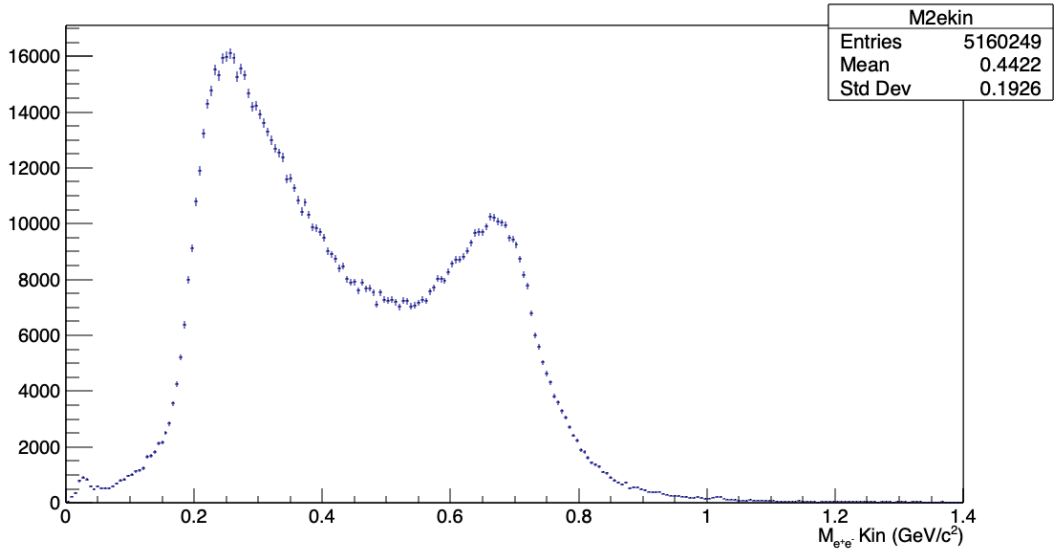
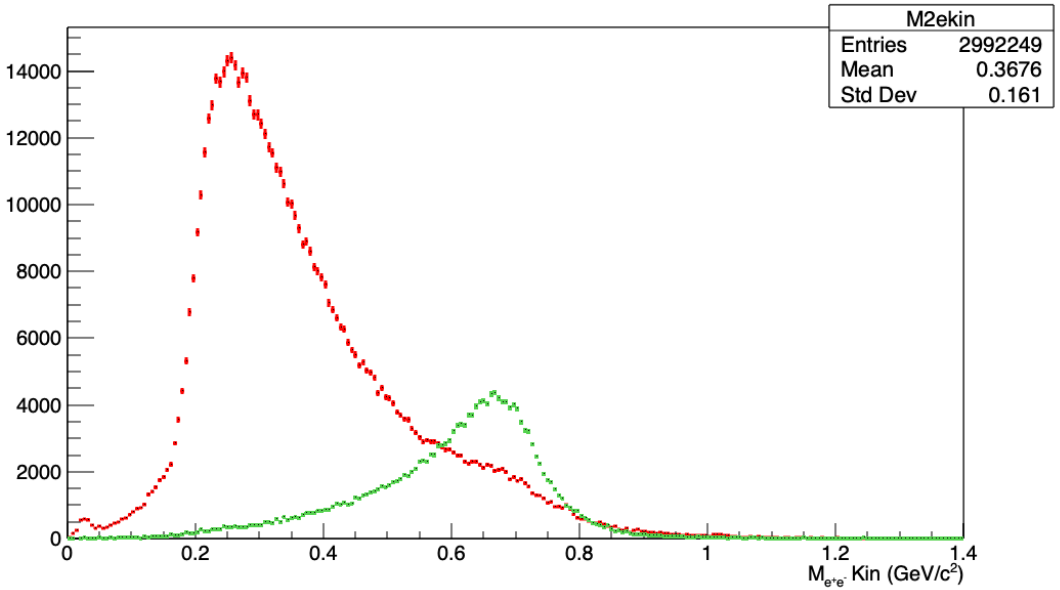
