

Update on:
Checks on optics matrices,
New LHRS Gmp optics matrix,
and work on energy loss corrections

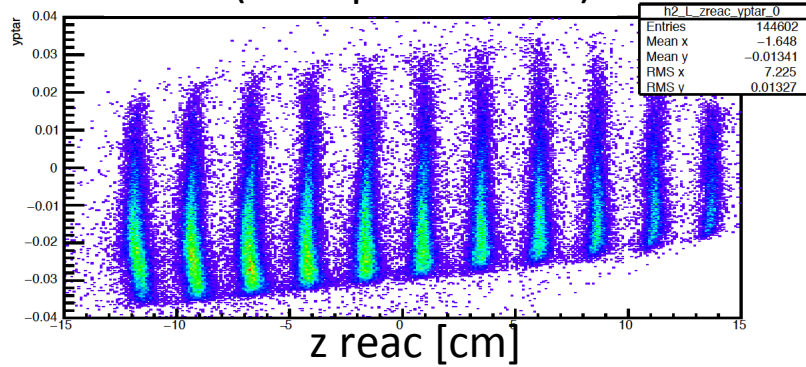
Reynier Cruz Torres
(May 29, 2018)

Optics checks

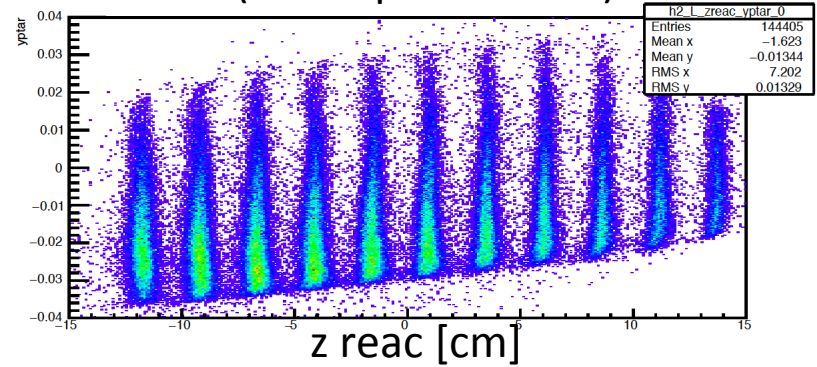
- Last week, we found out that the LHRS Gmp optics matrix that the Tritium experiments were using was not the most updated one.
- We replayed the data using this “new” LHRS Gmp optics matrix and compared it to the distributions obtained using the “old” one.
- The optics check includes:
 - * multi-foil data: y_{ptar} should be independent from z_{reac} (vertex z-coordinate in Hall Coordinate System)
 - * hydrogen data: W^2 (relevant for LHRS) should be independent of the “target” variables (y_{tar} , y_{ptar} , x_{ptar} , δ)

yptar vs. z_{reac} (Multi-foil data)

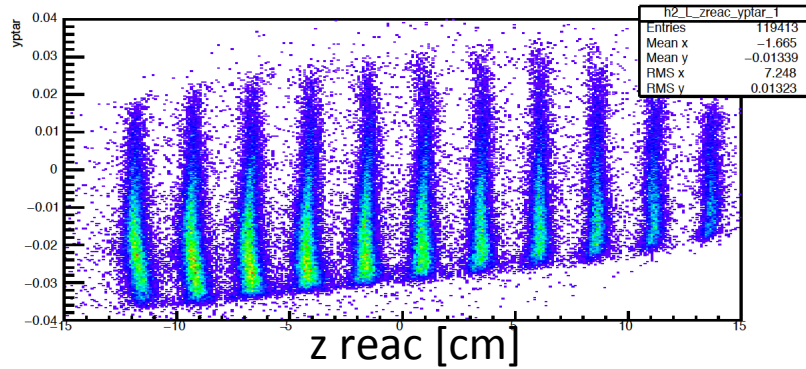
LHRS (Old optics matrix)



