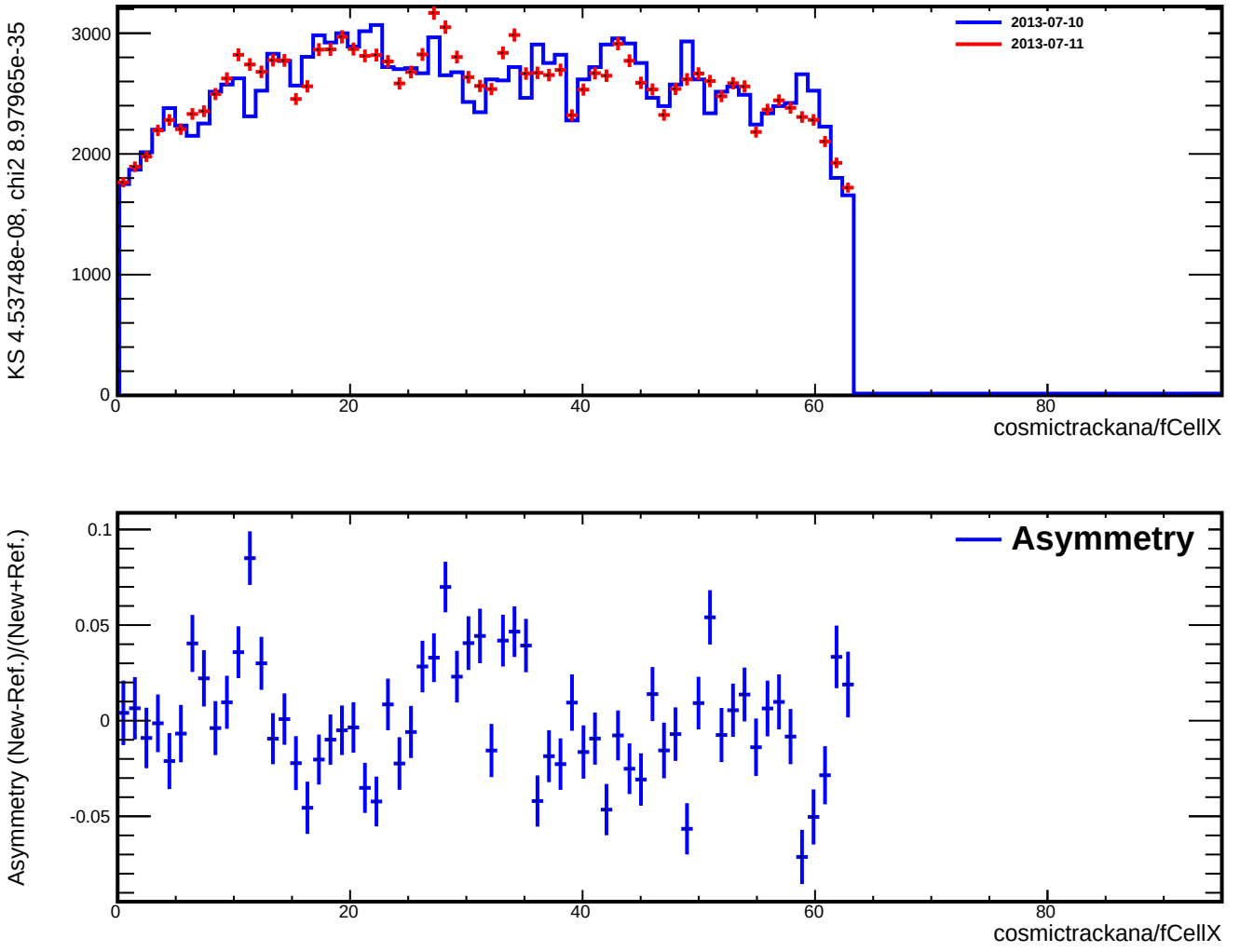

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-200
-100
0
100
200
cosmictrackana/hitXPosition

