

Start Counter Efficiency

Mahmoud Kamel

Data

ROOT tree produced from the start counter efficiency plugin run as part of the production reconstruction pass on the Spring 2016 data are used. Only run 10492 is used.

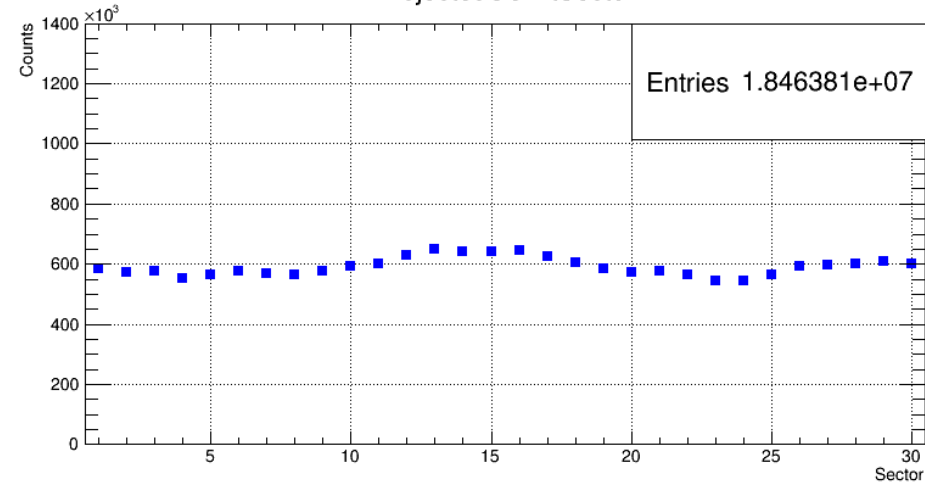
Run #	Col (mm)	BC (nA)	# events
10492 02/23	5	30	92 M

Run: 10492

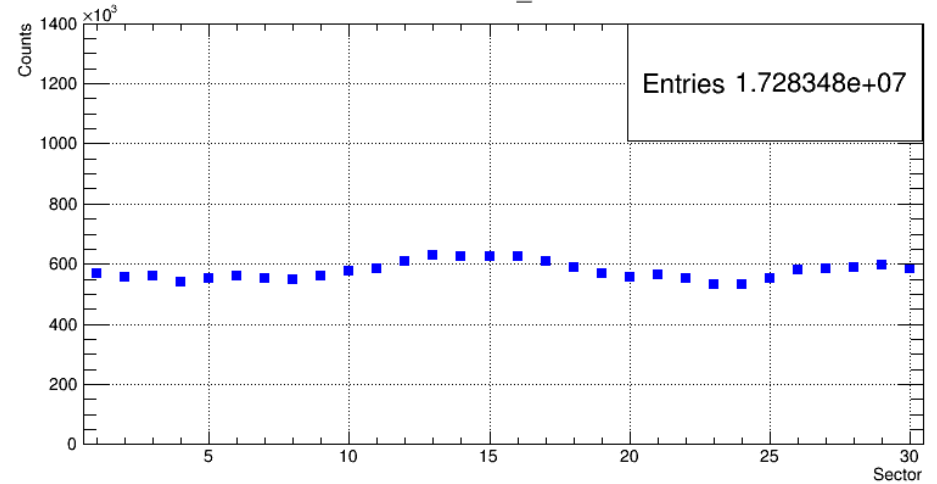
SC_Eff for all tracks

Efficiency = ProjectedSCHitSector if (IsMatchedToTrack) is true / ProjectedSCHitSector

