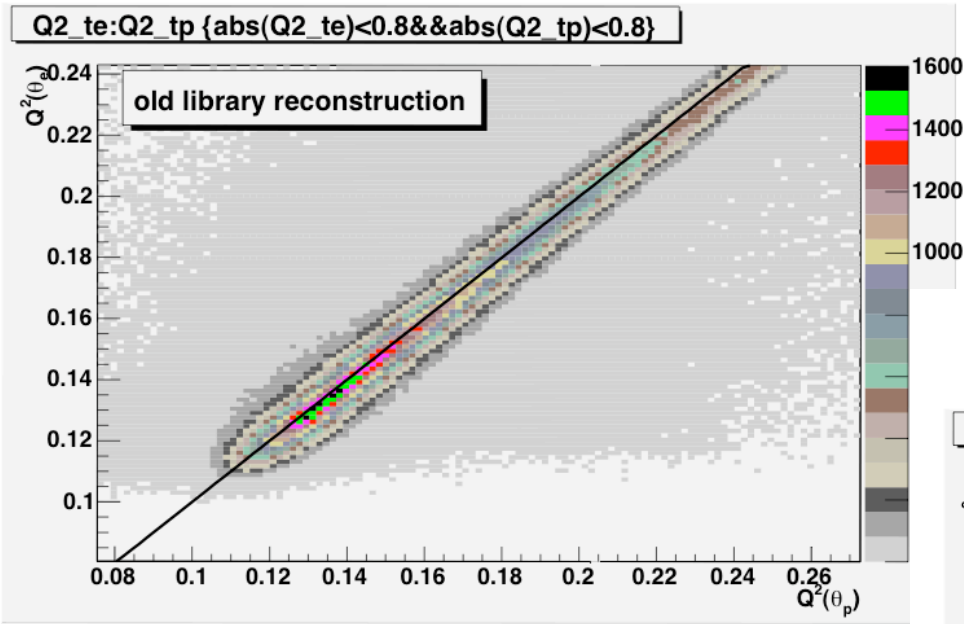
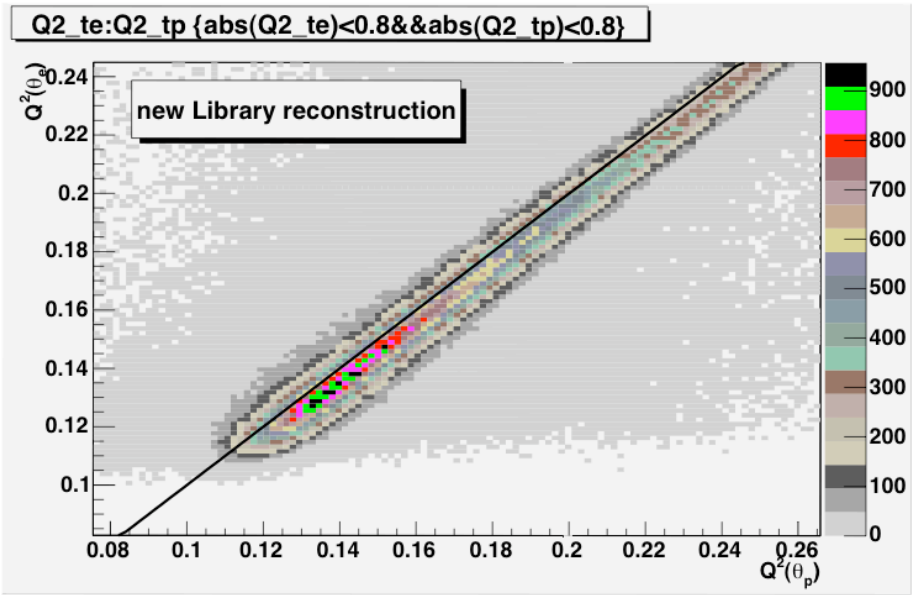
$Q^2(\theta_e)$ vs. $Q^2(\theta_p)$ comparison

