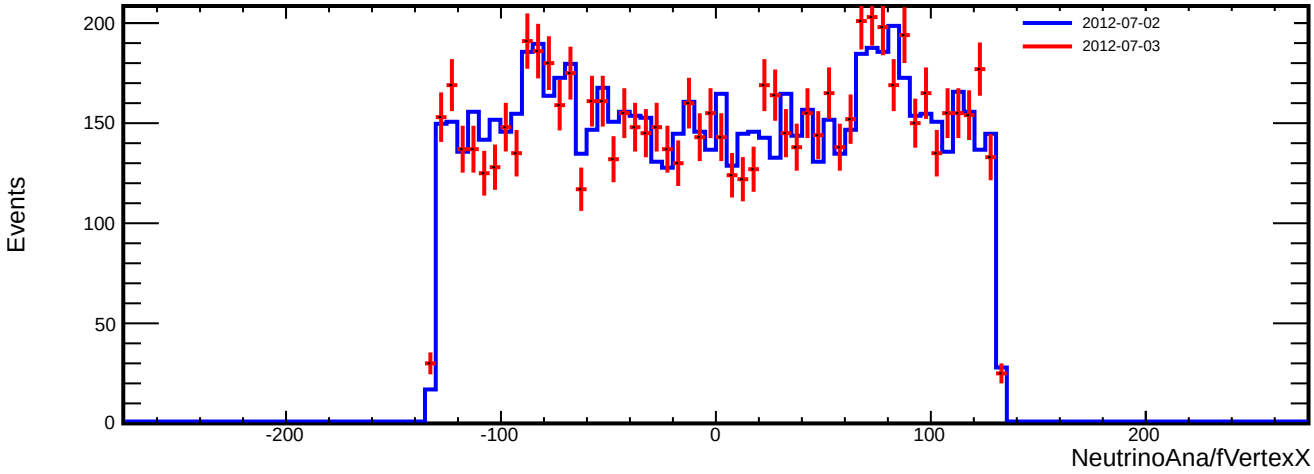
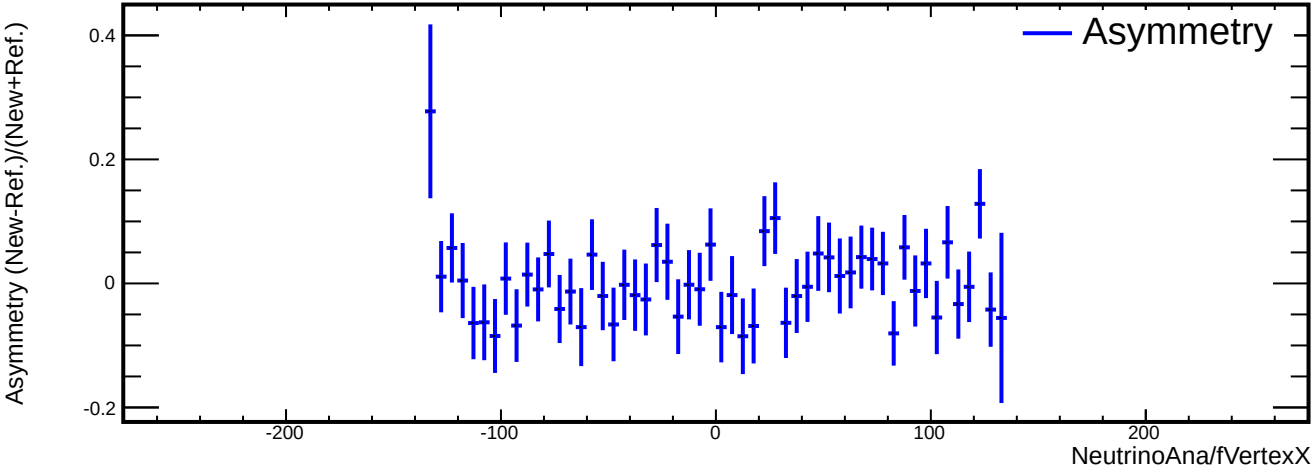
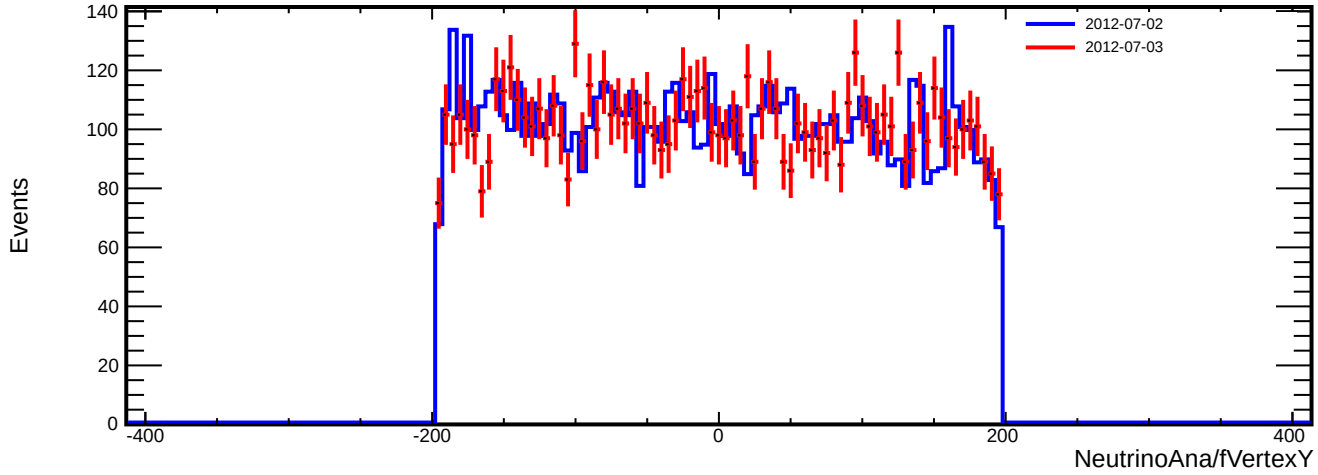
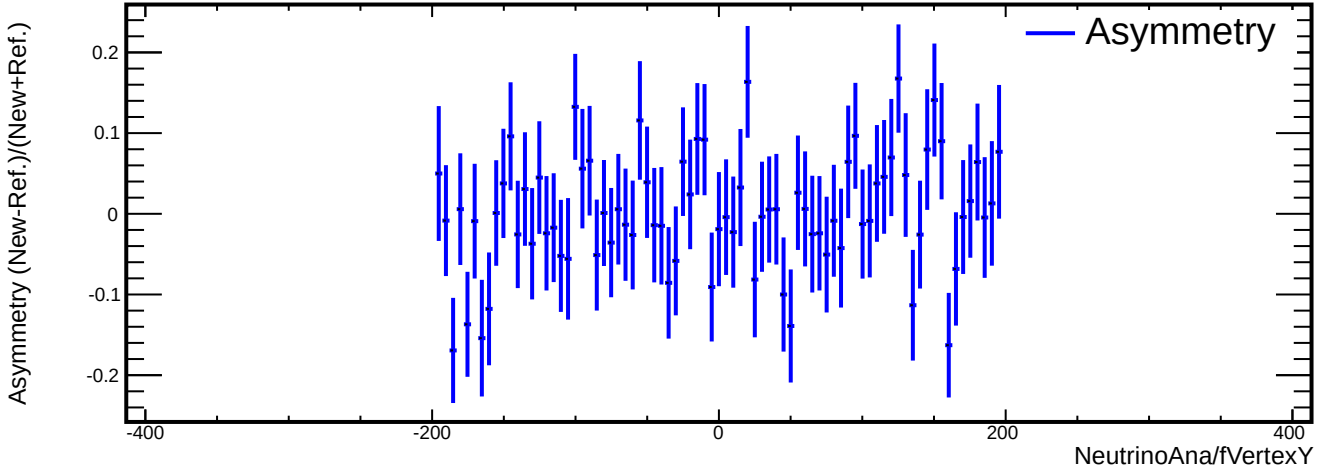
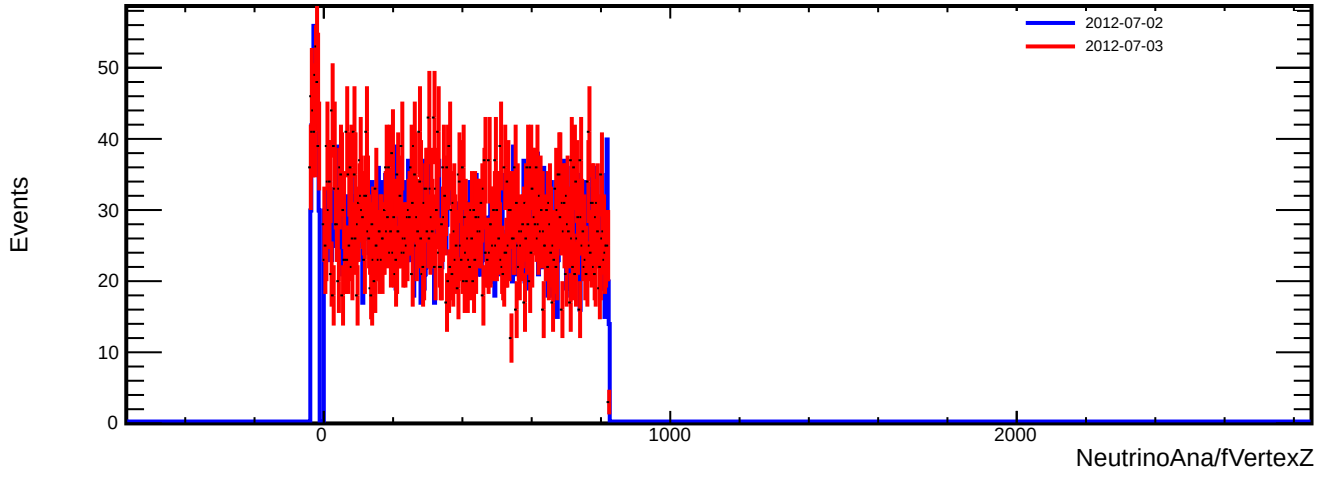
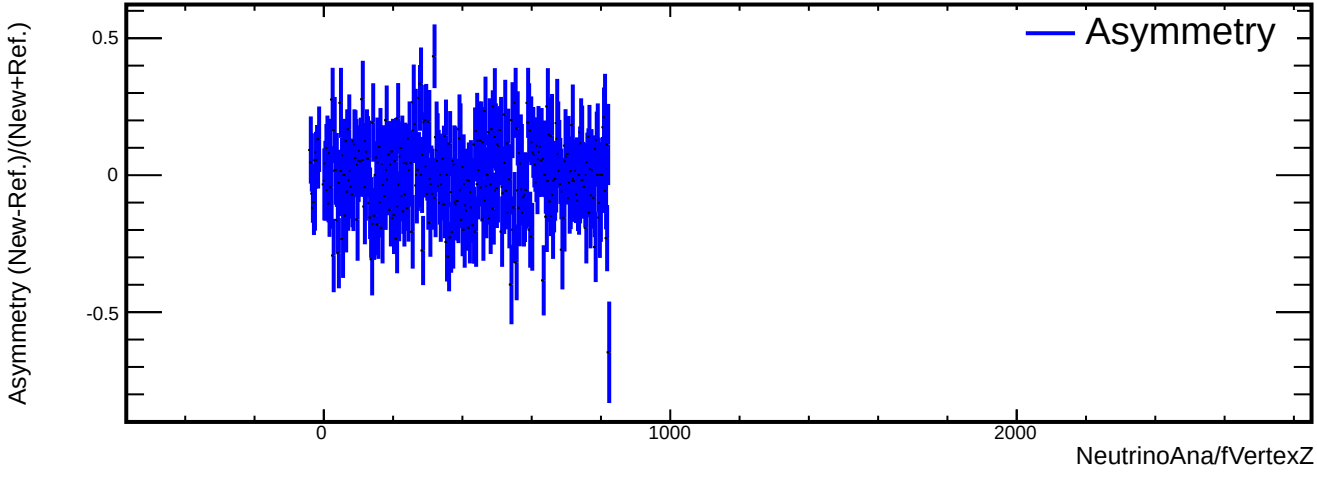

2012-07-02
2012-07-03
Events
200
150
100
50
0
-200
-100
0
100
200
NeutrinoAna/fVertexX

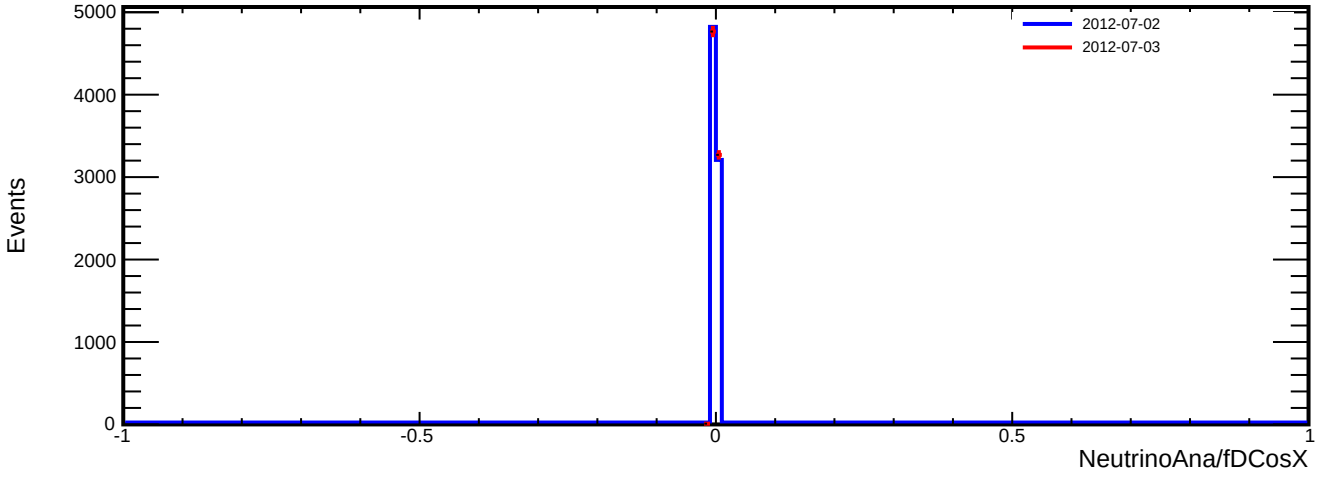

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.4
0.2
0
-0.2
-200
-100
0
100
200
NeutrinoAna/fVertexX

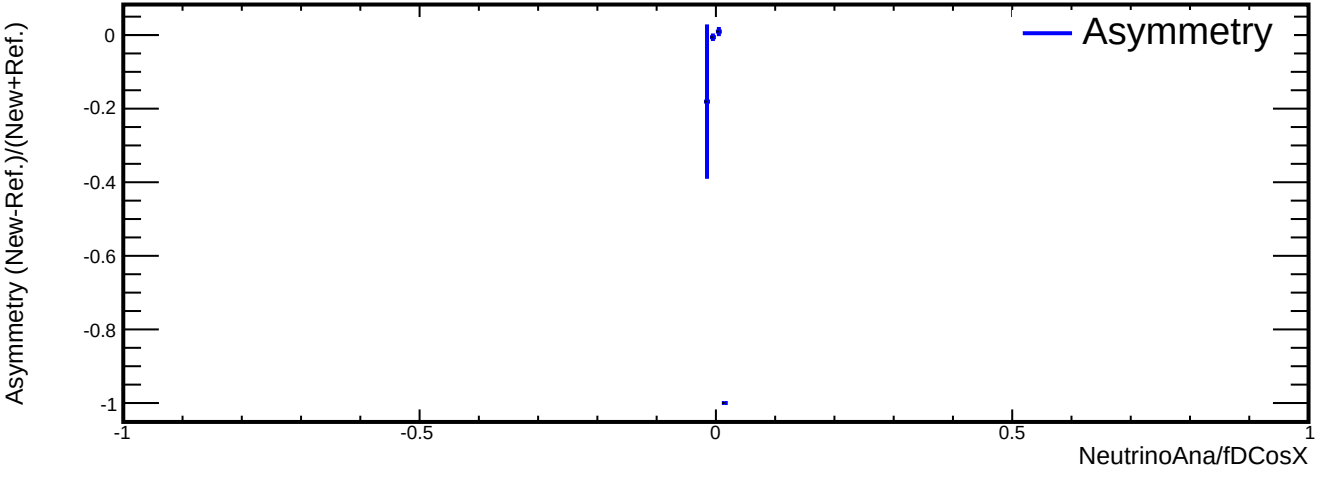

2012-07-02
2012-07-03
Events
140
120
100
80
60
40
20
0
-400
-200
0
200
400
NeutrinoAna/fVertexY

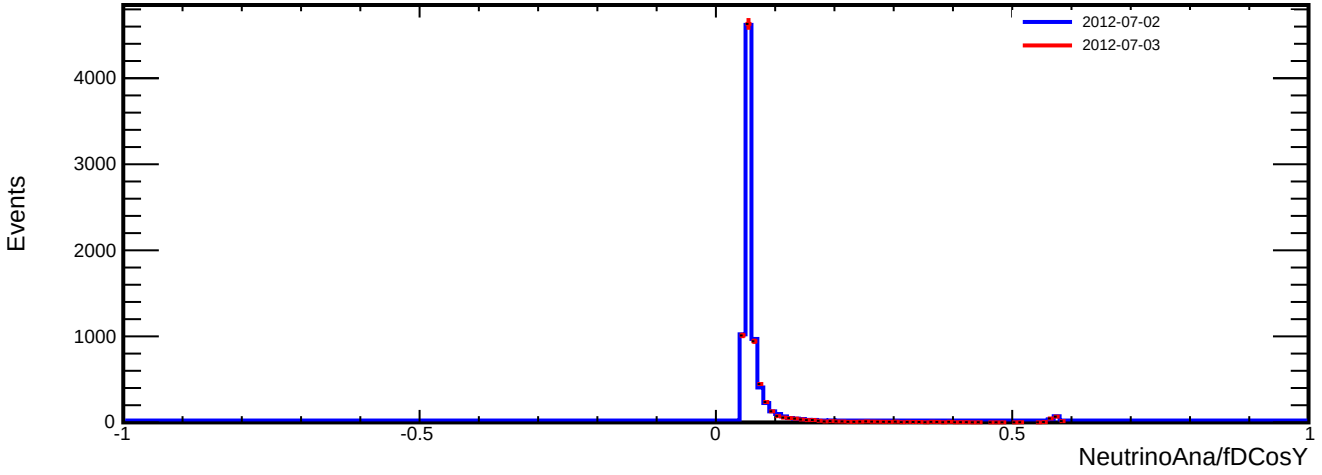

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.2
0.1
0
-0.1
-0.2
-400
-200
0
200
400
NeutrinoAna/fVertexY

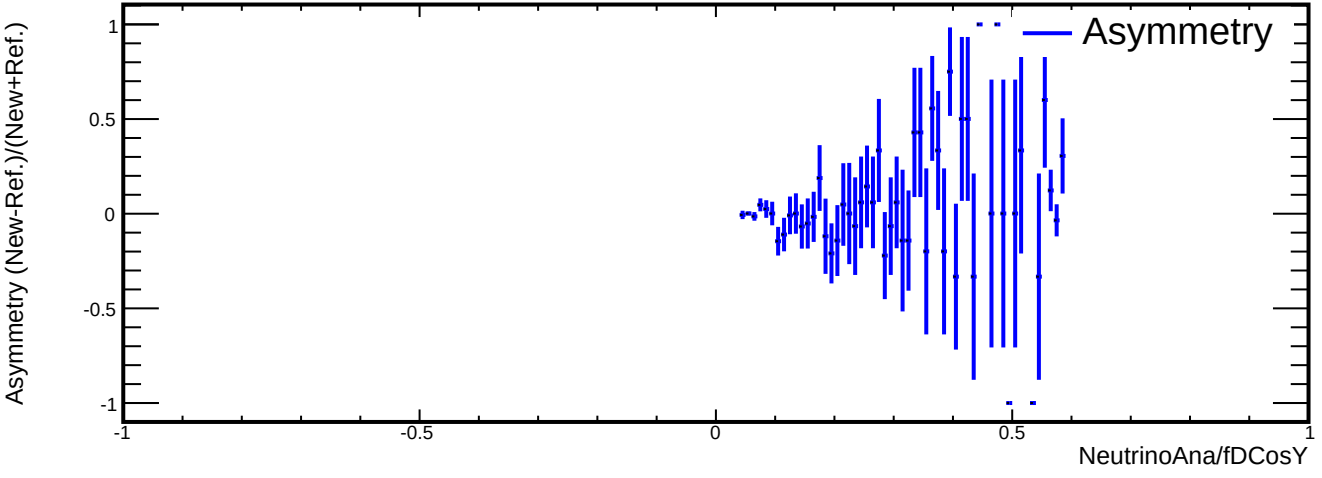

2012-07-02
2012-07-03
Events
0
10
20
30
40
50
0
1000
2000
NeutrinoAna/fVertexZ

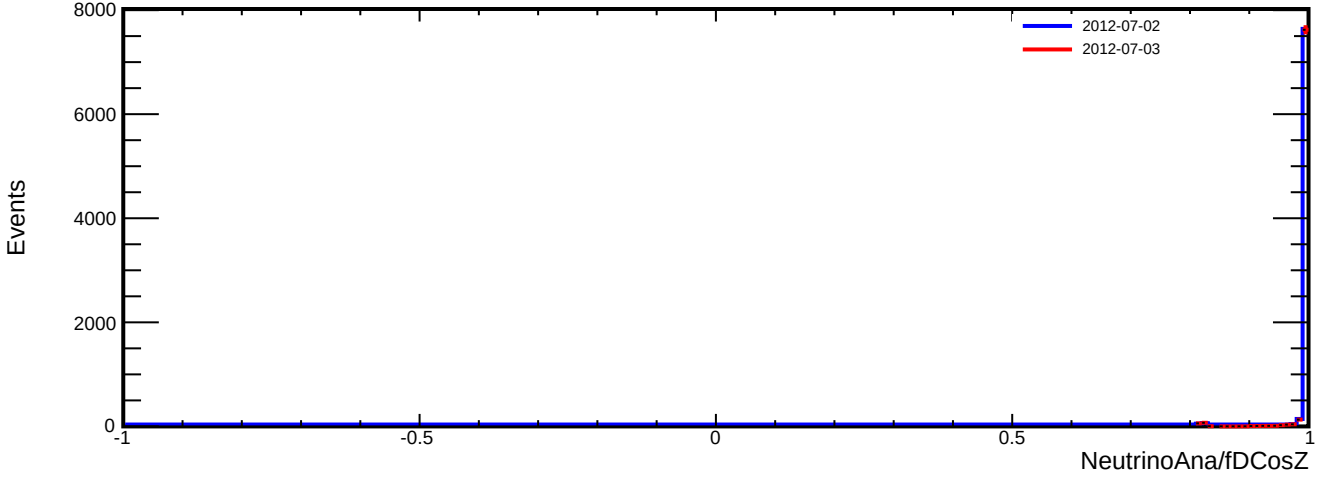

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
1000
2000
NeutrinoAna/fVertexZ

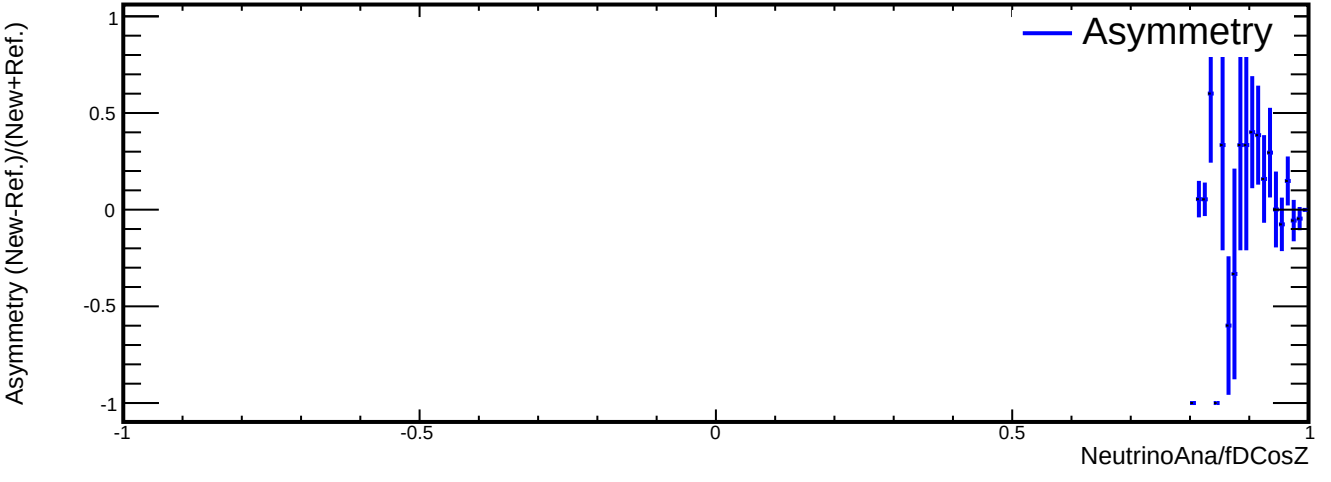

Events
5000
4000
3000
2000
1000
0
-1
-0.5
0
0.5
1
NeutrinoAna/fDCosX
2012-07-02
2012-07-03

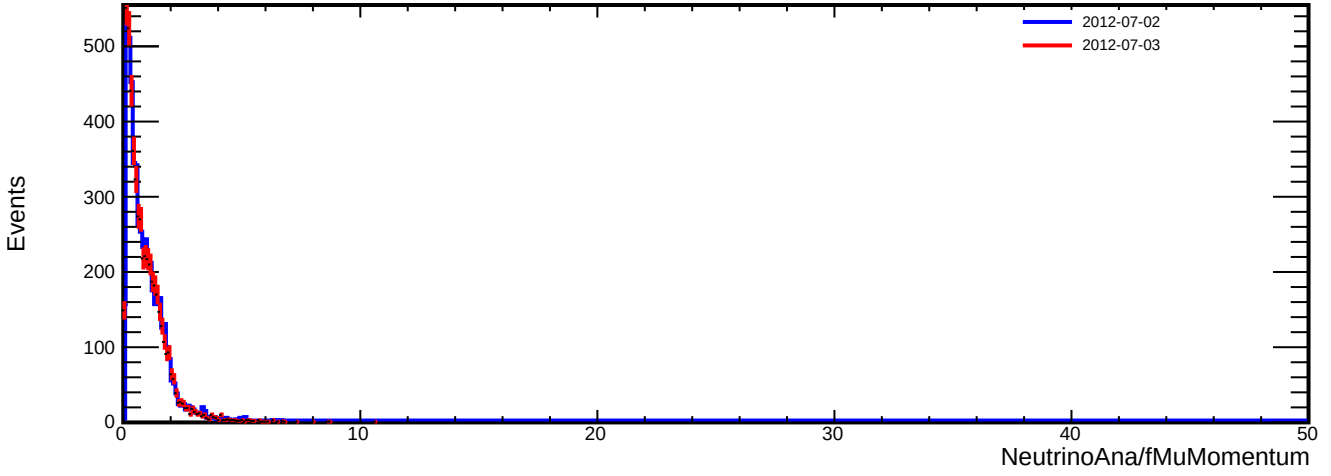

Asymmetry (New-Ref.)/(New+Ref.)
0
-0.2
-0.4
-0.6
-0.8
-1
-1
-0.5
0
0.5
1
NeutrinoAna/fDCosX
Asymmetry

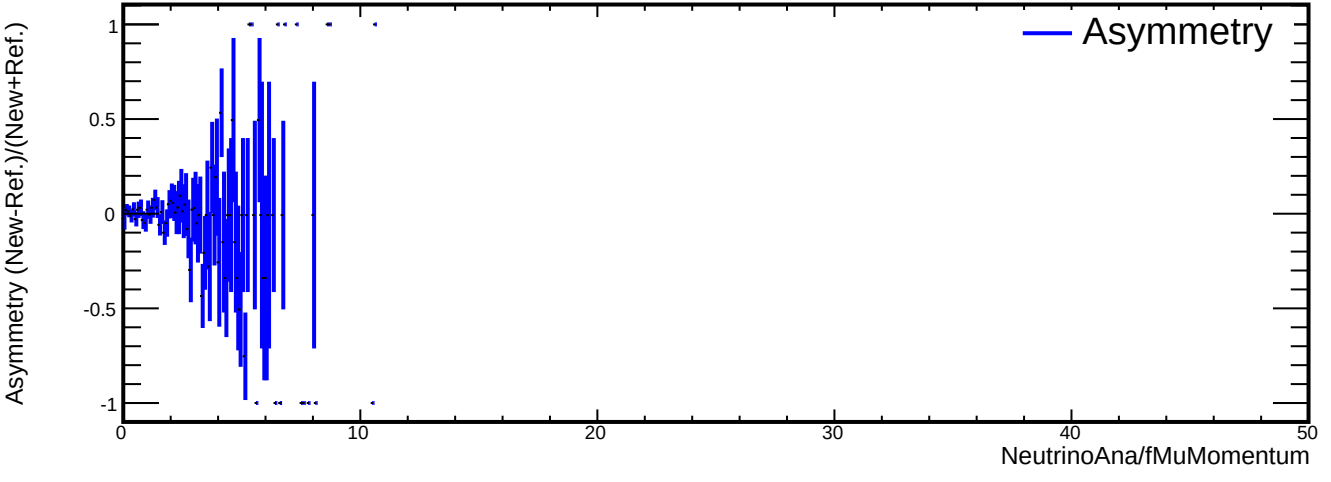

2012-07-02
2012-07-03
Events
4000
3000
2000
1000
0
-1
-0.5
0
0.5
1
NeutrinoAna/fDCosY

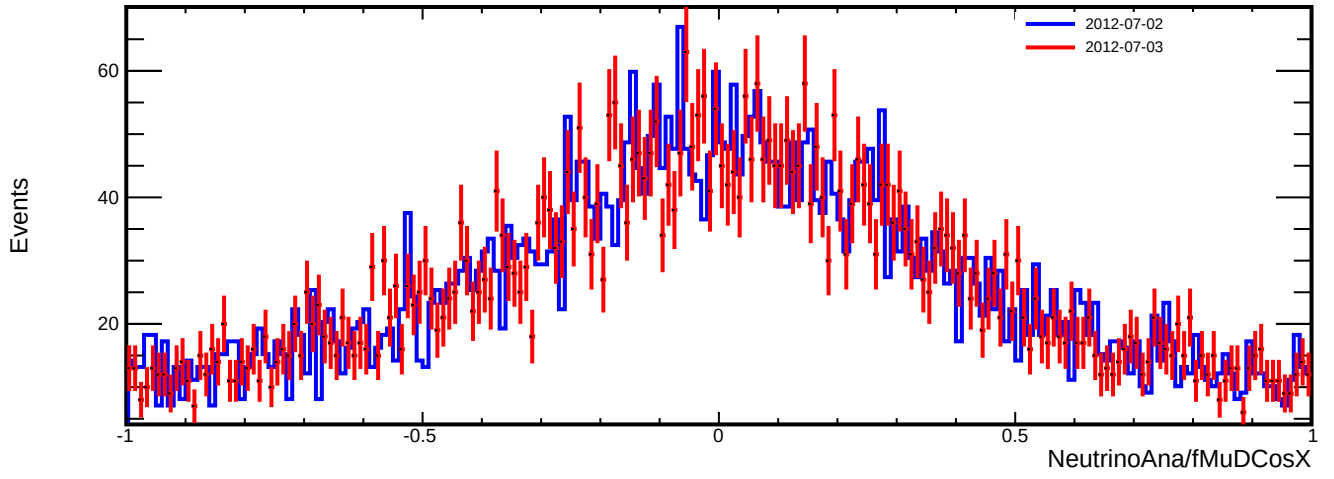

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
NeutrinoAna/fDCosY

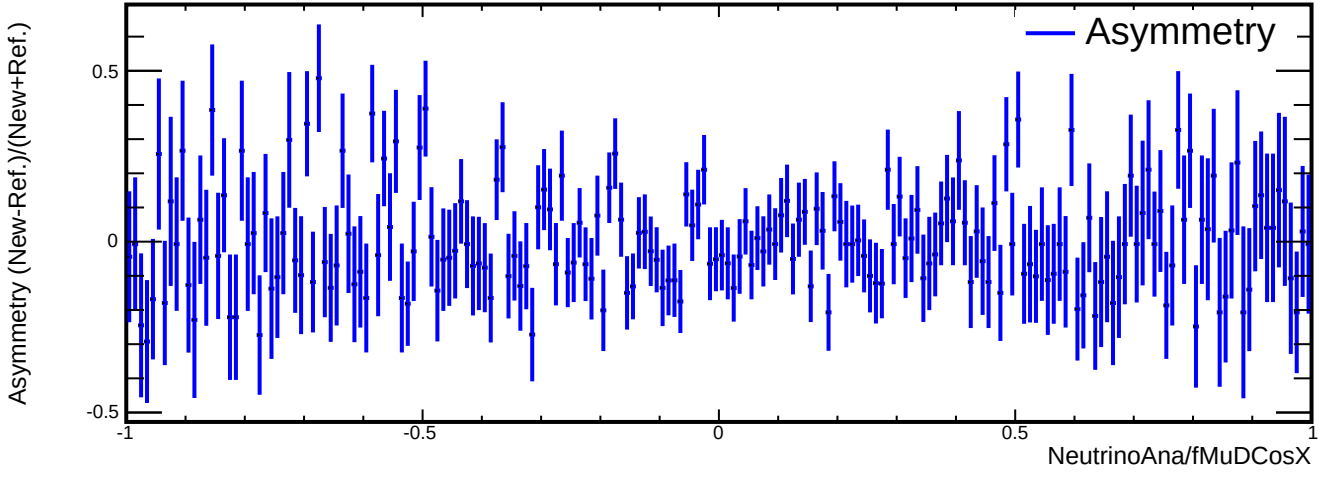

8000
6000
4000
2000
0
Events
-1
-0.5
0
0.5
1
NeutrinoAna/fDCosZ
2012-07-02
2012-07-03

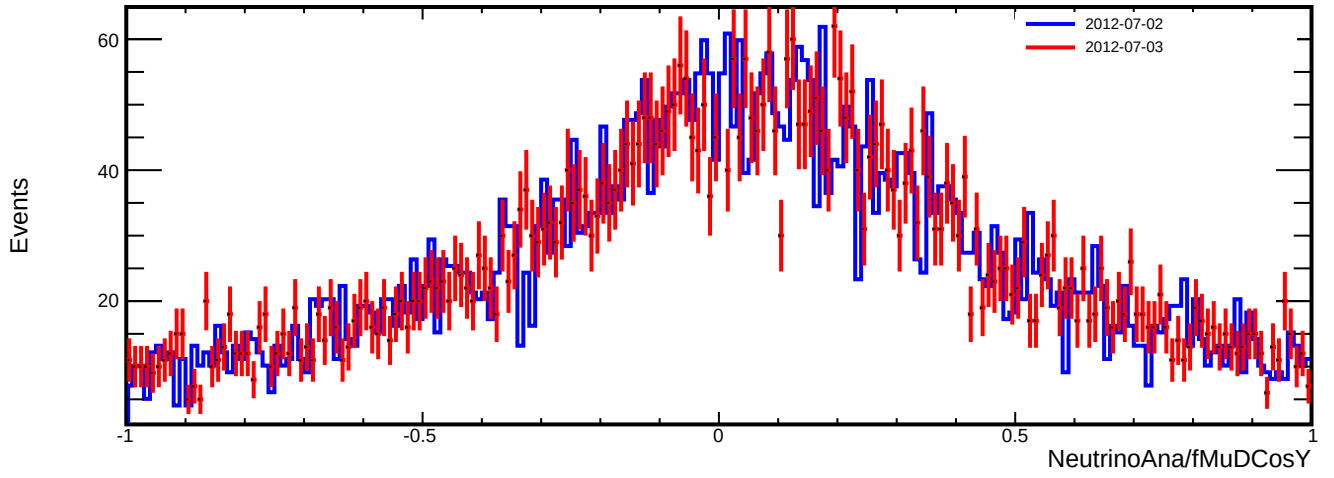

1
0.5
0
-0.5
-1
Asymmetry (New-Ref.)/(New+Ref.)
-1
-0.5
0
0.5
1
NeutrinoAna/fDCosZ
Asymmetry

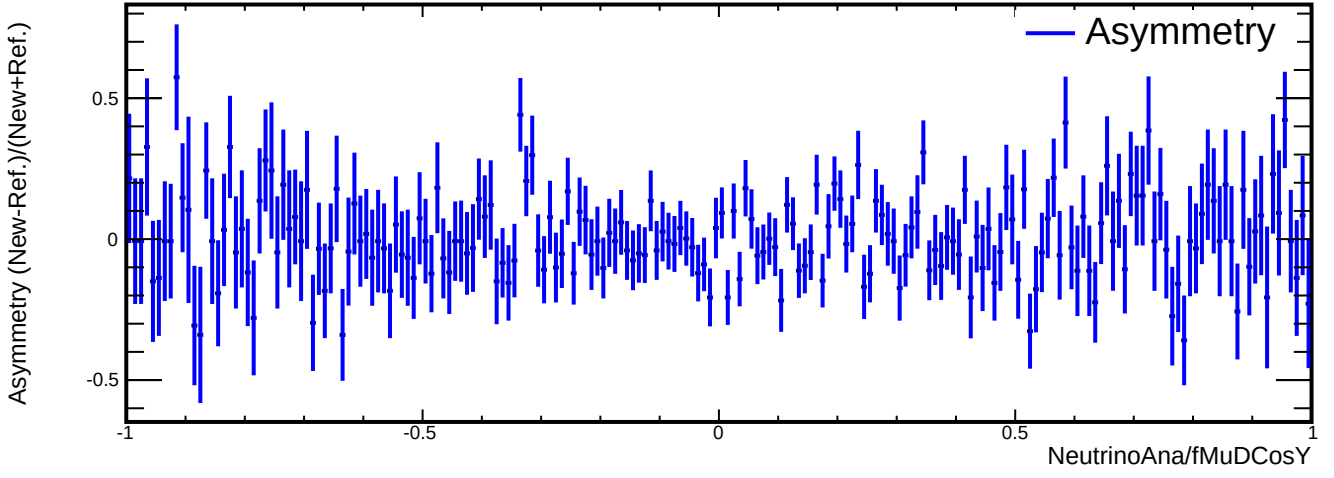

2012-07-02
2012-07-03
Events
500
400
300
200
100
0
0
10
20
30
40
50
NeutrinoAna/fMuMomentum

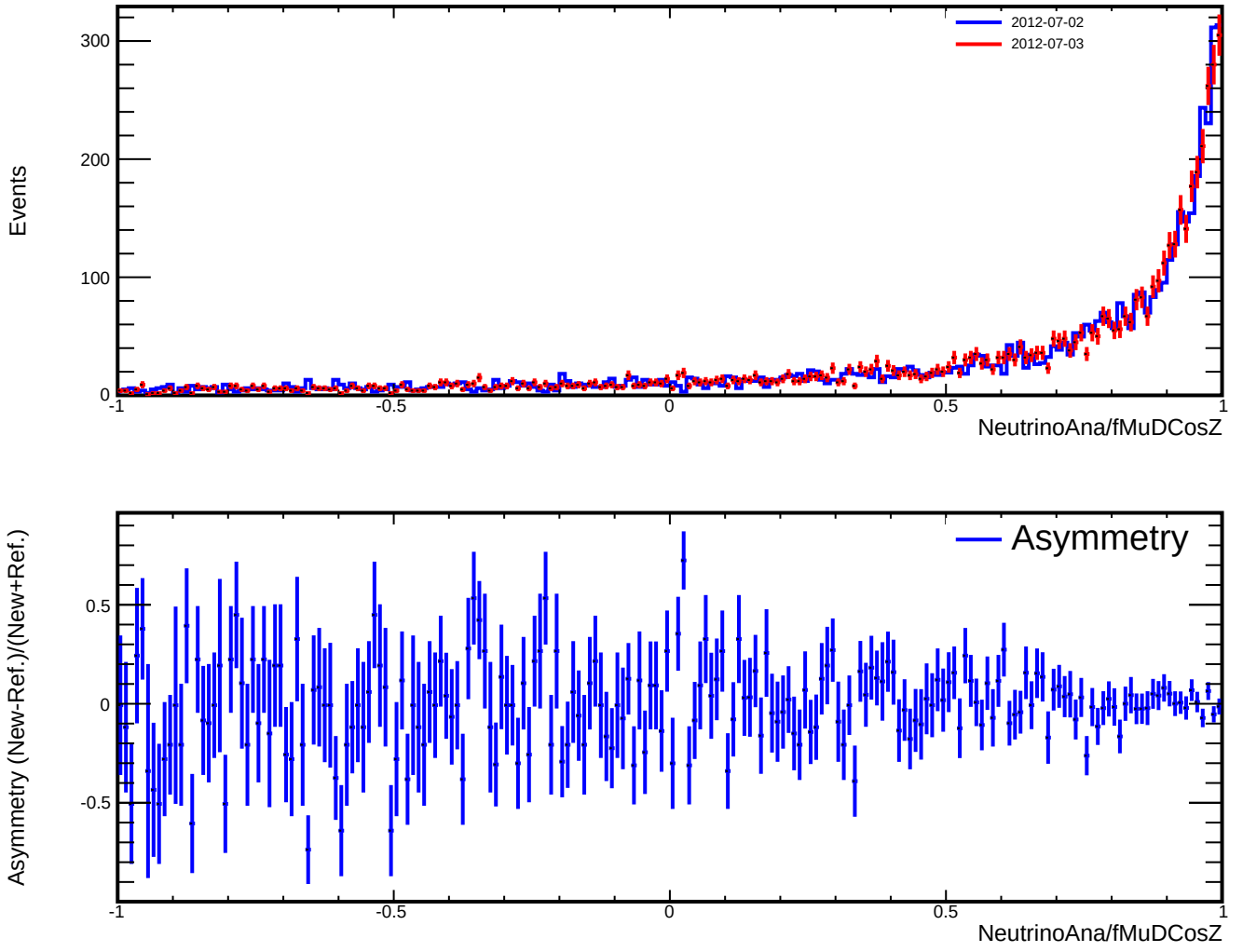

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
10
20
30
40
50
NeutrinoAna/fMuMomentum

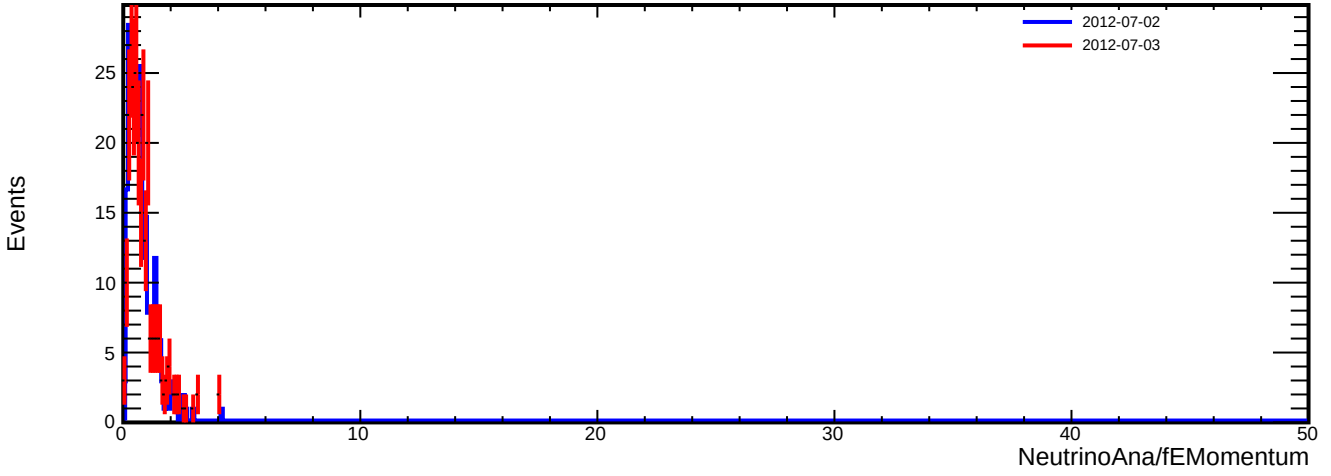

2012-07-02
2012-07-03
Events
60
40
20
-1
-0.5
0
0.5
1
NeutrinoAna/fMuDCosX

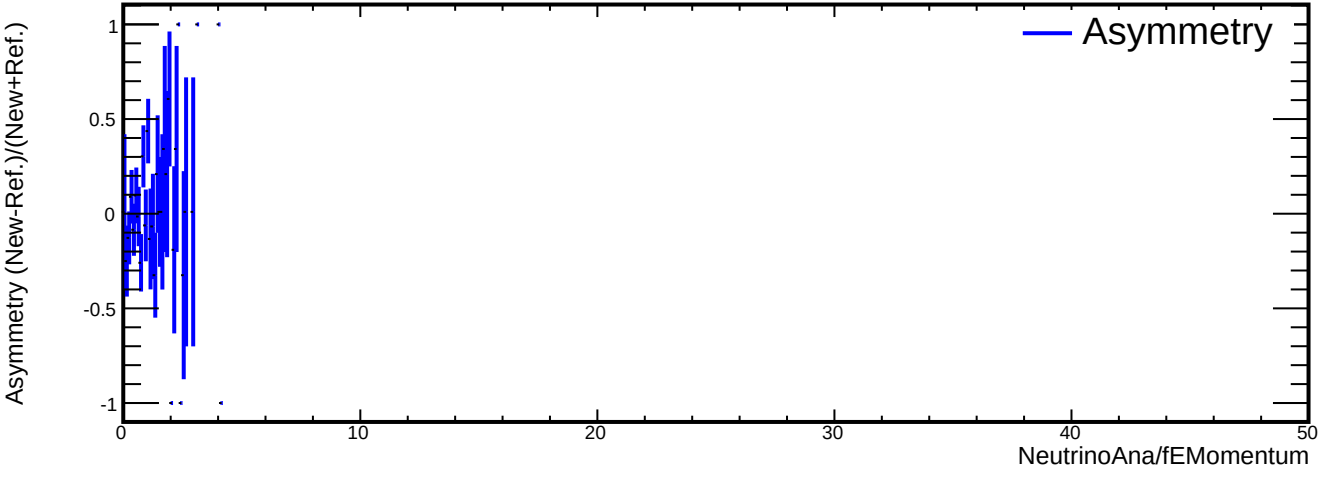

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-1
-0.5
0
0.5
1
NeutrinoAna/fMuDCosX

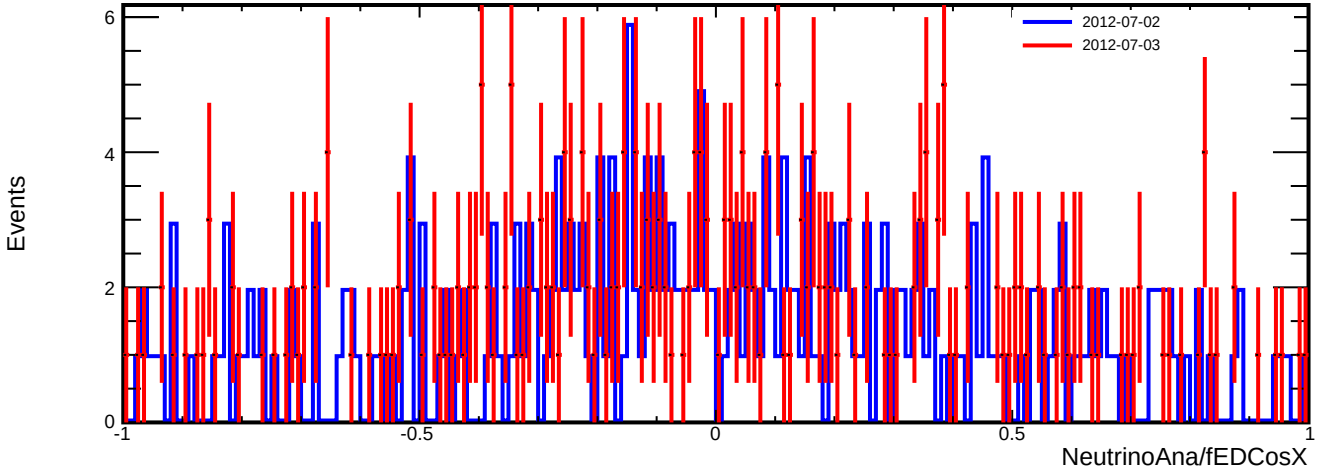

2012-07-02
2012-07-03
Events
60
40
20
-1
-0.5
0
0.5
1
NeutrinoAna/fMuDCosY

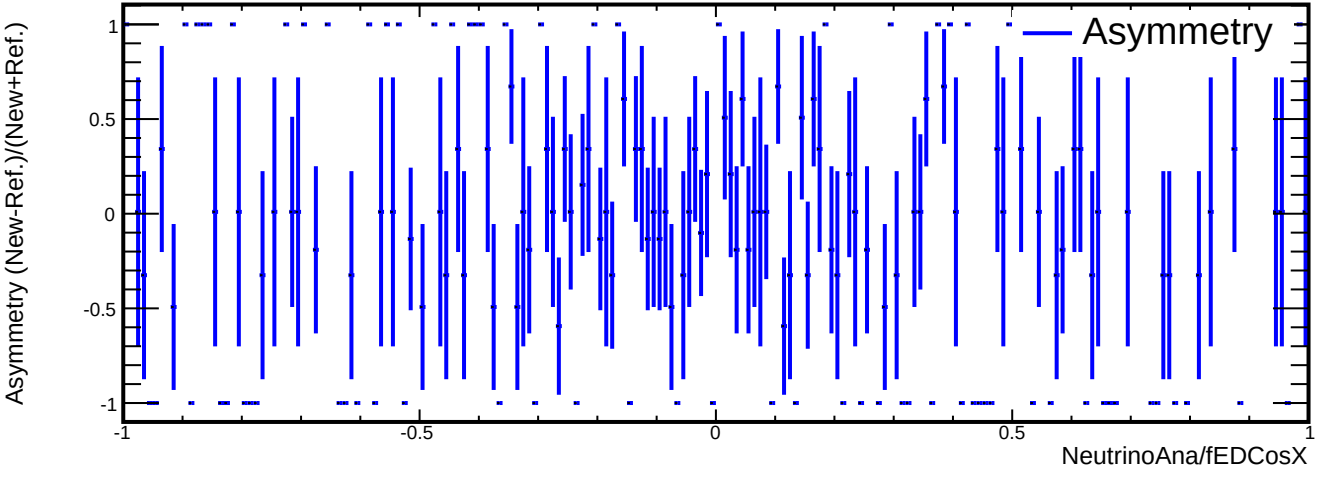

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-1
-0.5
0
0.5
1
NeutrinoAna/fMuDCosY

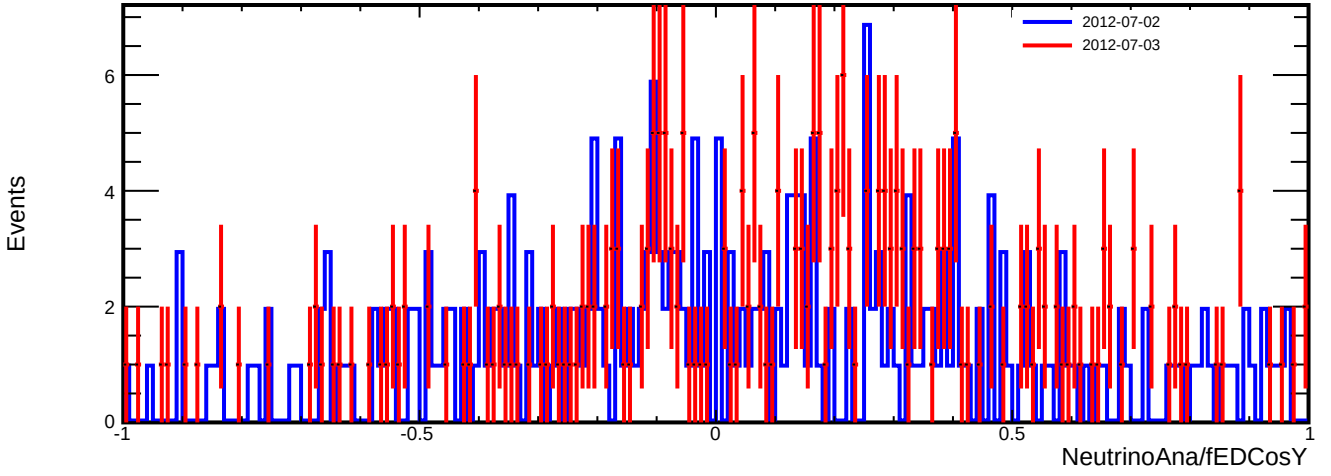

2012-07-02
2012-07-03
Events
300
200
100
0
-1
-0.5
0
0.5
1
NeutrinoAna/fMuDCosZ
Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-1
-0.5
0
0.5
1
NeutrinoAna/fMuDCosZ

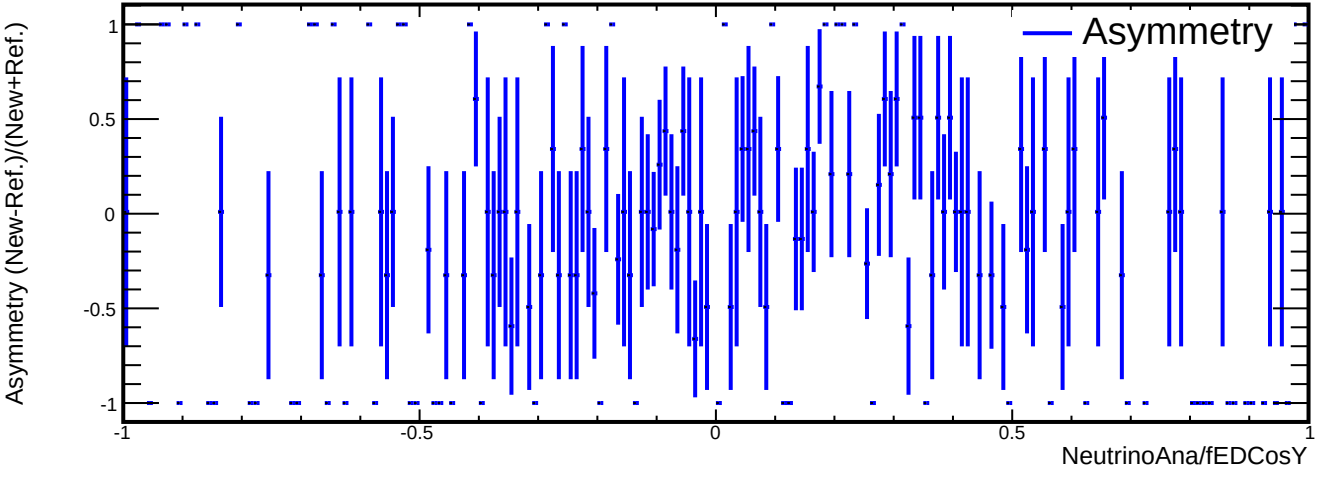

2012-07-02
2012-07-03
Events
0
5
10
15
20
25
0
10
20
30
40
50
NeutrinoAna/fEMomentum

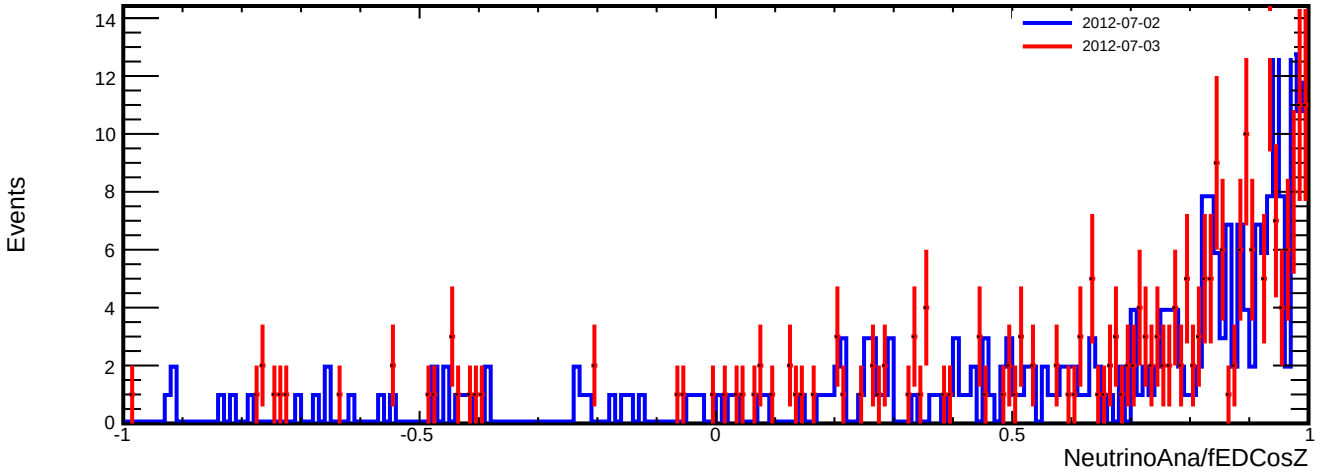

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
10
20
30
40
50
NeutrinoAna/fEMomentum