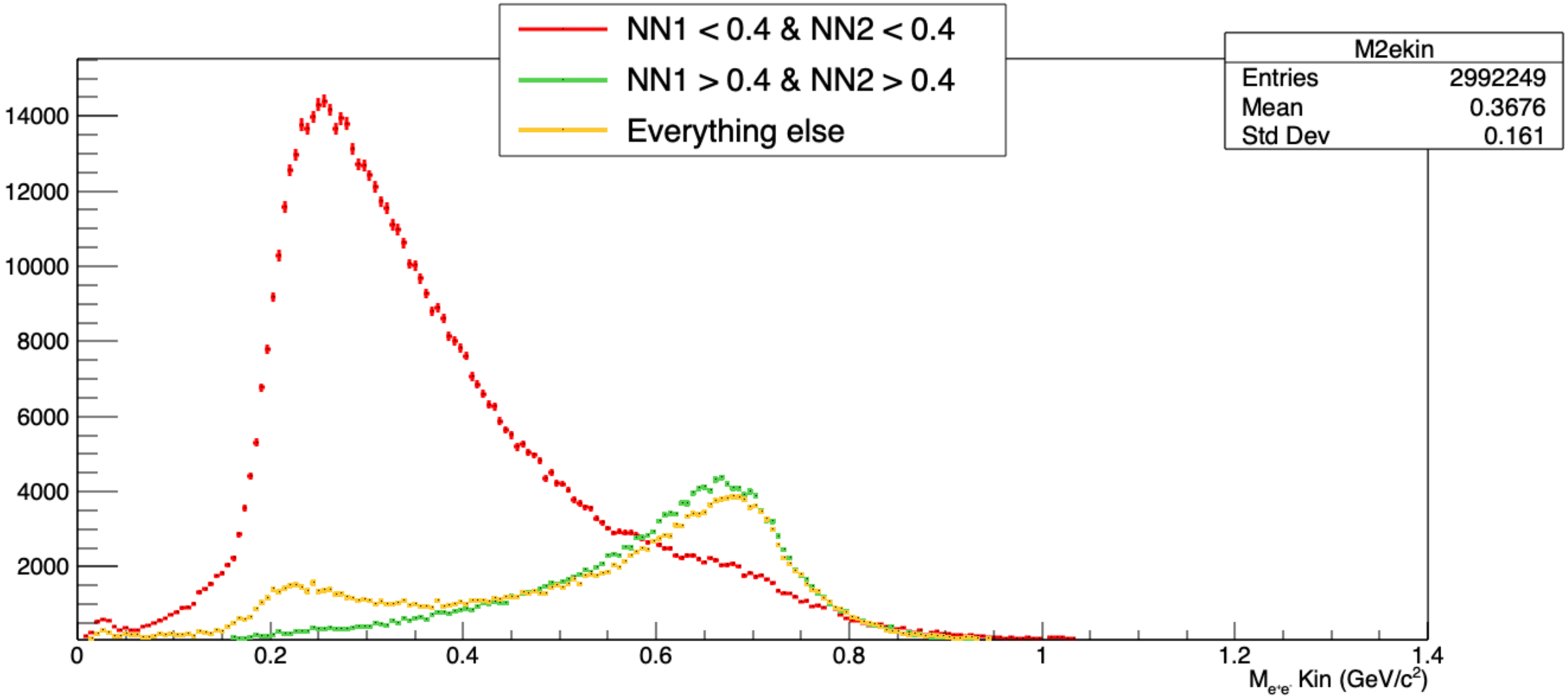
