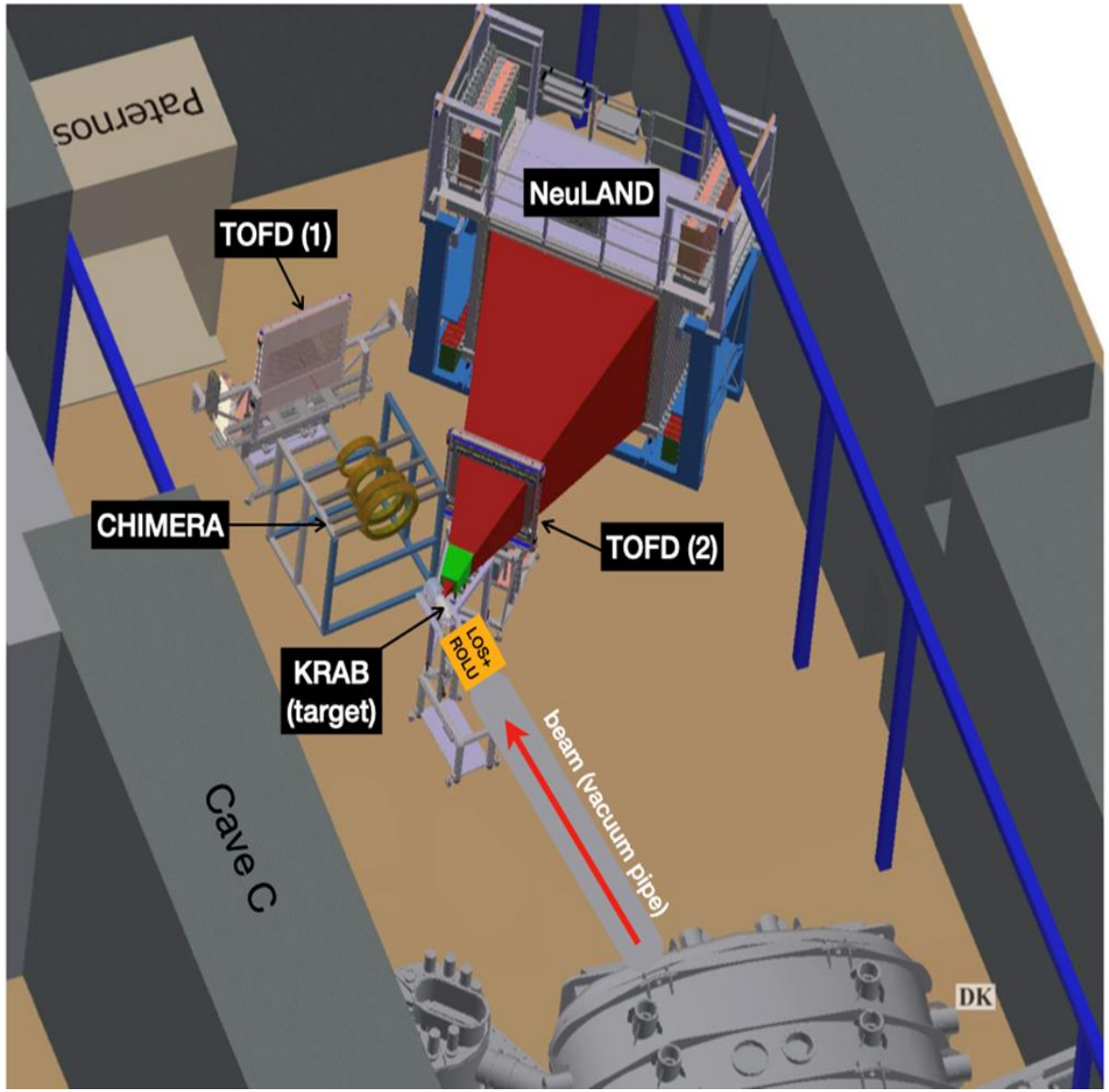
ASY-EOS II

March 2025 at GSI: Au + Au collision

Energy [AMeV]	Justification
280	highest sensitivity on K_{sym}
400	reference to ASY-EOS I, n/p tests higher densities than before
600	highest sensitivity on L, high-density tested
1000	Maximum energy (≈ density) where models agree on v2 sensitivity



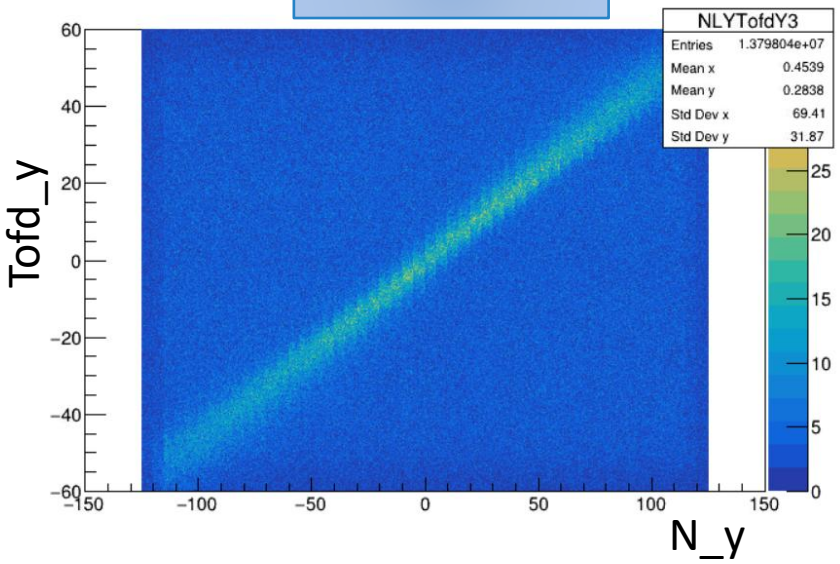
RUN	GIORNO	INIZIO	FINE	DURATA	TARGET	SB	ENERGIA
357	26-mar	10:08	12:14	02:06	AU	NO	280
356	26-mar	08:05	10:01	01:56	EMPTY	NO	280
331	24-mar	19:15	21:16	02:01	AU	SI	280
329	24-mar	16:50	17:18	00:28	EMPTY	SI	280