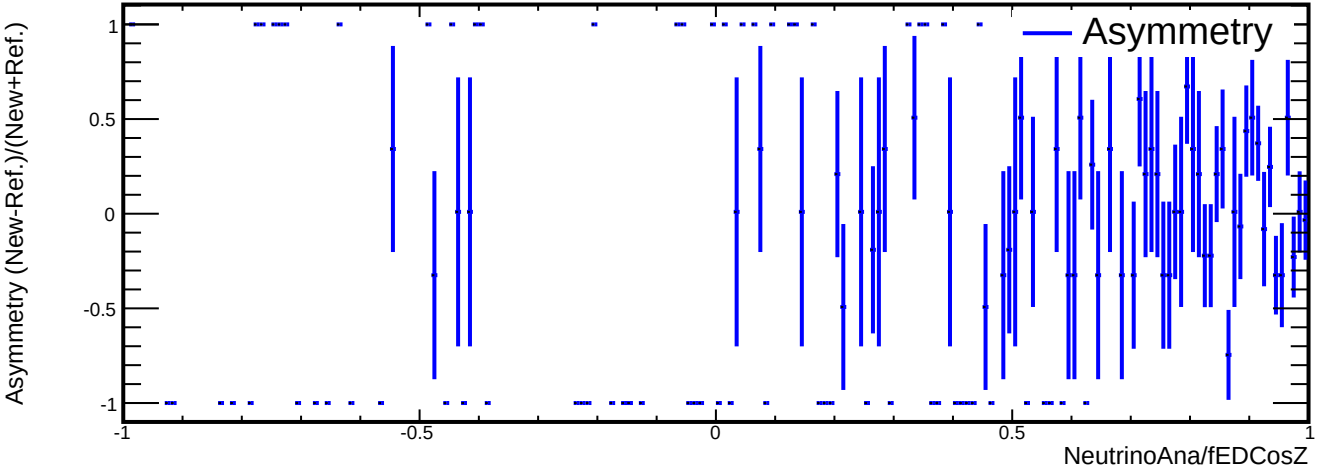

2012-07-02
2012-07-03
Events
NeutrinoAna/fEDCosX

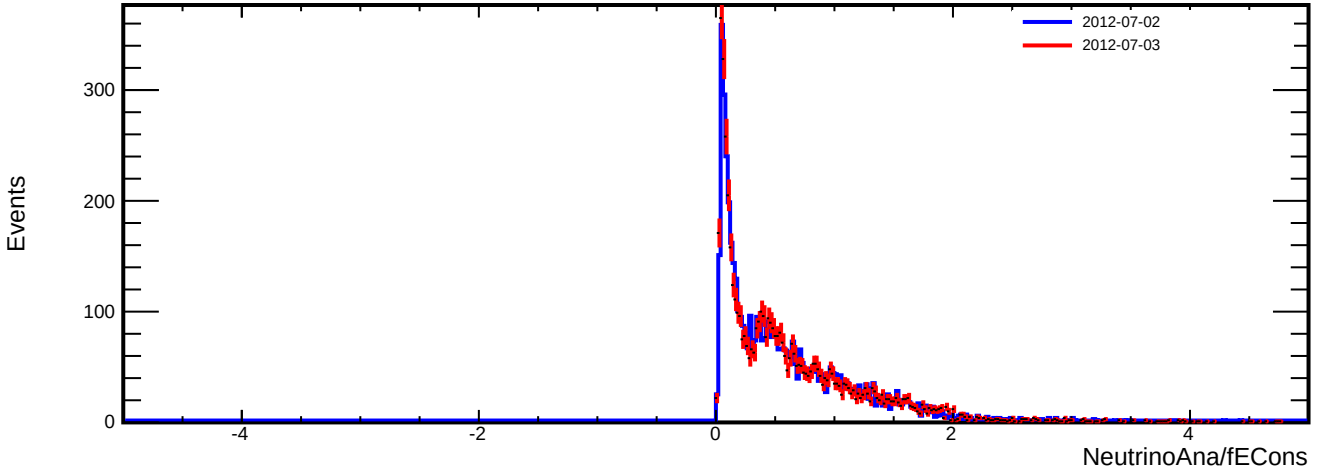

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
NeutrinoAna/fEDCosX

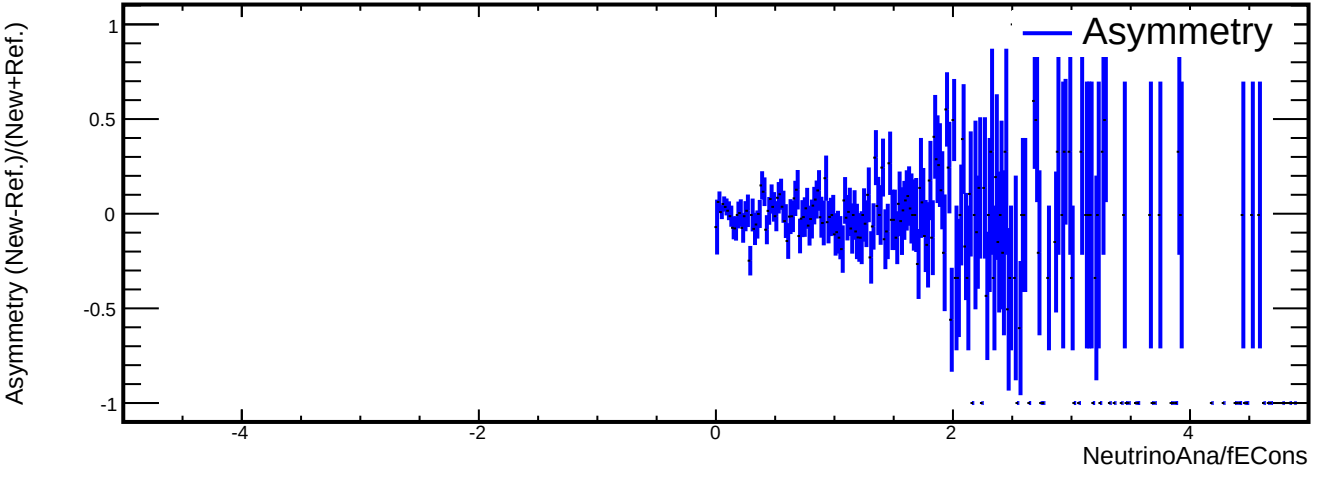

2012-07-02
2012-07-03
Events
0
2
4
6
-1
-0.5
0
0.5
1
NeutrinoAna/fEDCosY

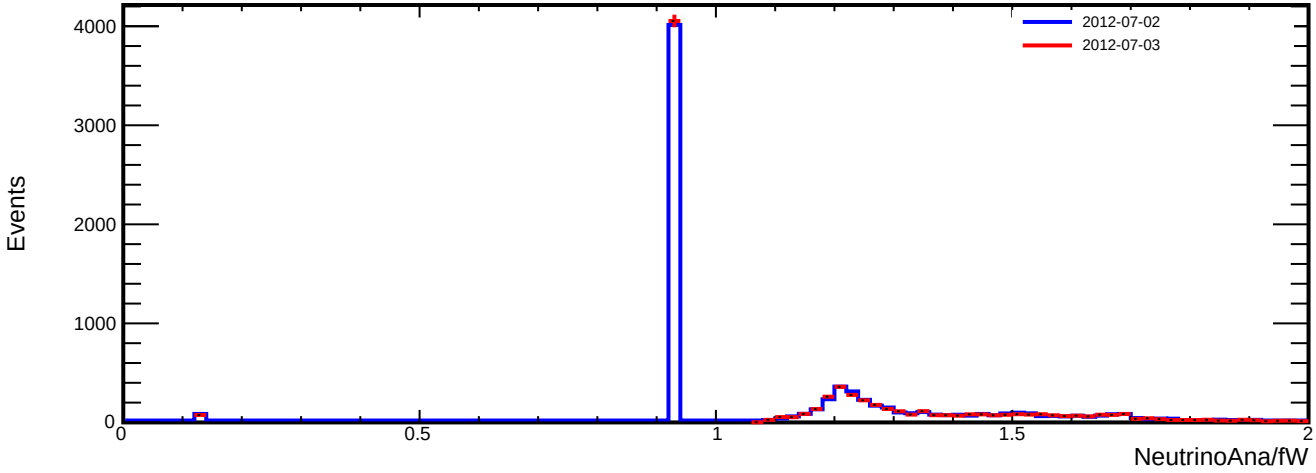

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
NeutrinoAna/fEDCosY

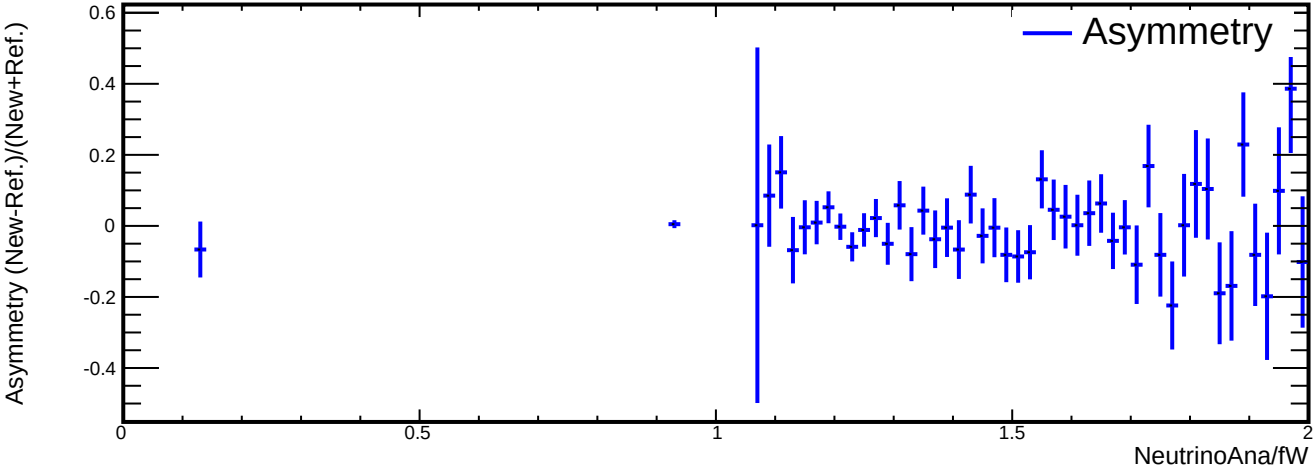

2012-07-02
2012-07-03
Events
NeutrinoAna/fEDCosZ

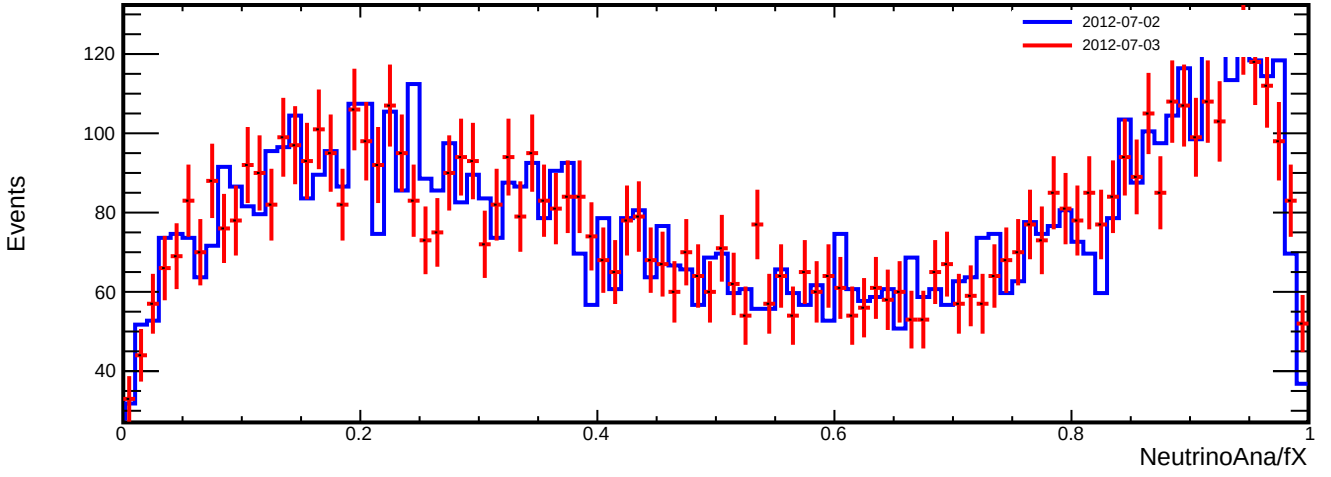

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
NeutrinoAna/fEDCosZ

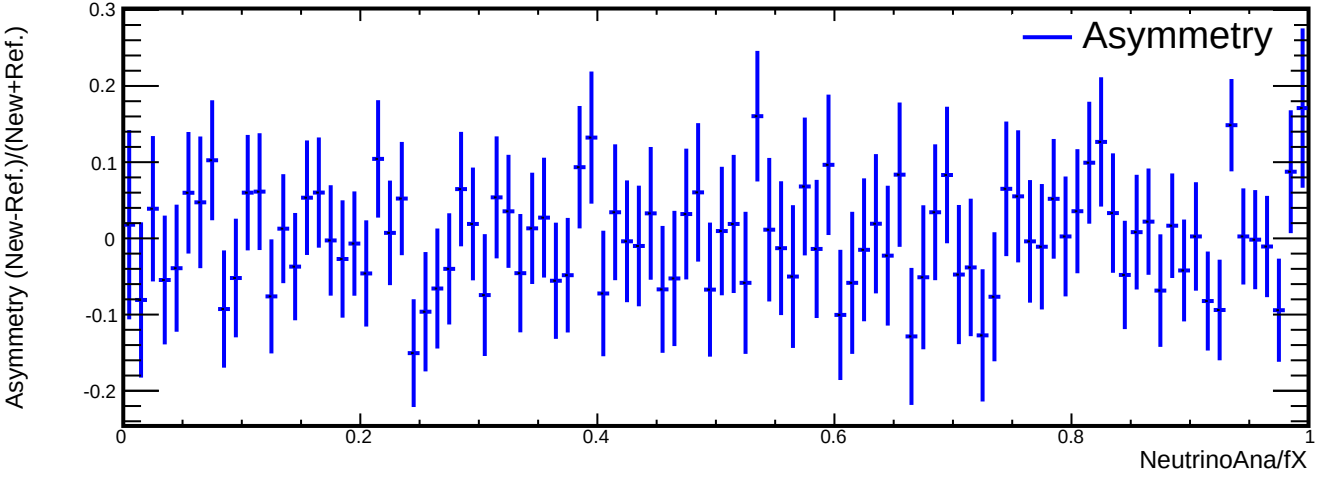

2012-07-02
2012-07-03
Events
300
200
100
0
-4
-2
0
2
4
NeutrinoAna/fECons

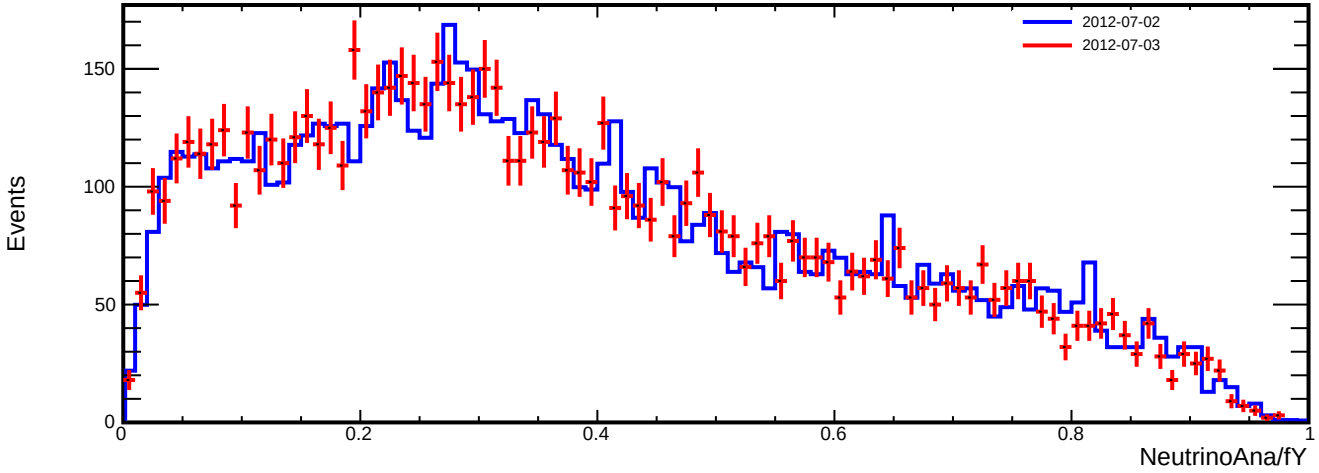

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-4
-2
0
2
4
NeutrinoAna/fECons

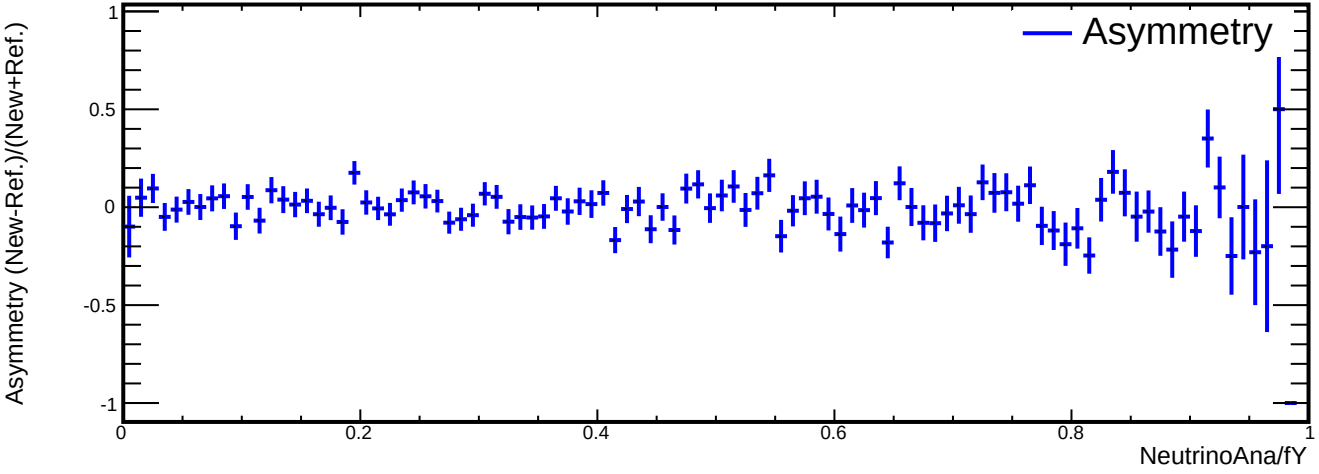

2012-07-02
2012-07-03
Events
4000
3000
2000
1000
0
0
0.5
1
1.5
2
NeutrinoAna/fW

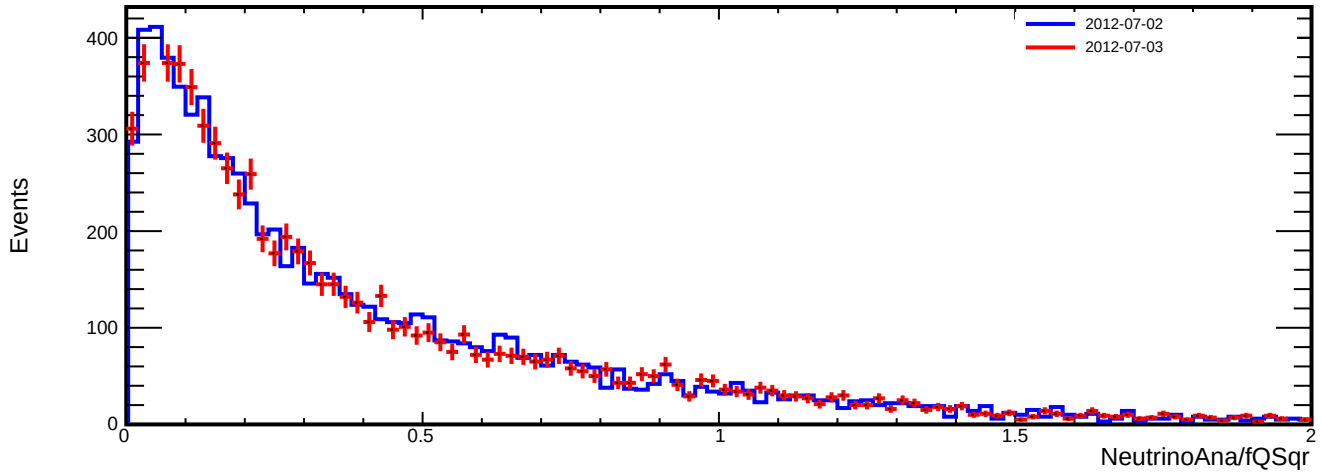

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.6
0.4
0.2
0
-0.2
-0.4
0
0.5
1
1.5
2
NeutrinoAna/fW

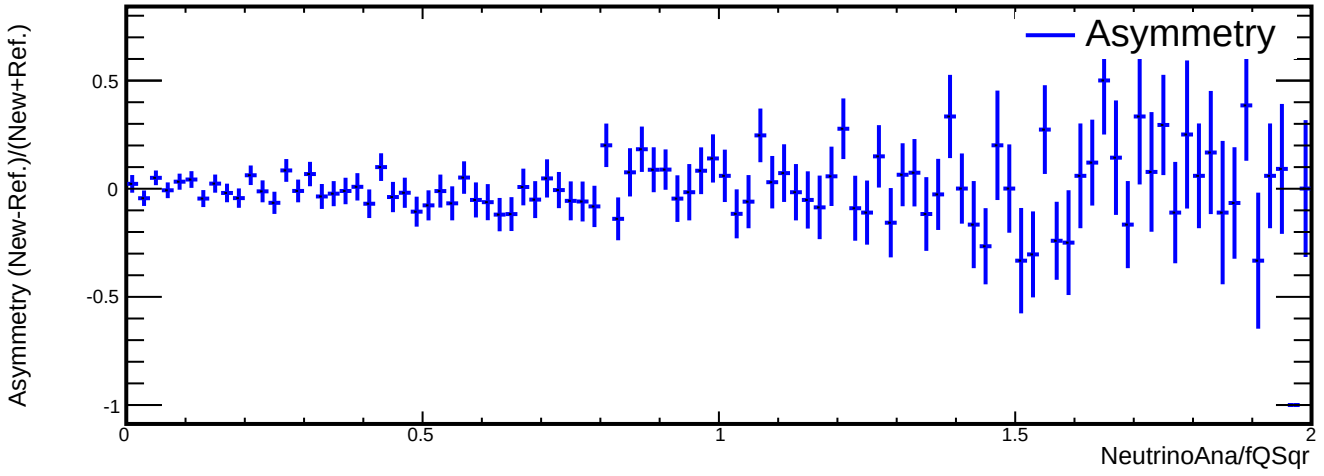

2012-07-02
2012-07-03
Events
120
100
80
60
40
0
0.2
0.4
0.6
0.8
1
NeutrinoAna/fX

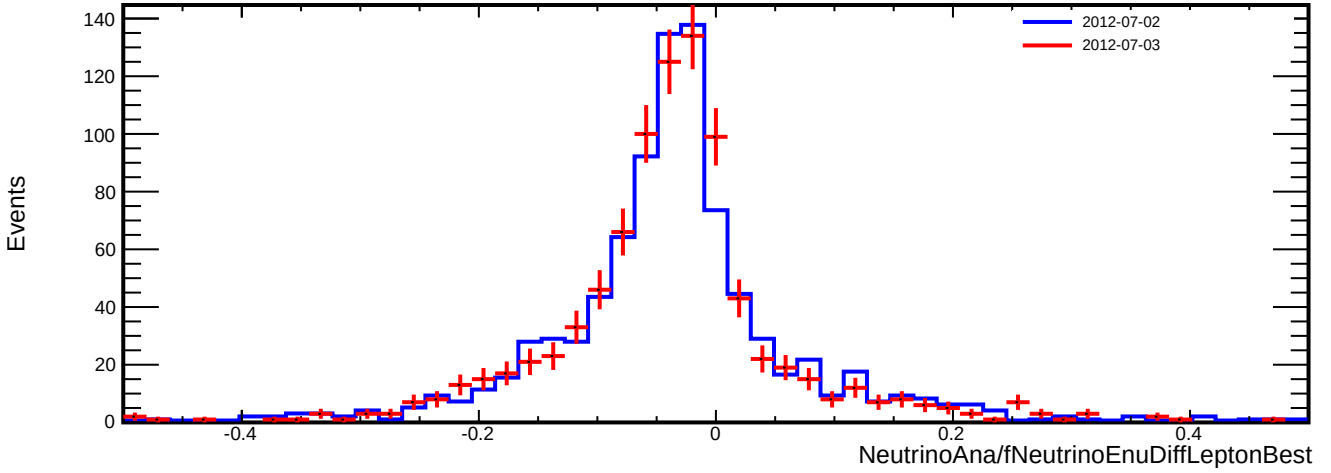

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.3
0.2
0.1
0
-0.1
-0.2
0
0.2
0.4
0.6
0.8
1
NeutrinoAna/fX

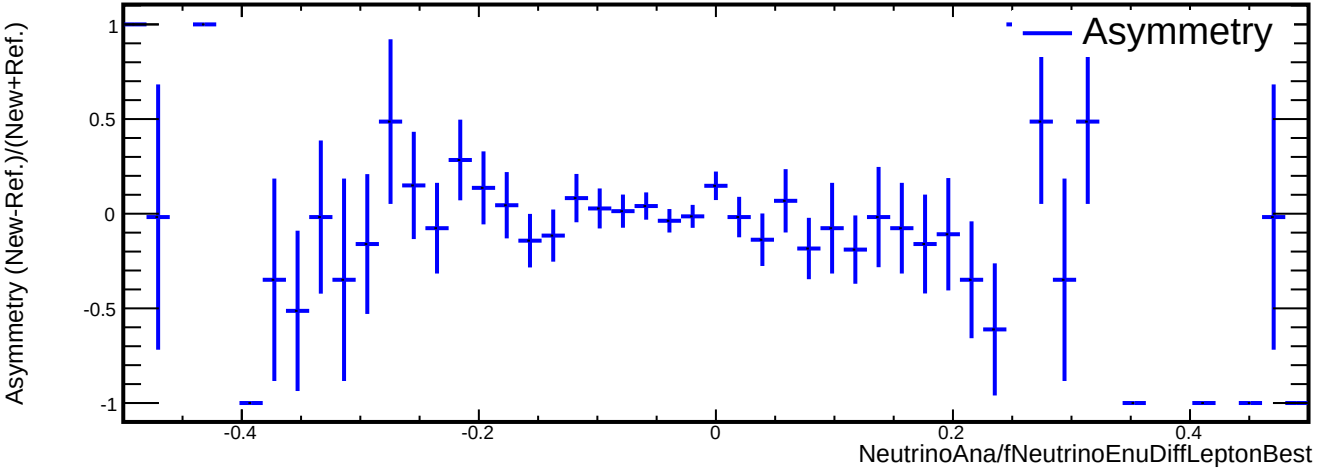

2012-07-02
2012-07-03
Events
150
100
50
0
0
0.2
0.4
0.6
0.8
1
NeutrinoAna/fY

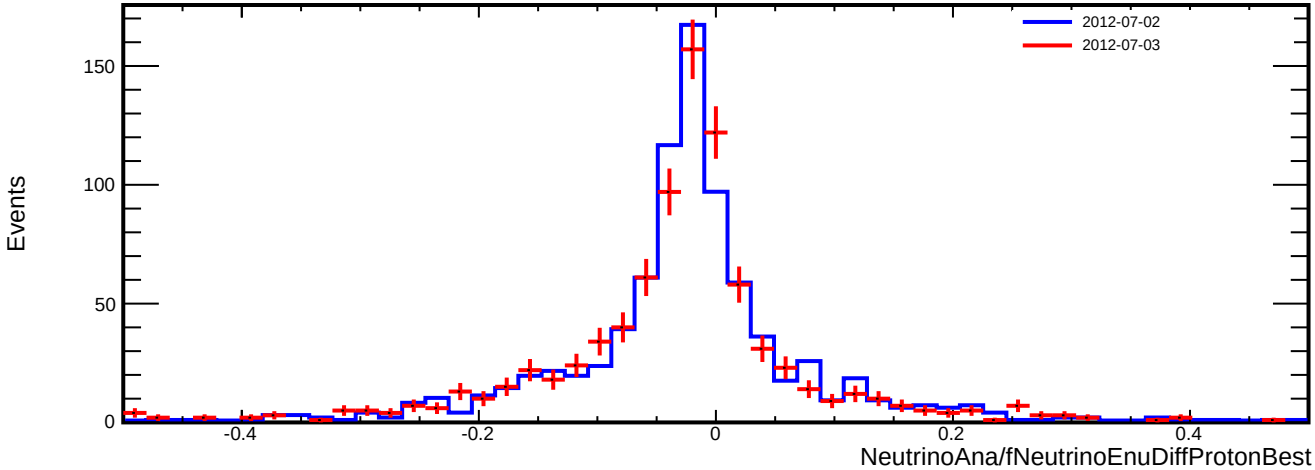

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
0.2
0.4
0.6
0.8
1
NeutrinoAna/fY

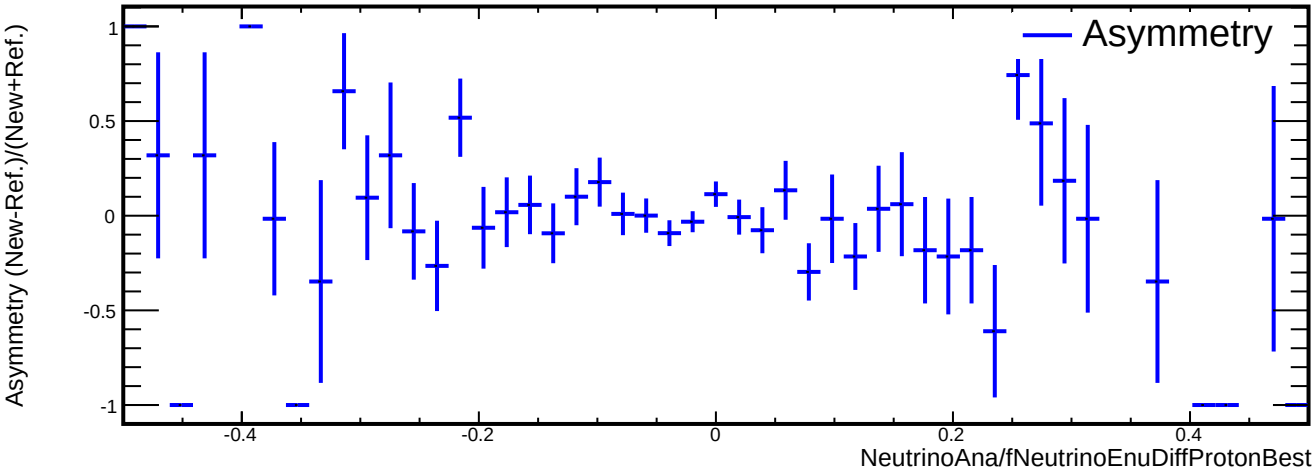

2012-07-02
2012-07-03
Events
400
300
200
100
0
0
0.5
1
1.5
2
NeutrinoAna/fQSqr

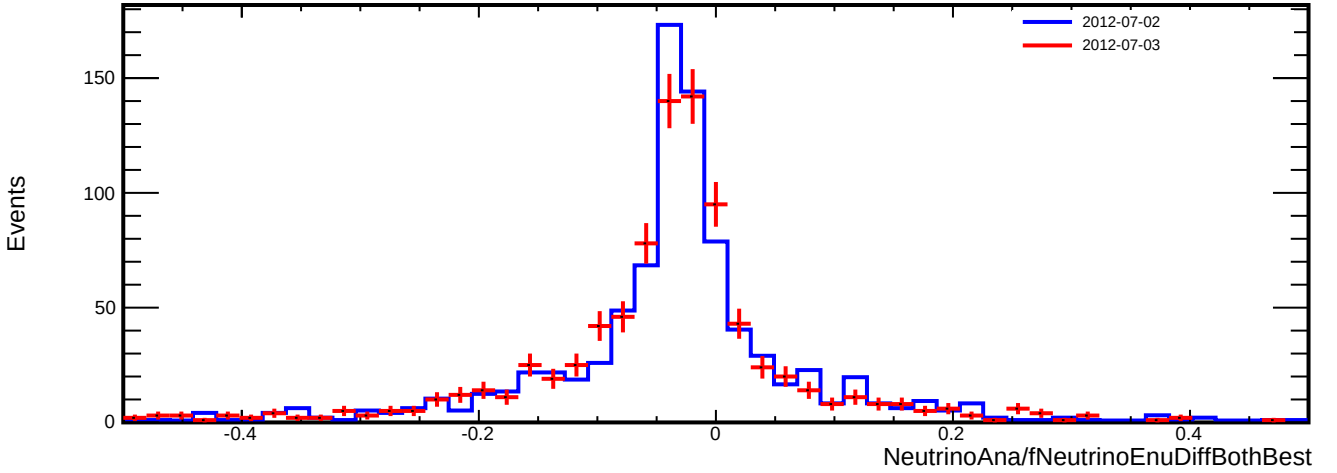

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-1
0
0.5
1
1.5
2
NeutrinoAna/fQSqr

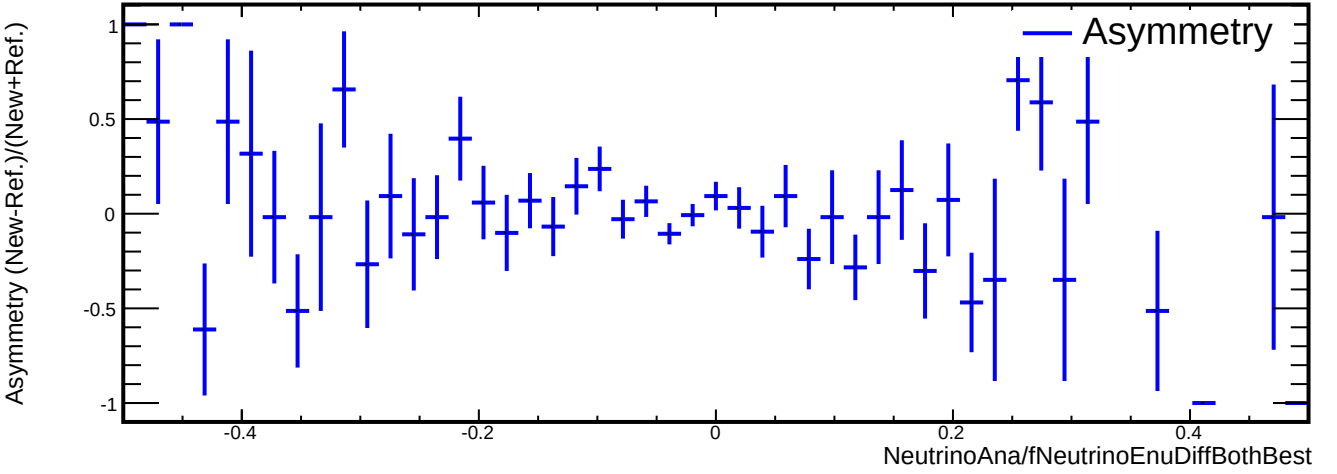

2012-07-02
2012-07-03
Events
140
120
100
80
60
40
20
0
-0.4
-0.2
0
0.2
0.4
NeutrinoAna/fNeutrinoEnuDiffLeptonBest

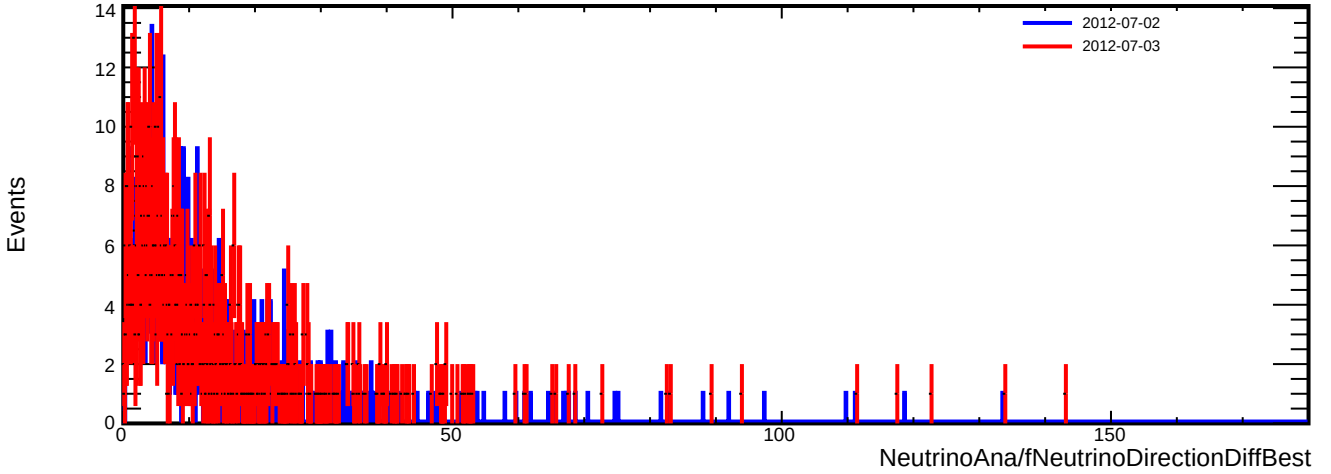

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-0.4
-0.2
0
0.2
0.4
NeutrinoAna/fNeutrinoEnuDiffLeptonBest

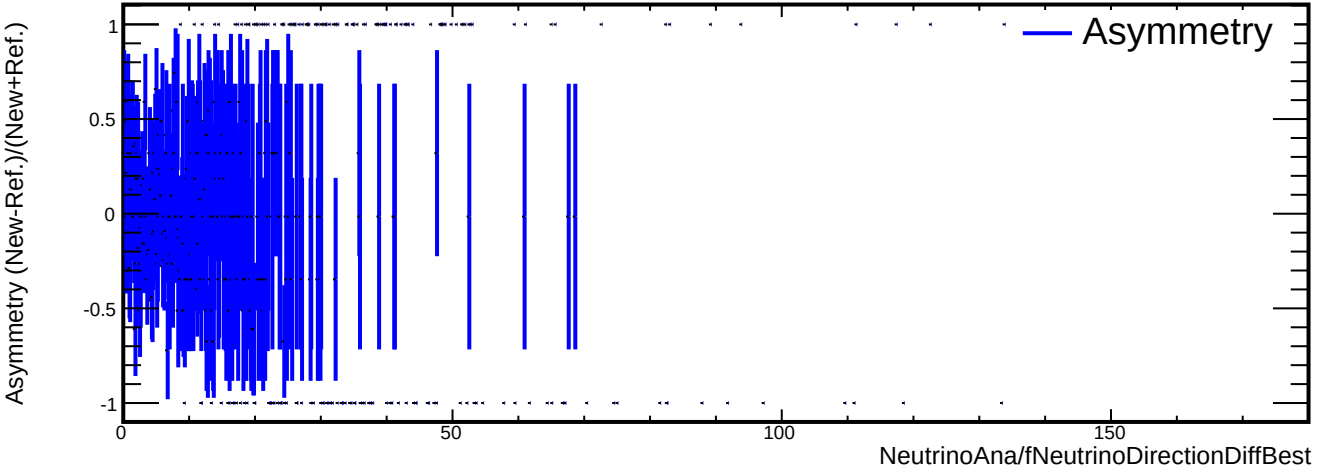

2012-07-02
2012-07-03
Events
150
100
50
0
-0.4
-0.2
0
0.2
0.4
NeutrinoAna/fNeutrinoEnuDiffProtonBest

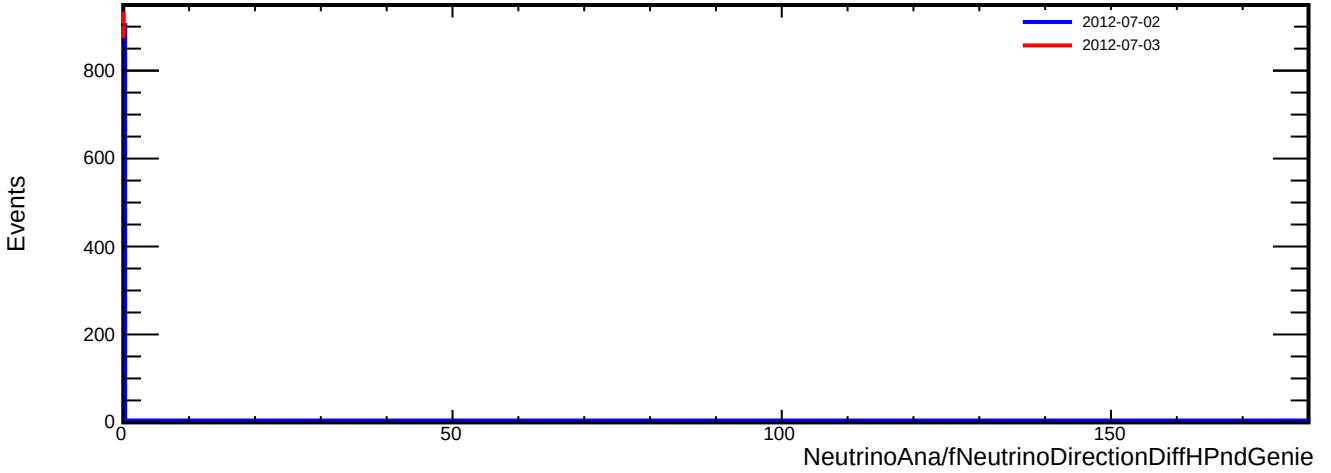

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-0.4
-0.2
0
0.2
0.4
NeutrinoAna/fNeutrinoEnuDiffProtonBest

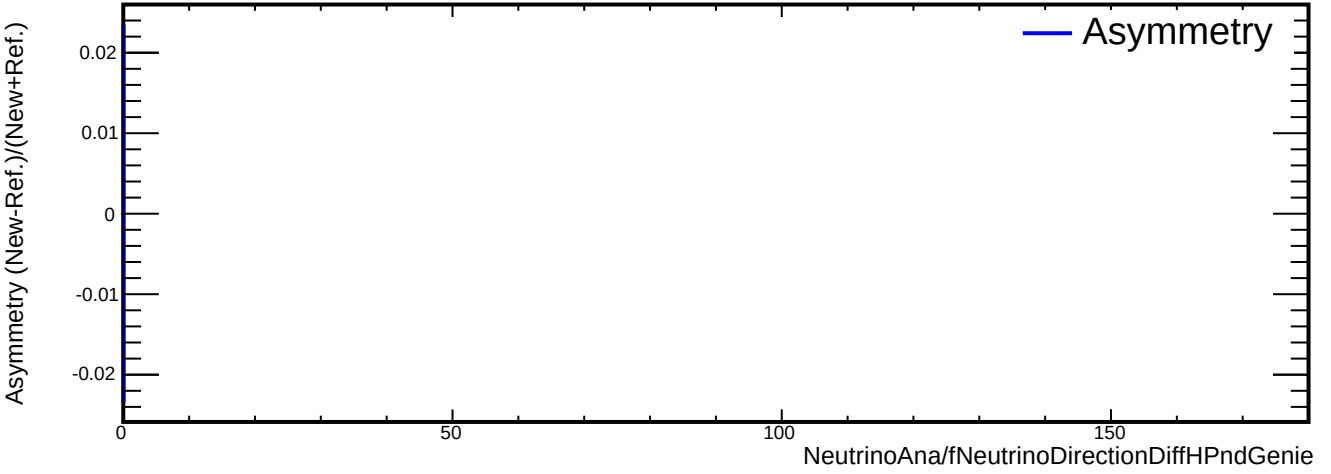

2012-07-02
2012-07-03
Events
150
100
50
0
-0.4
-0.2
0
0.2
0.4
NeutrinoAna/fNeutrinoEnuDiffBothBest

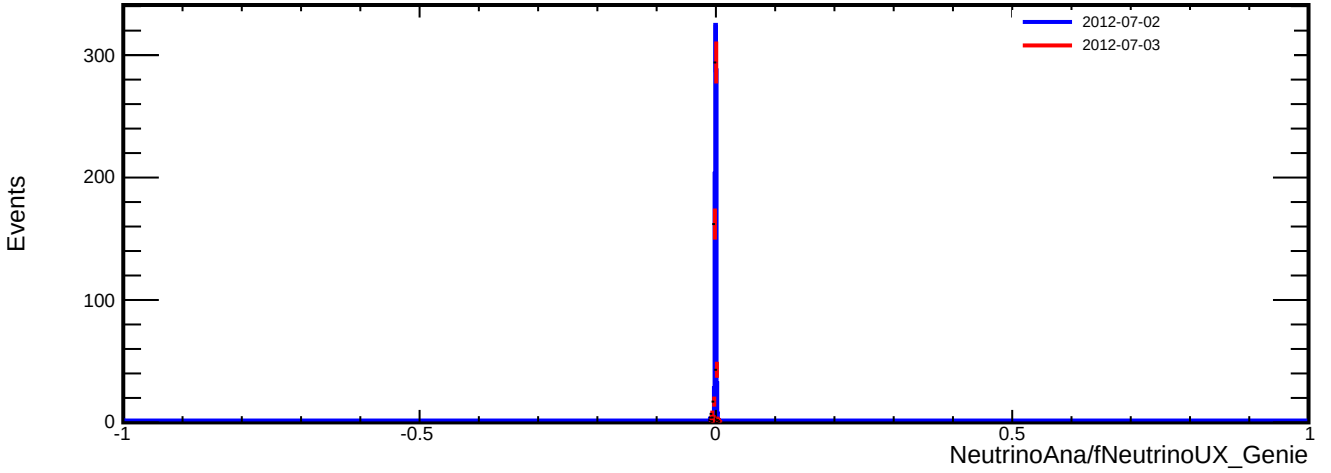

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-0.4
-0.2
0
0.2
0.4
NeutrinoAna/fNeutrinoEnuDiffBothBest

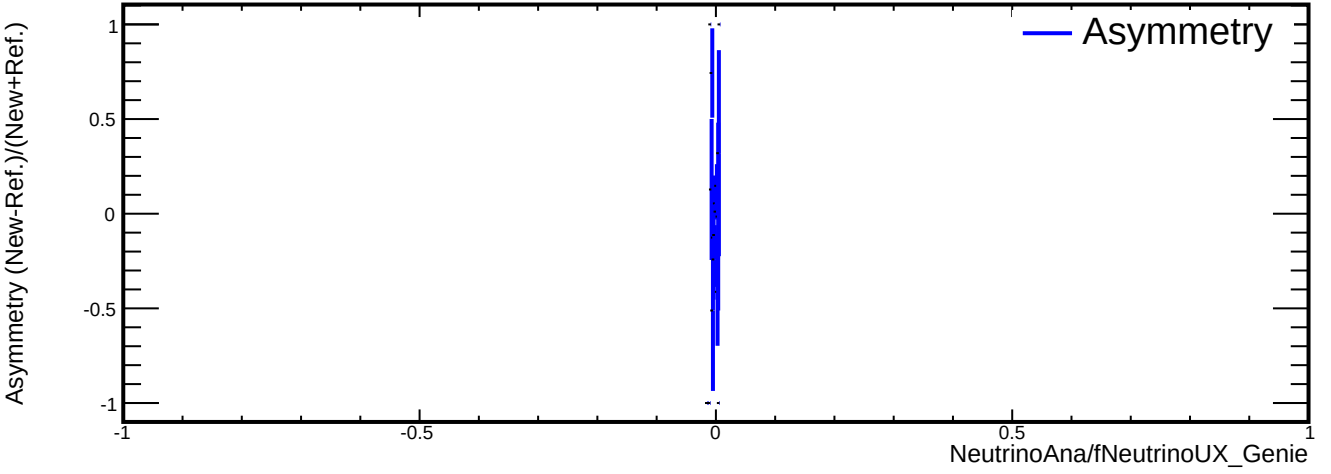

Events
2012-07-02
2012-07-03
NeutrinoAna/fNeutrinoDirectionDiffBest

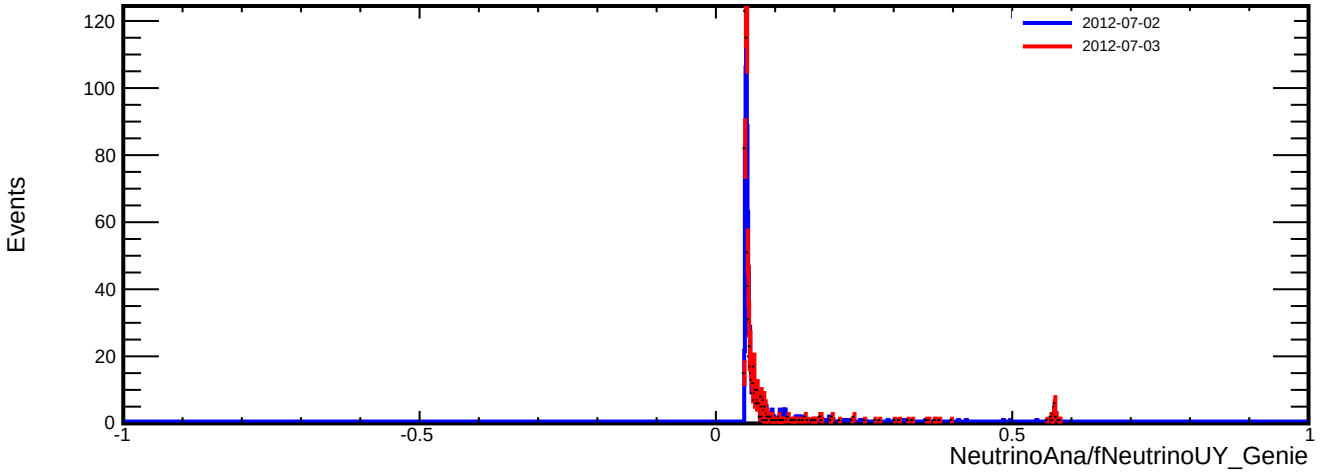

Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
NeutrinoAna/fNeutrinoDirectionDiffBest

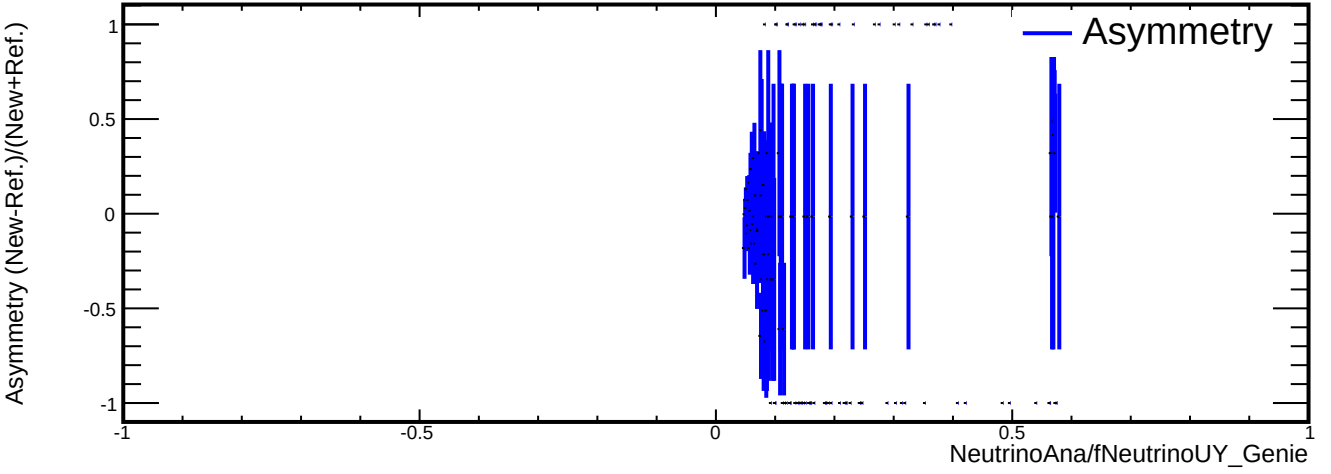

2012-07-02
2012-07-03
Events
800
600
400
200
0
0
50
100
150
NeutrinoAna/fNeutrinoDirectionDiffHPndGenie

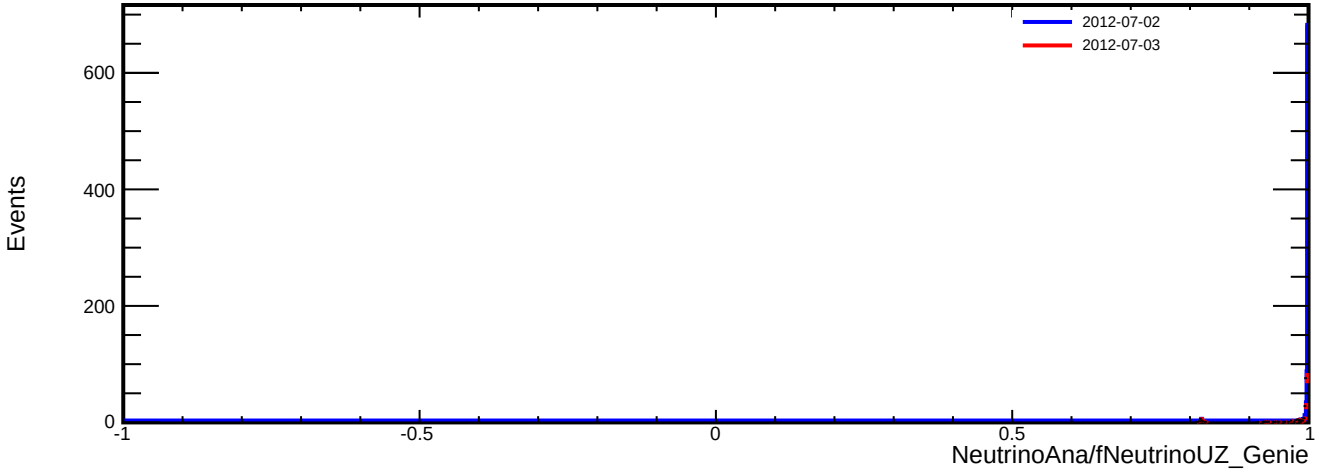

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.02
0.01
0
-0.01
-0.02
0
50
100
150
NeutrinoAna/fNeutrinoDirectionDiffHPndGenie

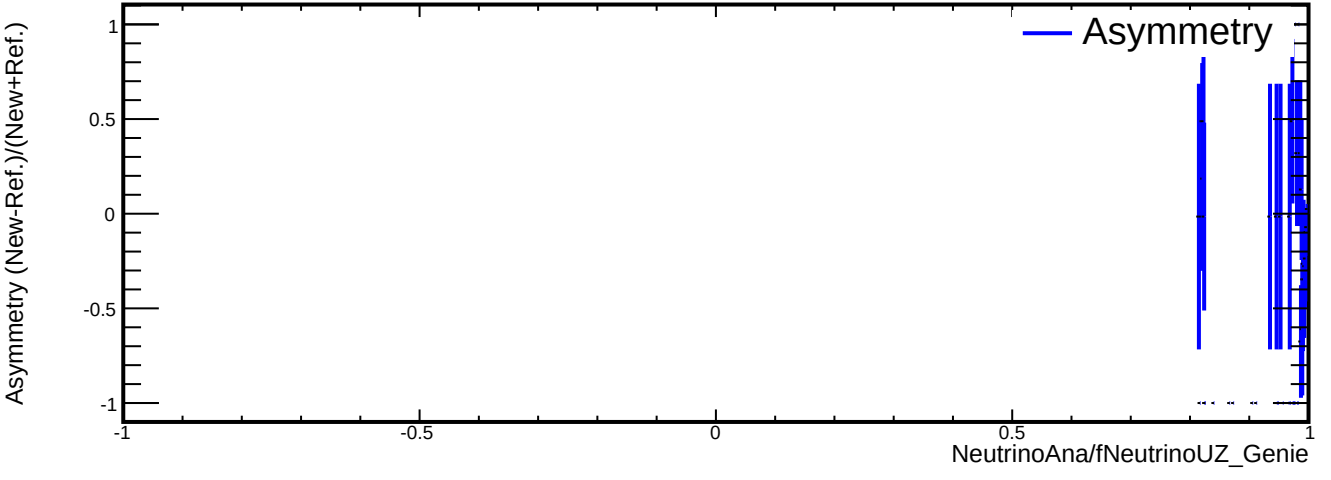

2012-07-02
2012-07-03
Events
300
200
100
0
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUX_Genie

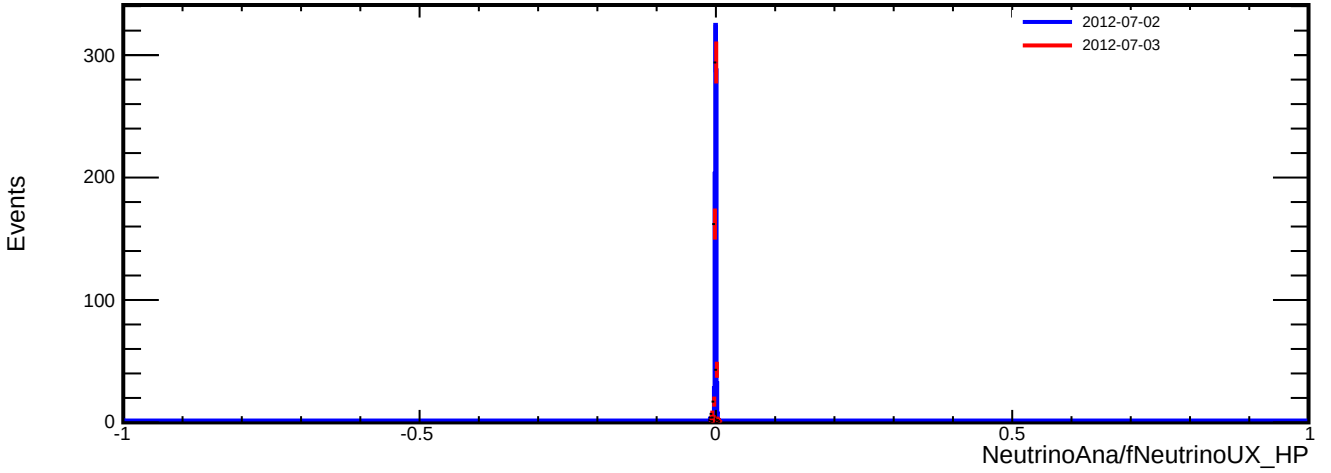

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUX_Genie

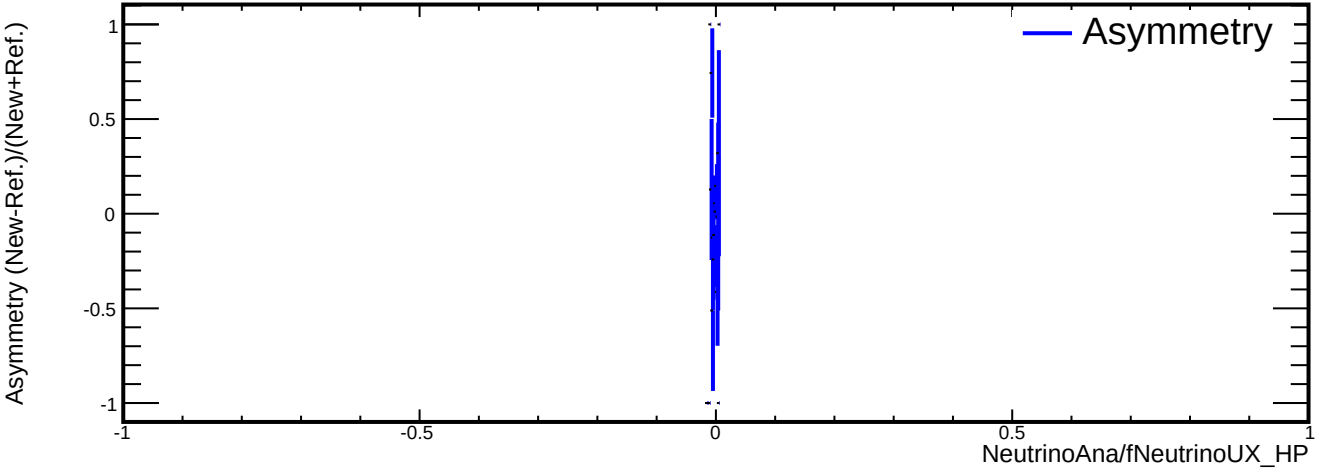

2012-07-02
2012-07-03
Events
120
100
80
60
40
20
0
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUY_Genie