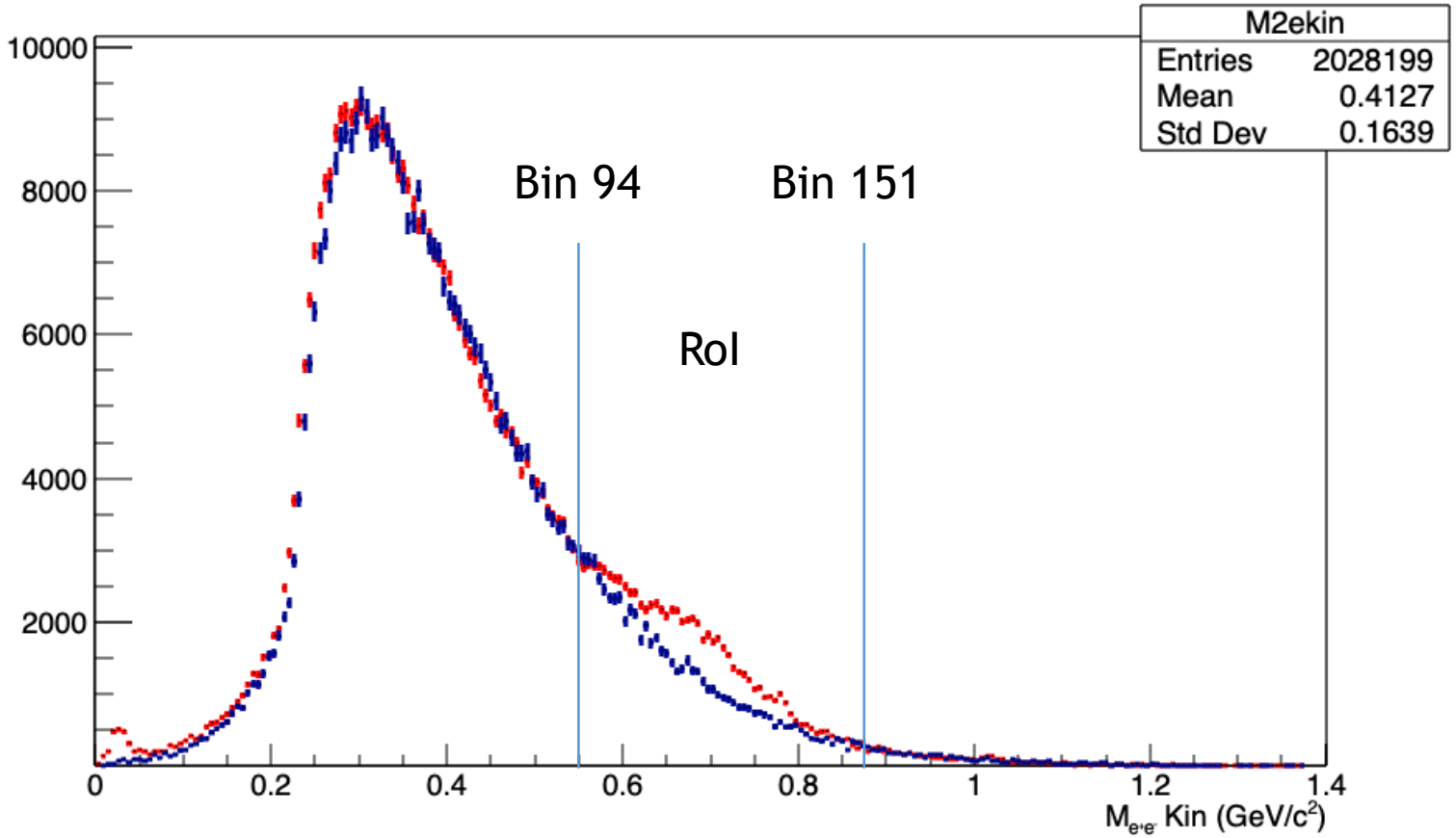
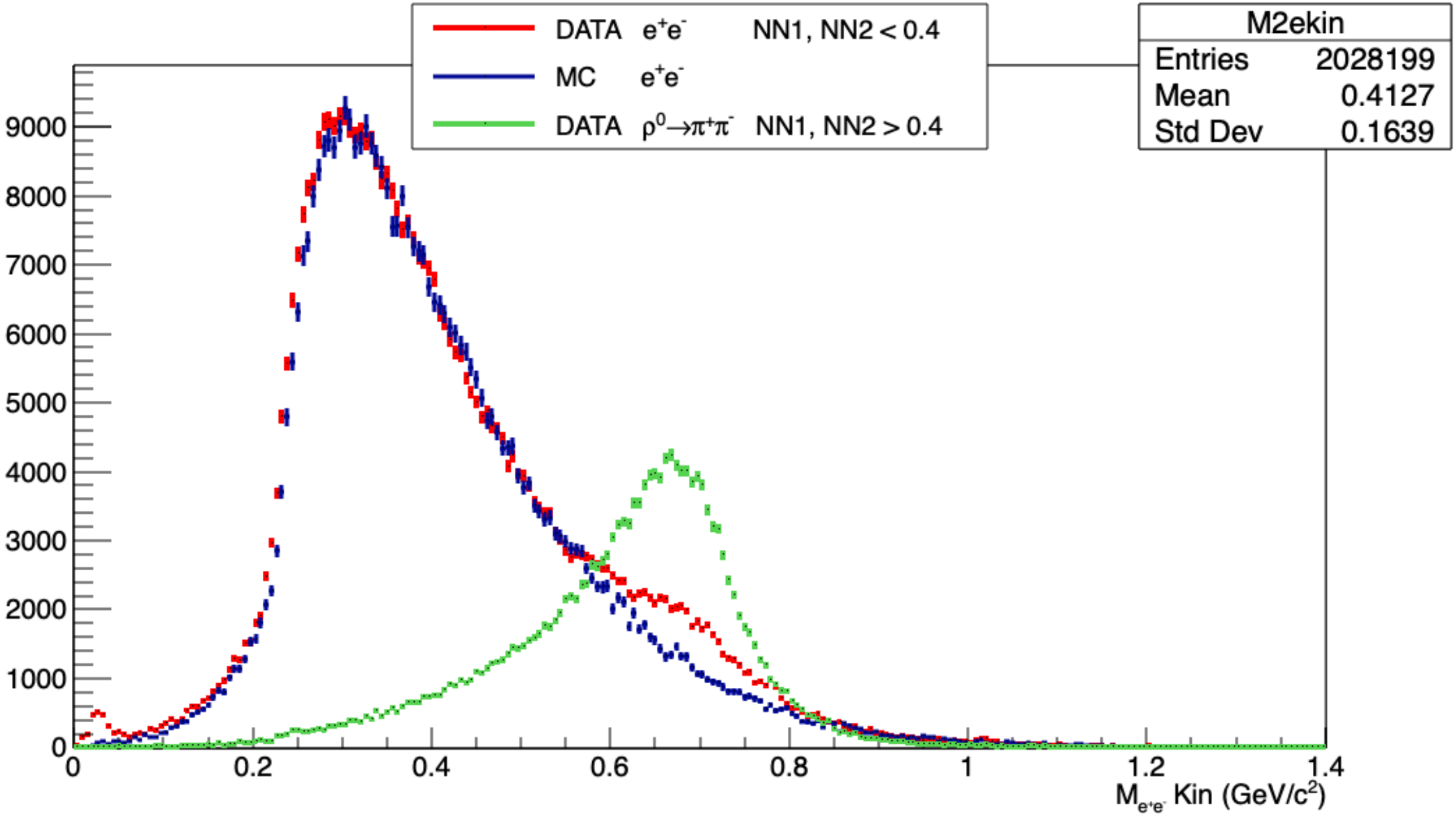