Neuland-Tofd

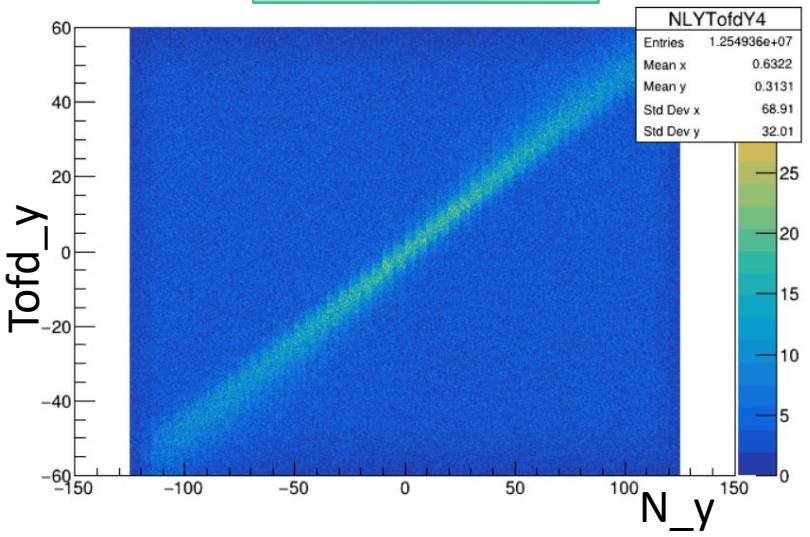
357 Au2% at 280 Mev/A

Tofd-Neuland correlation in Y

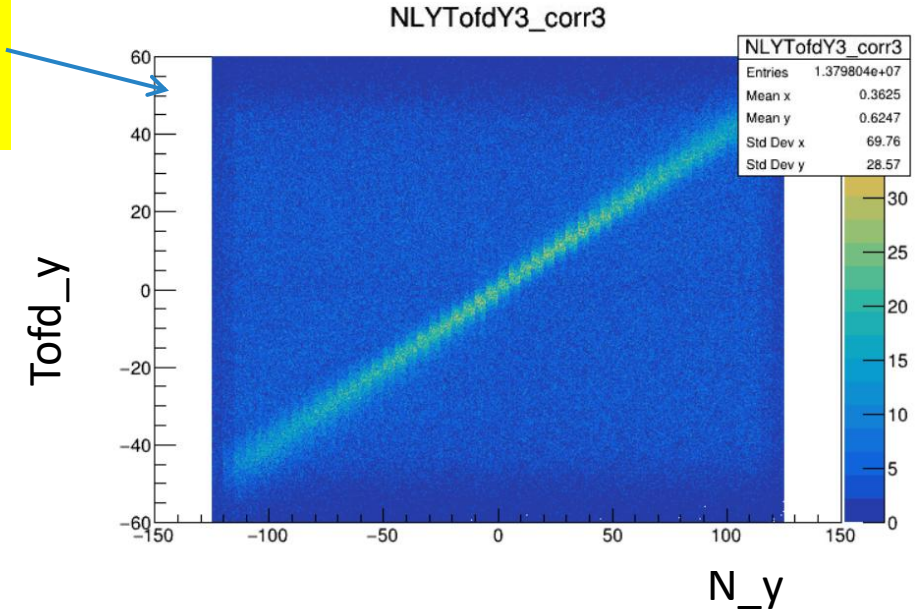
Tofd Plane 3

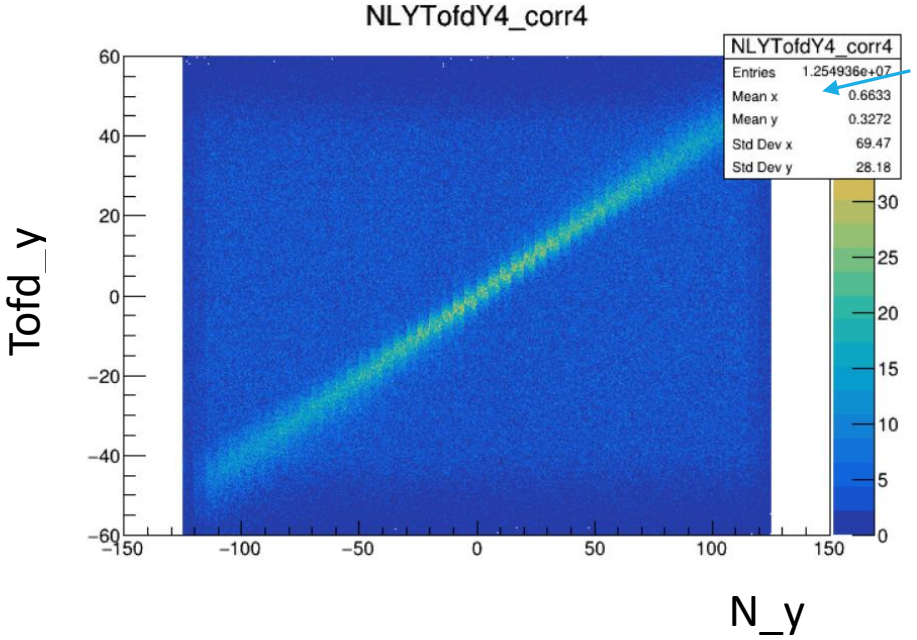


Tofd Plane 4



after the correction of the tofd_y values

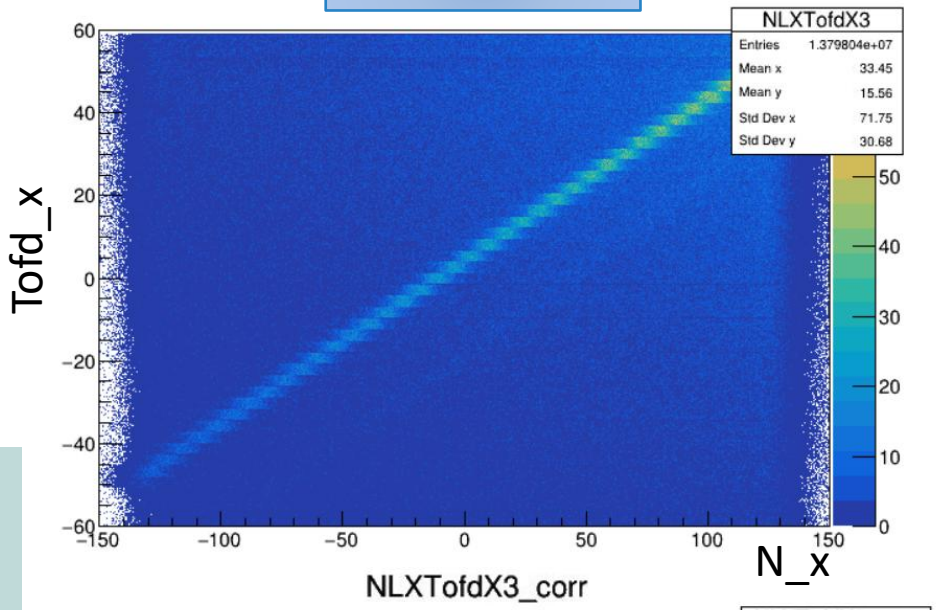




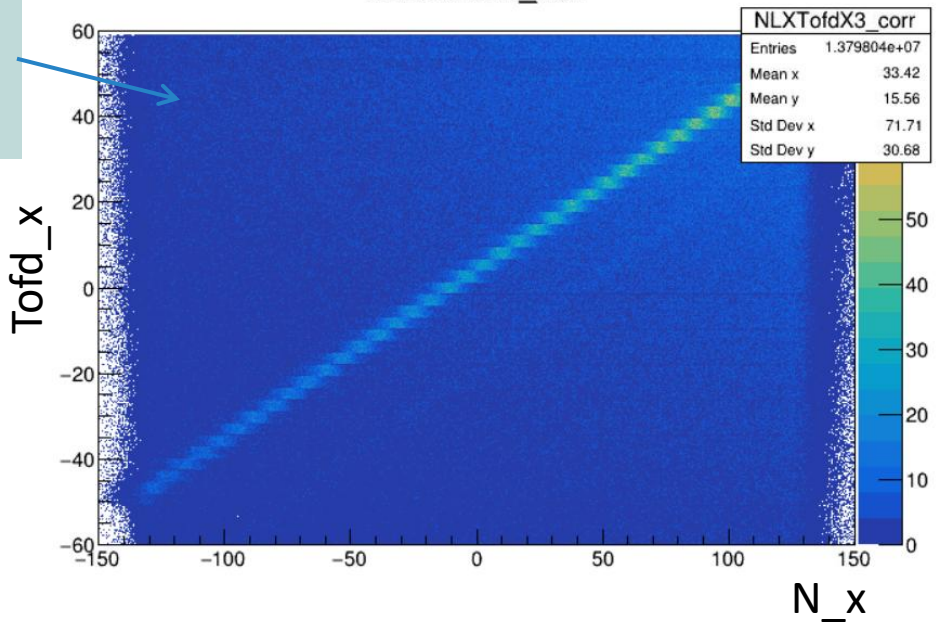
after the correction of the tofd_y values