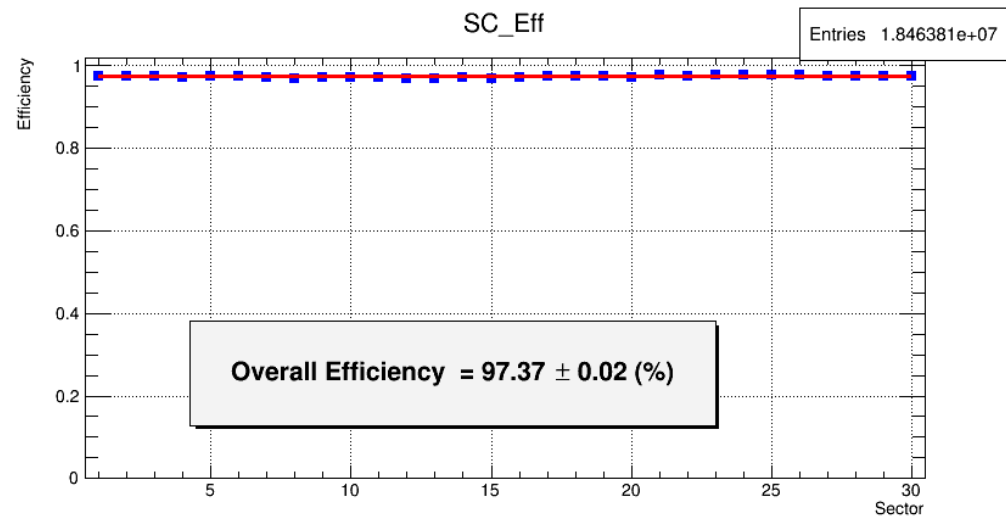
ProjectedSCHitSector



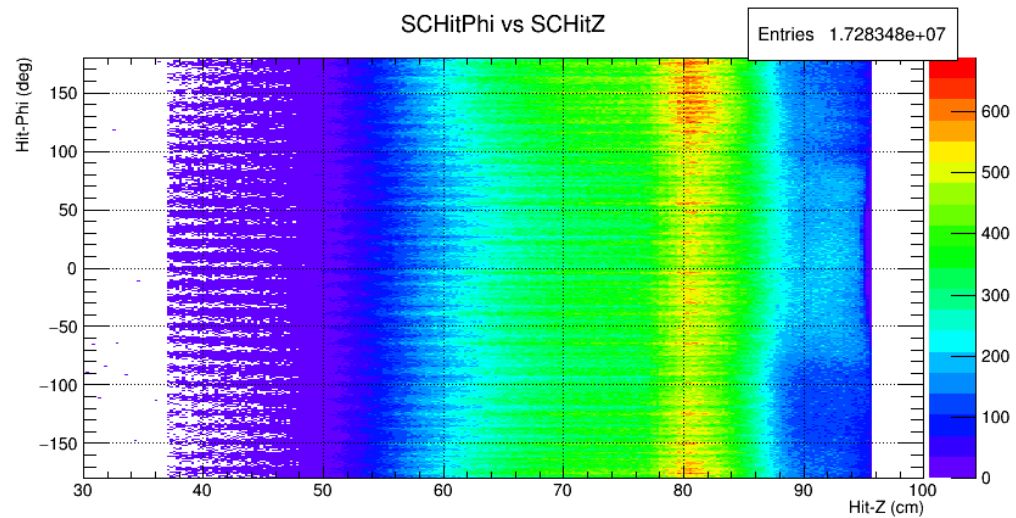
SCHitSector_Matched



SC_Eff



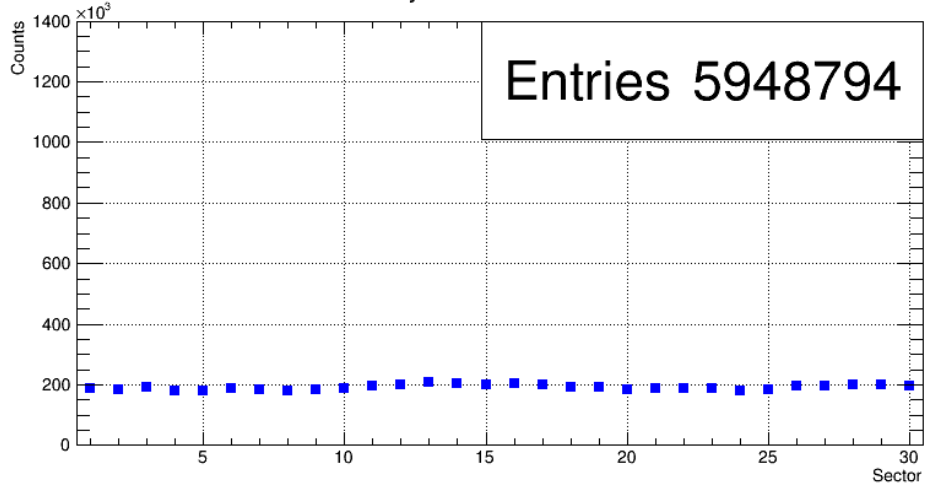
SCHitPhi vs SCHitZ



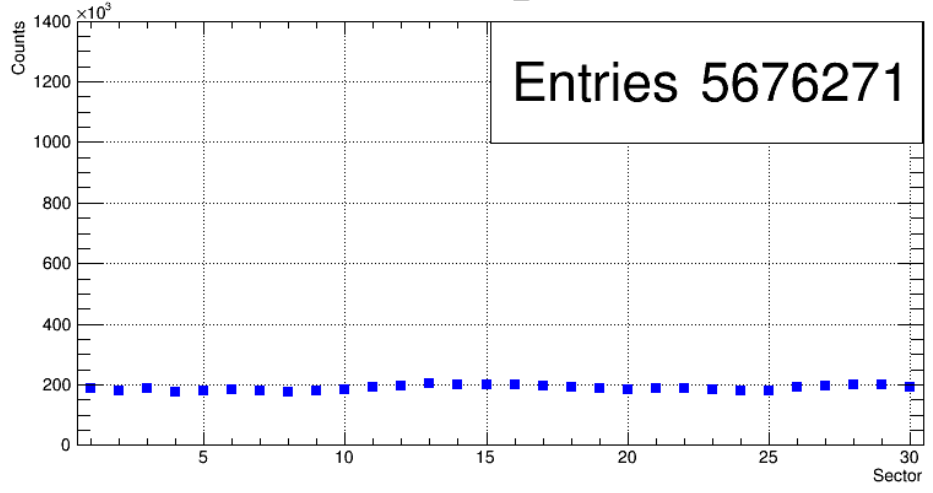
Run: 10492

SC_Eff for Protons

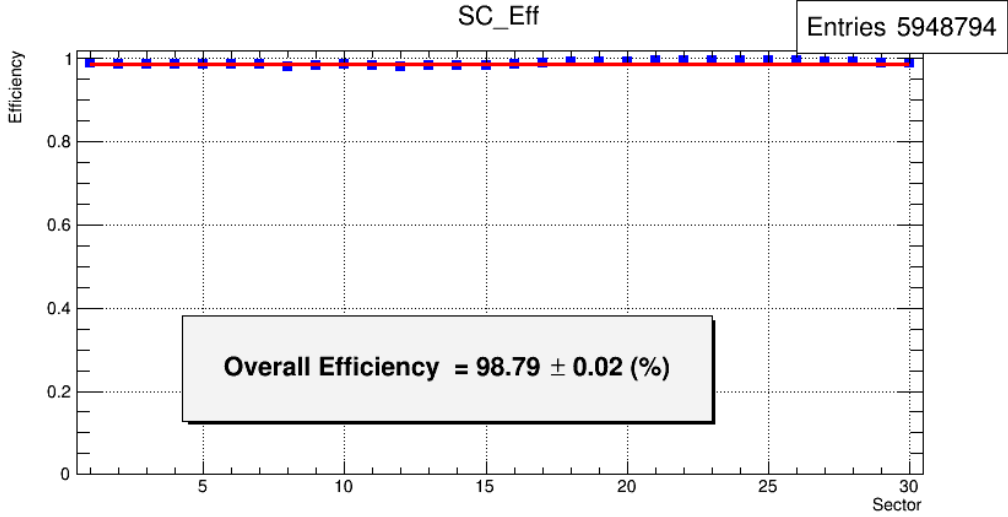
ProjectedSCHitSector



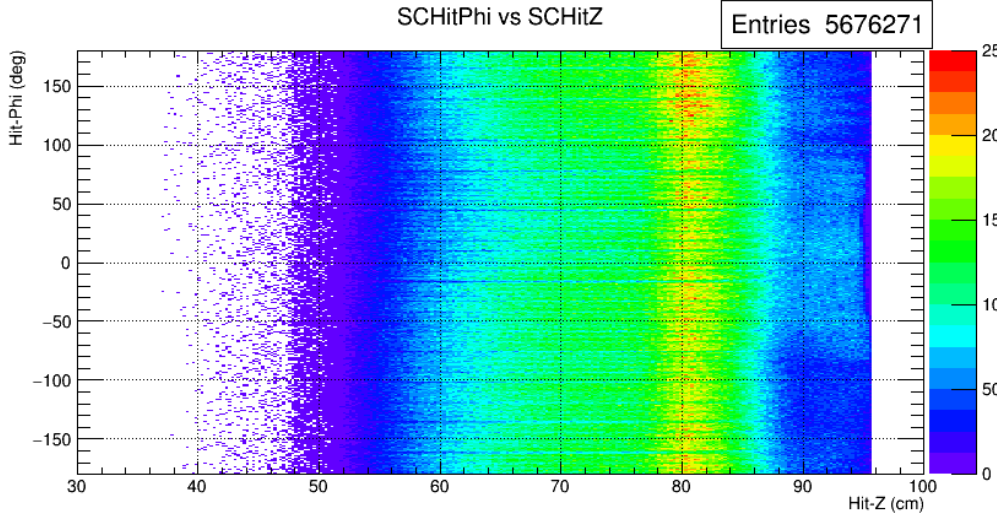
SCHitSector_Matched



SC_Eff



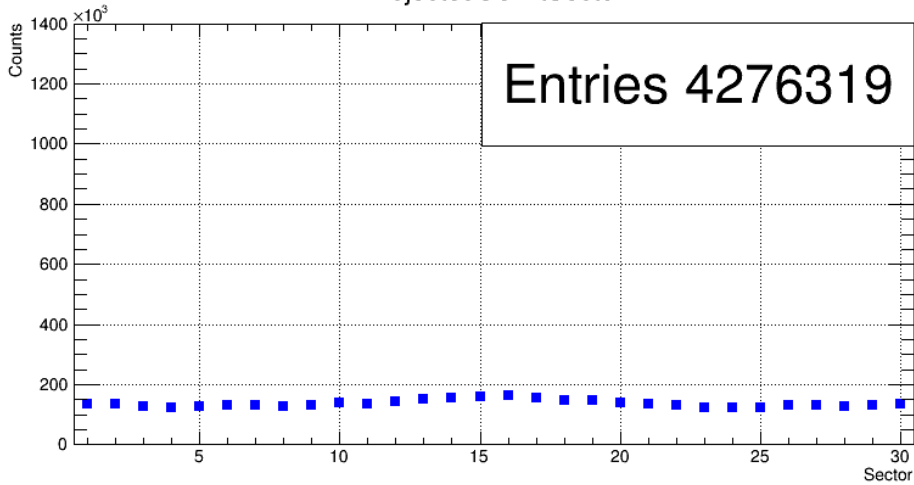
SCHitPhi vs SCHitZ



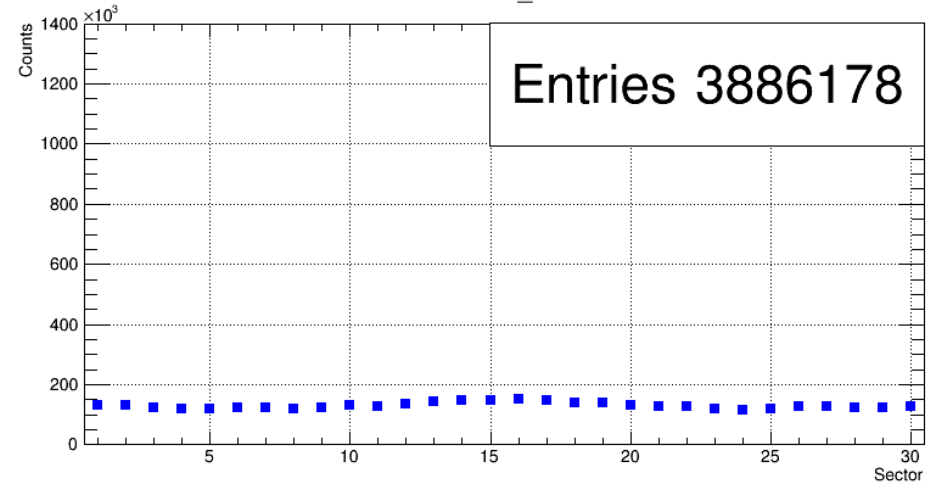
Run: 10492

SC_Eff for PiPlus