M2ekin
Entries 5160249
Mean 0.4422
Std Dev 0.1926
16000
14000
12000
10000
8000
6000
4000
2000
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
$M_{e^+e^-}$ Kin (GeV/c^2)

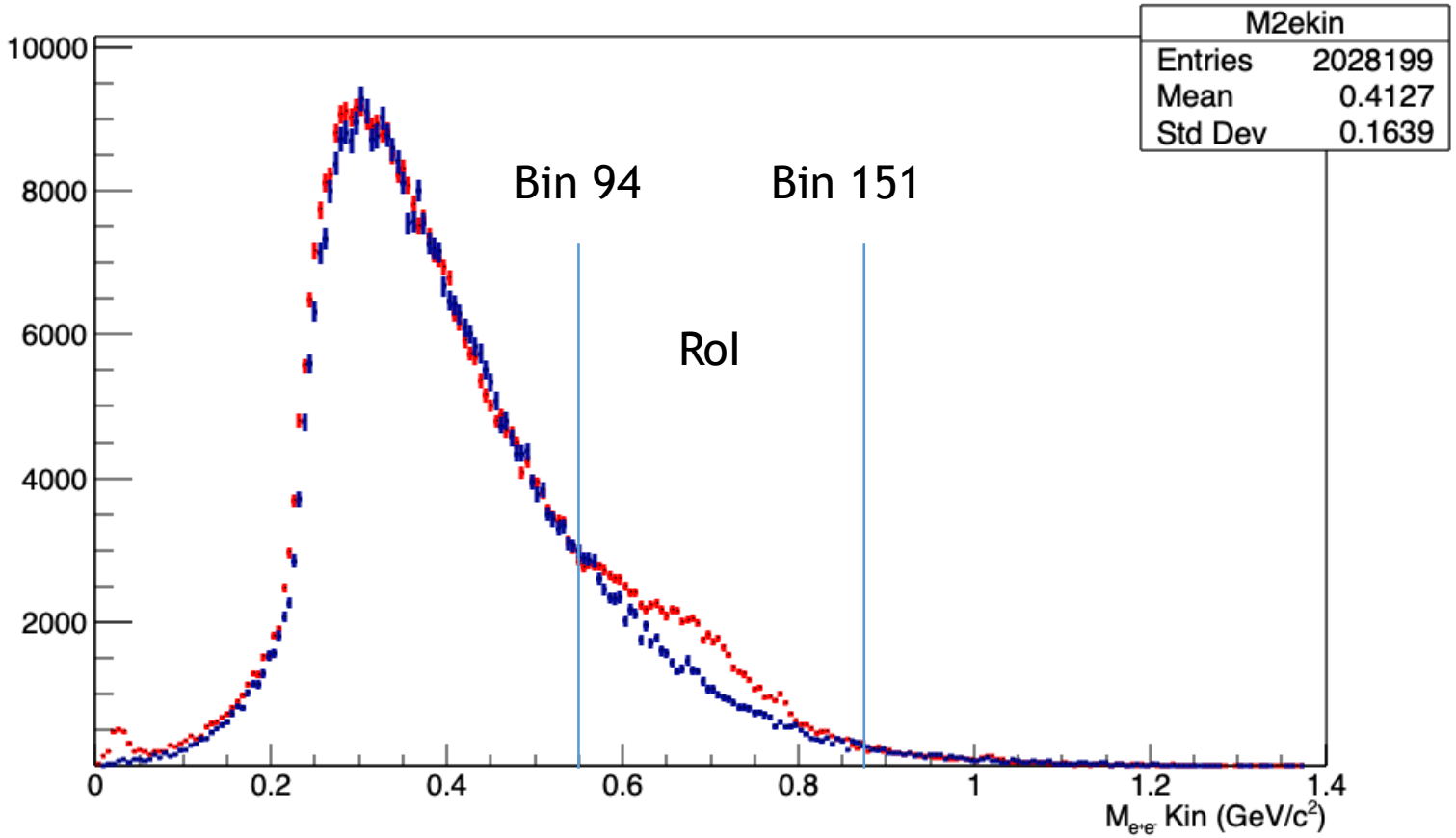

M2ekin
Entries 2992249
Mean 0.3676
Std Dev 0.161
14000
12000
10000
8000
6000
4000
2000
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
$M_{e^+e^-}$ Kin (GeV/c^2)


