

V0fitter : secondary vertexing code finds the Vees
event by event



V0Producer : writes the Vees to the events
creates two branches in the ntuples : Kshort, Lambda
creates a collection of Vees



MyKshorts : class of Kshort collection
way the analysis code gets access to the Vees



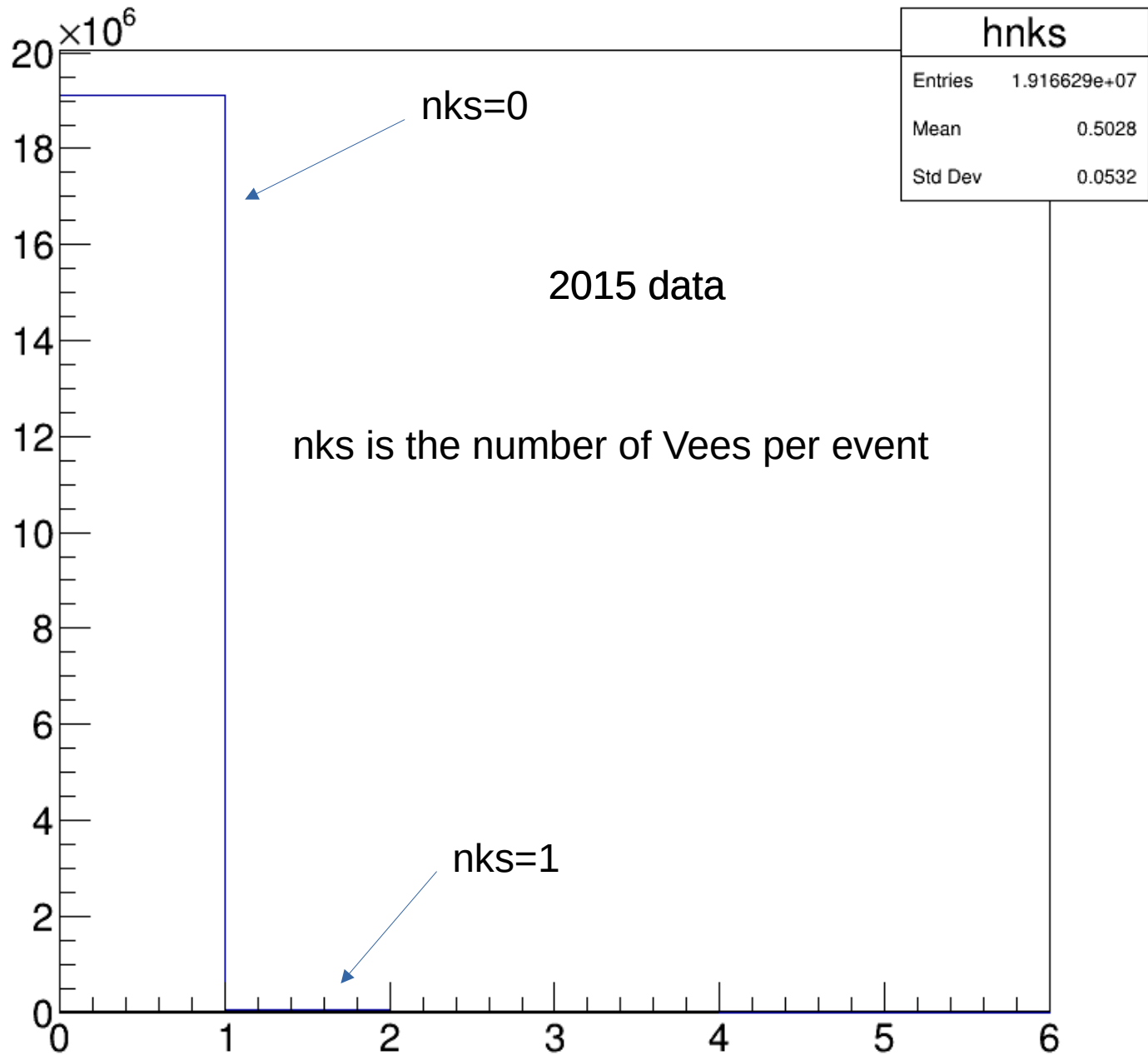
nks : counts the number of Vees per event (number of K0s)
tags the secondary vertices

nvtx : counts the number of primary vertices

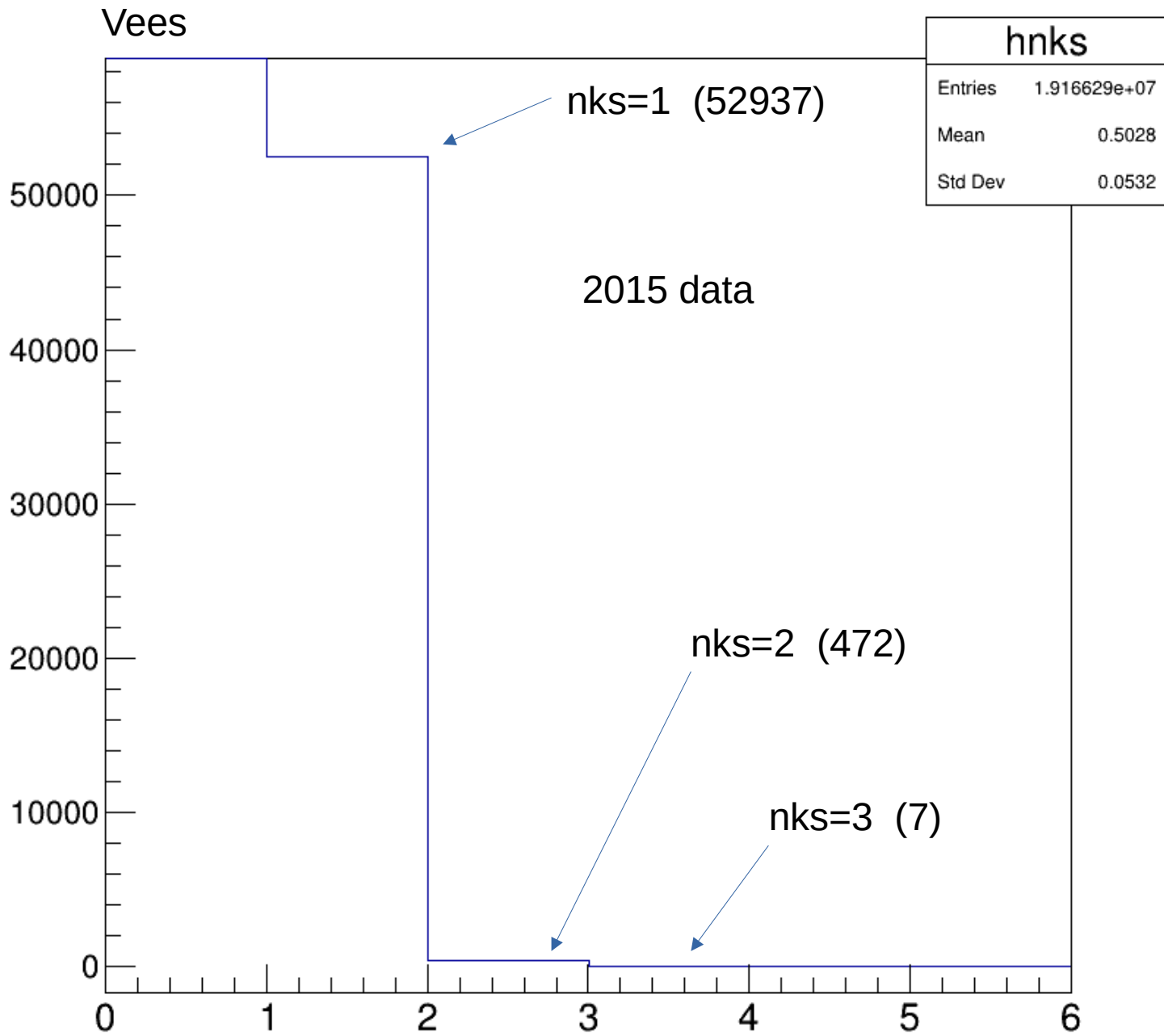
Study on Brian Drell's code: I am preparing a document to explain the
the secondary vertexing...coming soon!