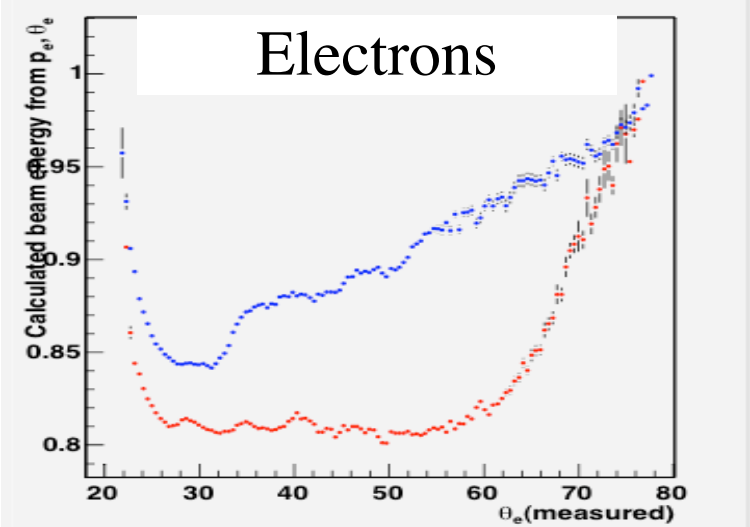


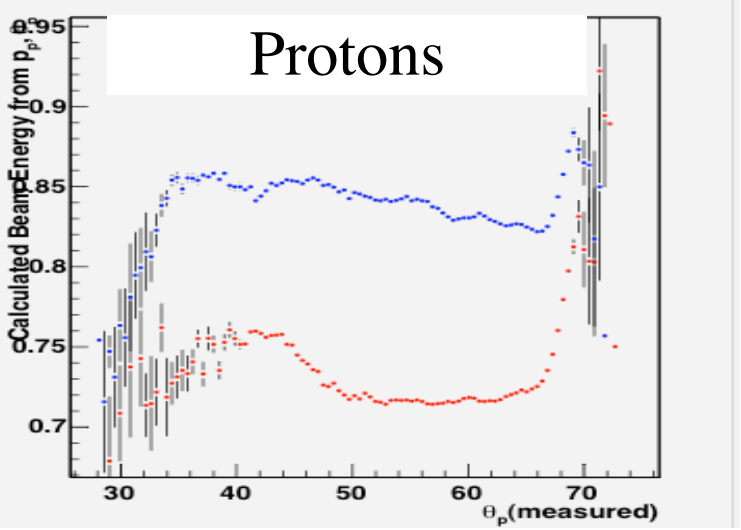


Beam Energy calculations

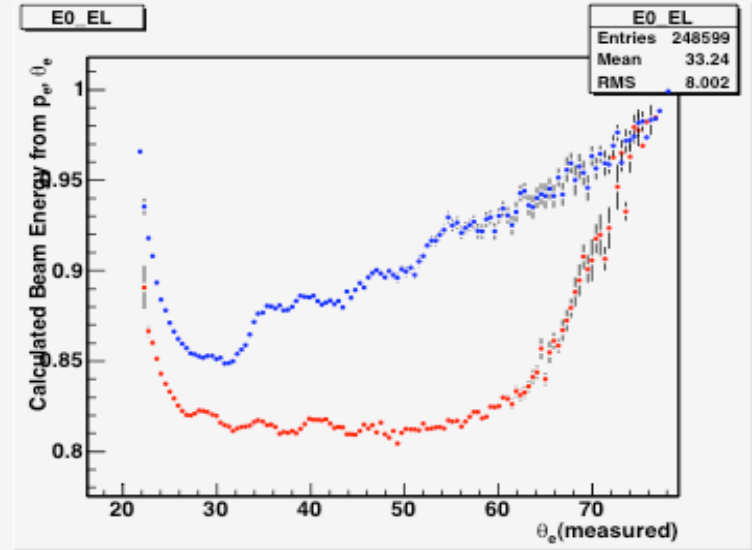
RED: Electron Left BLUE: Electron Right

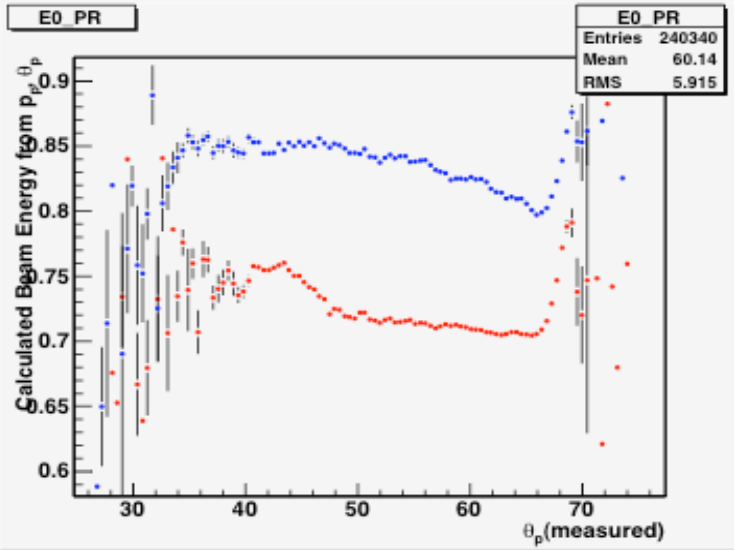