NN1 < 0.4 & NN2 < 0.4
NN1 > 0.4 & NN2 > 0.4
Everything else
M2ekin
Entries 2992249
Mean 0.3676
Std Dev 0.161
14000
12000
10000
8000
6000
4000
2000
0
0.2
0.4
0.6
0.8
1
1.2
1.4
M_e+e- Kin (GeV/c^2)

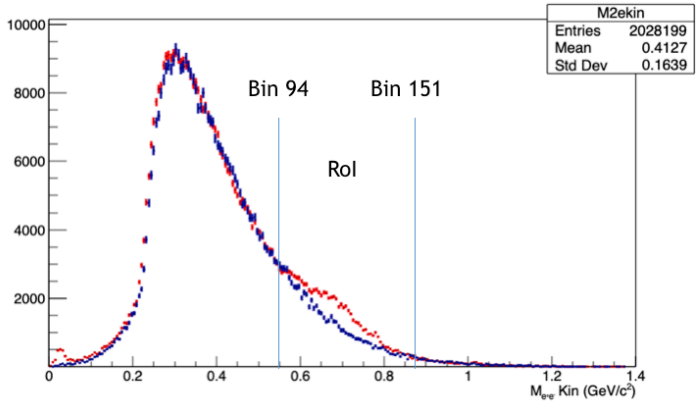


$$\frac{\int_{94}^{151} W_{data} dn}{\int_{94}^{151} W_{MC} dn} = \frac{86855.500}{68714.912} = 1.263997$$

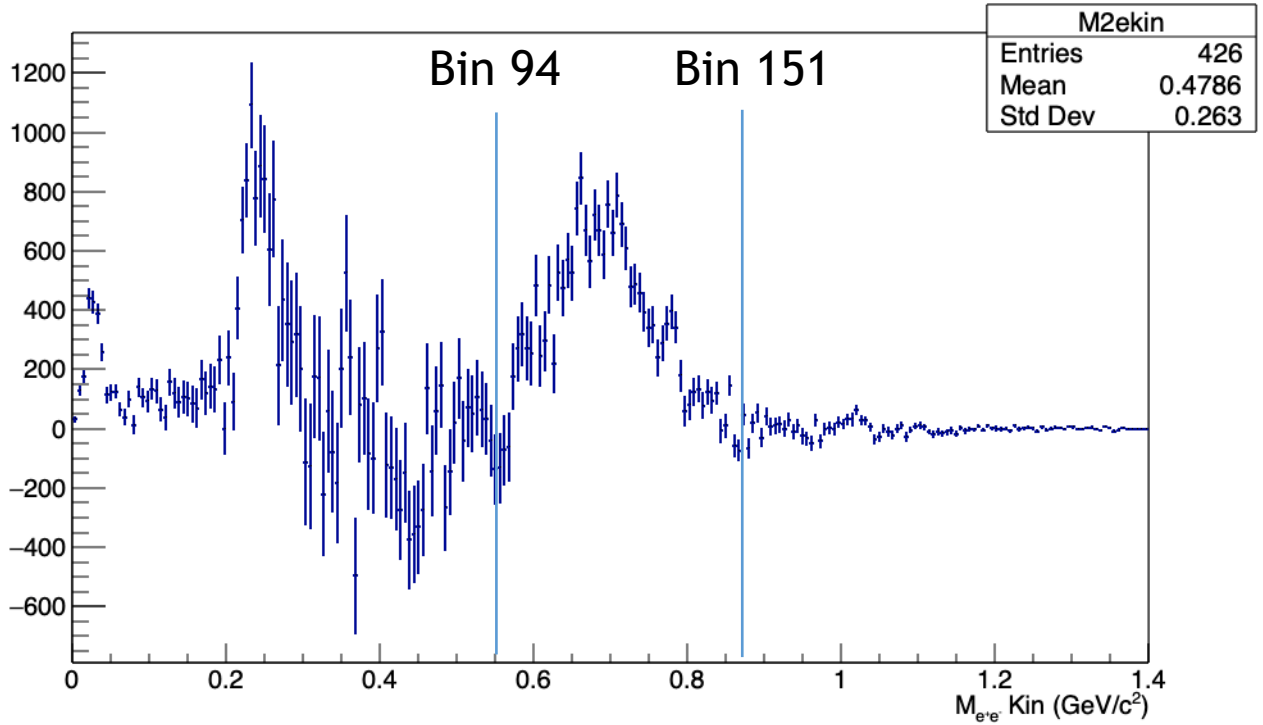

DATA e+e- NN1, NN2 < 0.4
MC e+e-
DATA ρ0→π+π- NN1, NN2 > 0.4
M2ekin
Entries 2028199
Mean 0.4127
Std Dev 0.1639
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
Me+e- Kin (GeV/c2)