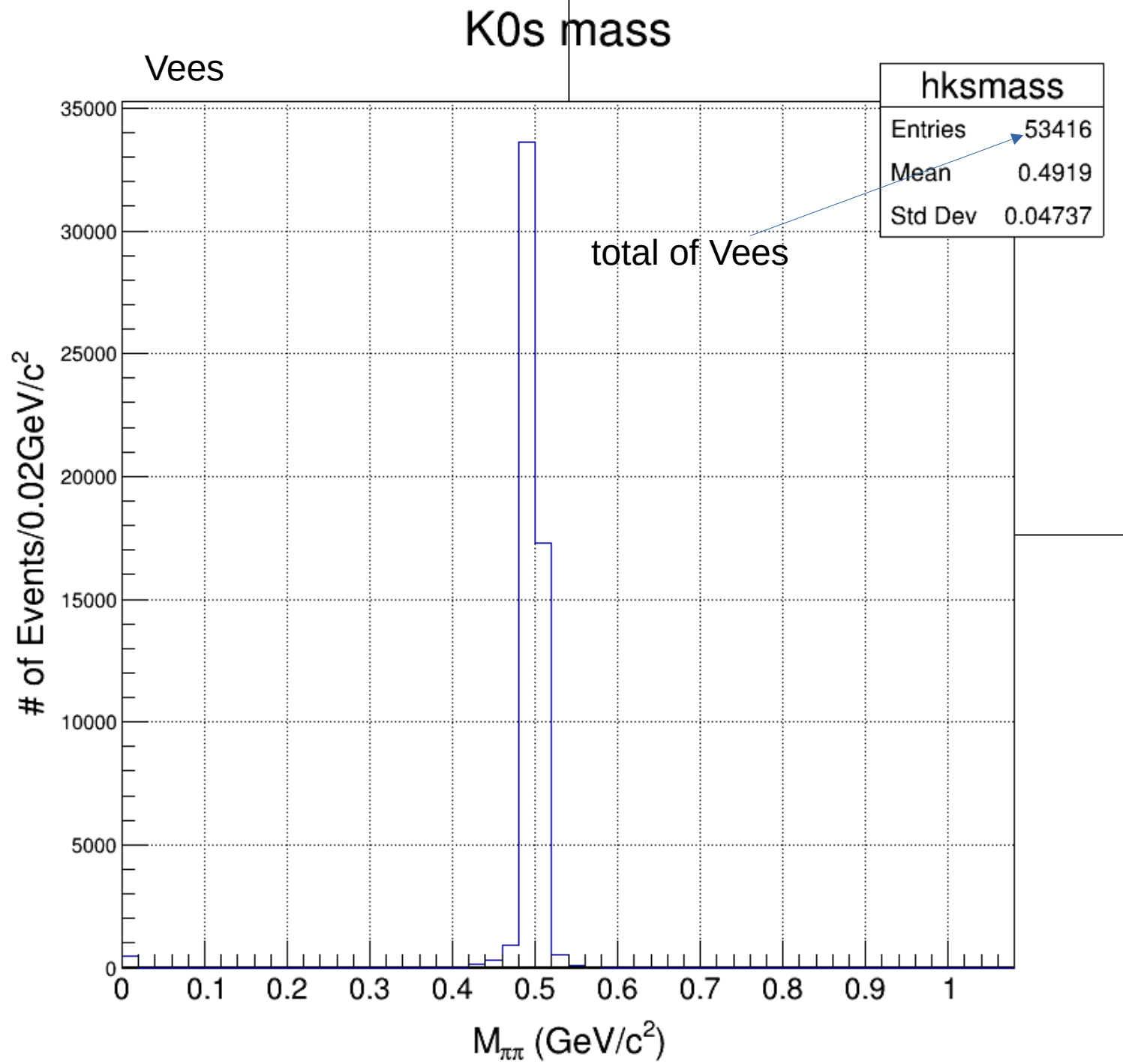
MyKshort class

N Kshorts

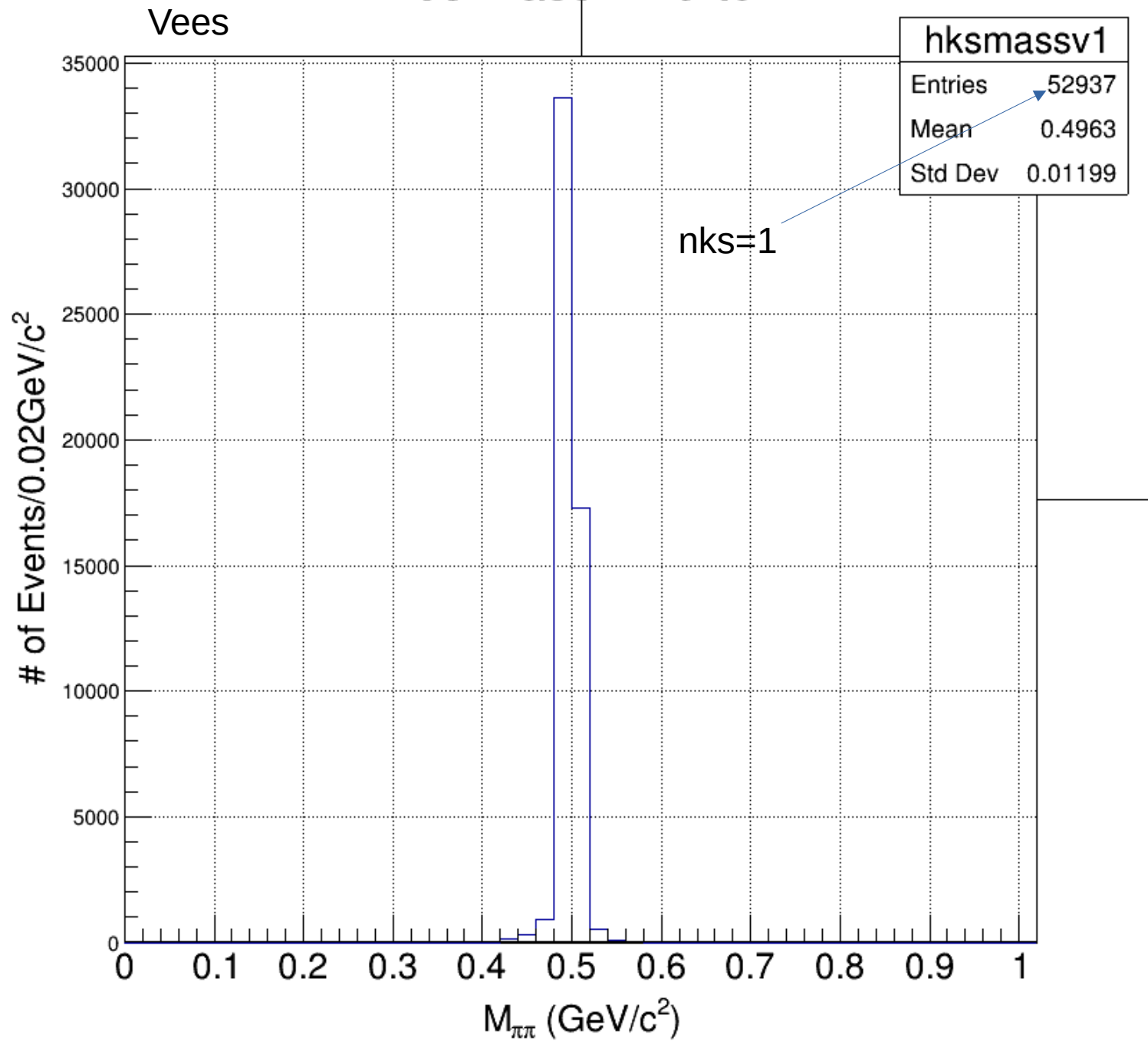


N Kshorts

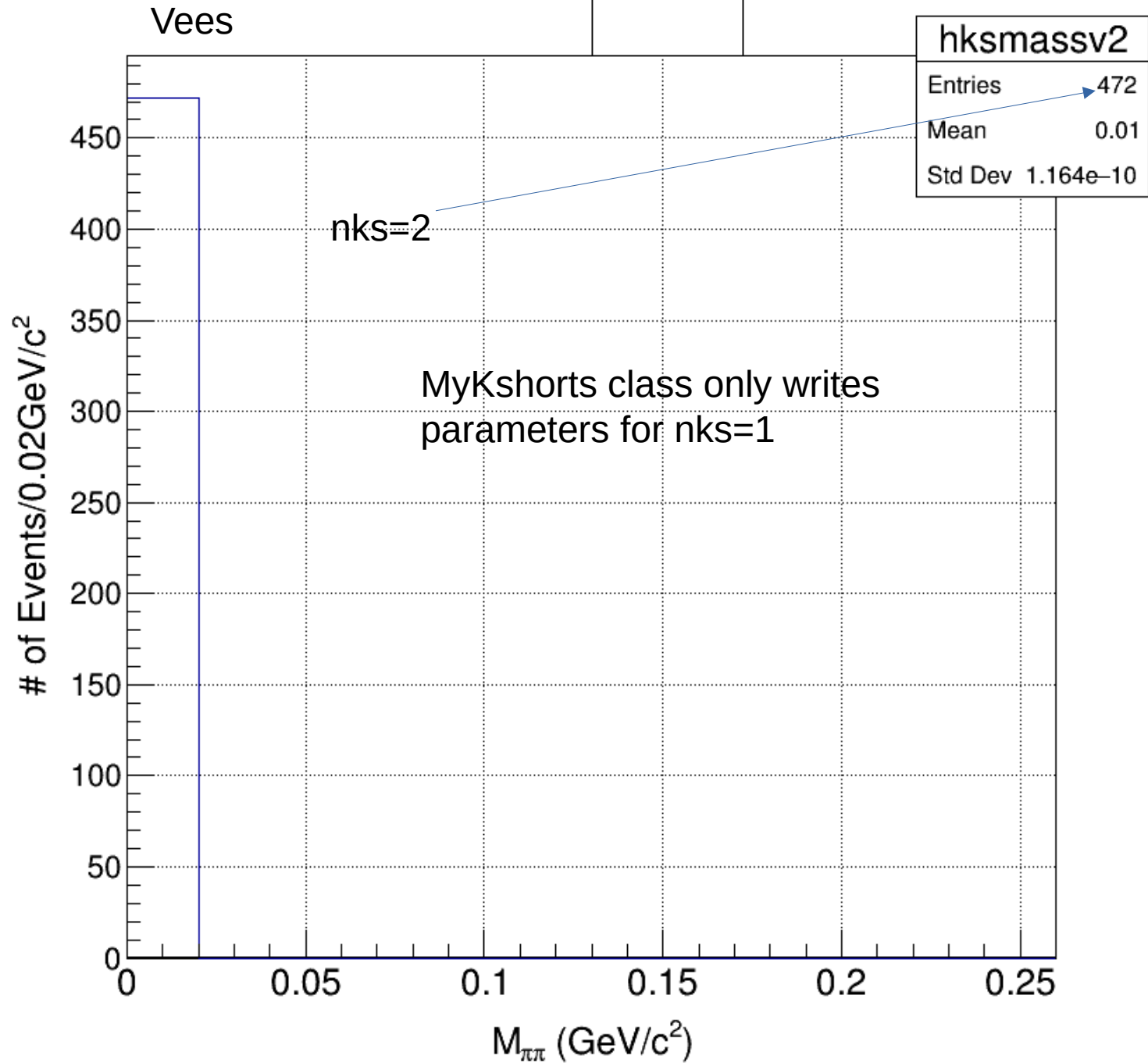




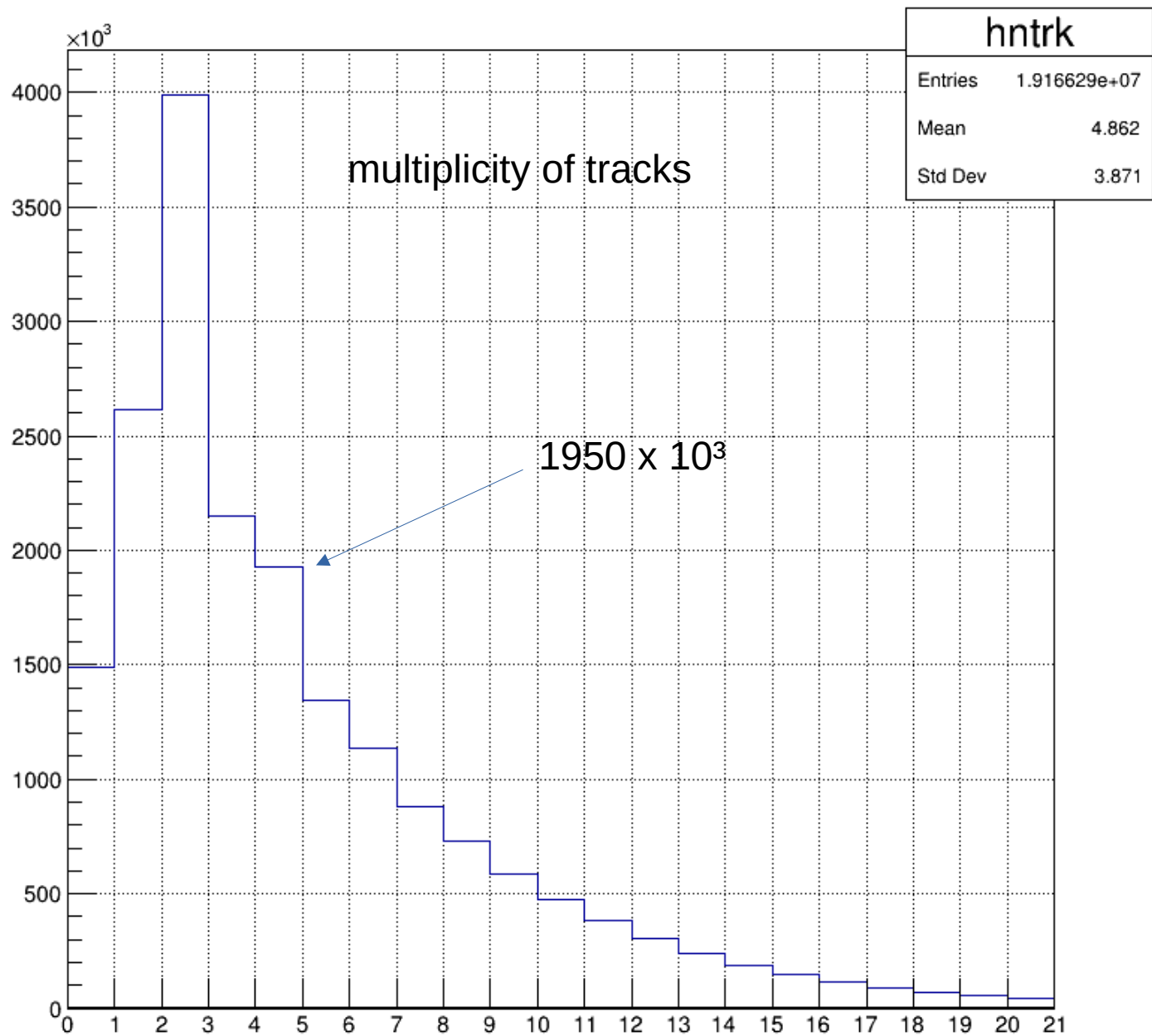
K0s mass 1 vertex



K0sK0s mass 2 vertices

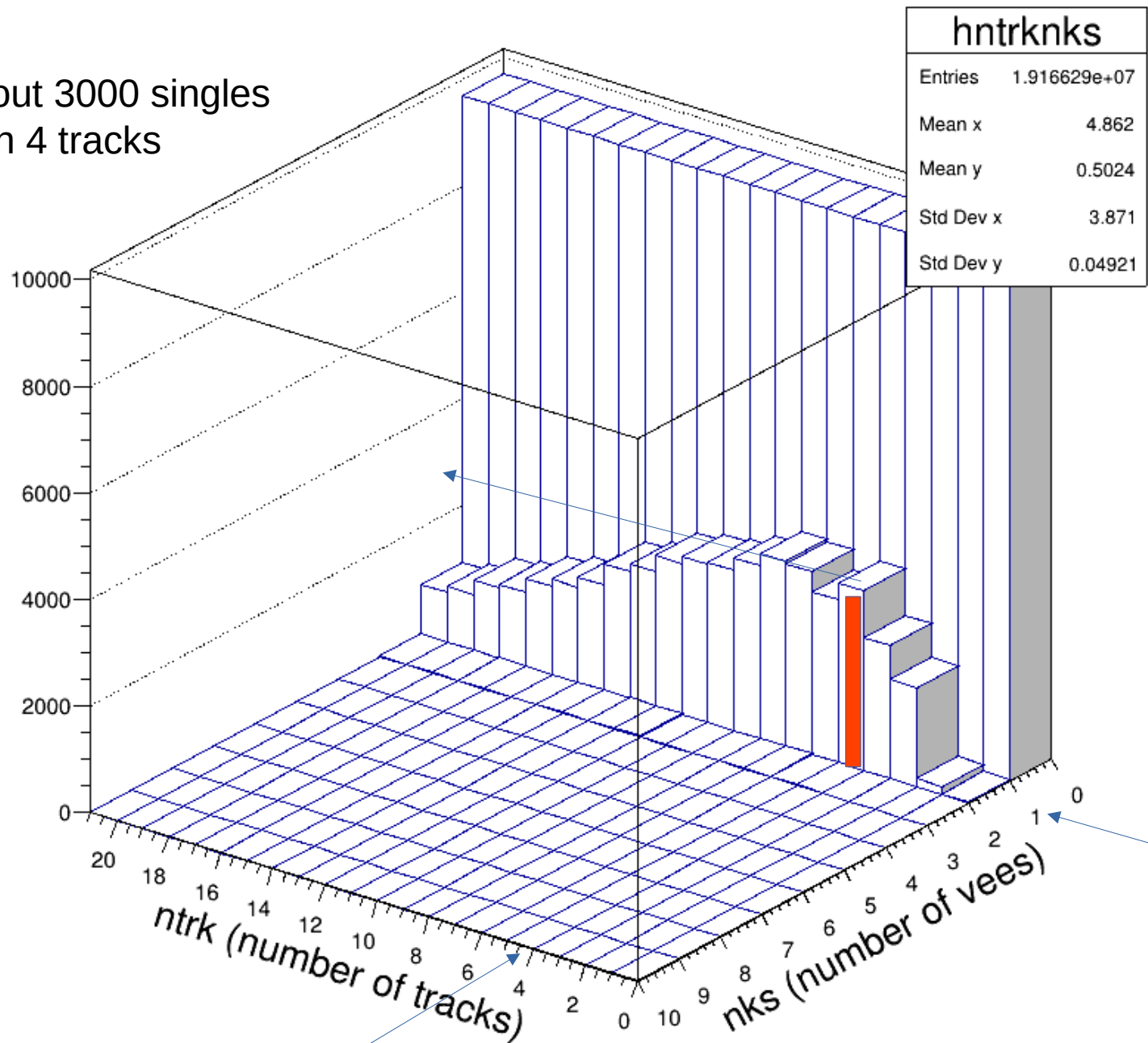


Ntrk for nPixelHits>0



of Vees vs # of Tracks

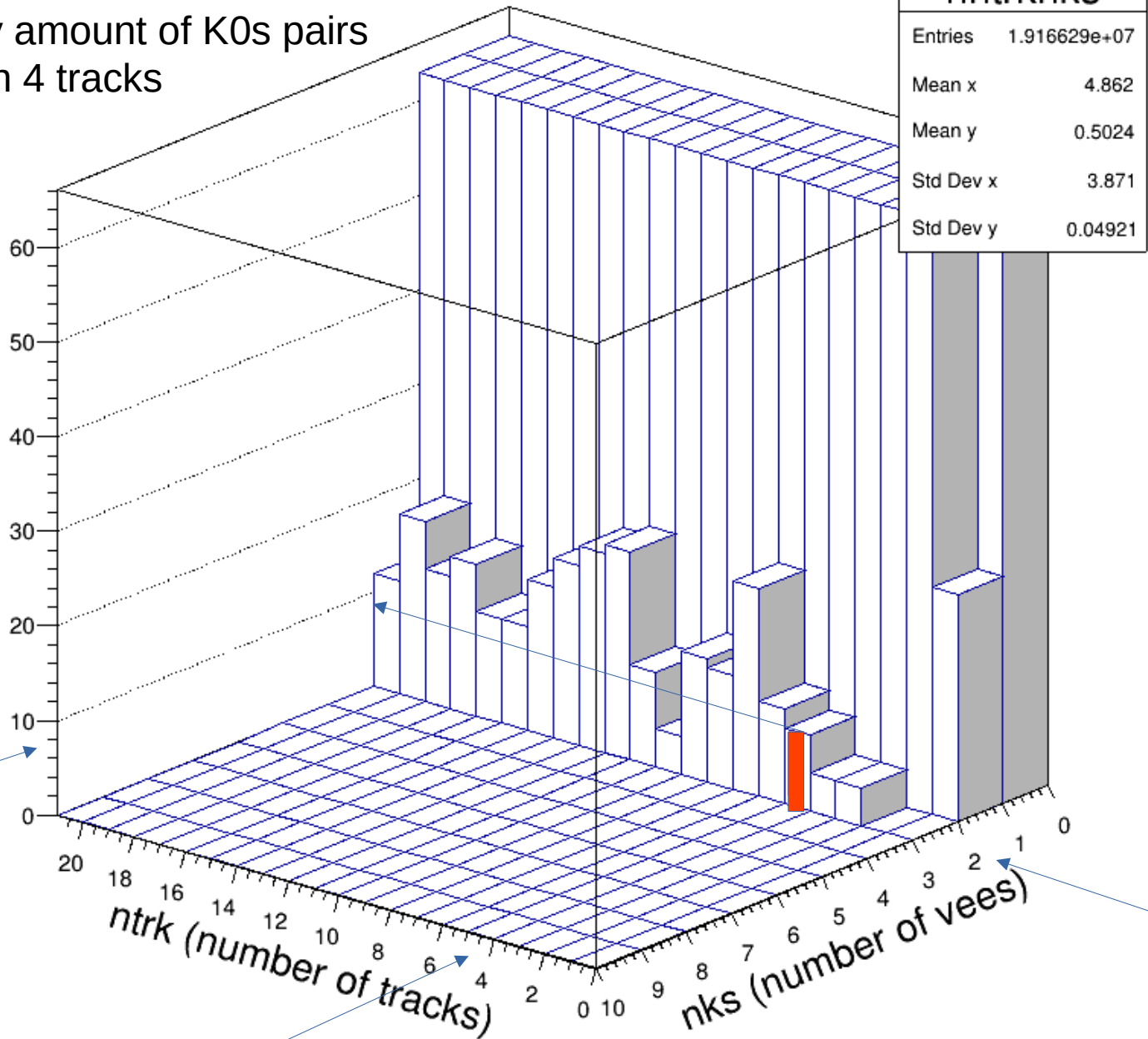
about 3000 singles