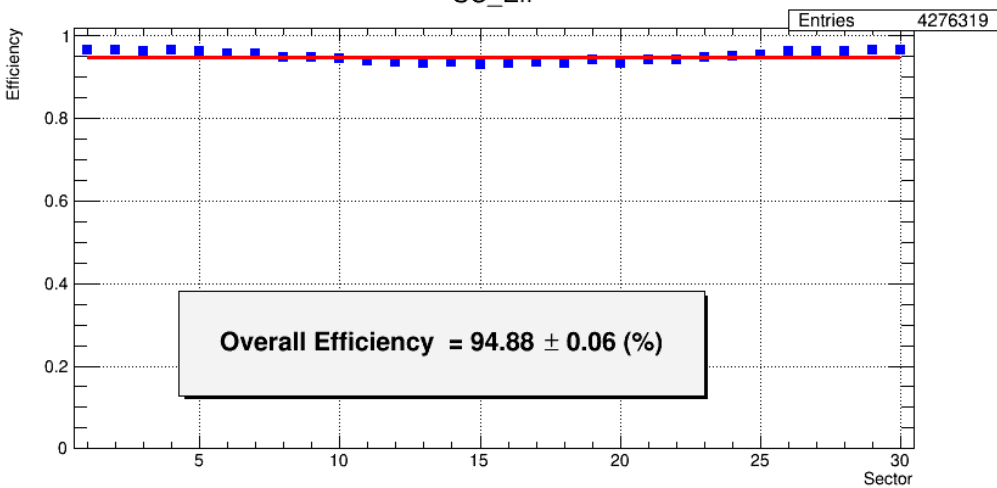
ProjectedSCHitSector



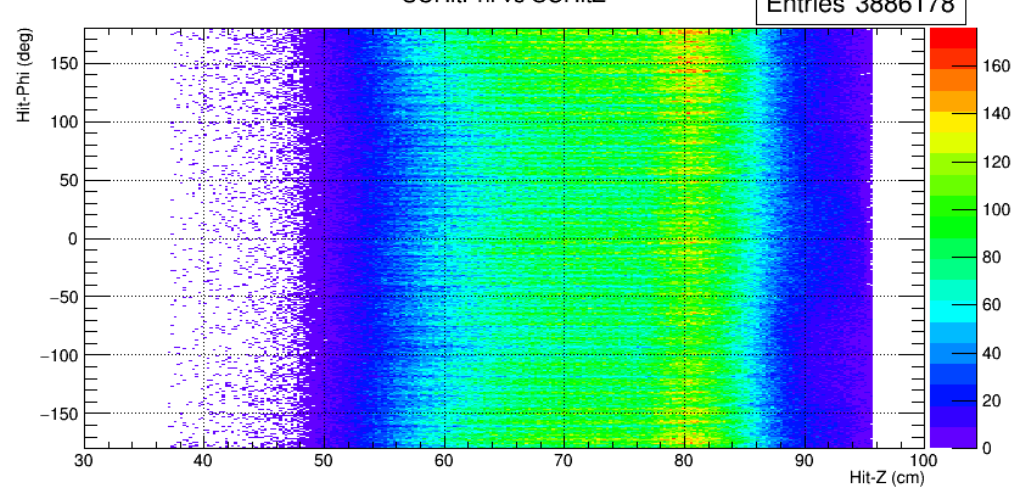
SCHitSector_Matched



SC_Eff



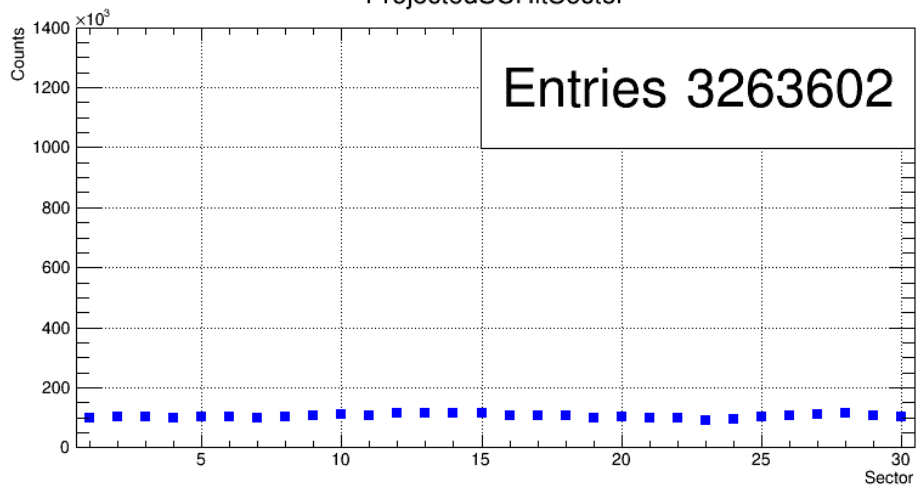
SCHitPhi vs SCHitZ



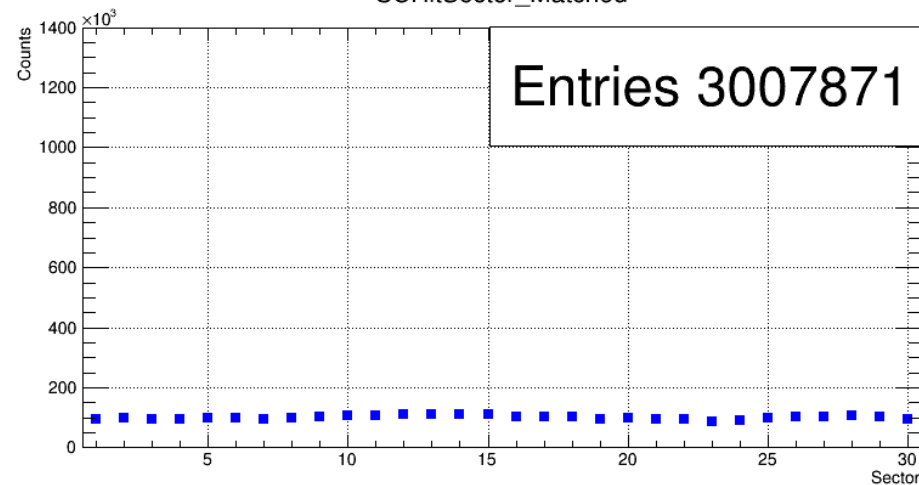
Run: 10492

SC_Eff for PiMinus

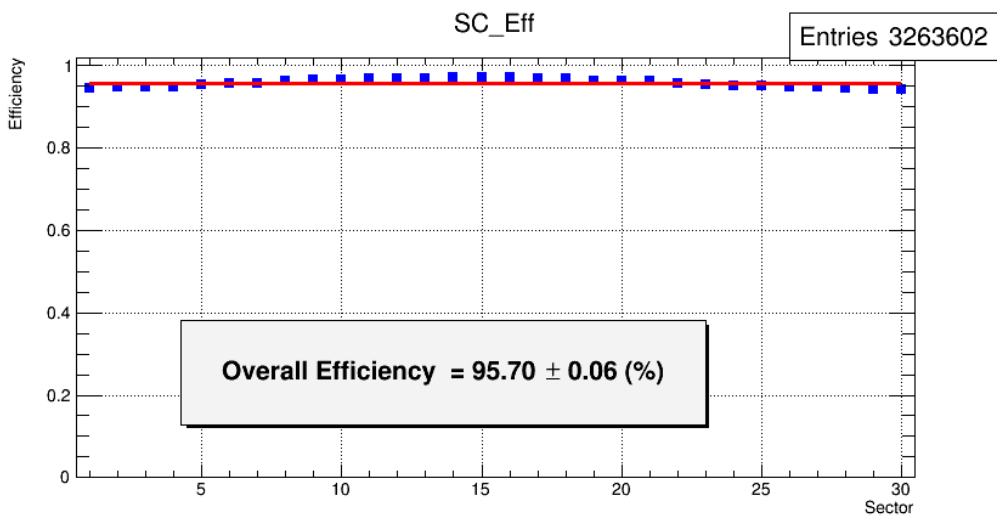
ProjectedSCHitSector



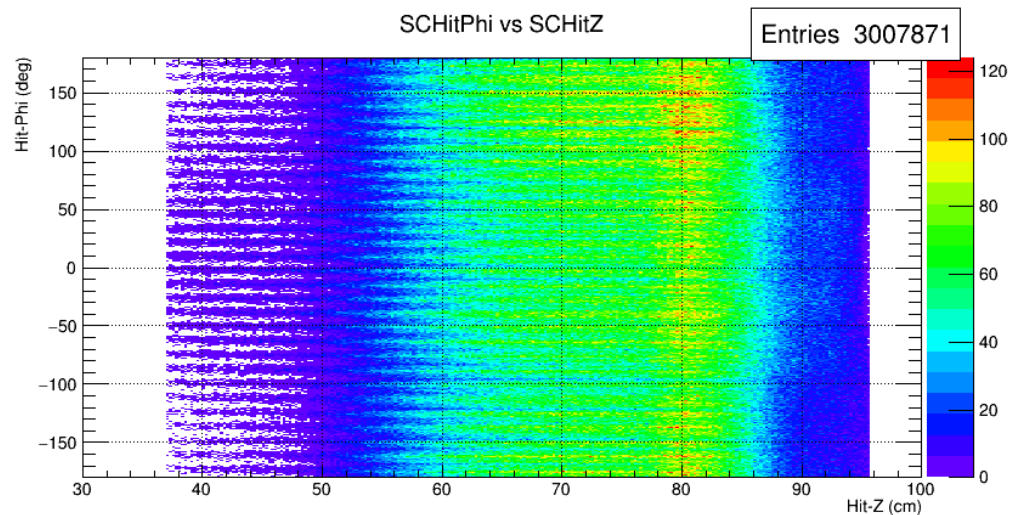
SCHitSector_Matched



SC_Eff

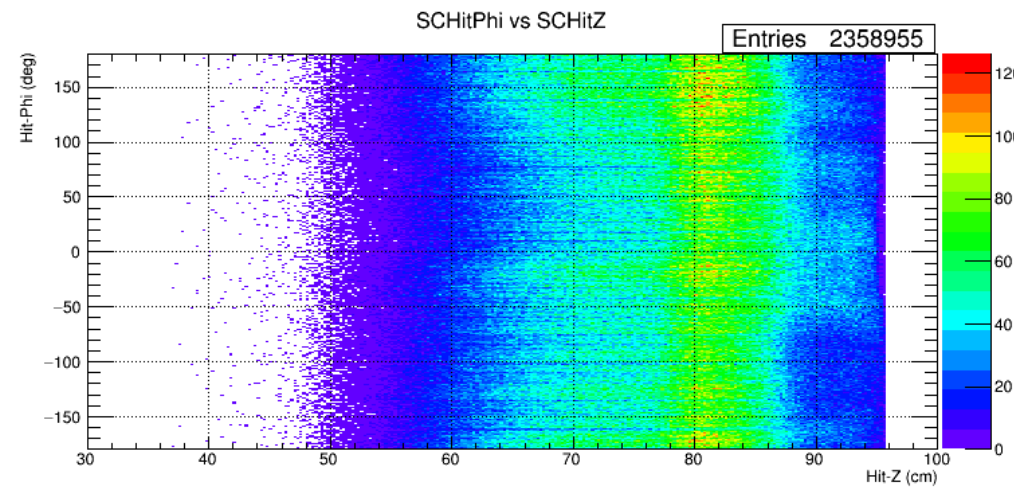
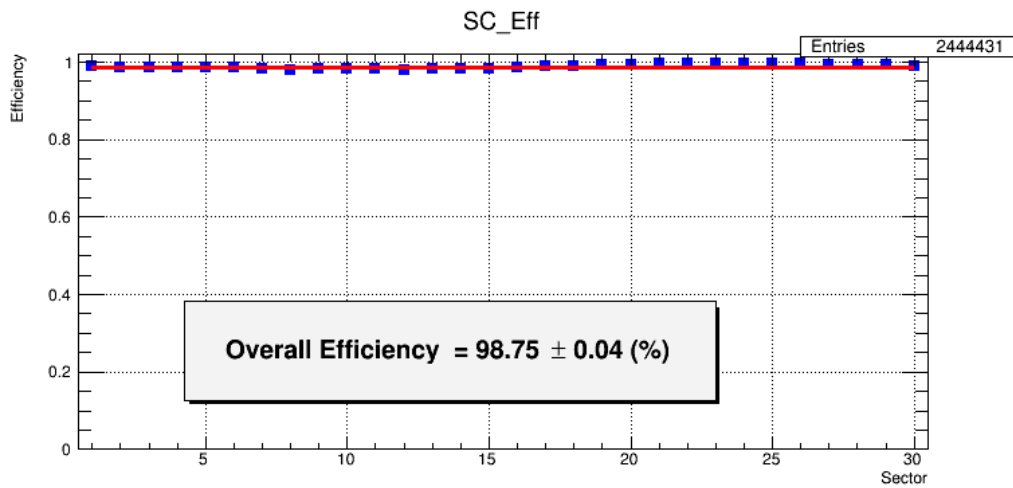
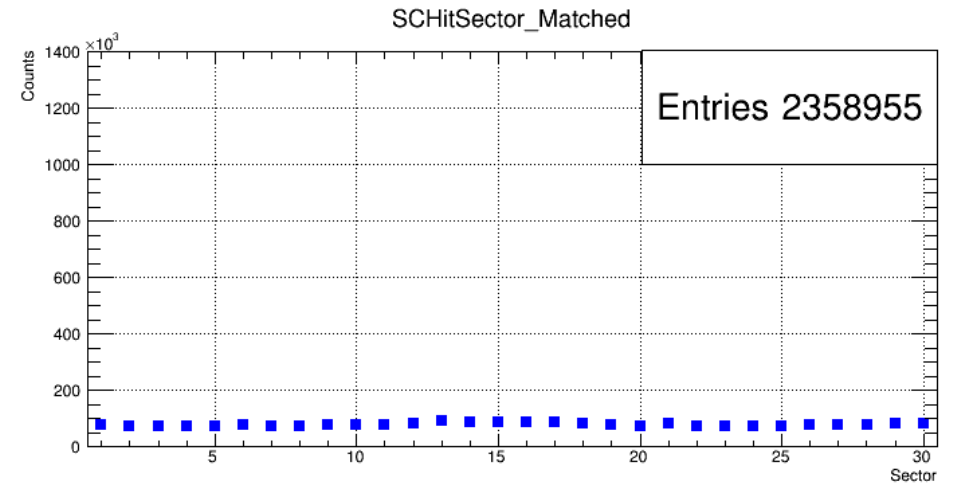
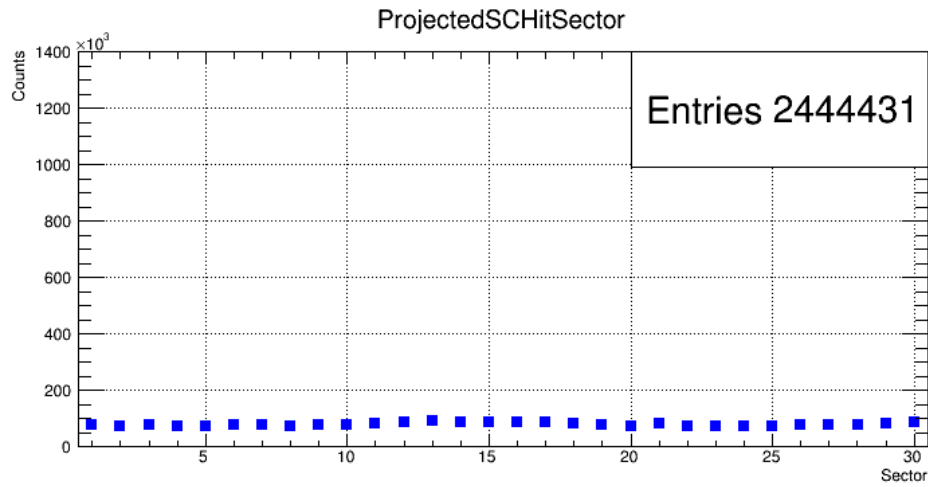


