Jet Vertex Resolution Study

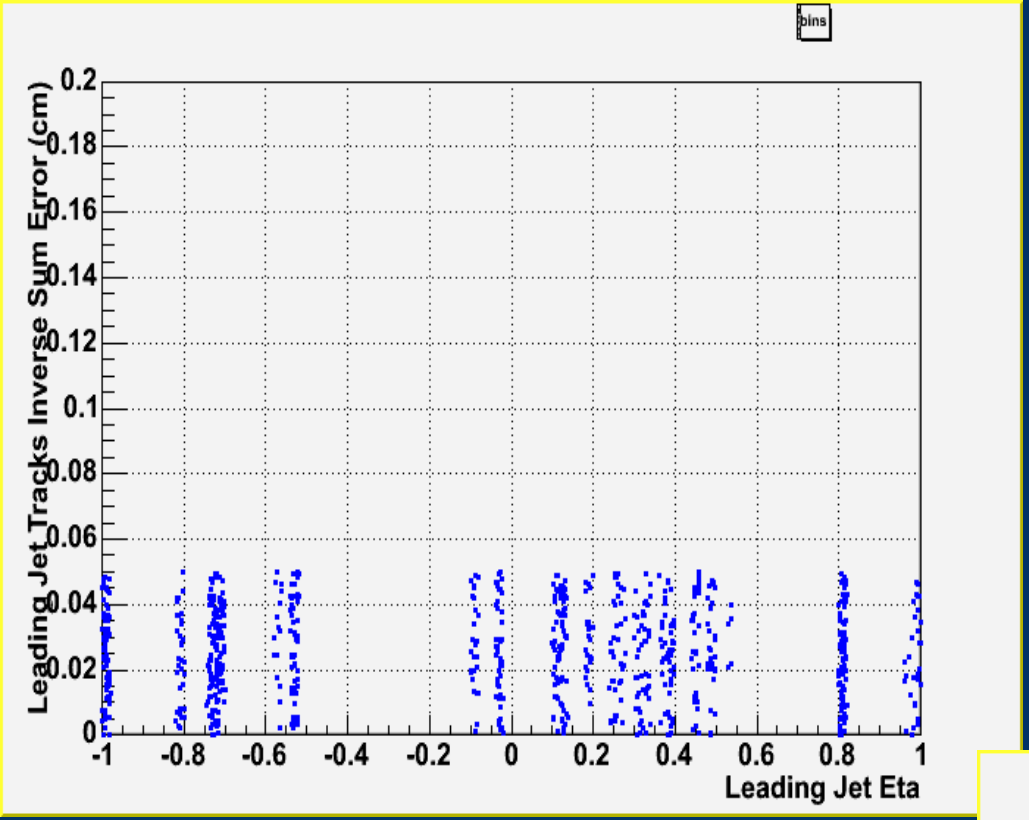
- Track Selection criteria
- How is the Inverse Sum Error Calculated ?
- Plots for the Inverse sum Error for Leading and Second Jet