with 4 tracks



of Vees vs # of Tracks

tiny amount of K0s pairs
with 4 tracks

about
8 events



Fireworks :

cmsShow event display is not working on my Fedora 30

I have to reinstall all MESA libraries

coming soon !

reprocessed the entire 2015 data: job#368

Notation :

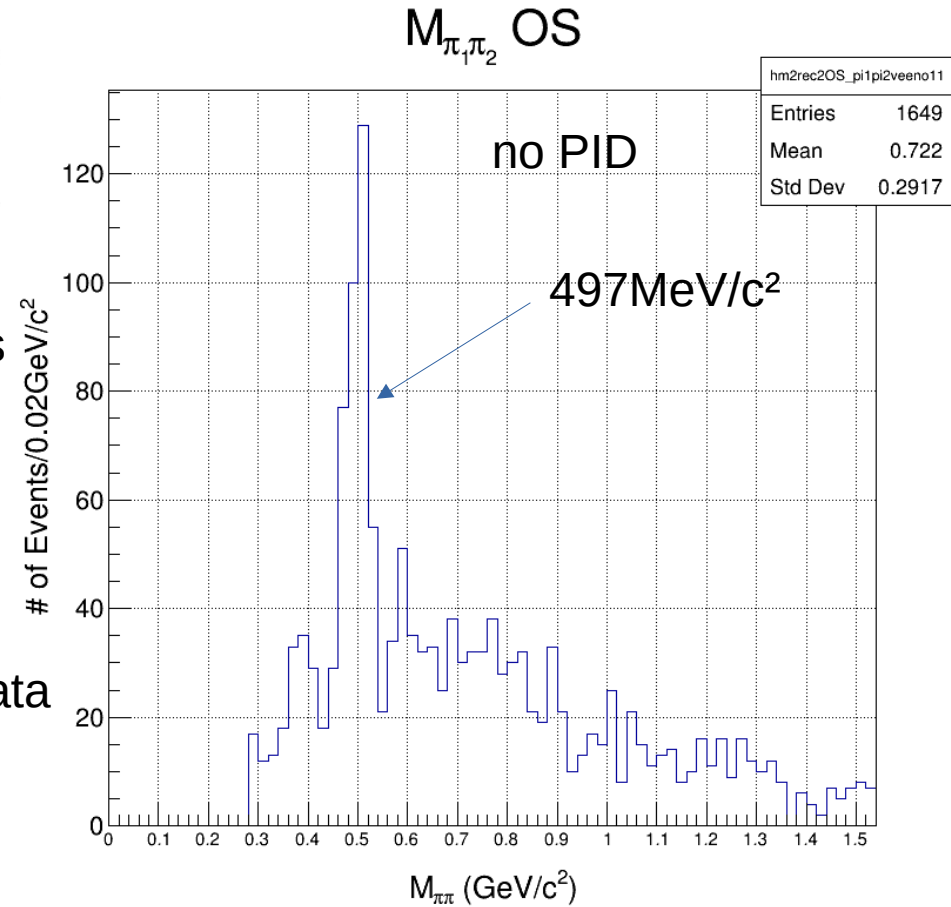
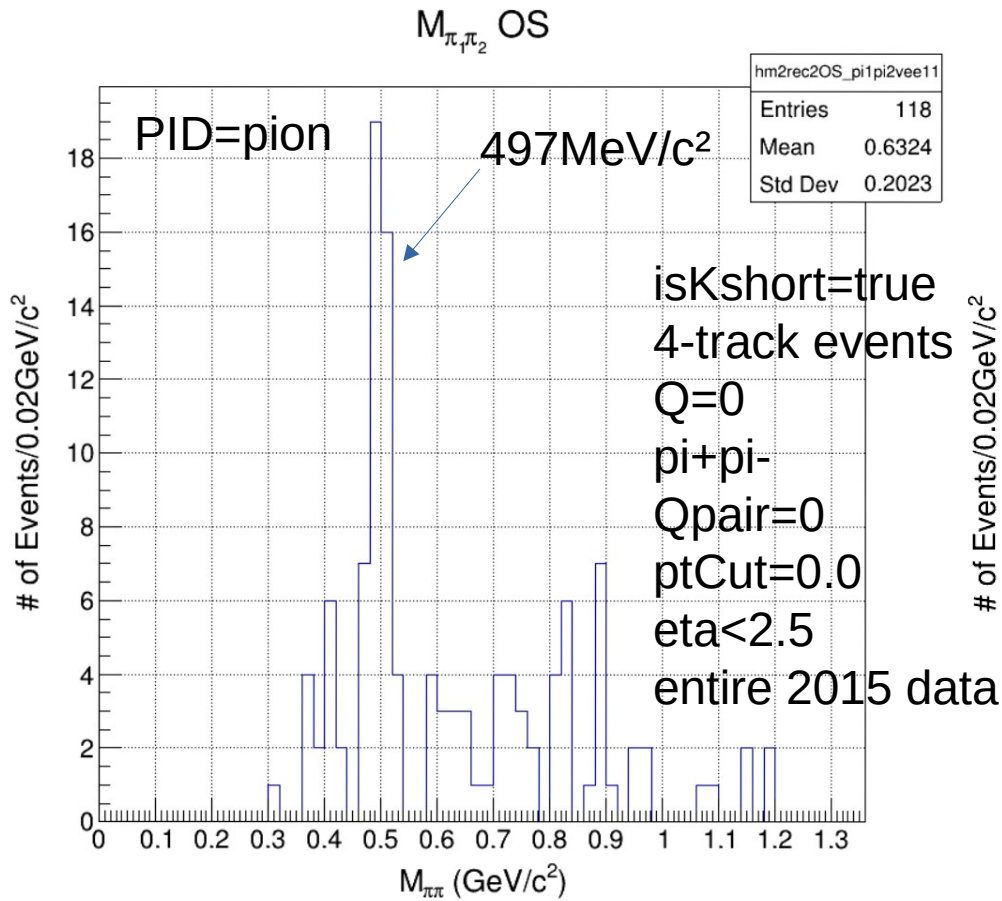
11 : one primary vertex & one Vee