SCHitPhi vs SCHitZ



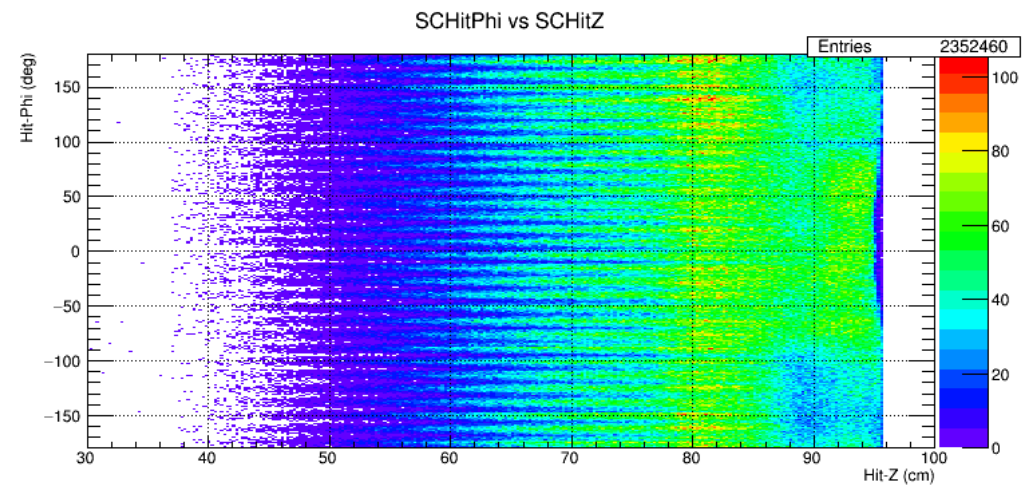
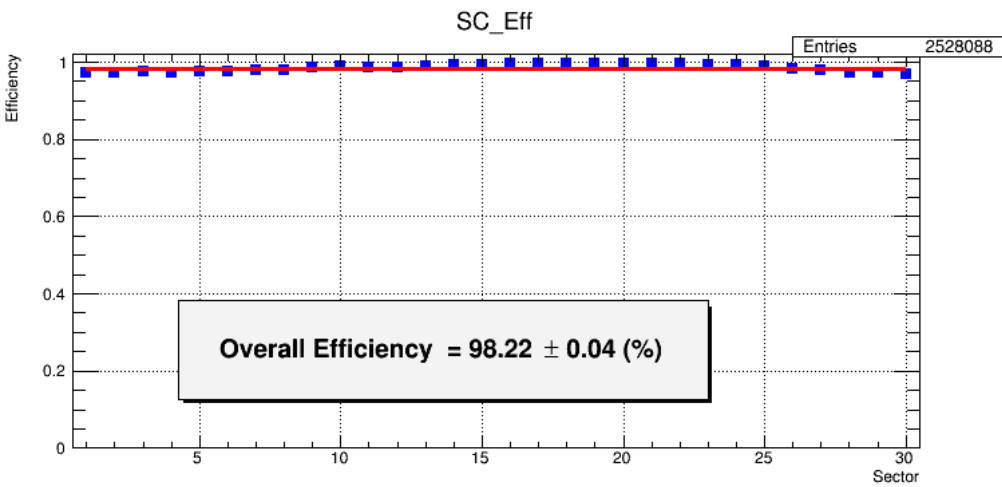
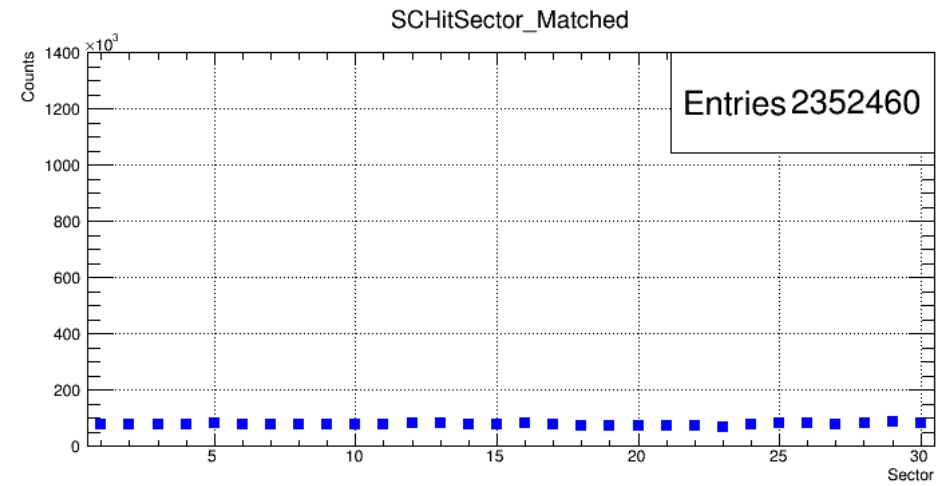
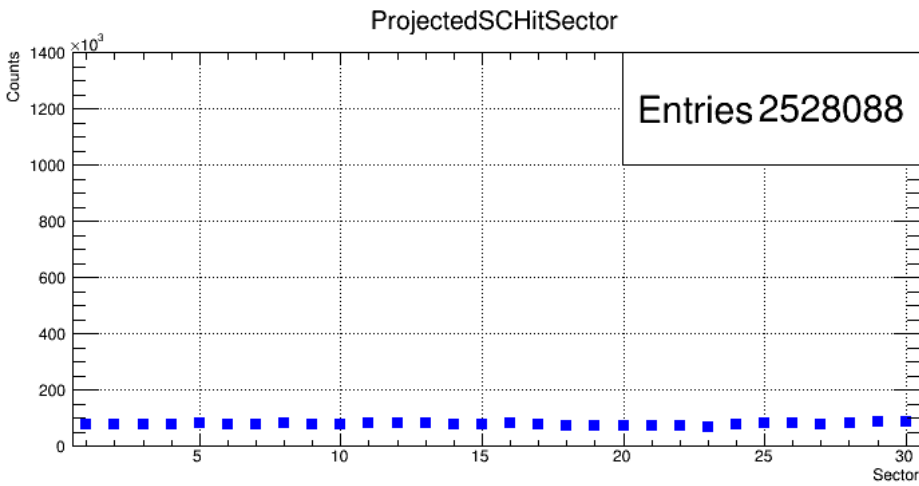
Run: 10492

SC_Eff for KPlus



Run: 10492

SC_Eff for KMinus



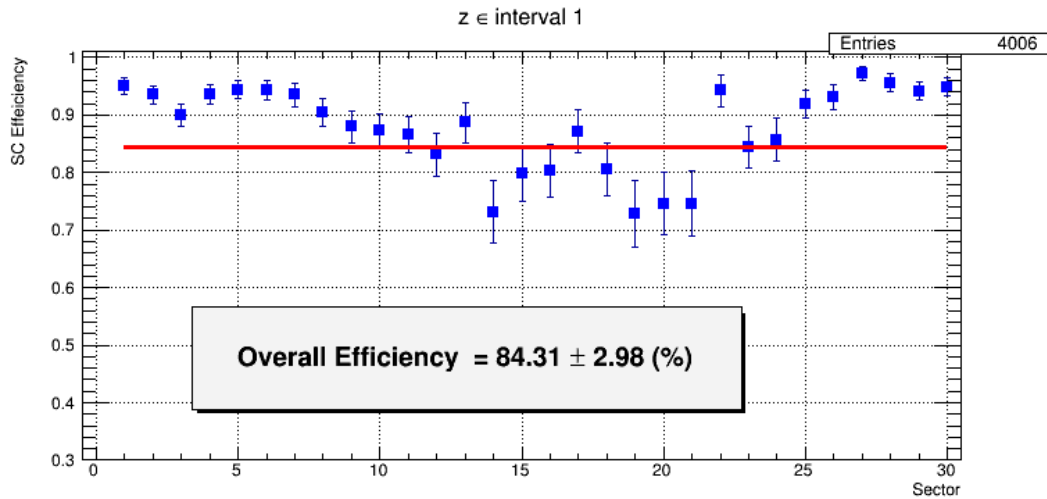
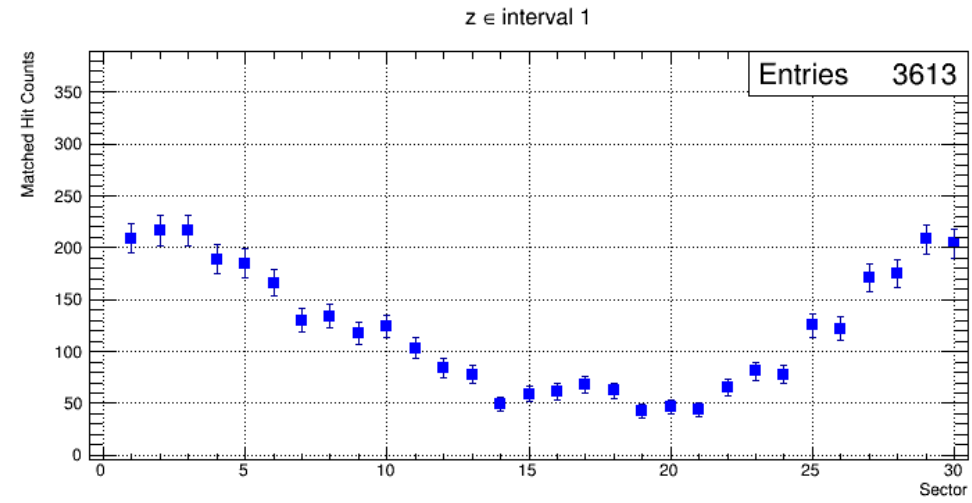
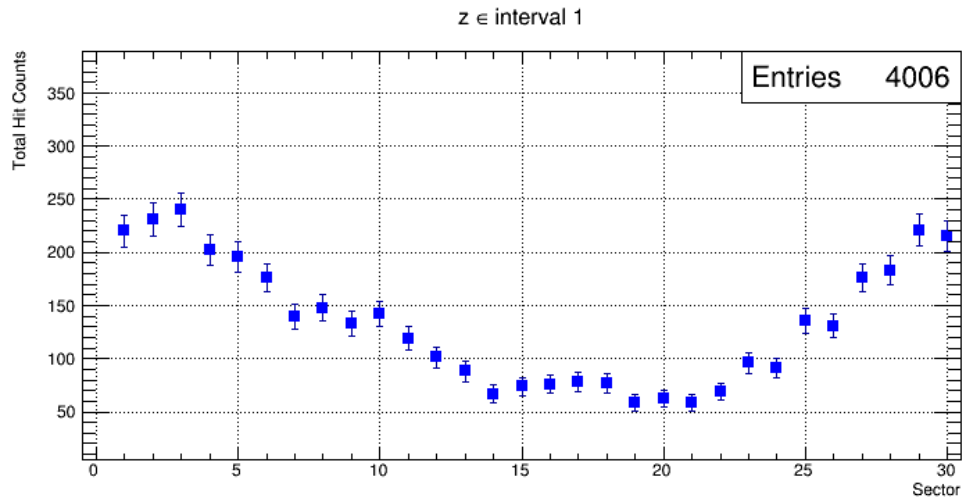
Run: 10492

SC Efficiency for 25 intervals, each of length 2.36 cm.

Efficiency = ProjectedSCHitSector if (IsMatchedToTrack) is true / ProjectedSCHitSector

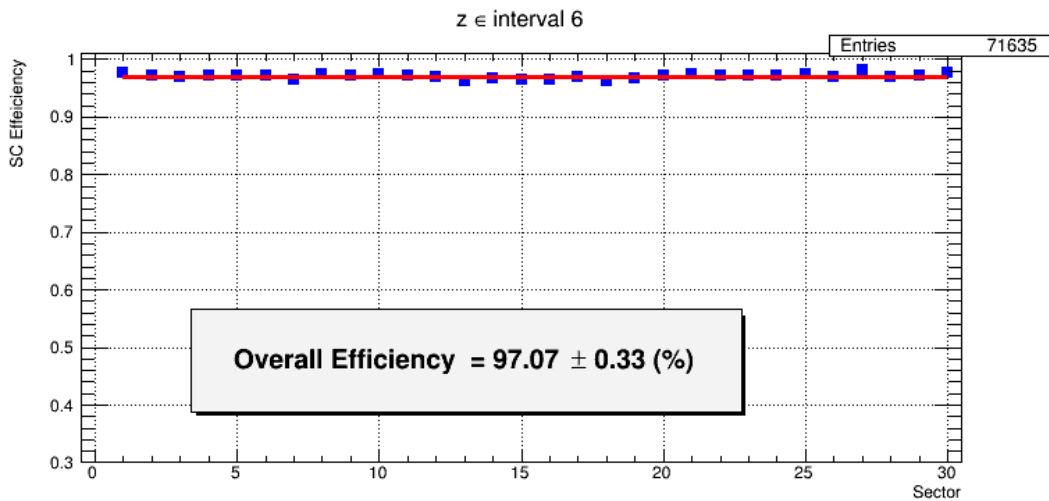
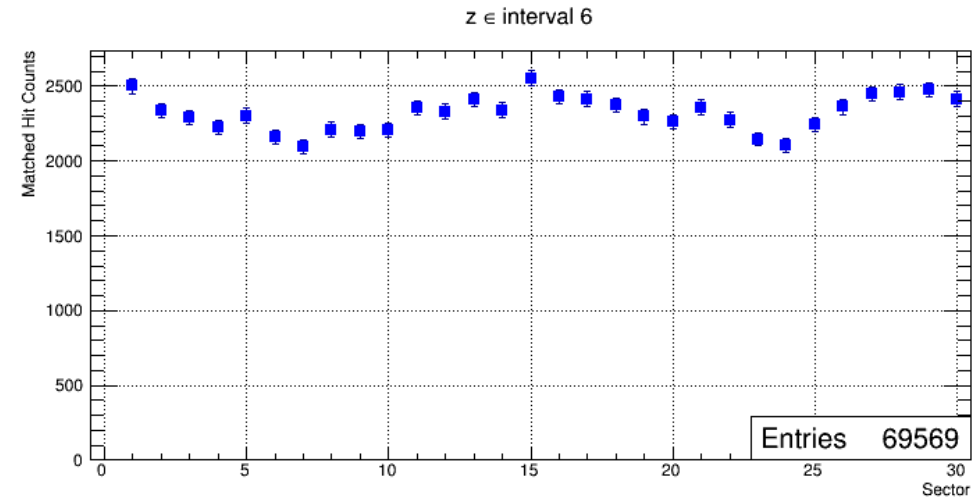
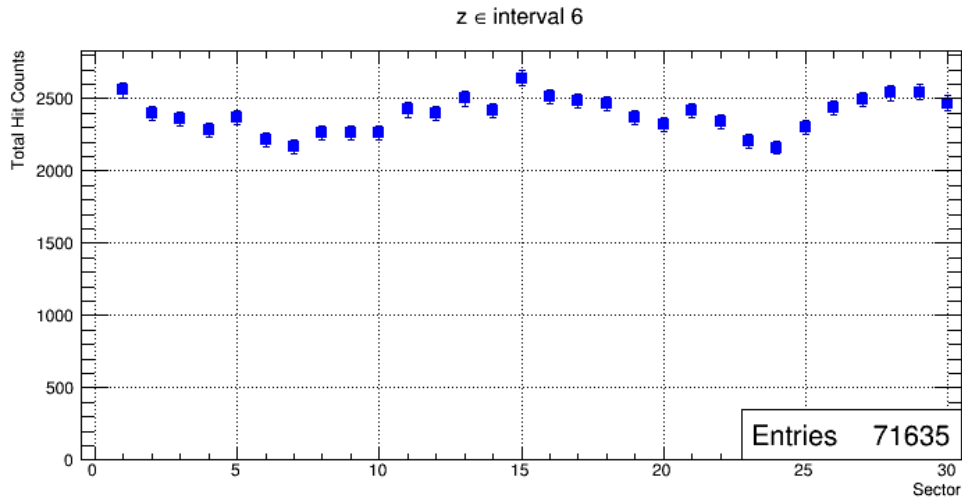
Run: 10492