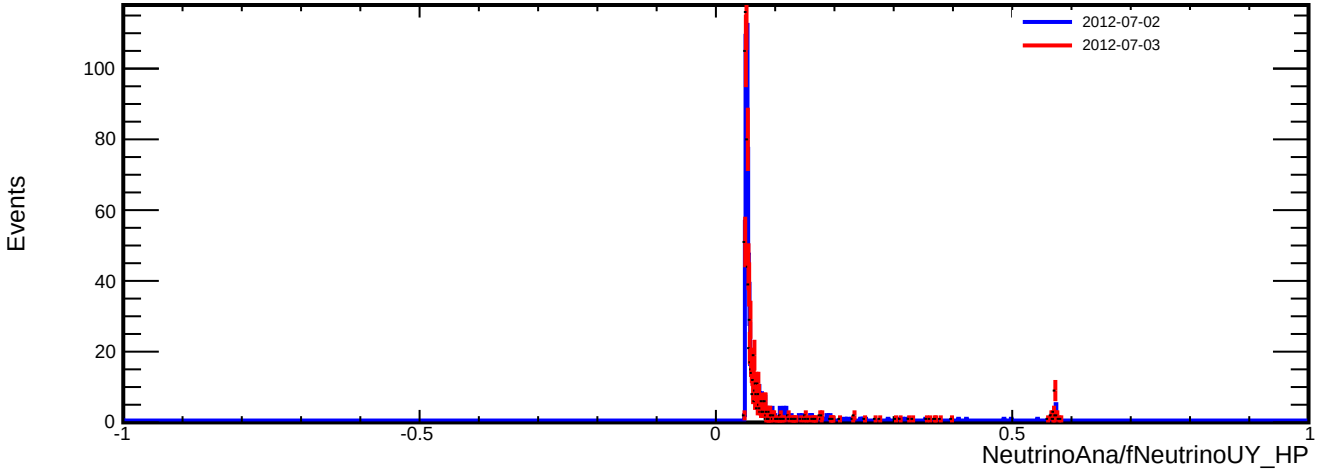

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUY_Genie

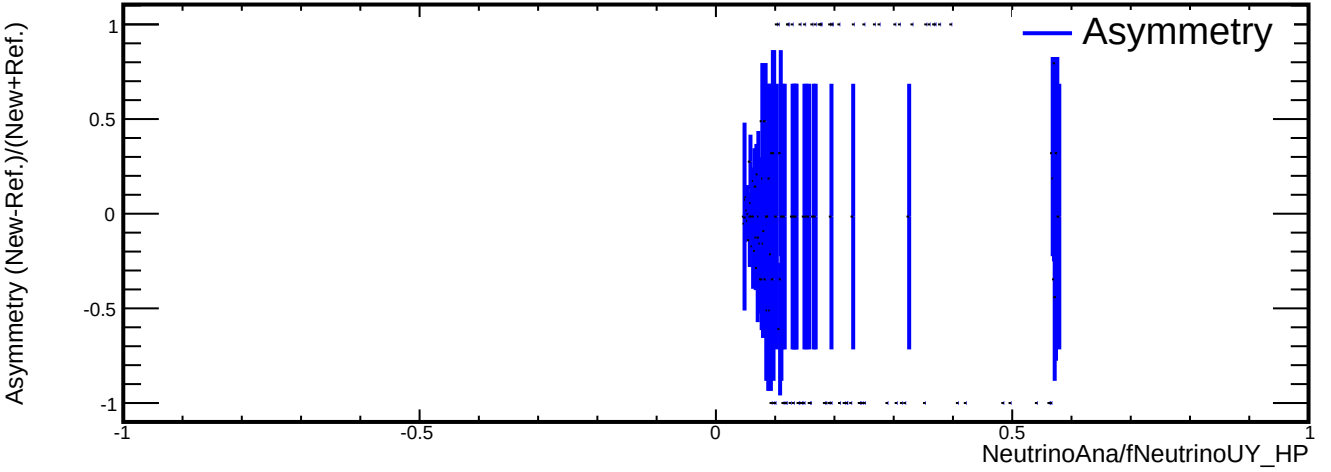

2012-07-02
2012-07-03
Events
600
400
200
0
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUZ_Genie

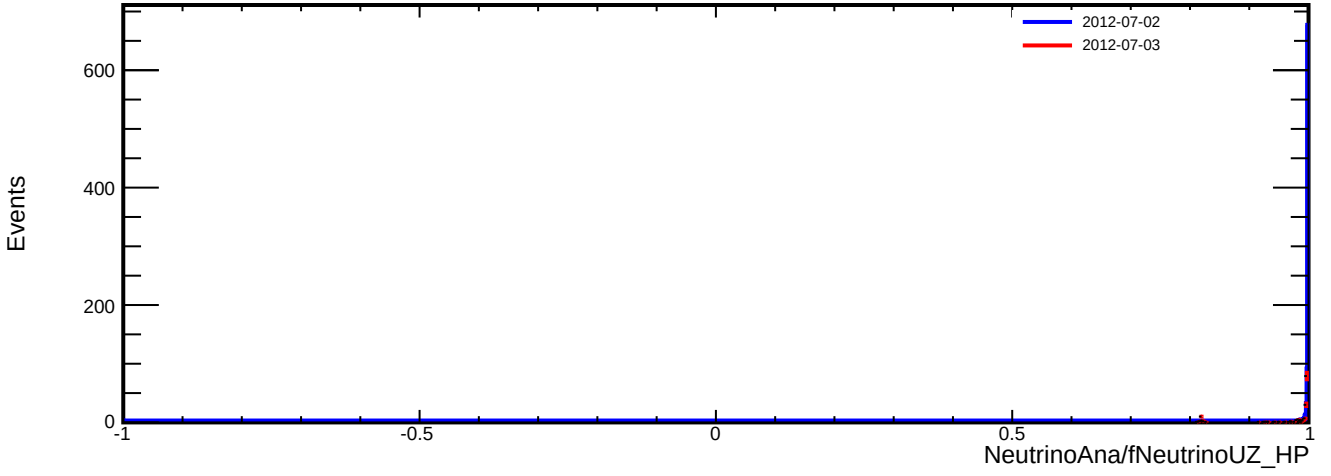

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUZ_Genie

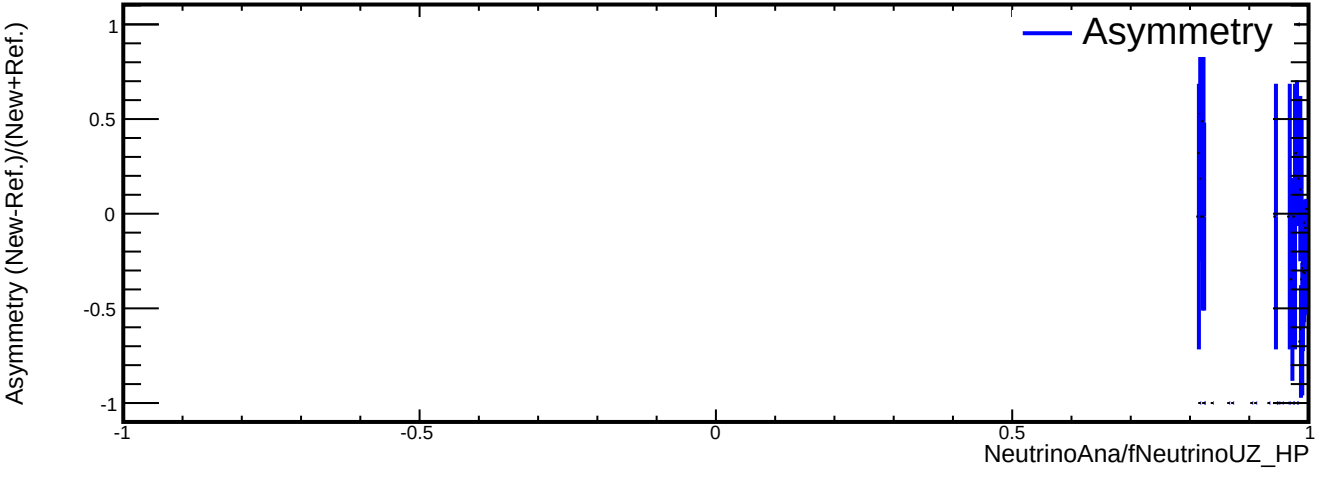

2012-07-02
2012-07-03
Events
300
200
100
0
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUX_HP

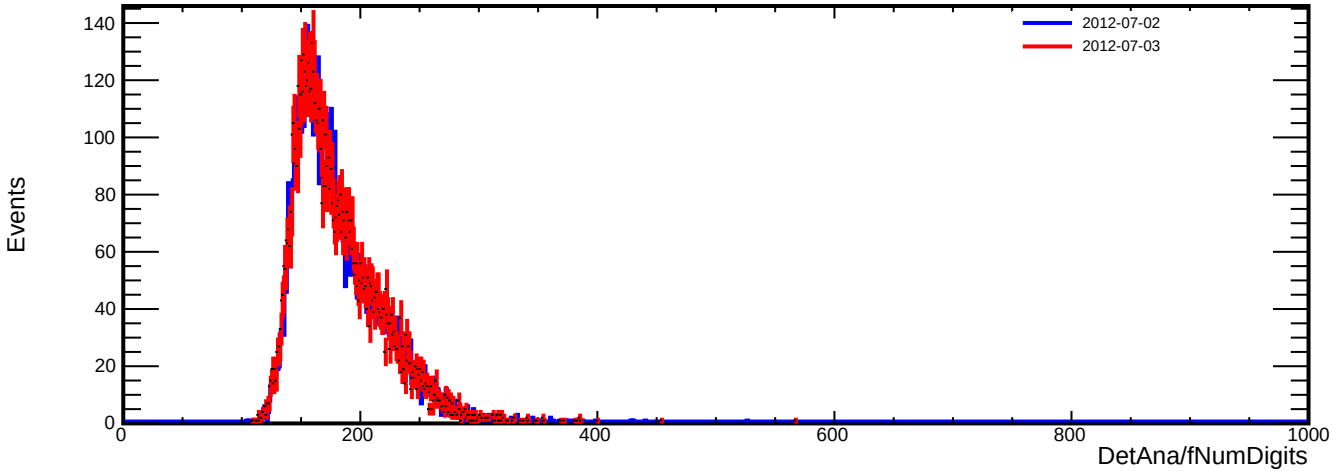

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUX_HP

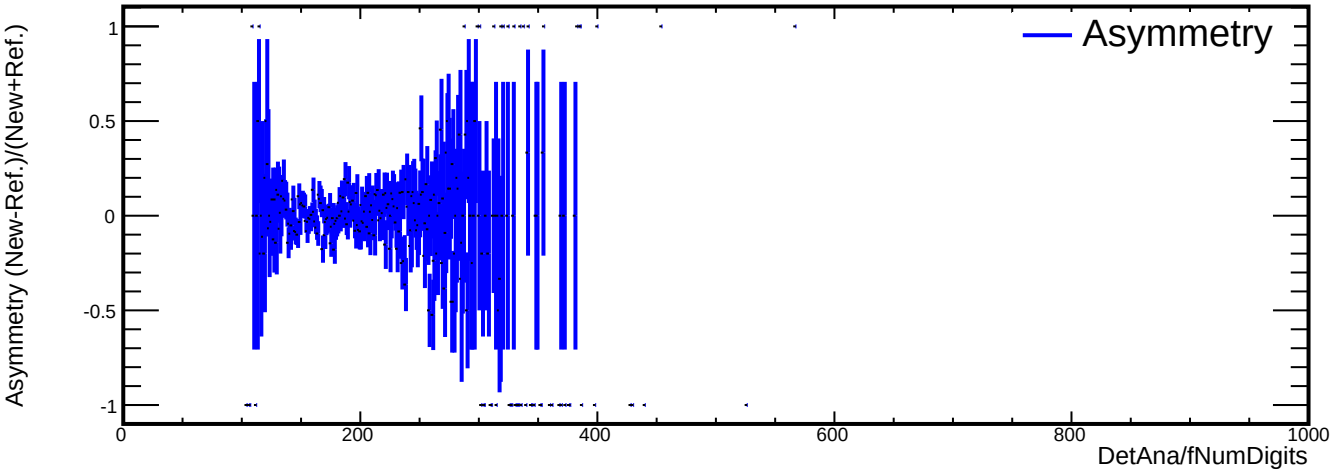

2012-07-02
2012-07-03
Events
100
80
60
40
20
0
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUY_HP

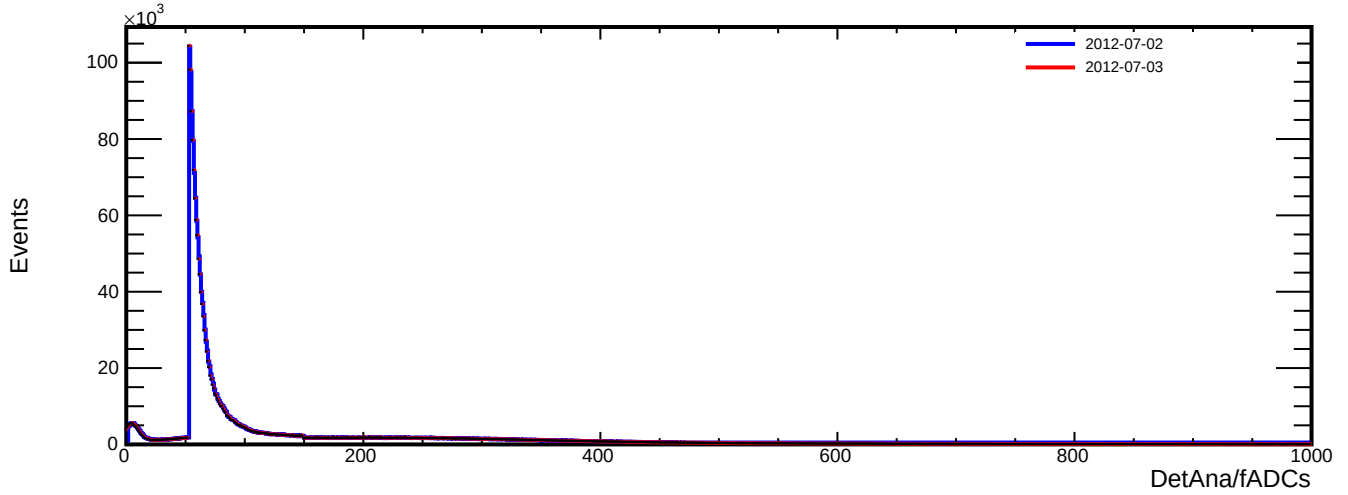

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUY_HP

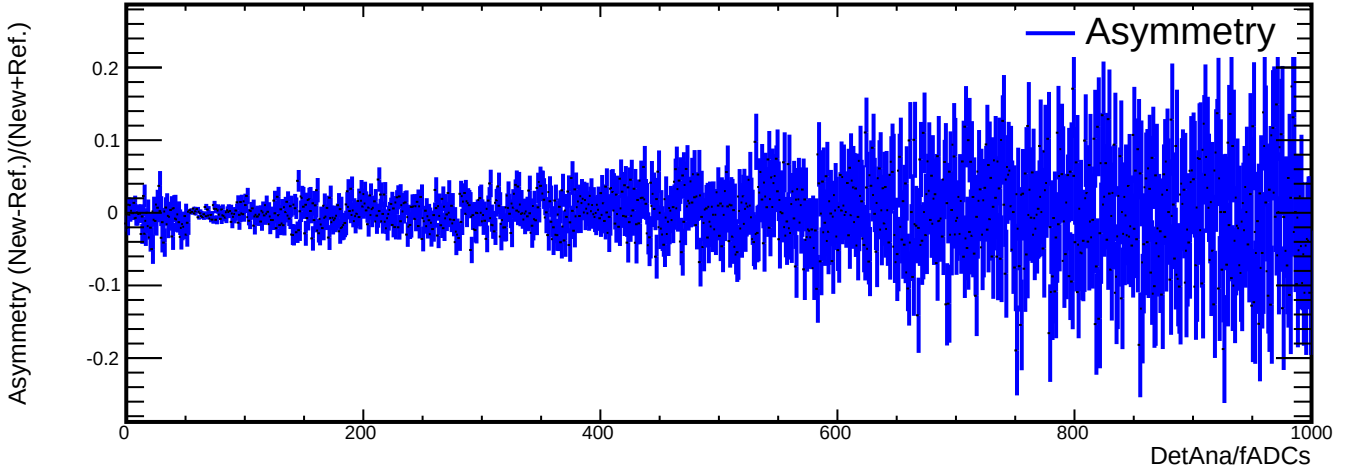

2012-07-02
2012-07-03
Events
600
400
200
0
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUZ_HP

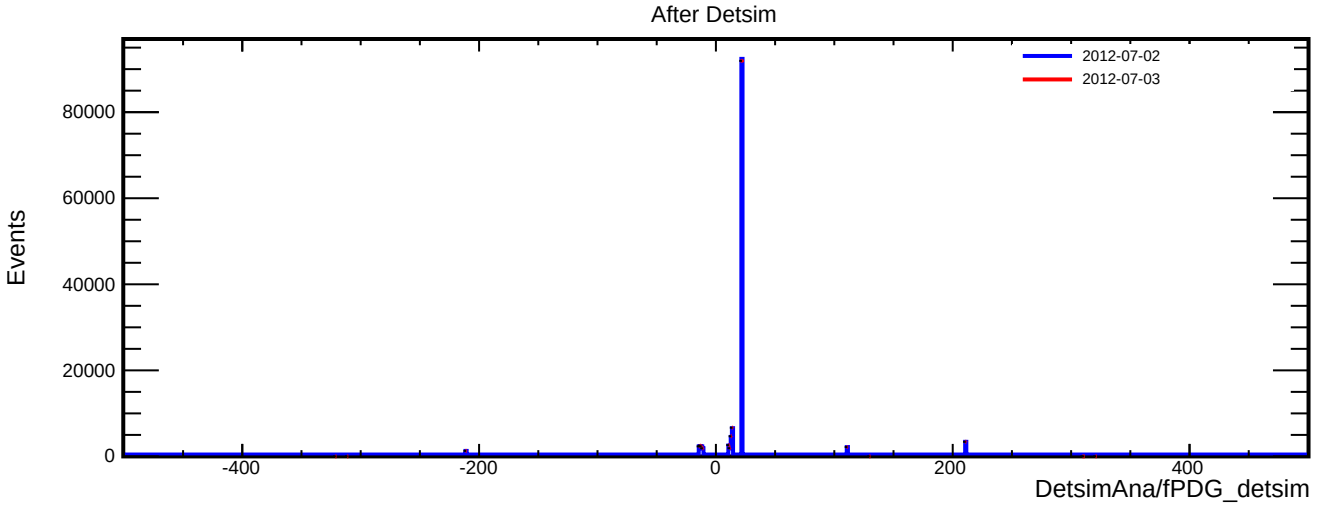

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-1
-0.5
0
0.5
1
NeutrinoAna/fNeutrinoUZ_HP

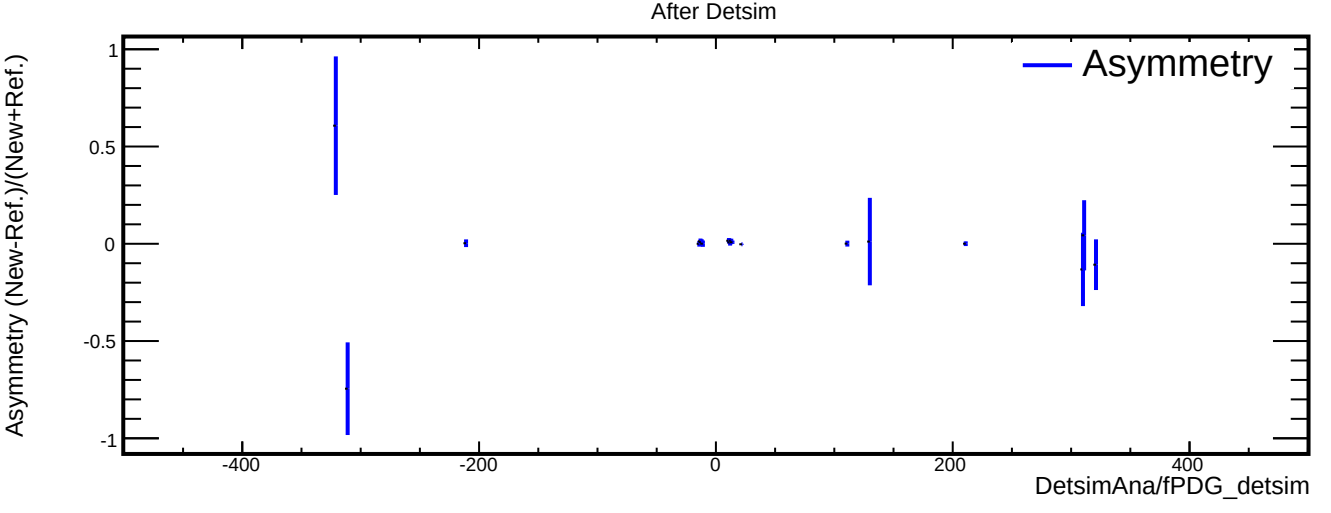

2012-07-02
2012-07-03
Events
DetAna/fNumDigits
0
20
40
60
80
100
120
140
0
200
400
600
800
1000

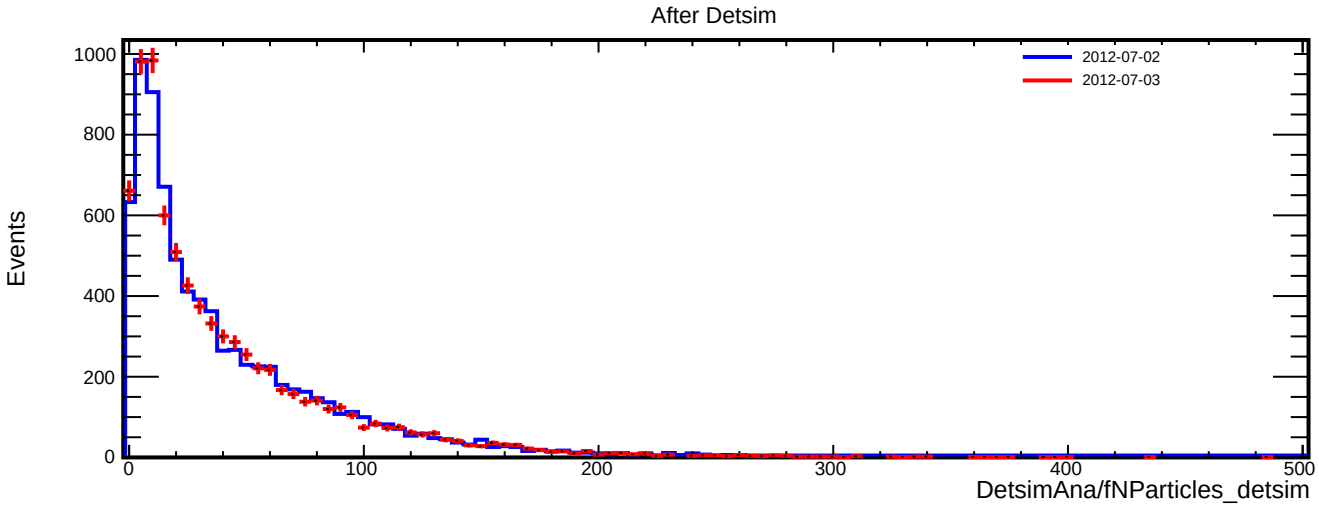

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
DetAna/fNumDigits
1
0.5
0
-0.5
-1
0
200
400
600
800
1000

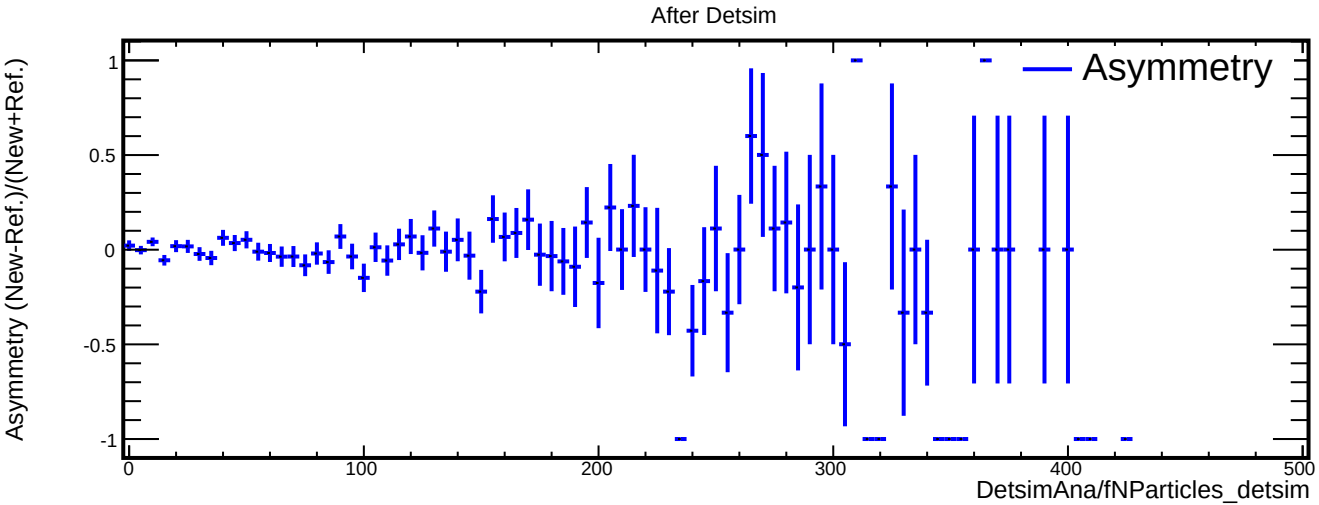

×10^3
100
80
60
40
20
0
Events
0
200
400
600
800
1000
DetAna/fADCs
2012-07-02
2012-07-03

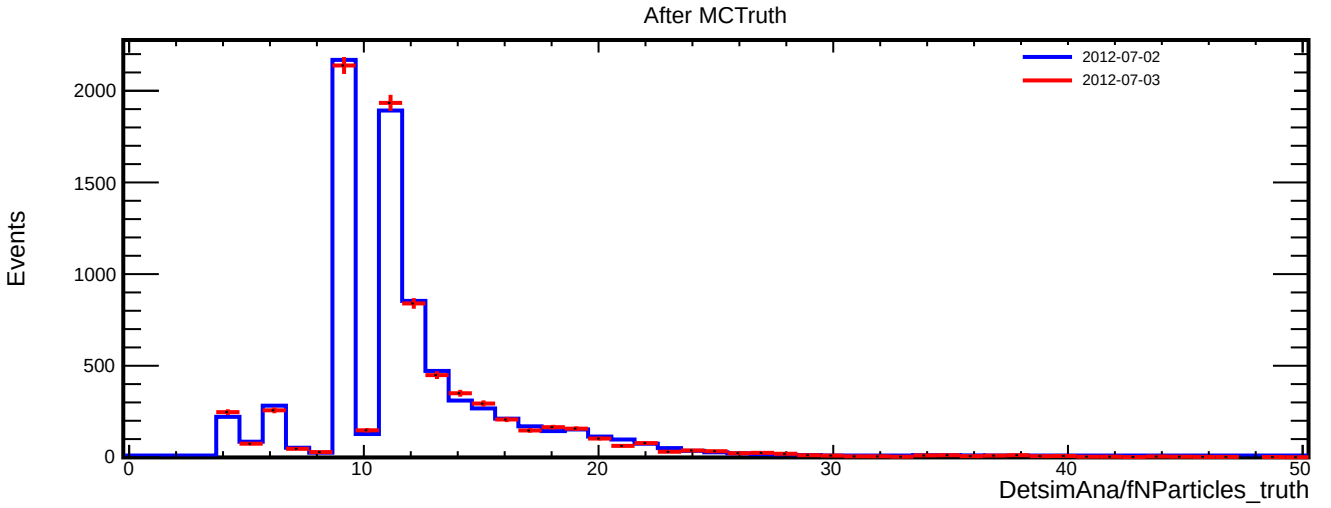

Asymmetry
0.2
0.1
0
-0.1
-0.2
Asymmetry (New-Ref.)/(New+Ref.)
0
200
400
600
800
1000
DetAna/fADCs

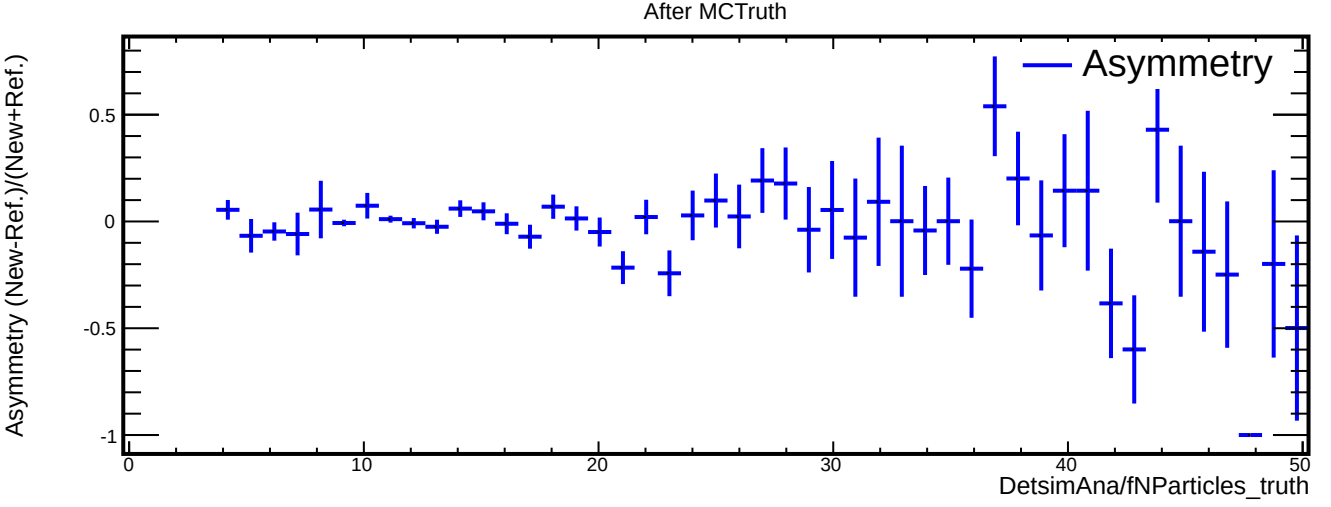

After Detsim
2012-07-02
2012-07-03
Events
80000
60000
40000
20000
0
-400
-200
0
200
400
DetsimAna/fPDG_detsim

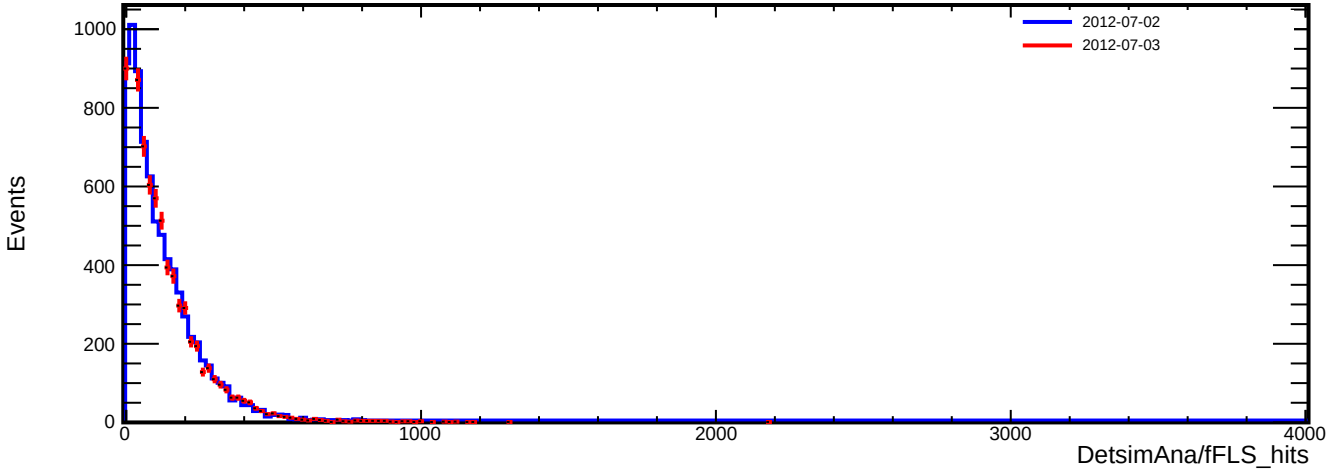

After Detsim
Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
-400
-200
0
200
400
DetsimAna/fPDG_detsim

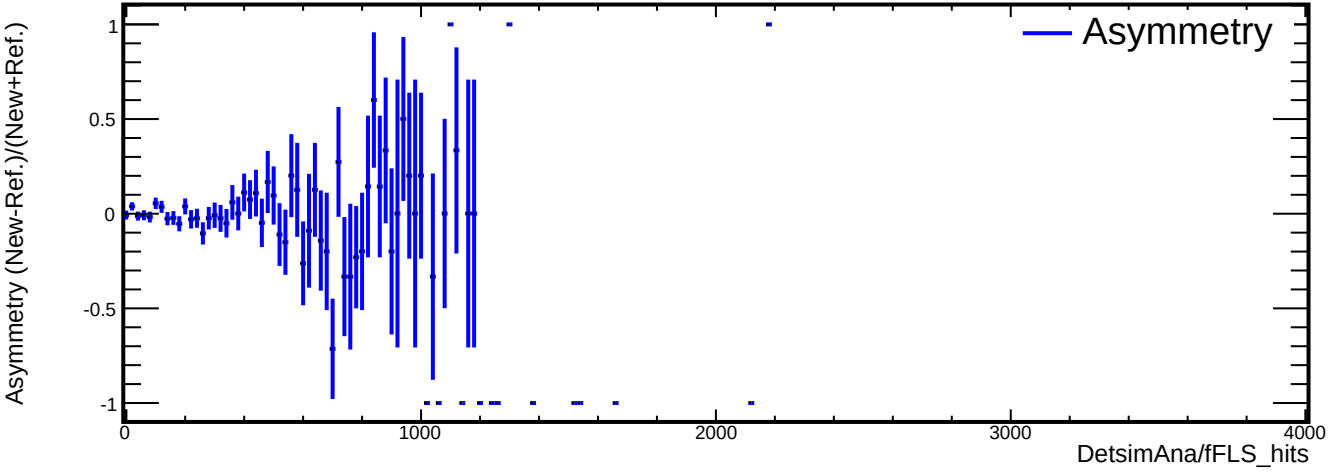

After Detsim
Events
1000
800
600
400
200
0
0
100
200
300
400
500
DetsimAna/fNParticles_detsim
2012-07-02
2012-07-03

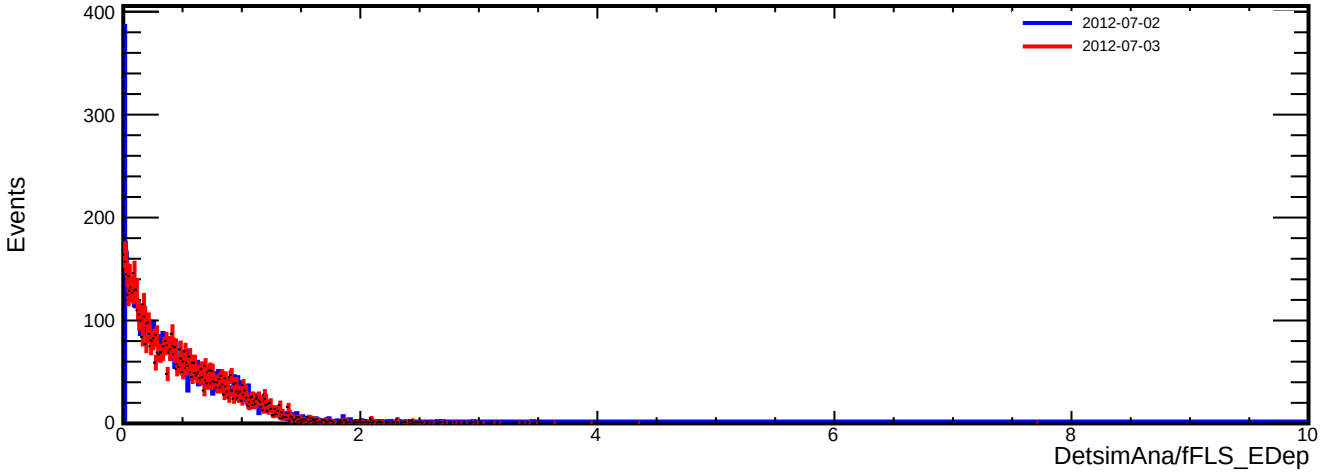

After Detsim
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
100
200
300
400
500
DetsimAna/fNParticles_detsim
Asymmetry

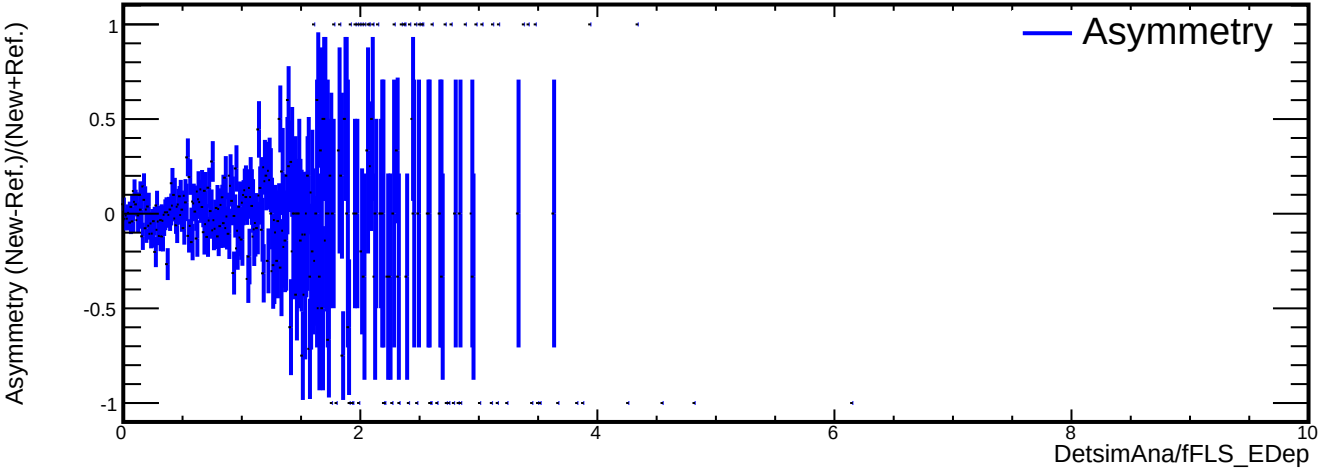

After MCTruth
2012-07-02
2012-07-03
Events
0
500
1000
1500
2000
0
10
20
30
40
50
DetsimAna/fNParticles_truth

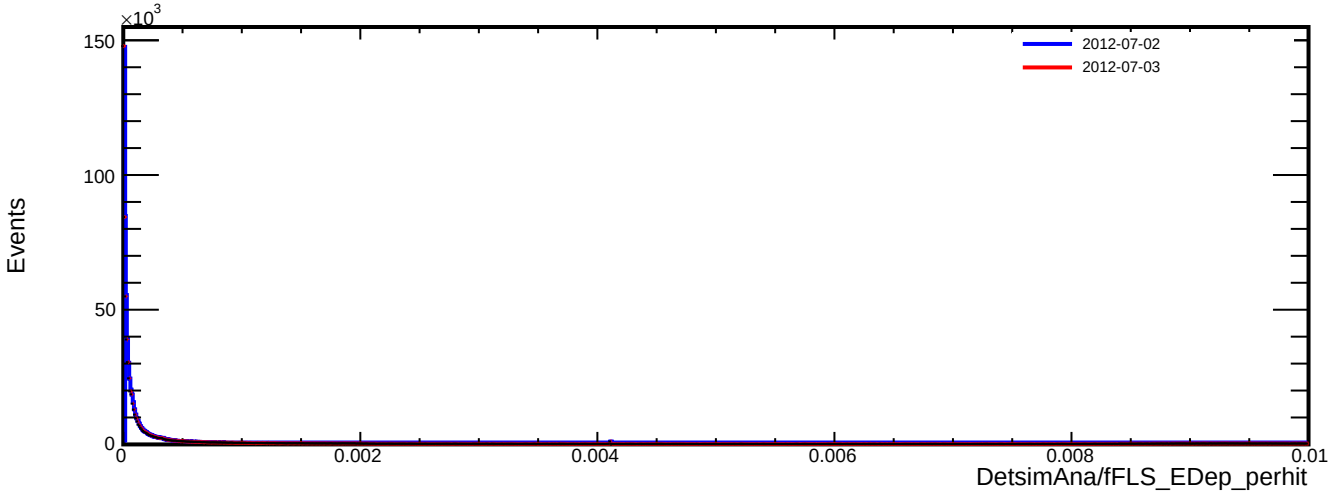

After MCTruth
Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
-1
-0.5
0
0.5
0
10
20
30
40
50
DetsimAna/fNParticles_truth

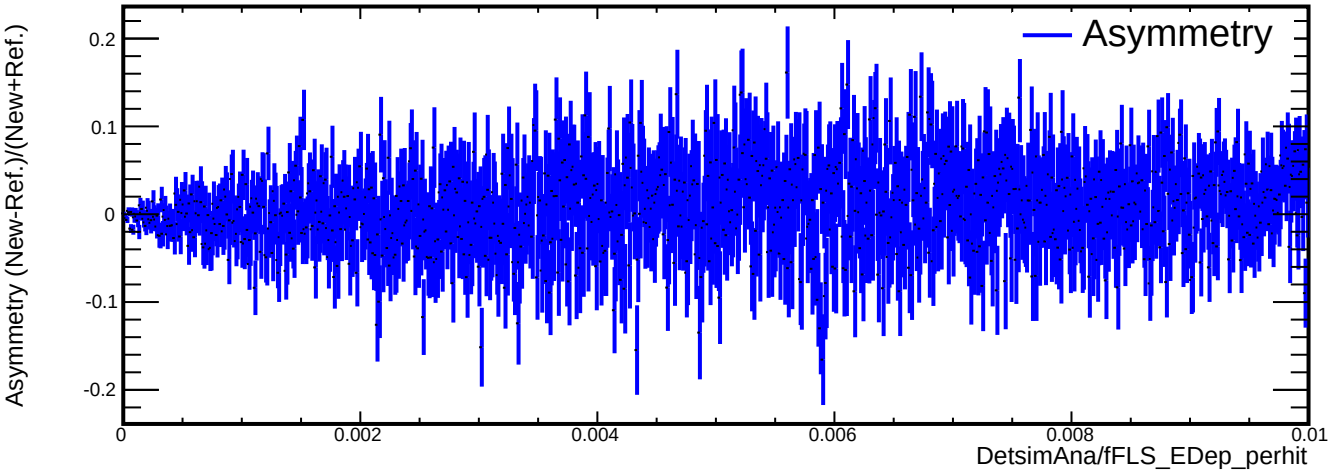

2012-07-02
2012-07-03
Events
1000
800
600
400
200
0
0
1000
2000
3000
4000
DetsimAna/fFLS_hits

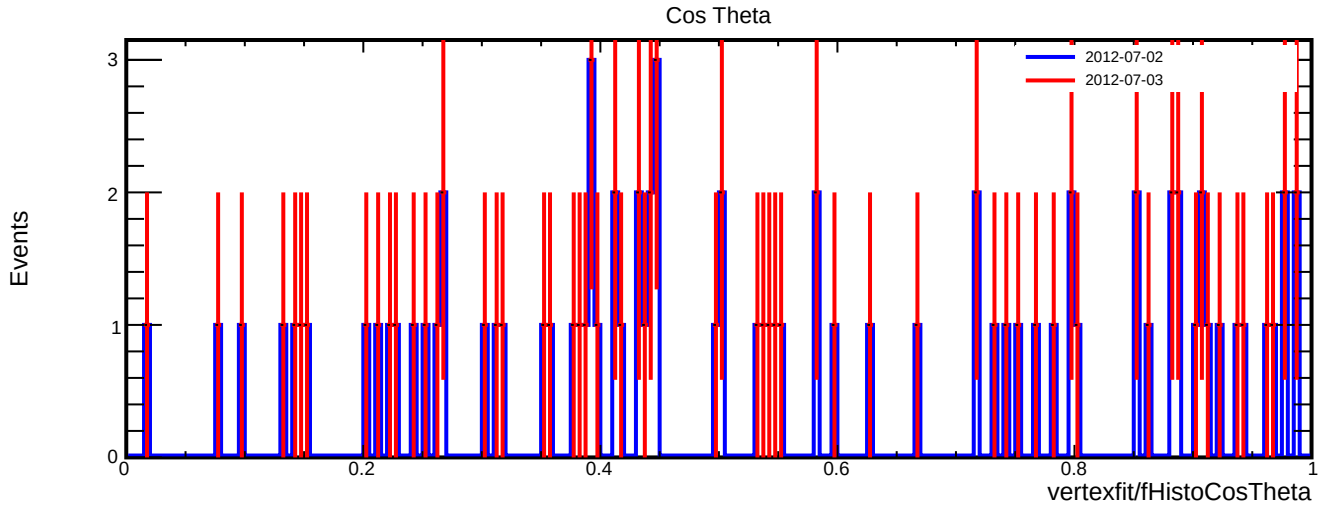

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
1000
2000
3000
4000
DetsimAna/fFLS_hits

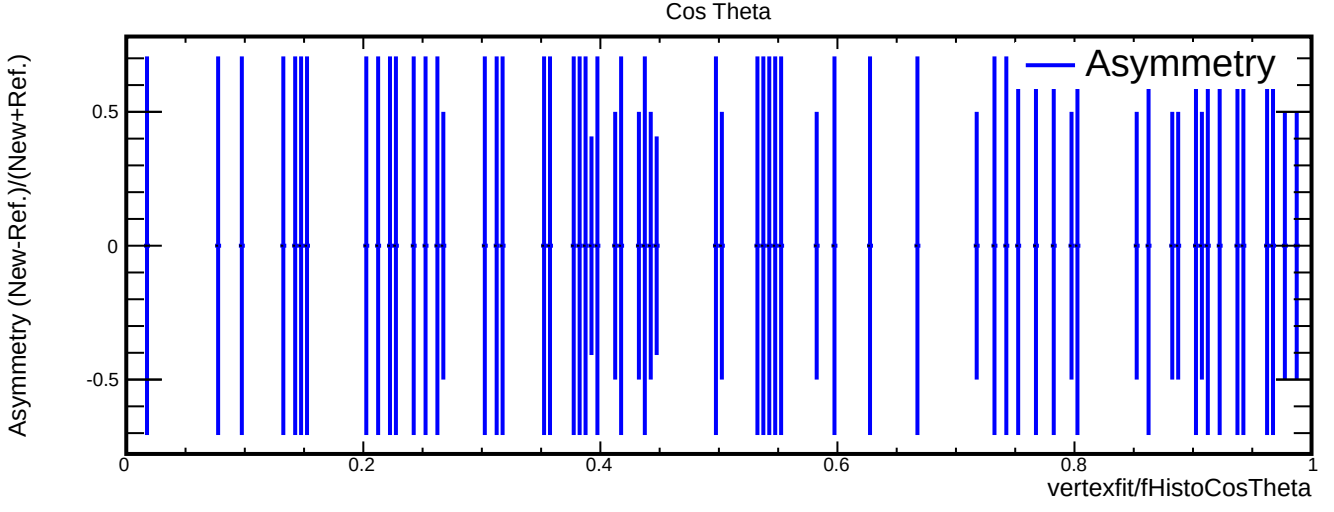

Events
400
300
200
100
0
0
2
4
6
8
10
DetsimAna/fFLS_EDep
2012-07-02
2012-07-03

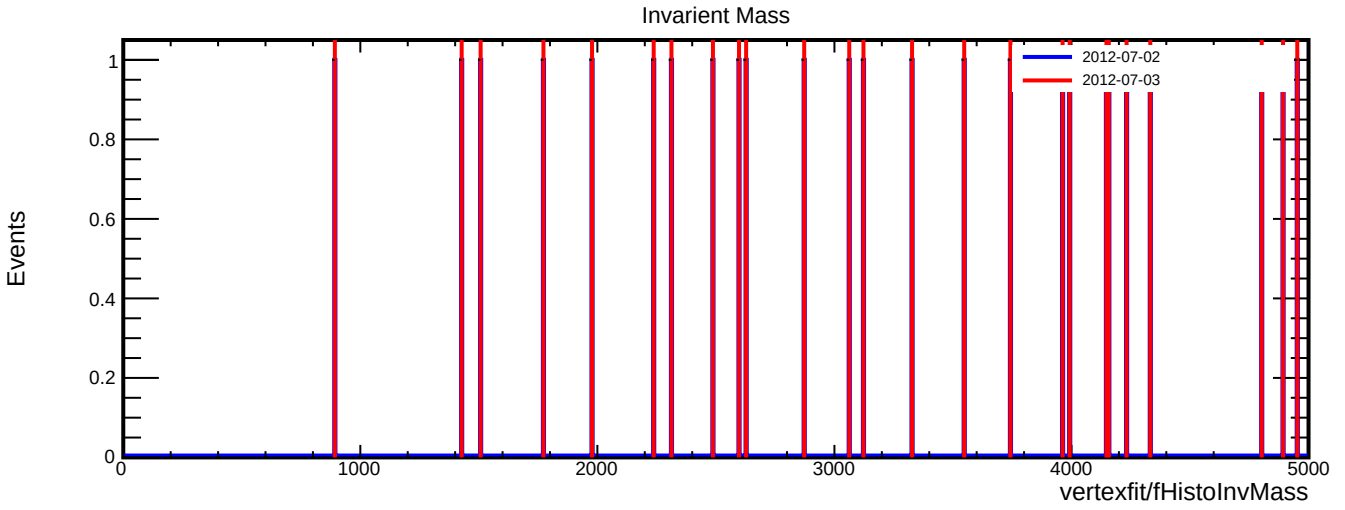

Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
2
4
6
8
10
DetsimAna/fFLS_EDep
Asymmetry

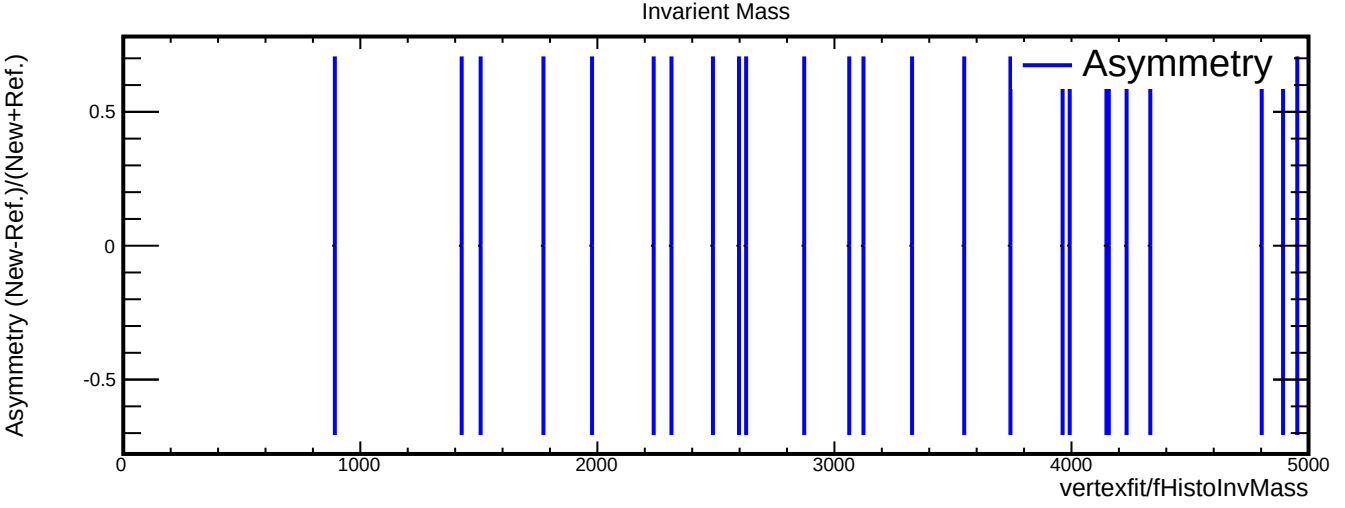

×10^3
150
100
50
0
Events
2012-07-02
2012-07-03
0
0.002
0.004
0.006
0.008
0.01
DetsimAna/fFLS_EDep_perhit

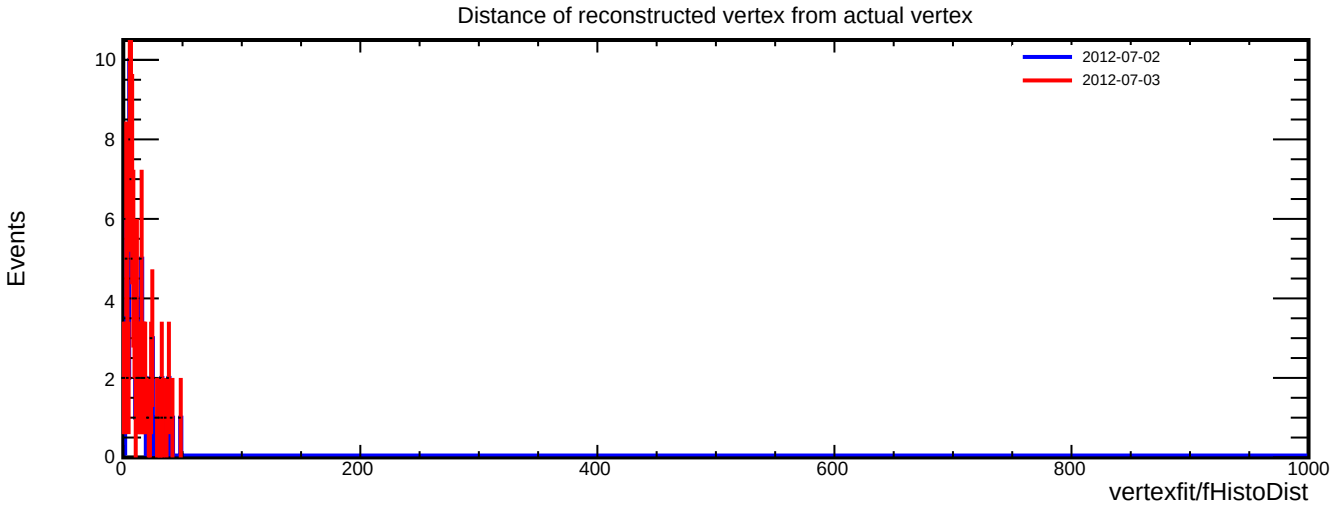

Asymmetry
0.2
0.1
0
-0.1
-0.2
Asymmetry (New-Ref.)/(New+Ref.)
0
0.002
0.004
0.006
0.008
0.01
DetsimAna/fFLS_EDep_perhit

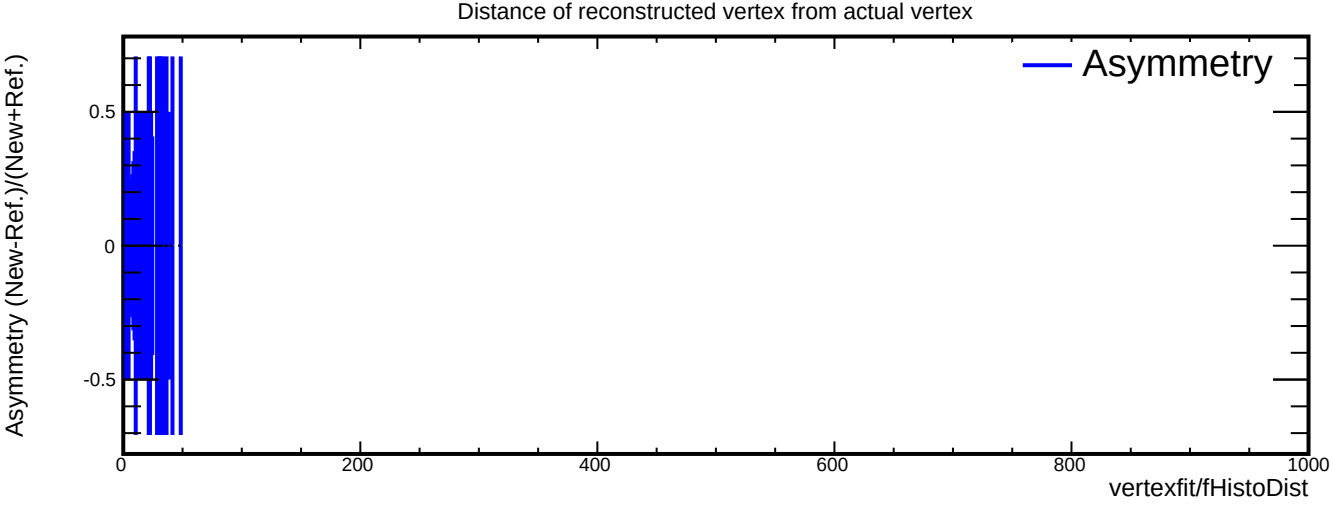

Cos Theta
Events
2012-07-02
2012-07-03
vertexfit/fHistoCosTheta

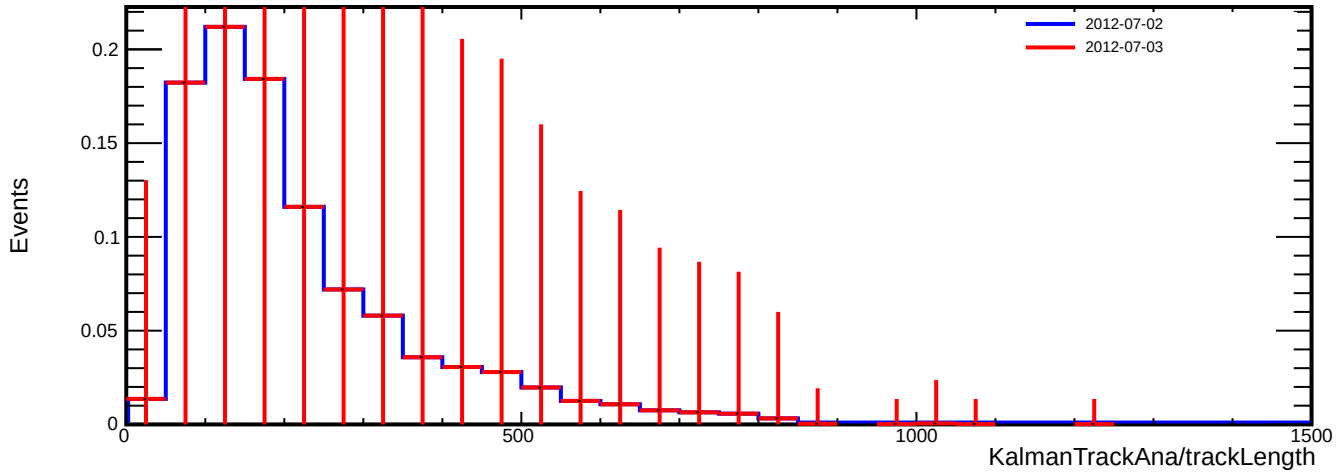

Cos Theta
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
vertexfit/fHistoCosTheta