$n_{vtx}=1$ and $n_{ks}=1$

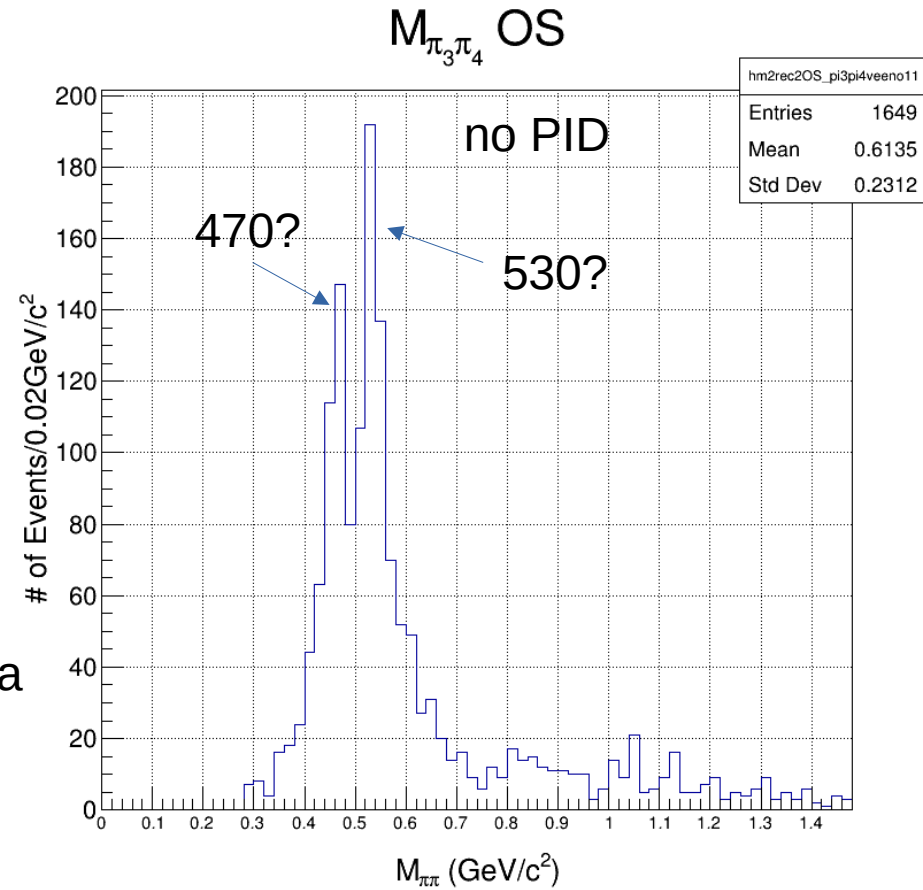
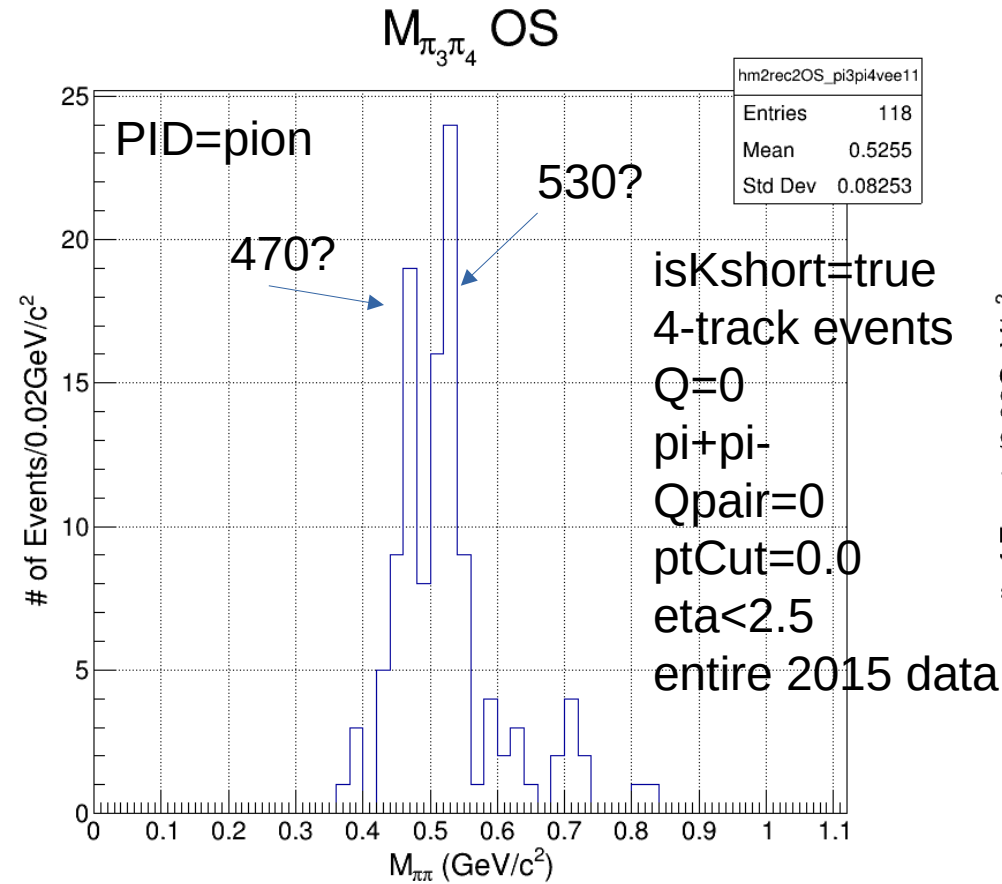
02 : no primary vertex & two Vees

$n_{vtx}=0$ and $n_{ks}=2$

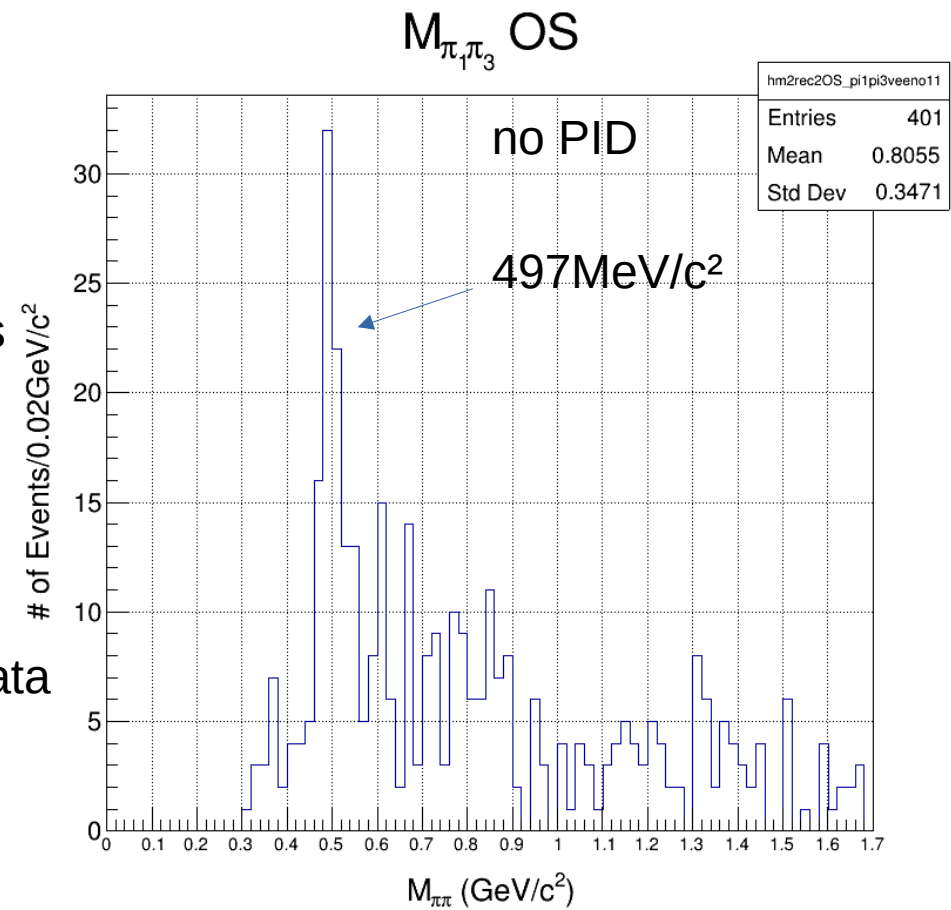
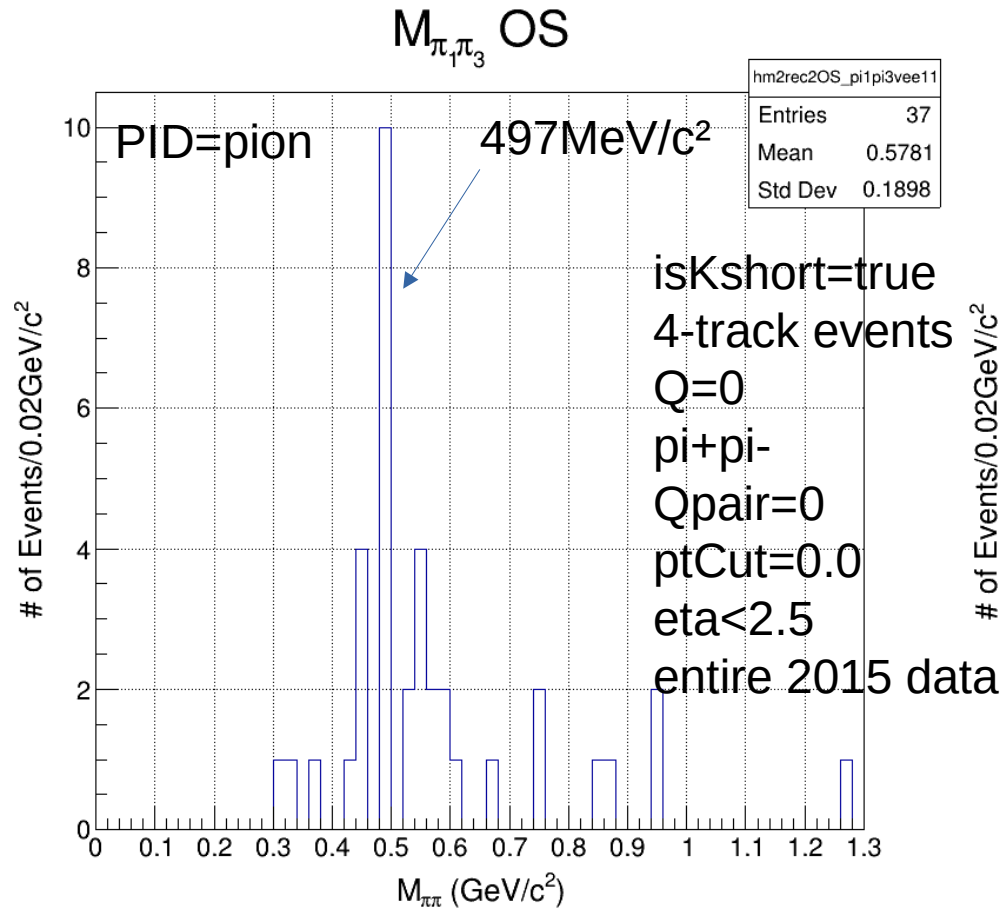
one primary vertex & one Vee



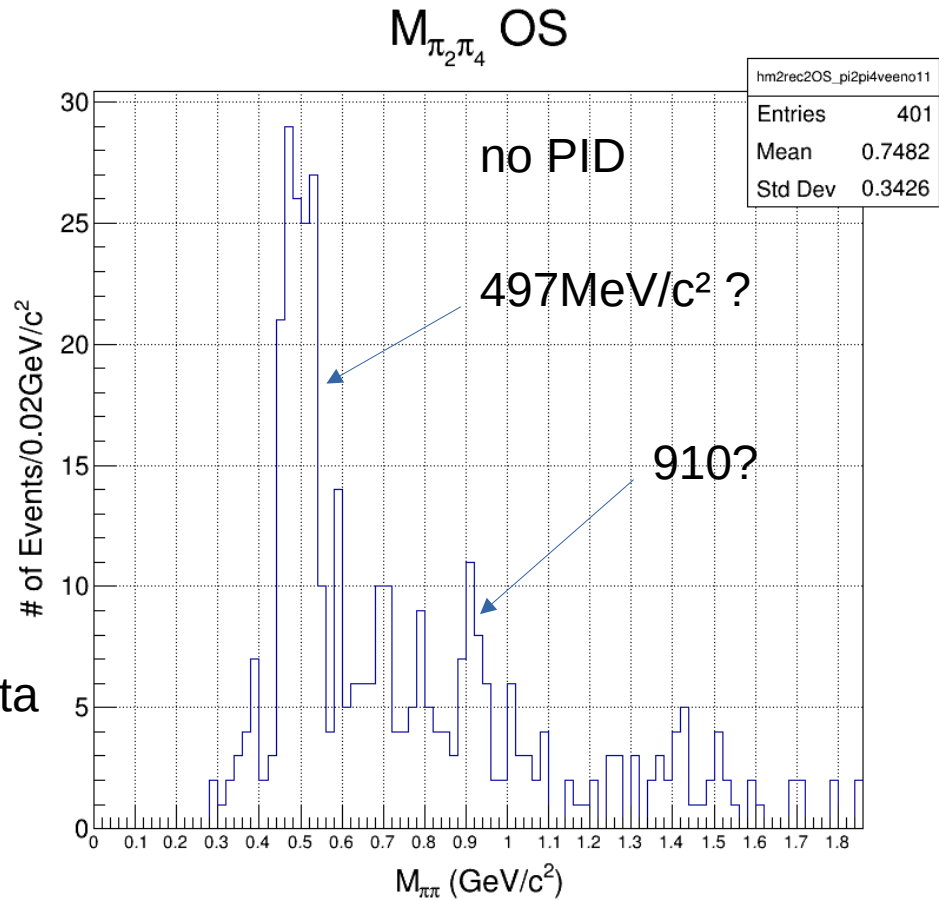
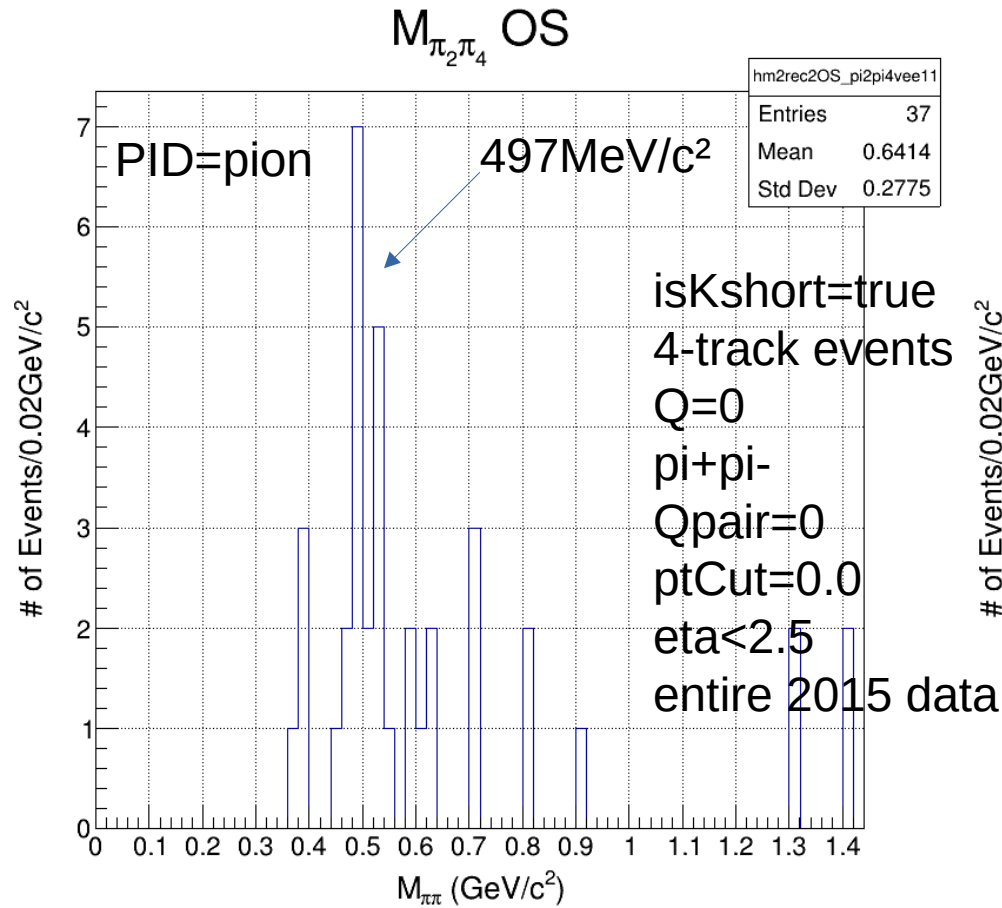
one primary vertex & one Vee