Tofd-Neuland correlation in X

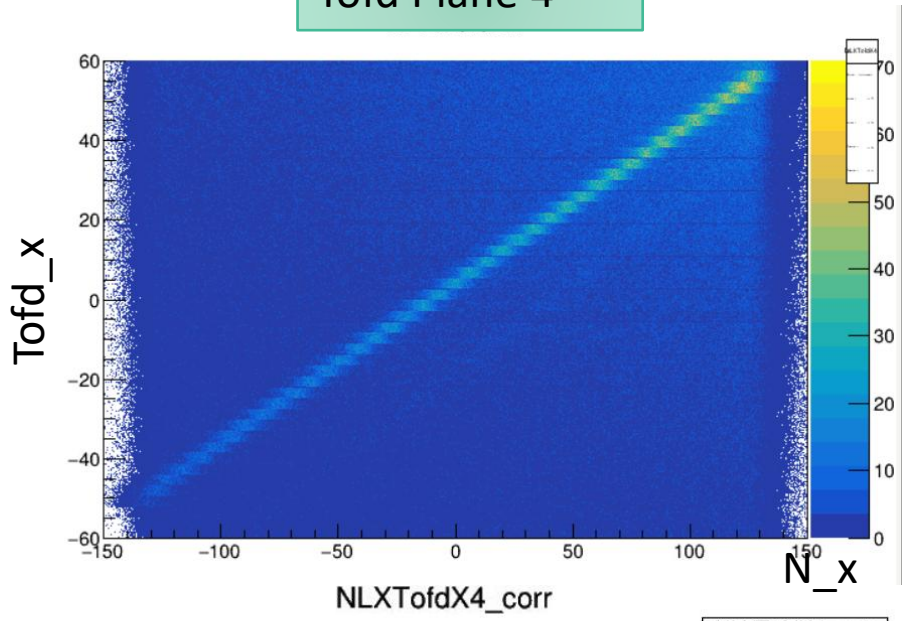
Tofd Plane 3



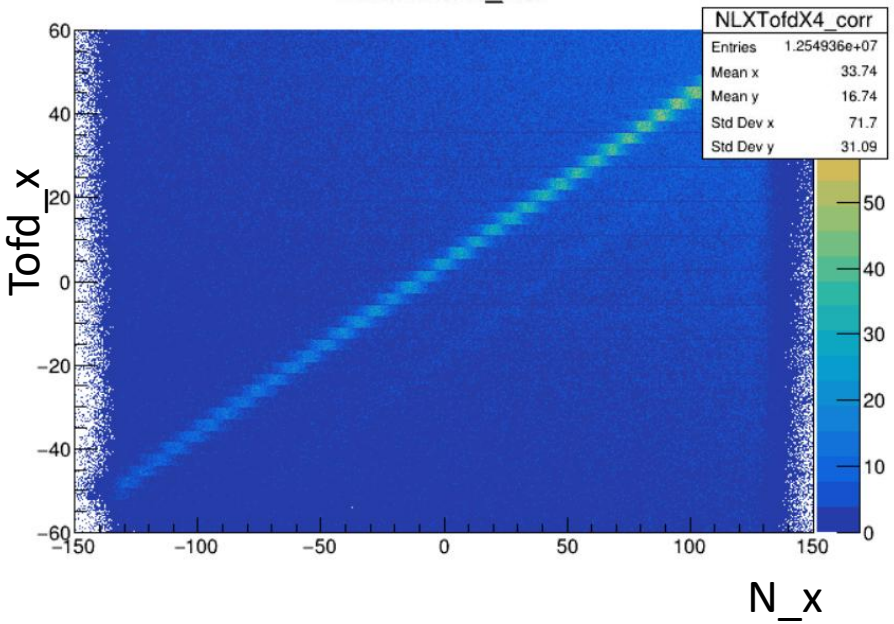
after the correction of the neuland _x values