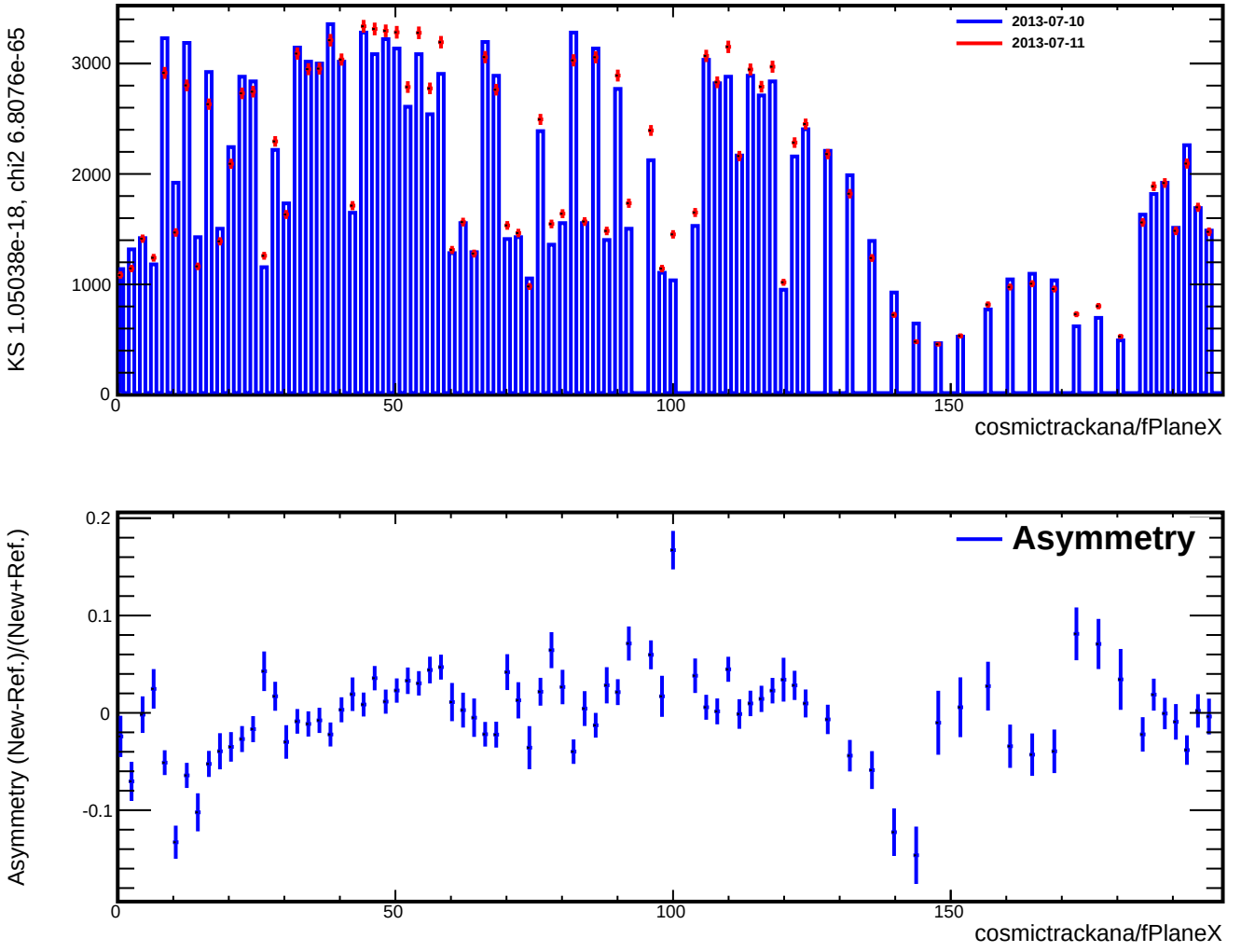

KS 5.19178e-29, chi2 0
8000
6000
4000
2000
0
-200
-100
0
100
200
cosmictrackana/hitYPosition
2013-07-10
2013-07-11