one primary vertex & one Vee

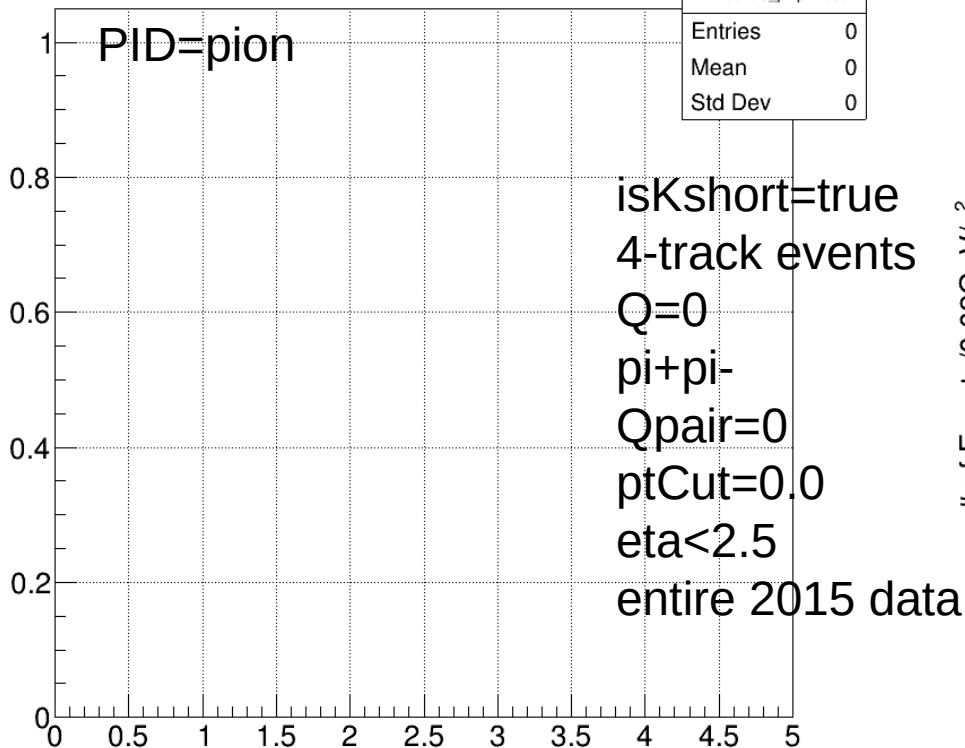


one primary vertex & one Vee



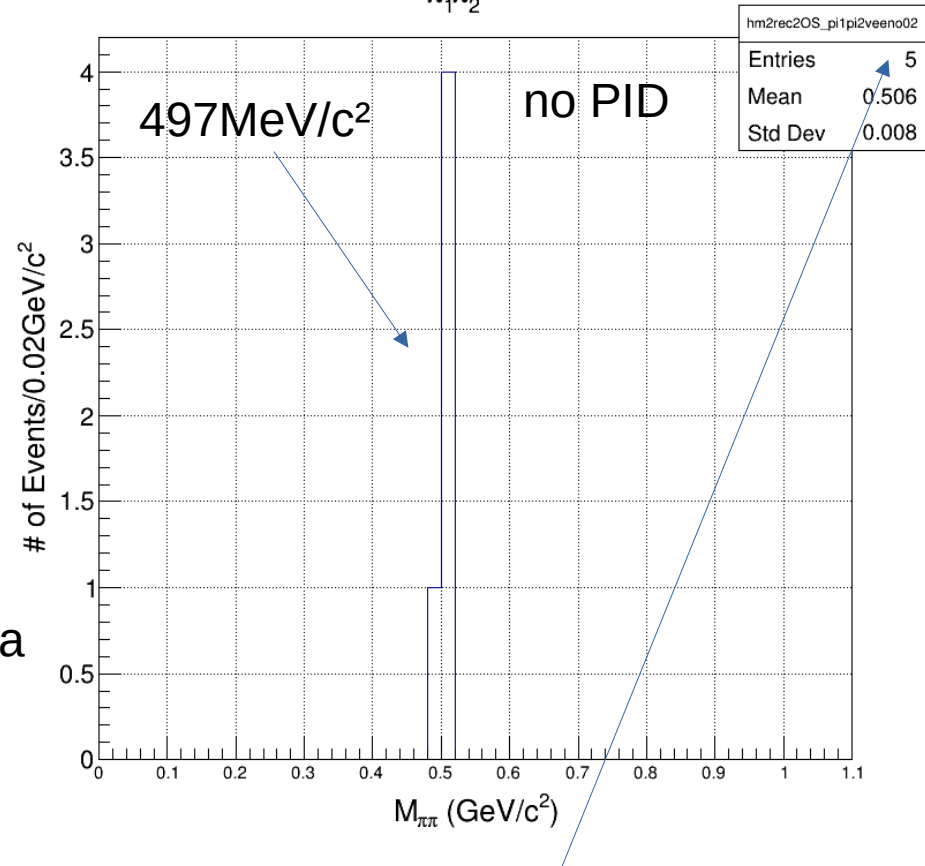
no primary vertex & two Vees

$M_{\pi_1\pi_2}$ OS



no entries

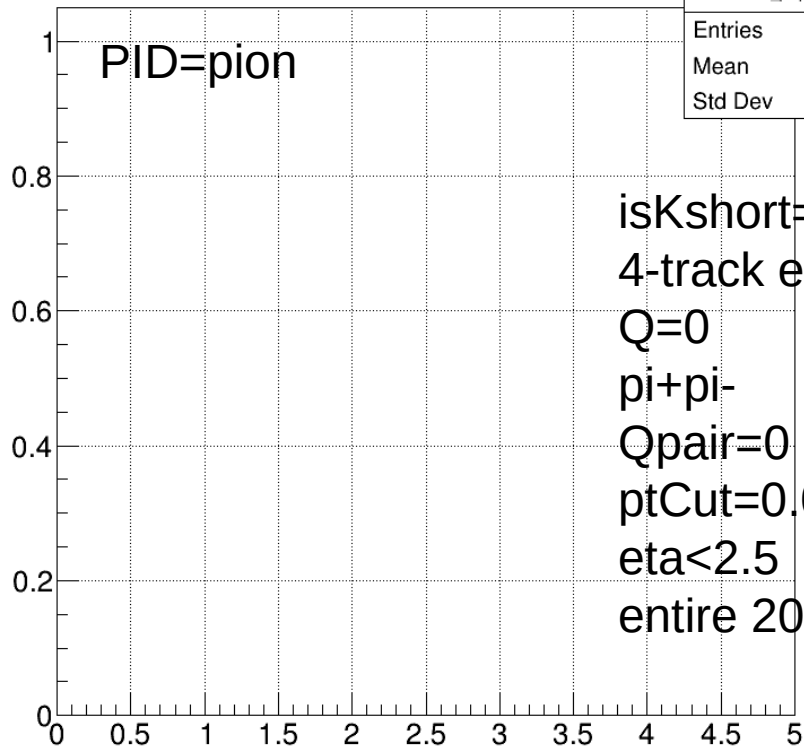
$M_{\pi_1\pi_2}$ OS



we only have 8 (5+3) events
of K0sK0s with 4-tracks!
(see next slides)

no primary vertex & two Vees

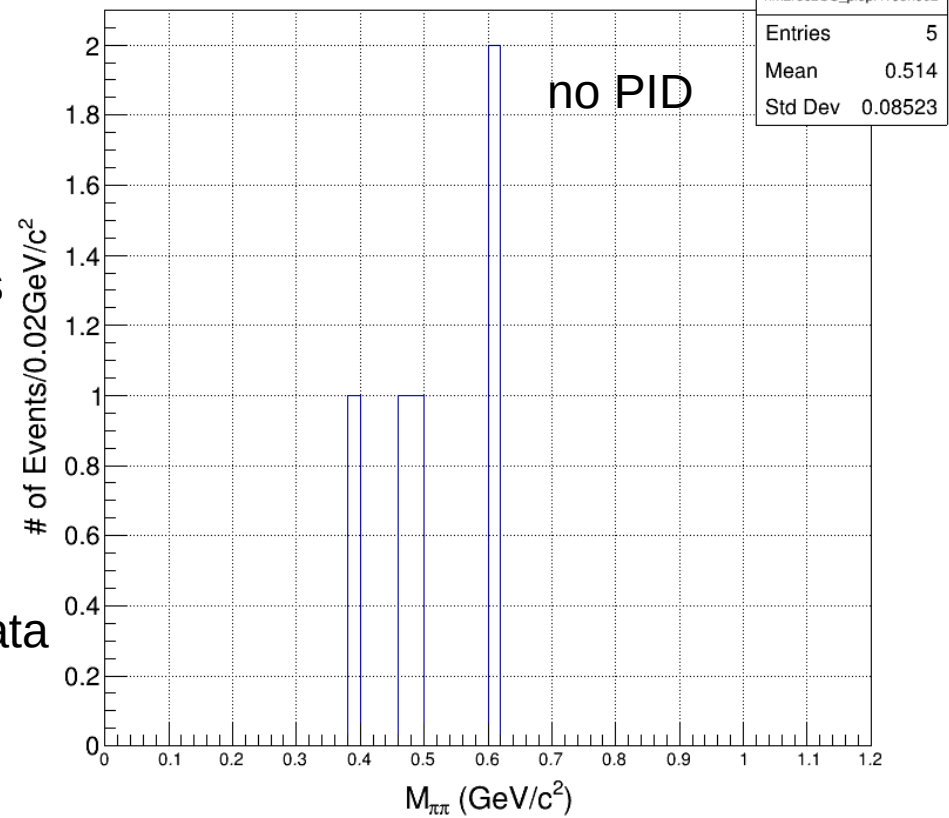
$M_{\pi_3\pi_4}$ OS



no entries

isKshort=true
4-track events
Q=0
pi+pi-
Qpair=0
ptCut=0.0
eta<2.5
entire 2015 data