Tofd Plane 4

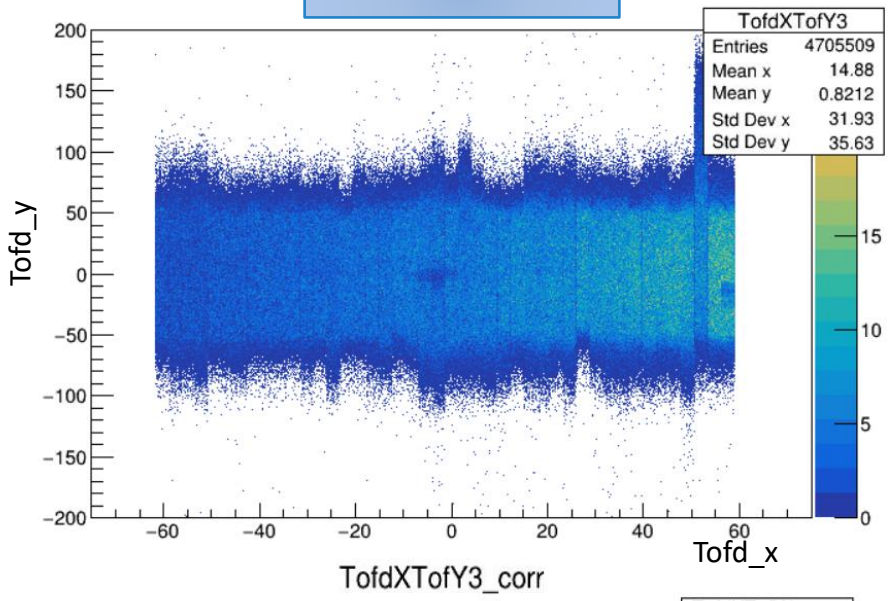


after the correction of the neuland _x values

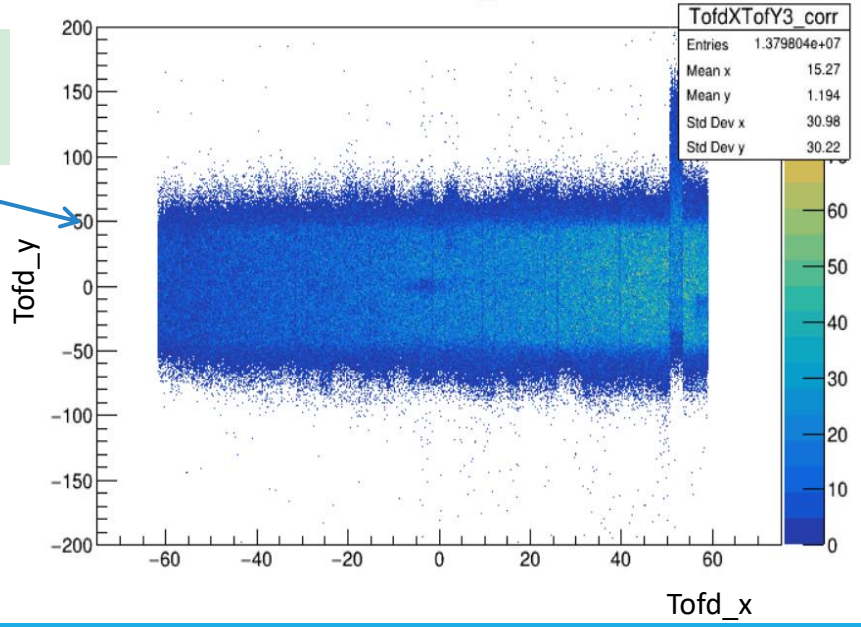


Tofd-Y-Tofd-X

Tofd Plane 3

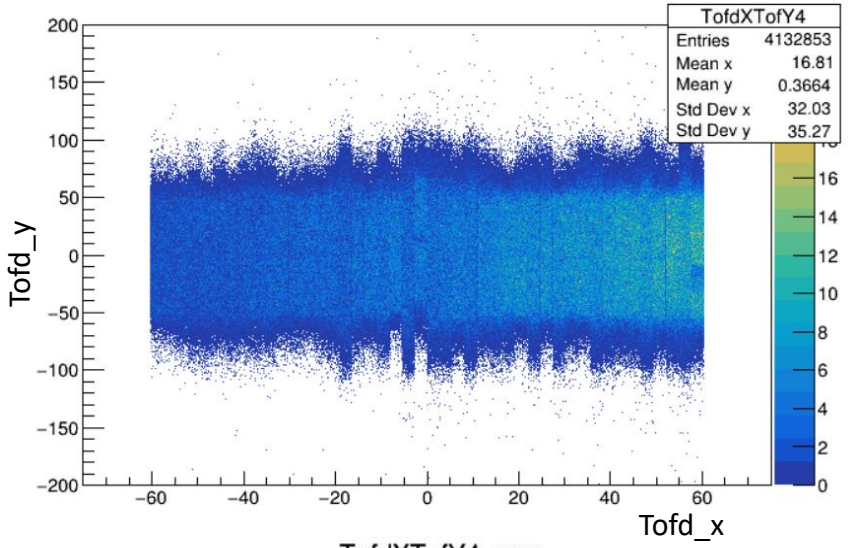


TofdXTofY3_corr

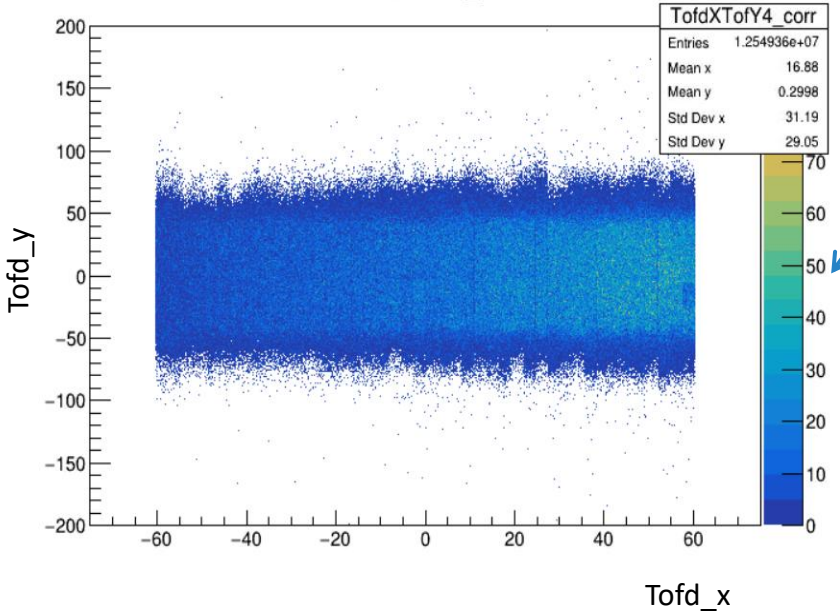


after the correction.