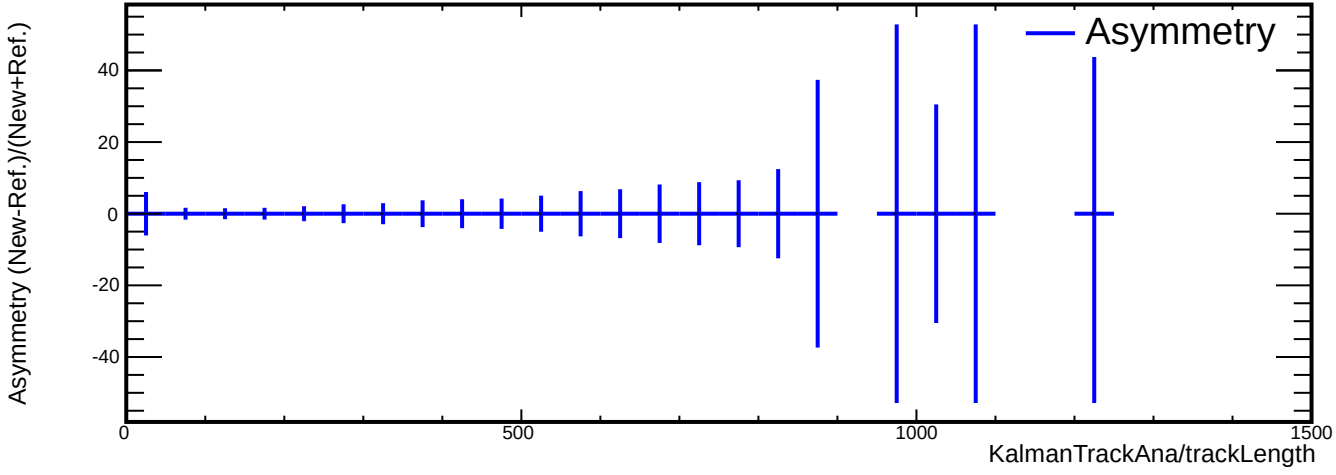

Invarient Mass
Events
2012-07-02
2012-07-03
0
0.2
0.4
0.6
0.8
1
0
1000
2000
3000
4000
5000
vertexfit/fHistoInvMass

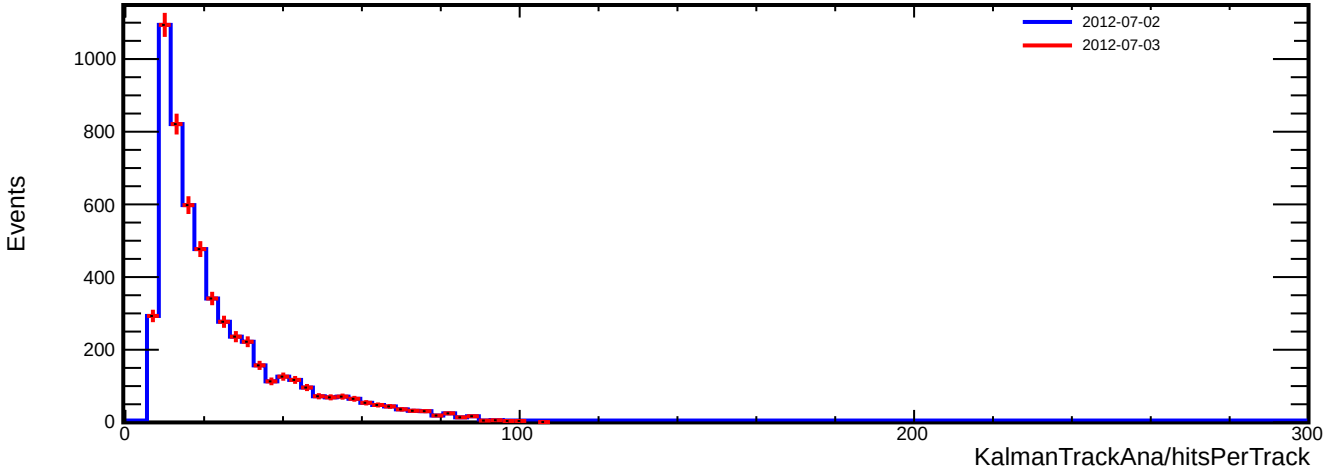

Invarient Mass
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
-0.5
0
0.5
0
1000
2000
3000
4000
5000
vertexfit/fHistoInvMass

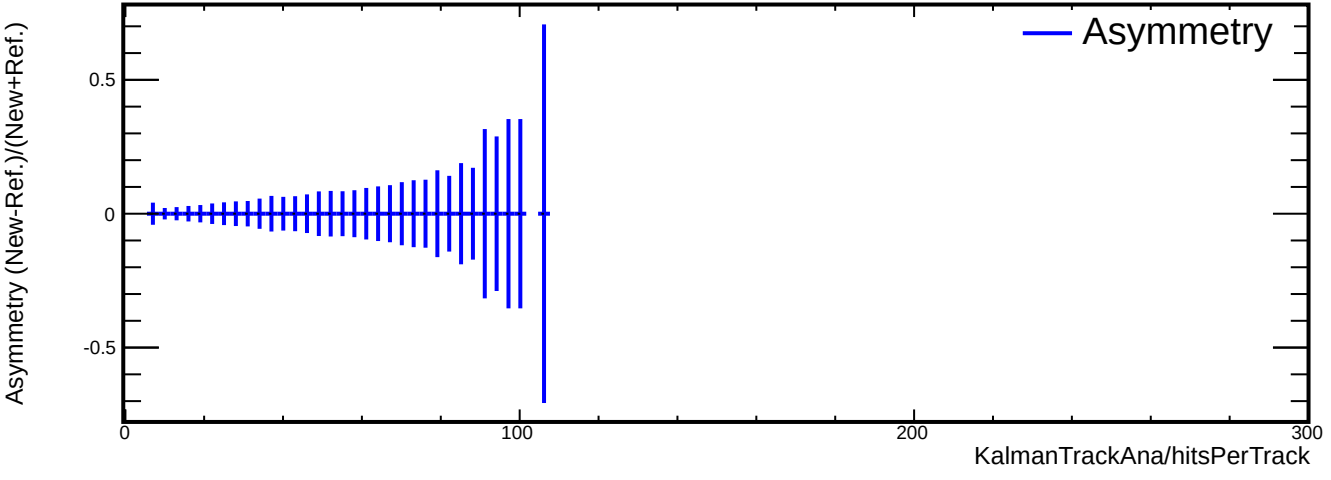

Distance of reconstructed vertex from actual vertex
Events
vertexfit/fHistoDist
2012-07-02
2012-07-03
0
2
4
6
8
10
0
200
400
600
800
1000

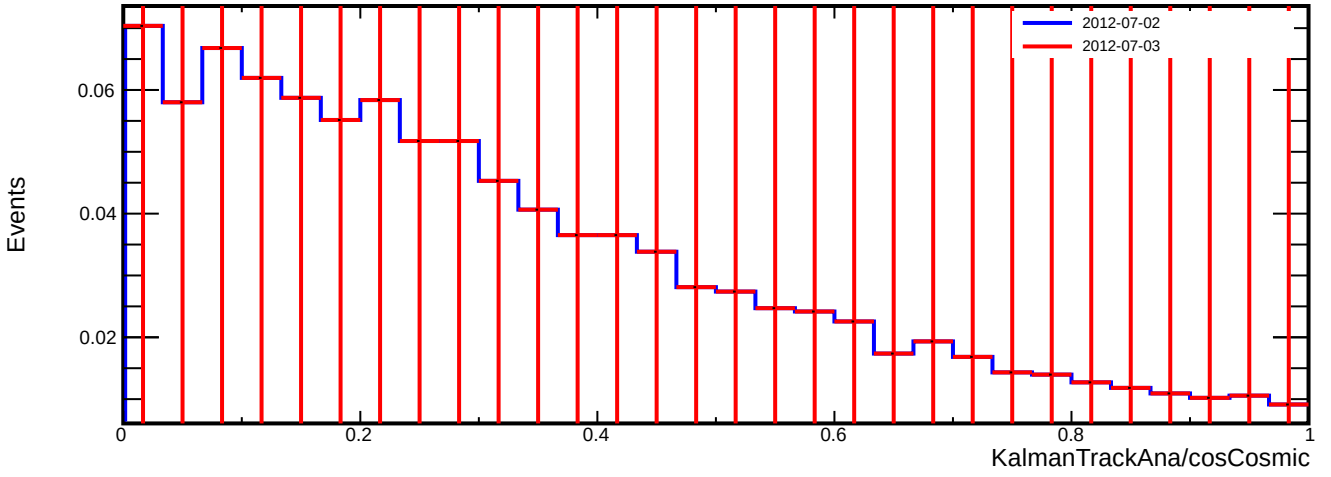

Distance of reconstructed vertex from actual vertex
Asymmetry (New-Ref.)/(New+Ref.)
vertexfit/fHistoDist
Asymmetry
0.5
0
-0.5
0
200
400
600
800
1000

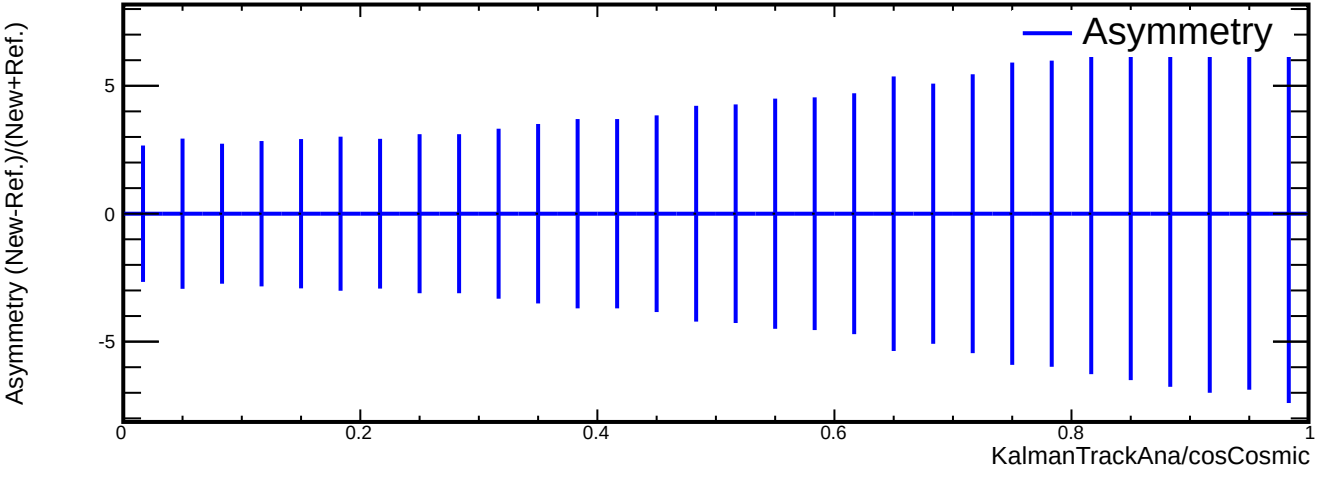

2012-07-02
2012-07-03
Events
0.2
0.15
0.1
0.05
0
0
500
1000
1500
KalmanTrackAna/trackLength

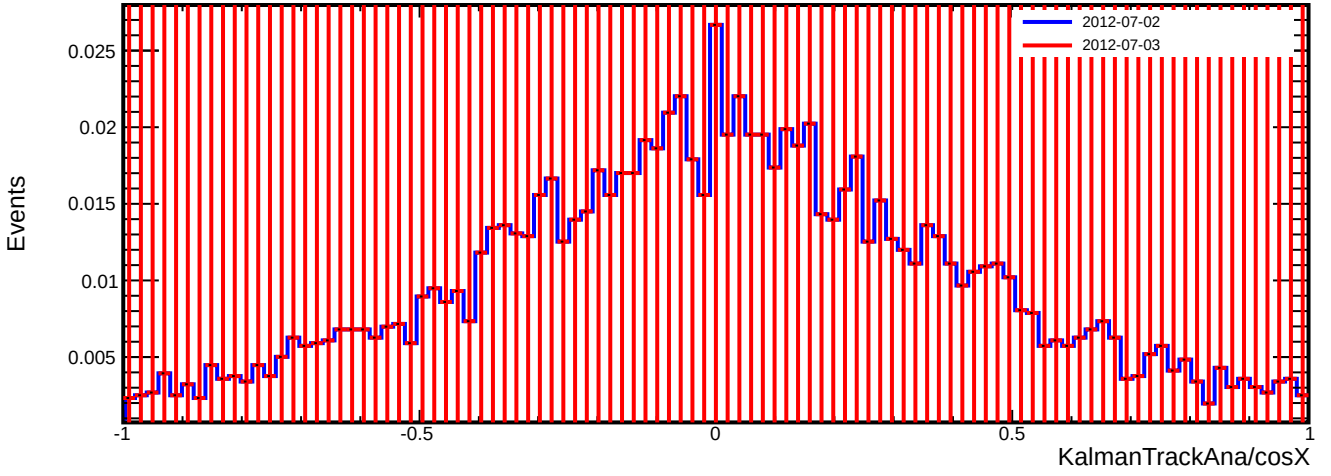

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
40
20
0
-20
-40
0
500
1000
1500
KalmanTrackAna/trackLength

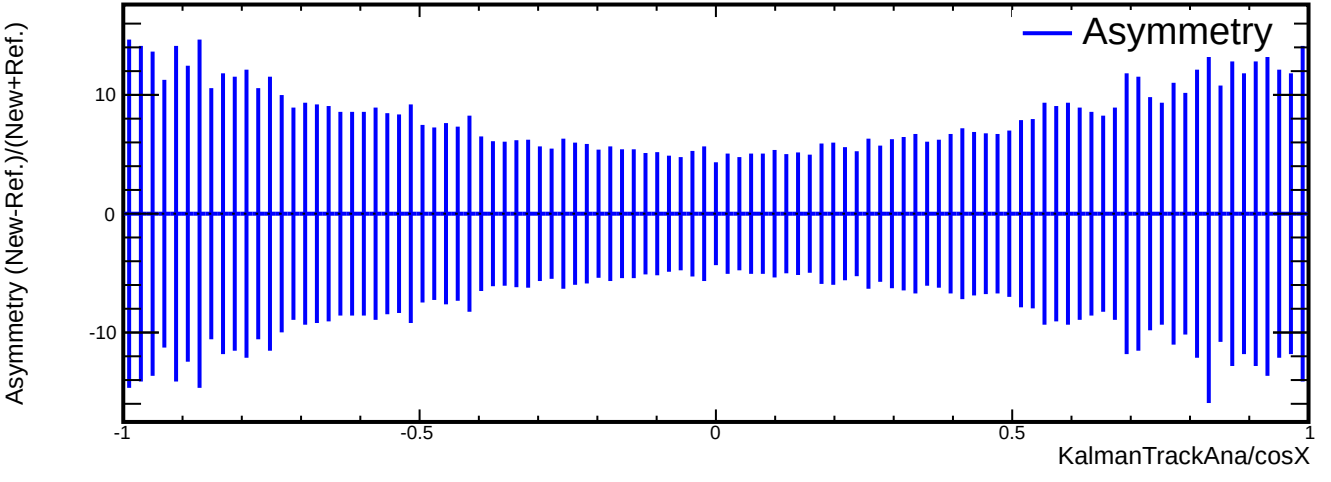

2012-07-02
2012-07-03
Events
1000
800
600
400
200
0
0
100
200
300
KalmanTrackAna/hitsPerTrack

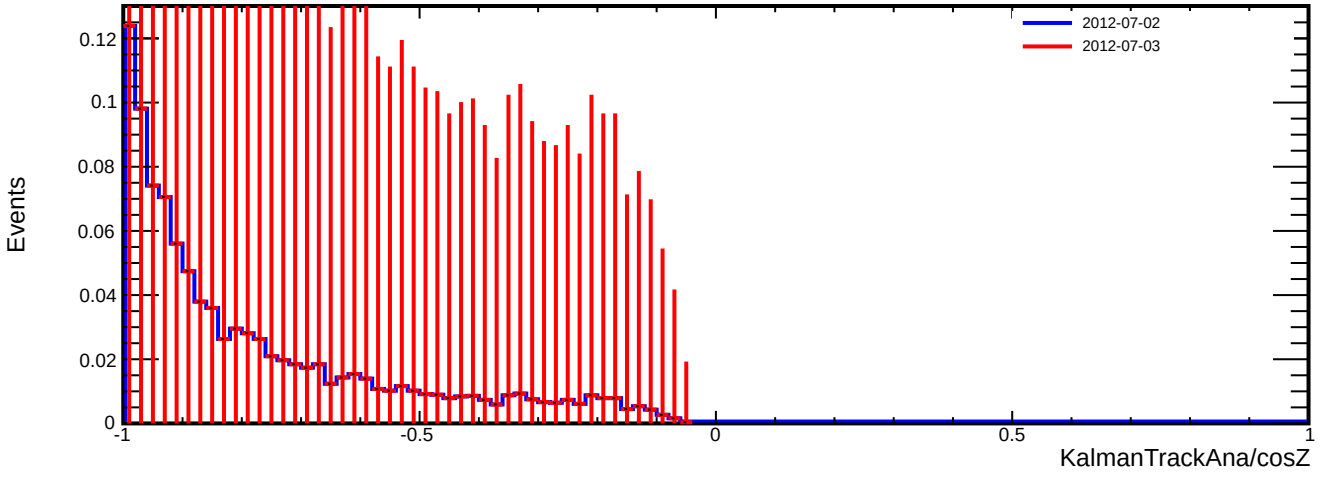

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
100
200
300
KalmanTrackAna/hitsPerTrack

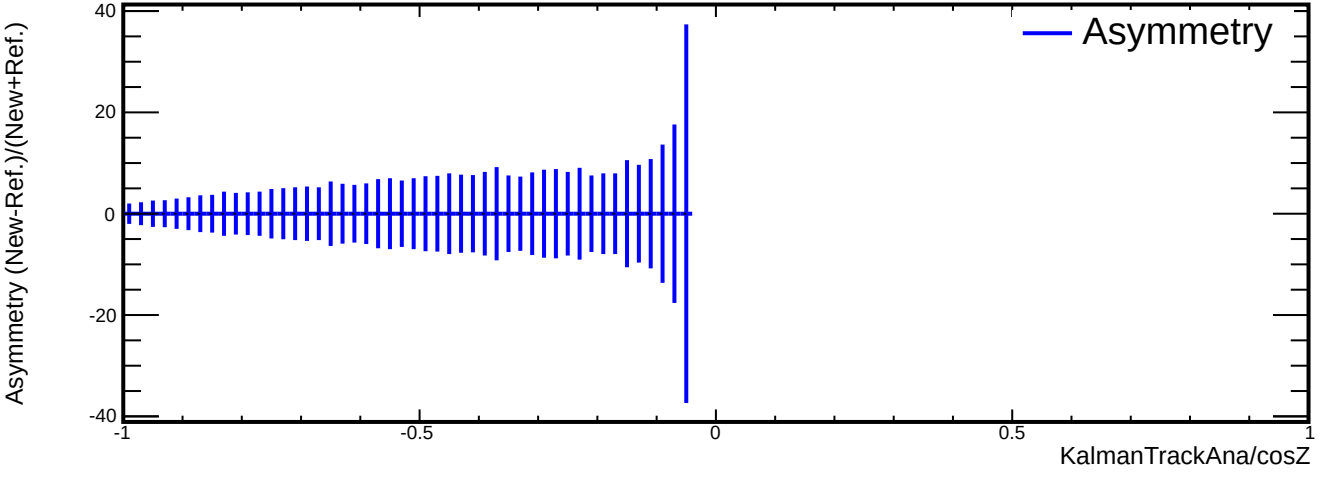

2012-07-02
2012-07-03
Events
0.06
0.04
0.02
0
0.2
0.4
0.6
0.8
1
KalmanTrackAna/cosCosmic

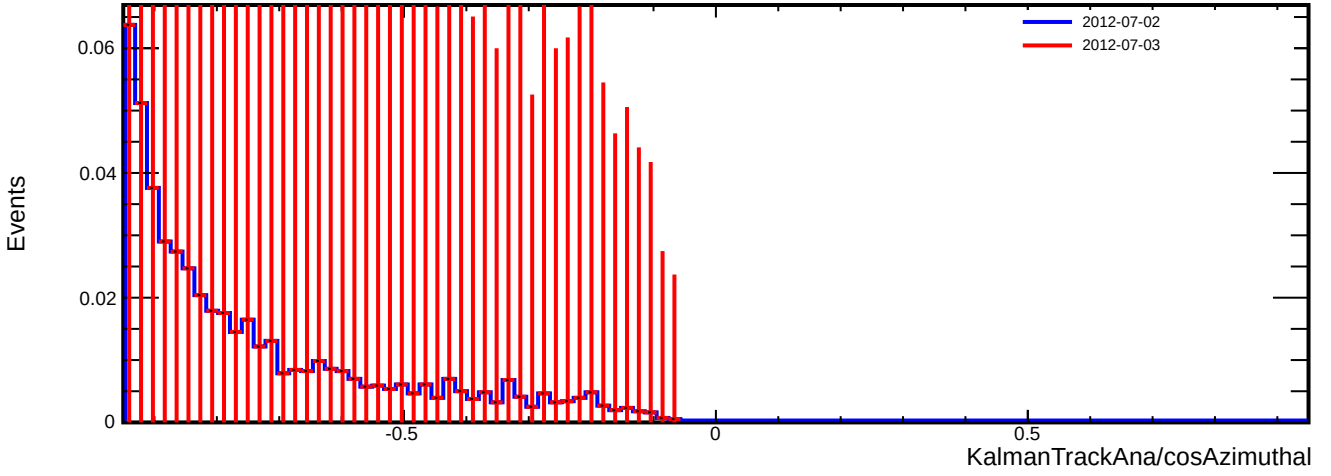

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
5
0
-5
0
0.2
0.4
0.6
0.8
1
KalmanTrackAna/cosCosmic

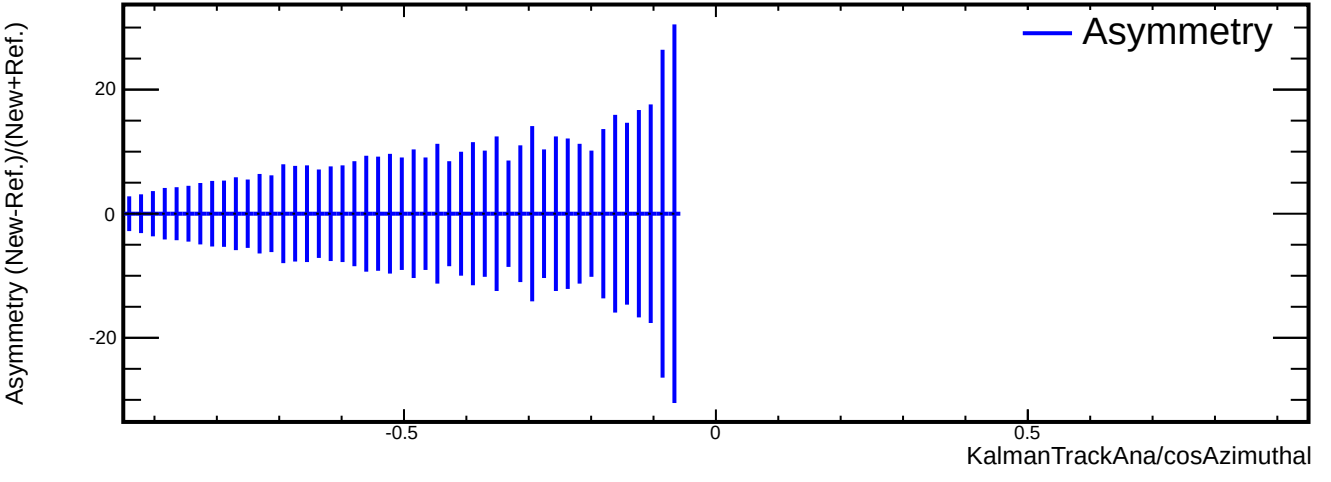

2012-07-02
2012-07-03
Events
0.025
0.02
0.015
0.01
0.005
-1
-0.5
0
0.5
1
KalmanTrackAna/cosX

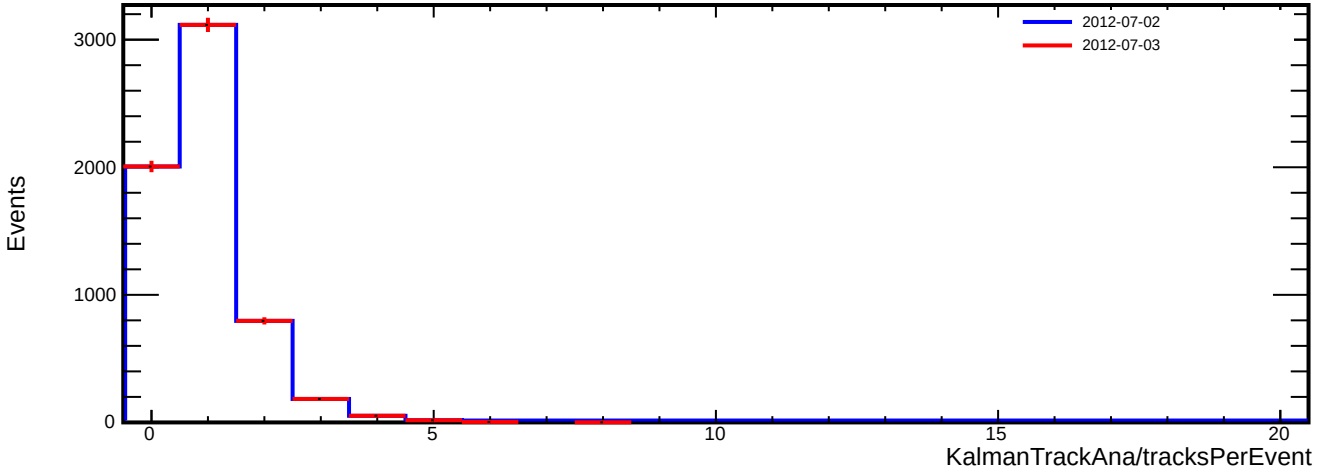

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
10
0
-10
-1
-0.5
0
0.5
1
KalmanTrackAna/cosX

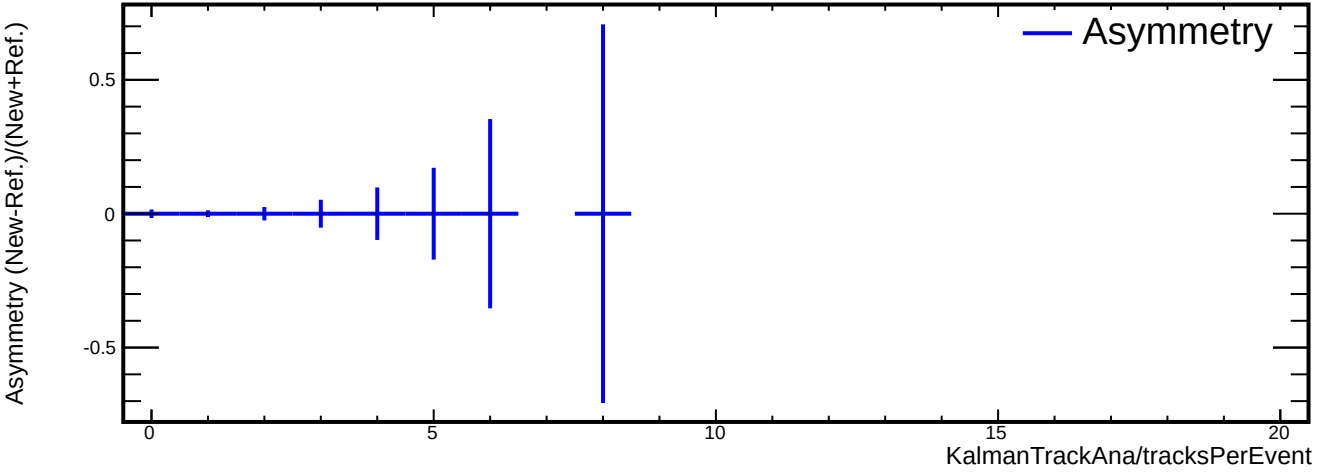

2012-07-02
2012-07-03
Events
0.12
0.1
0.08
0.06
0.04
0.02
0
-1
-0.5
0
0.5
1
KalmanTrackAna/cosZ

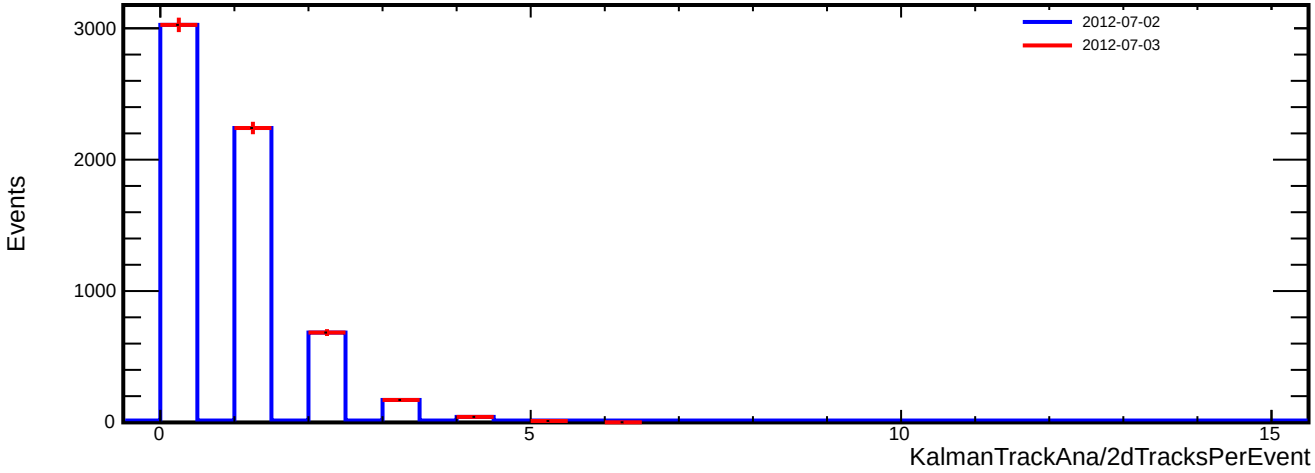

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
40
20
0
-20
-40
-1
-0.5
0
0.5
1
KalmanTrackAna/cosZ

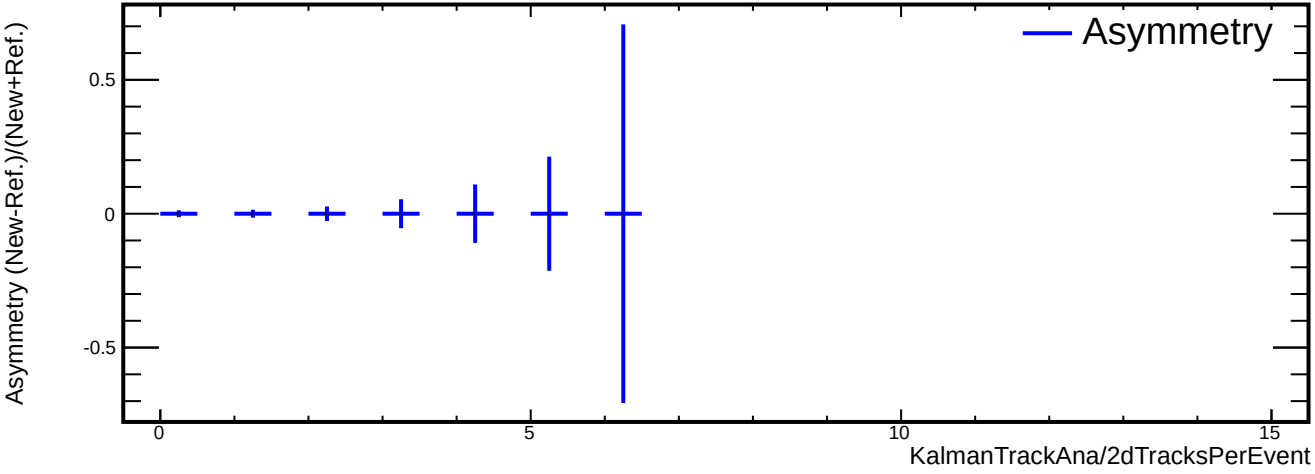

2012-07-02
2012-07-03
Events
0.06
0.04
0.02
0
-0.5
0
0.5
KalmanTrackAna/cosAzimuthal

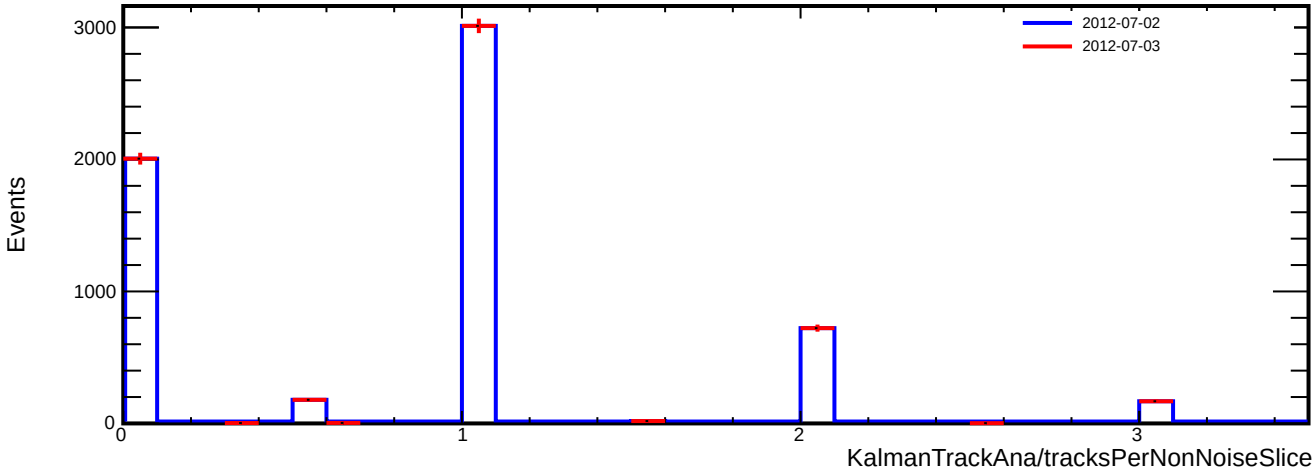

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
20
0
-20
-0.5
0
0.5
KalmanTrackAna/cosAzimuthal

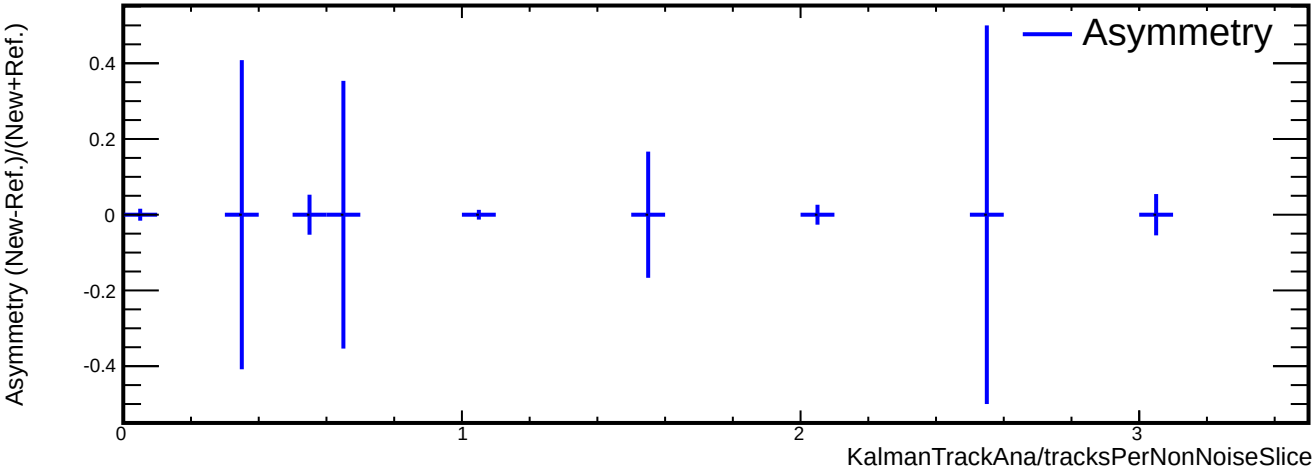

2012-07-02
2012-07-03
Events
3000
2000
1000
0
0
5
10
15
20
KalmanTrackAna/tracksPerEvent

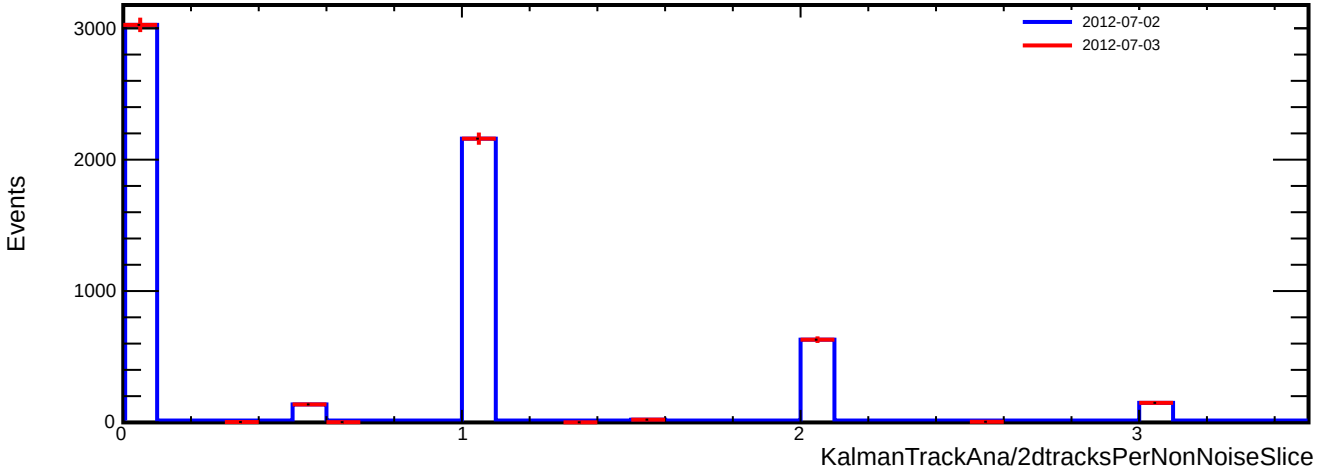

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
5
10
15
20
KalmanTrackAna/tracksPerEvent

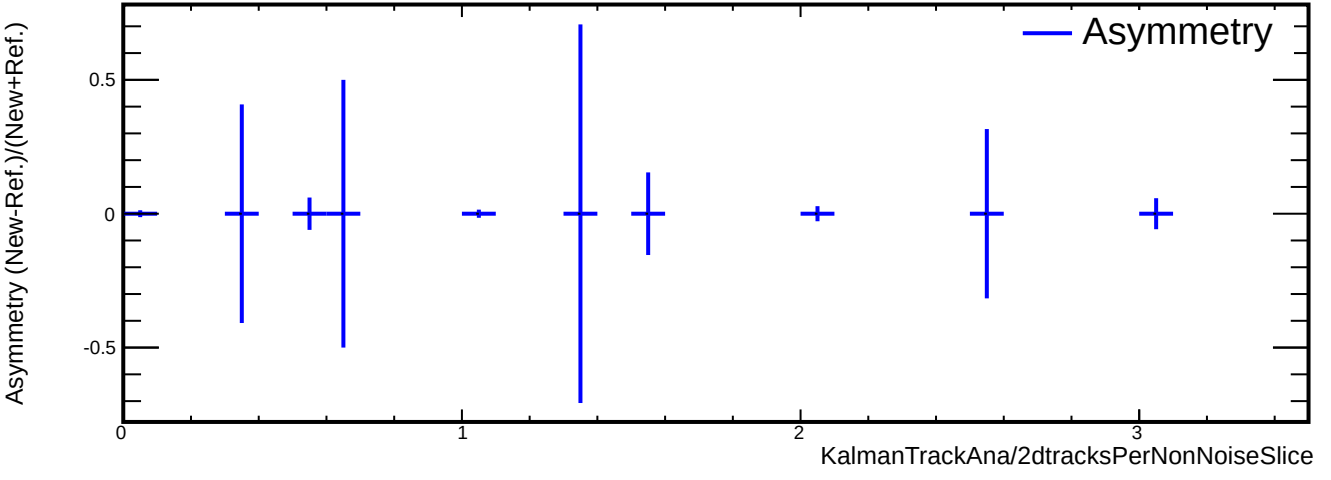

2012-07-02
2012-07-03
Events
3000
2000
1000
0
0
5
10
15
KalmanTrackAna/2dTracksPerEvent

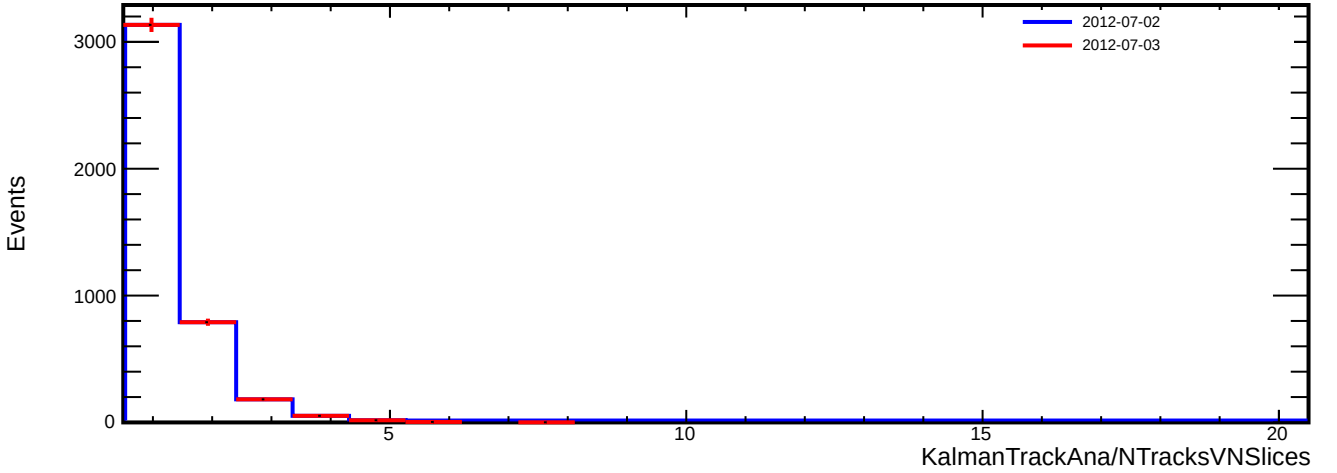

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
5
10
15
KalmanTrackAna/2dTracksPerEvent

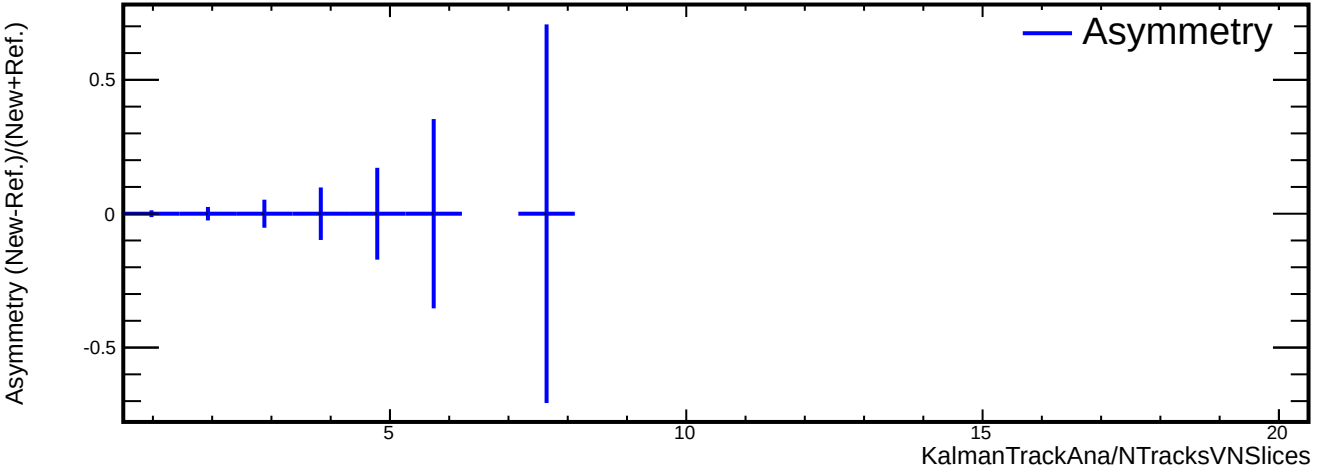

2012-07-02
2012-07-03
Events
3000
2000
1000
0
0
1
2
3
KalmanTrackAna/tracksPerNonNoiseSlice

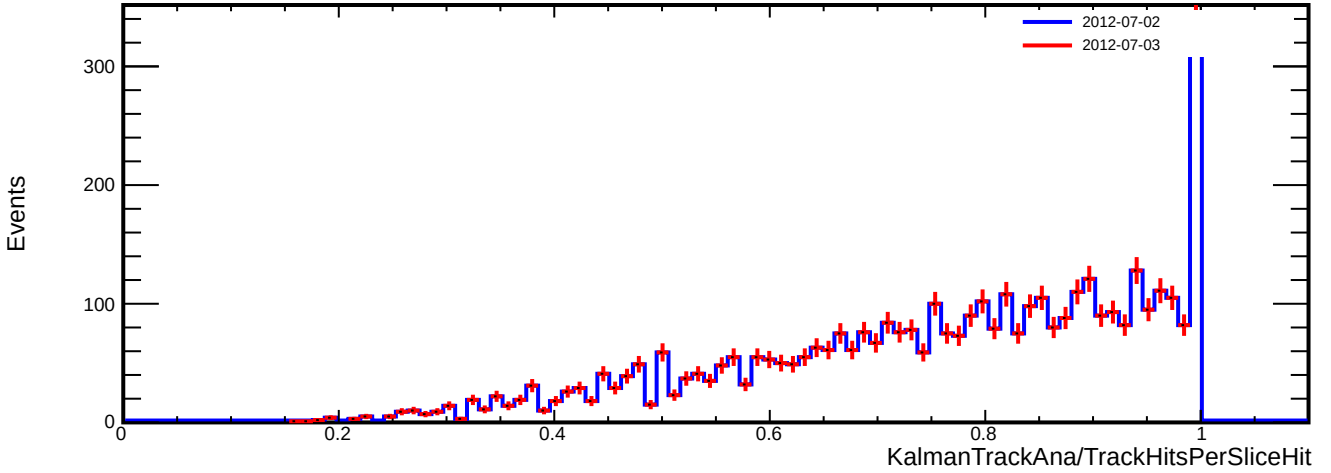

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.4
0.2
0
-0.2
-0.4
0
1
2
3
KalmanTrackAna/tracksPerNonNoiseSlice

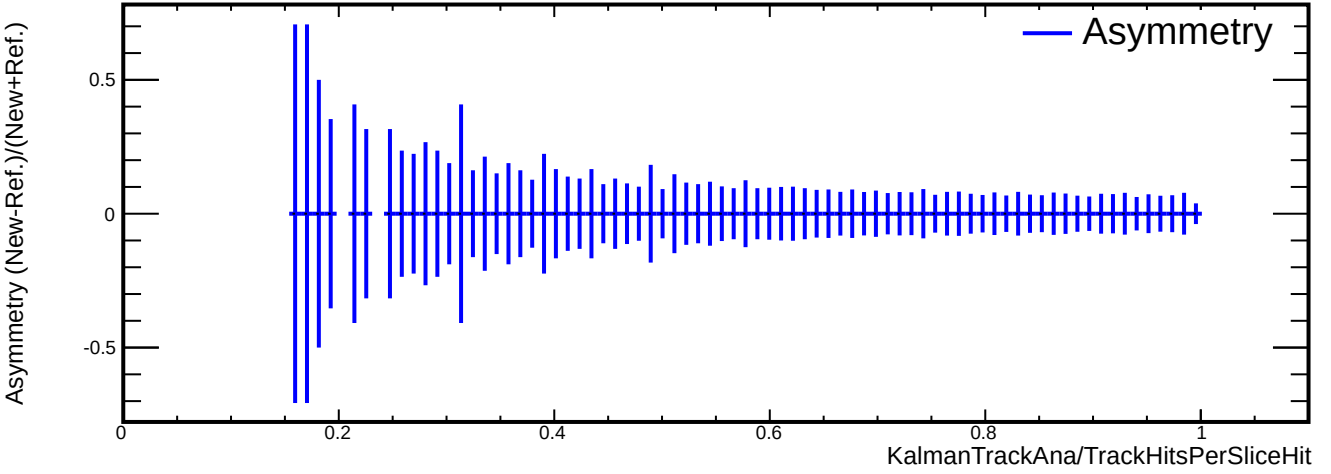

2012-07-02
2012-07-03
Events
3000
2000
1000
0
0
1
2
3
KalmanTrackAna/2dtracksPerNonNoiseSlice

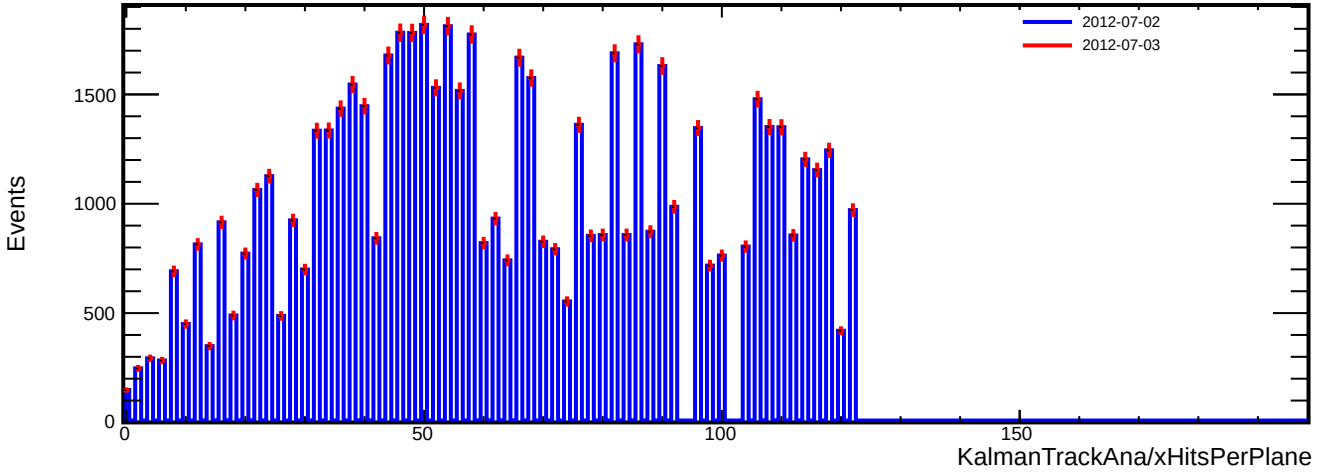

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
1
2
3
KalmanTrackAna/2dtracksPerNonNoiseSlice

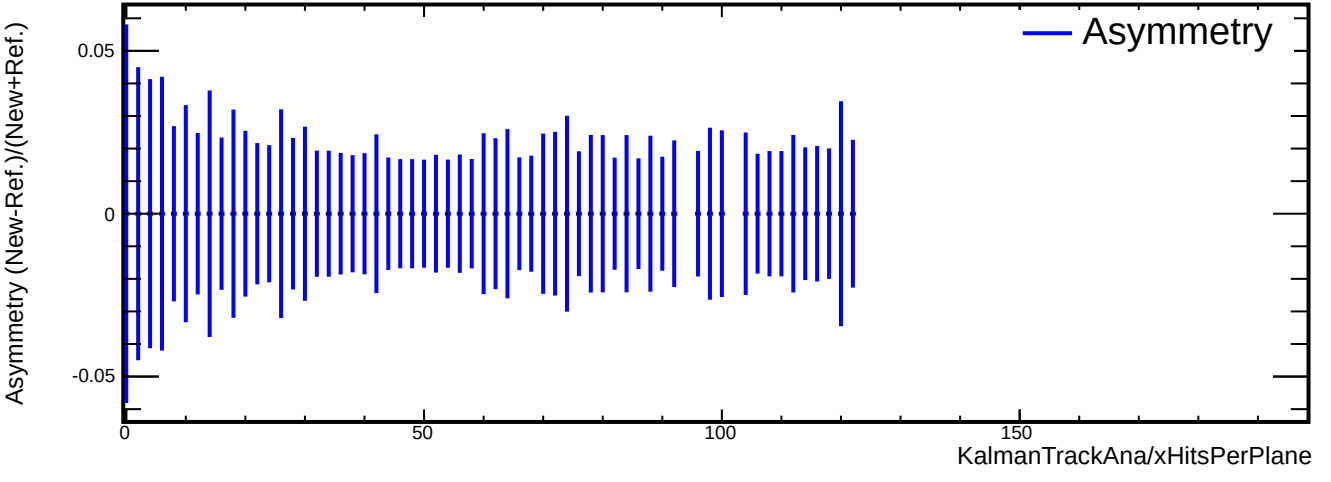

2012-07-02
2012-07-03
Events
3000
2000
1000
0
5
10
15
20
KalmanTrackAna/NTracksVNSlices

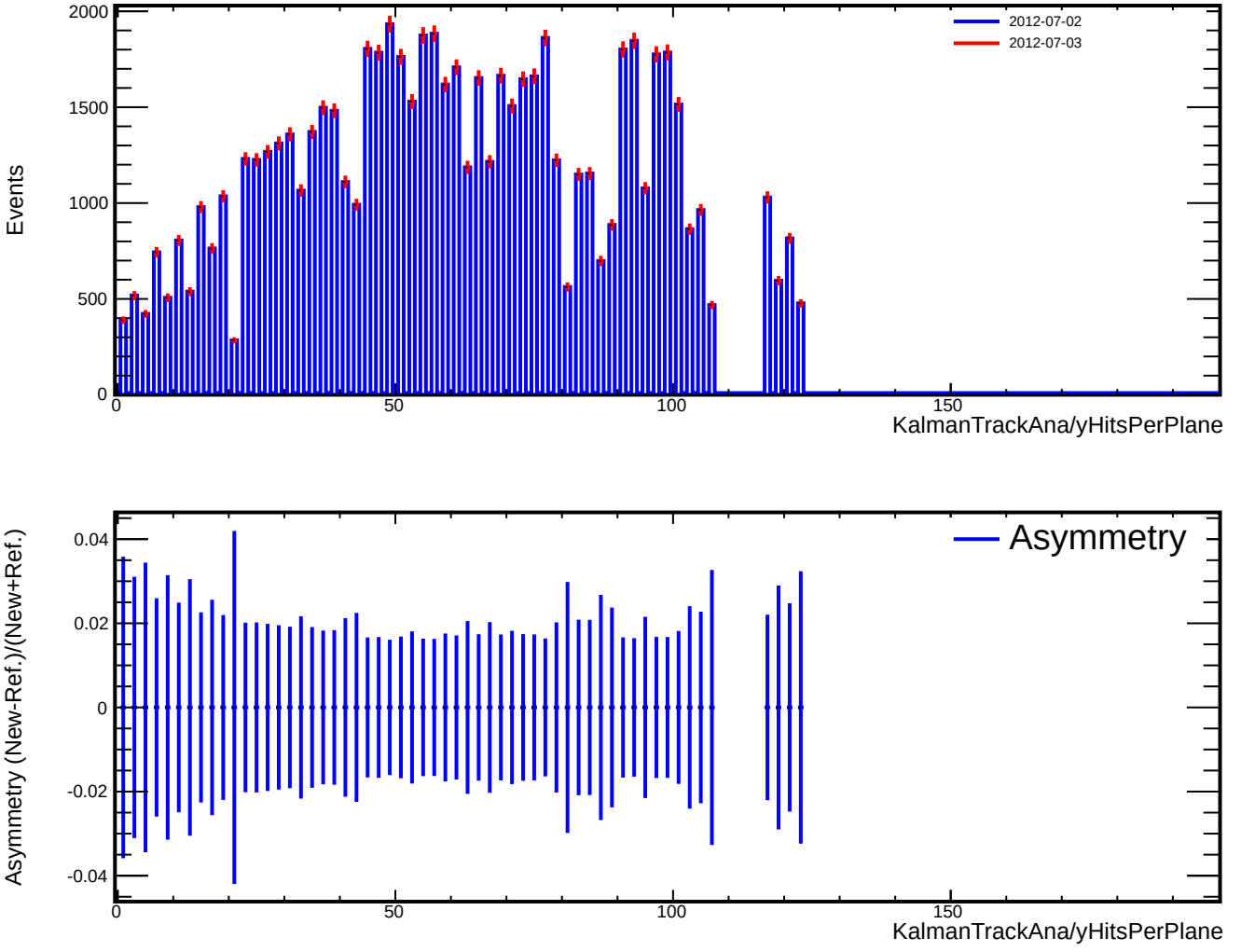

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
5
10
15
20
KalmanTrackAna/NTracksVNSlices

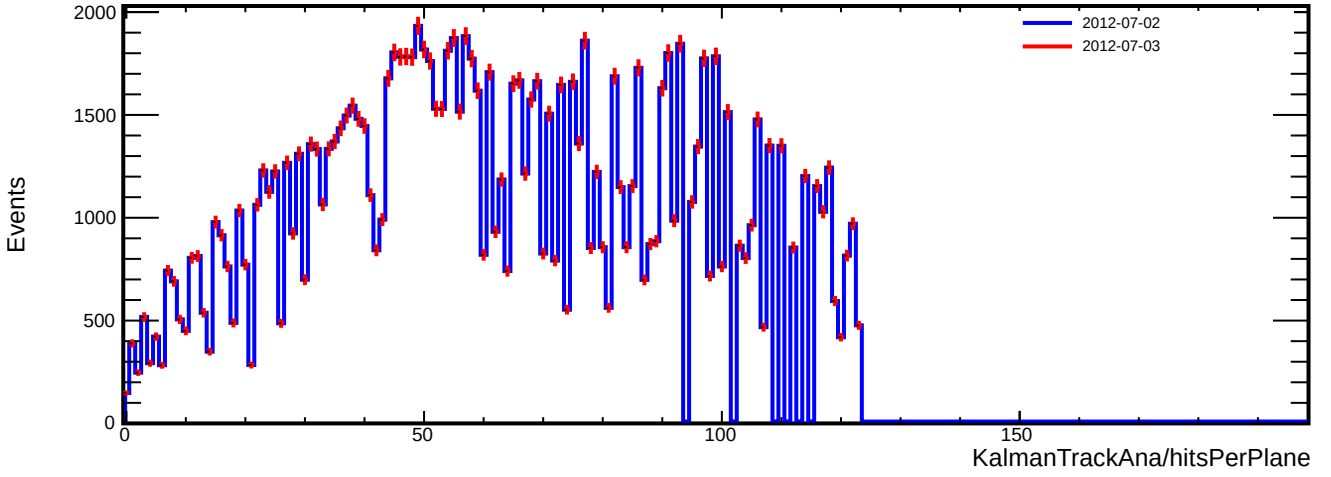

2012-07-02
2012-07-03
Events
300
200
100
0
0
0.2
0.4
0.6
0.8
1
KalmanTrackAna/TrackHitsPerSliceHit