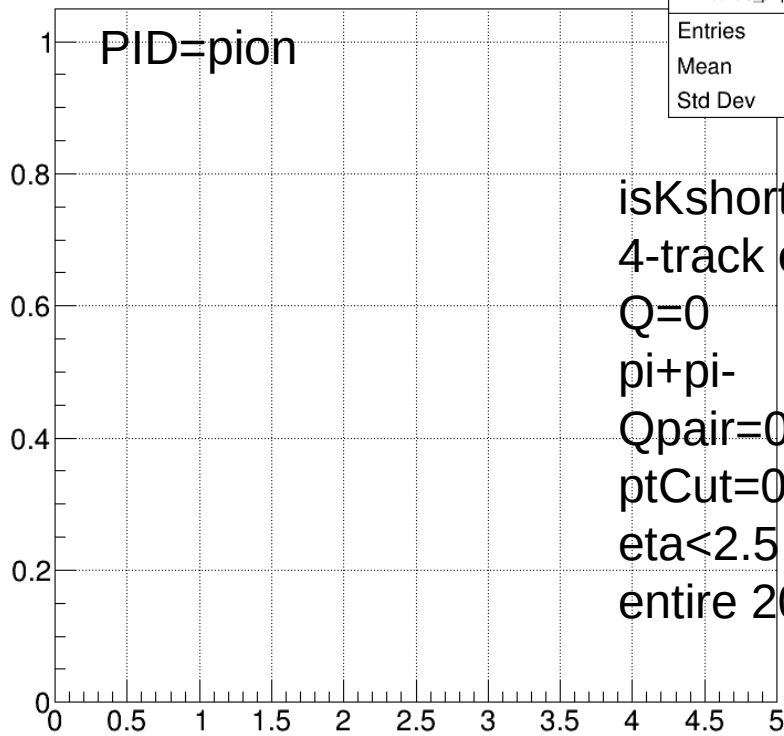
$M_{\pi_3\pi_4}$ OS



no primary vertex & two Vees

$M_{\pi_1\pi_3}$ OS

PID=pion

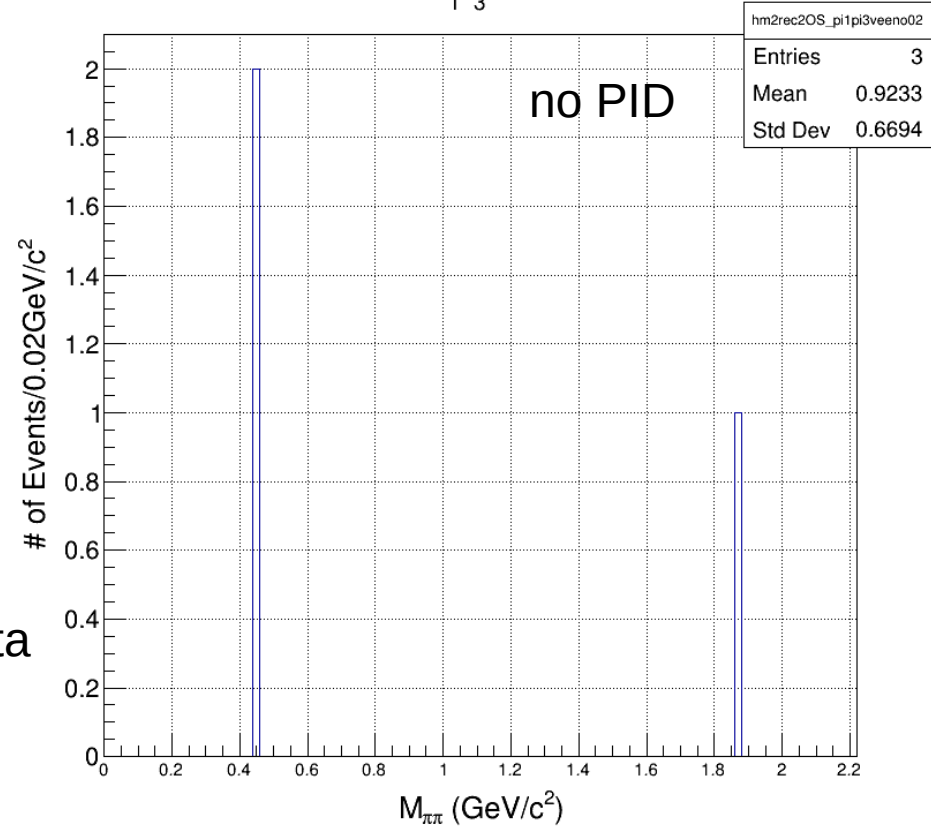


isKshort=true
4-track events
Q=0
pi+pi-
Qpair=0
ptCut=0.0
eta<2.5
entire 2015 data

no entries

$M_{\pi_1\pi_3}$ OS

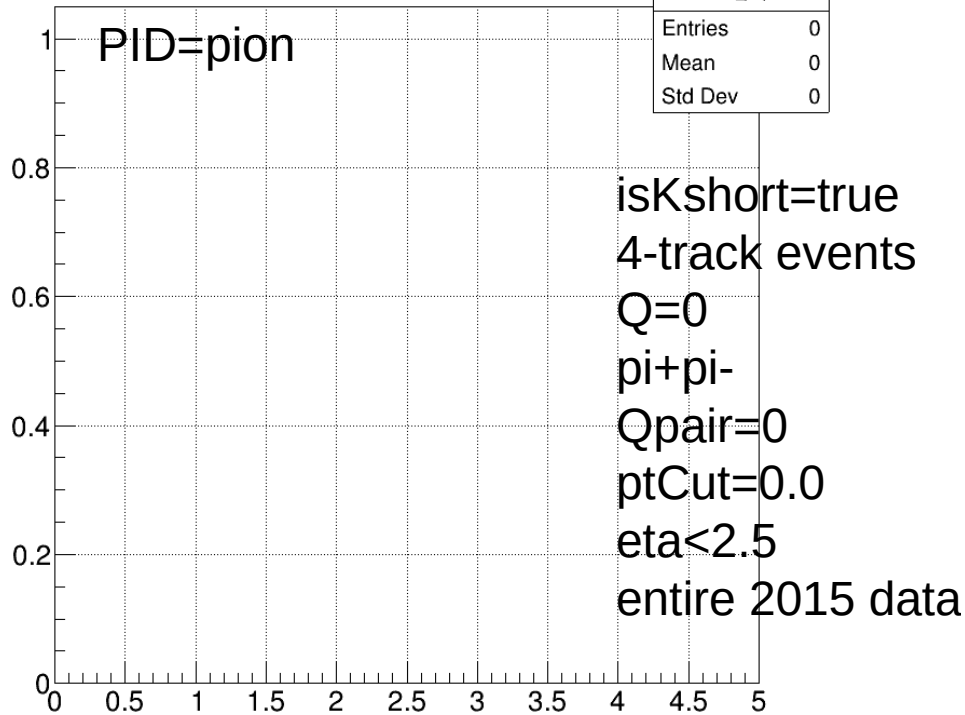
no PID



no primary vertex & two Vees

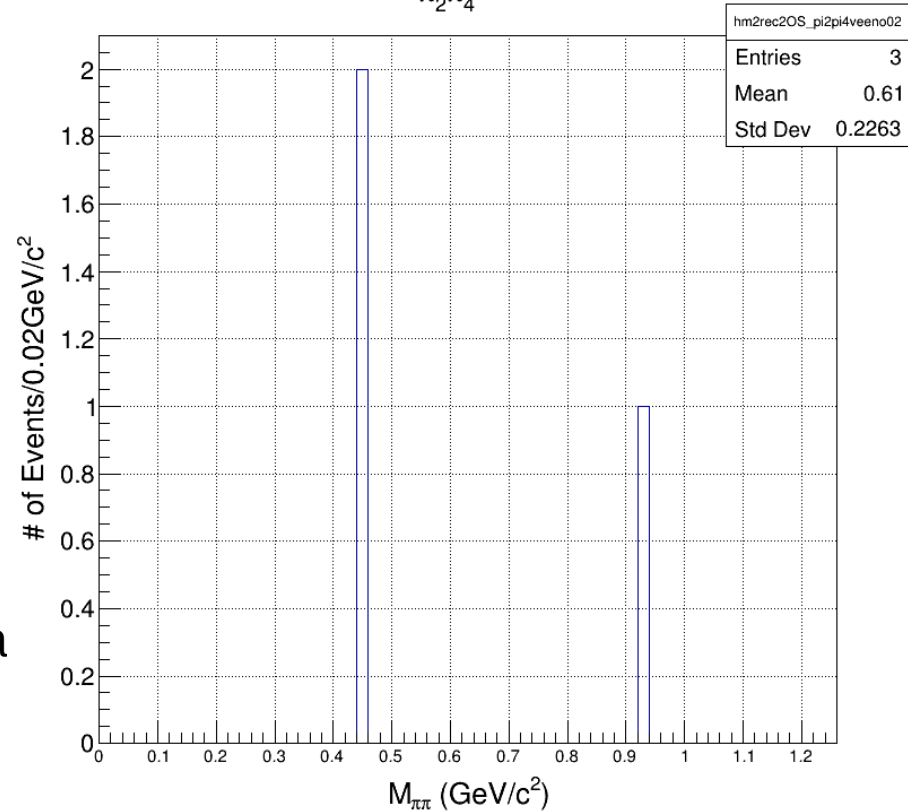
$M_{\pi_2\pi_4}$ OS

PID=pion

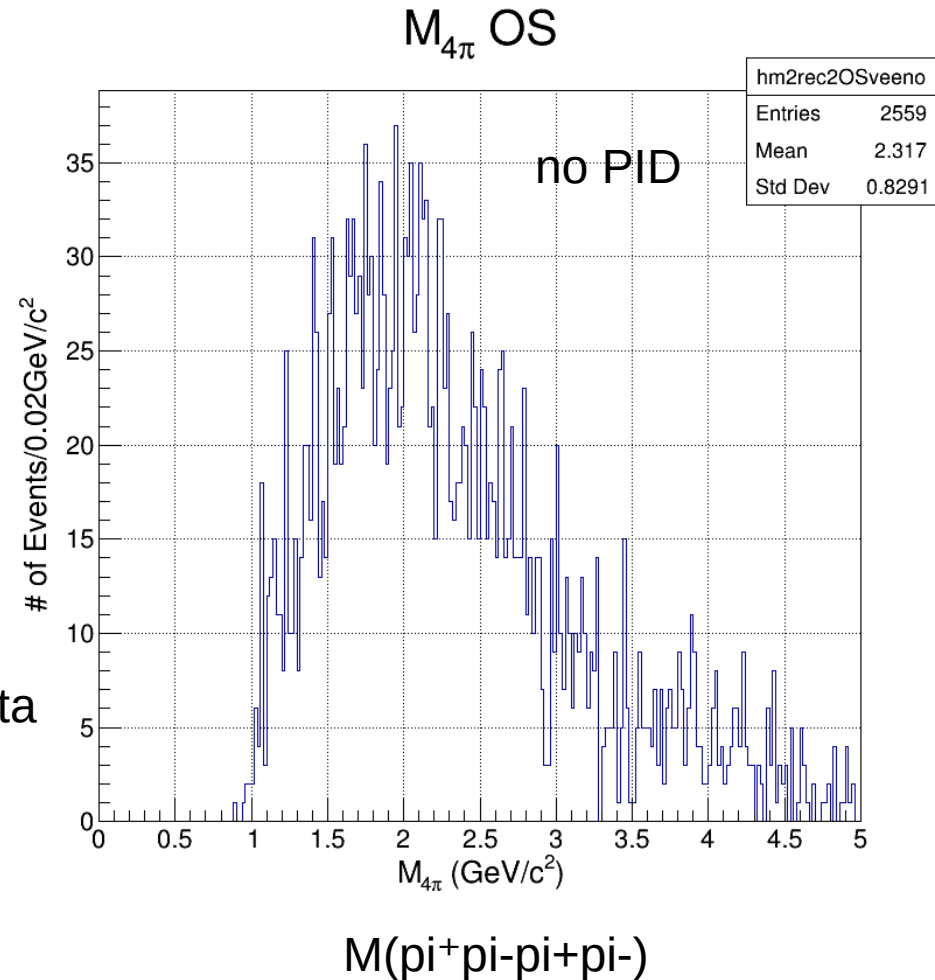
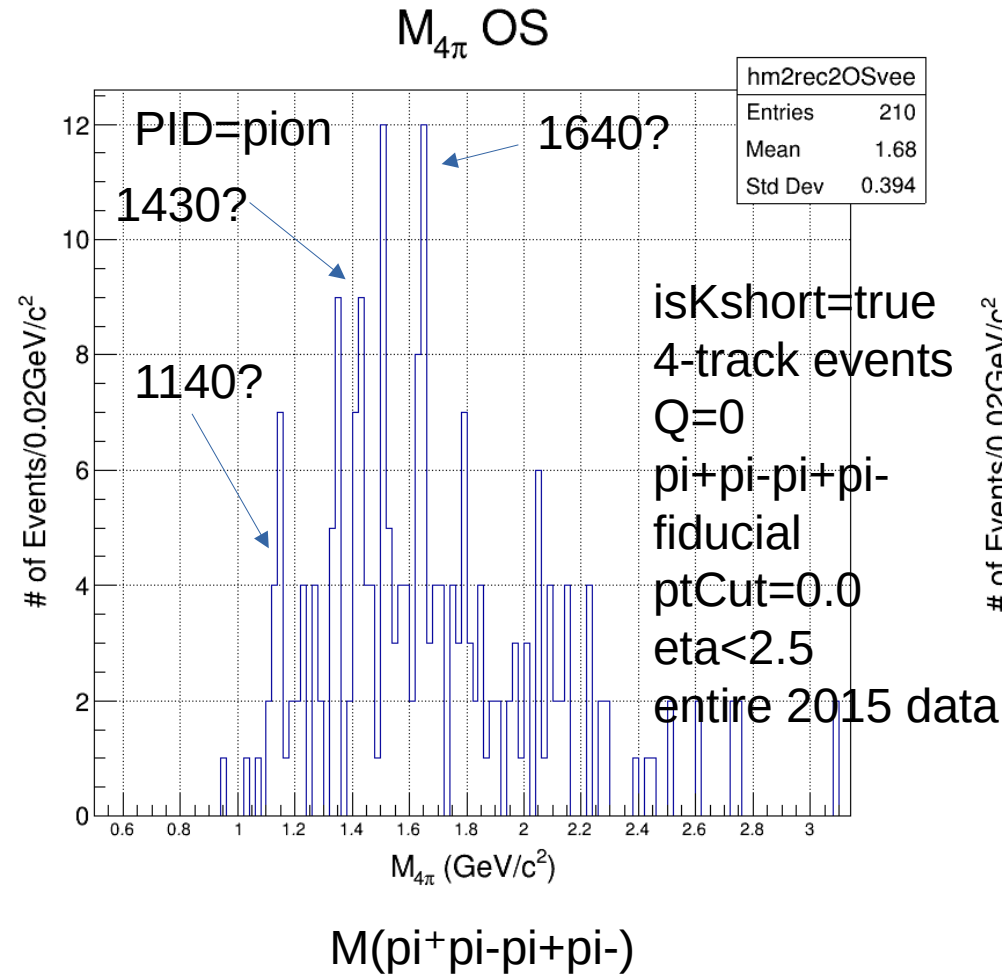