Tofd Plane 4



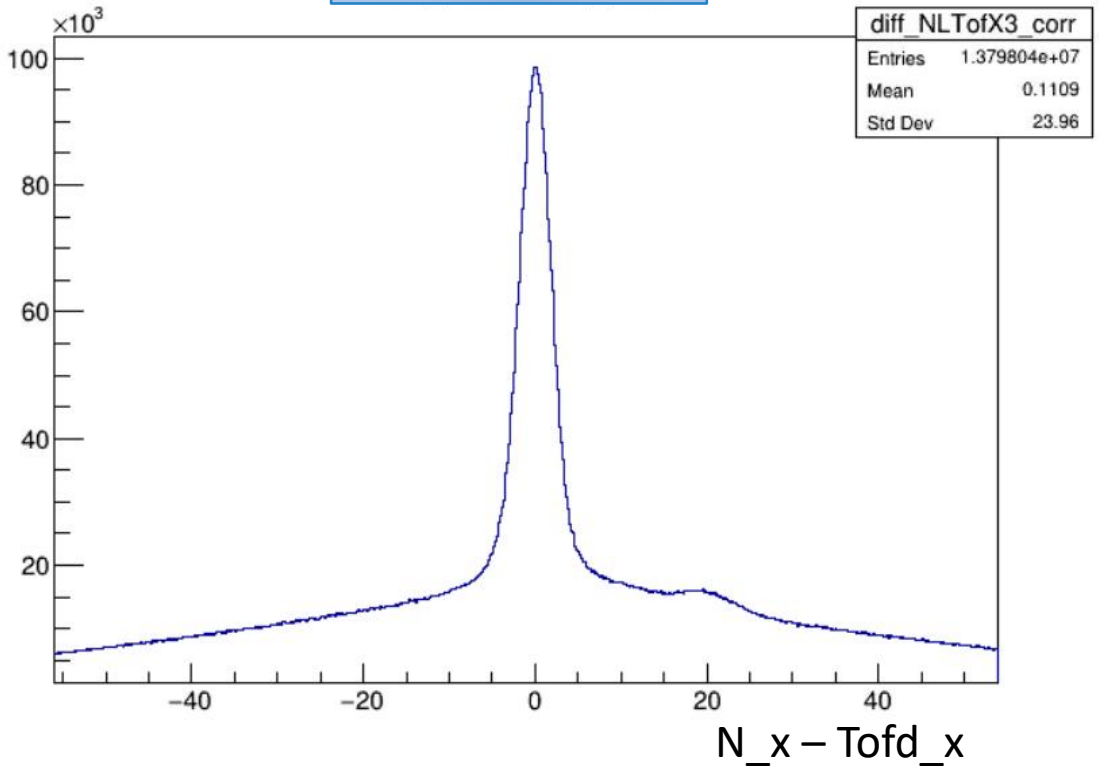
TofdXTofY4_corr



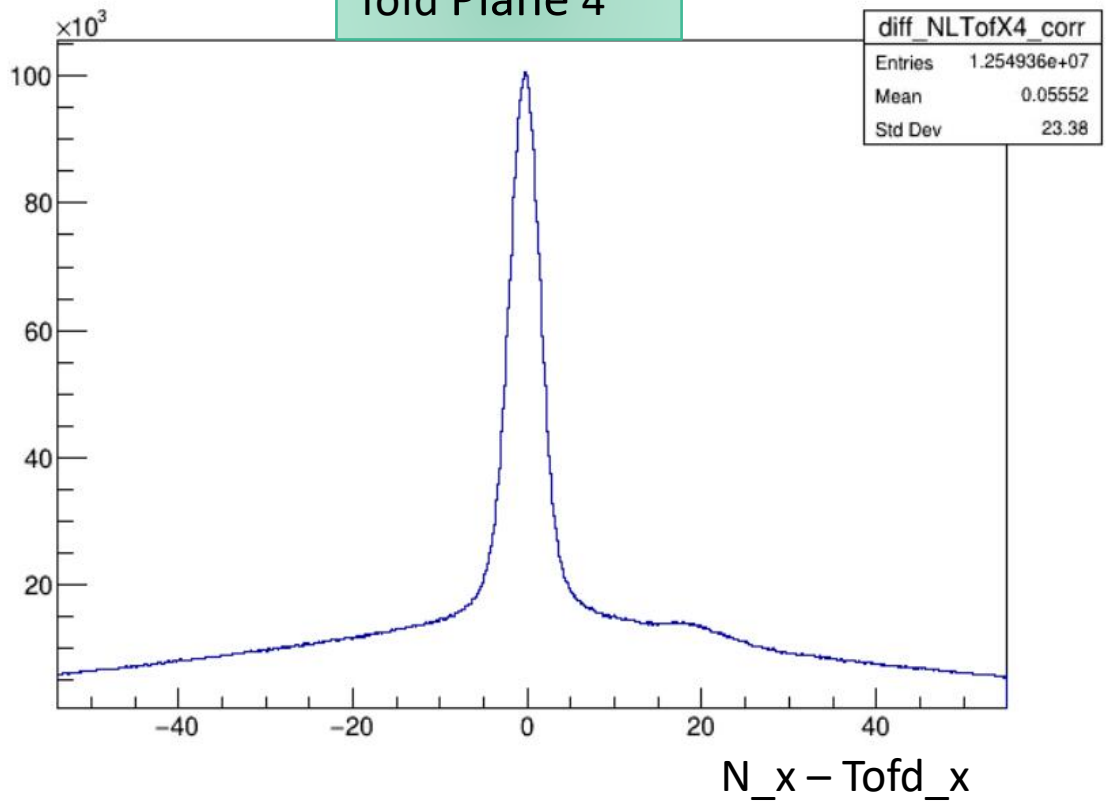
after the correction.

Taking now the difference between the **already corrected** x-values of Neuland and TOFD

Tofd Plane 3

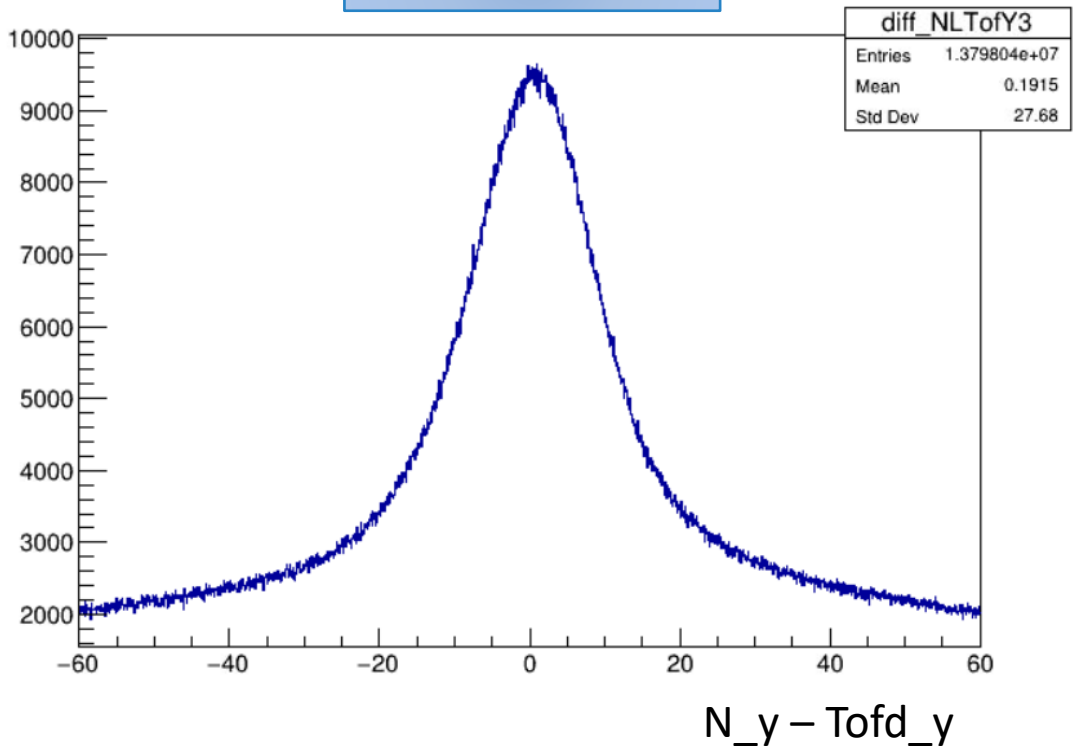


Tofd Plane 4



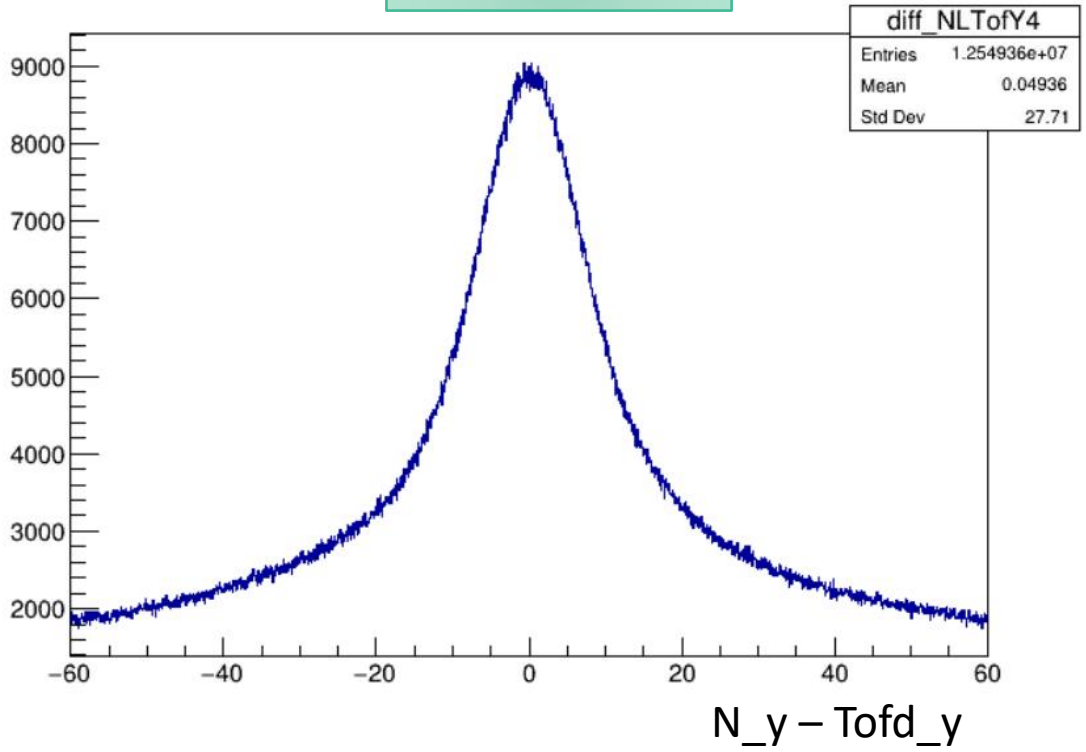
Taking now the difference between the **already corrected y**-values of Neuland and TOFD