Old



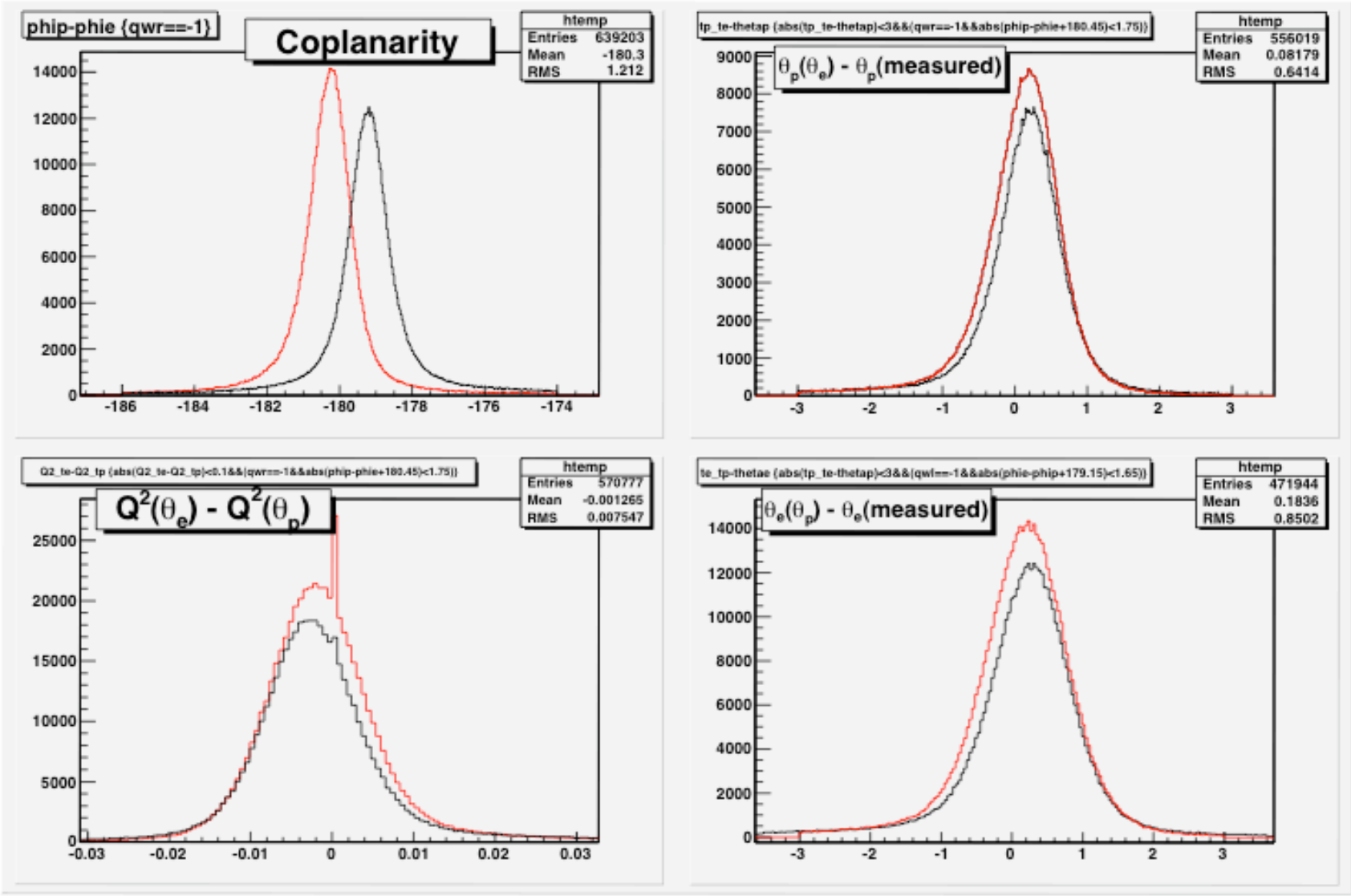


New

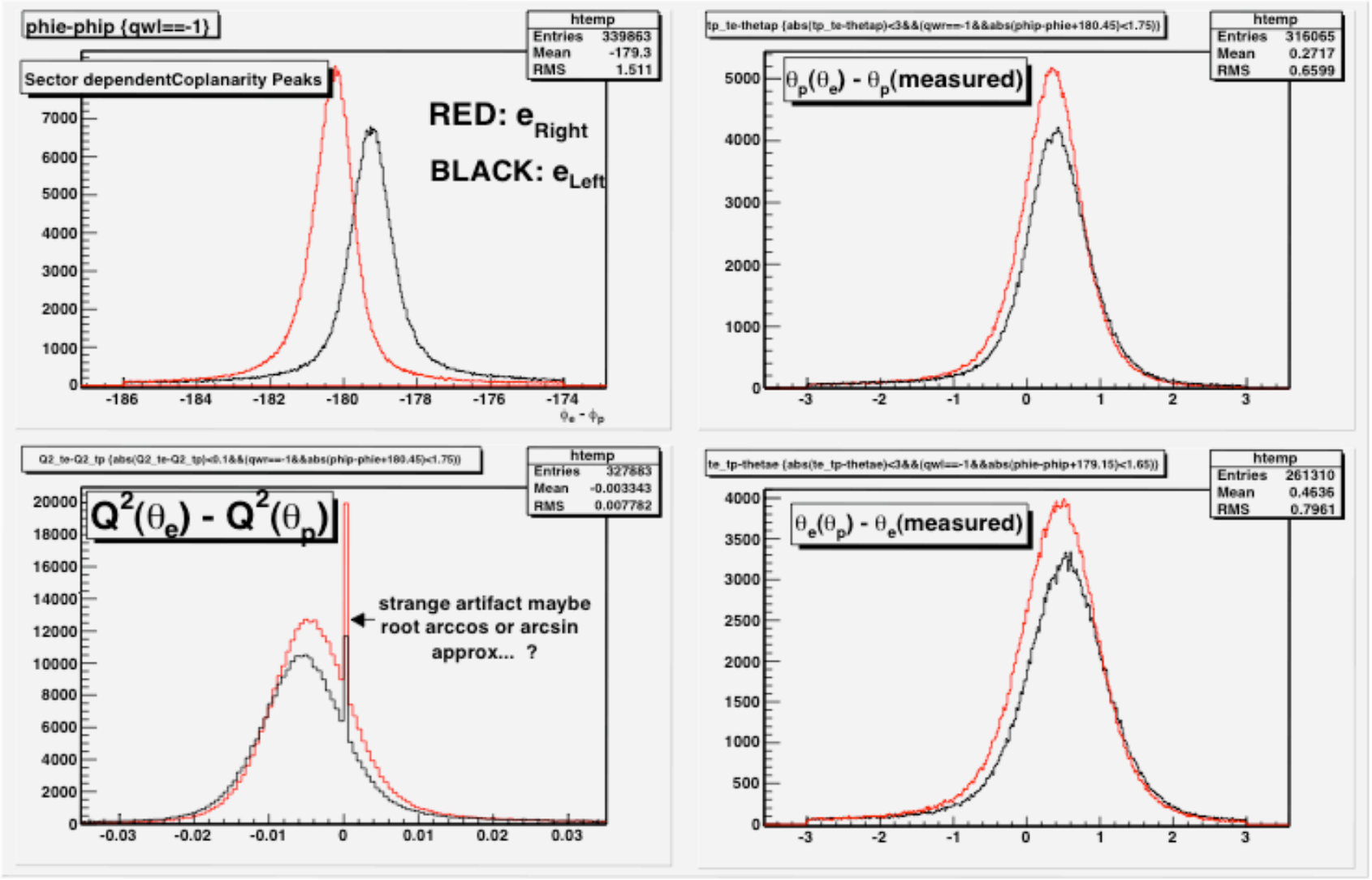




Old Crunch

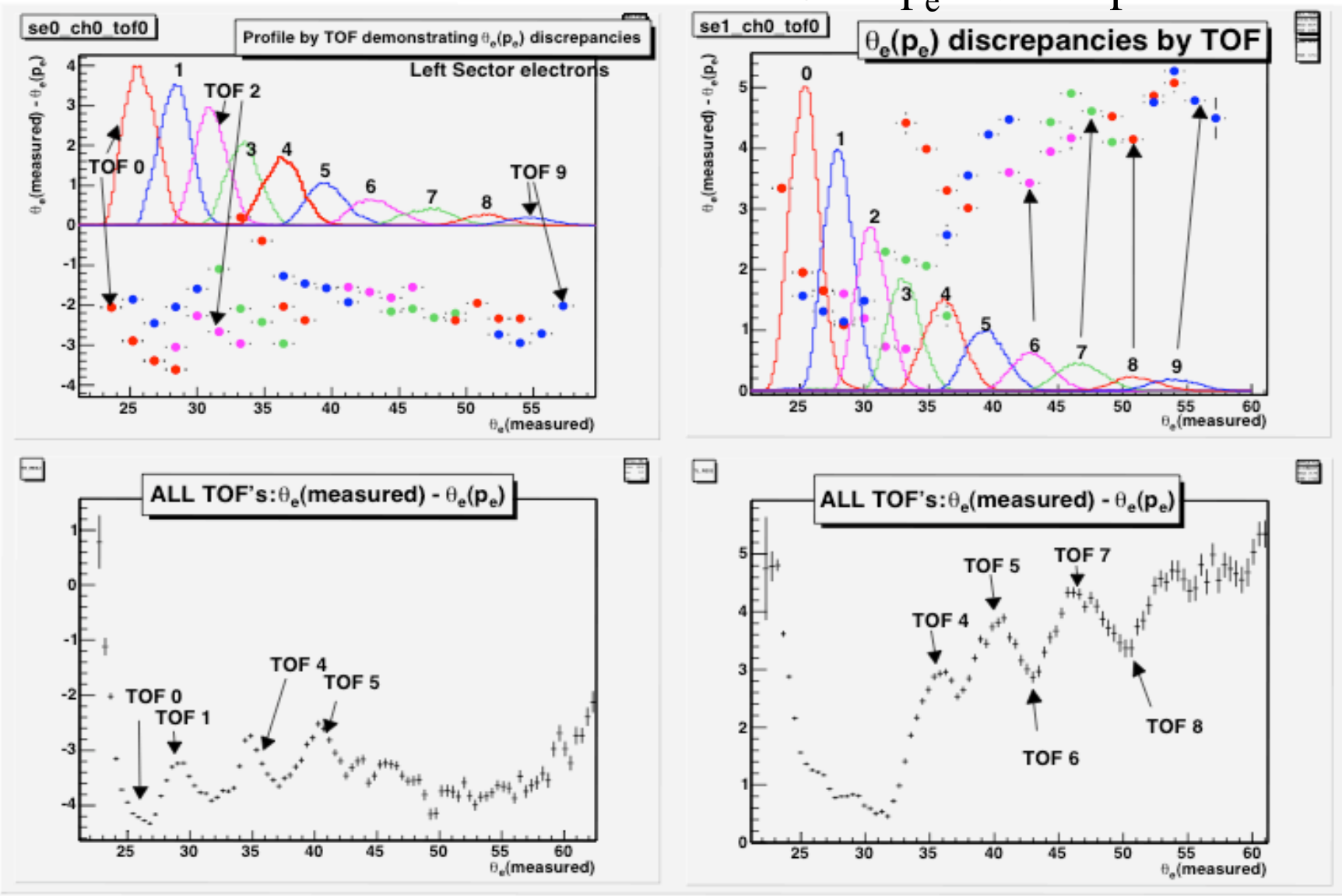

phip-phie {qwr==-1}
Coplanarity
htemp
Entries 639203
Mean -180.3
RMS 1.212
tp_te-thetap (abs(tp_te-thetap)<3&&(qwr==-1&&abs(phip-phie+180.45)<1.75))
θp(θe) - θp(measured)
htemp
Entries 556019
Mean 0.08179
RMS 0.6414
Q2_te-Q2_tp (abs(Q2_te-Q2_tp)<0.1&&(qwr==-1&&abs(phip-phie+180.45)<1.75))
Q2(θe) - Q2(θp)
htemp
Entries 570777
Mean -0.001265
RMS 0.007547
te_tp-thetae (abs(tp_te-thetap)<3&&(qwr==-1&&abs(phie-phip+179.15)<1.65))
θe(θp) - θe(measured)
htemp
Entries 471944
Mean 0.1836
RMS 0.8502