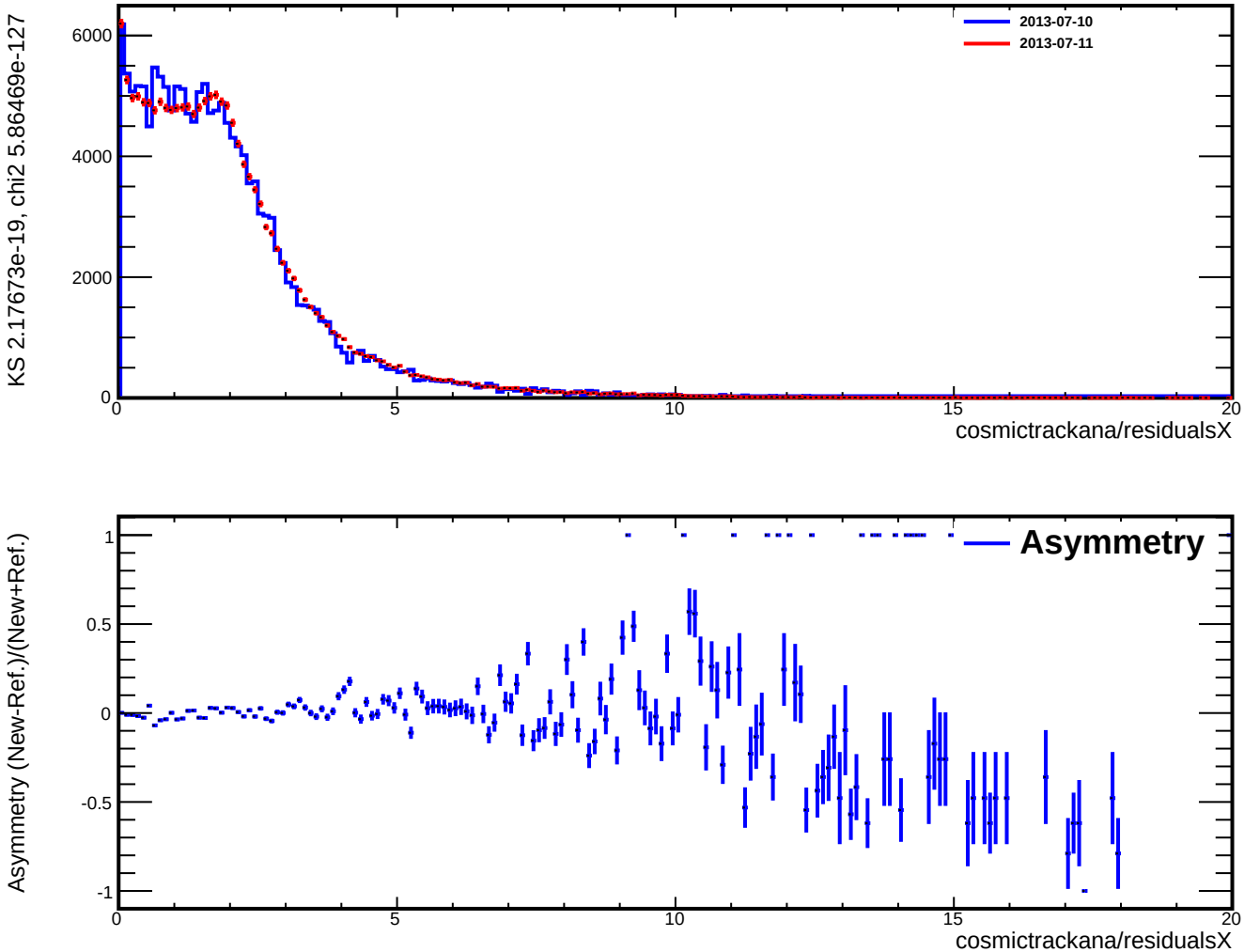

Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-200
-100
0
100
200
cosmictrackana/hitYPosition
Asymmetry