Tofd Plane 3



N_y – Tofd_y

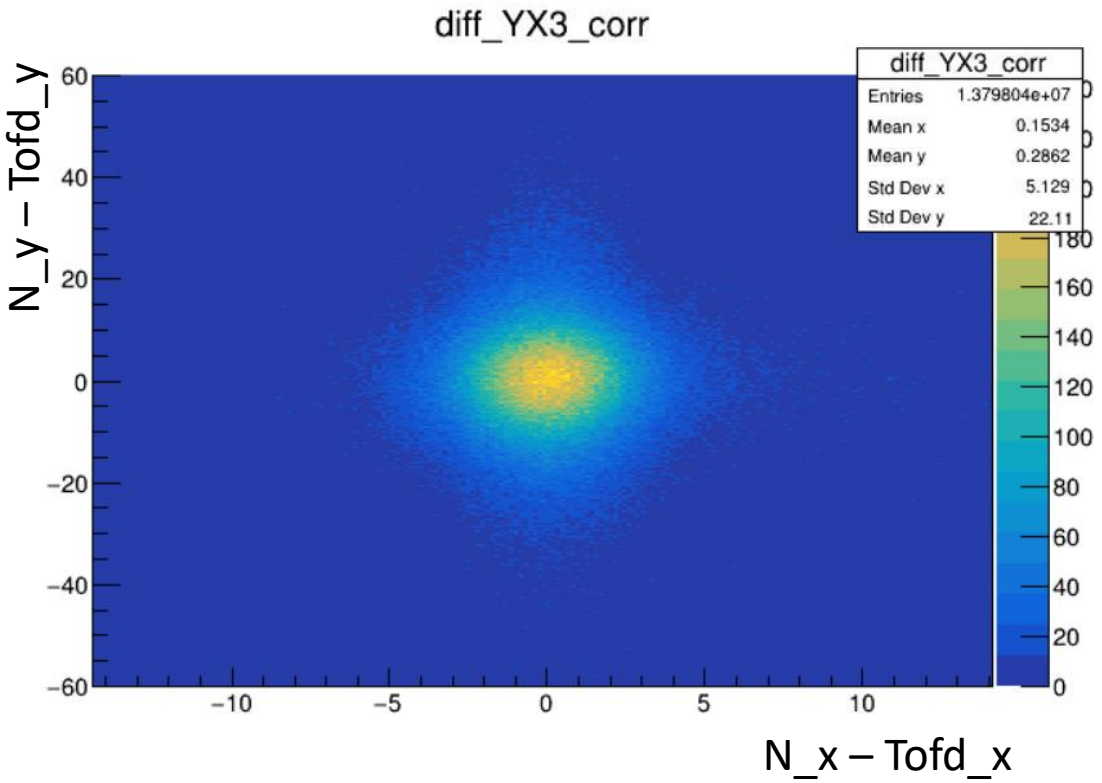
Tofd Plane 4



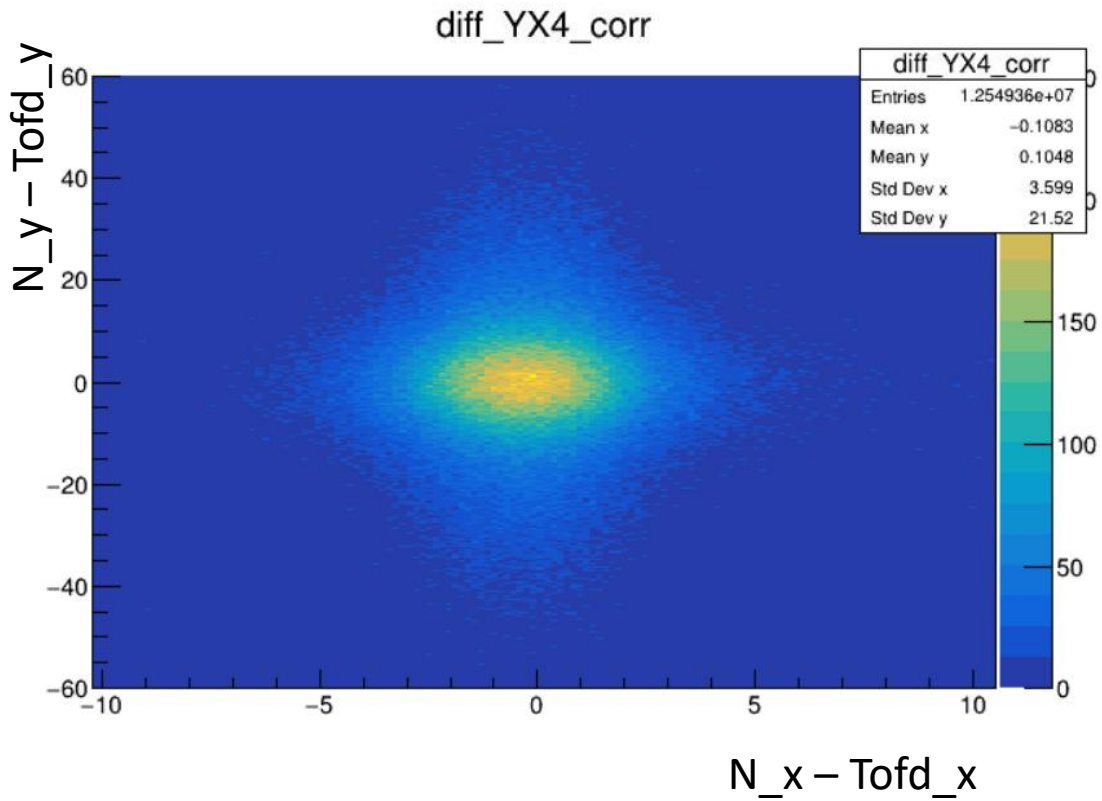
N_y – Tofd_y

Difference Tofd-Neuland Y vs Tofd-Neuland X

Tofd Plane 3

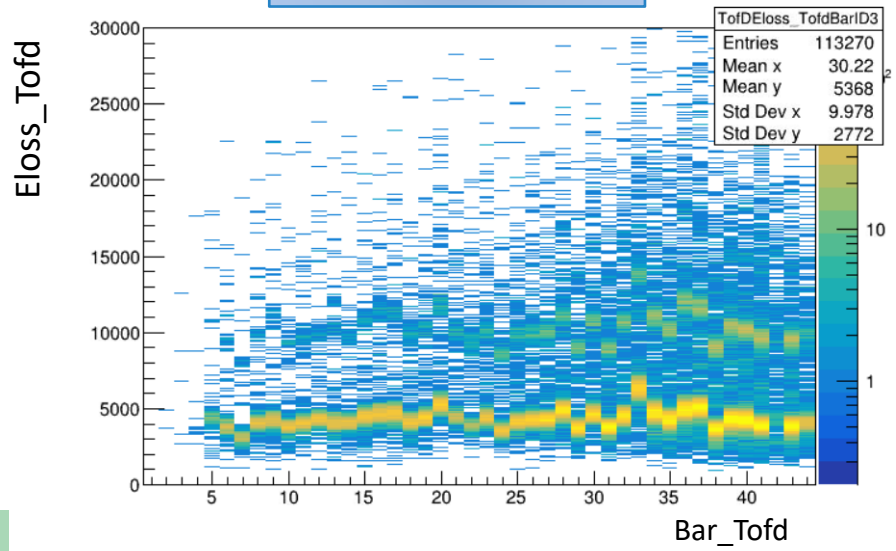