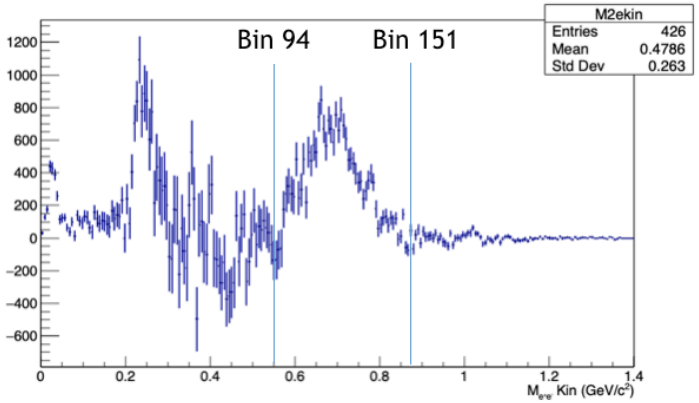
$$\frac{\int_{94}^{151} W_{data} dn}{\int_{94}^{151} W_{MC} dn} = \frac{86855.500}{68714.912} = 1.263997$$



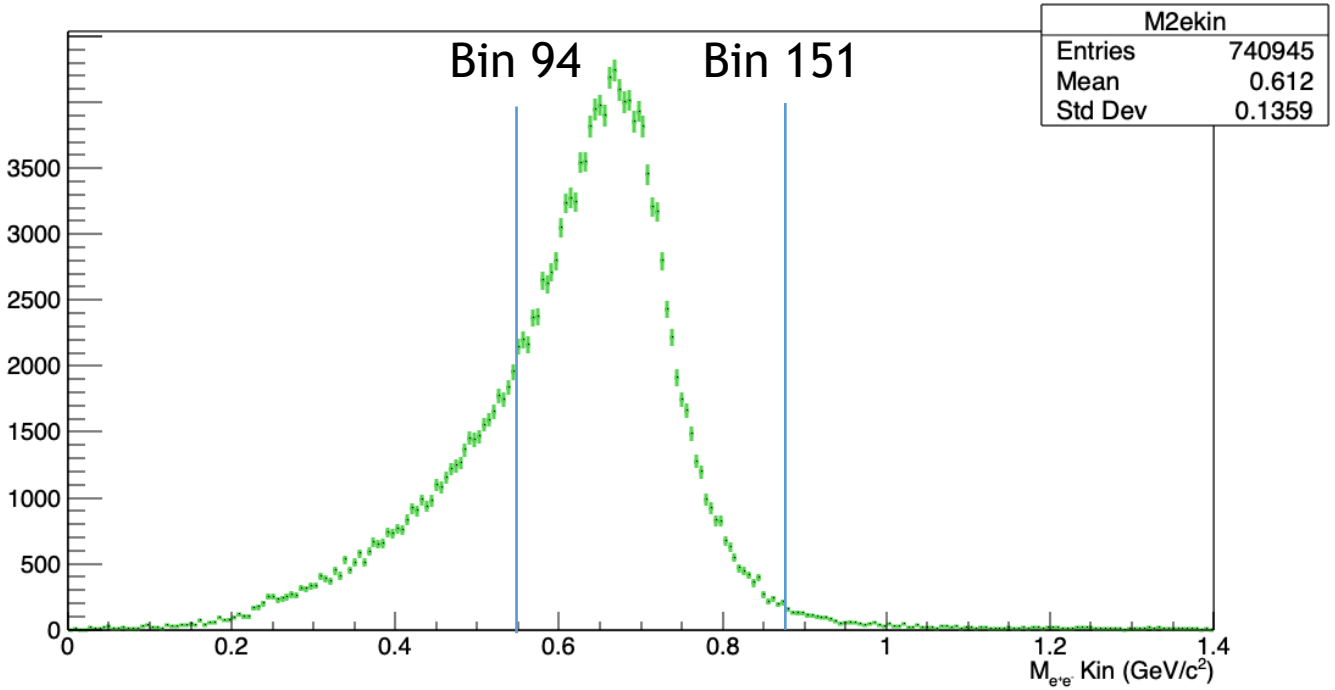
Subtract the MC distribution from the data and plot the difference