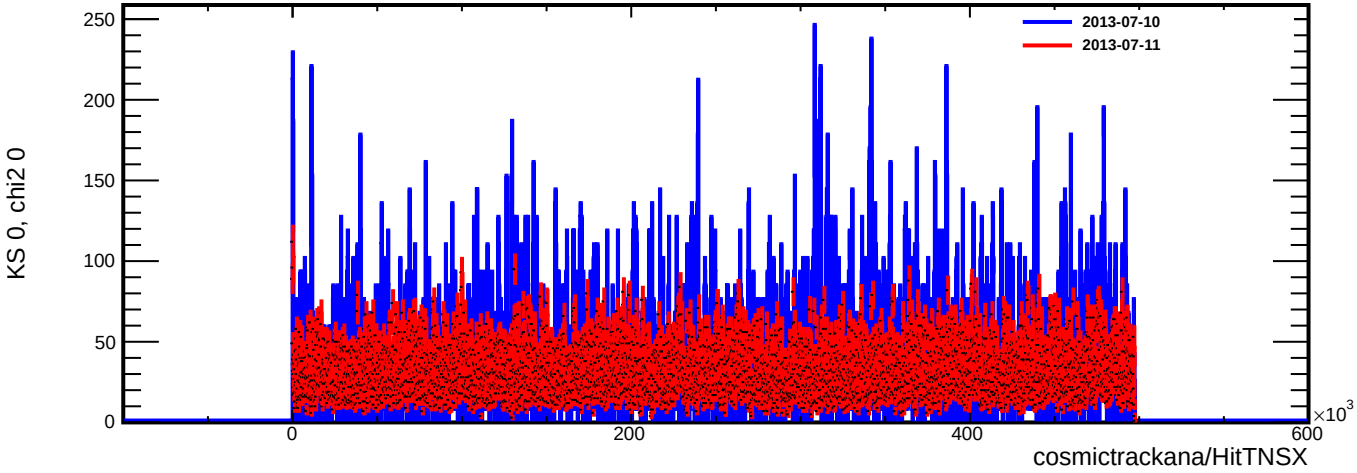

2013-07-10
2013-07-11
KS 0, chi2 1.42163e-183
0
1000
2000
3000
4000
5000
0
500
1000
1500
cosmictrackana/hitZPosition

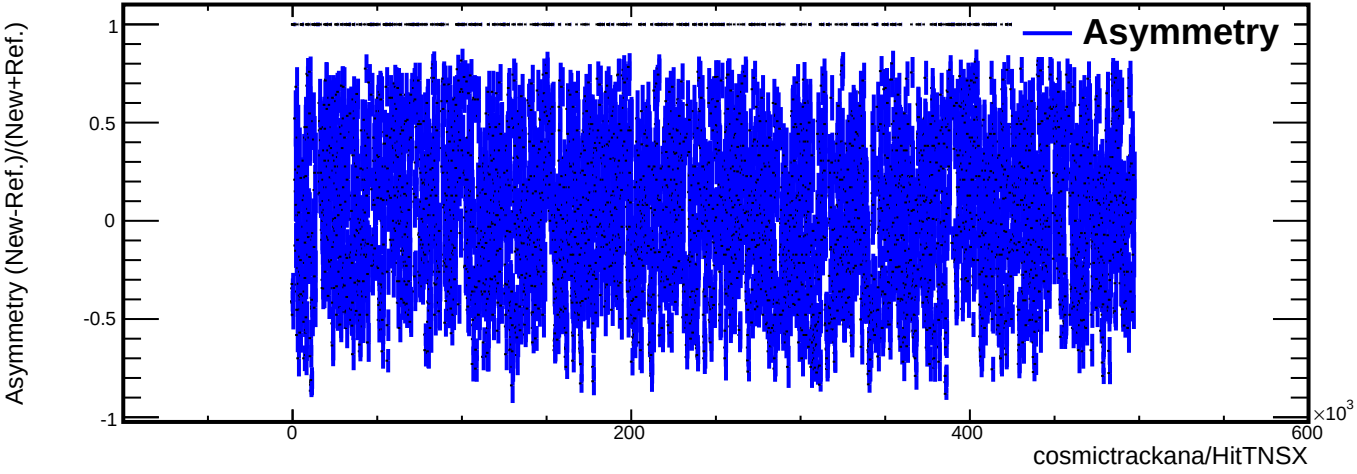

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.2
0.1
0
-0.1
0
500
1000
1500
cosmictrackana/hitZPosition