Tofd Plane 4

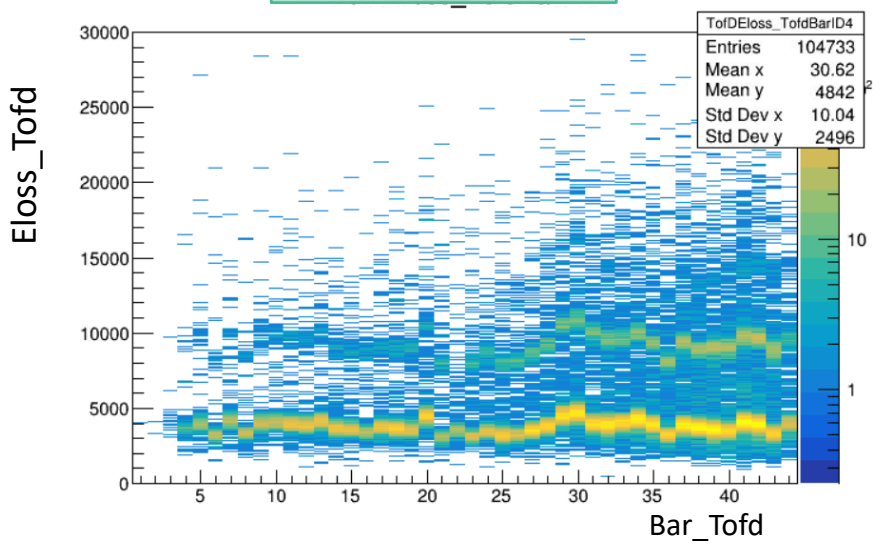


Energy loss in Tofd vs Bar_Tofd

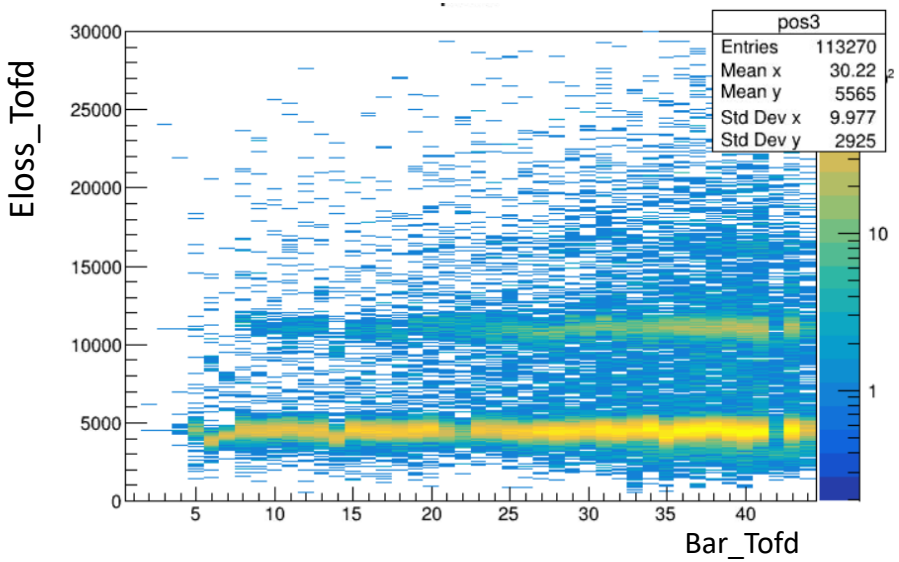
Tofd Plane 3

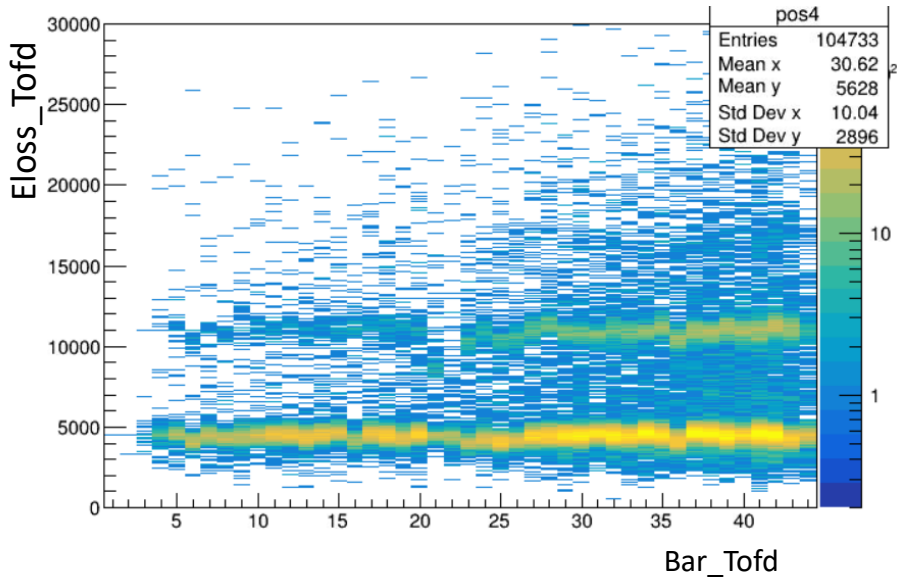


Tofd Plane 4



after the correction.