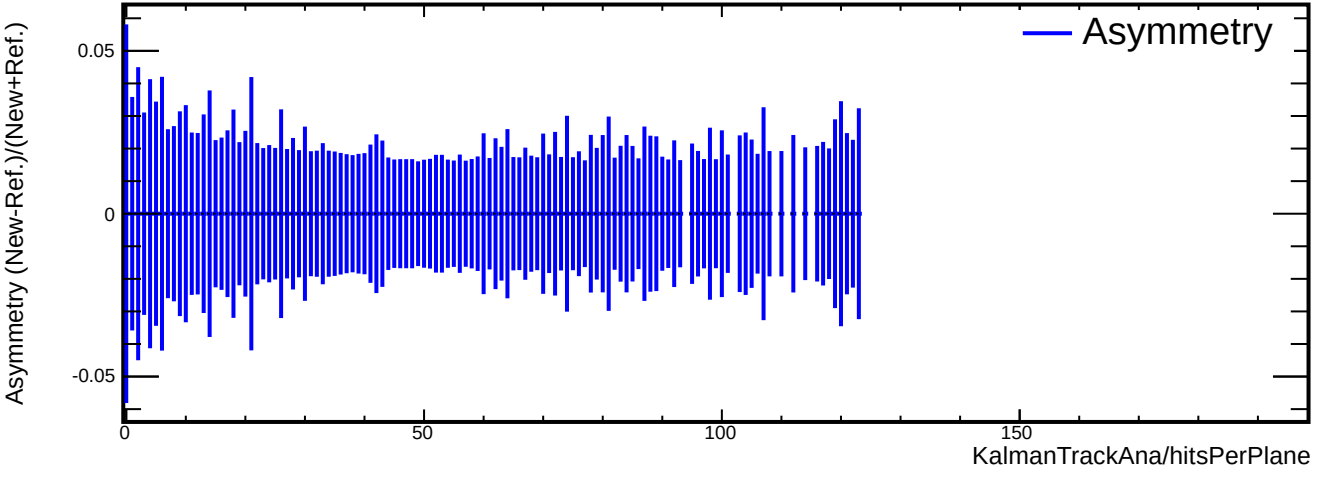

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
0.2
0.4
0.6
0.8
1
KalmanTrackAna/TrackHitsPerSliceHit

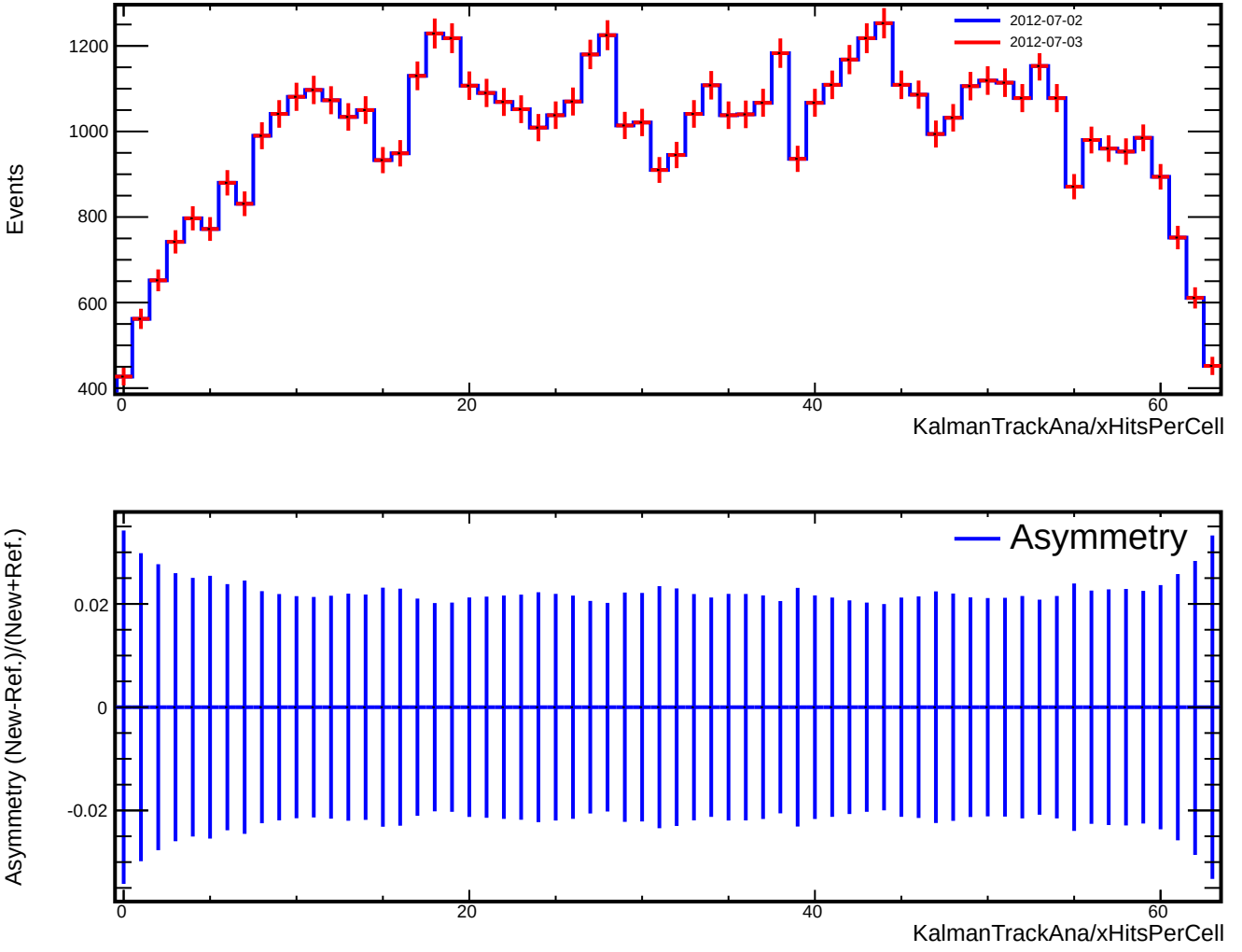

2012-07-02
2012-07-03
Events
0
500
1000
1500
0
50
100
150
KalmanTrackAna/xHitsPerPlane

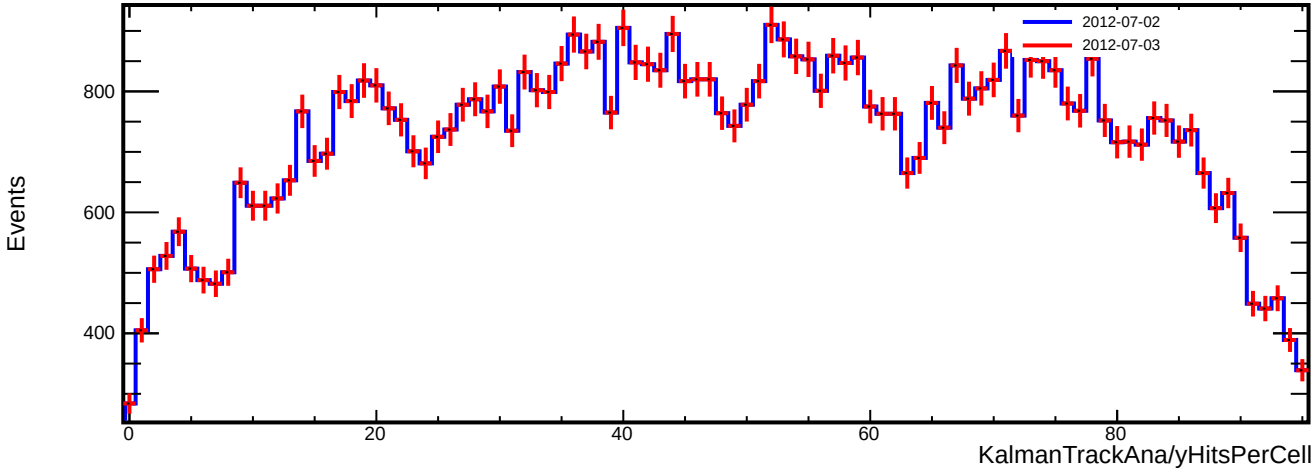

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.05
0
-0.05
0
50
100
150
KalmanTrackAna/xHitsPerPlane

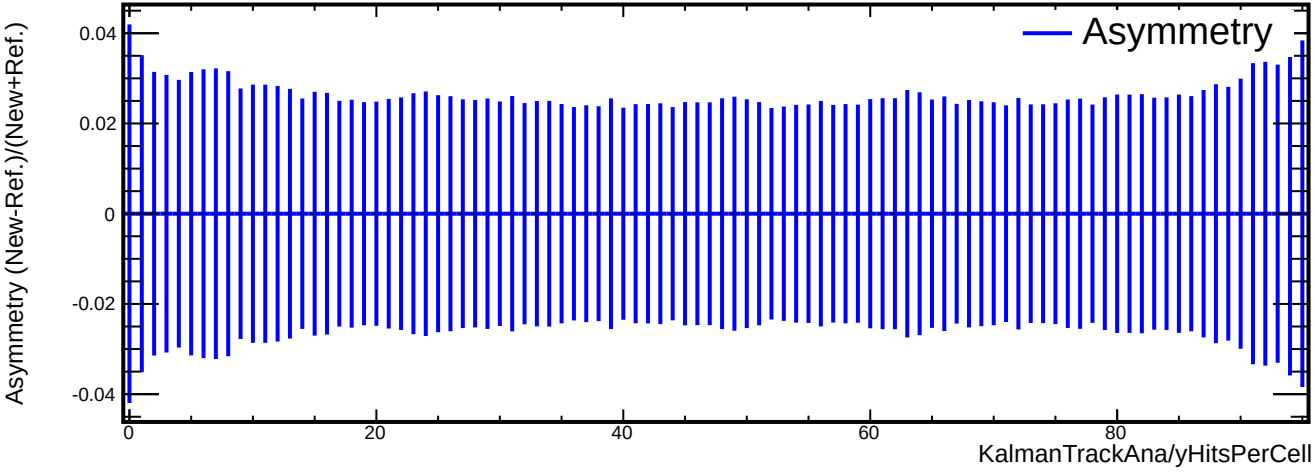

Events
2012-07-02
2012-07-03
KalmanTrackAna/yHitsPerPlane
Asymmetry (New-Ref.)/(New+Ref.)
Asymmetry
KalmanTrackAna/yHitsPerPlane

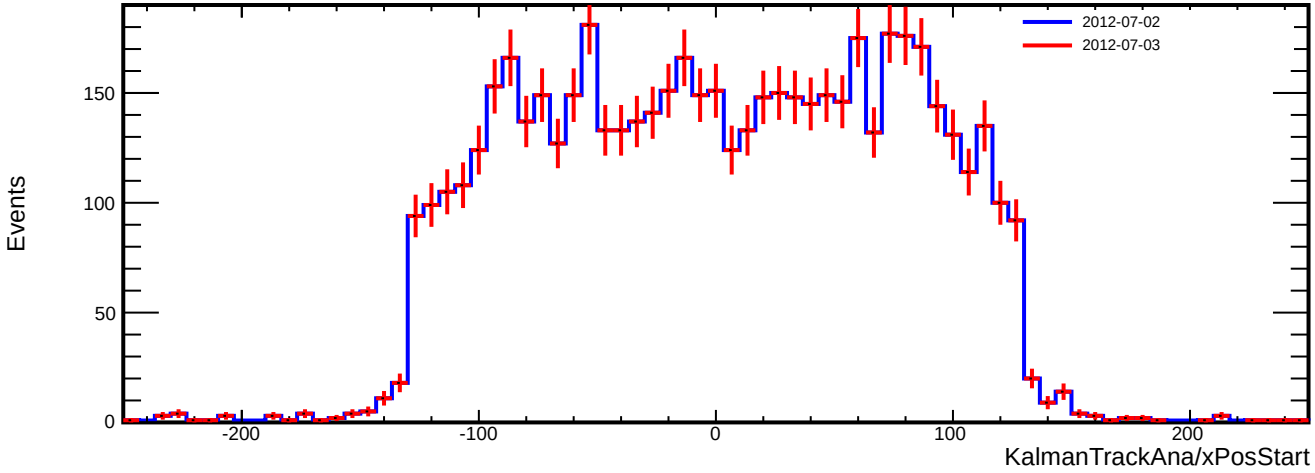

2012-07-02
2012-07-03
Events
2000
1500
1000
500
0
0
50
100
150
KalmanTrackAna/hitsPerPlane

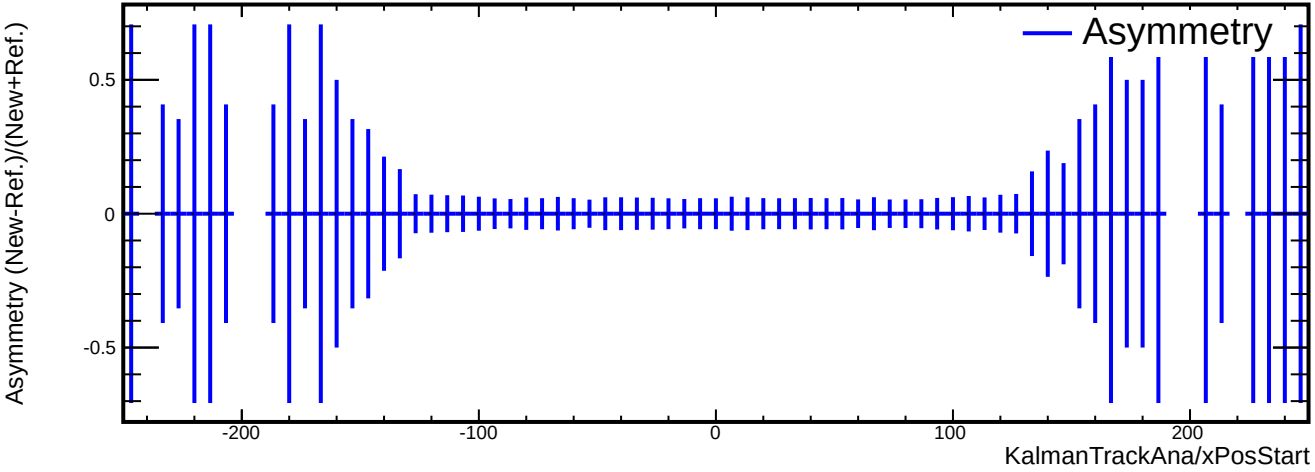

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.05
0
-0.05
0
50
100
150
KalmanTrackAna/hitsPerPlane

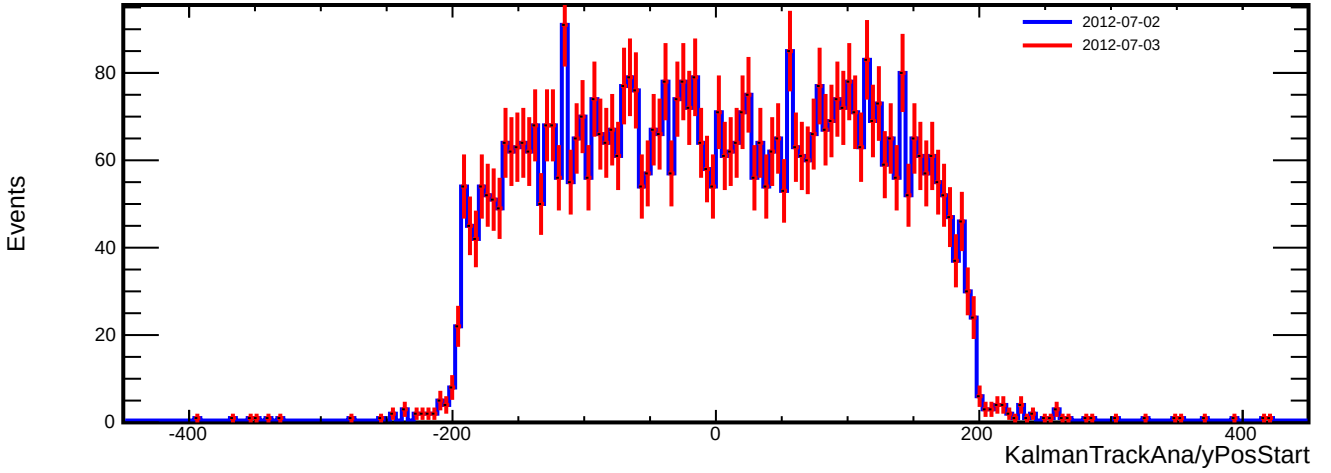

2012-07-02
2012-07-03
Events
1200
1000
800
600
400
0
20
40
60
KalmanTrackAna/xHitsPerCell
Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.02
0
-0.02
0
20
40
60
KalmanTrackAna/xHitsPerCell

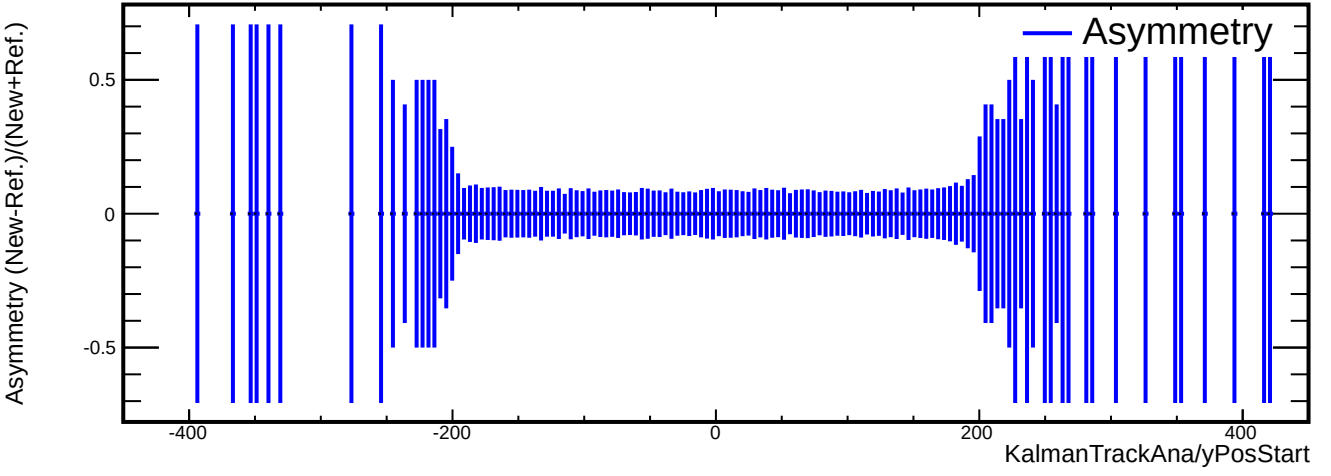

2012-07-02
2012-07-03
Events
800
600
400
0
20
40
60
80
KalmanTrackAna/yHitsPerCell

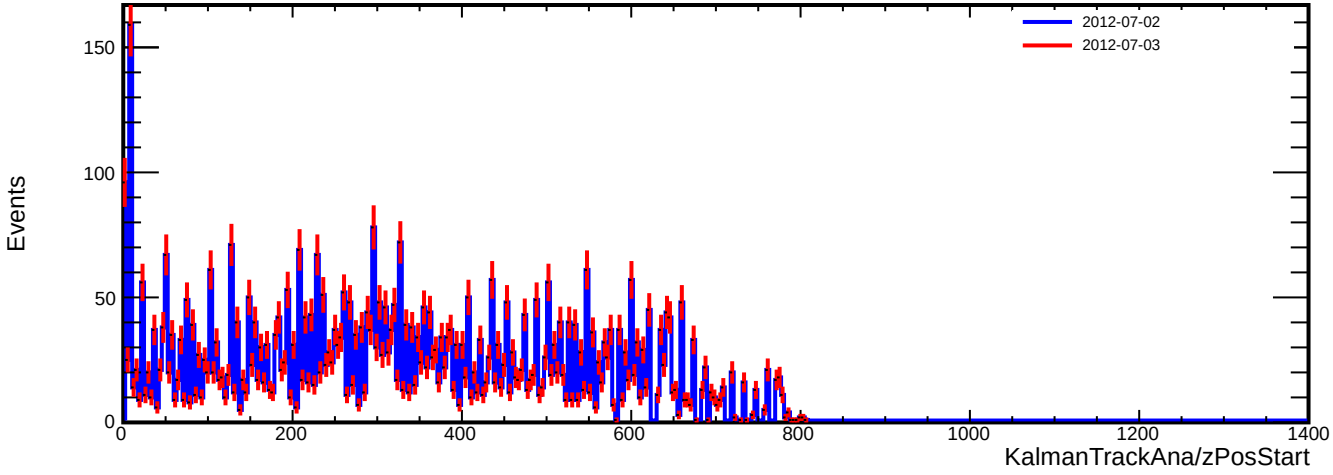

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.04
0.02
0
-0.02
-0.04
0
20
40
60
80
KalmanTrackAna/yHitsPerCell

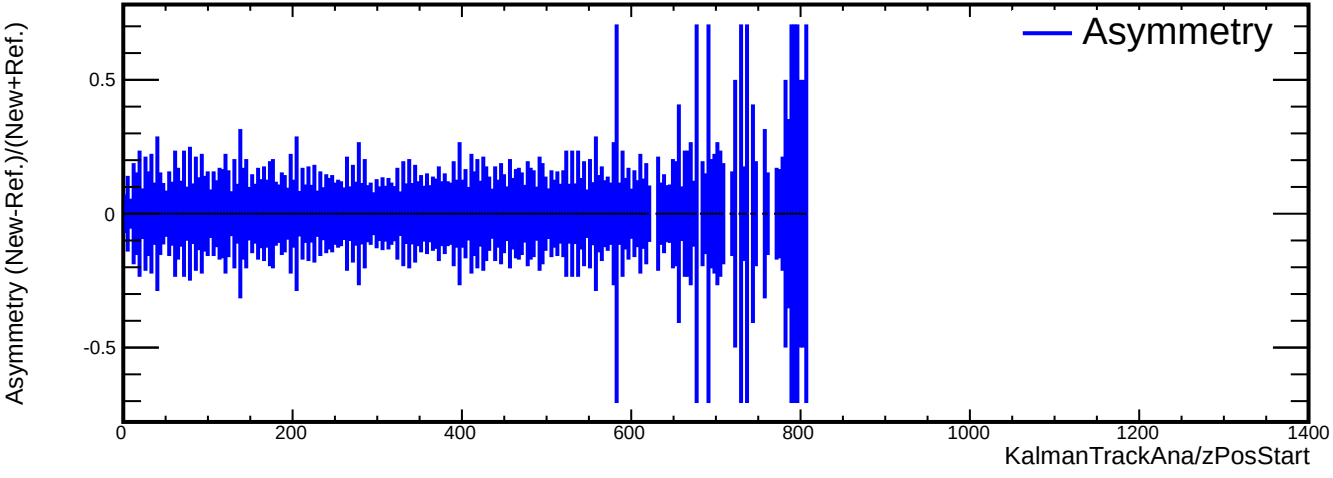

2012-07-02
2012-07-03
Events
150
100
50
0
-200
-100
0
100
200
KalmanTrackAna/xPosStart

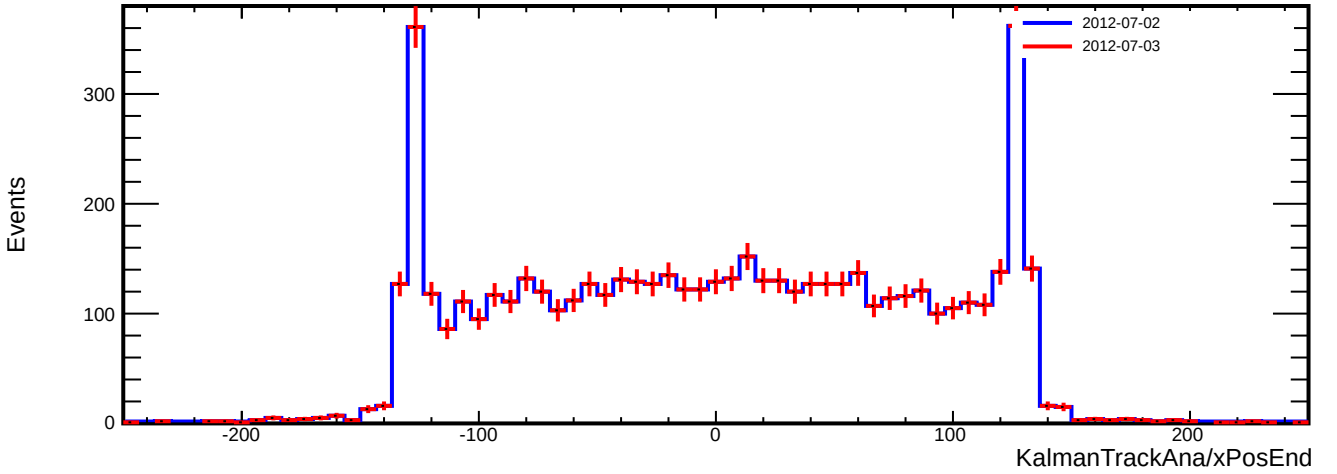

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-200
-100
0
100
200
KalmanTrackAna/xPosStart

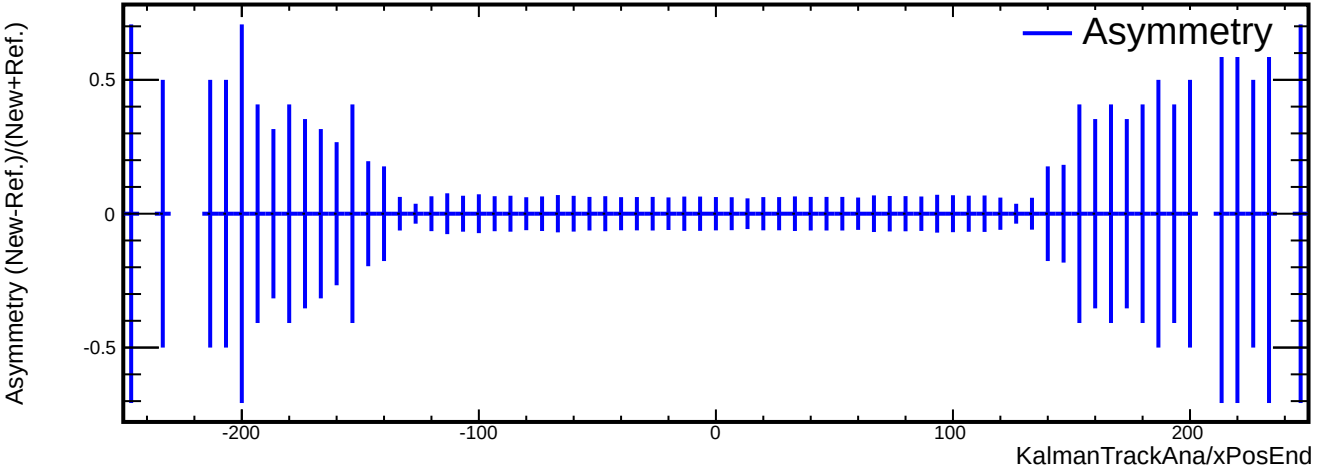

2012-07-02
2012-07-03
Events
0
20
40
60
80
-400
-200
0
200
400
KalmanTrackAna/yPosStart

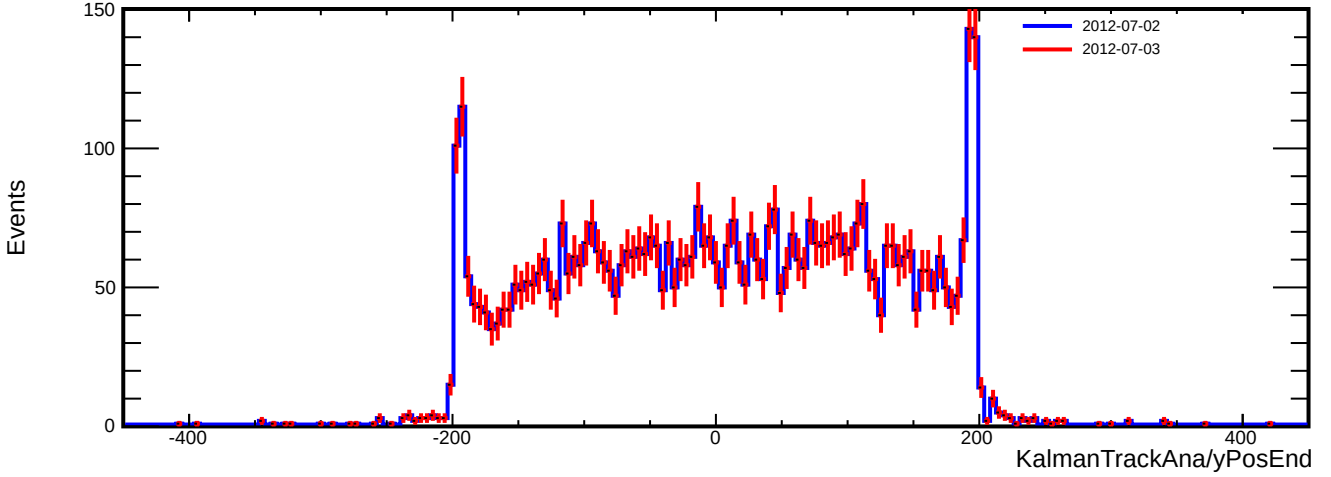

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-400
-200
0
200
400
KalmanTrackAna/yPosStart

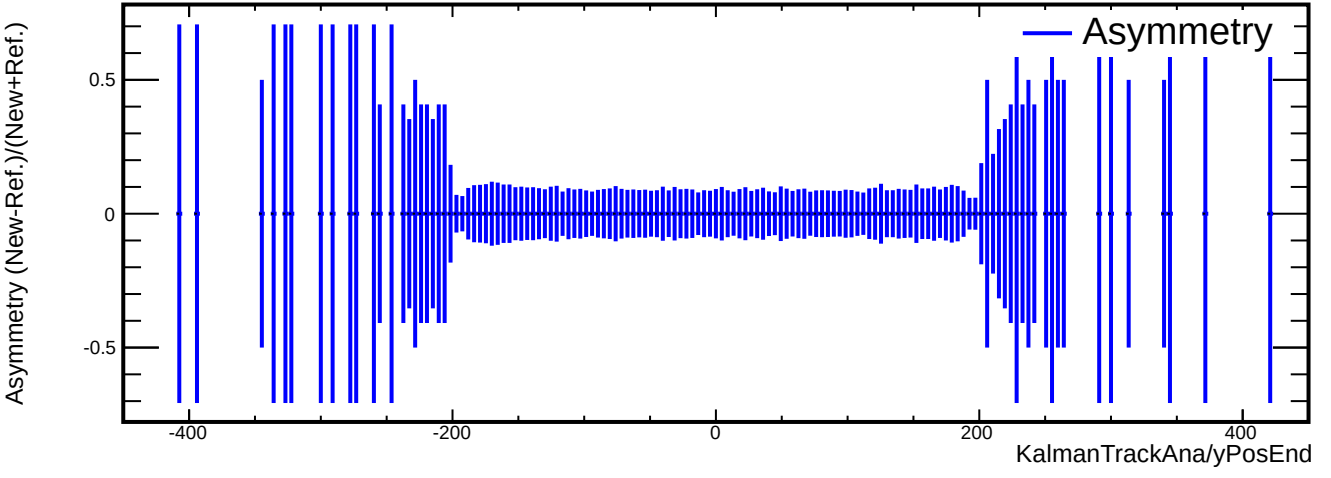

2012-07-02
2012-07-03
Events
150
100
50
0
0
200
400
600
800
1000
1200
1400
KalmanTrackAna/zPosStart

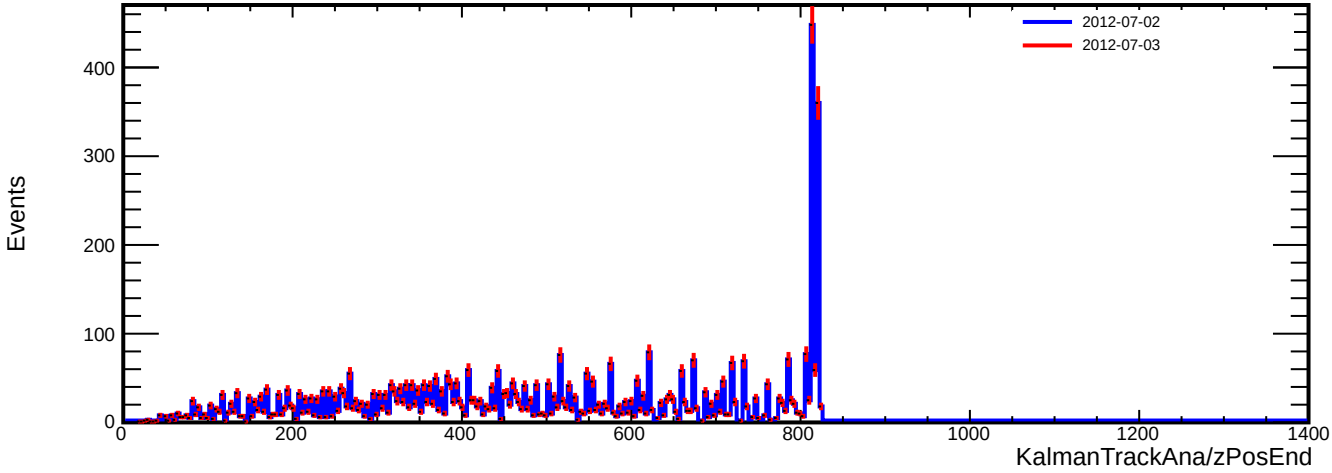

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
200
400
600
800
1000
1200
1400
KalmanTrackAna/zPosStart

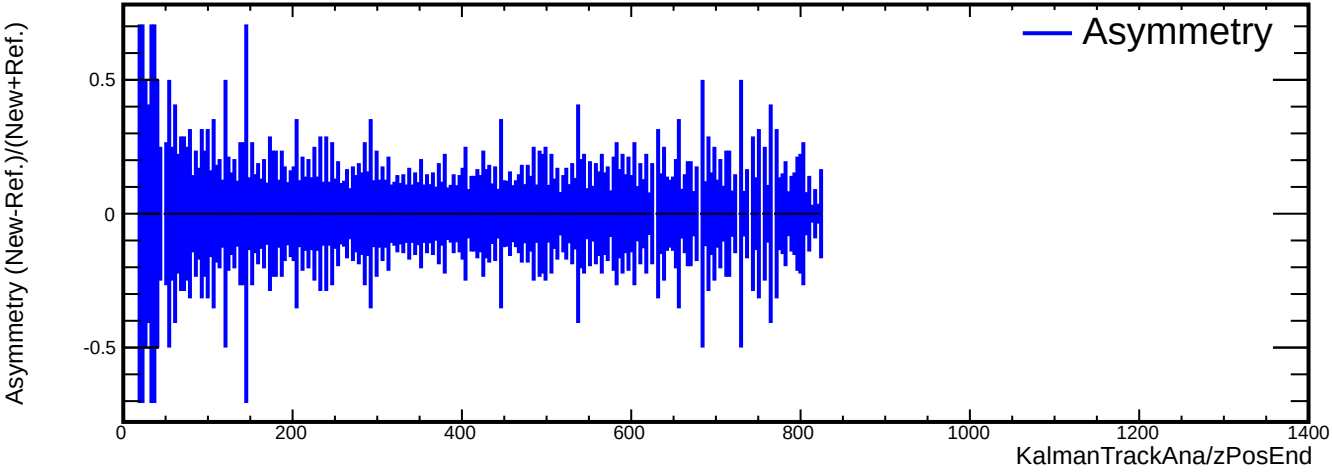

2012-07-02
2012-07-03
Events
300
200
100
0
-200
-100
0
100
200
KalmanTrackAna/xPosEnd

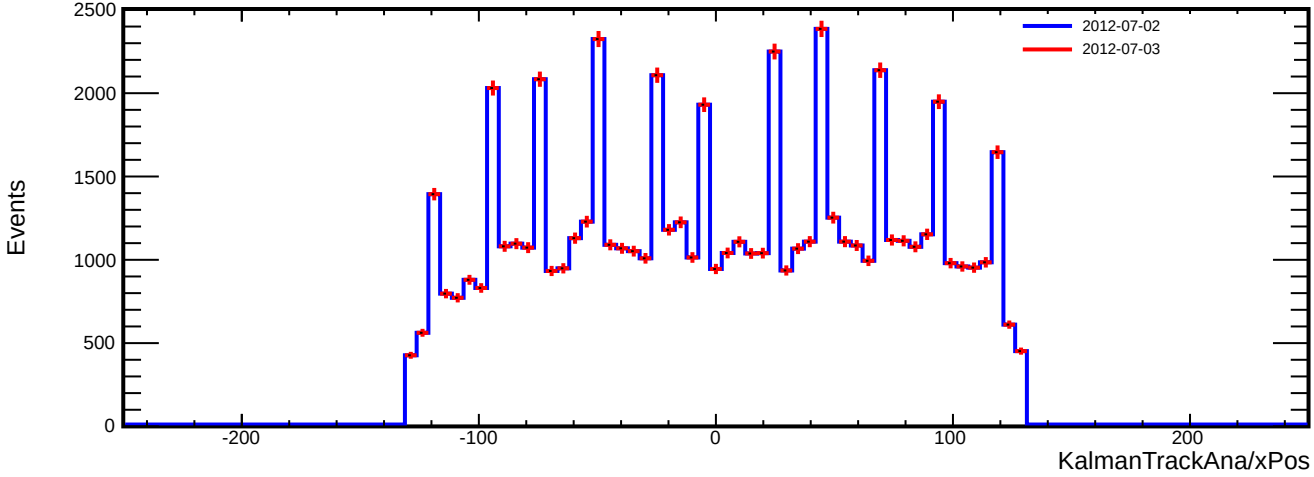

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-200
-100
0
100
200
KalmanTrackAna/xPosEnd

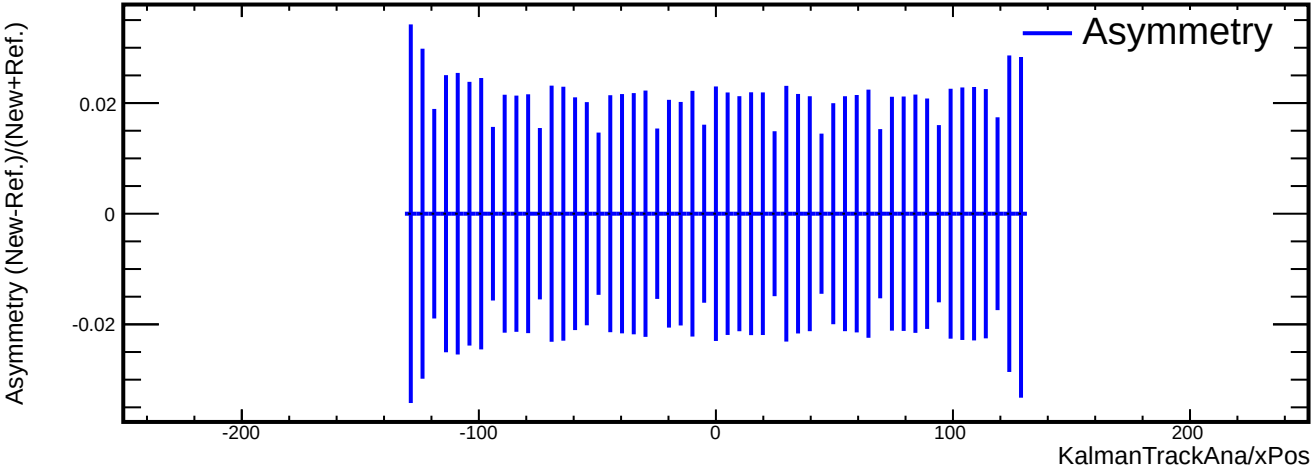

150
100
50
0
Events
-400
-200
0
200
400
KalmanTrackAna/yPosEnd
2012-07-02
2012-07-03

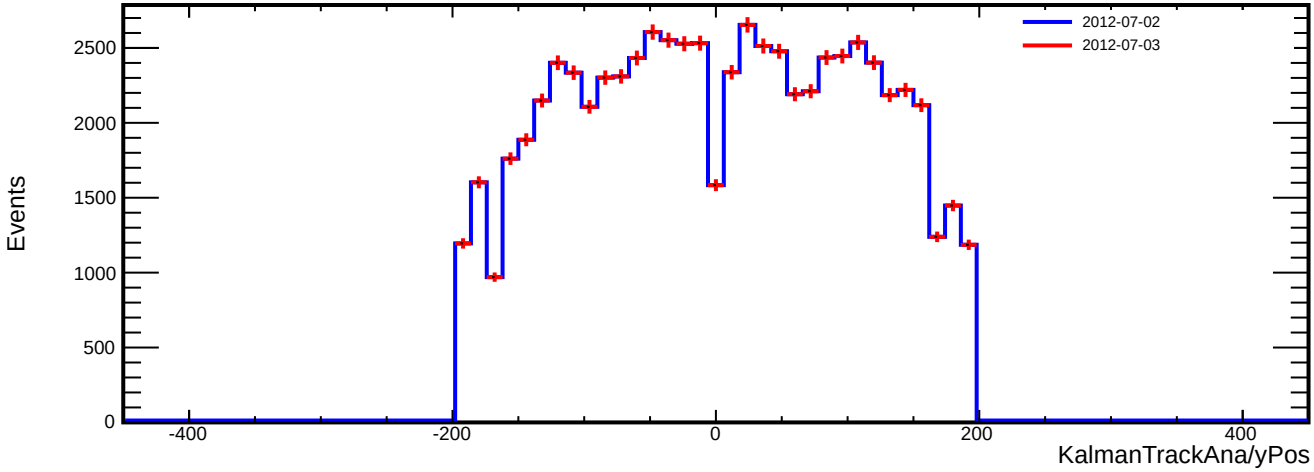

0.5
0
-0.5
Asymmetry (New-Ref.)/(New+Ref.)
-400
-200
0
200
400
KalmanTrackAna/yPosEnd
Asymmetry

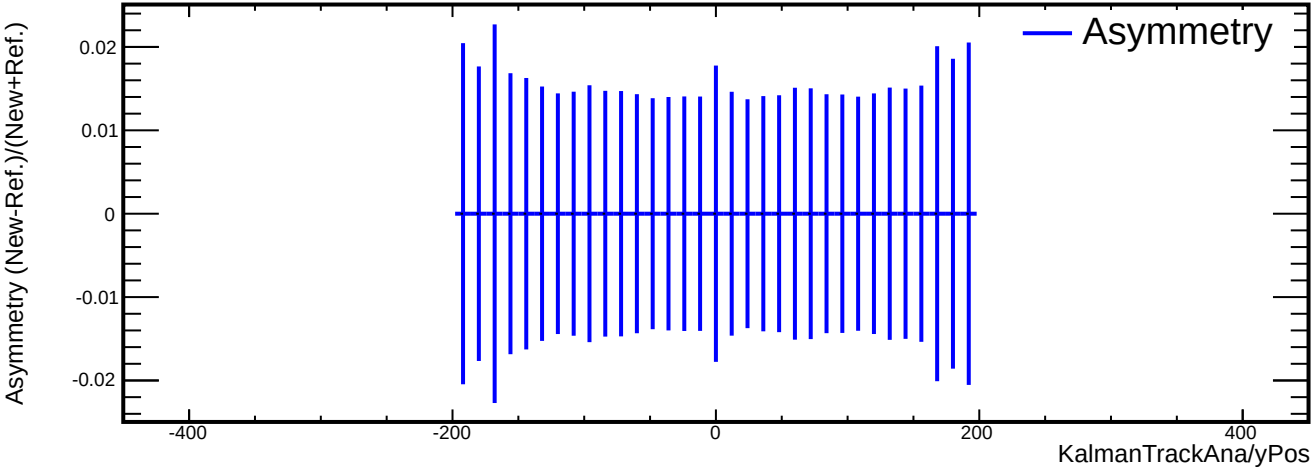

2012-07-02
2012-07-03
Events
0
100
200
300
400
0
200
400
600
800
1000
1200
1400
KalmanTrackAna/zPosEnd

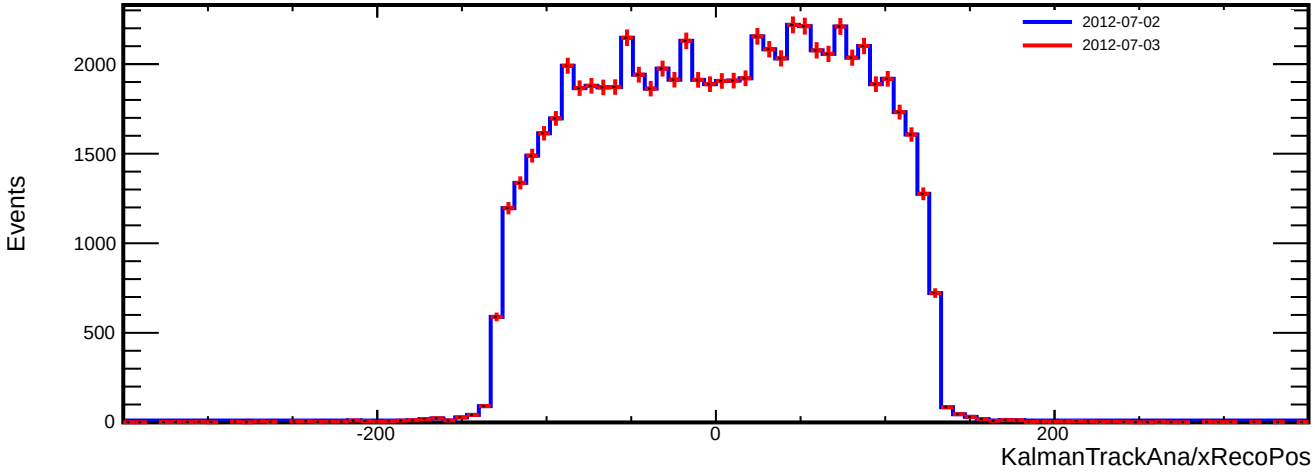

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
200
400
600
800
1000
1200
1400
KalmanTrackAna/zPosEnd

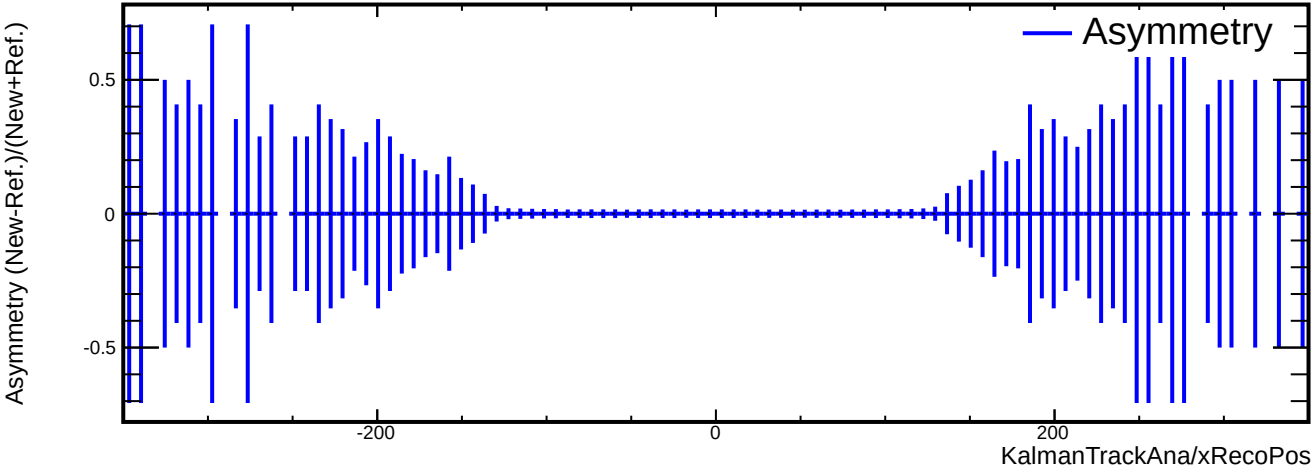

2012-07-02
2012-07-03
Events
2500
2000
1500
1000
500
0
-200
-100
0
100
200
KalmanTrackAna/xPos

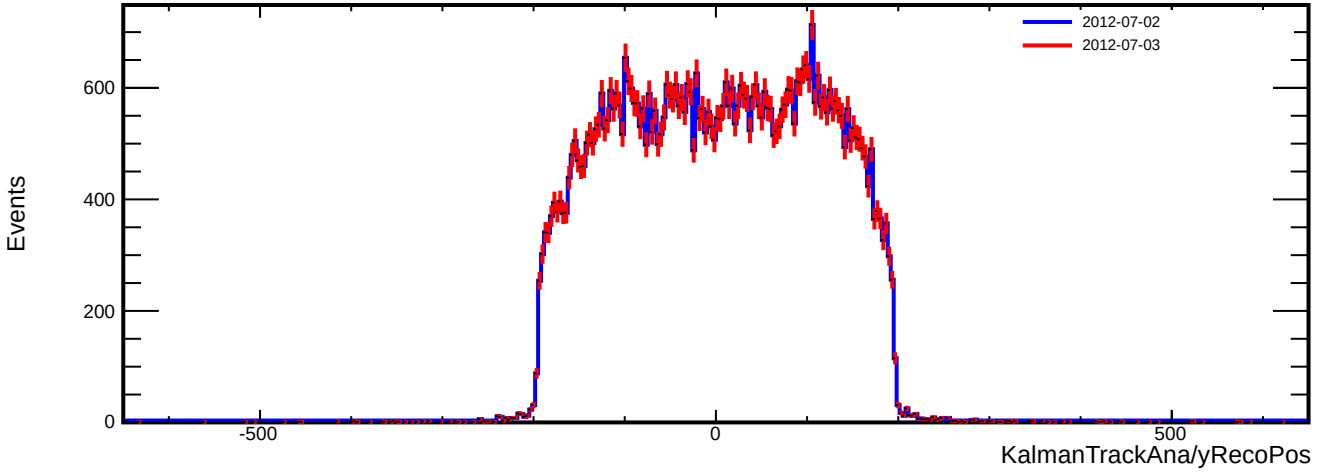

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.02
0
-0.02
-200
-100
0
100
200
KalmanTrackAna/xPos

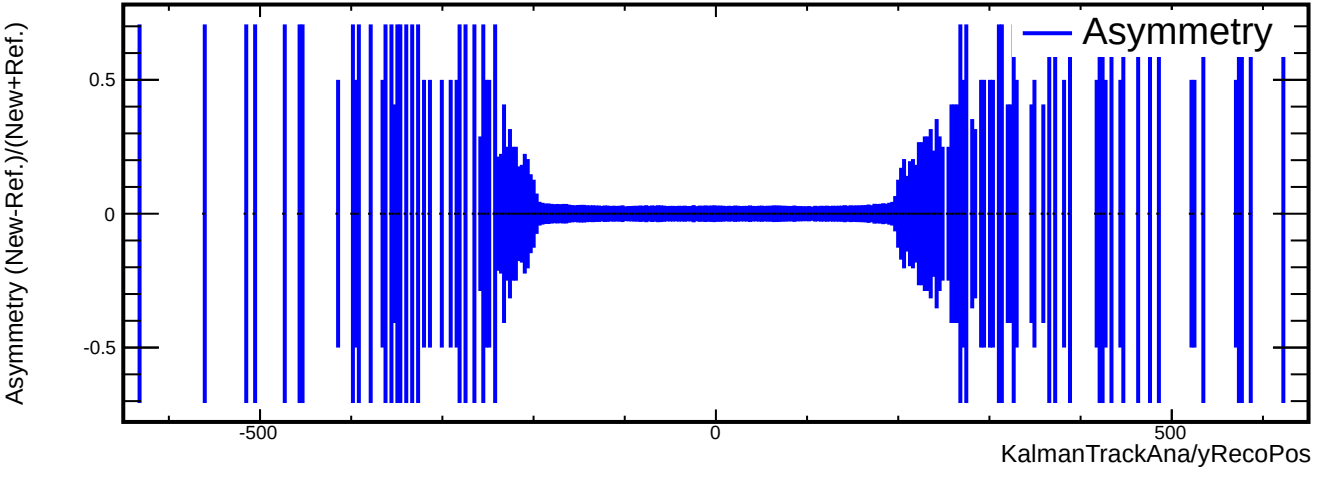

2012-07-02
2012-07-03
Events
2500
2000
1500
1000
500
0
-400
-200
0
200
400
KalmanTrackAna/yPos

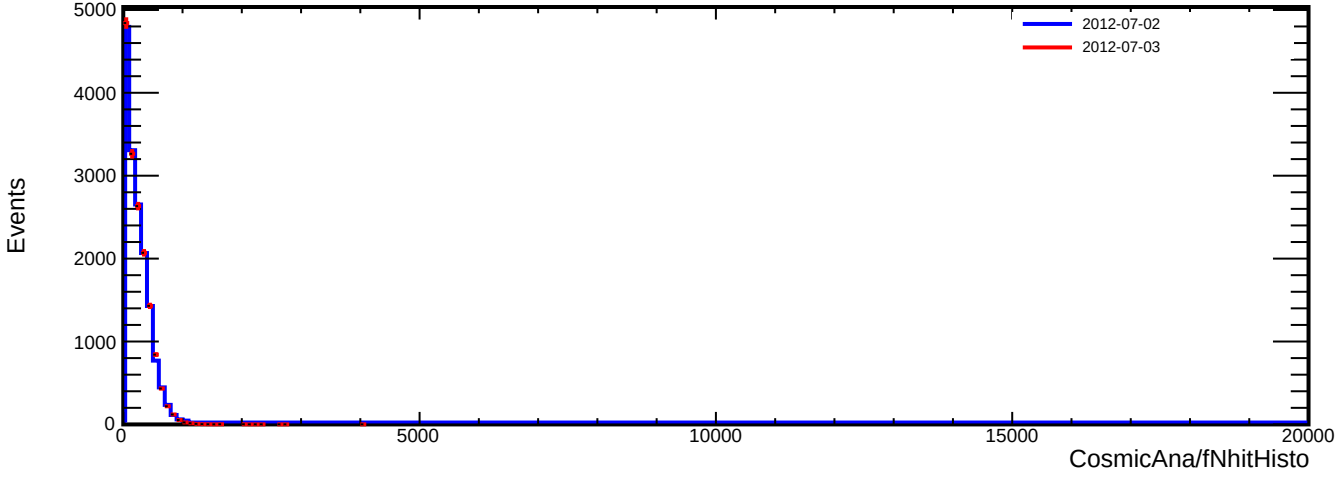

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.02
0.01
0
-0.01
-0.02
-400
-200
0
200
400
KalmanTrackAna/yPos

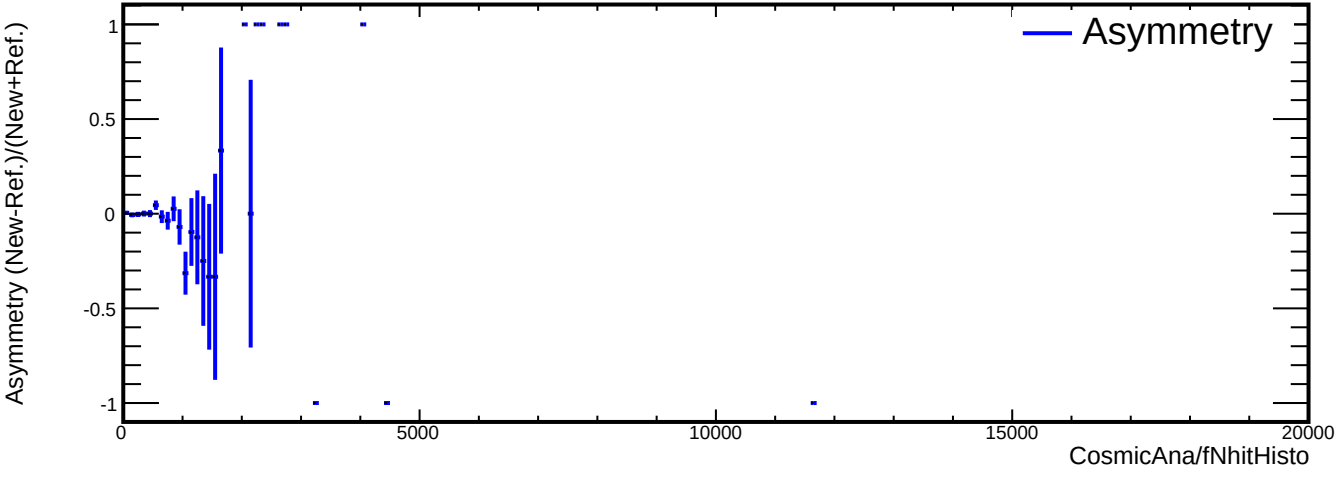

2012-07-02
2012-07-03
Events
2000
1500
1000
500
0
-200
0
200
KalmanTrackAna/xRecoPos

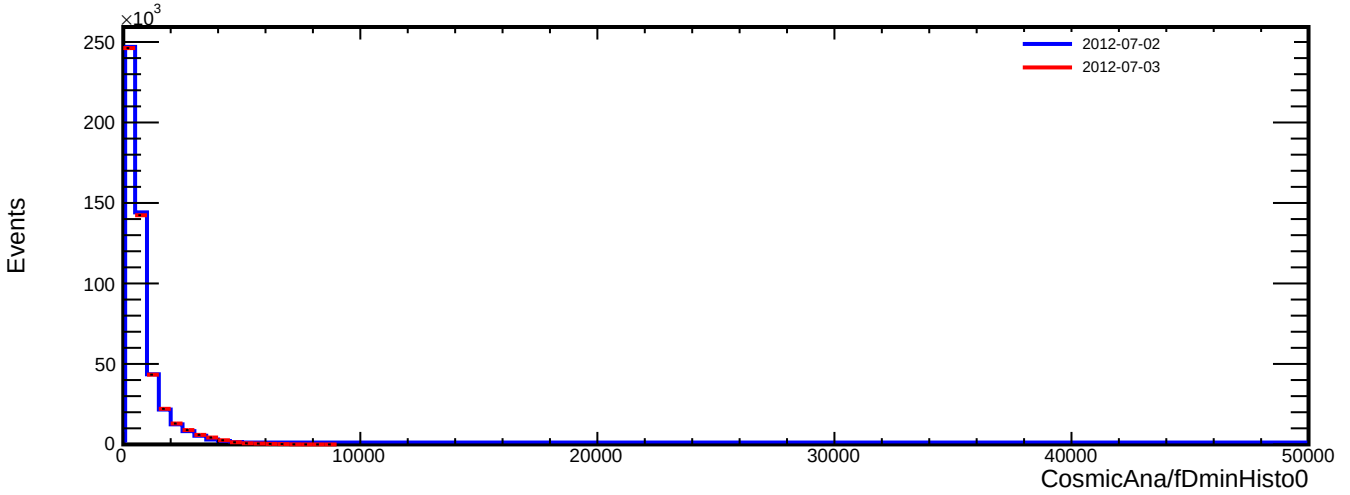

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-200
0
200
KalmanTrackAna/xRecoPos