New Recrunch



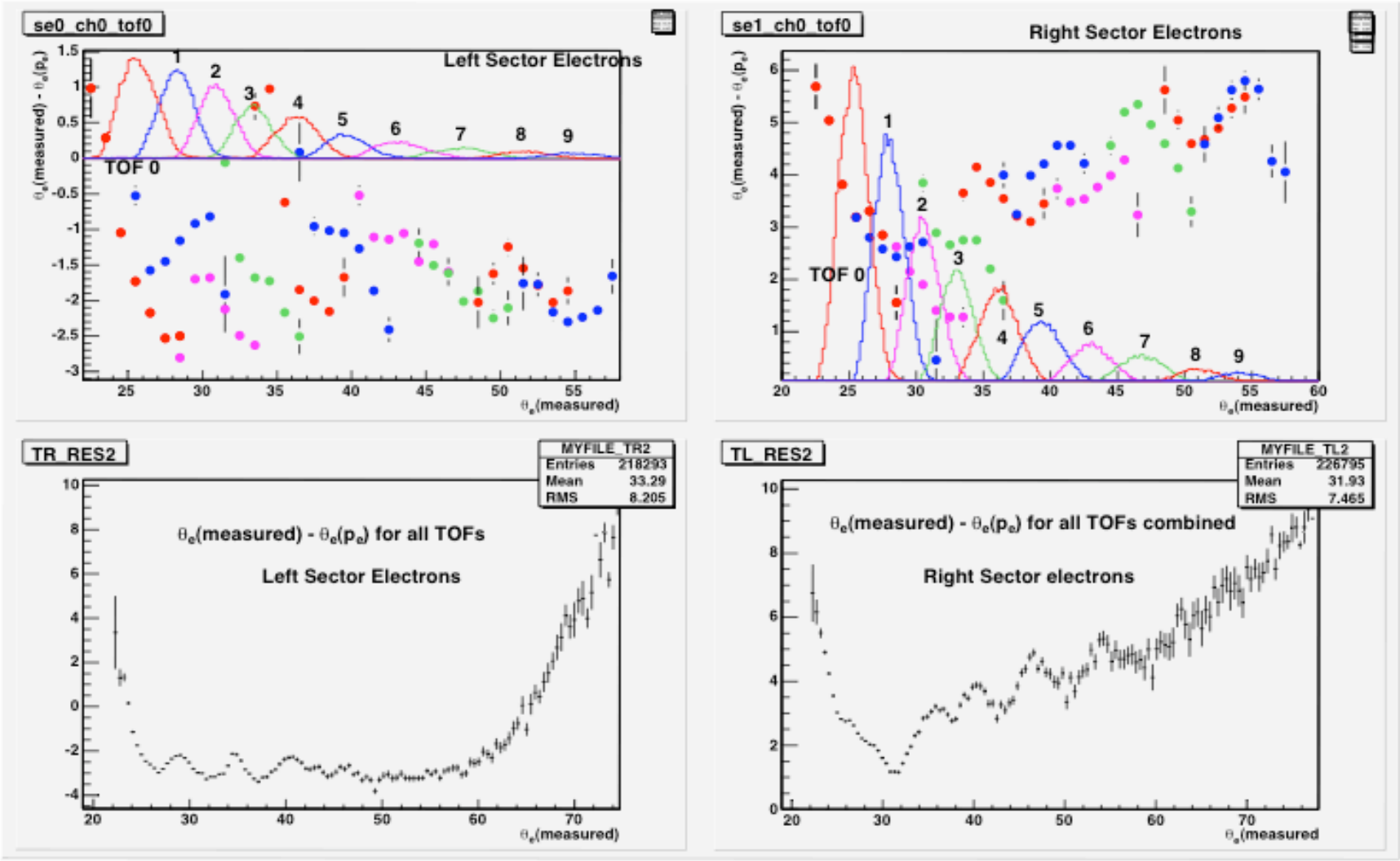
Old Crunch

Shifts are caused by momenta used in calculations. p_e TOF-dependent??



New Crunch

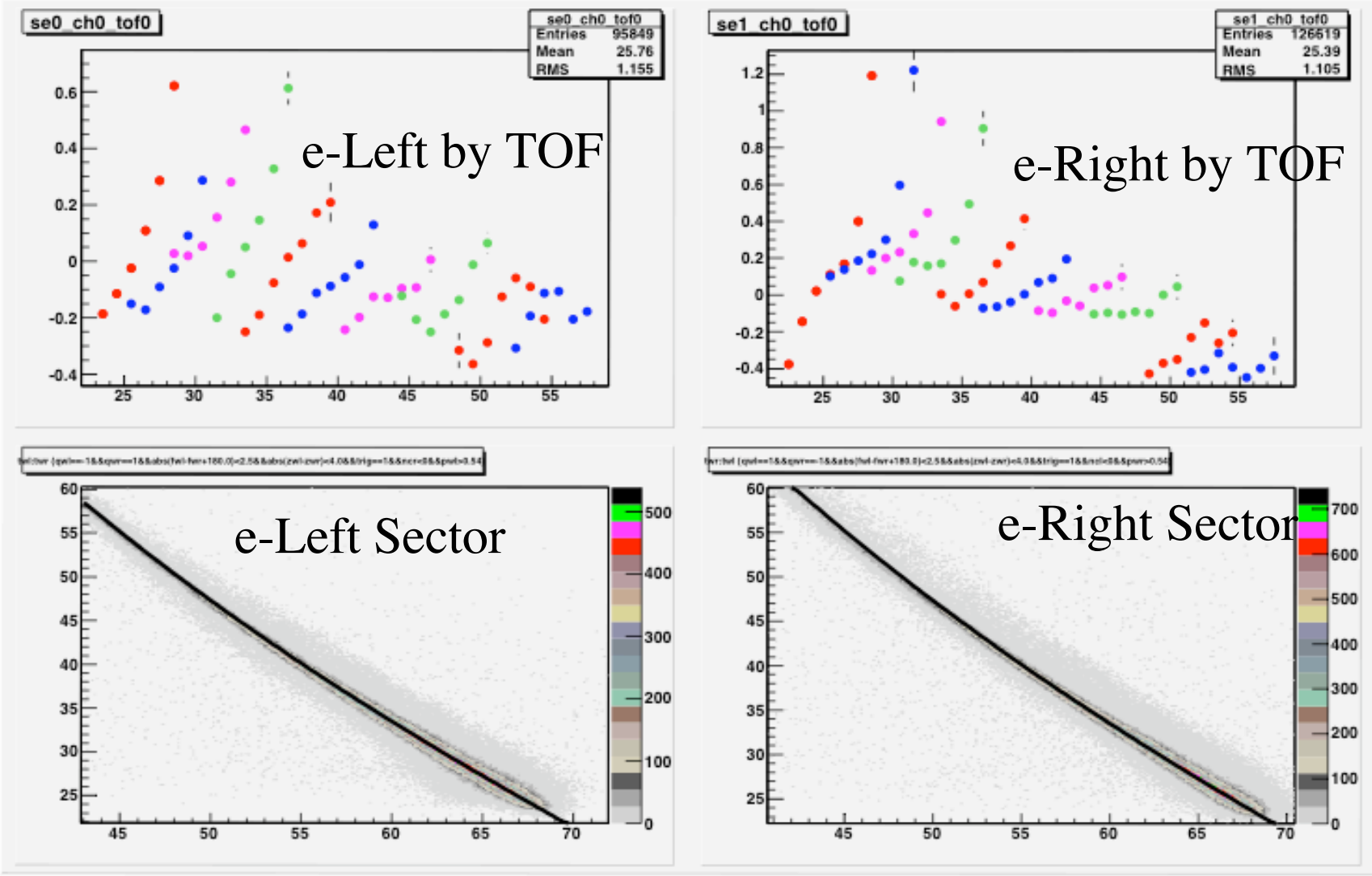
Shifts still apparent…
Next slide will show why I conclude a TOF dependency in momentum calculations