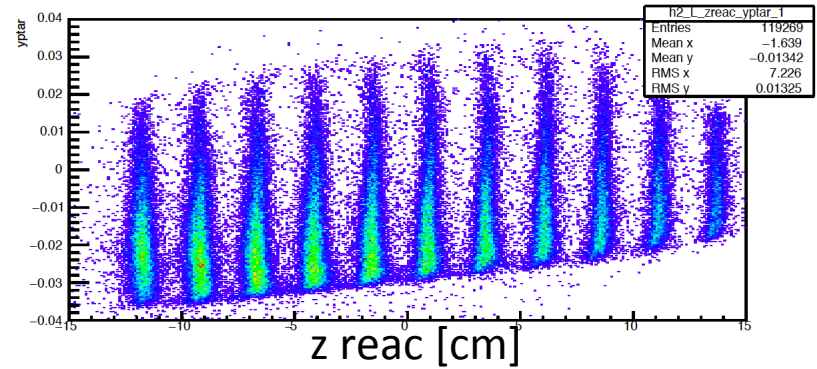
LHRS (New optics matrix)



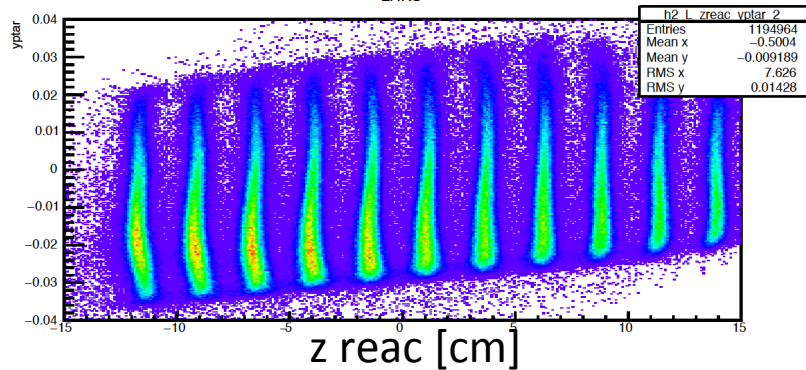
LHRS



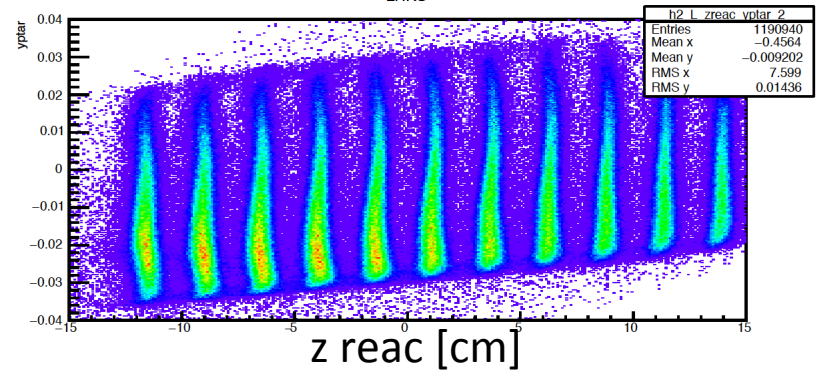
LHRS