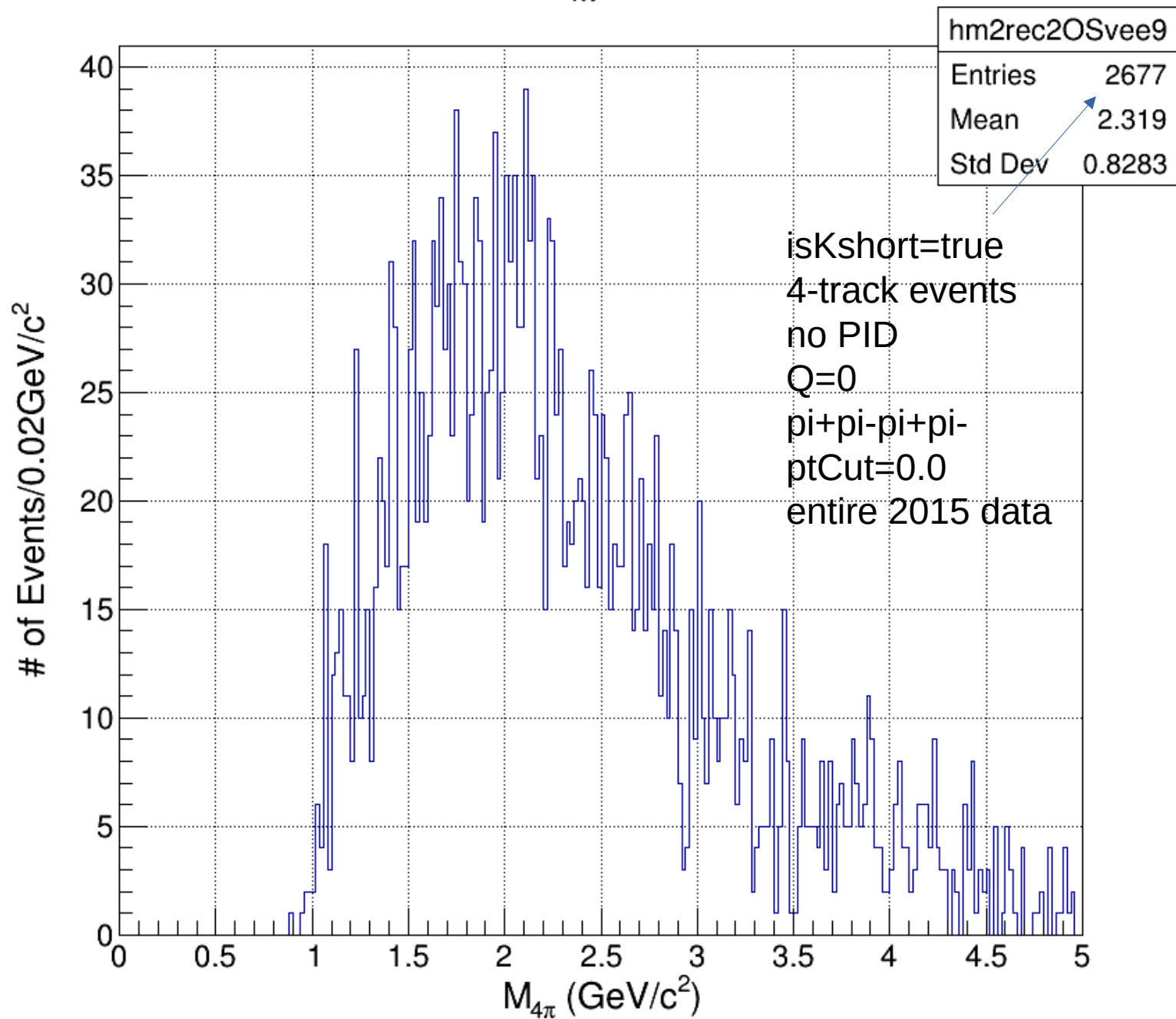
no entries

$M_{\pi_2\pi_4}$ OS

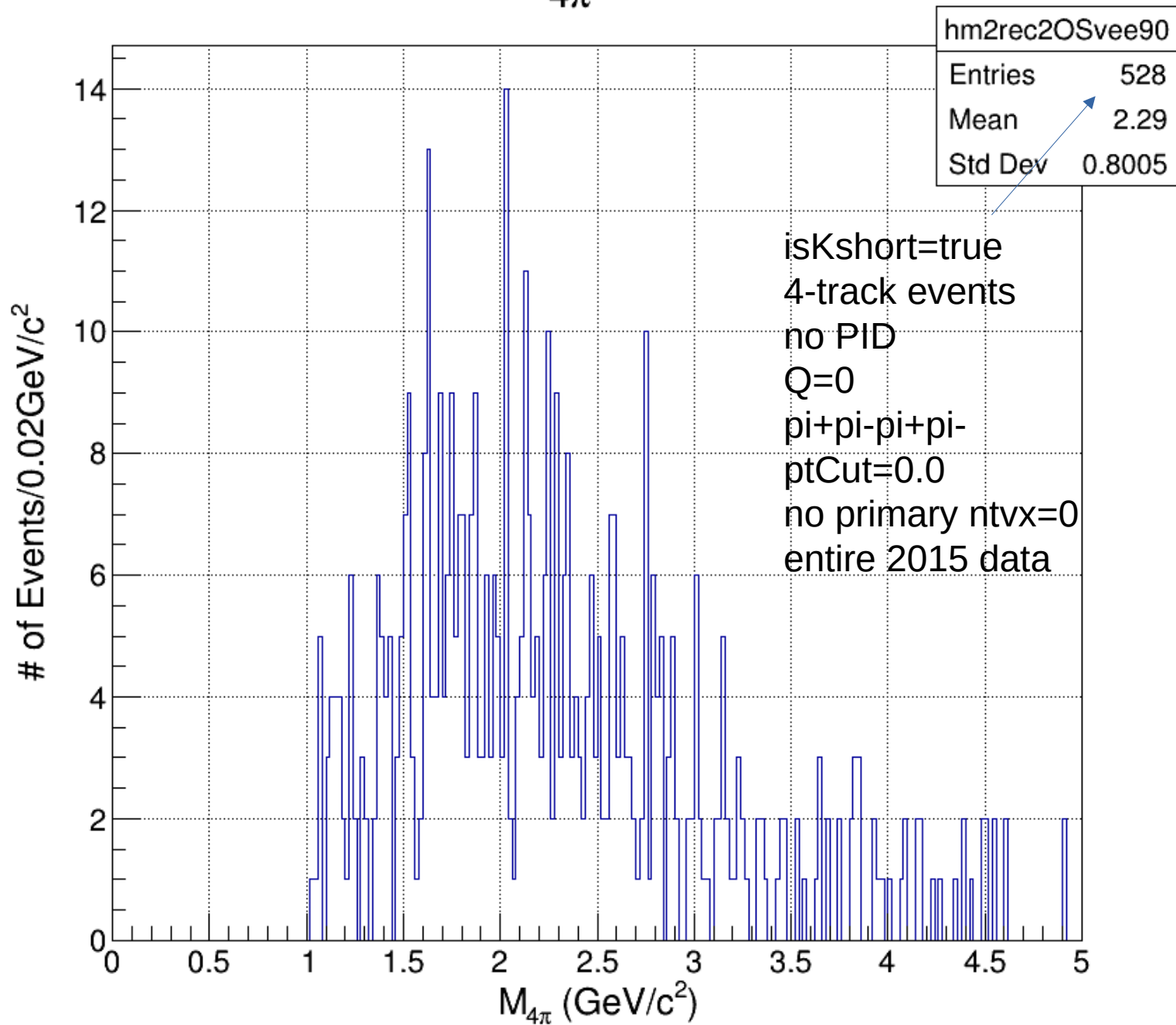


1 primary vertex & 1 Vee + 0 primary vertex & 2 Vees (tiny)

