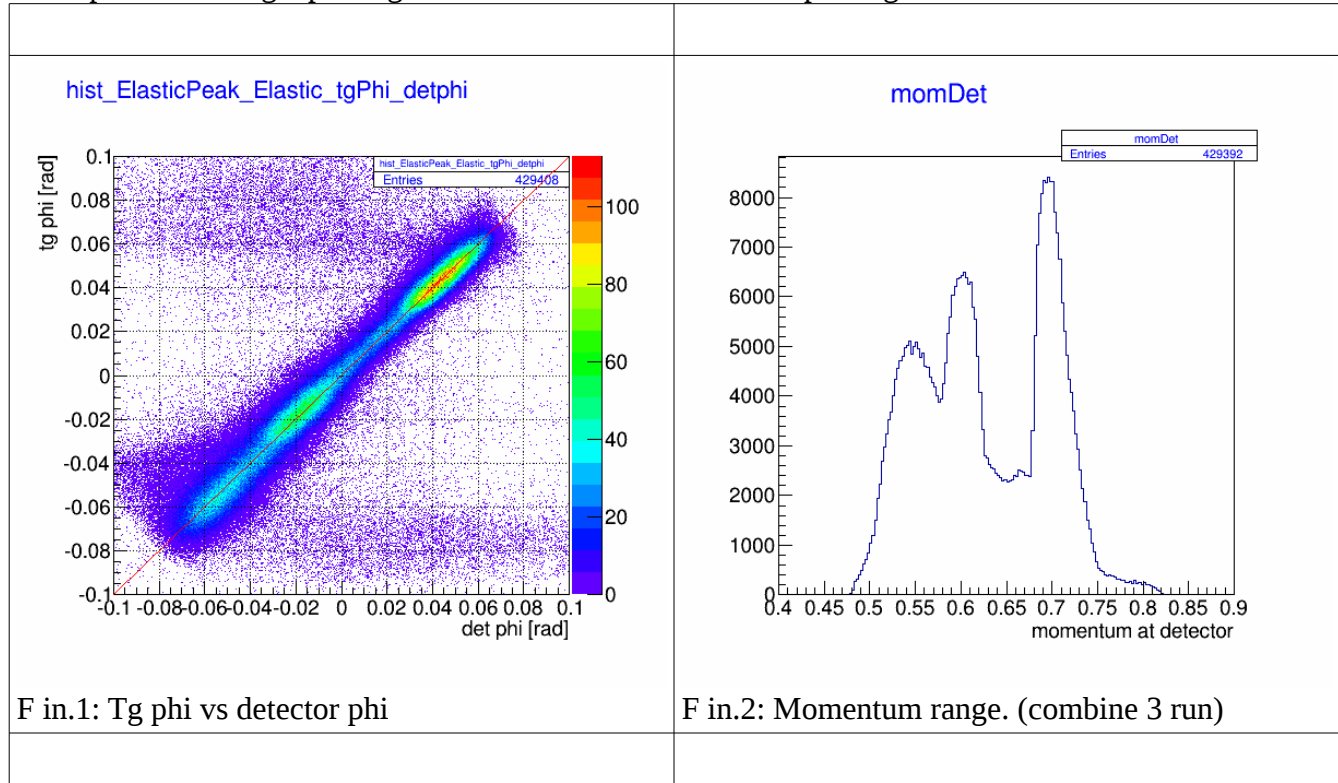From elastic data 1st path which are within 0.5-0.8 GeV/c momentum, we translate the |q| to expected momentum at the detector through energy loss and also translate q angles into in-plane(phi) and out-of-plane(theta) angle.
We expected the target phi angle = 0 will match with detector phi angle = 0.

F in.1: Tg phi vs detector phi	F in.2: Momentum range. (combine 3 run)