LHRS

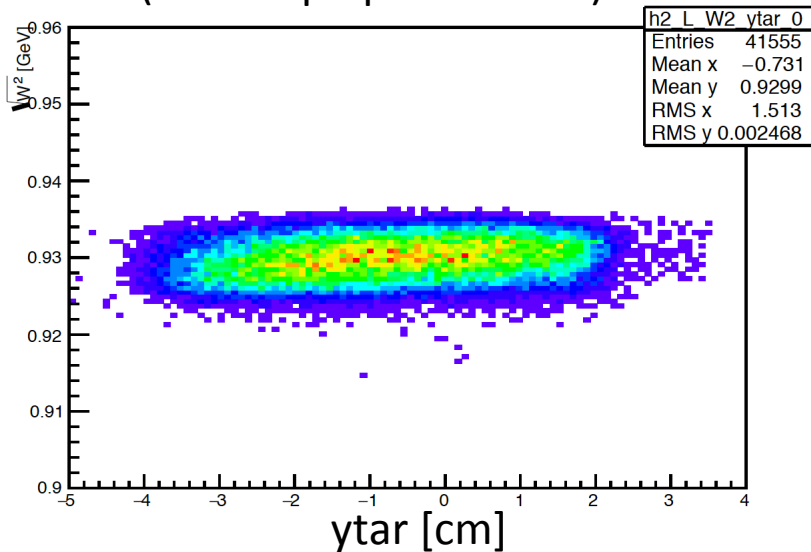


LHRS



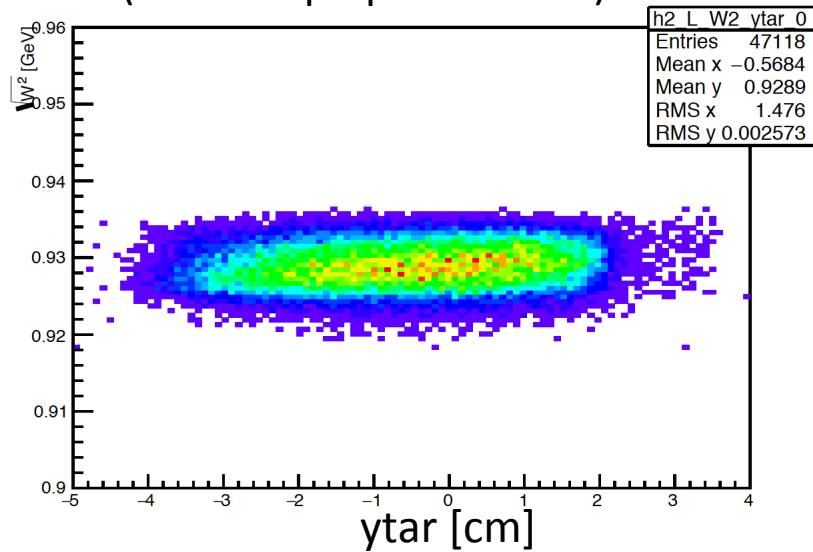
Checking optics matrices (Hydrogen data)

(Old Gmp optics matrix)