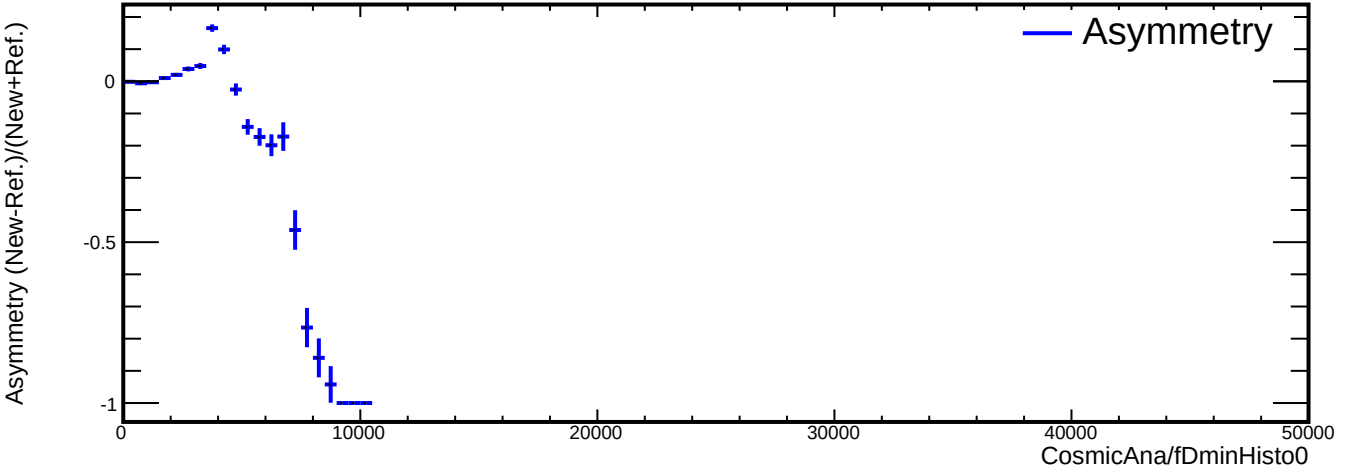

2012-07-02
2012-07-03
Events
600
400
200
0
-500
0
500
KalmanTrackAna/yRecoPos

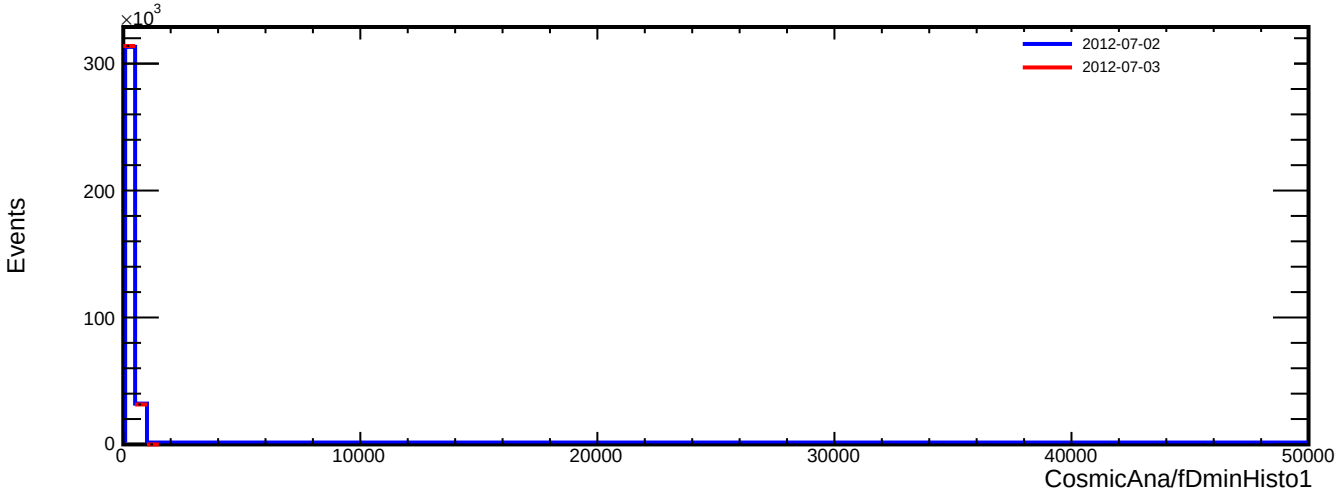

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-500
0
500
KalmanTrackAna/yRecoPos

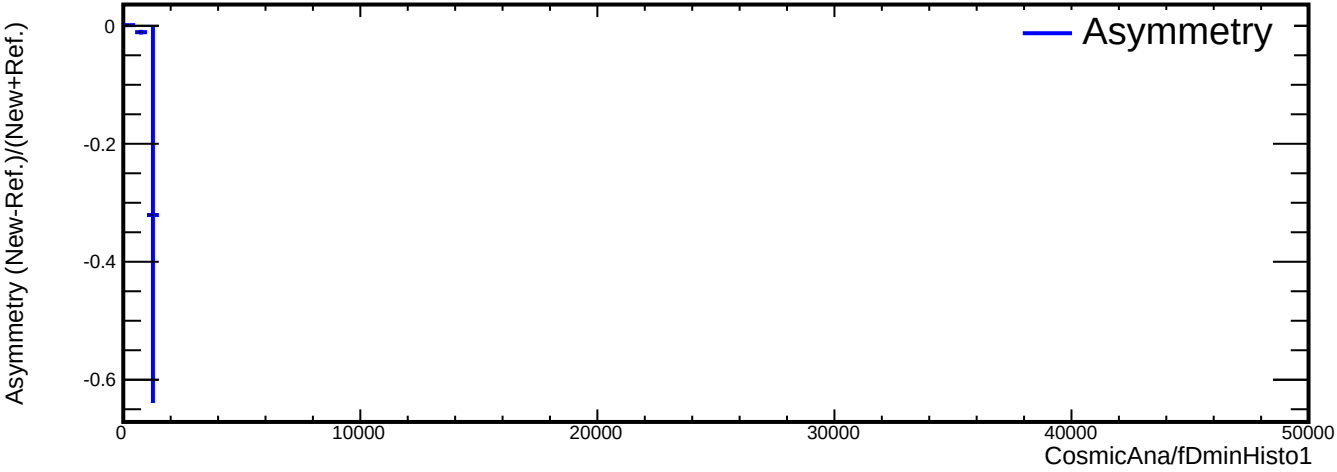

Events
5000
4000
3000
2000
1000
0
0
5000
10000
15000
20000
CosmicAna/fNhitHisto
2012-07-02
2012-07-03

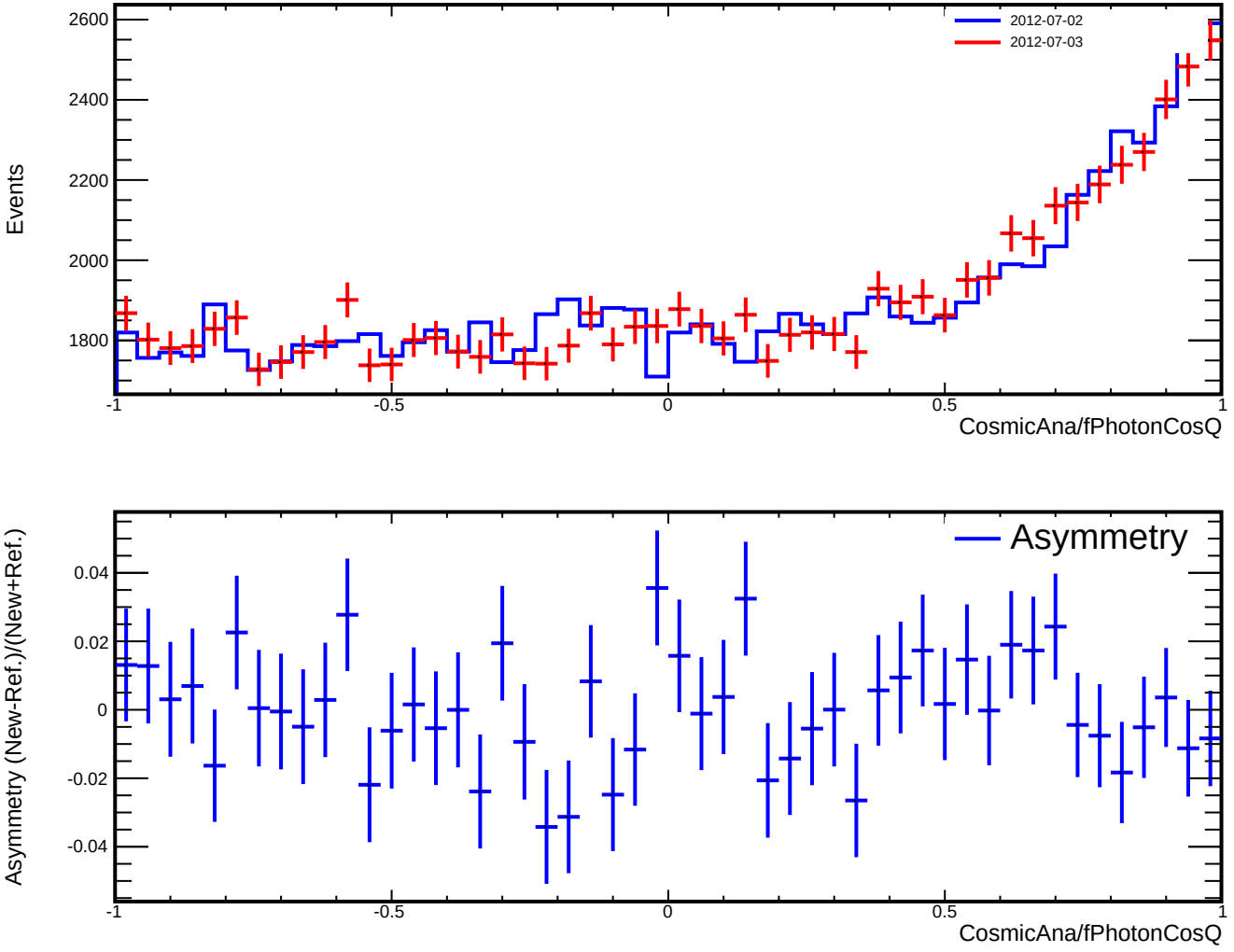

Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
5000
10000
15000
20000
CosmicAna/fNhitHisto
Asymmetry

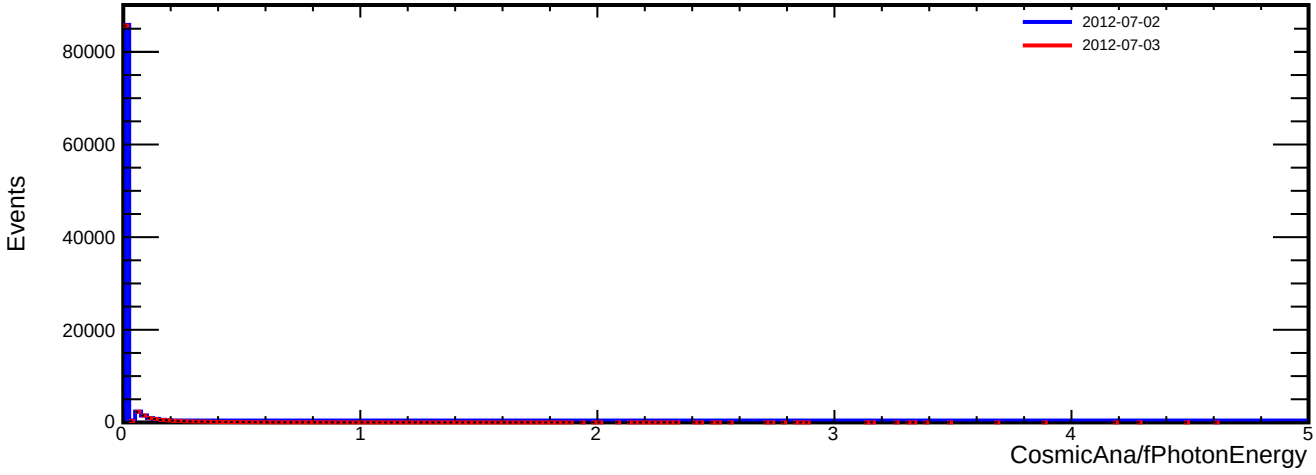

×10^3
250
200
150
100
50
0
Events
0
10000
20000
30000
40000
50000
CosmicAna/fDminHisto0
2012-07-02
2012-07-03

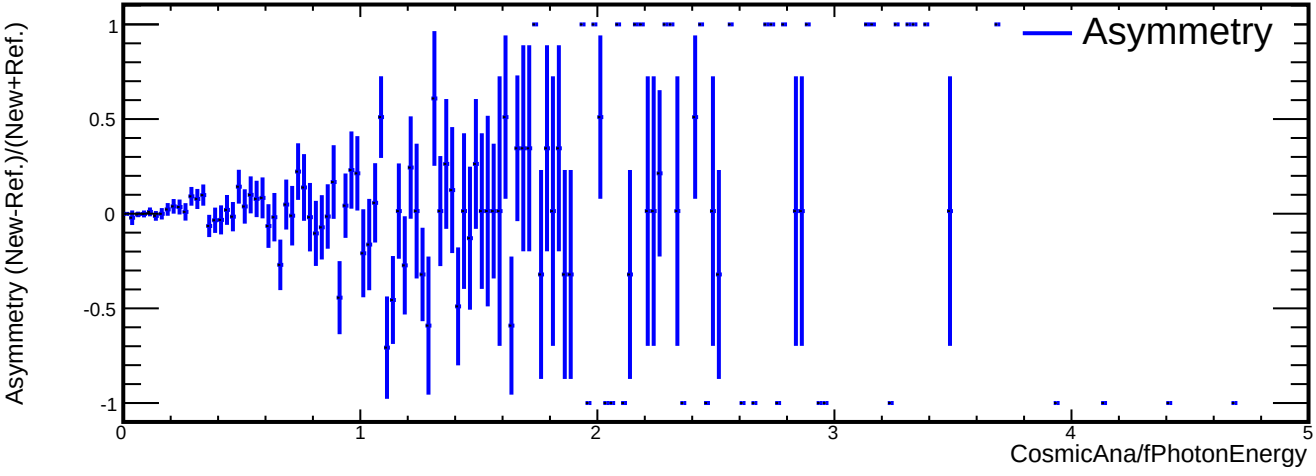

Asymmetry (New-Ref.)/(New+Ref.)
0
-0.5
-1
0
10000
20000
30000
40000
50000
CosmicAna/fDminHisto0
Asymmetry

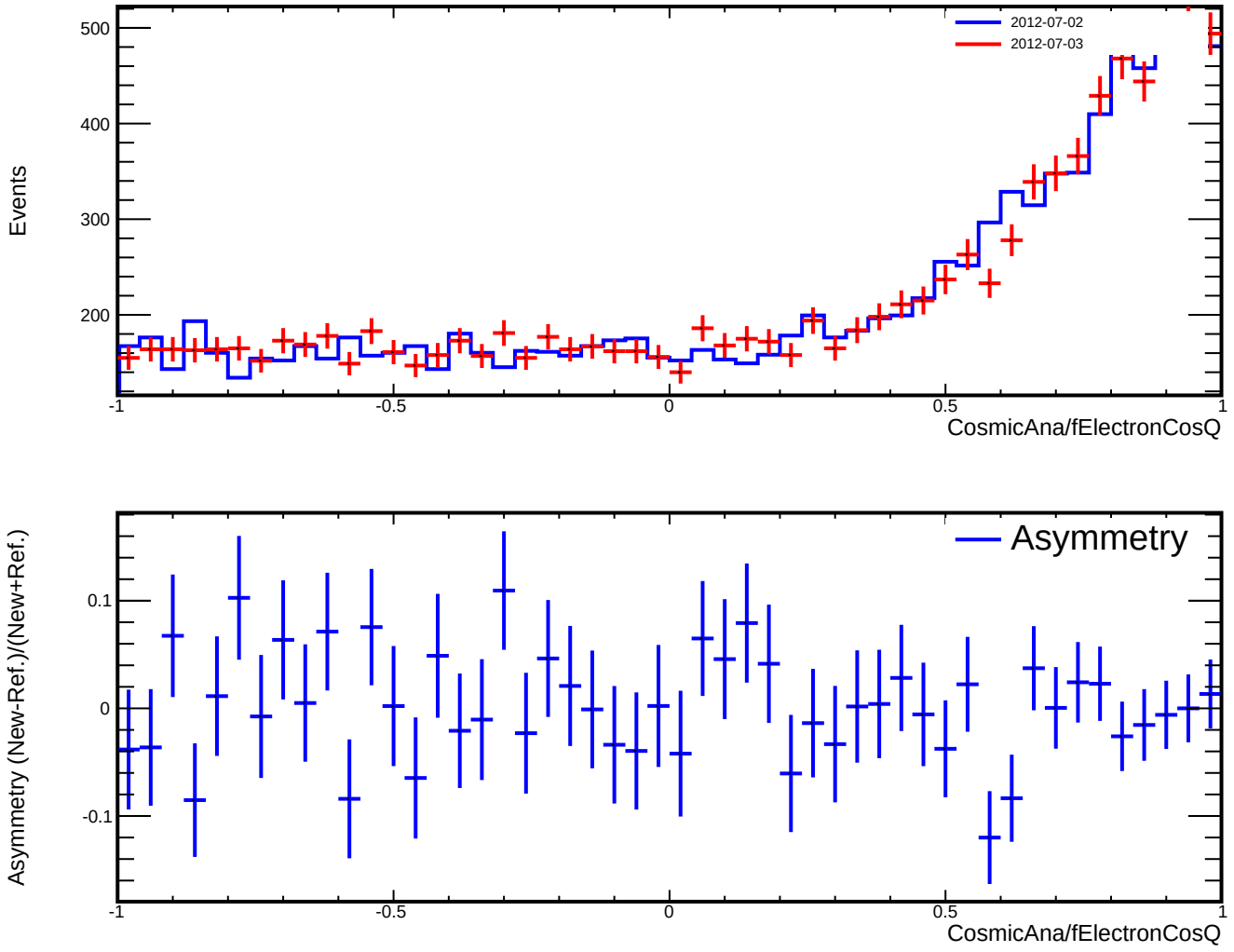

×10^3
300
200
100
0
Events
0
10000
20000
30000
40000
50000
CosmicAna/fDminHisto1
2012-07-02
2012-07-03

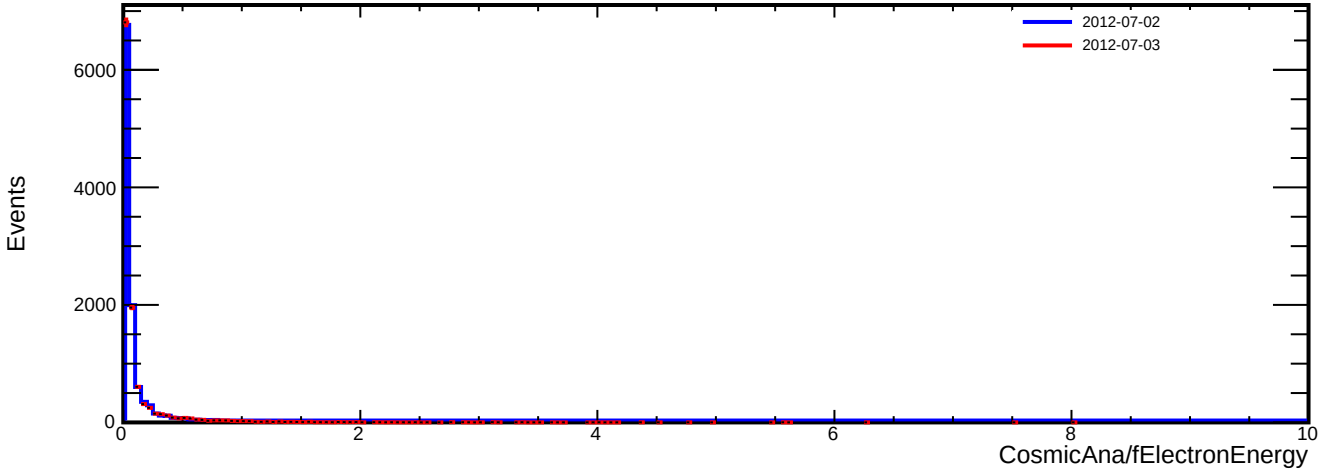

0
-0.2
-0.4
-0.6
Asymmetry (New-Ref.)/(New+Ref.)
0
10000
20000
30000
40000
50000
CosmicAna/fDminHisto1
Asymmetry

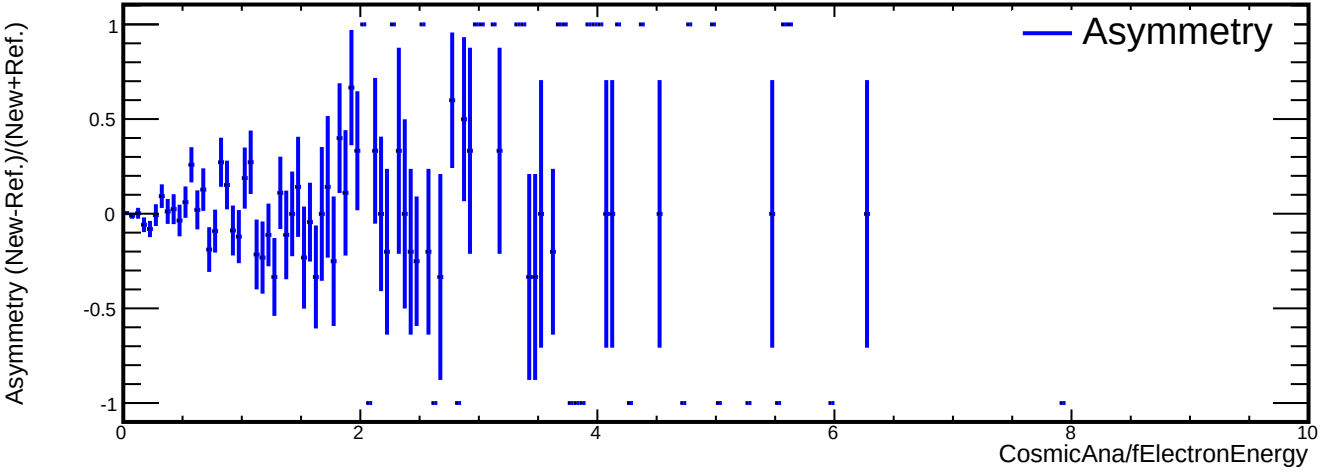

2012-07-02
2012-07-03
Events
2600
2400
2200
2000
1800
-1
-0.5
0
0.5
1
CosmicAna/fPhotonCosQ
Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.04
0.02
0
-0.02
-0.04
-1
-0.5
0
0.5
1
CosmicAna/fPhotonCosQ

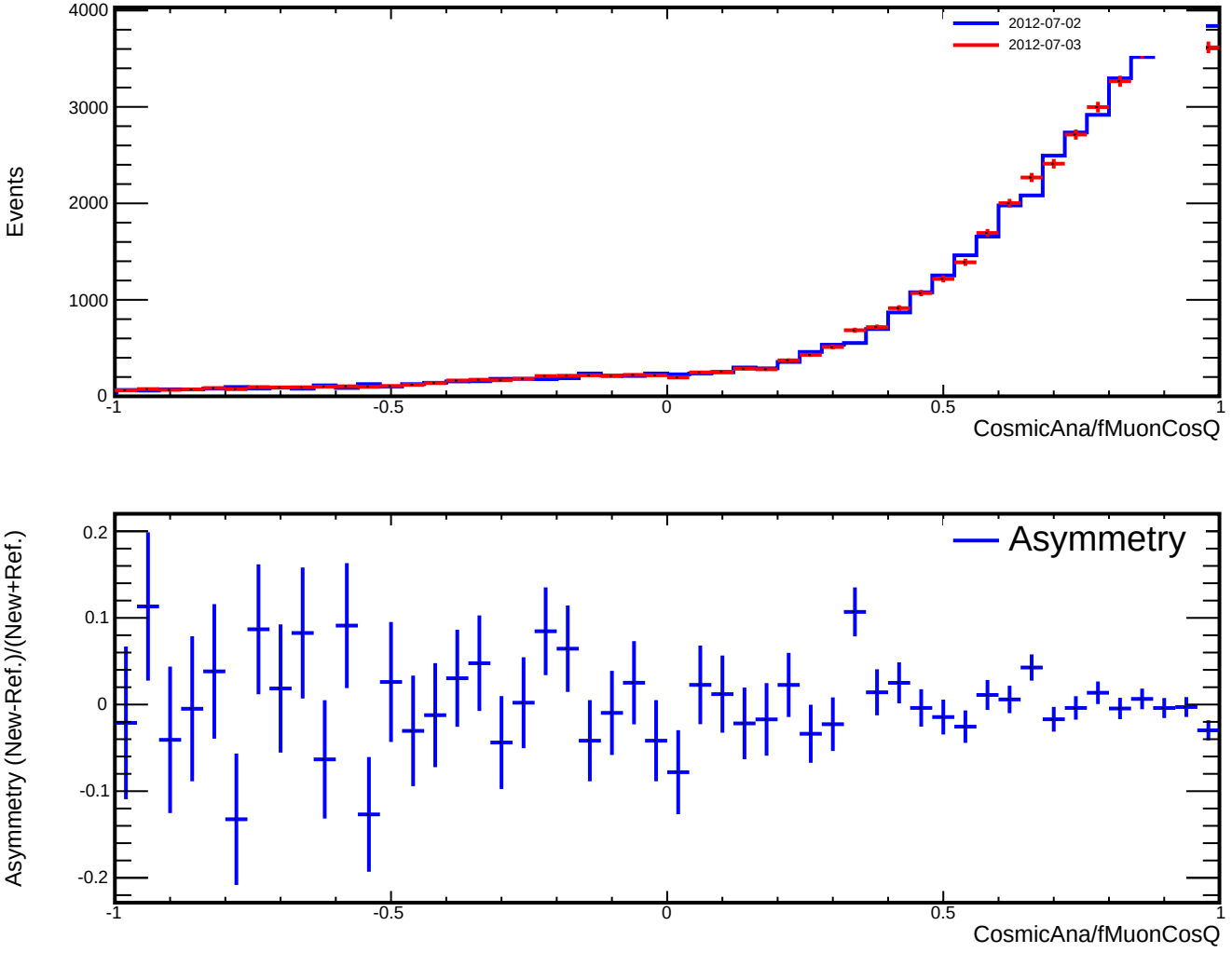

2012-07-02
2012-07-03
Events
80000
60000
40000
20000
0
0
1
2
3
4
5
CosmicAna/fPhotonEnergy

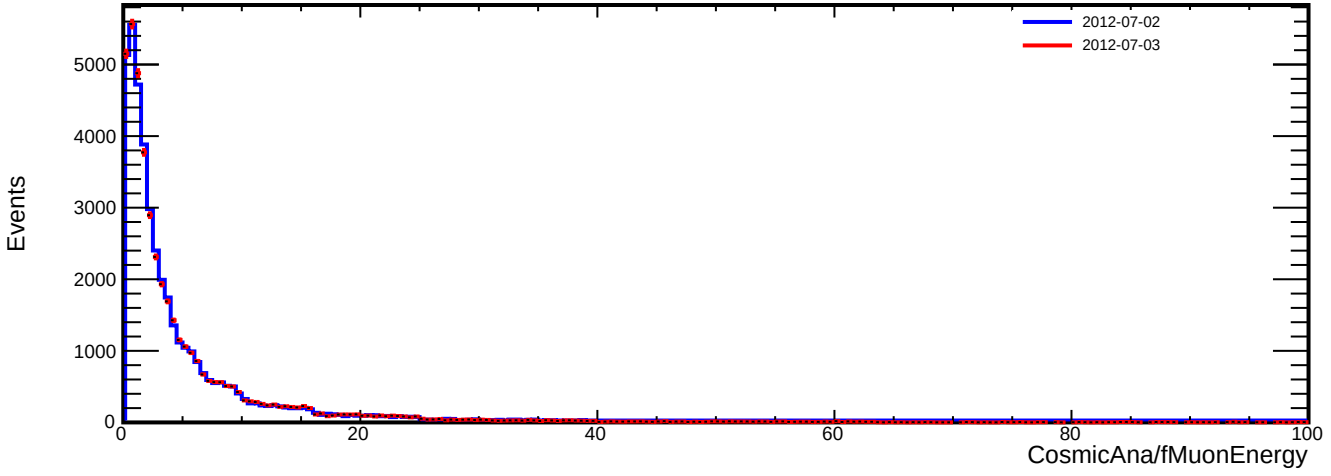

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
1
2
3
4
5
CosmicAna/fPhotonEnergy

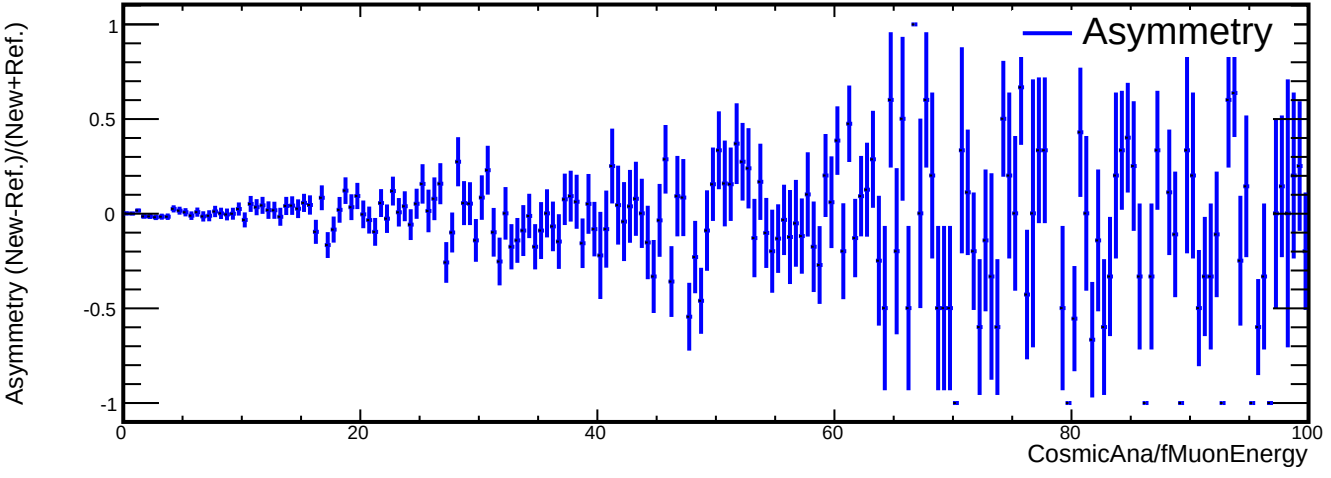

2012-07-02
2012-07-03
Events
500
400
300
200
-1
-0.5
0
0.5
1
CosmicAna/fElectronCosQ
Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.1
0
-0.1
-1
-0.5
0
0.5
1
CosmicAna/fElectronCosQ

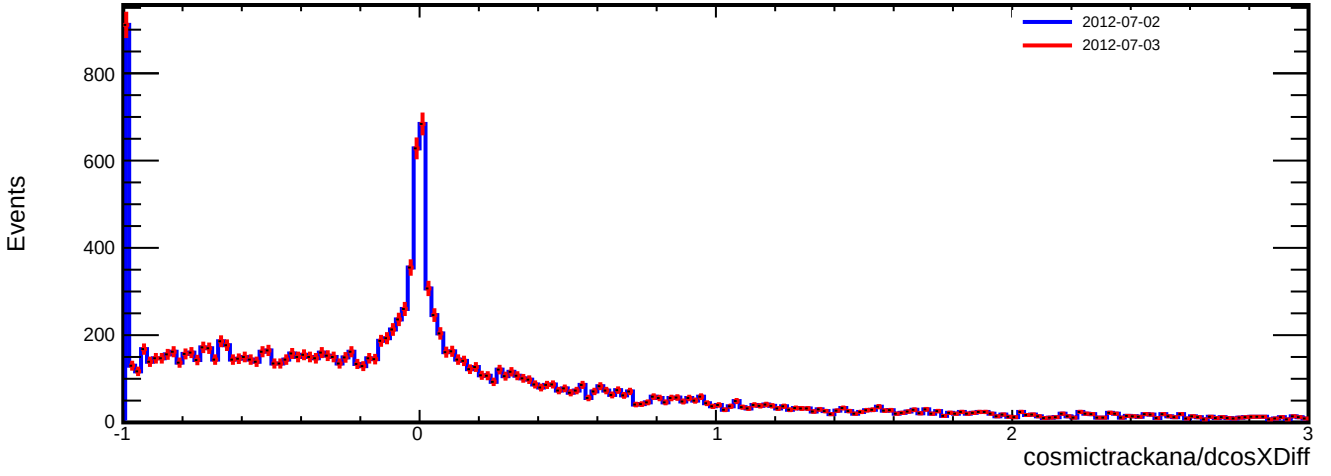

2012-07-02
2012-07-03
Events
6000
4000
2000
0
0
2
4
6
8
10
CosmicAna/fElectronEnergy

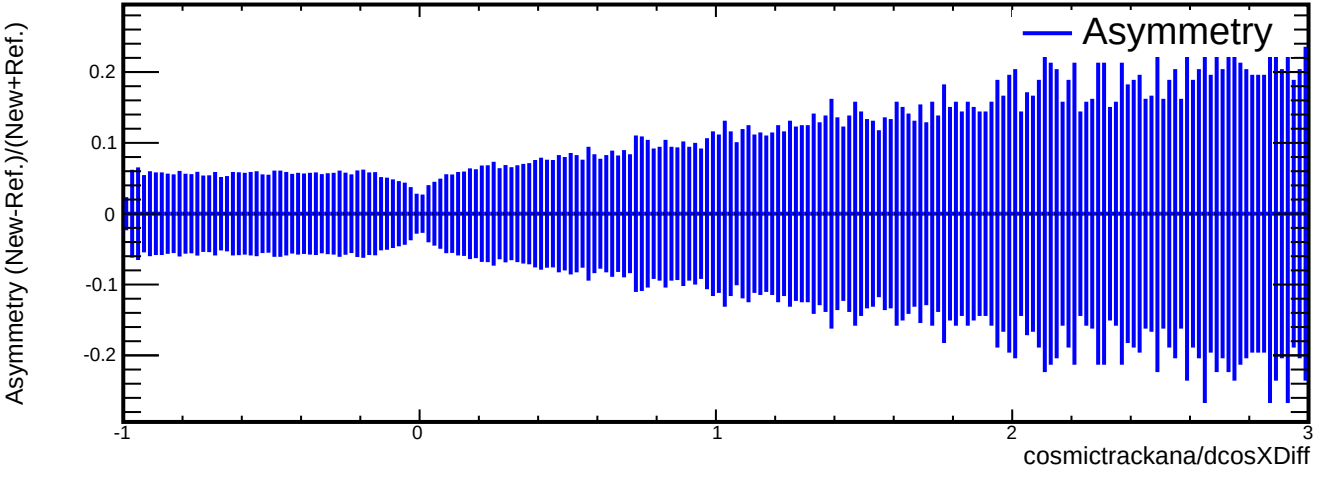

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
2
4
6
8
10
CosmicAna/fElectronEnergy

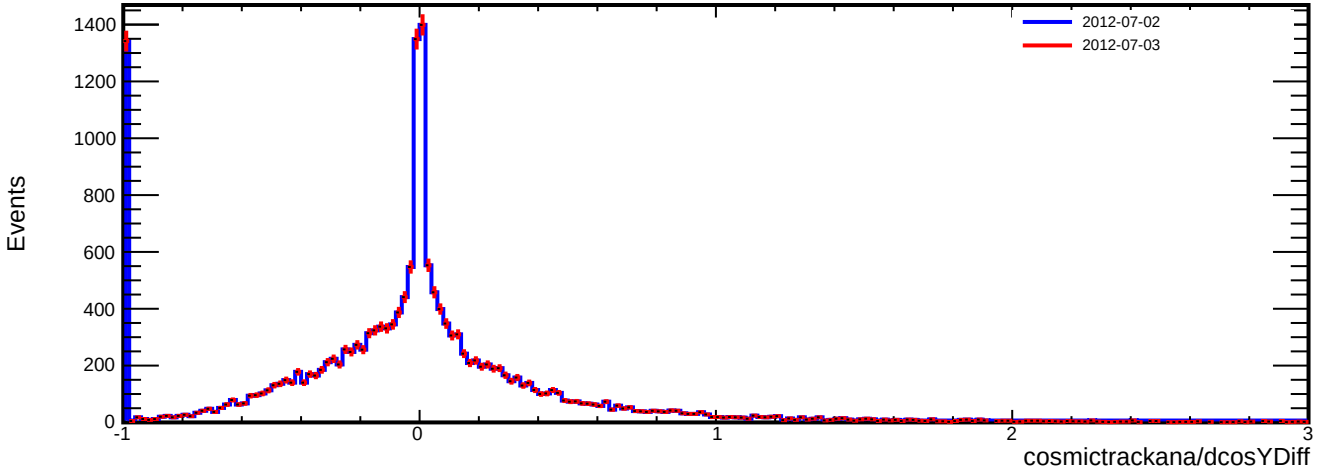

Events
4000
3000
2000
1000
0
-1
-0.5
0
0.5
1
CosmicAna/fMuonCosQ
2012-07-02
2012-07-03
Asymmetry (New-Ref.)/(New+Ref.)
0.2
0.1
0
-0.1
-0.2
Asymmetry

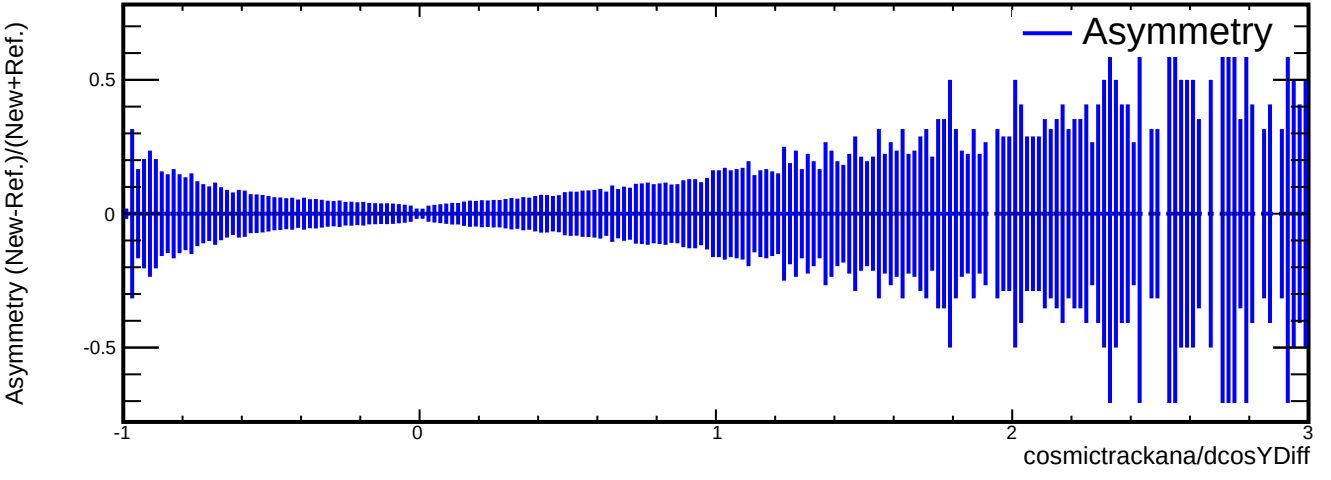

2012-07-02
2012-07-03
Events
5000
4000
3000
2000
1000
0
0
20
40
60
80
100
CosmicAna/fMuonEnergy

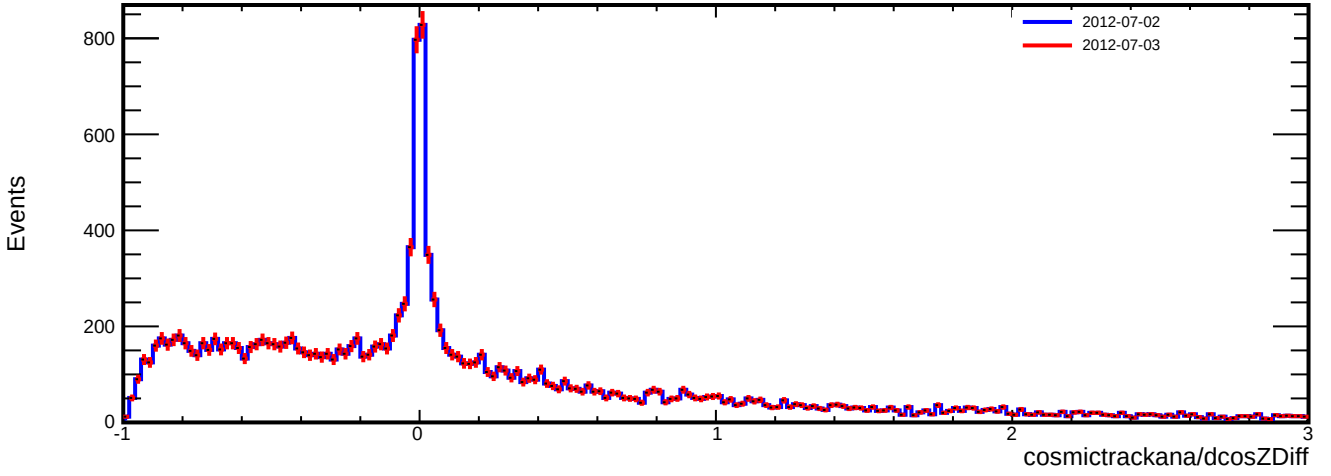

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
1
0.5
0
-0.5
-1
0
20
40
60
80
100
CosmicAna/fMuonEnergy

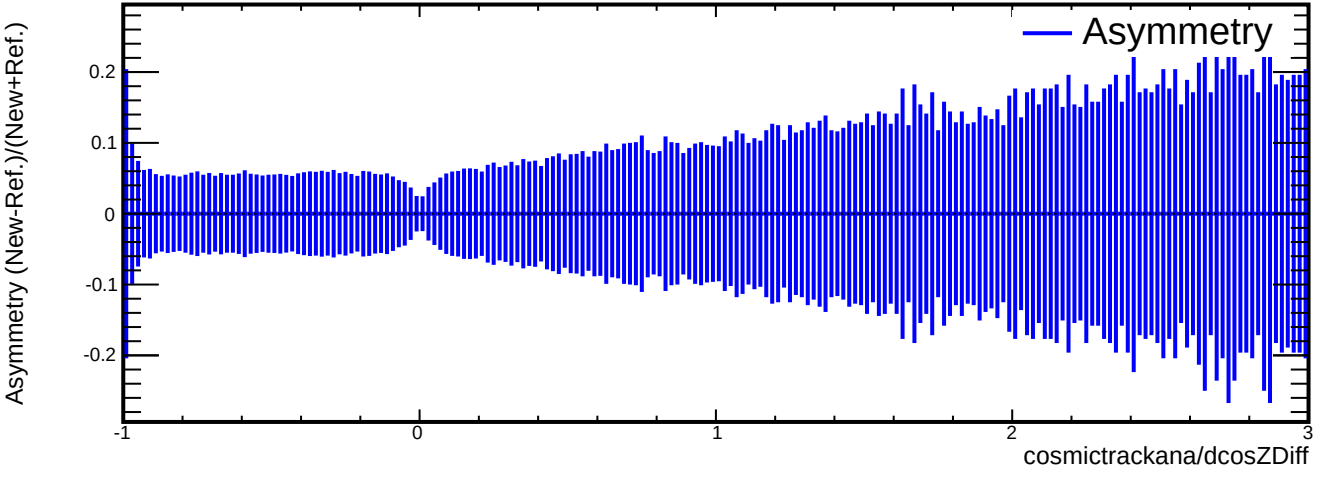

2012-07-02
2012-07-03
Events
800
600
400
200
0
-1
0
1
2
3
cosmictrackana/dcosXDiff

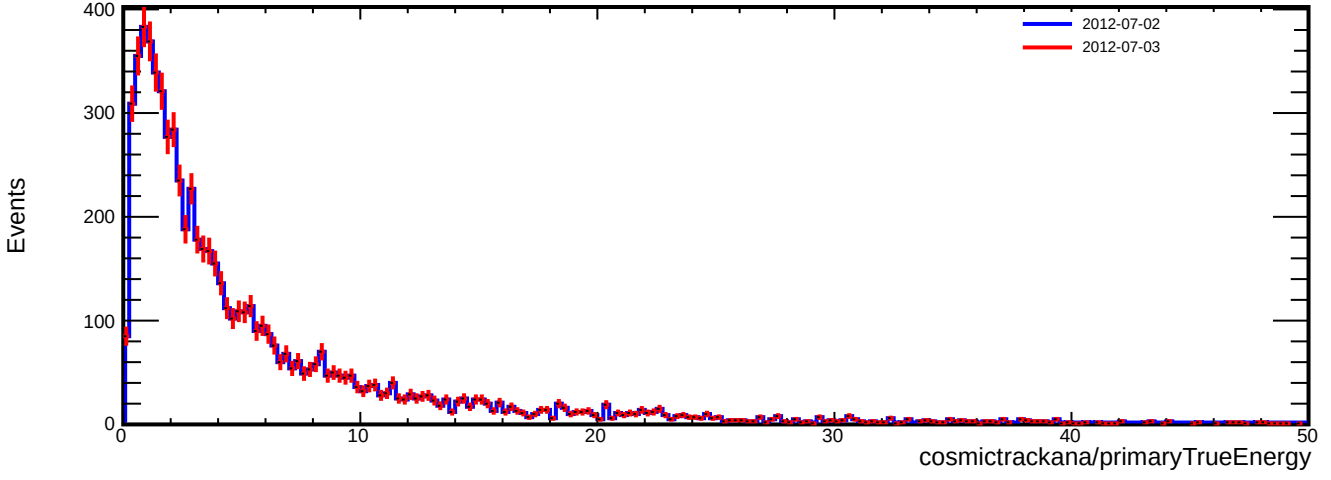

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.2
0.1
0
-0.1
-0.2
-1
0
1
2
3
cosmictrackana/dcosXDiff

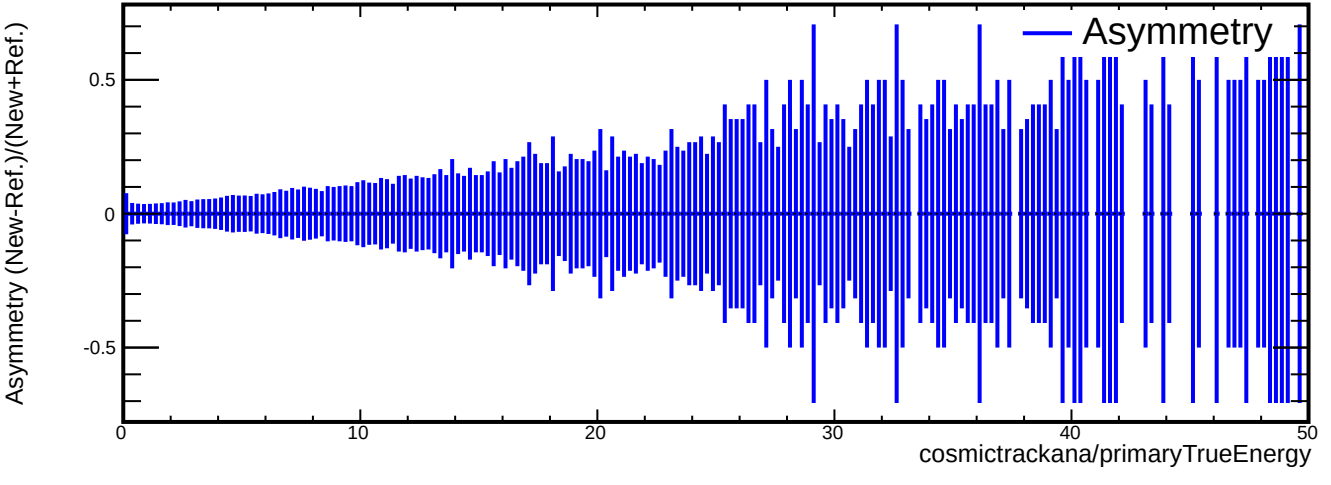

2012-07-02
2012-07-03
Events
1400
1200
1000
800
600
400
200
0
-1
0
1
2
3
cosmictrackana/dcosYDiff

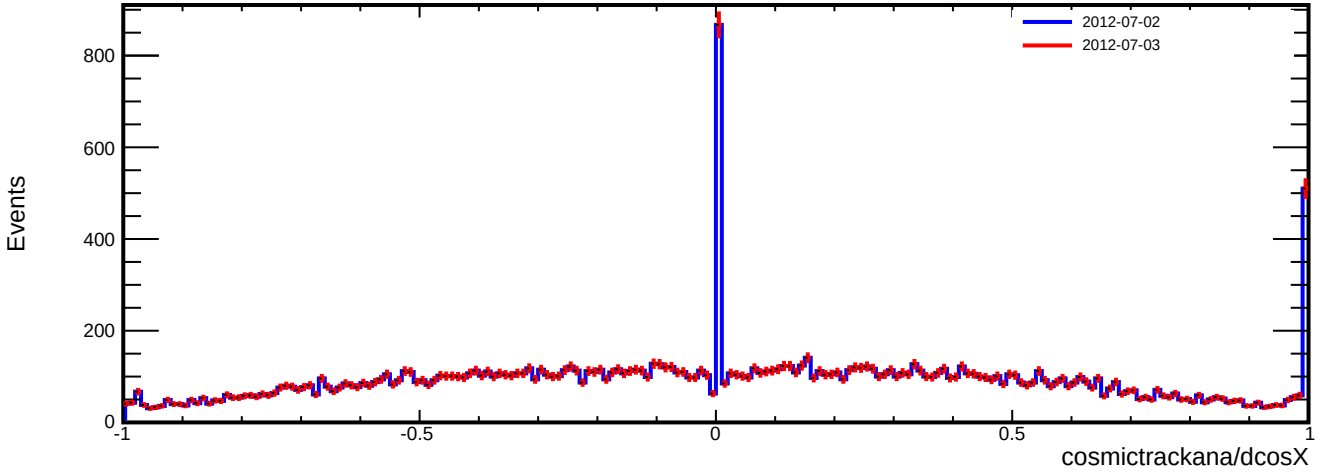

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-1
0
1
2
3
cosmictrackana/dcosYDiff

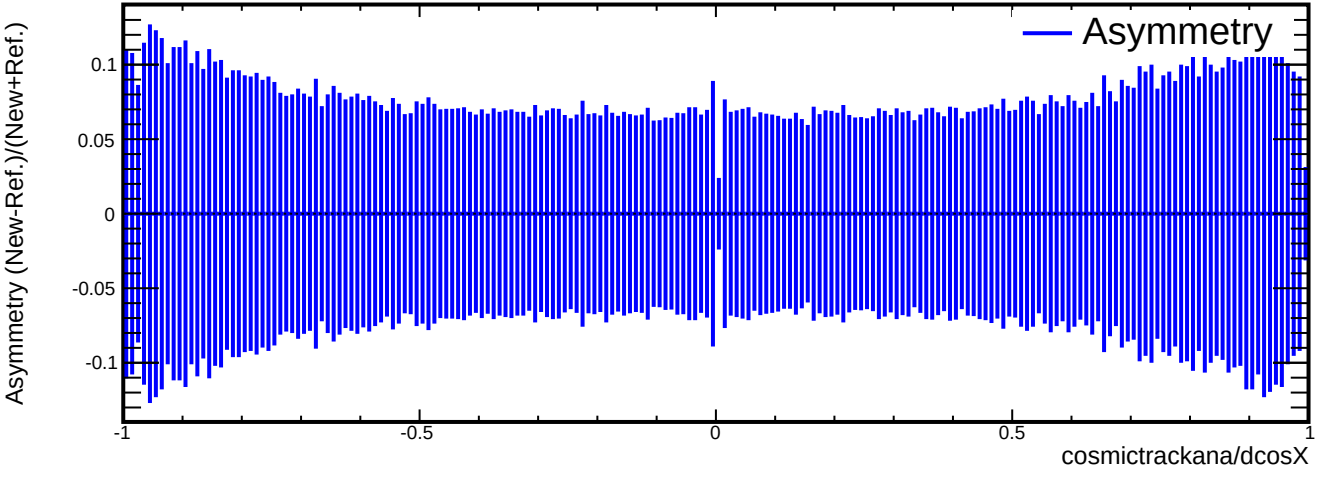

2012-07-02
2012-07-03
Events
800
600
400
200
0
-1
0
1
2
3
cosmictrackana/dcosZDiff

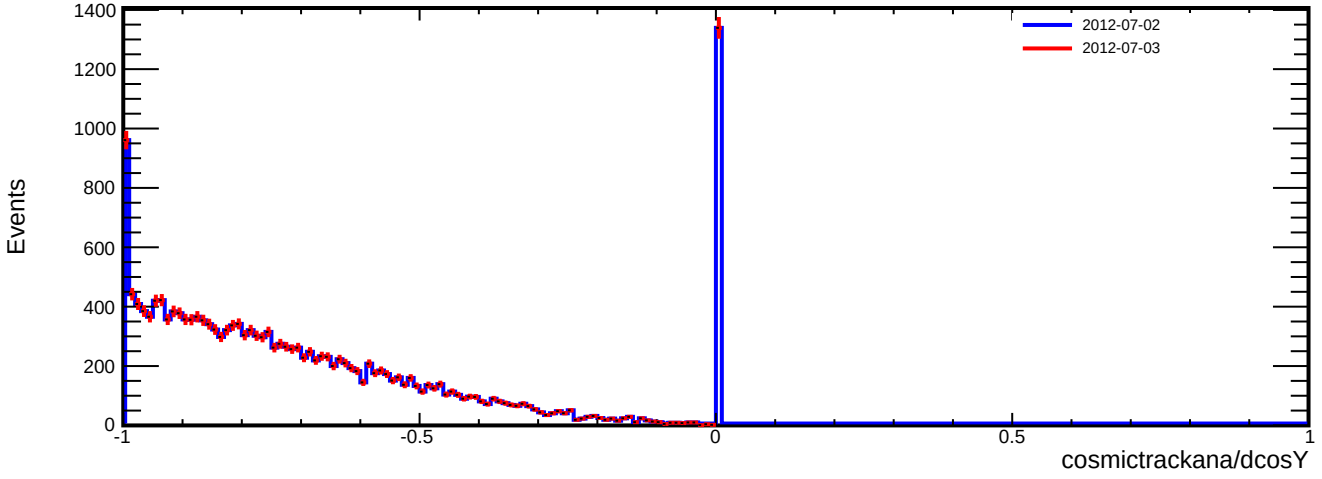

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.2
0.1
0
-0.1
-0.2
-1
0
1
2
3
cosmictrackana/dcosZDiff

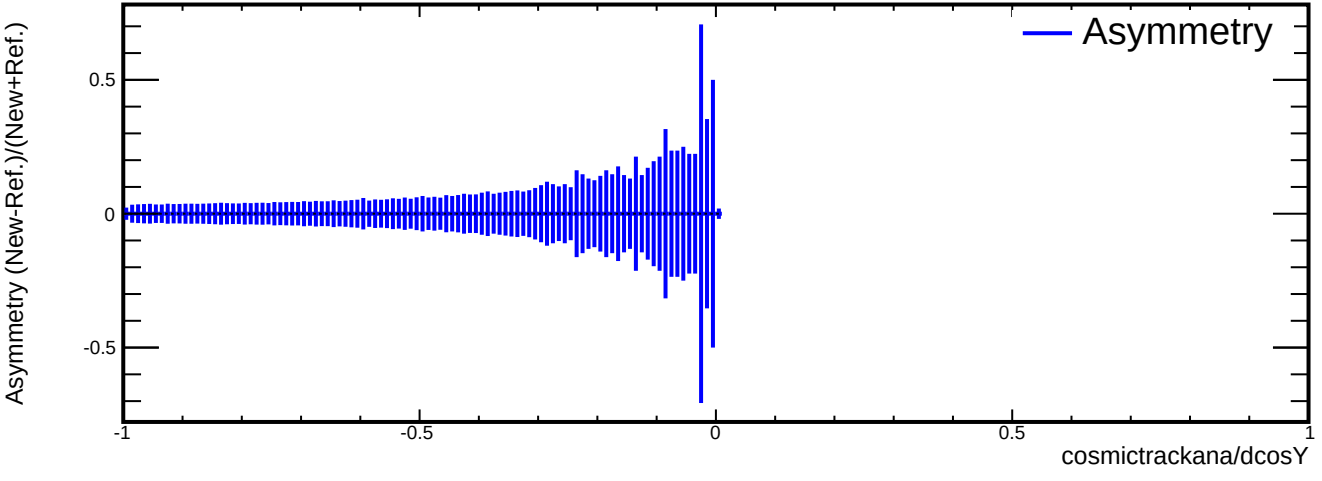

Events
400
300
200
100
0
0
10
20
30
40
50
cosmictrackana/primaryTrueEnergy
2012-07-02
2012-07-03

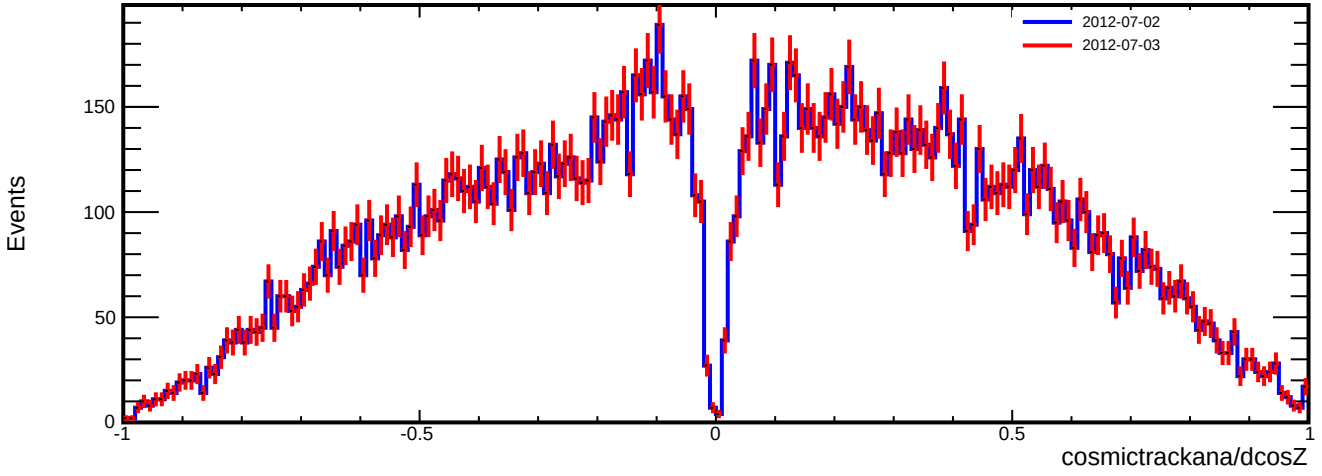

Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
10
20
30
40
50
cosmictrackana/primaryTrueEnergy
Asymmetry