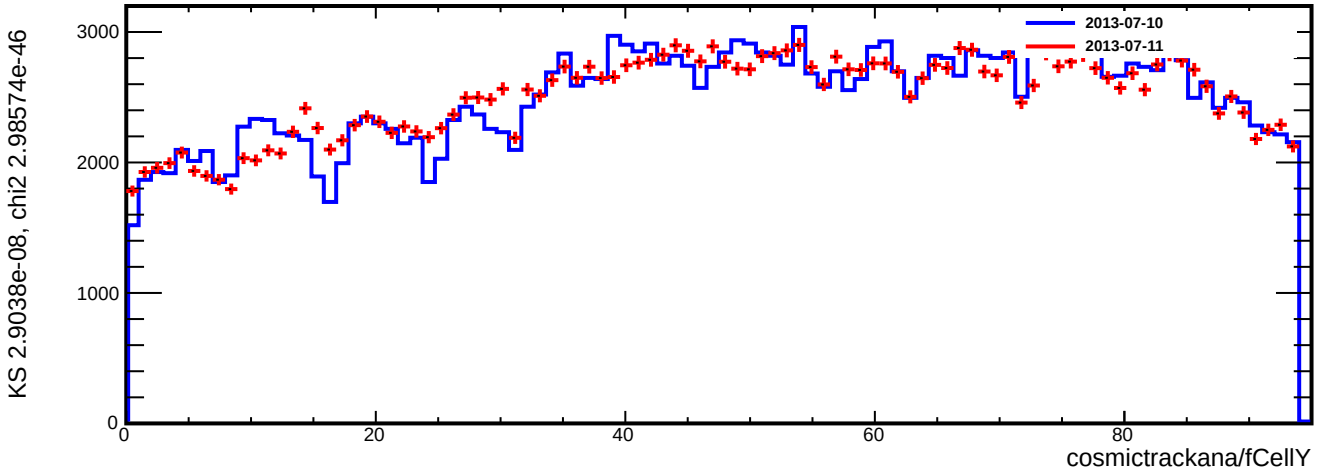

KS 4.53748e-08, chi2 8.97965e-35
2013-07-10
2013-07-11
cosmictrackana/fCellX
Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
cosmictrackana/fCellX

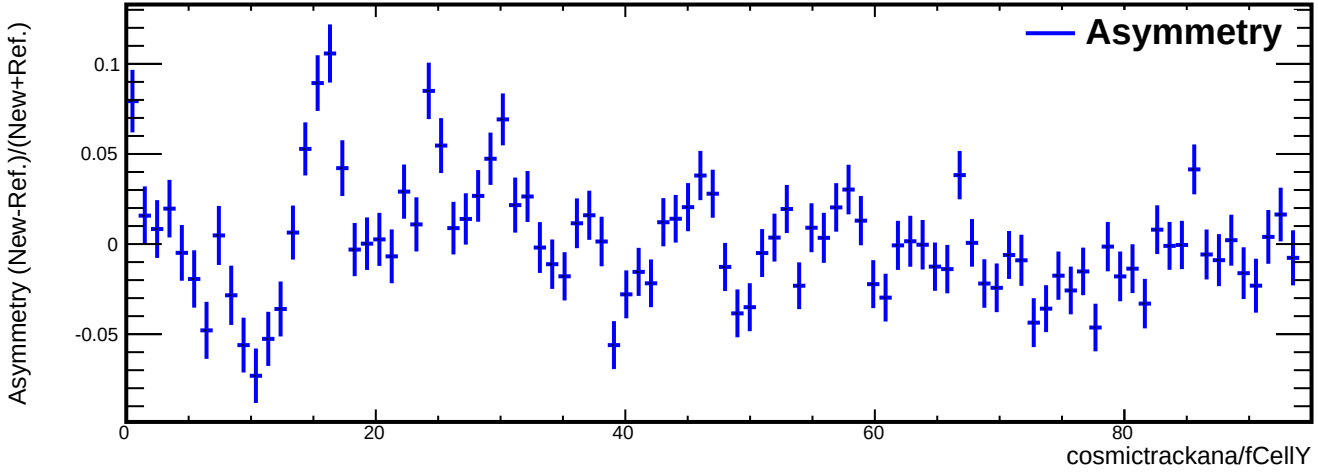

KS 1.05038e-18, chi2 6.8076e-65
2013-07-10
2013-07-11
cosmictrackana/fPlaneX
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
cosmictrackana/fPlaneX