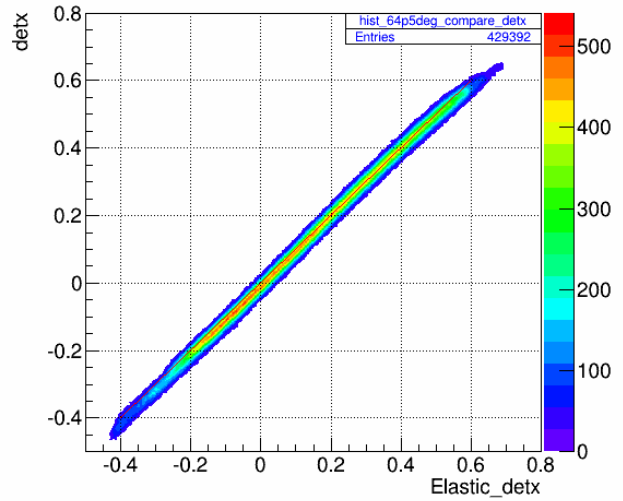Put the p_expected, tg_theta,and tg_phi as an input and vary simulation parameters.
We compare the simulation parameters at the detector to data parameters at the detector. The adjustment is aim for the closest option for the simulation=data.
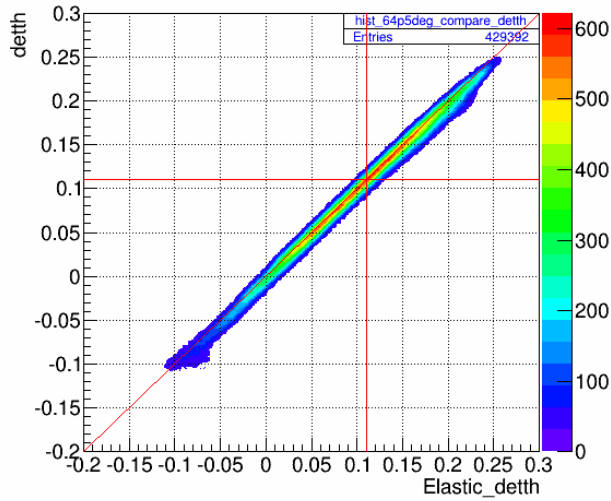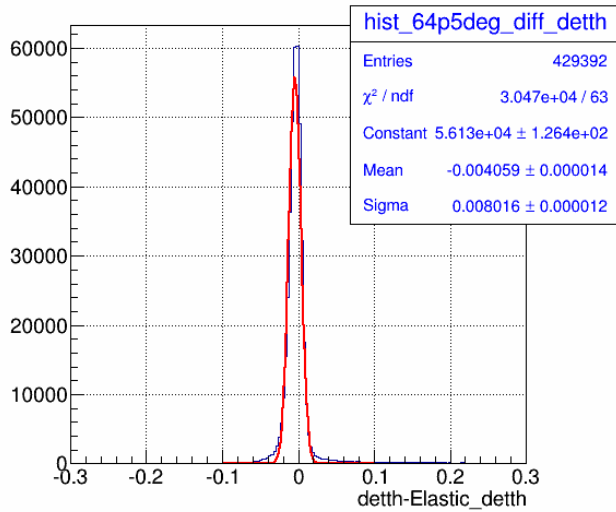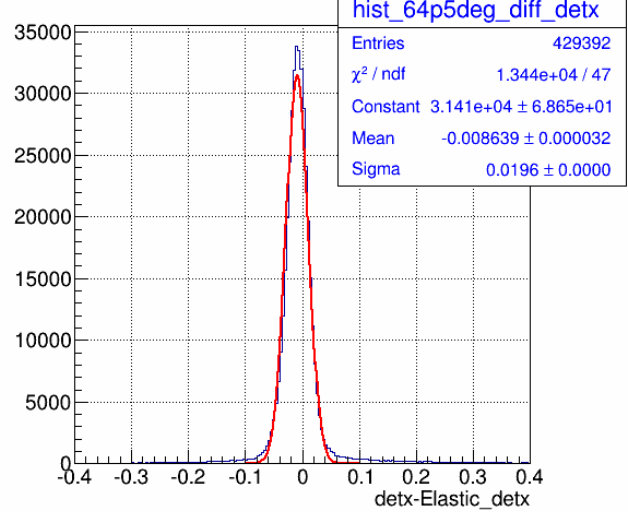
F compare.1: simulation detector theta vs elastic detector theta.

F compare.2: simulation detector x vs elastic detector x.

F compare.3: simulation detector theta - elastic detector theta.
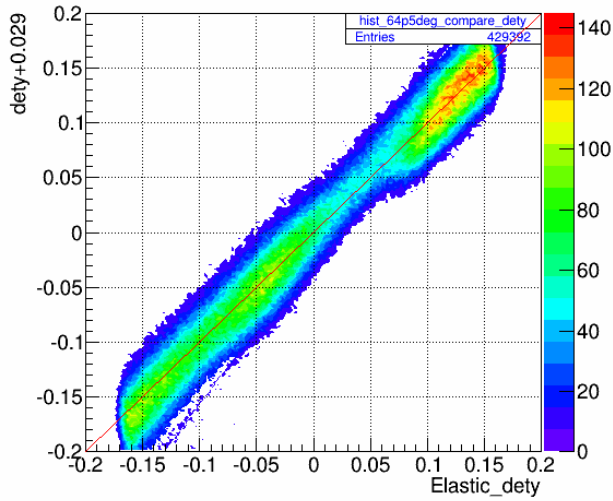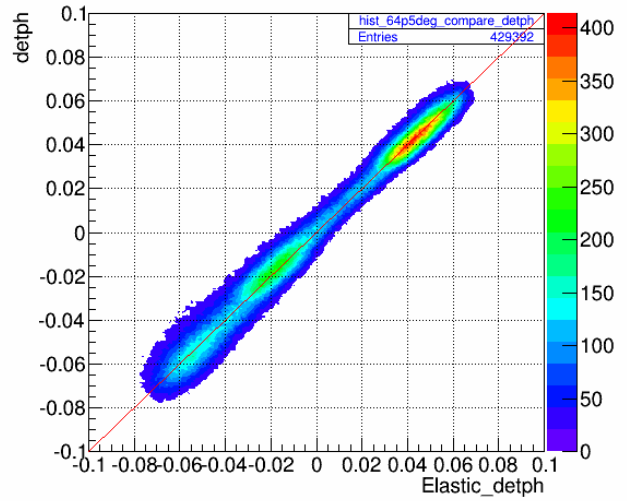

F compare.4: simulation detector x - elastic detector x.

In detector theta and x, we have -4 mrad and 8.6 mm difference respectively.

F compare.5: simulation detector y vs elastic detector y.

F compare.6: simulation detector phi vs elastic detector phi.

A single offset is in detector y of 2.9 cm.

We then apply the extracted parameters into the db and rerun the production and also try to extract the acceptance.