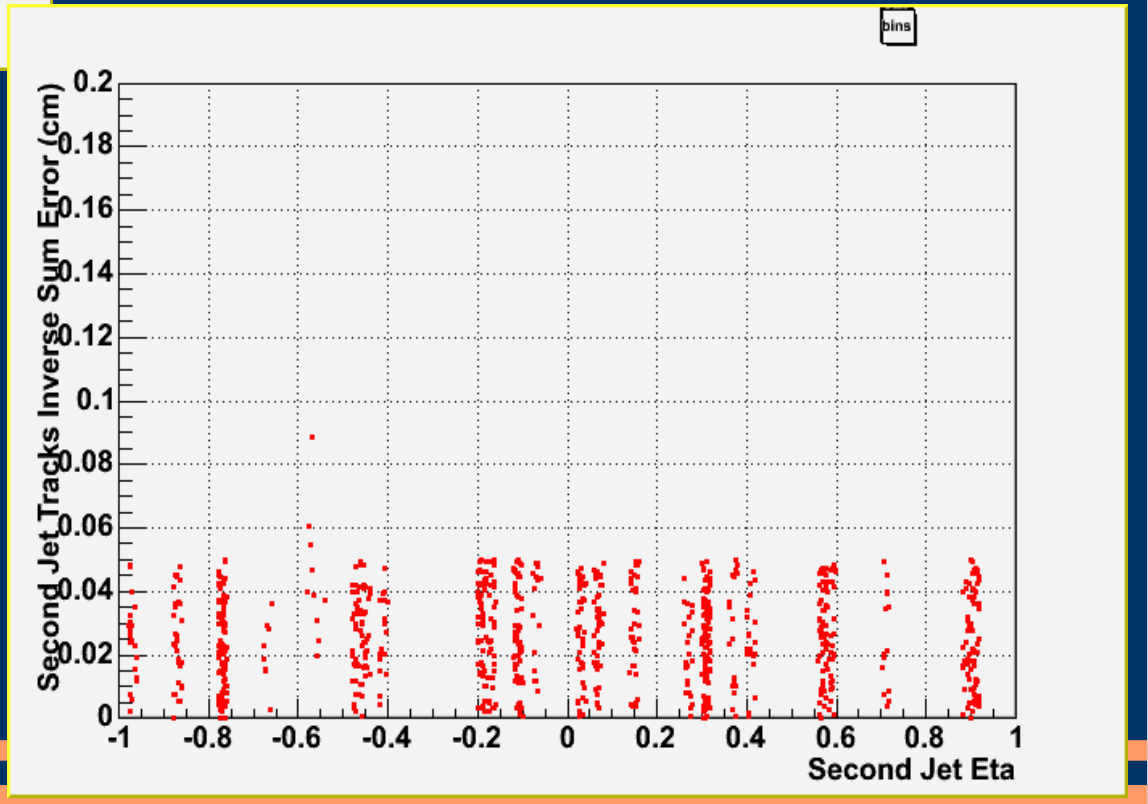
Tracks Selection Criteria

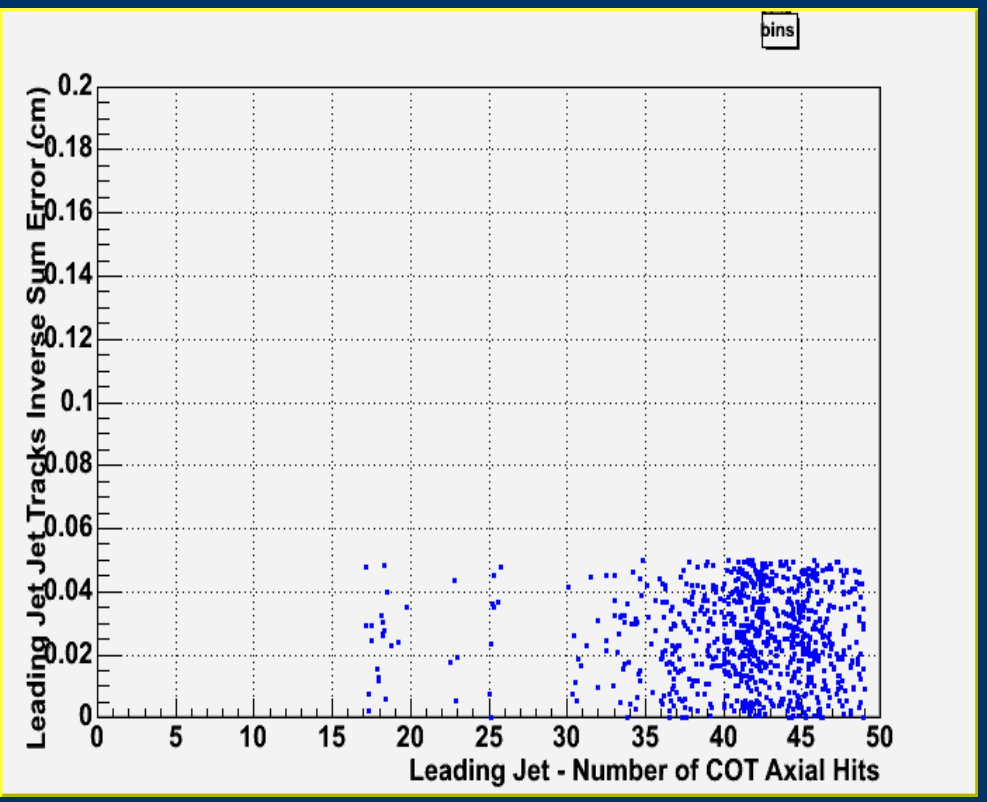
Type of Track	No. of Axial Hits	No. of Stereo Hits	Chi2Dof
COT Only	3	3	4
SVX only	5	3	8
COT+SVX	2-COT/4 SVX	2-COT/3-SVX	Same as above