SC_Eff for Interval 1



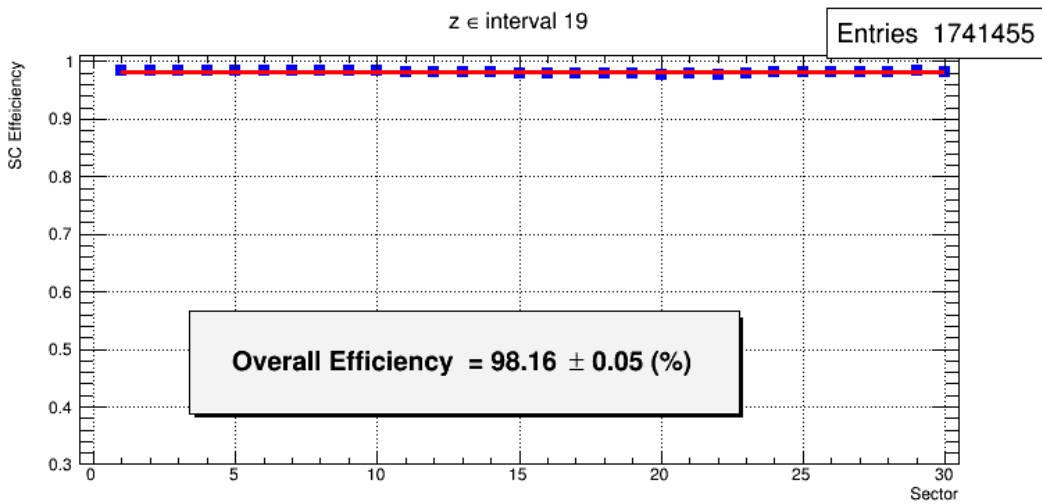
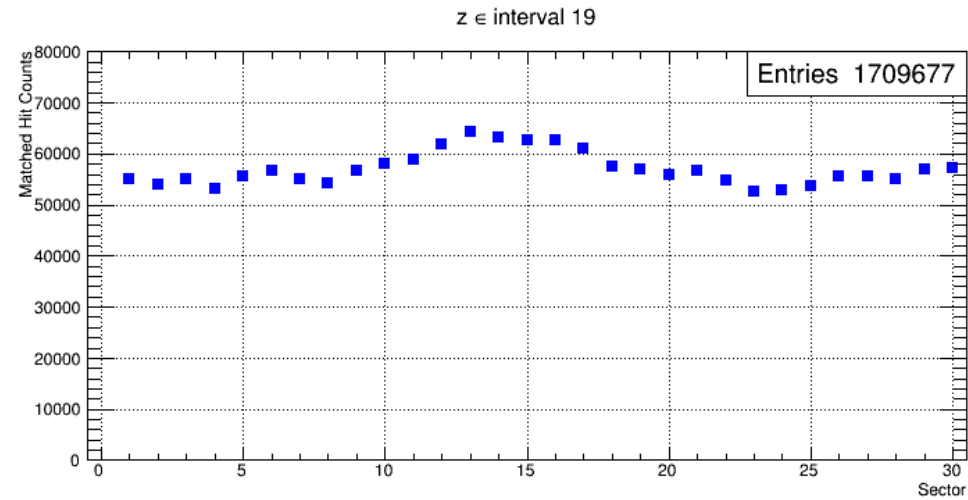
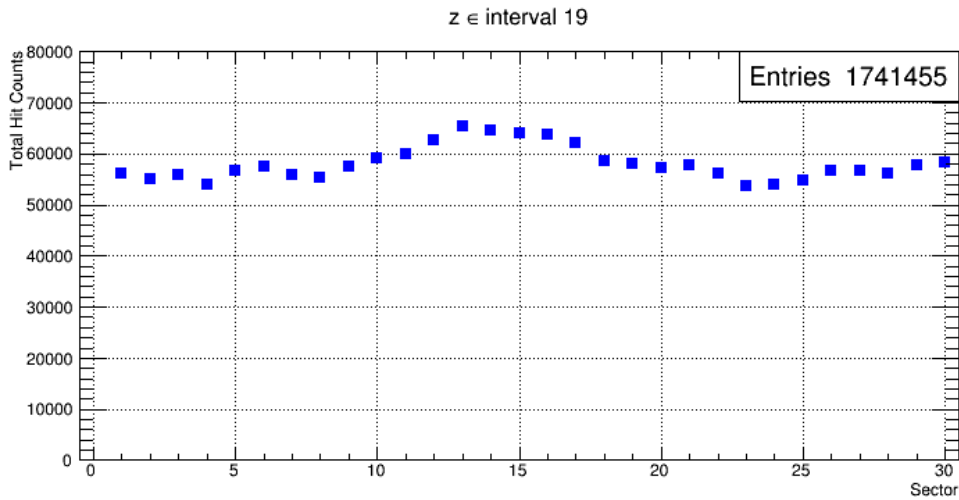
Run: 10492

SC_Eff for Interval 6



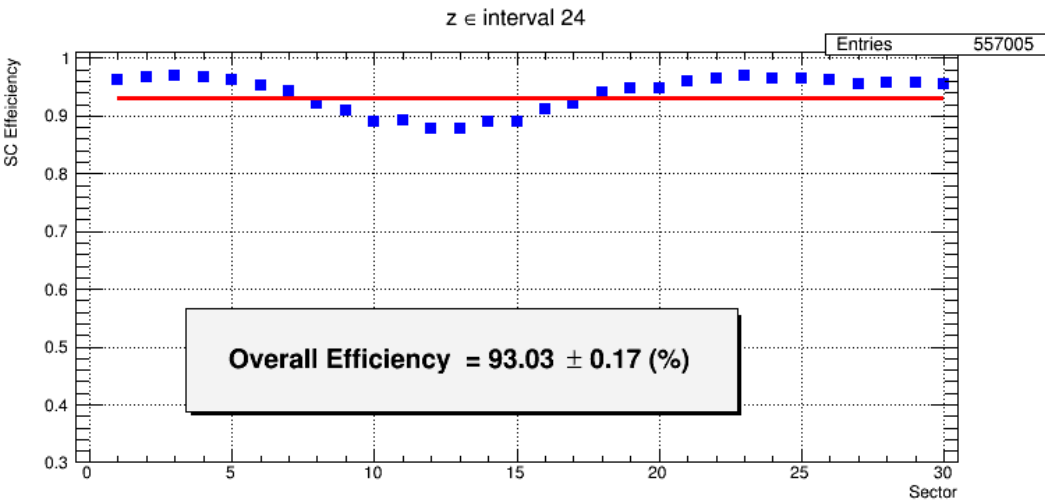
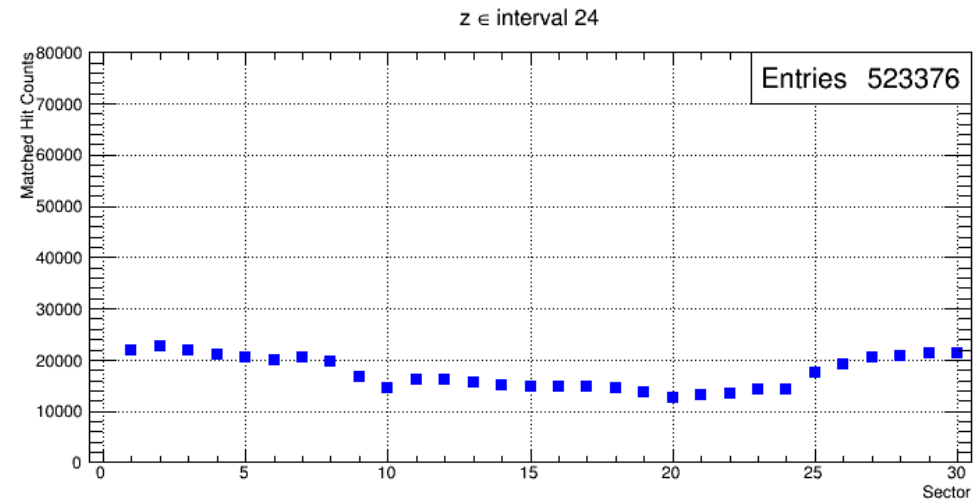
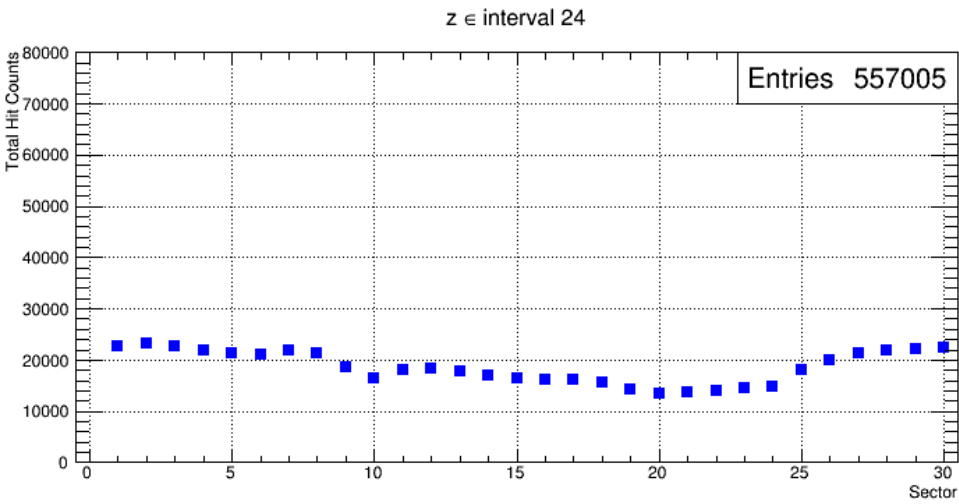
Run: 10492