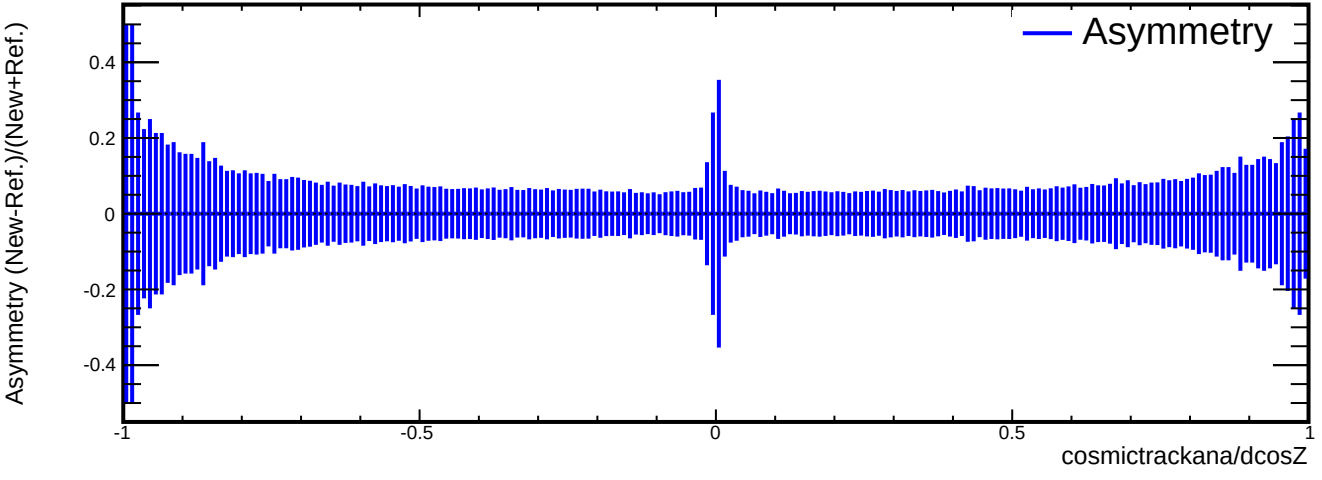

2012-07-02
2012-07-03
Events
800
600
400
200
0
-1
-0.5
0
0.5
1
cosmictrackana/dcosX

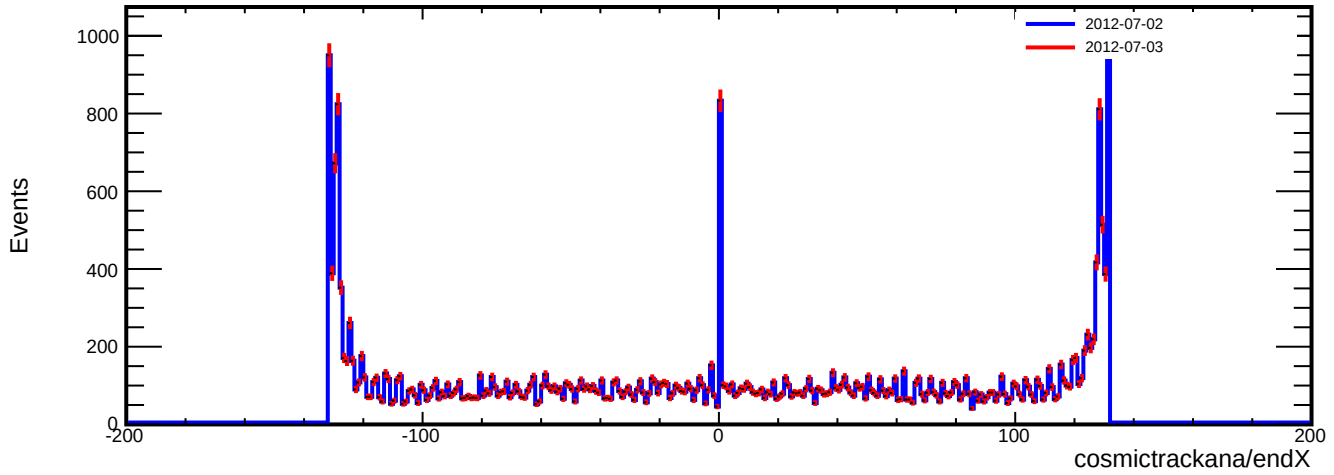

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.1
0.05
0
-0.05
-0.1
-1
-0.5
0
0.5
1
cosmictrackana/dcosX

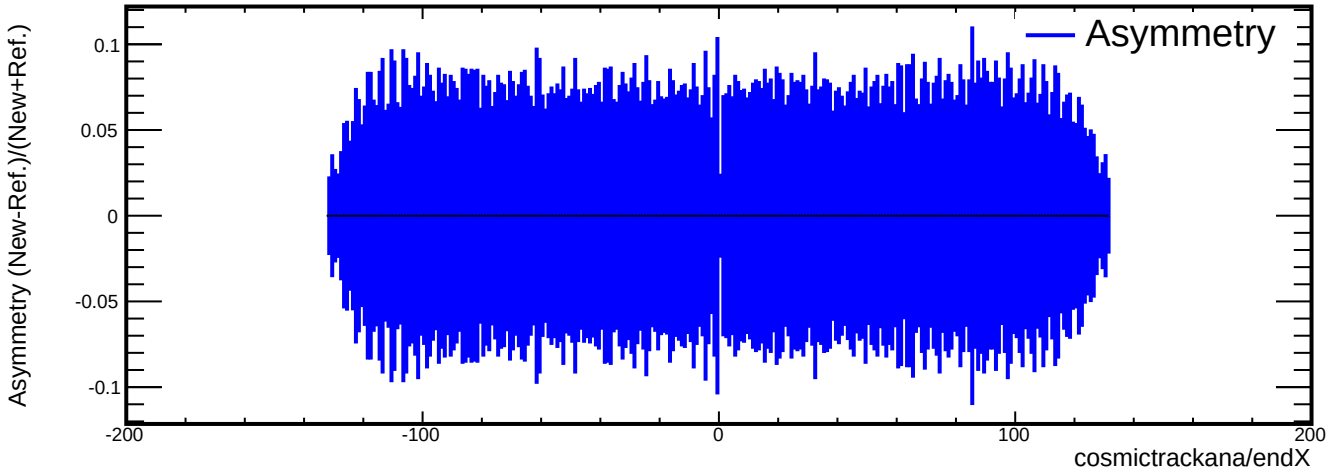

Events
1400
1200
1000
800
600
400
200
0
-1
-0.5
0
0.5
1
cosmictrackana/dcosY
2012-07-02
2012-07-03

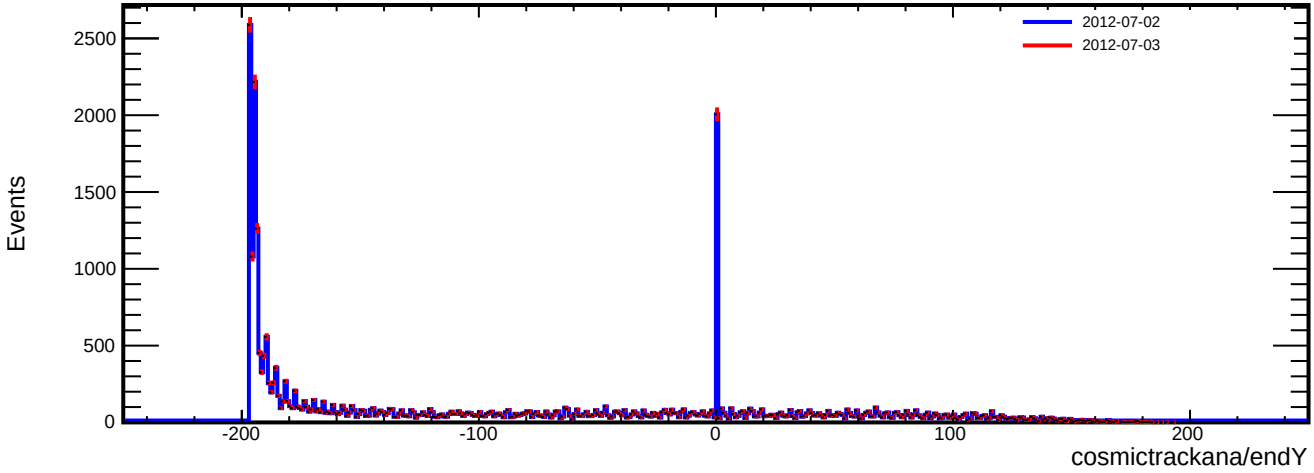

Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-1
-0.5
0
0.5
1
cosmictrackana/dcosY
Asymmetry

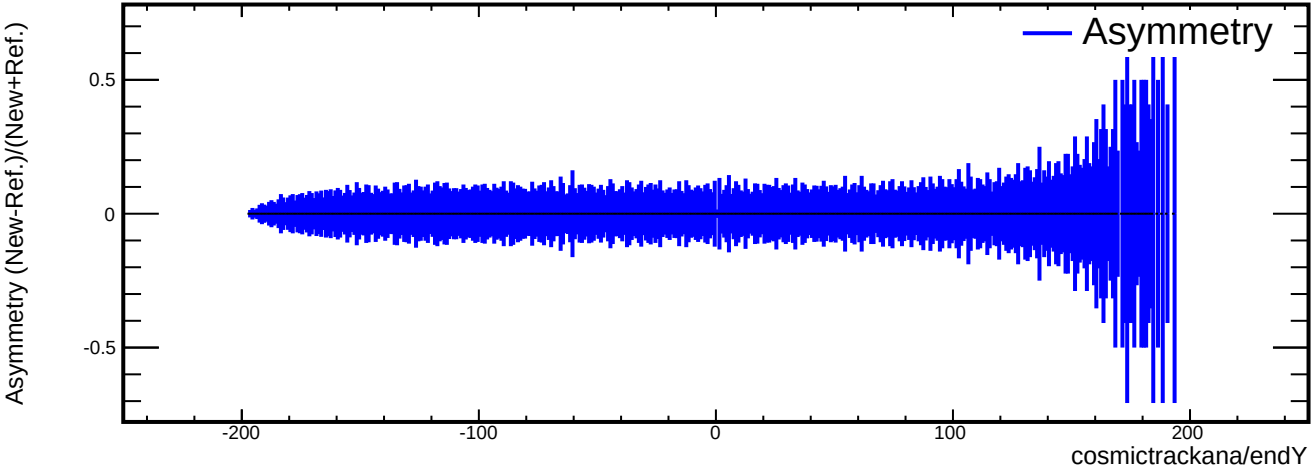

2012-07-02
2012-07-03
Events
150
100
50
0
-1
-0.5
0
0.5
1
cosmictrackana/dcosZ

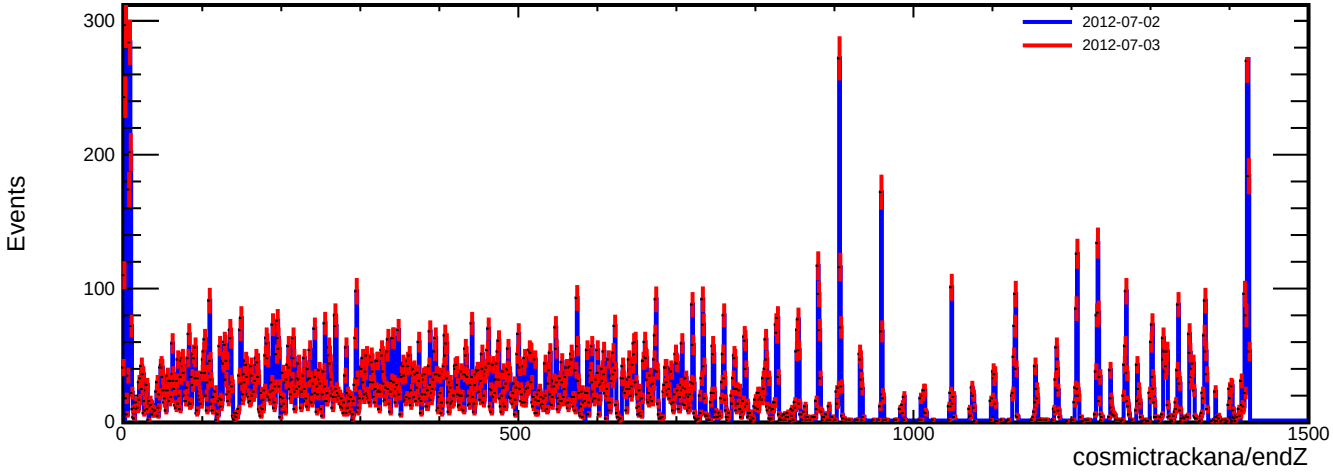

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.4
0.2
0
-0.2
-0.4
-1
-0.5
0
0.5
1
cosmictrackana/dcosZ

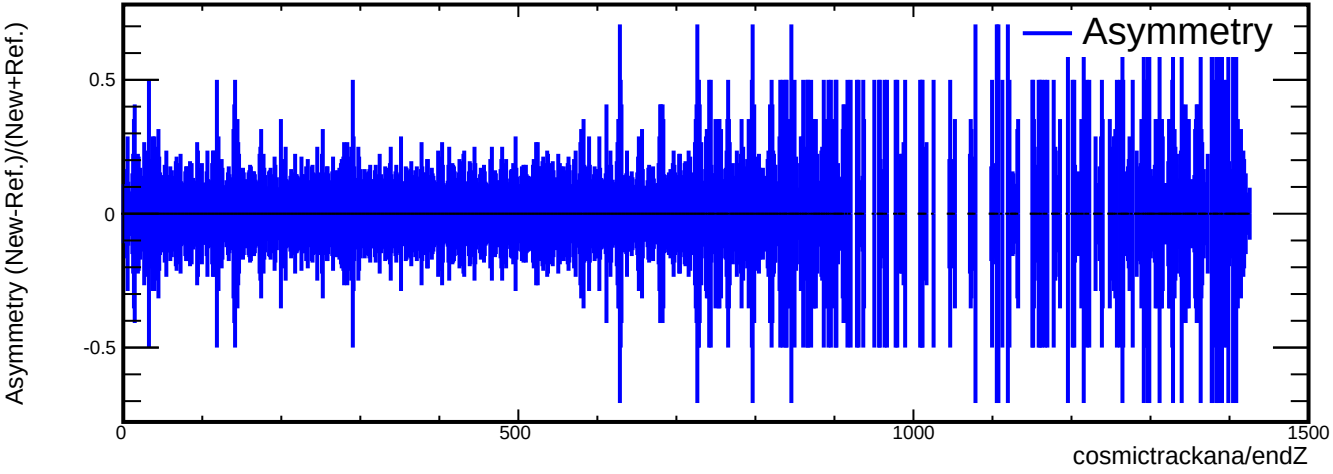

2012-07-02
2012-07-03
Events
1000
800
600
400
200
0
-200
-100
0
100
200
cosmictrackana/endX

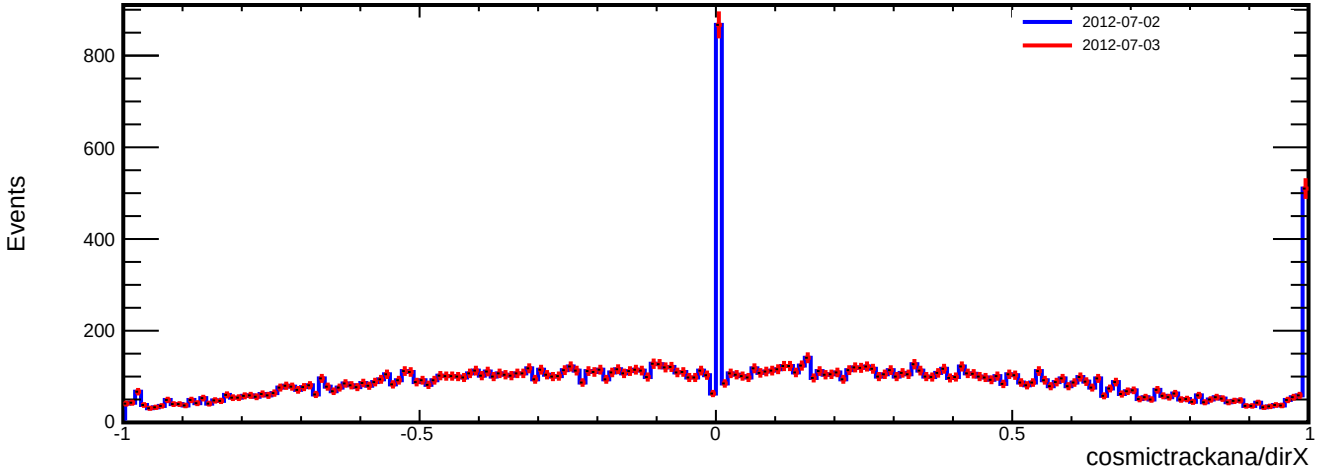

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.1
0.05
0
-0.05
-0.1
-200
-100
0
100
200
cosmictrackana/endX

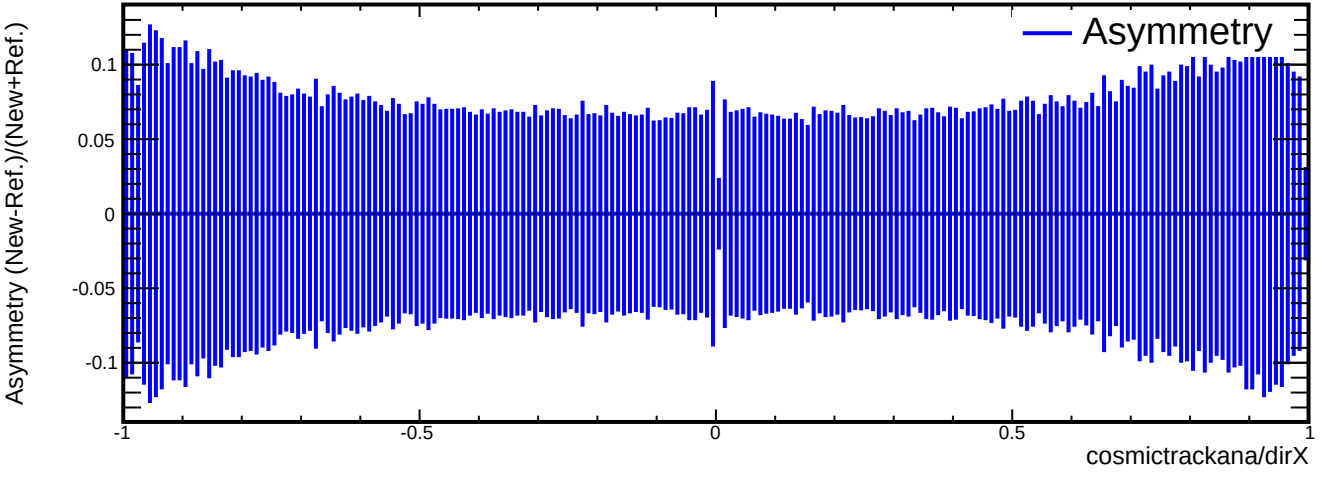

2012-07-02
2012-07-03
Events
2500
2000
1500
1000
500
0
-200
-100
0
100
200
cosmictrackana/endY

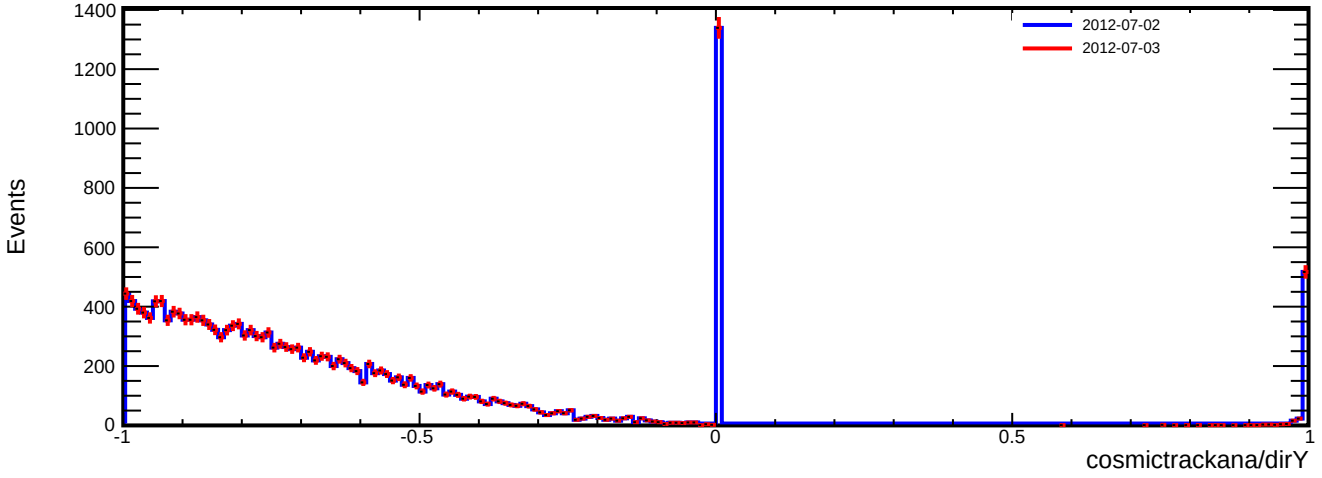

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-200
-100
0
100
200
cosmictrackana/endY

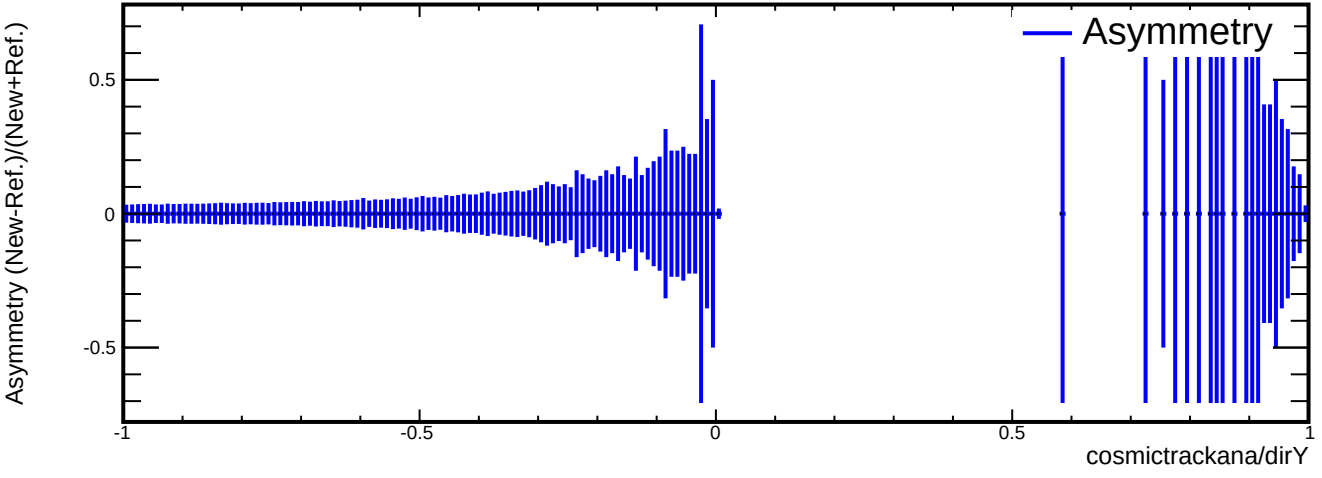

2012-07-02
2012-07-03
Events
300
200
100
0
0
500
1000
1500
cosmictrackana/endZ

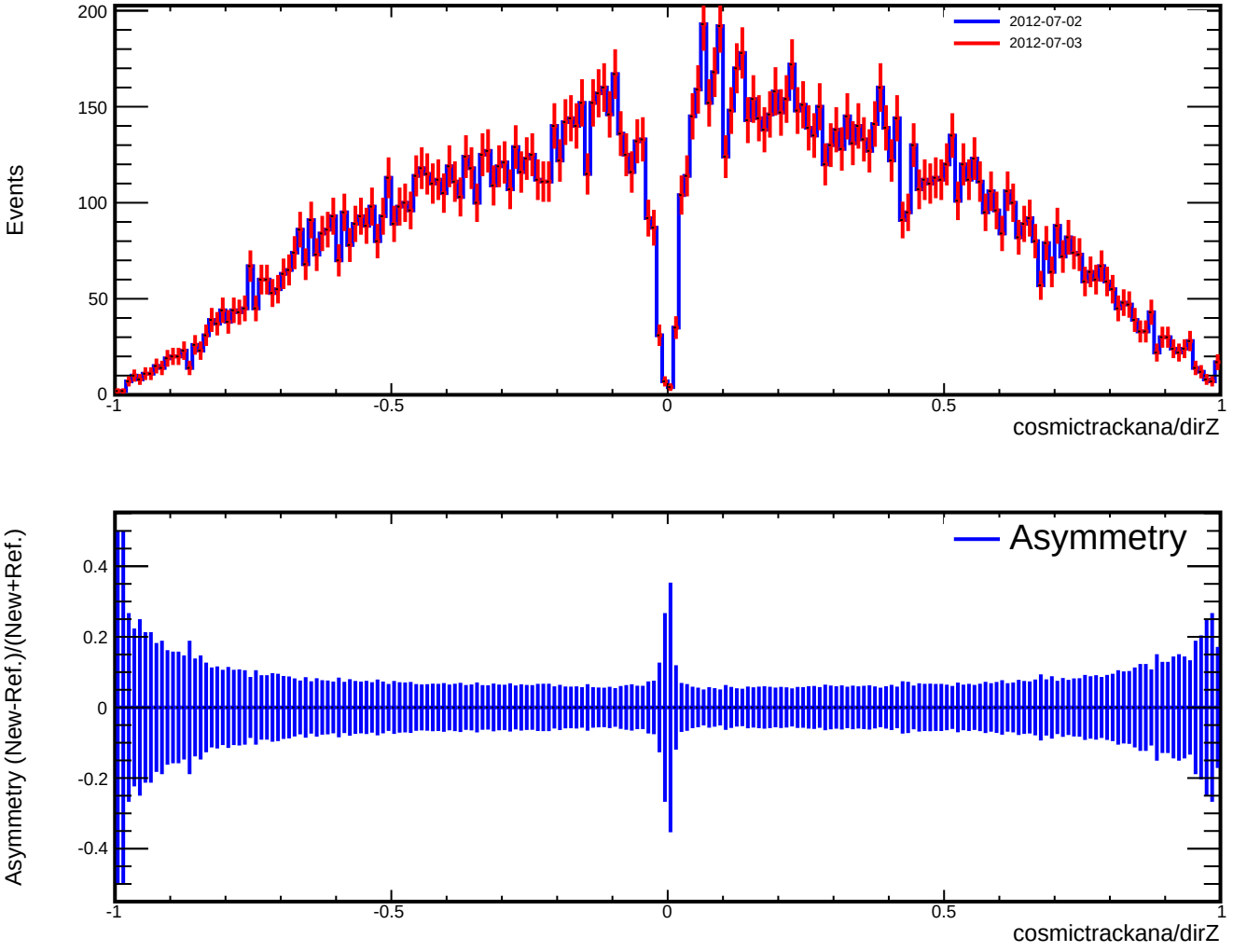

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
500
1000
1500
cosmictrackana/endZ

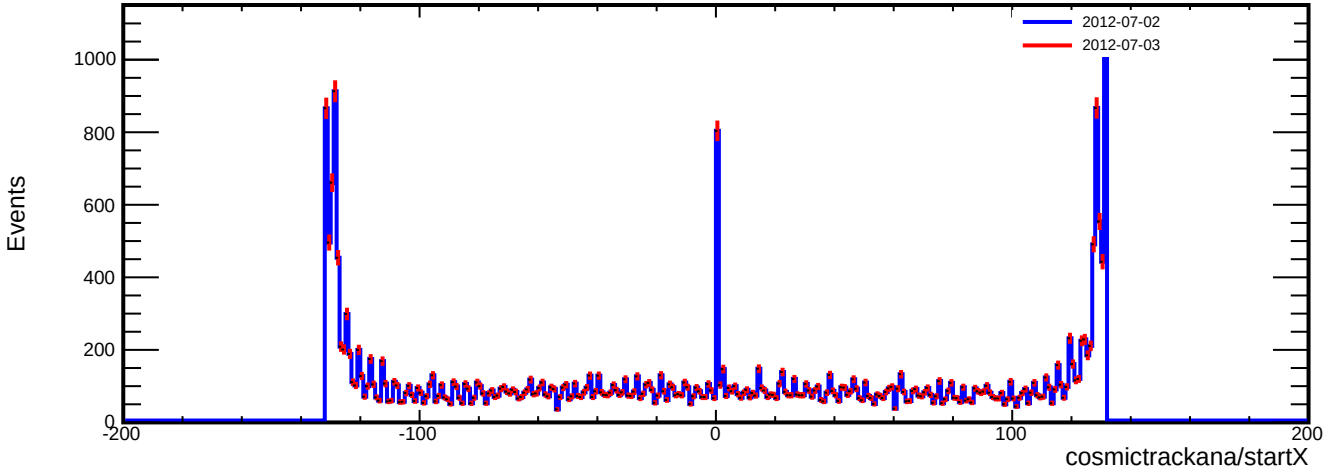

2012-07-02
2012-07-03
Events
800
600
400
200
0
-1
-0.5
0
0.5
1
cosmictrackana/dirX

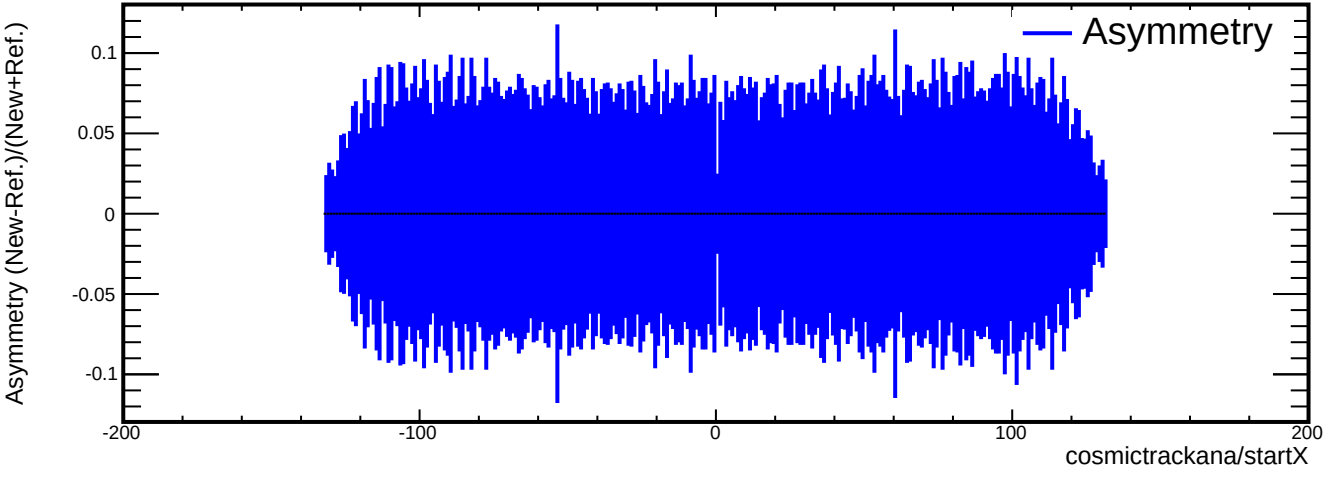

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.1
0.05
0
-0.05
-0.1
-1
-0.5
0
0.5
1
cosmictrackana/dirX

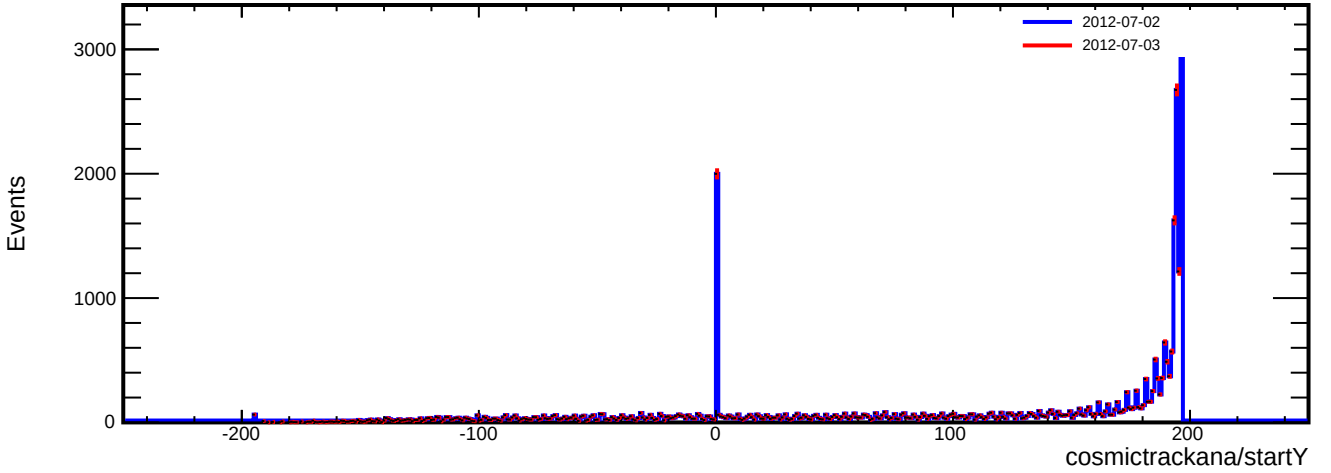

Events
1400
1200
1000
800
600
400
200
0
-1
-0.5
0
0.5
1
cosmictrackana/dirY
2012-07-02
2012-07-03

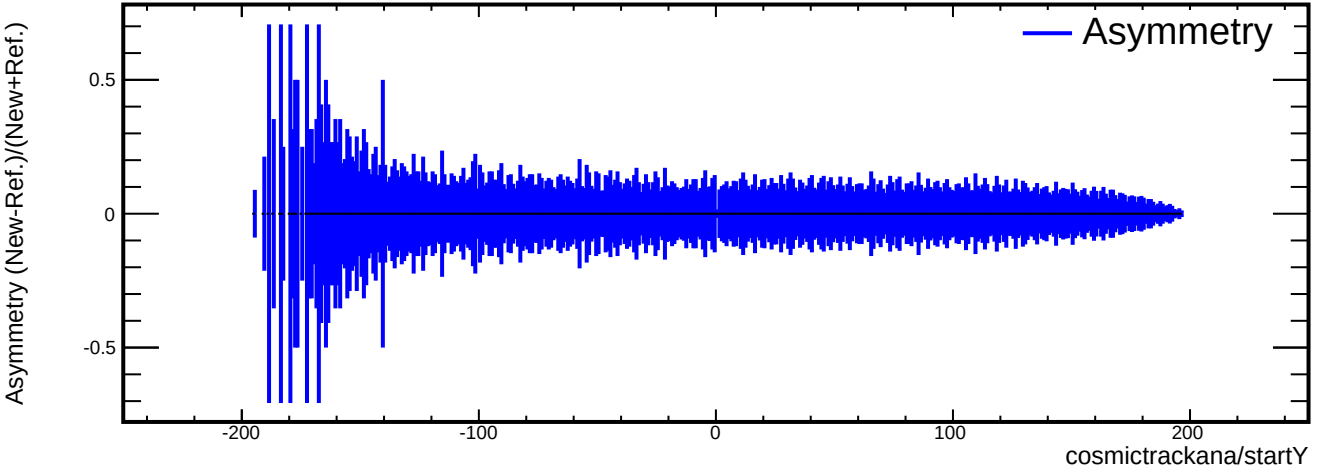

Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-1
-0.5
0
0.5
1
cosmictrackana/dirY
Asymmetry

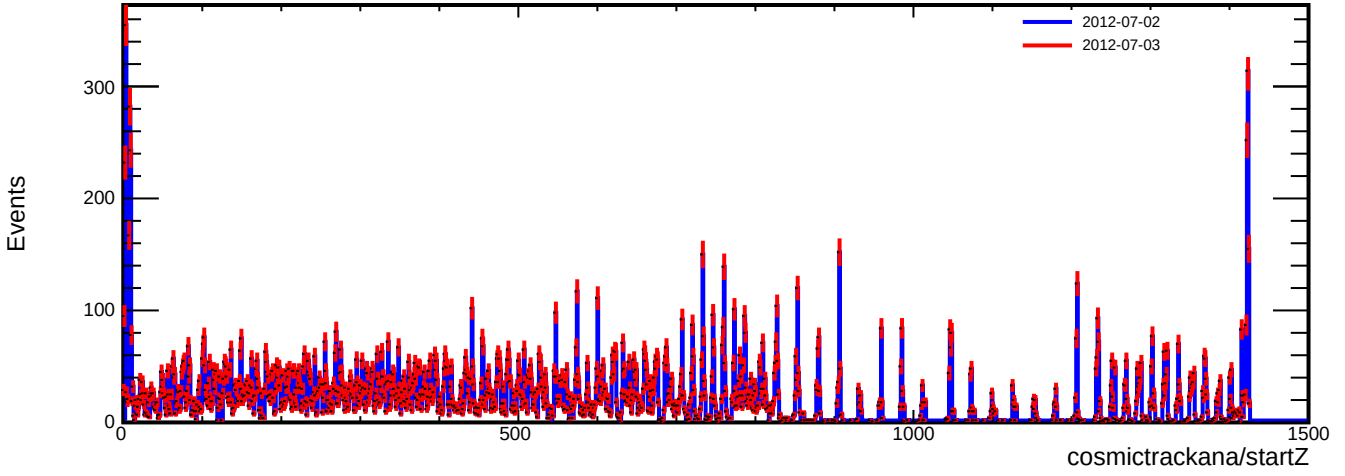

Events
200
150
100
50
0
-1
-0.5
0
0.5
1
cosmictrackana/dirZ
2012-07-02
2012-07-03
Asymmetry (New-Ref.)/(New+Ref.)
0.4
0.2
0
-0.2
-0.4
Asymmetry
cosmictrackana/dirZ

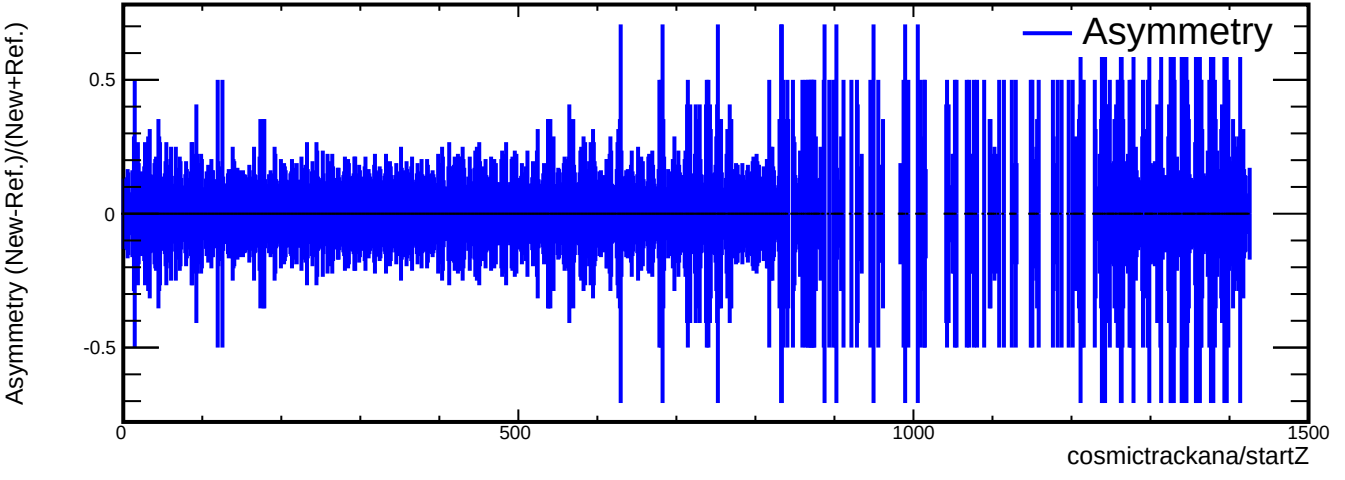

2012-07-02
2012-07-03
Events
1000
800
600
400
200
0
-200
-100
0
100
200
cosmictrackana/startX

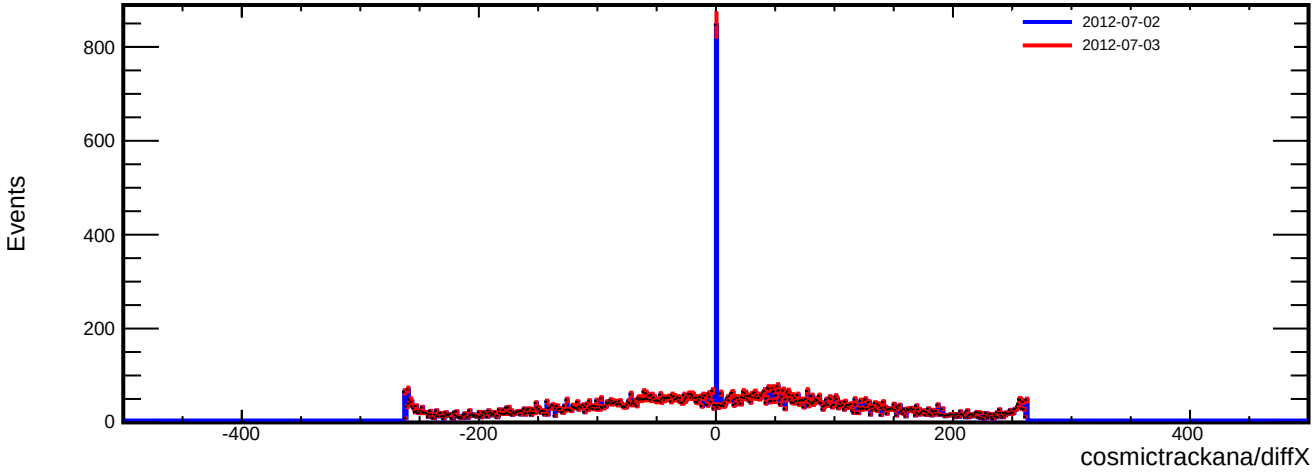

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.1
0.05
0
-0.05
-0.1
-200
-100
0
100
200
cosmictrackana/startX

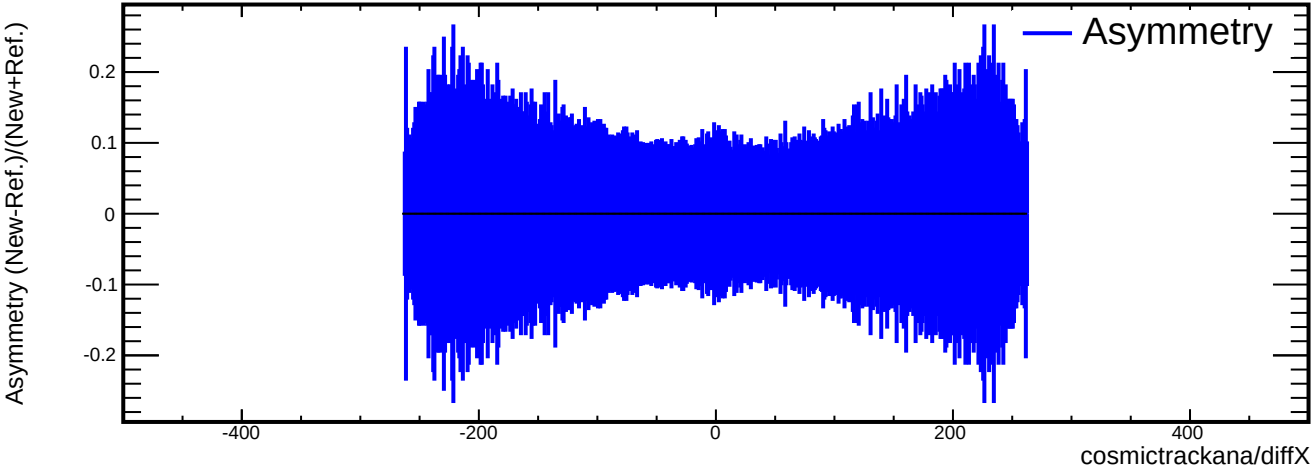

2012-07-02
2012-07-03
Events
3000
2000
1000
0
-200
-100
0
100
200
cosmictrackana/startY

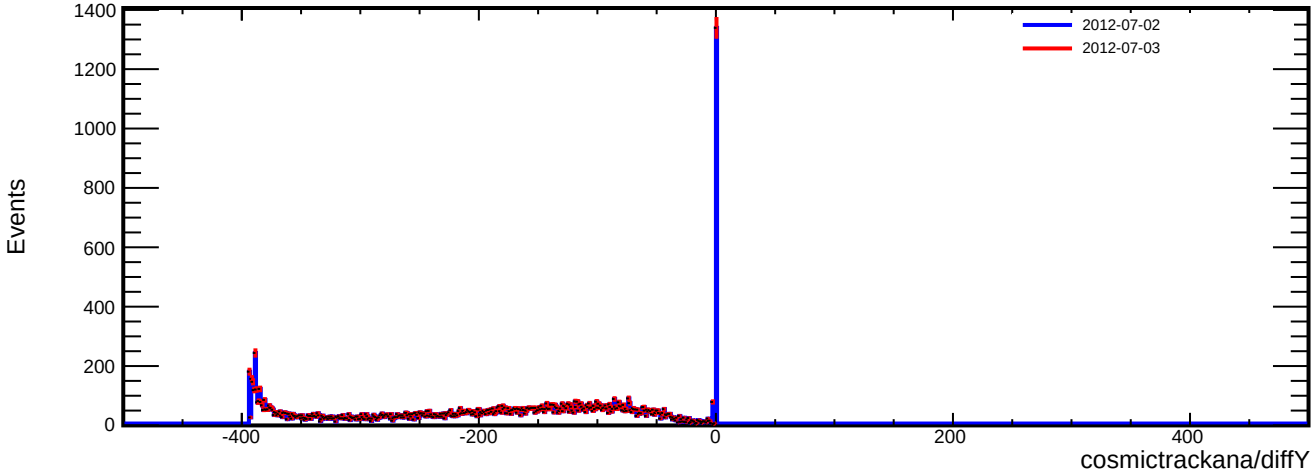

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-200
-100
0
100
200
cosmictrackana/startY

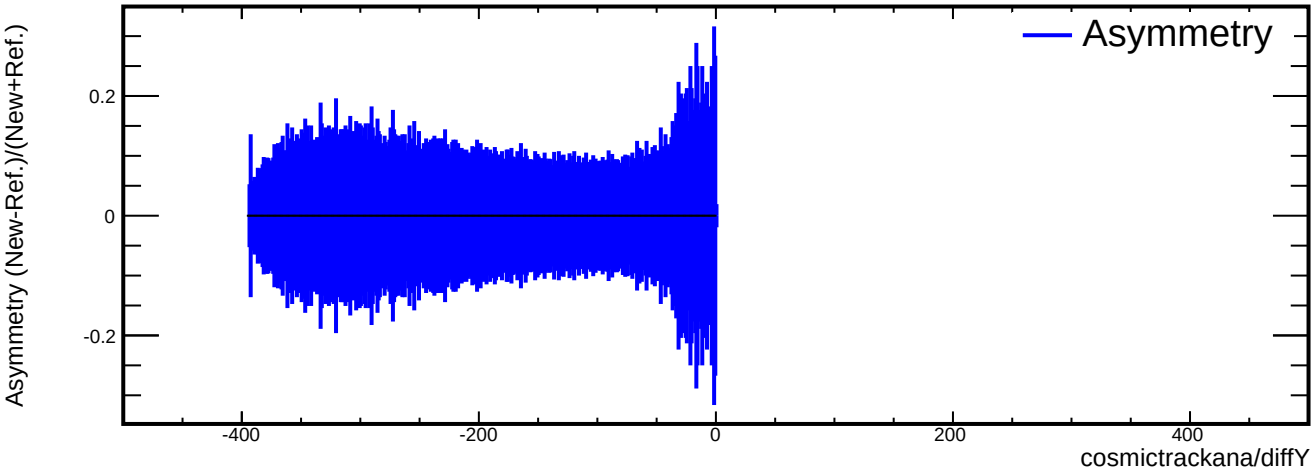

2012-07-02
2012-07-03
Events
300
200
100
0
0
500
1000
1500
cosmictrackana/startZ

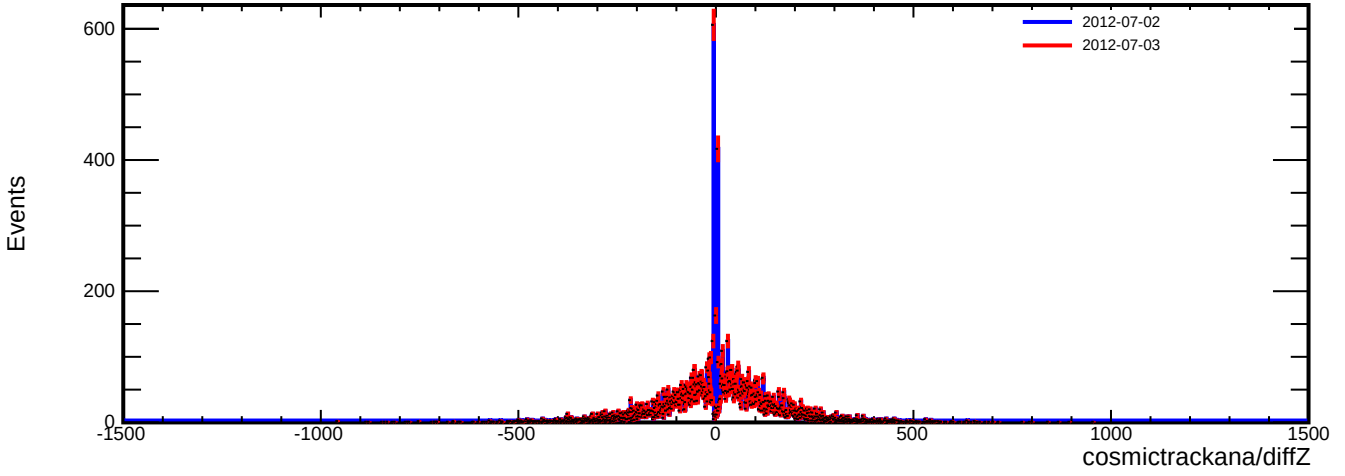

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
500
1000
1500
cosmictrackana/startZ

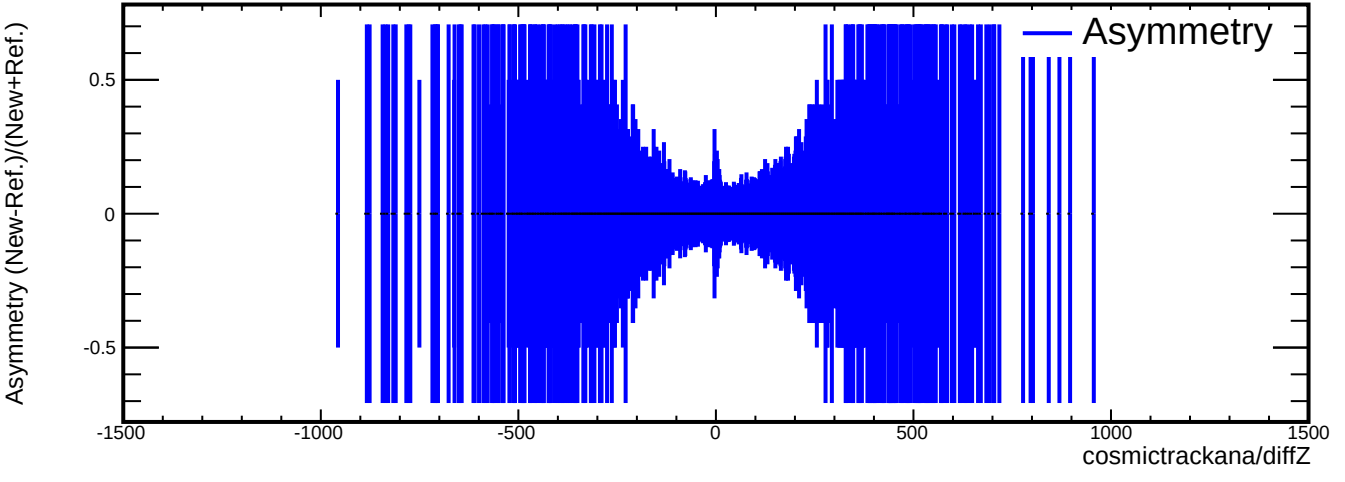

2012-07-02
2012-07-03
Events
800
600
400
200
0
-400
-200
0
200
400
cosmictrackana/diffX

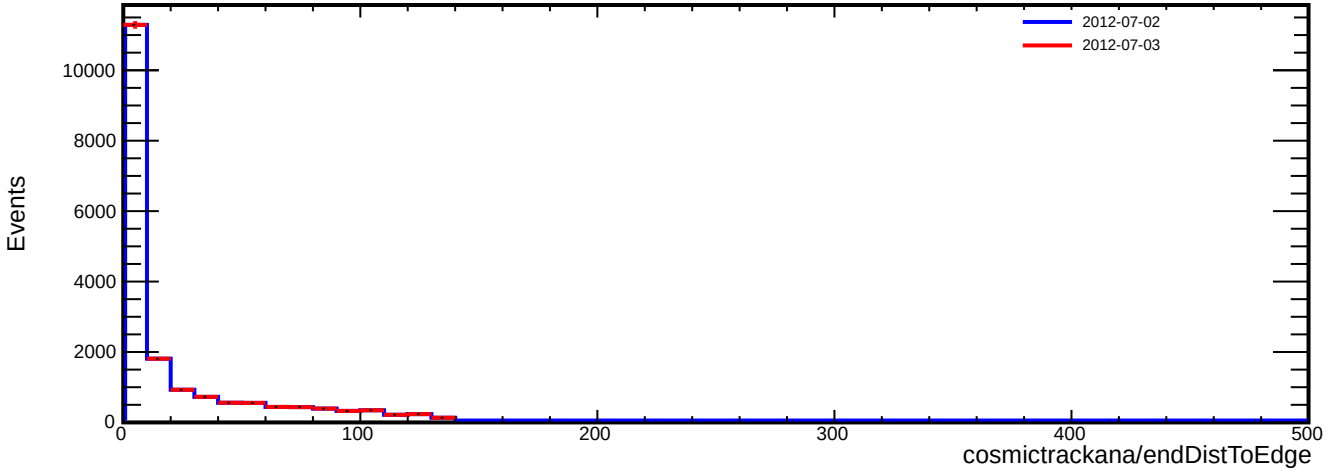

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.2
0.1
0
-0.1
-0.2
-400
-200
0
200
400
cosmictrackana/diffX

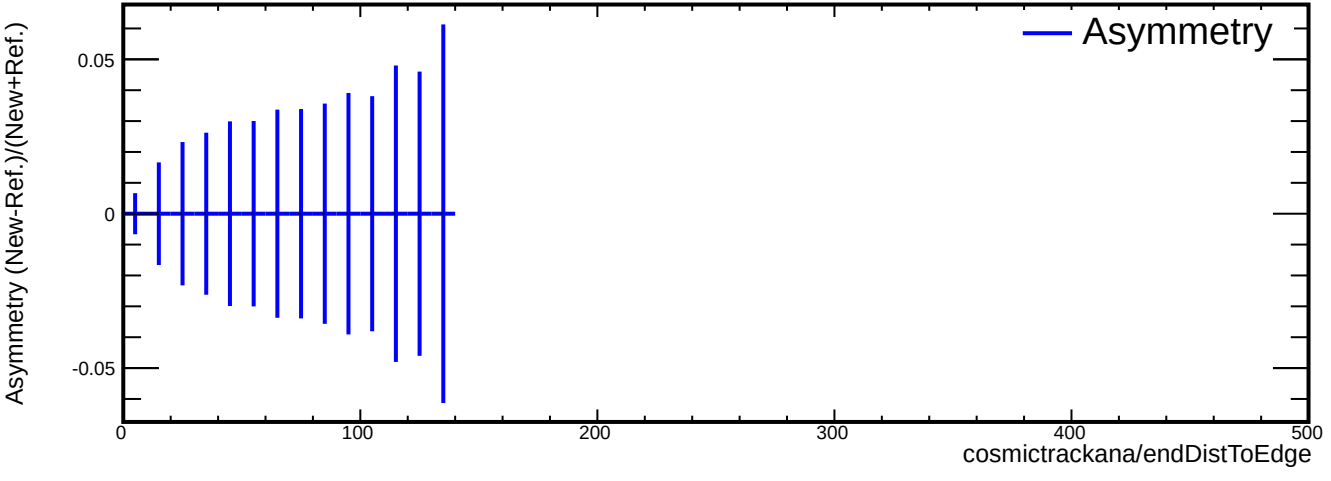

Events
1400
1200
1000
800
600
400
200
0
-400
-200
0
200
400
cosmictrackana/diffY
2012-07-02
2012-07-03

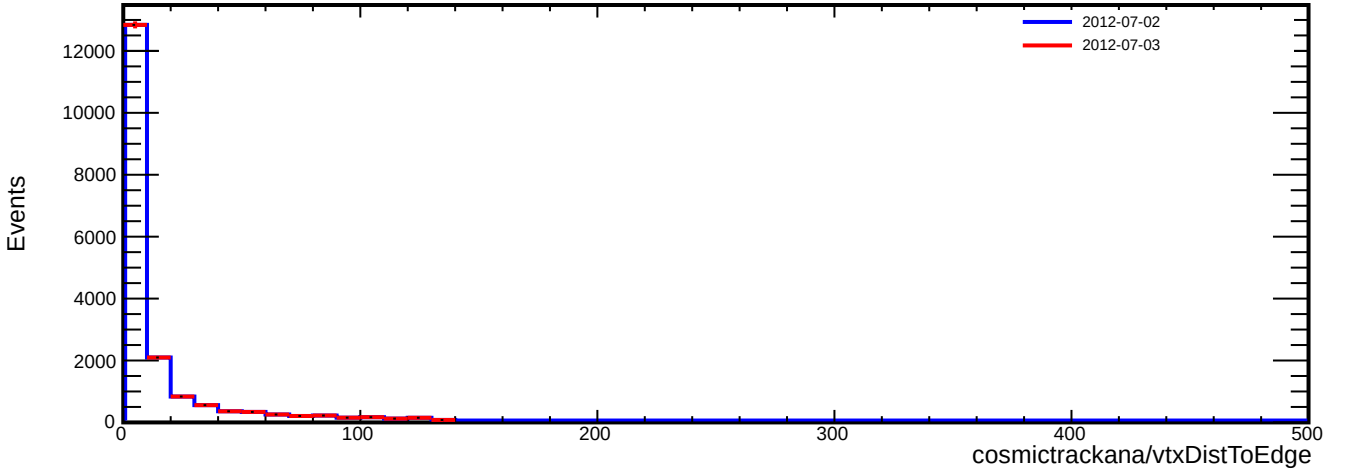

Asymmetry (New-Ref.)/(New+Ref.)
0.2
0
-0.2
-400
-200
0
200
400
cosmictrackana/diffY
Asymmetry