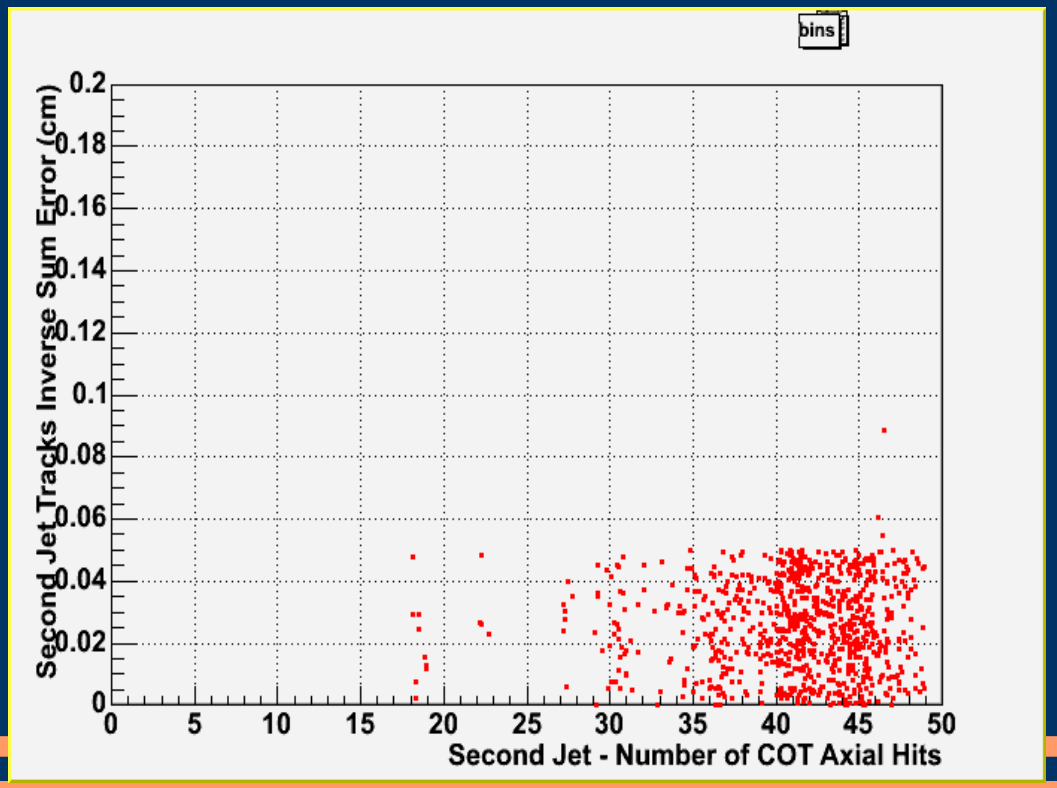
How is the Inverse Sum error Calculated ?

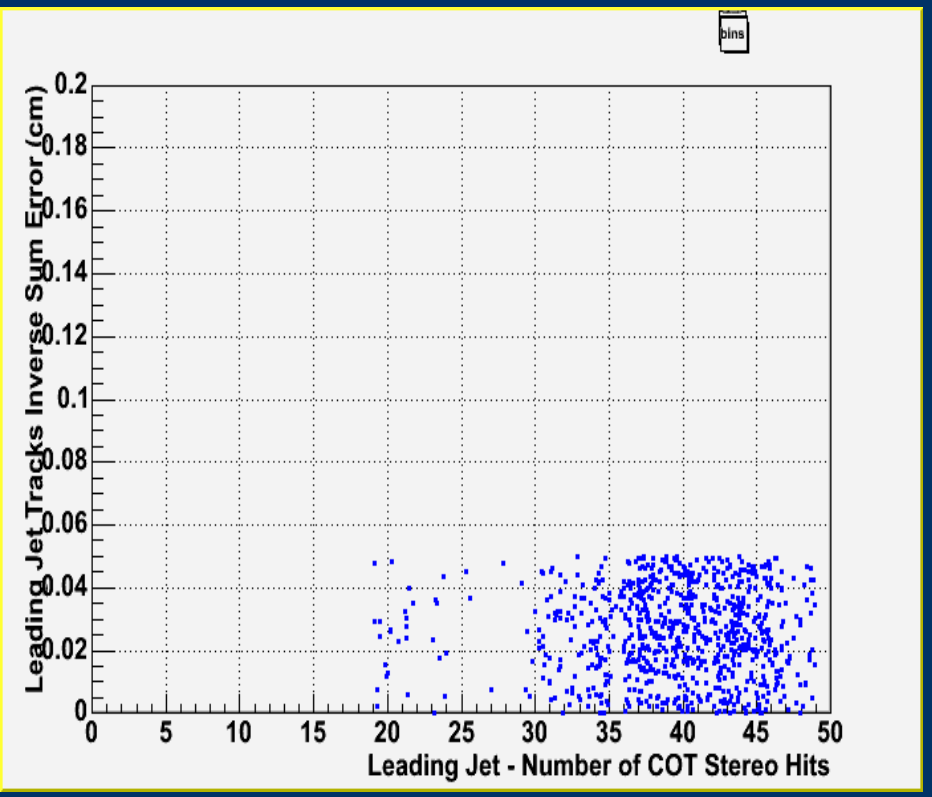
- Tracks are classified according to the criteria mentioned in the Table above .
- For each type of track the Error is calculated individually
- Inverse COT only Track Error Squared (ICotErr)= (1/(COT Tracks Error)^2)
- Inverse SVX only Track Error Squared(ISvxErr)= (1/(SVX Tracks Error)^2)
- Inverse COT+SVX only Track Error Squared(ICotSvxErr)= (1/(COT+SVX Tracks Error)^2)
- Sum = ICotErr + ISvxErr+ ICotSvxErr
- Inverse Sum Error (The Value in the plots)= 1/sqrt(Sum)