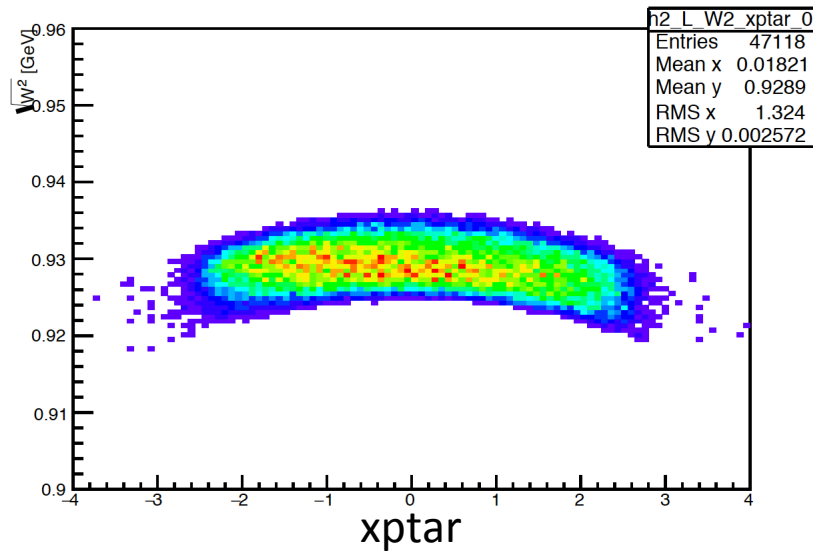
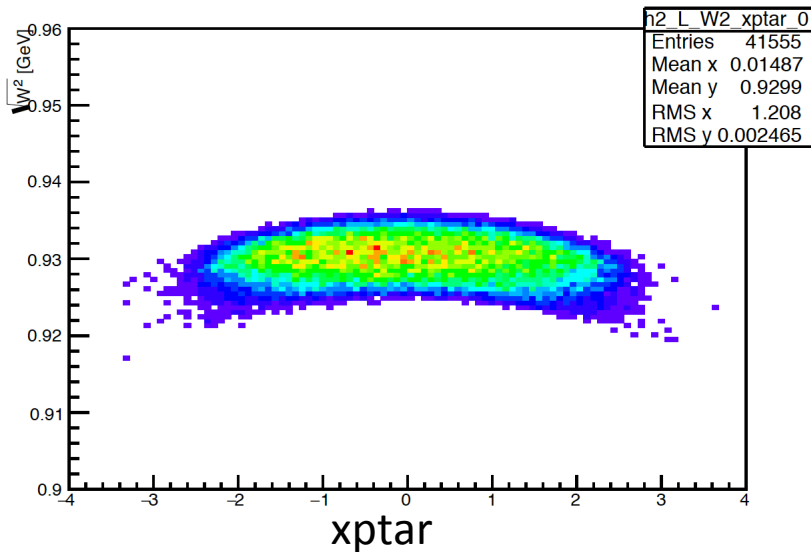


LHRS

(New Gmp optics matrix)

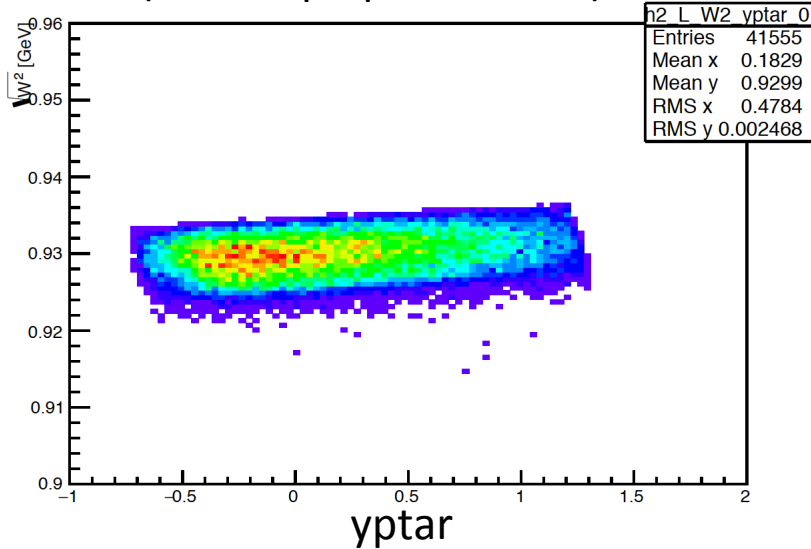


LHRS



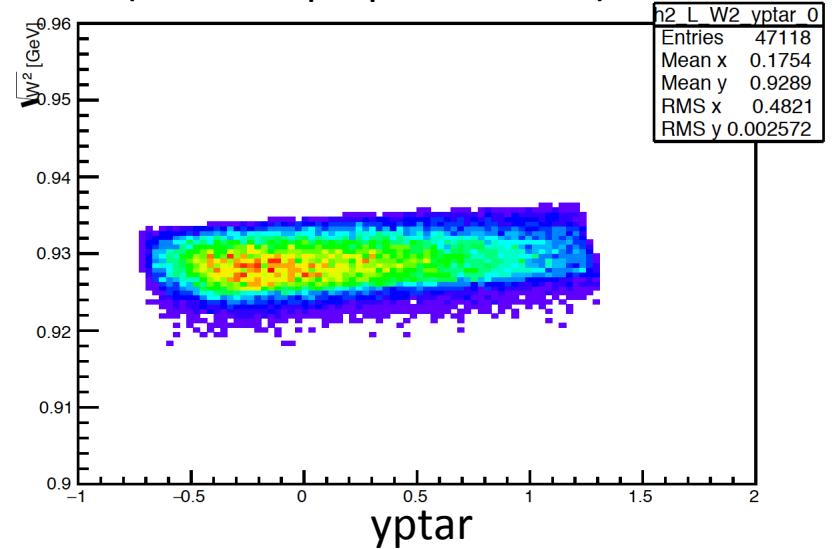
Checking optics matrices (Hydrogen data)