Old Crunch

Similar to above plots, this time: θ_e(measured) - $\theta_e(\theta_p)$ vs. θ_e

Same variation over θ_e per TOF. Looks nothing like $\theta_e(p_e)$

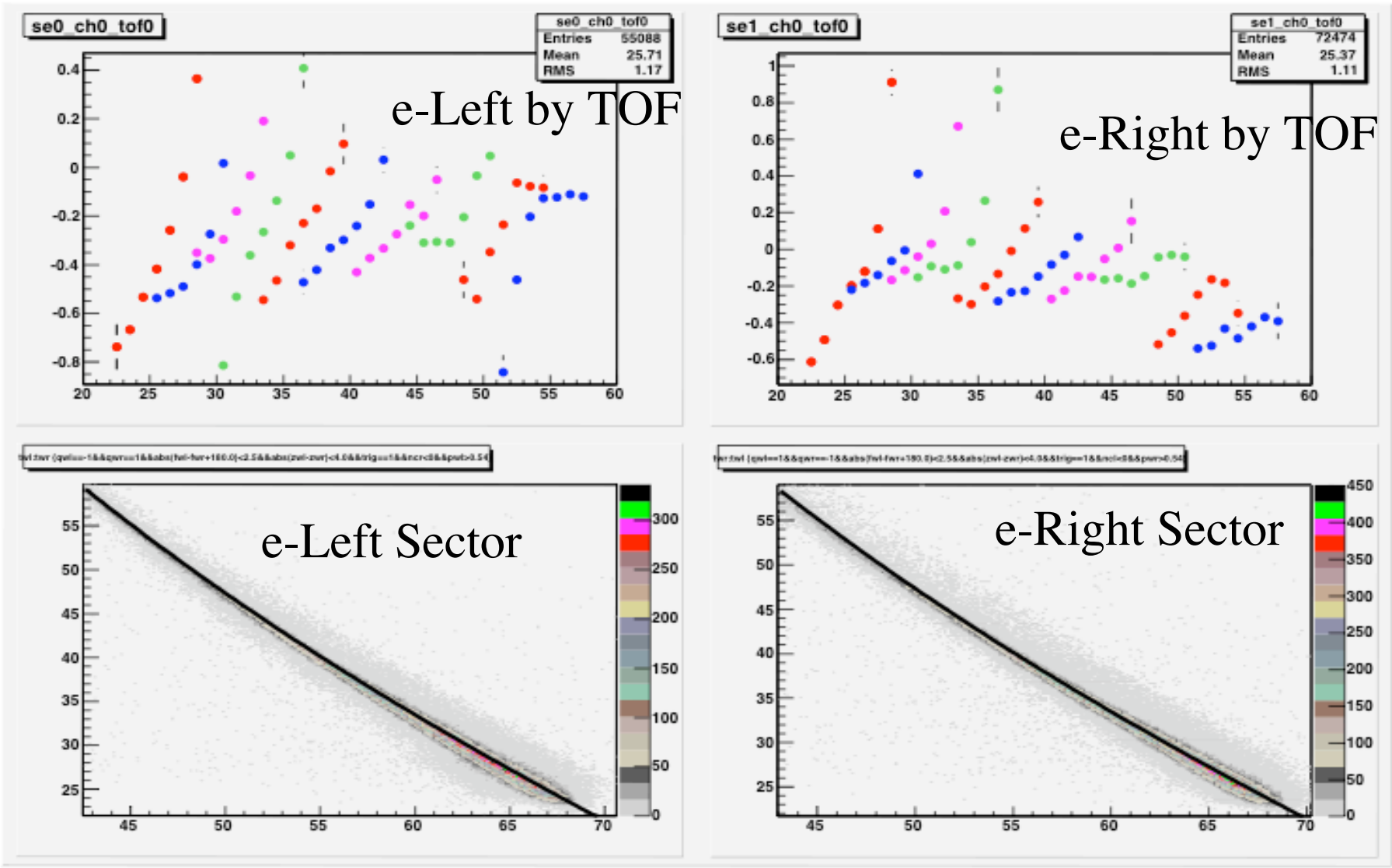


θ_e vs θ_p with Theory (great agreement)