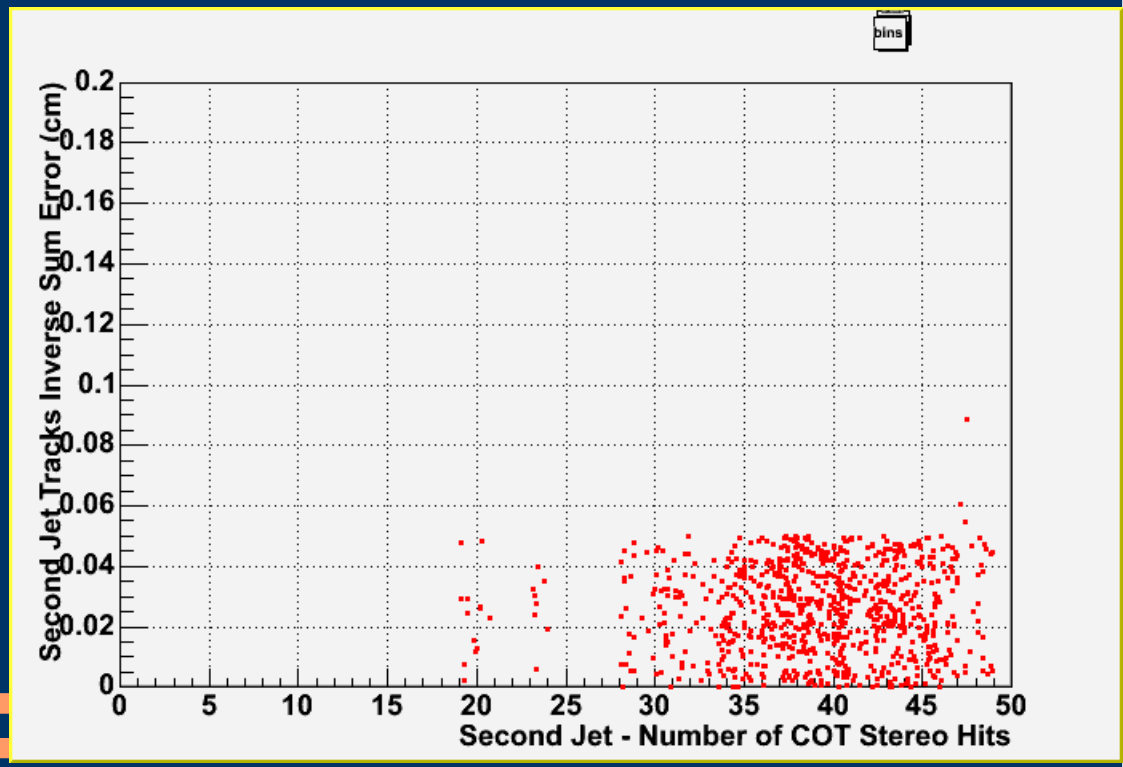

bins
Leading Jet Tracks Inverse Sum Error (cm)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
-1
-0.8
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
0.8
1
Leading Jet Eta