(Old Gmp optics matrix)

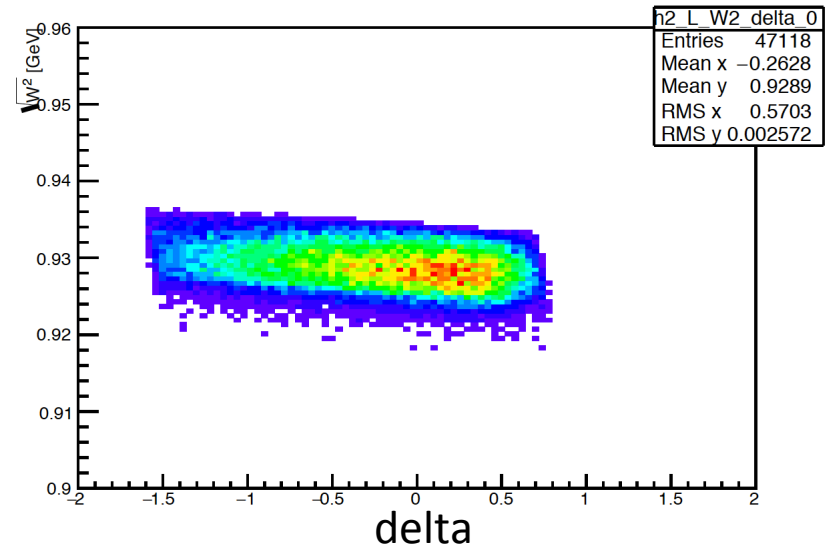
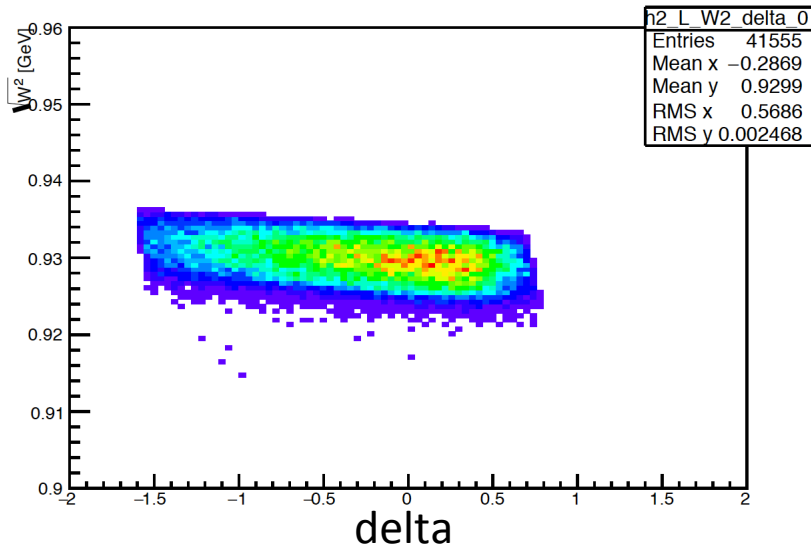


LHRS


(New Gmp optics matrix)



LHRS



Energy Loss

 Places where Eloss is taken into account