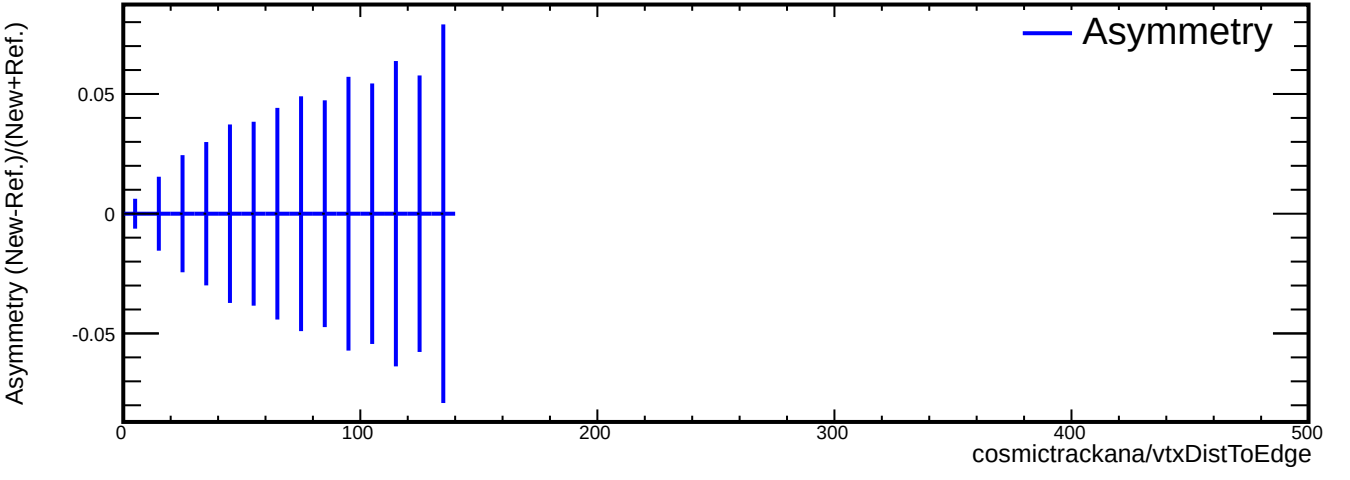

2012-07-02
2012-07-03
Events
600
400
200
0
-1500
-1000
-500
0
500
1000
1500
cosmictrackana/diffZ

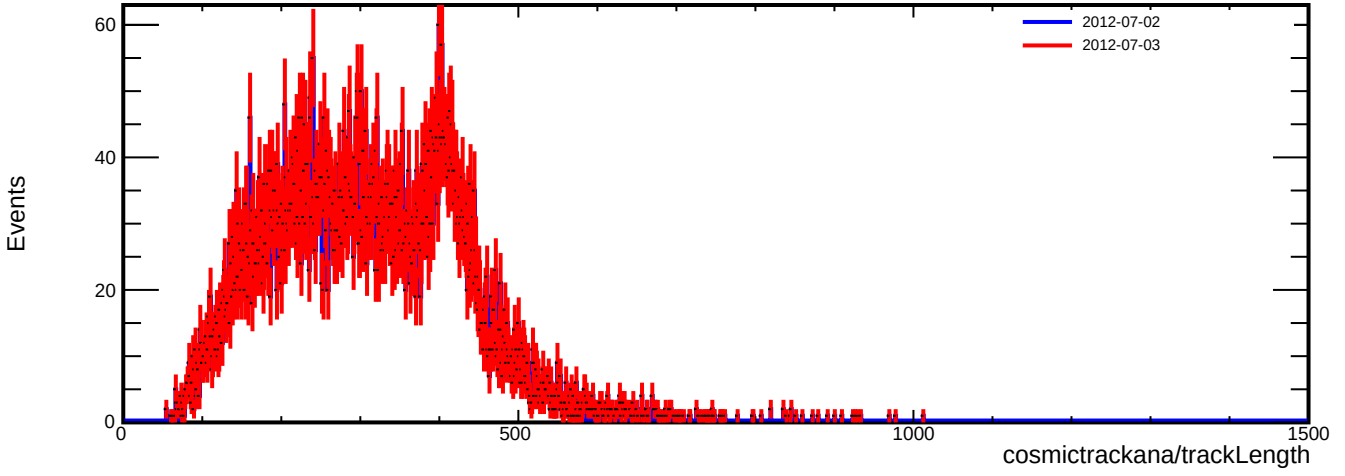

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-1500
-1000
-500
0
500
1000
1500
cosmictrackana/diffZ

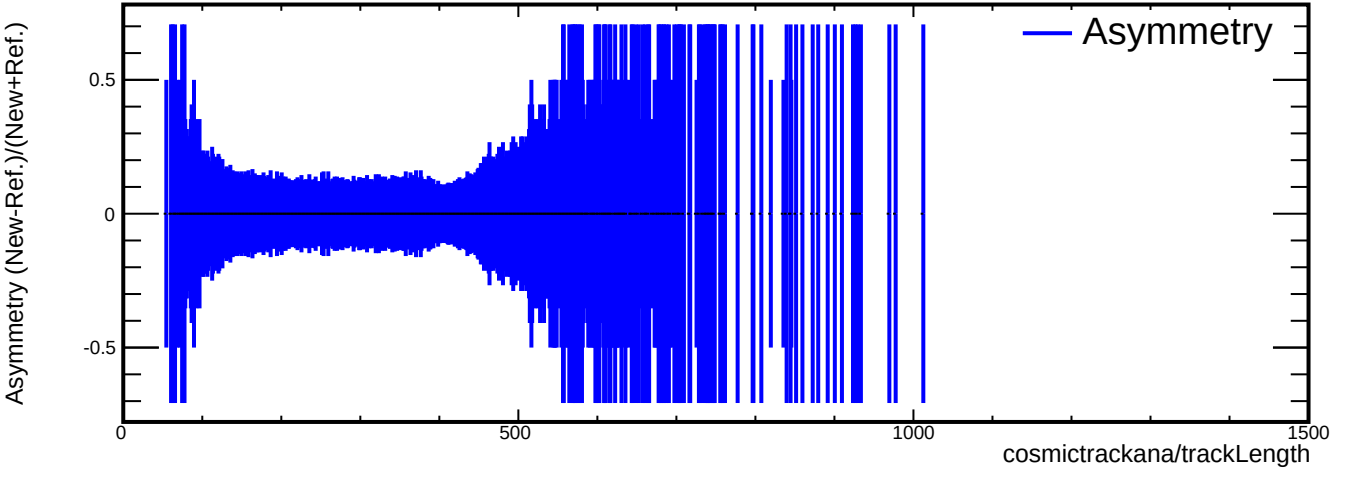

2012-07-02
2012-07-03
Events
10000
8000
6000
4000
2000
0
0
100
200
300
400
500
cosmictrackana/endDistToEdge

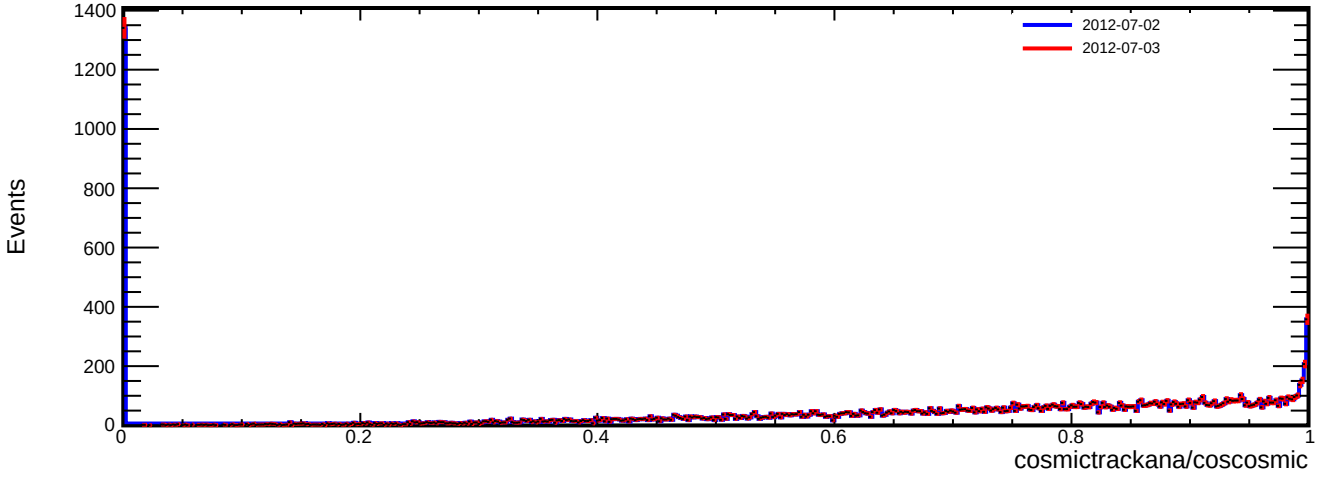

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.05
0
-0.05
0
100
200
300
400
500
cosmictrackana/endDistToEdge

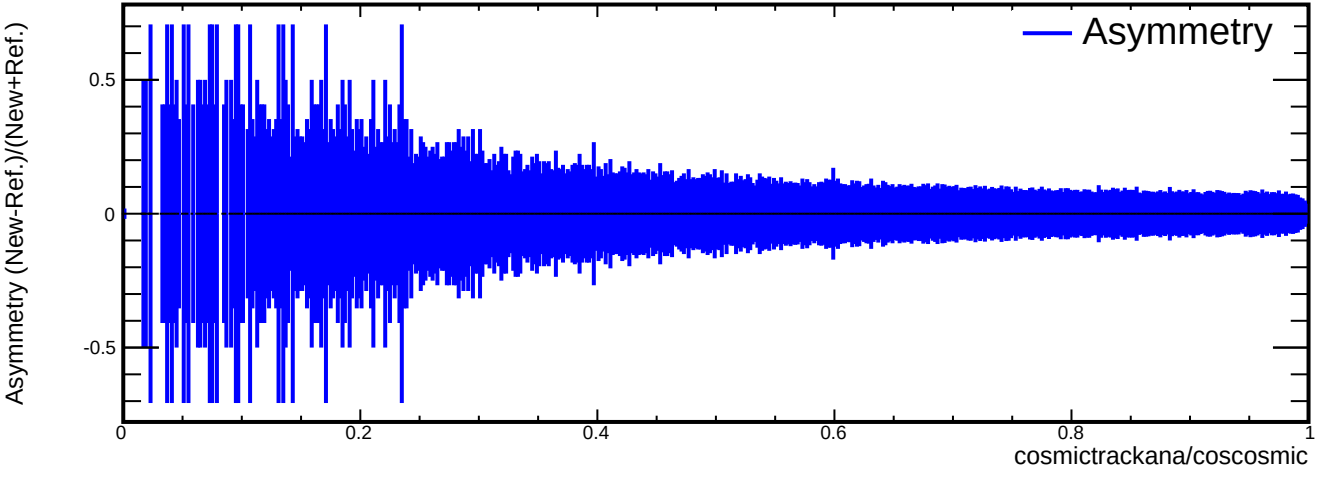

2012-07-02
2012-07-03
Events
12000
10000
8000
6000
4000
2000
0
0
100
200
300
400
500
cosmictrackana/vtxDistToEdge

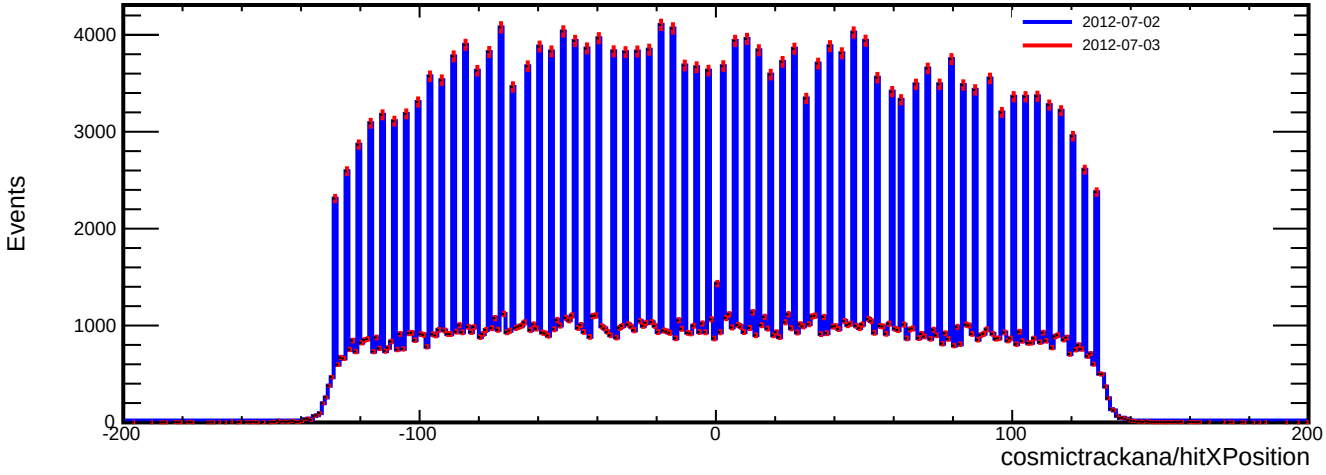

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.05
0
-0.05
0
100
200
300
400
500
cosmictrackana/vtxDistToEdge

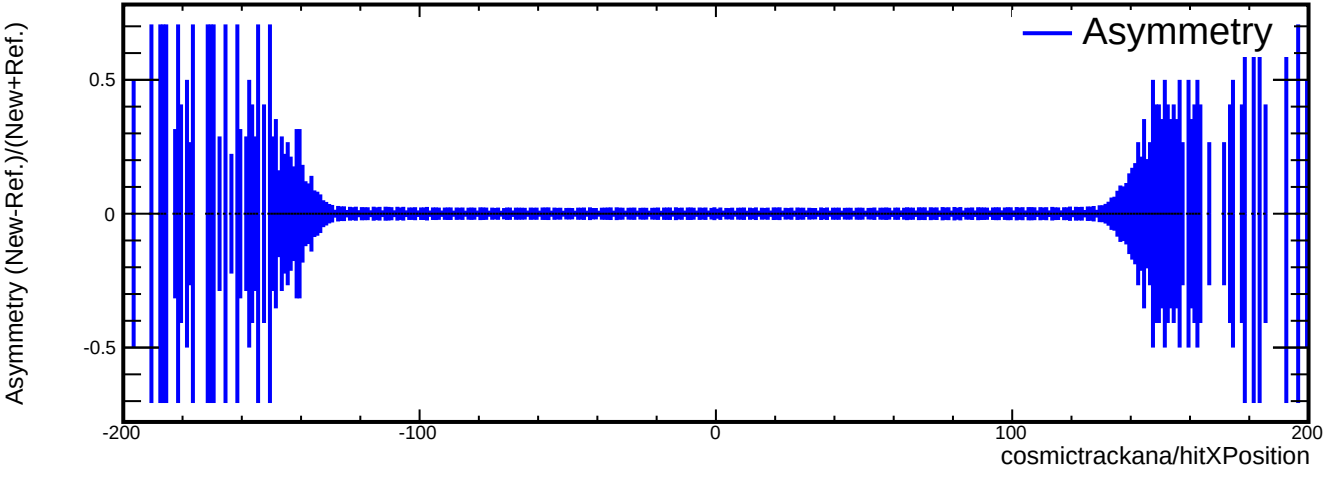

2012-07-02
2012-07-03
Events
60
40
20
0
0
500
1000
1500
cosmictrackana/trackLength

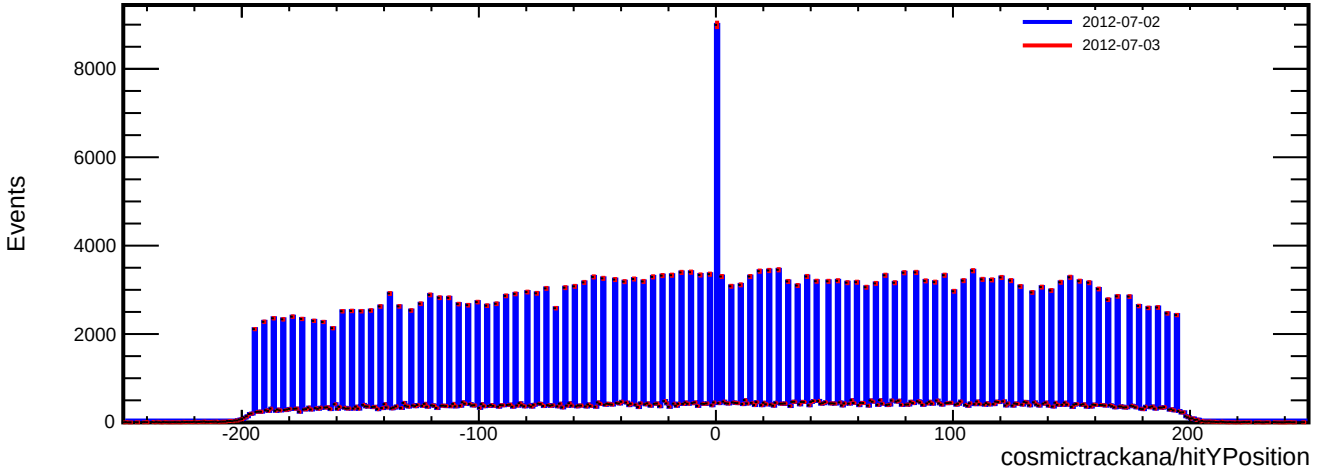

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
500
1000
1500
cosmictrackana/trackLength

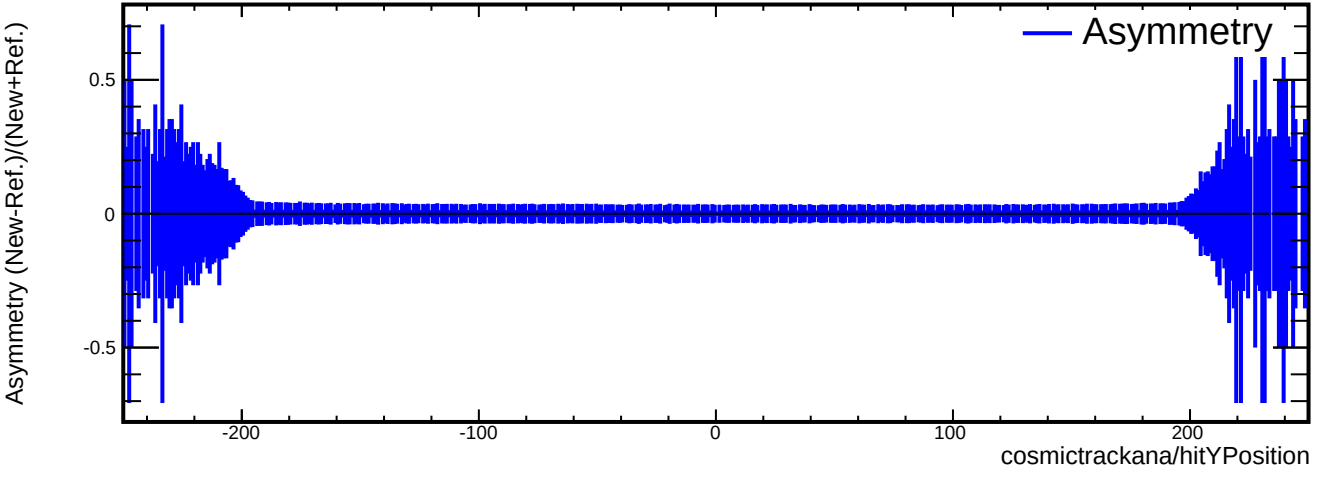

Events
1400
1200
1000
800
600
400
200
0
0
0.2
0.4
0.6
0.8
1
cosmictrackana/coscosmic
2012-07-02
2012-07-03

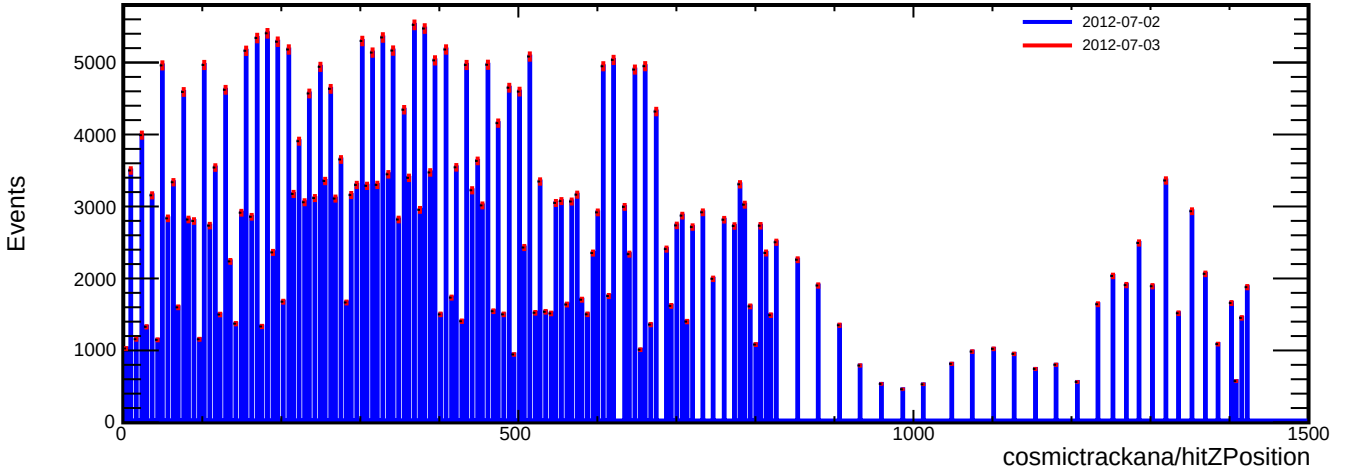

Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
0.2
0.4
0.6
0.8
1
cosmictrackana/coscosmic
Asymmetry

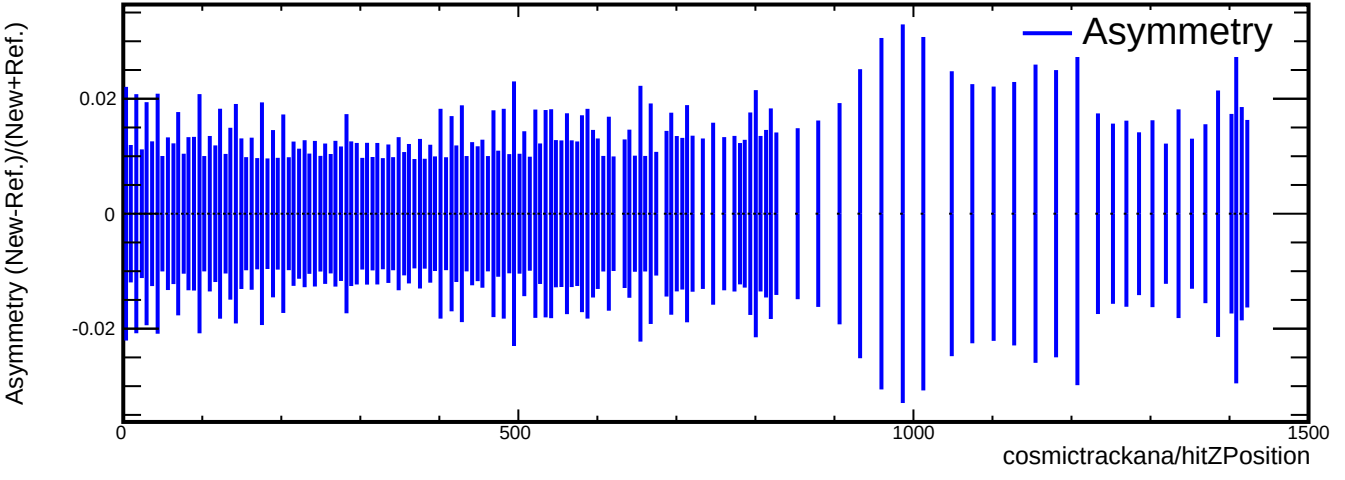

2012-07-02
2012-07-03
Events
4000
3000
2000
1000
0
-200
-100
0
100
200
cosmictrackana/hitXPosition

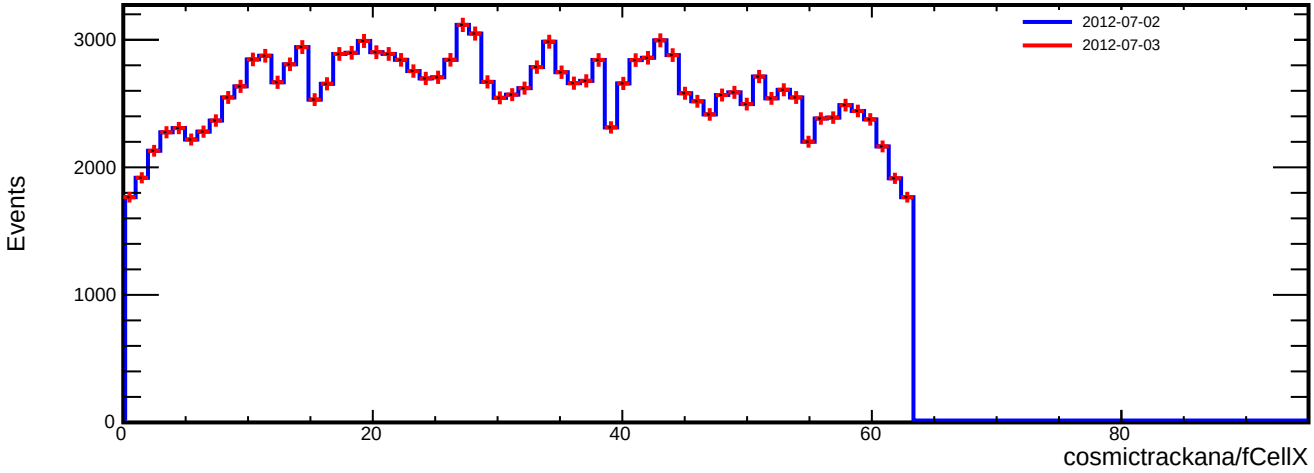

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-200
-100
0
100
200
cosmictrackana/hitXPosition

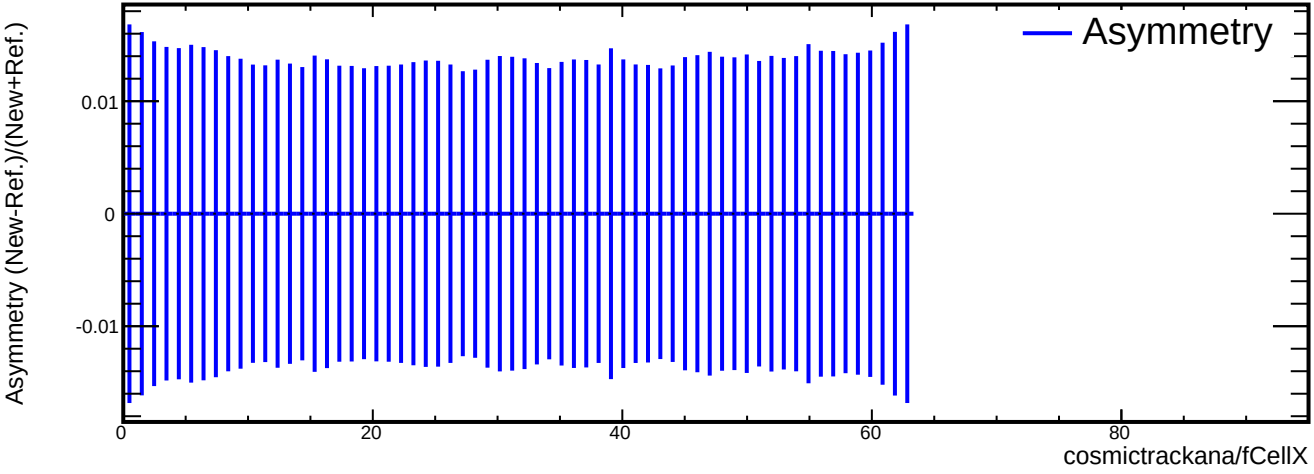

2012-07-02
2012-07-03
Events
8000
6000
4000
2000
0
-200
-100
0
100
200
cosmictrackana/hitYPosition

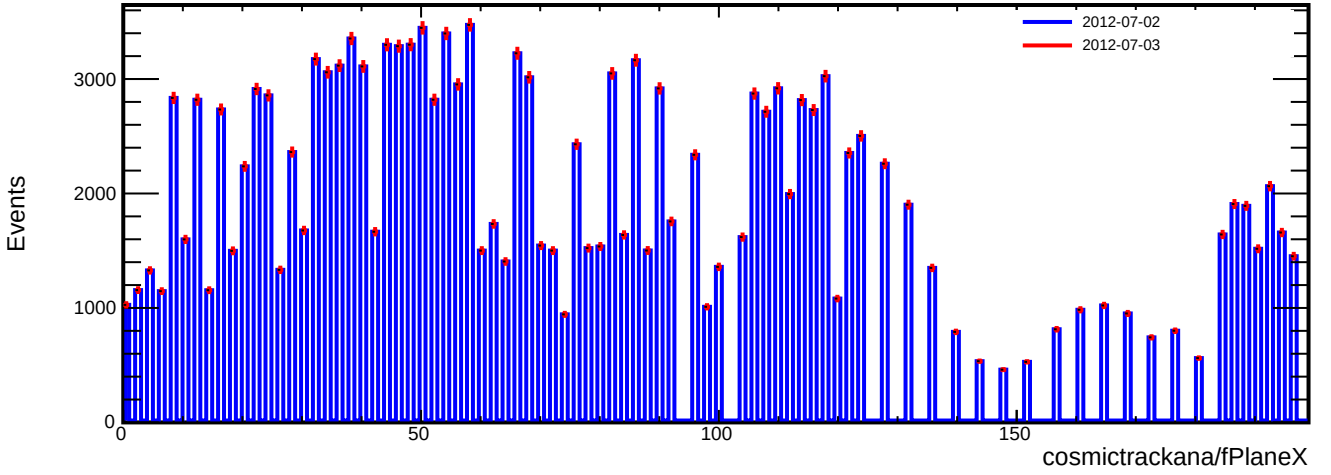

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
-200
-100
0
100
200
cosmictrackana/hitYPosition

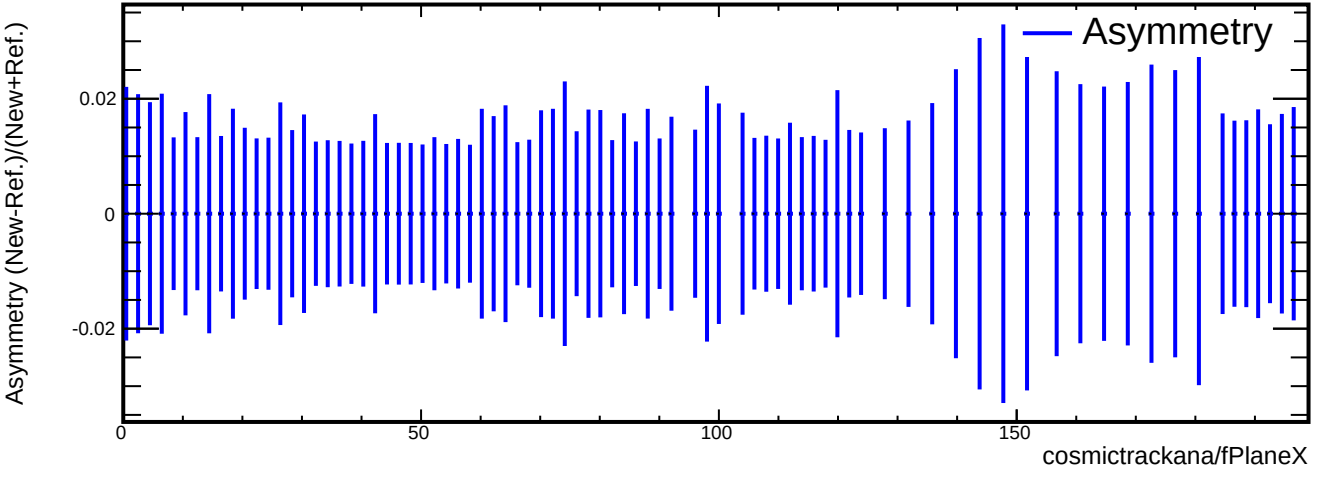

2012-07-02
2012-07-03
Events
0
1000
2000
3000
4000
5000
0
500
1000
1500
cosmictrackana/hitZPosition

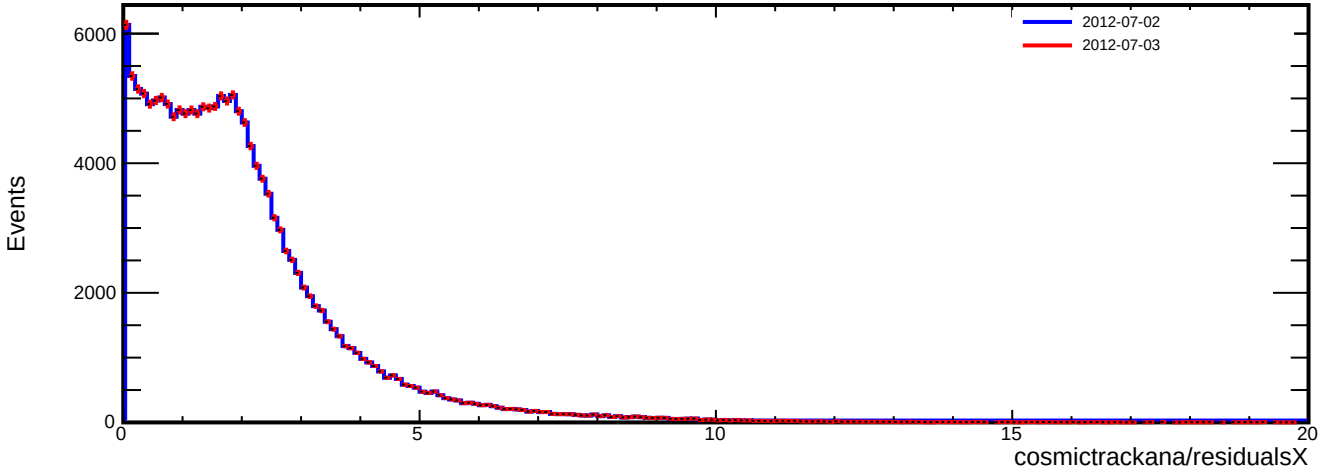

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.02
0
-0.02
0
500
1000
1500
cosmictrackana/hitZPosition

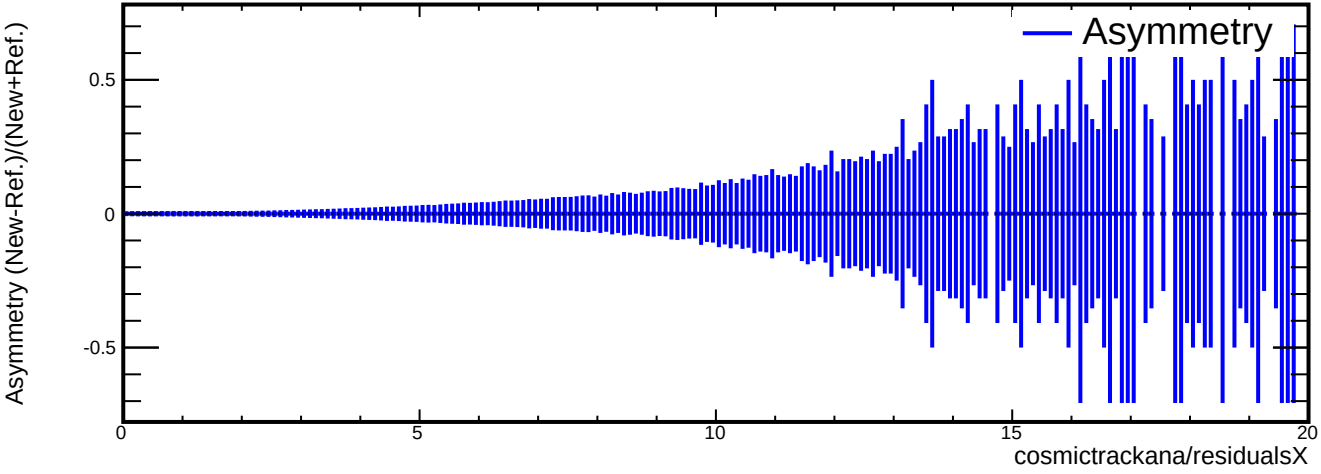

2012-07-02
2012-07-03
Events
3000
2000
1000
0
0
20
40
60
80
cosmictrackana/fCellX

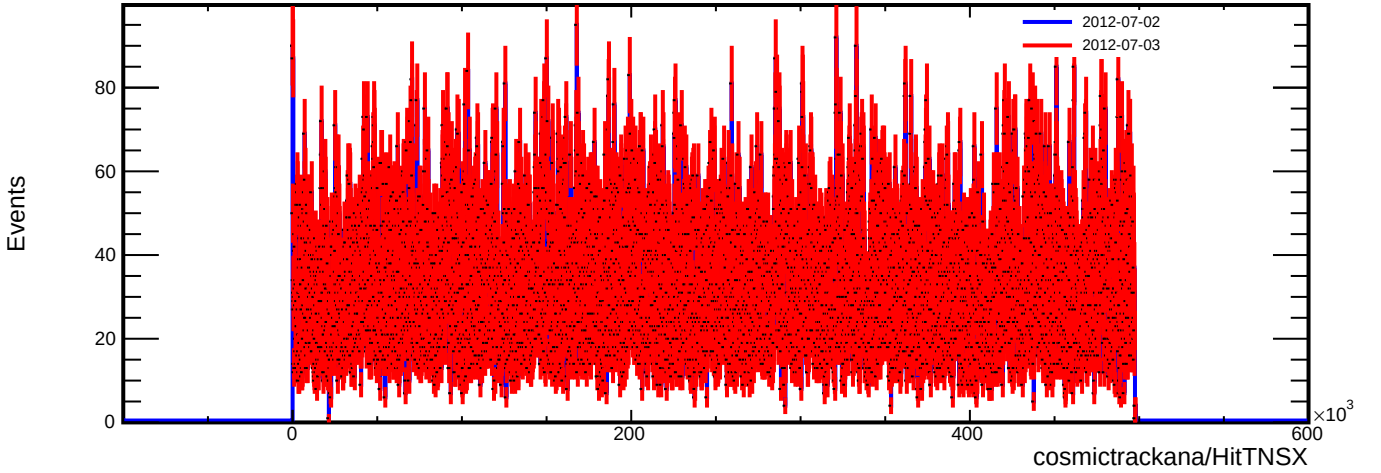

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.01
0
-0.01
0
20
40
60
80
cosmictrackana/fCellX

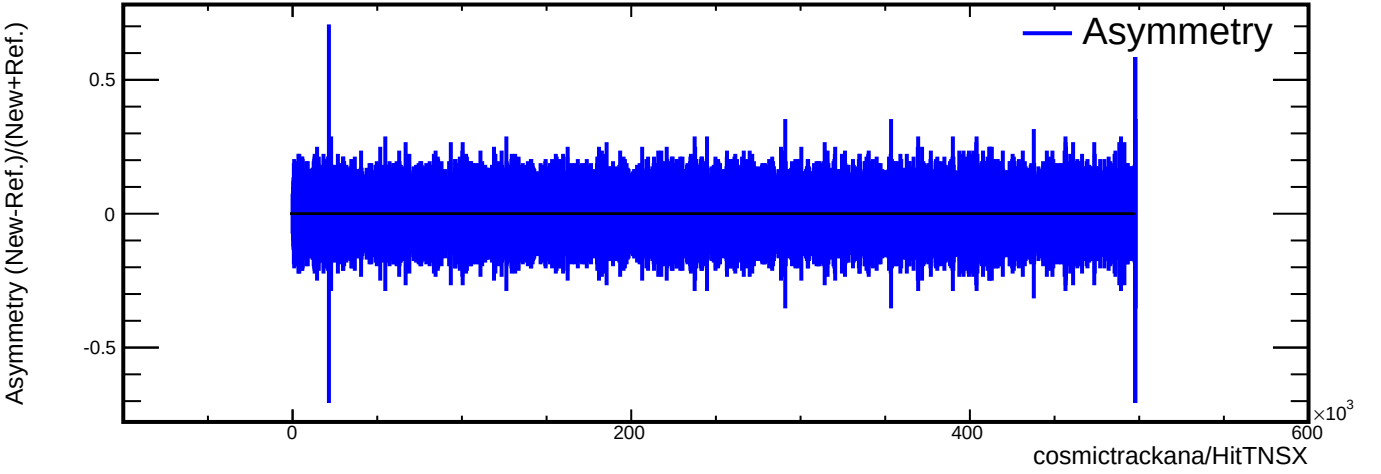

2012-07-02
2012-07-03
Events
0
1000
2000
3000
0
50
100
150
cosmictrackana/fPlaneX

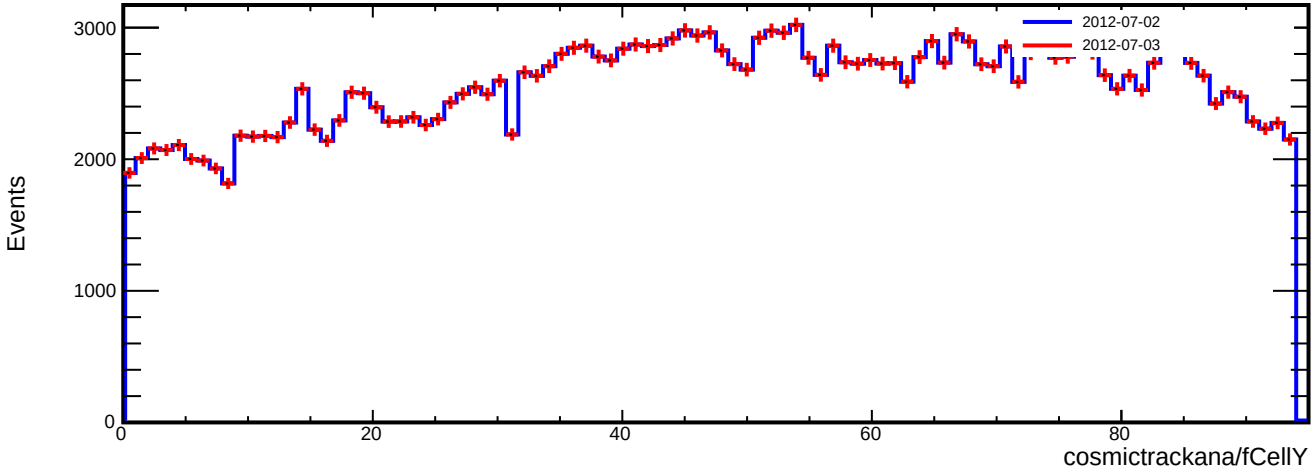

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.02
0
-0.02
0
50
100
150
cosmictrackana/fPlaneX

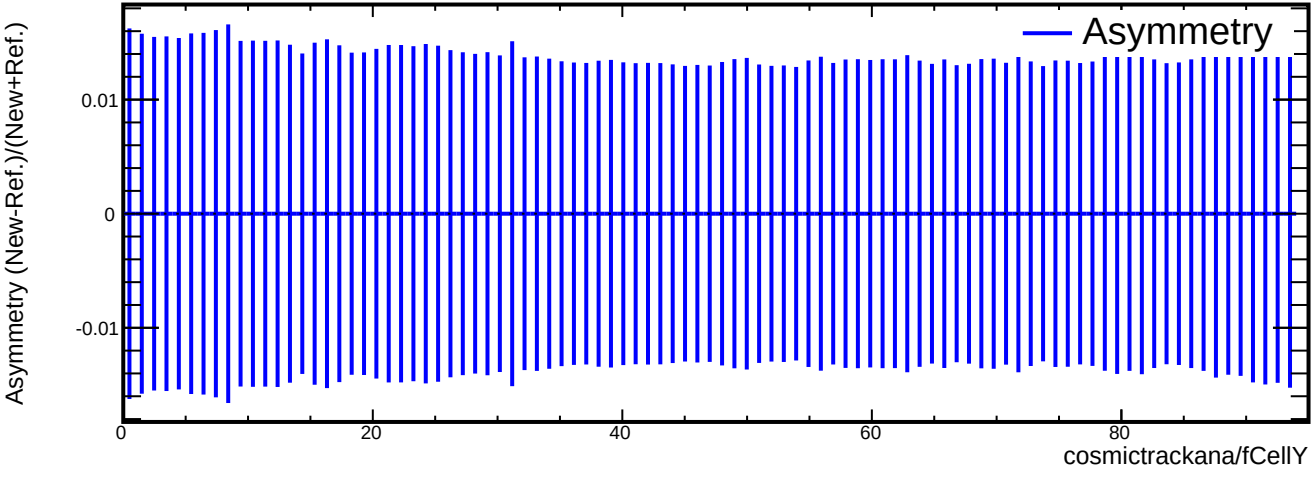

2012-07-02
2012-07-03
Events
6000
4000
2000
0
0
5
10
15
20
cosmictrackana/residualsX

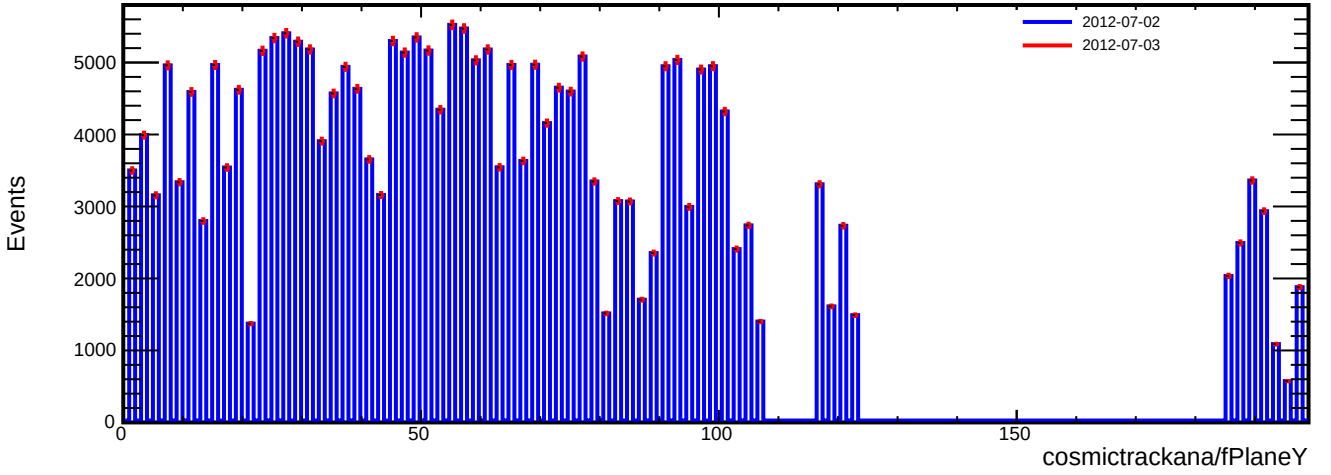

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
5
10
15
20
cosmictrackana/residualsX

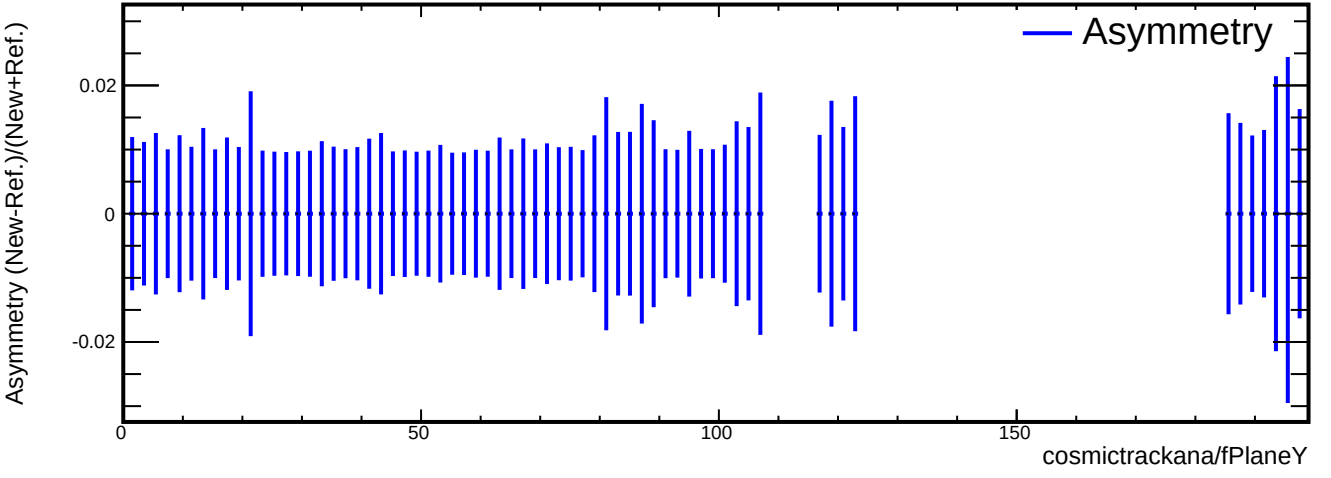

2012-07-02
2012-07-03
Events
0
20
40
60
80
0
200
400
600
×10^3
cosmictrackana/HitTNSX

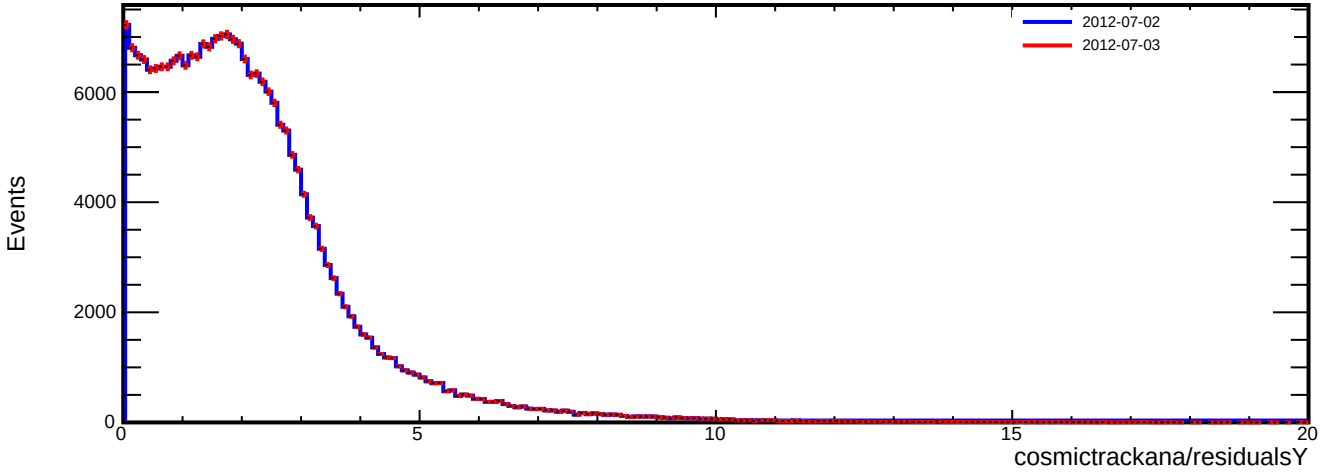

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
200
400
600
×10^3
cosmictrackana/HitTNSX

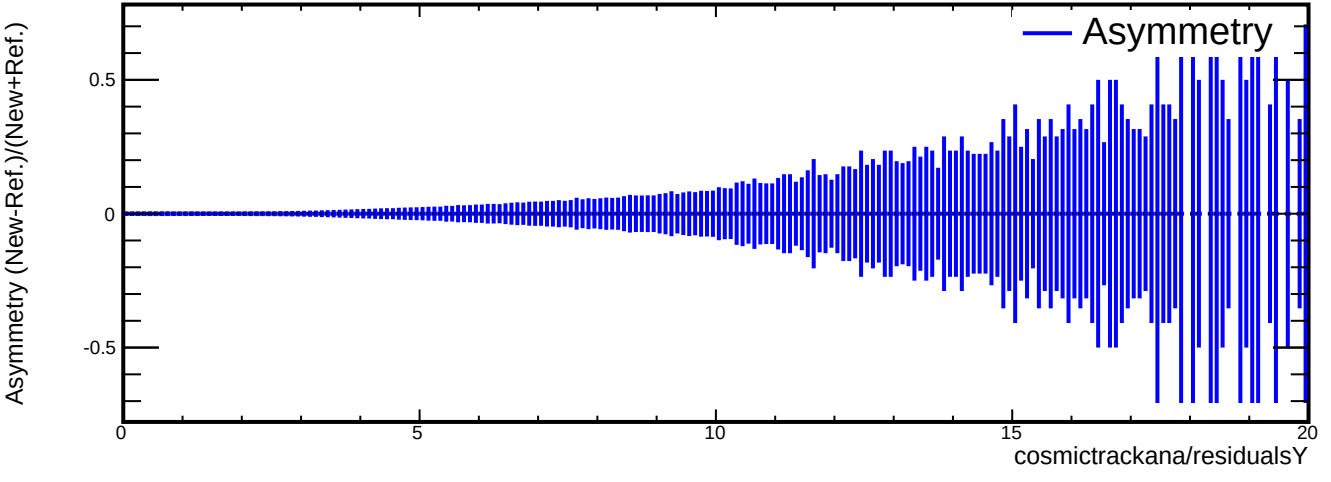

2012-07-02
2012-07-03
Events
3000
2000
1000
0
0
20
40
60
80
cosmictrackana/fCellY

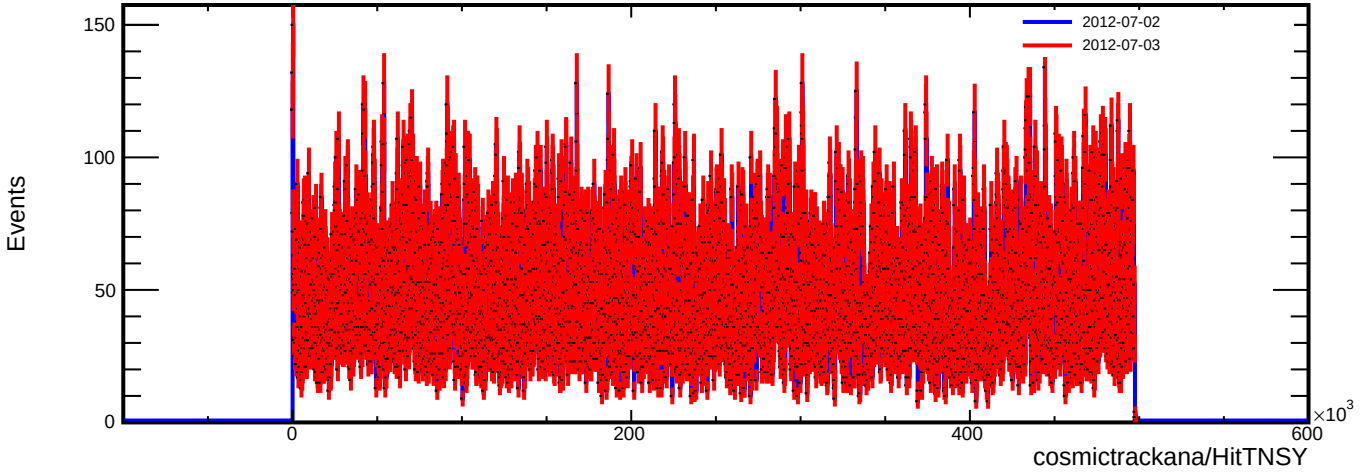

Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.01
0
-0.01
0
20
40
60
80
cosmictrackana/fCellY

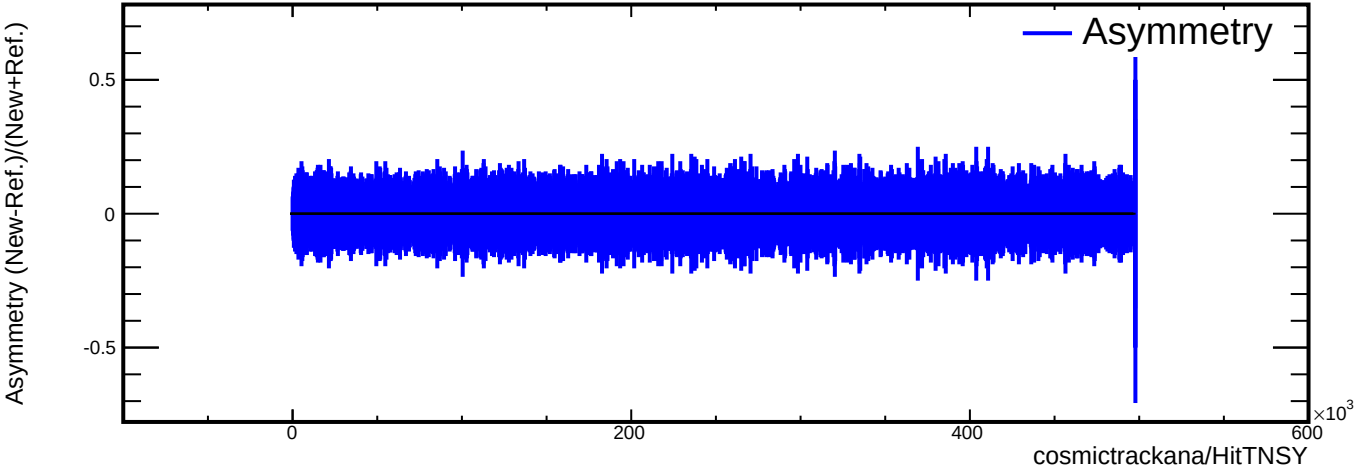

2012-07-02
2012-07-03
Events
0
1000
2000
3000
4000
5000
0
50
100
150
cosmictrackana/fPlaneY


Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.02
0
-0.02
0
50
100
150
cosmictrackana/fPlaneY


2012-07-02
2012-07-03
Events
6000
4000
2000
0
0
5
10
15
20
cosmictrackana/residualsY


Asymmetry
Asymmetry (New-Ref.)/(New+Ref.)
0.5
0
-0.5
0
5
10
15
20
cosmictrackana/residualsY


2012-07-02
2012-07-03
Events
150
100
50
0
0
200
400
600
×10^3
cosmictrackana/HitTNSY


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