New Crunch

Again: θ_e(measured) - $\theta_e(\theta_p)$ vs. θ_e

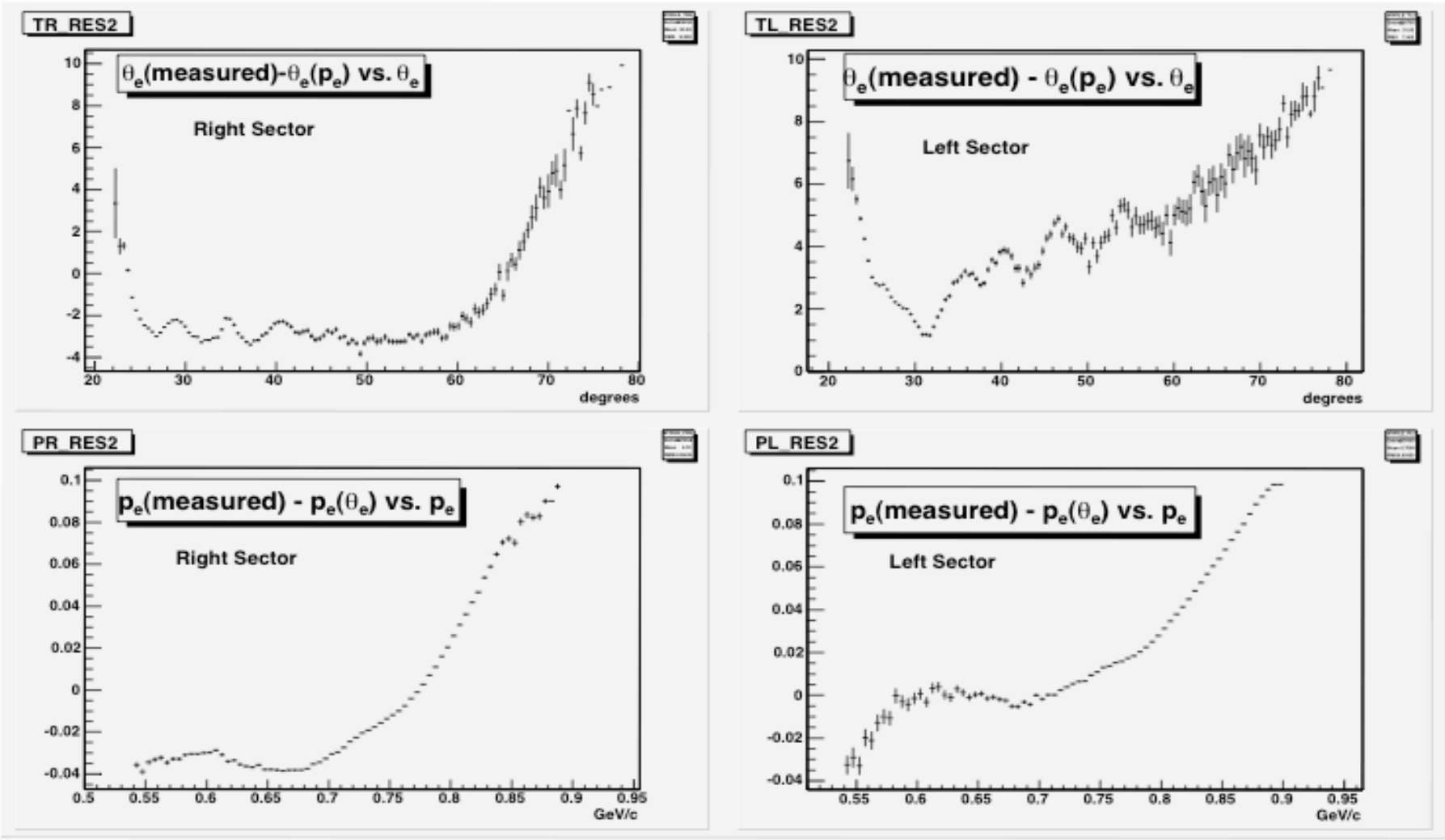
All values dropped.
Each TOF shows same variation in $\theta_e(\theta_p)$



θ_e vs θ_p with Theory (slightly worse agreement-probably due to drop)

New crunch

- Major conclusion would be smoothness of all functions of θ.
- Function of momentum show large fluctuations.
- No major difference between old and new values here.



New Crunch

- Much Smoother θ(p) graph as compared to electron above.
- Left sector θ and p look great from 40-67 degrees.
- Also reconstructs beam energy well.