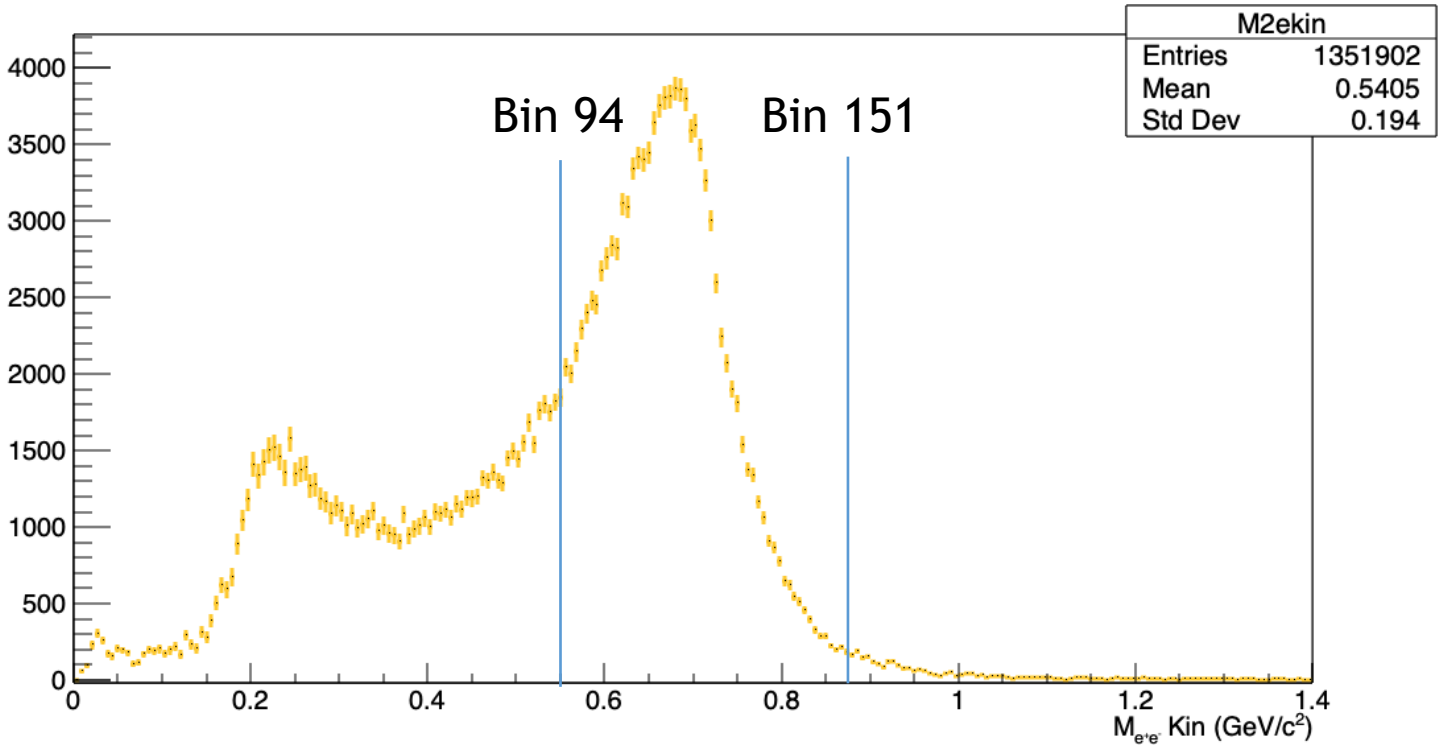
$$\int_{94}^{151} (W_{data} - W_{MC})dn = 18140.588$$



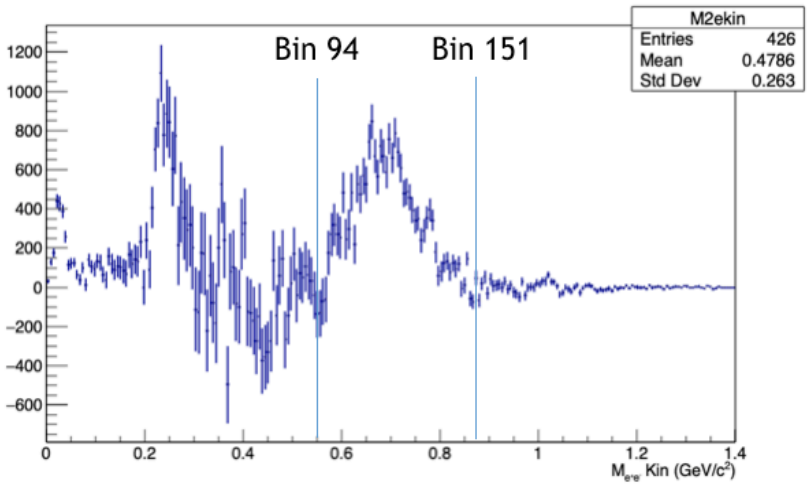
$$\int_{94}^{151} (W_{data} - W_{MC})dn = 18140.588$$