SC_Eff for Interval 19



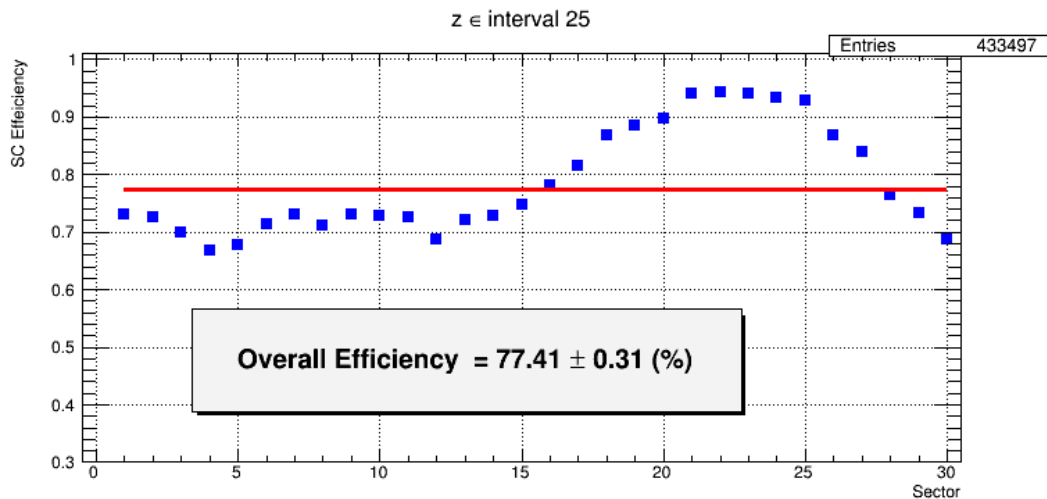
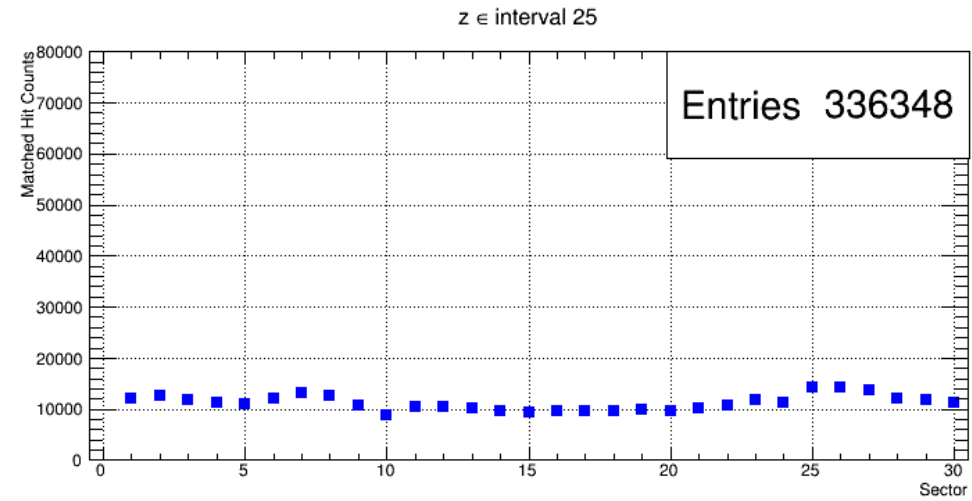
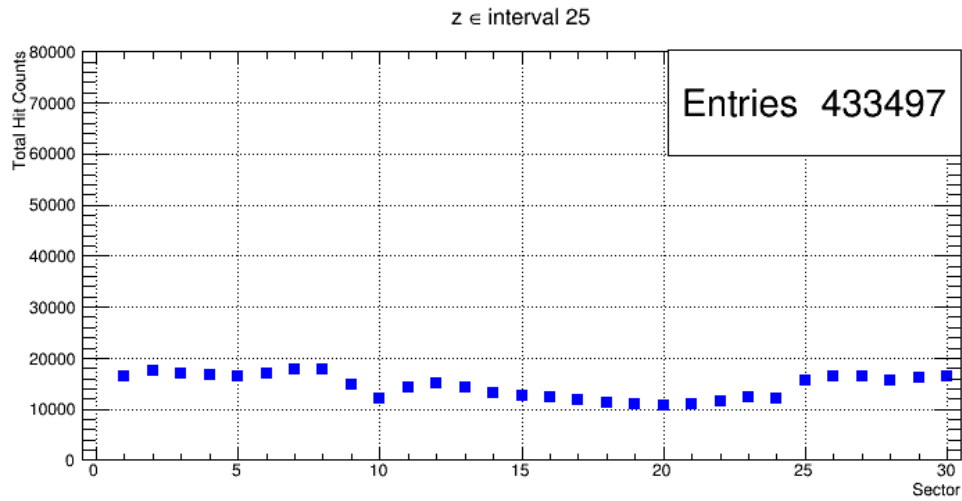
Run: 10492

SC_Eff for Interval 24



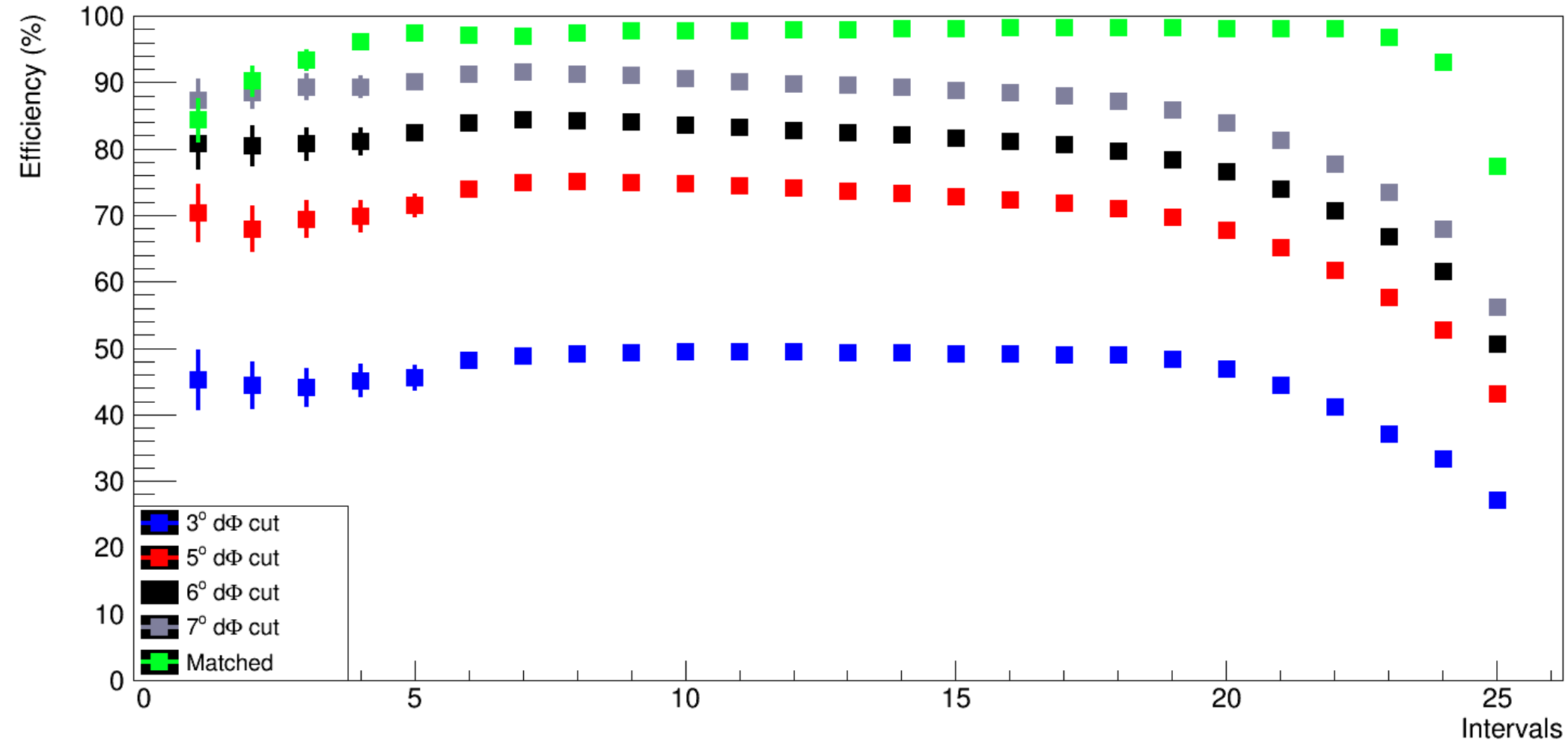
Run: 10492

SC_Eff for Interval 25



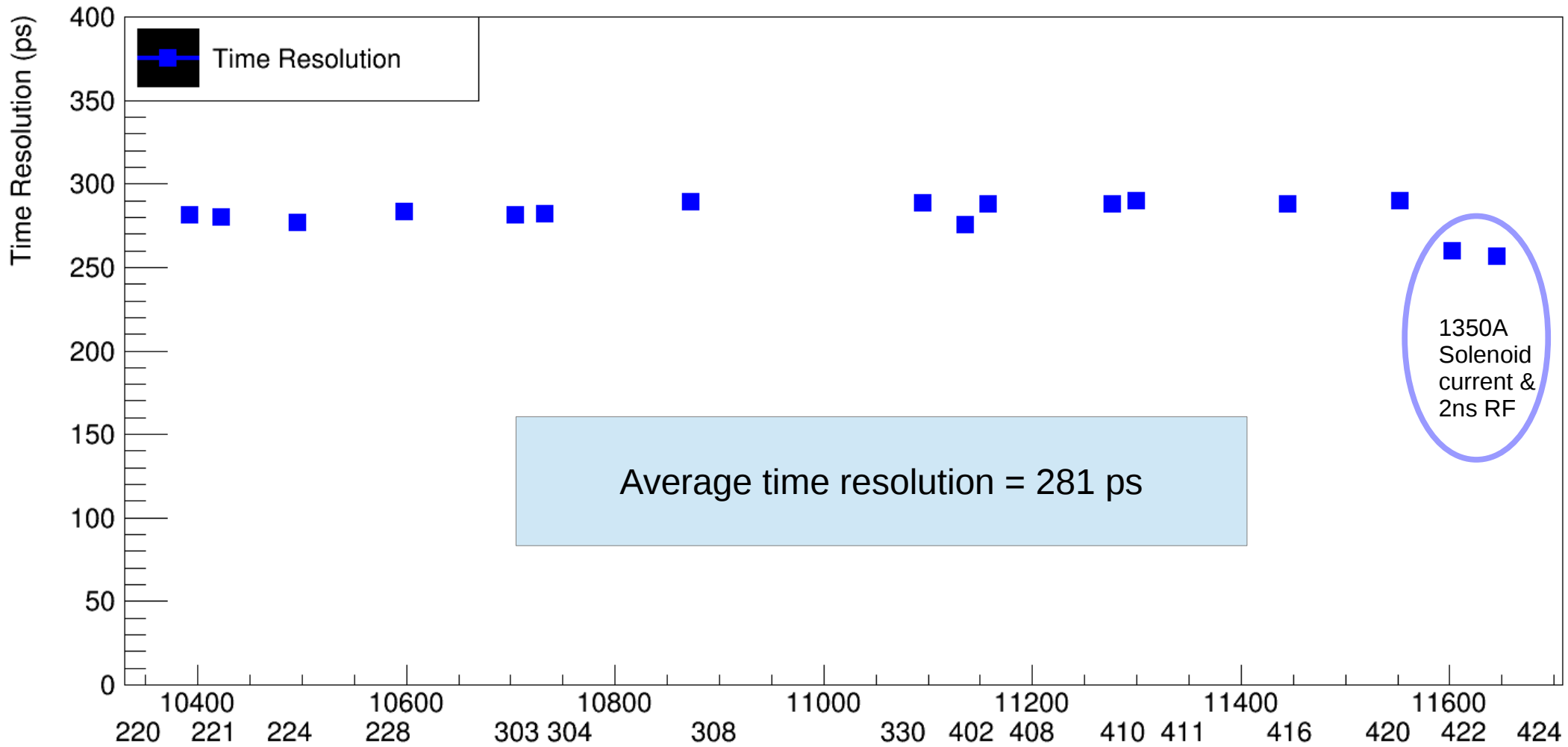
Run: 10492

SC Eff for the 25 intervals



$$\text{Eff}(d\Phi \text{ Cut}) = \frac{\text{ProjectedSCHitSector within TrackHitDeltaPhi cut}}{\text{ProjectedSCHitSector}}$$