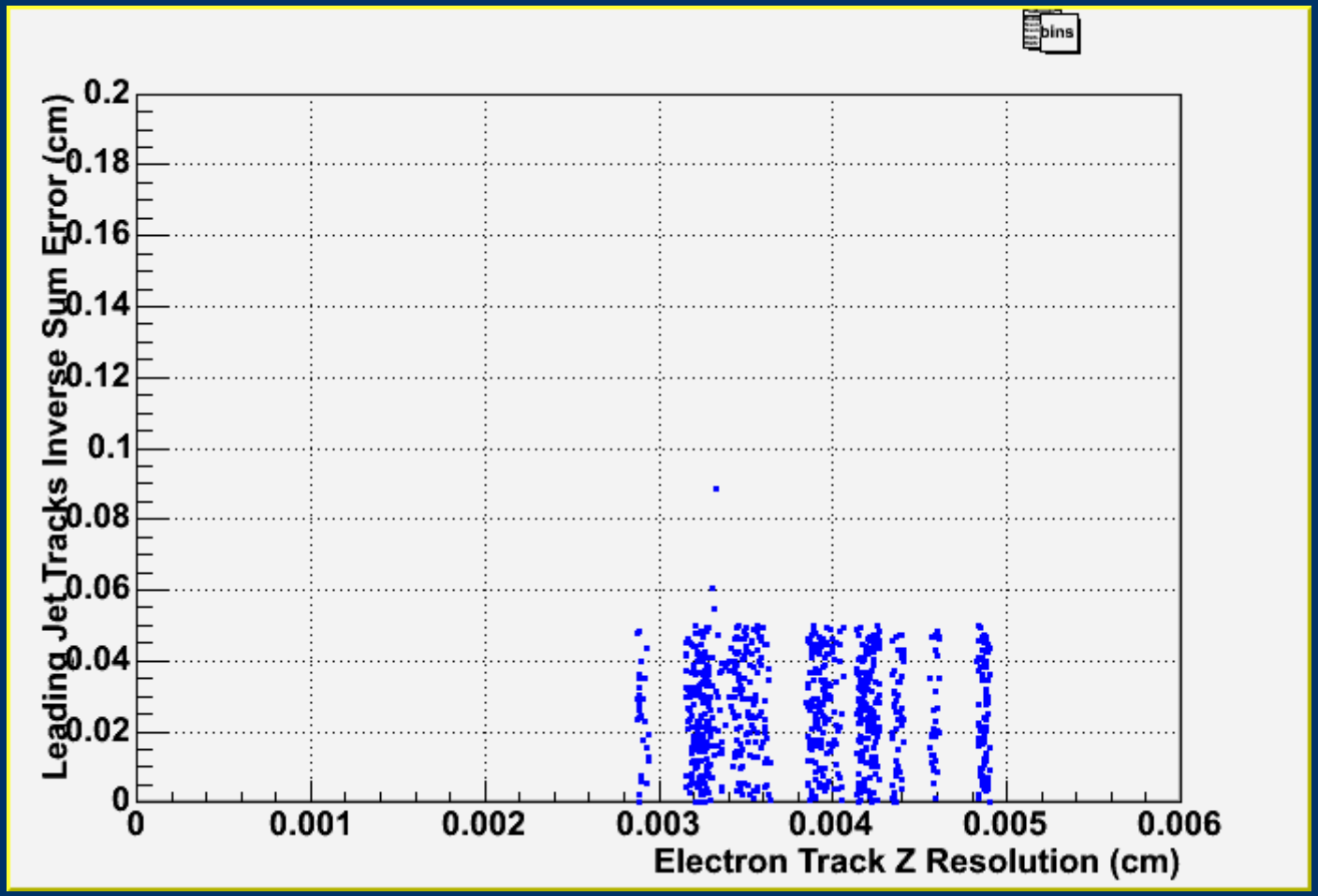

bins
Second Jet Tracks Inverse Sum Error (cm)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
-1
-0.8
-0.6
-0.4
-0.2
0
0.2
0.4
0.6
0.8
1
Second Jet Eta


bins
Leading Jet Jet_Tracks Inverse Sum Error (cm)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0 5 10 15 20 25 30 35 40 45 50
Leading Jet - Number of COT Axial Hits


bins
Second Jet_Tracks Inverse Sum Error (cm)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0 5 10 15 20 25 30 35 40 45 50
Second Jet - Number of COT Axial Hits


bins
Leading Jet Tracks Inverse Sum Error (cm)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0 5 10 15 20 25 30 35 40 45 50
Leading Jet - Number of COT Stereo Hits


bins
Second Jet Tracks Inverse Sum Error (cm)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0 5 10 15 20 25 30 35 40 45 50
Second Jet - Number of COT Stereo Hits


bins
Leading Jet Tracks Inverse Sum Error (cm)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
0.001
0.002
0.003
0.004
0.005
0.006
Electron Track Z Resolution (cm)