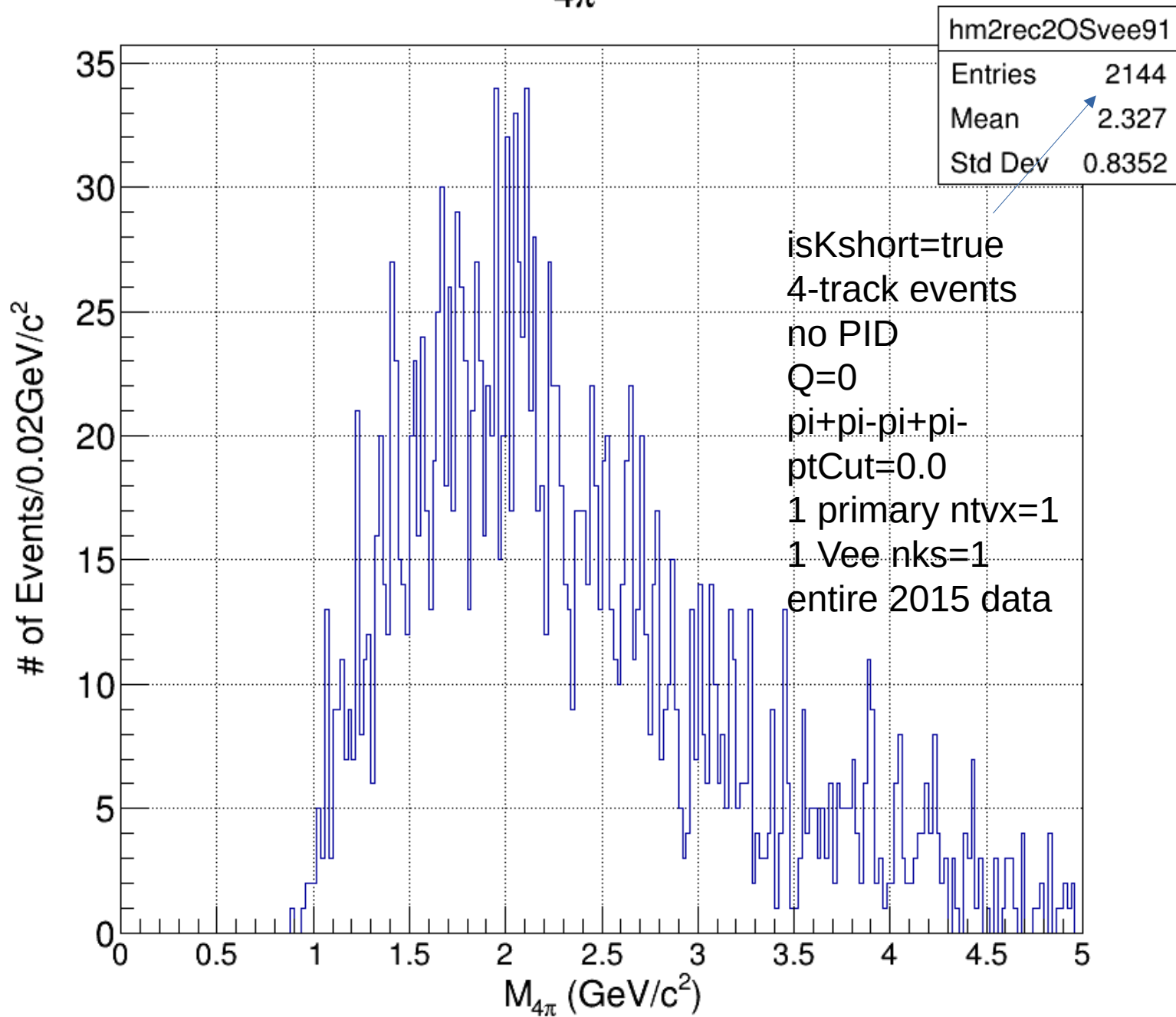


$M_{4\pi}$ OS

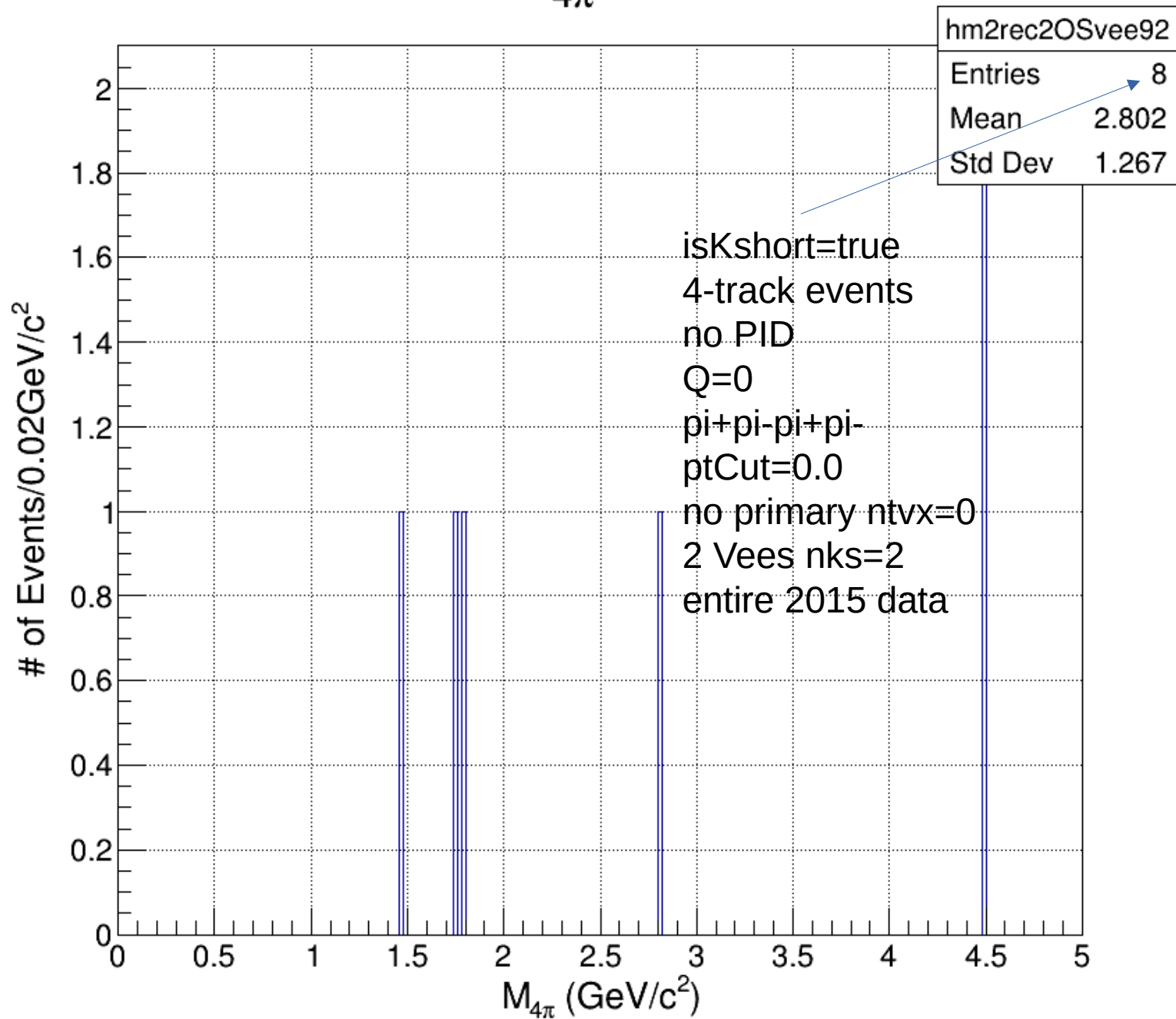
$M_{4\pi}$ OS



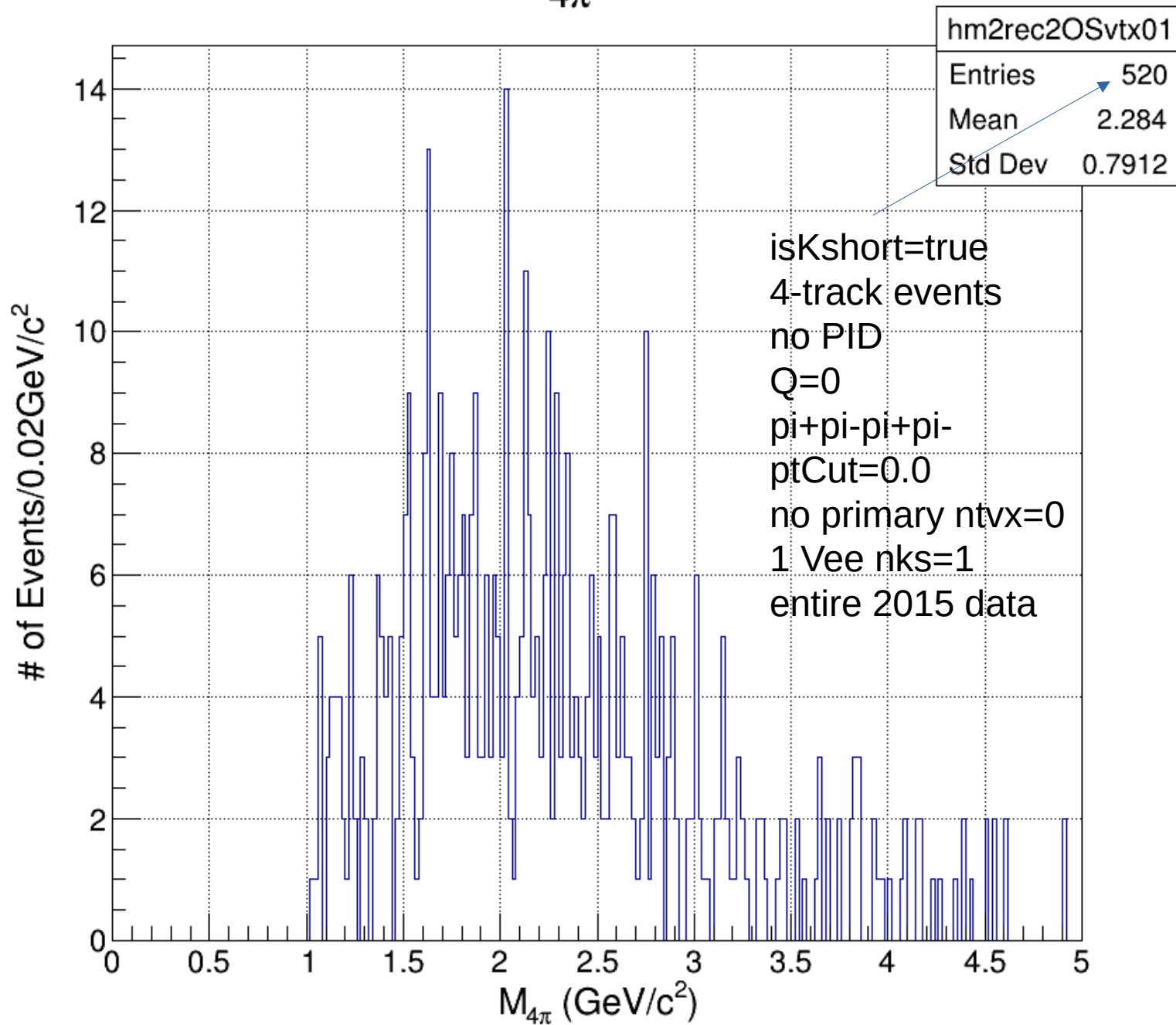
$M_{4\pi}$ OS



$M_{4\pi}$ OS



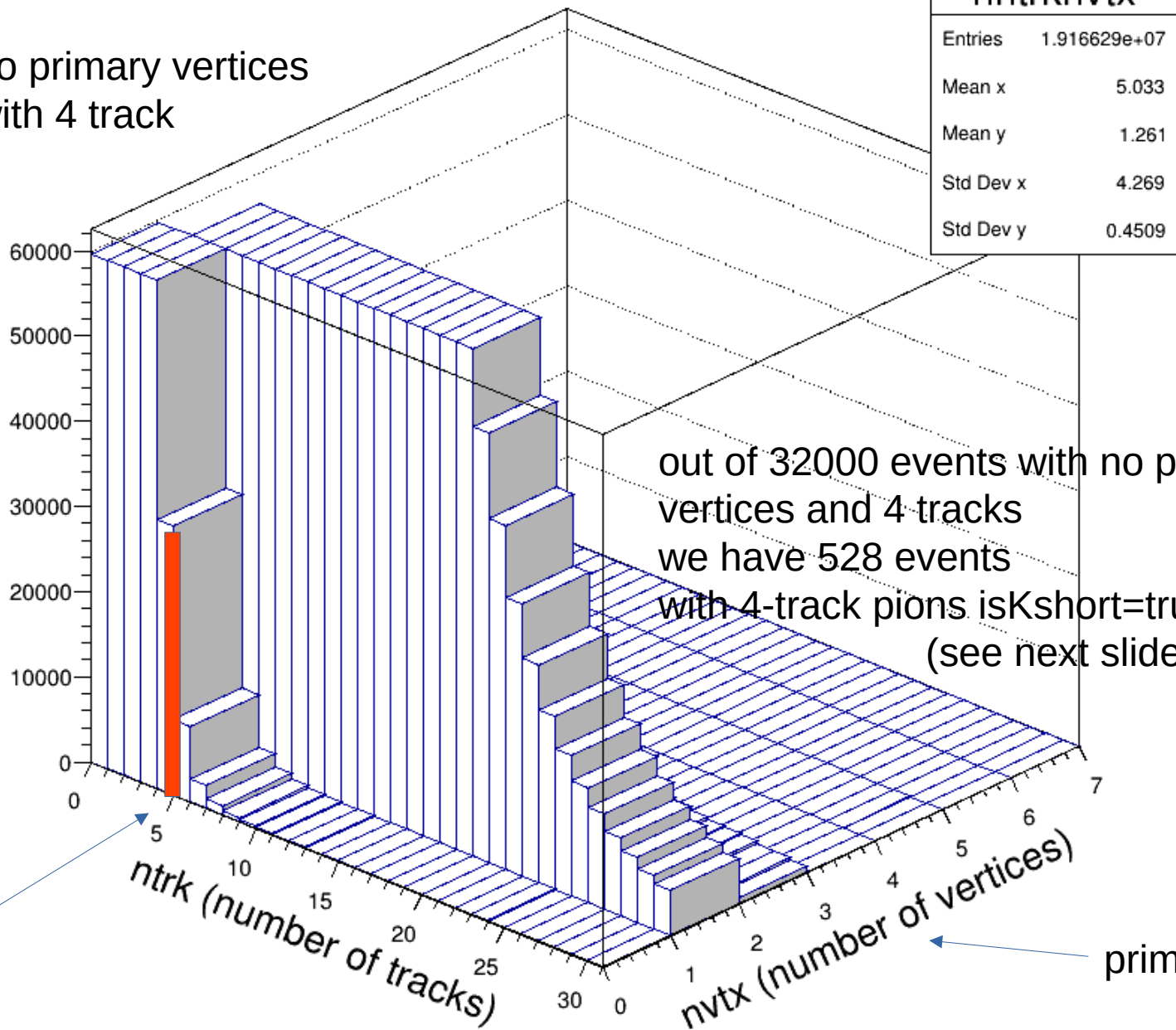
$M_{4\pi}$ OS



keeping the next plots just for checking

of Primary Vertices vs # of Tracks

no primary vertices
with 4 track



$M_{4\pi}$ OS