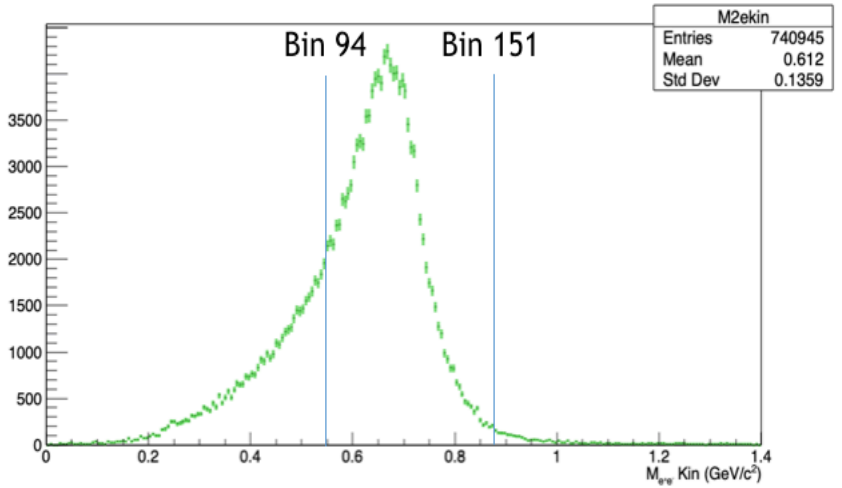


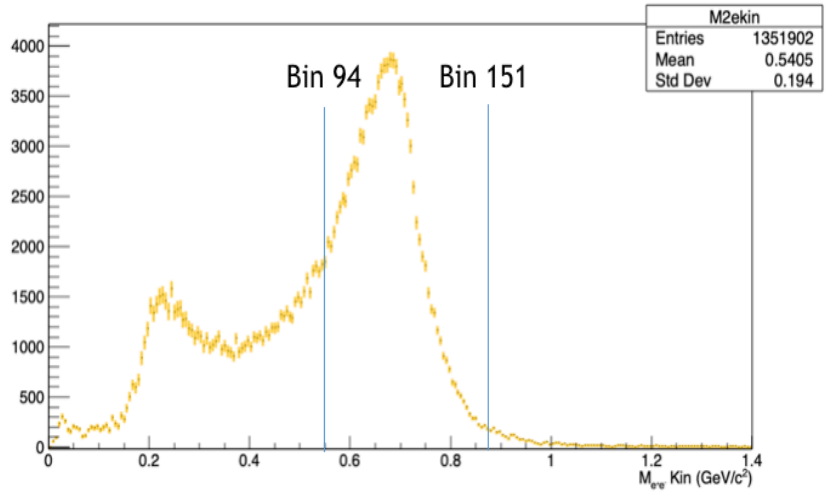
$$\int_{94}^{151} W_{\rho} dn = 125071.50$$



$$\int_{94}^{151} W_{\rho\text{rejected}} dn = 116950.00$$







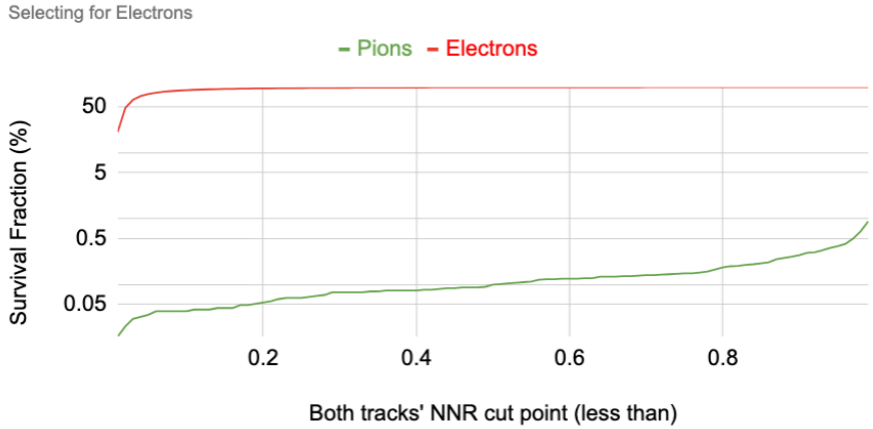
$$\int_{94}^{151} (W_{data} - W_{MC})dn = 18140.588$$

$$\int_{94}^{151} W_{\rho} dn = 125071.50$$

$$\int_{94}^{151} W_{\rho\text{rejected}} dn = 116950.00$$

Assume difference is purely pion contamination from Rho0. Does the assumption hold up to previous studies?

$$\frac{\int W_{diff}}{\int (W_{diff} + W_{\rho} + W_{rej})} = \frac{18140.588}{18140.588 + 125071.50 + 116950.00} = 0.069728023$$



6.9% survival fraction under this assumption. Let's compare to omega/pi0 study:

Cut point	Pion %	Electron %
0.4	0.08066188841	98.68677962