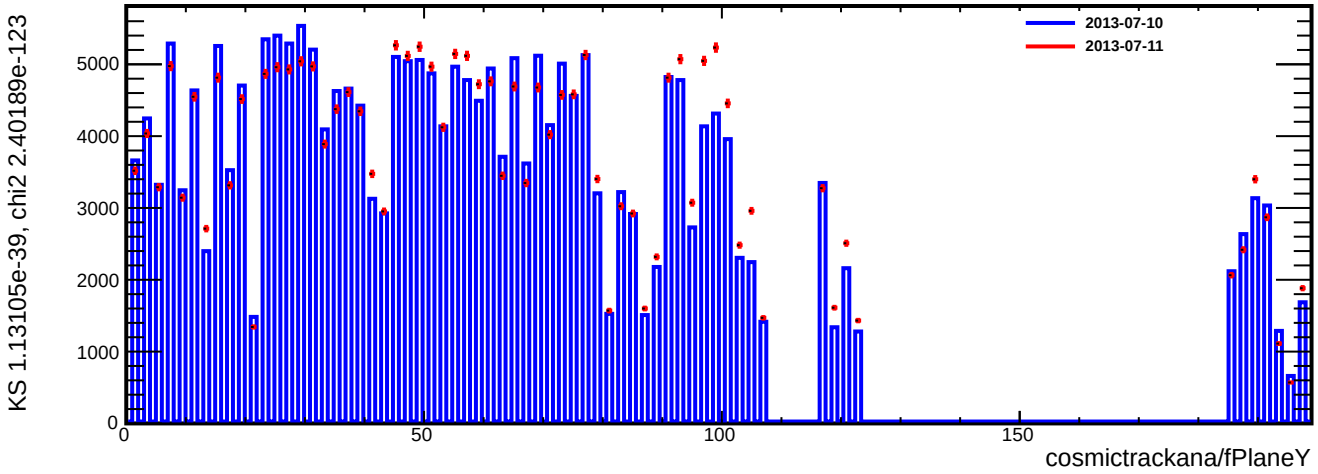

KS 2.17673e-19, chi2 5.86469e-127
2013-07-10
2013-07-11
cosmictrackana/residualsX
Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
cosmictrackana/residualsX

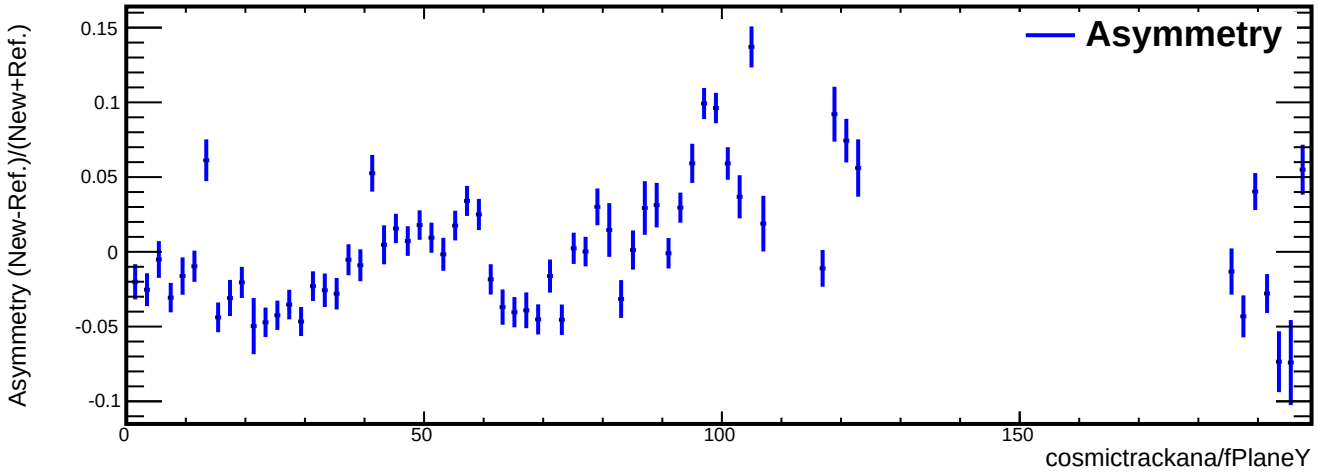

2013-07-10
2013-07-11
KS 0, chi2 0
250
200
150
100
50
0
0
200
400
600
×10^3
cosmictrackana/HitTNSX