Time Resolution as a Function of Time



Back up

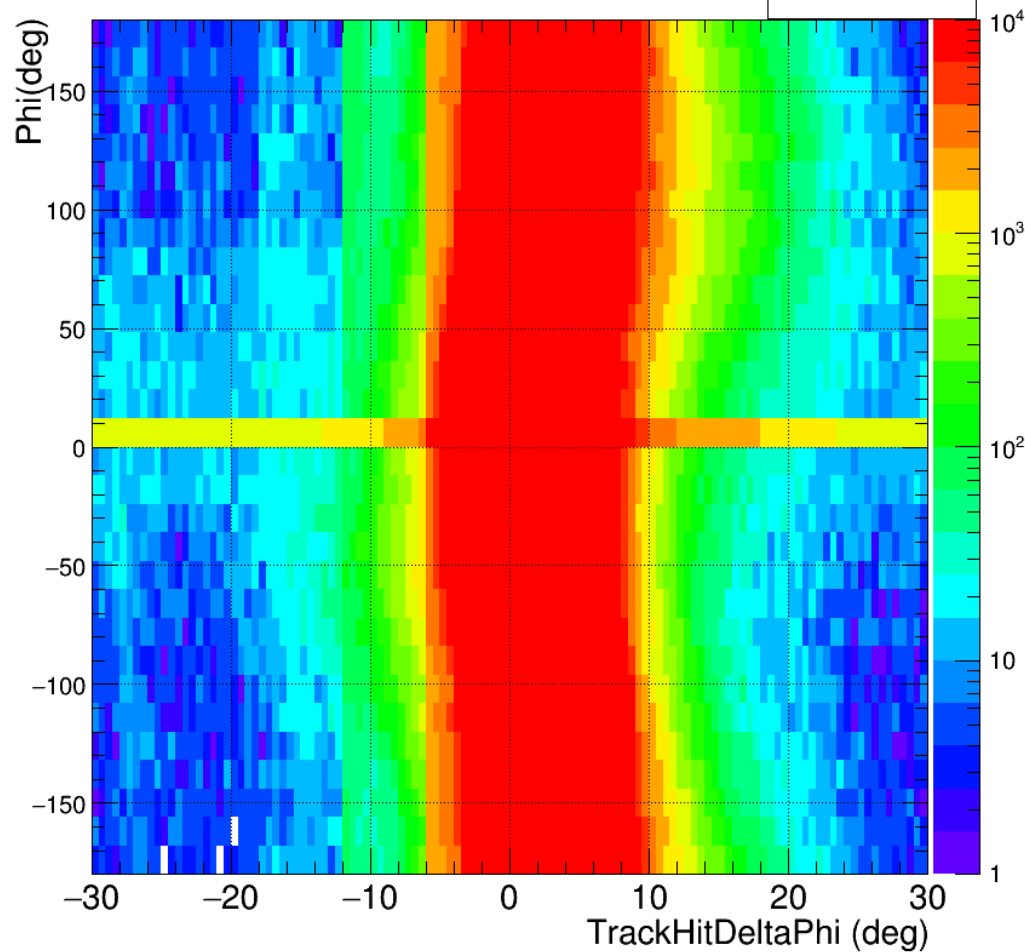
Run: 10492 All Tracks

Y : ProjectedScHitPhi

Y : Sector

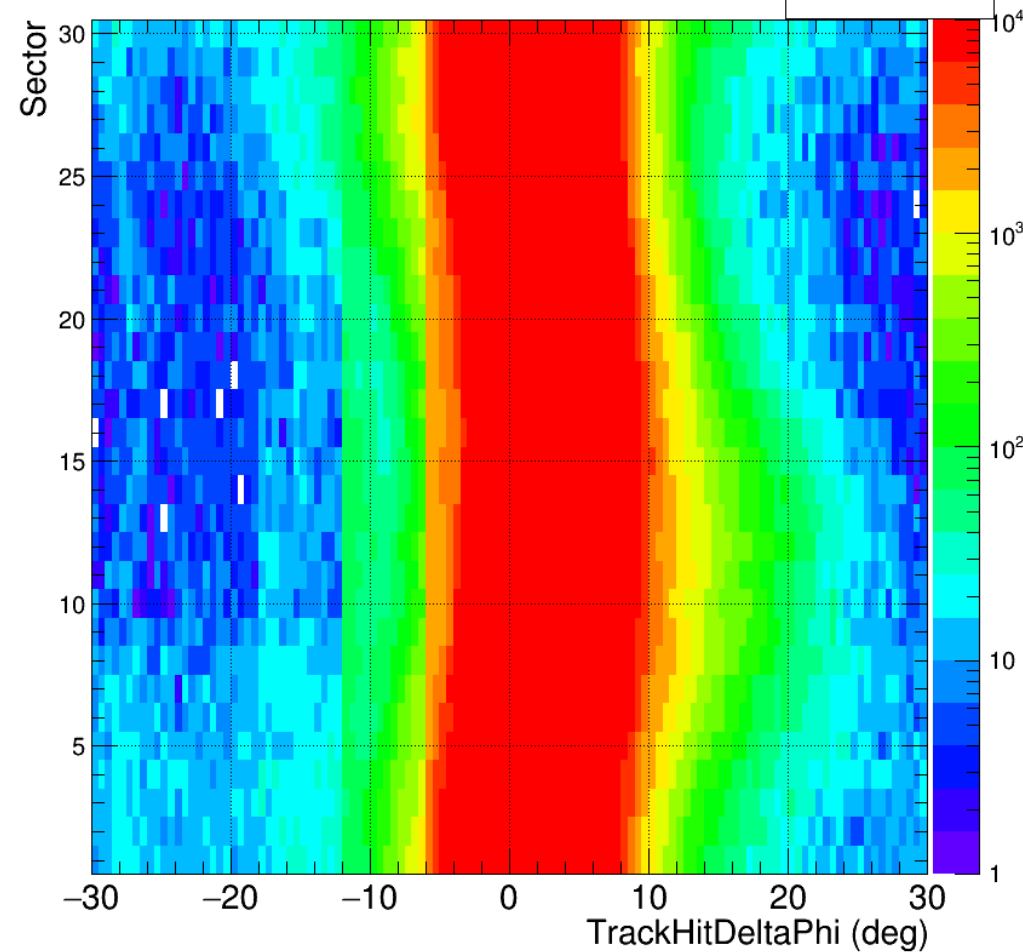
Phi vs TrackHitDeltaPhi

Entries 1.846381e+07



Sector vs TrackHitDeltaPhi

Entries 1.846381e+07



Run: 10492

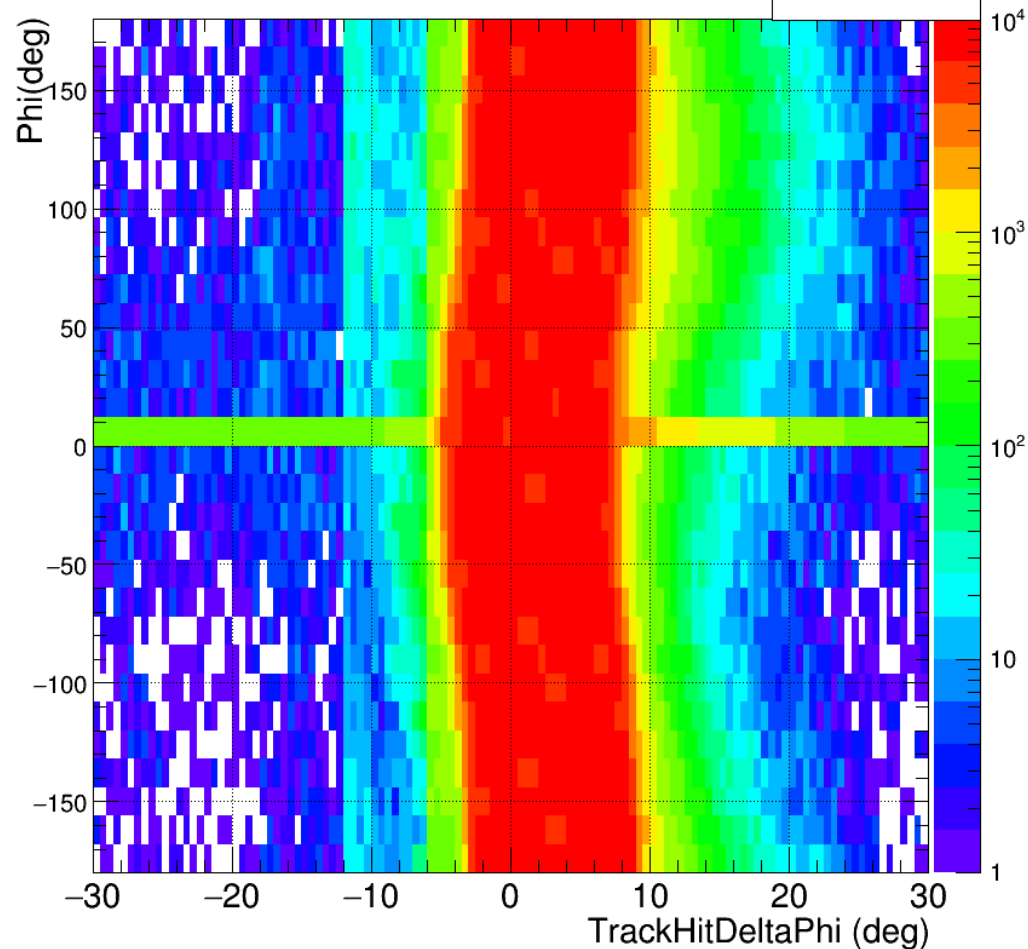
Protons

Y : ProjectedScHitPhi

Y : Sector

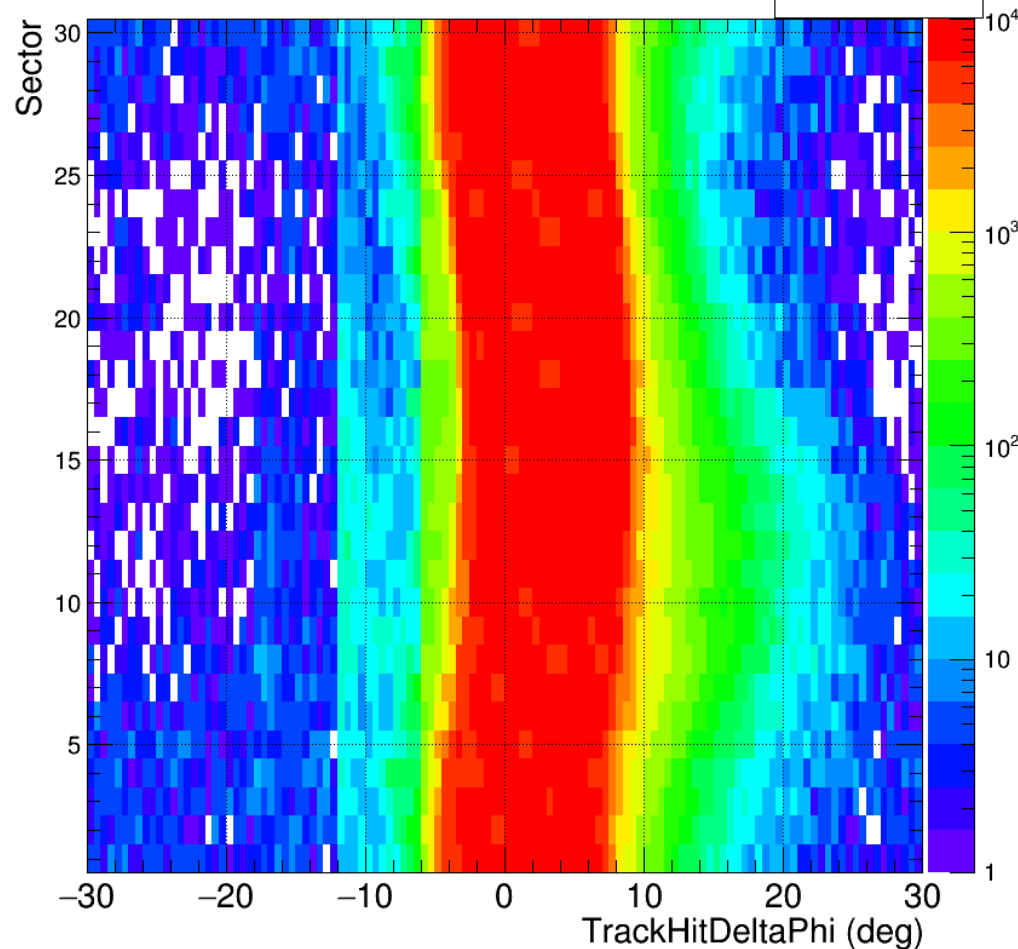
Phi vs TrackHitDeltaPhi