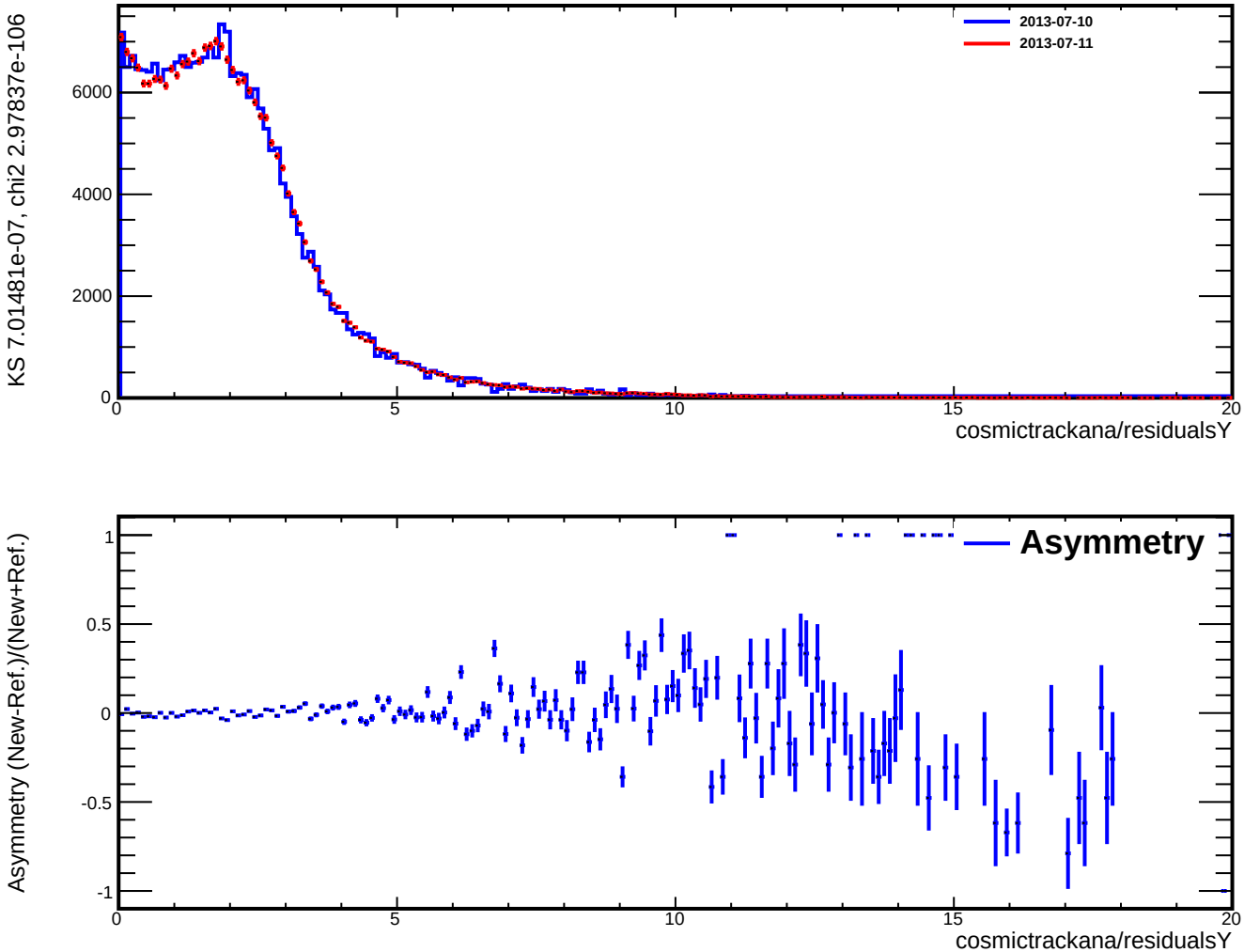

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
200
400
600
×10^3
cosmictrackana/HitTNSX