Entries 5948794



Sector vs TrackHitDeltaPhi

Entries 5948794



Run: 10492 PiPlus

Y : ProjectedScHitPhi

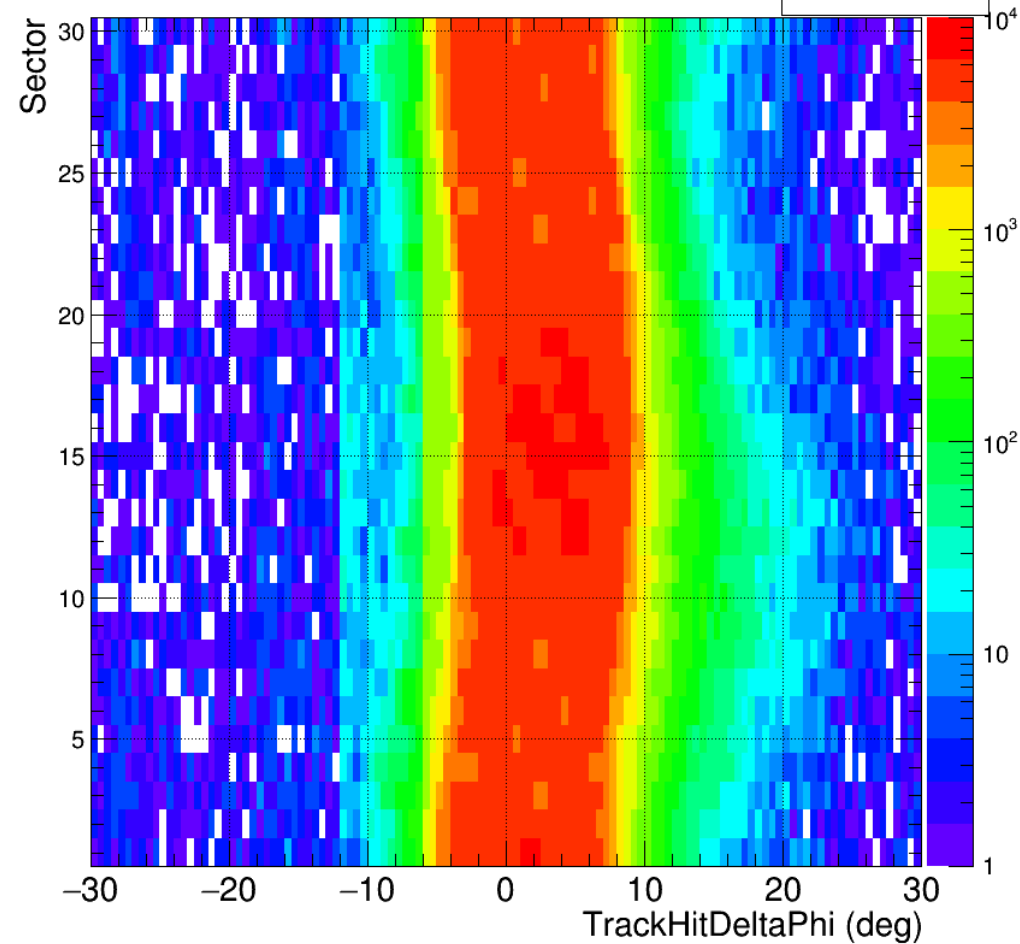
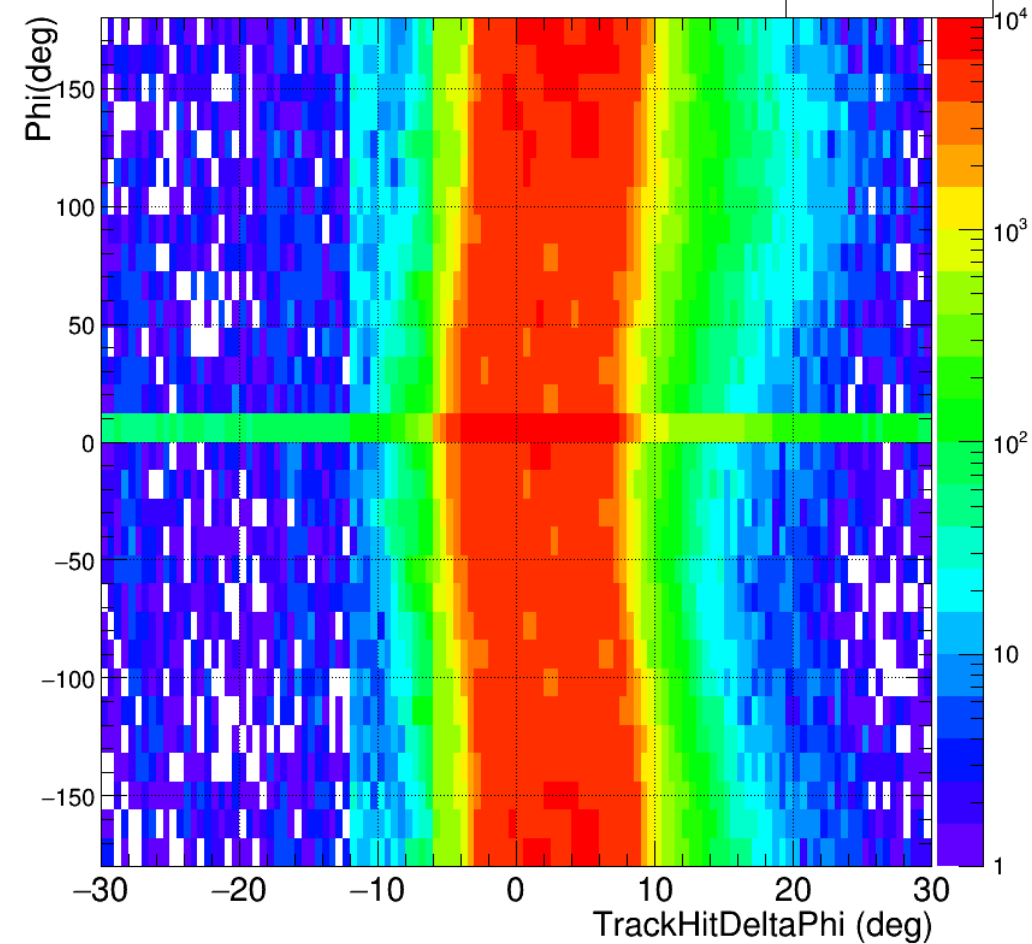
Y : Sector

Phi vs TrackHitDeltaPhi

Sector vs TrackHitDeltaPhi

Entries 4276319

Entries 4276319

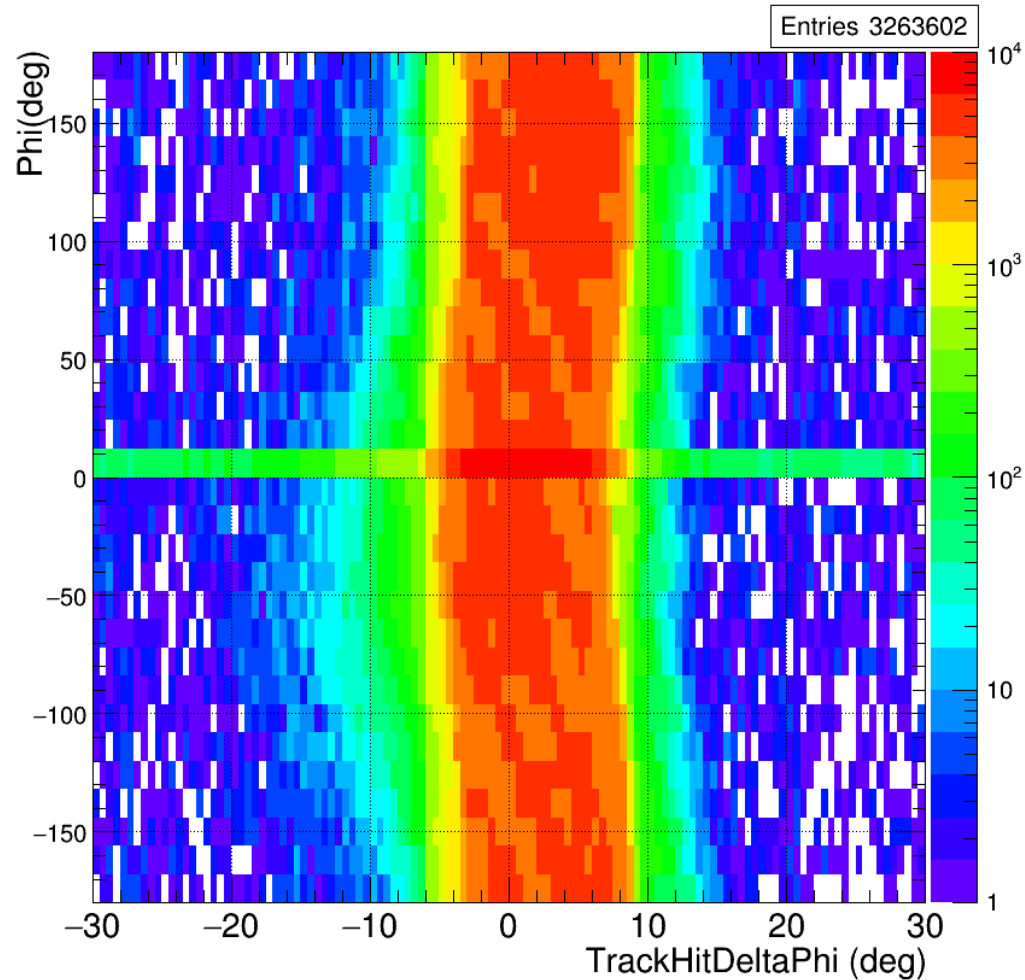


Run: 10492 PiMinus

Y : ProjectedScHitPhi

Y : Sector

Phi vs TrackHitDeltaPhi



Sector vs TrackHitDeltaPhi