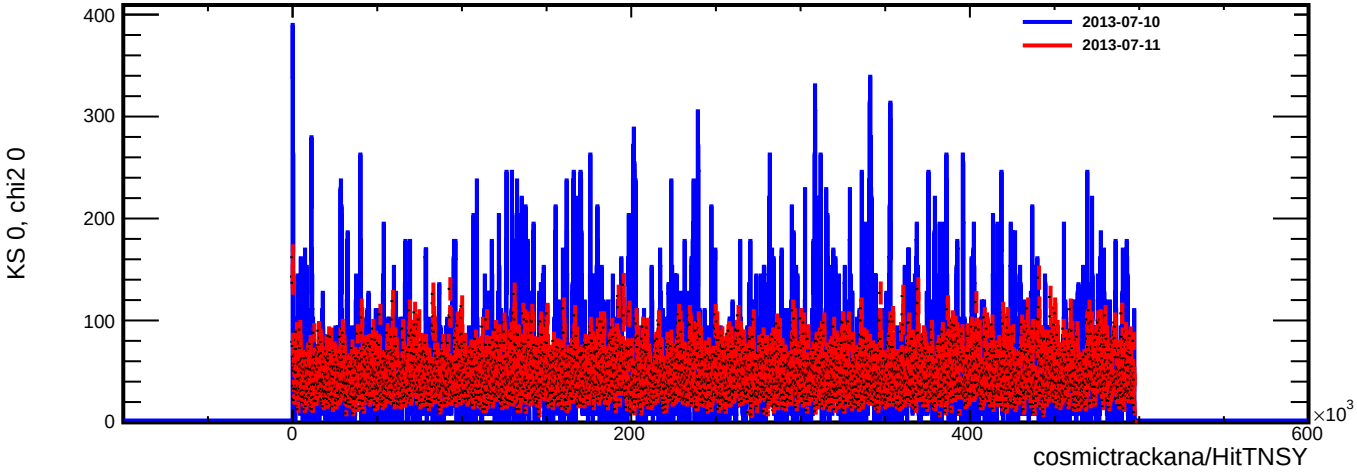

KS 2.9038e-08, chi2 2.98574e-46
2013-07-10
2013-07-11
3000
2000
1000
0
0
20
40
60
80
cosmictrackana/fCellY

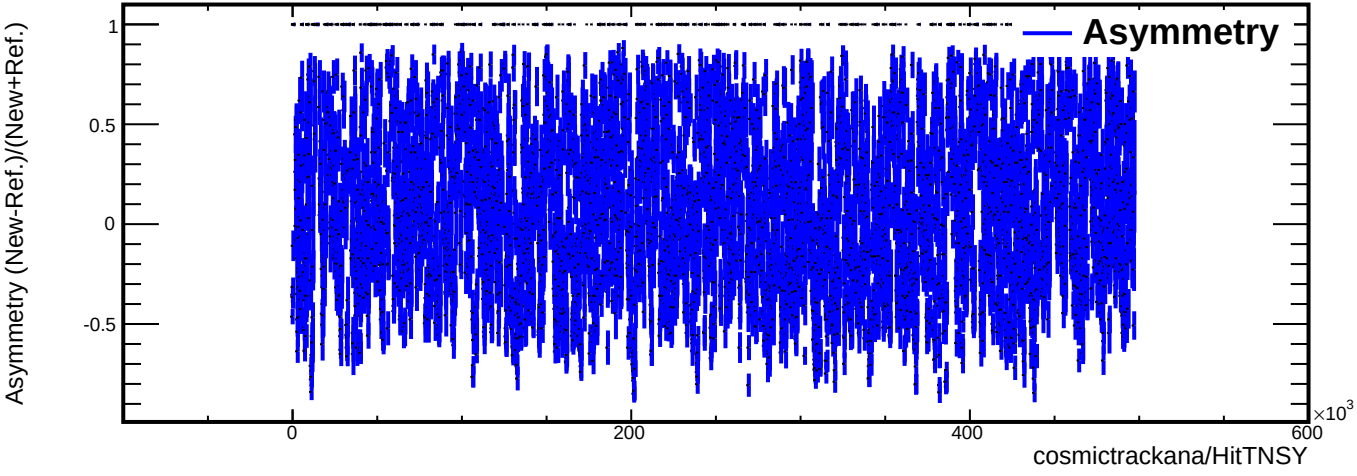

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
0.1
0.05
0
-0.05
0
20
40
60
80
cosmictrackana/fCellY


KS 1.13105e-39, chi2 2.40189e-123
2013-07-10
2013-07-11
cosmictrackana/fPlaneY


Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
cosmictrackana/fPlaneY


KS 7.01481e-07, chi2 2.97837e-106
2013-07-10
2013-07-11
6000
4000
2000
0
0
5
10
15
20
cosmictrackana/residualsY
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
1
0.5
0
-0.5
-1
0
5
10
15
20
cosmictrackana/residualsY


2013-07-10
2013-07-11
KS 0, chi2 0
400
300
200
100
0
0
200
400
600
×10^3
cosmictrackana/HitTNSY


Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
0
200
400
600
×10^3
cosmictrackana/HitTNSY