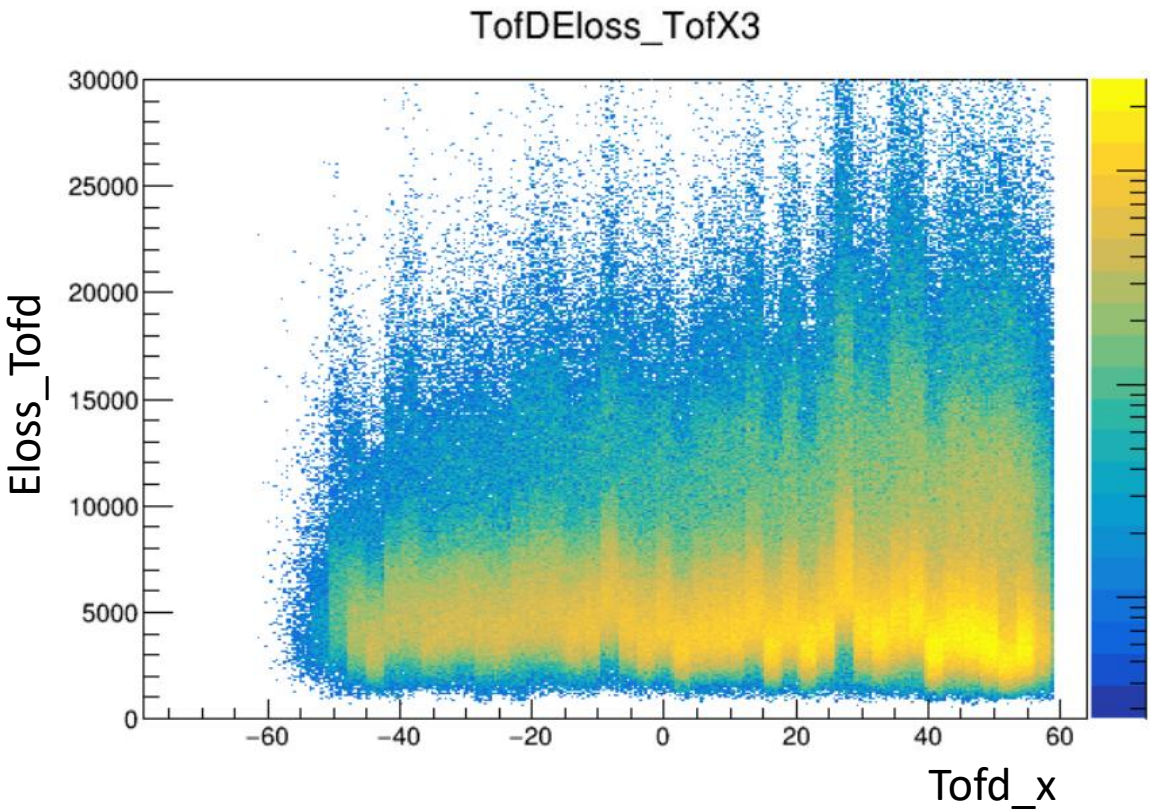


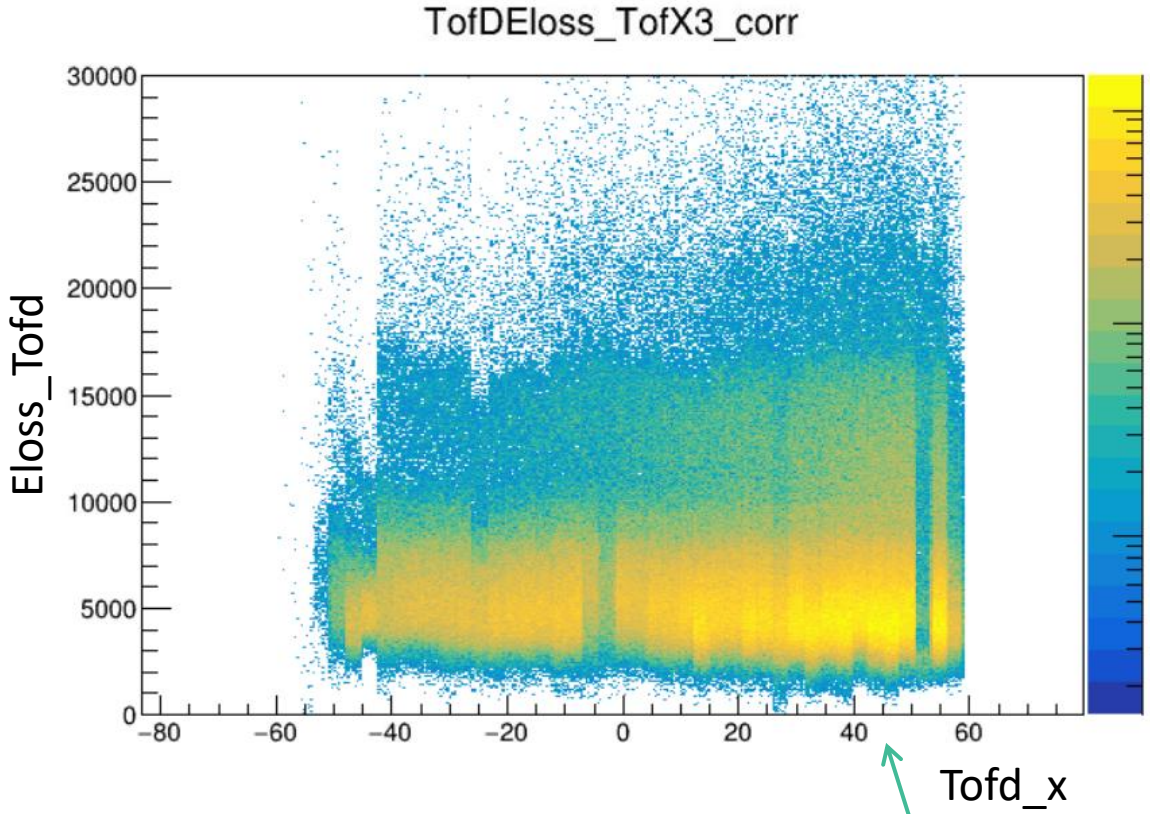
after the correction.

These plots were made by applying time-of-flight cuts in order to select the energy-loss peaks

Energy loss in Tofd vs TofdX

Tofd Plane 3



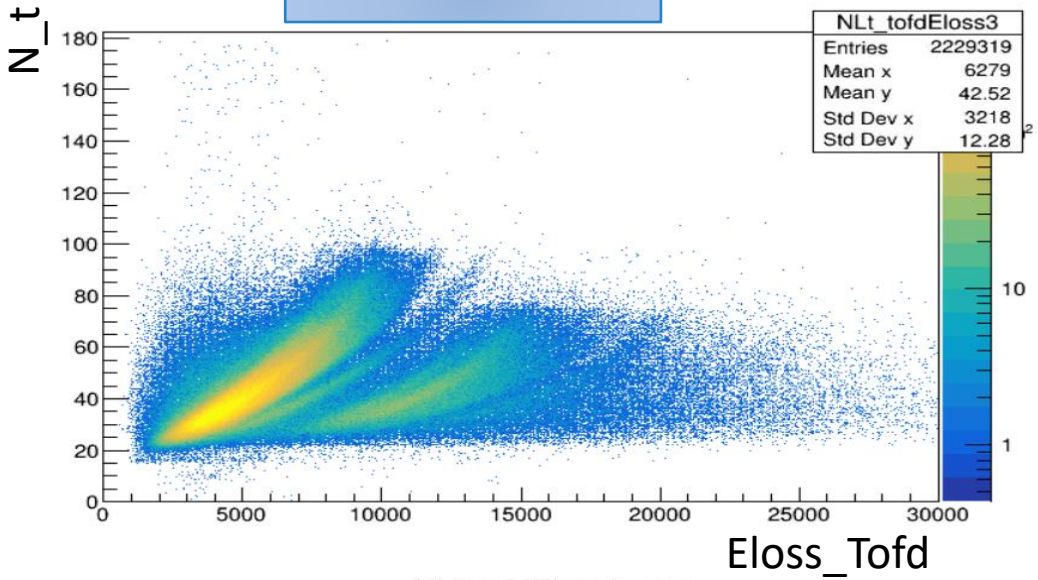


- Some channels **still need to be corrected manually**.

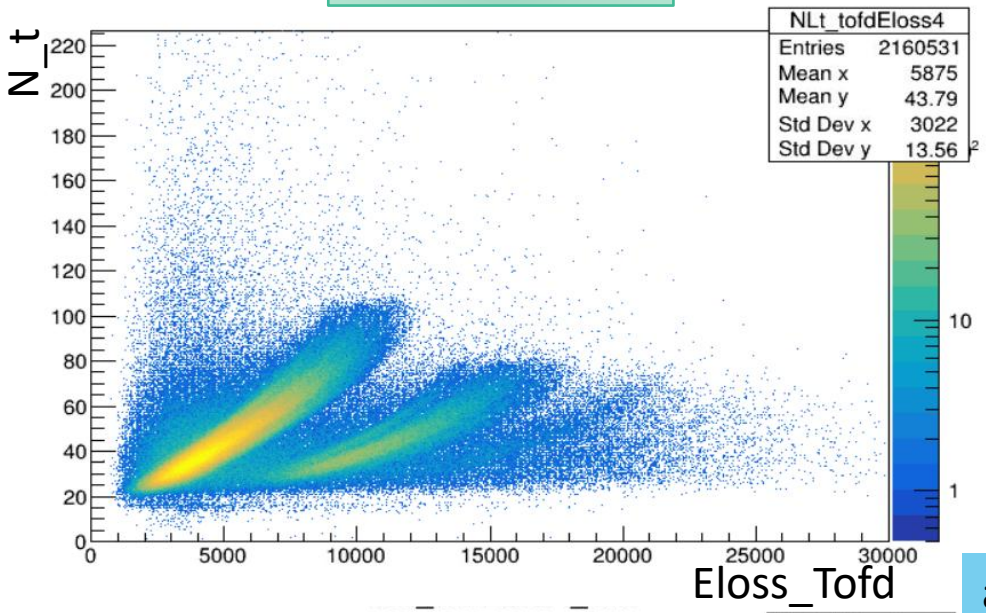
after the correction.

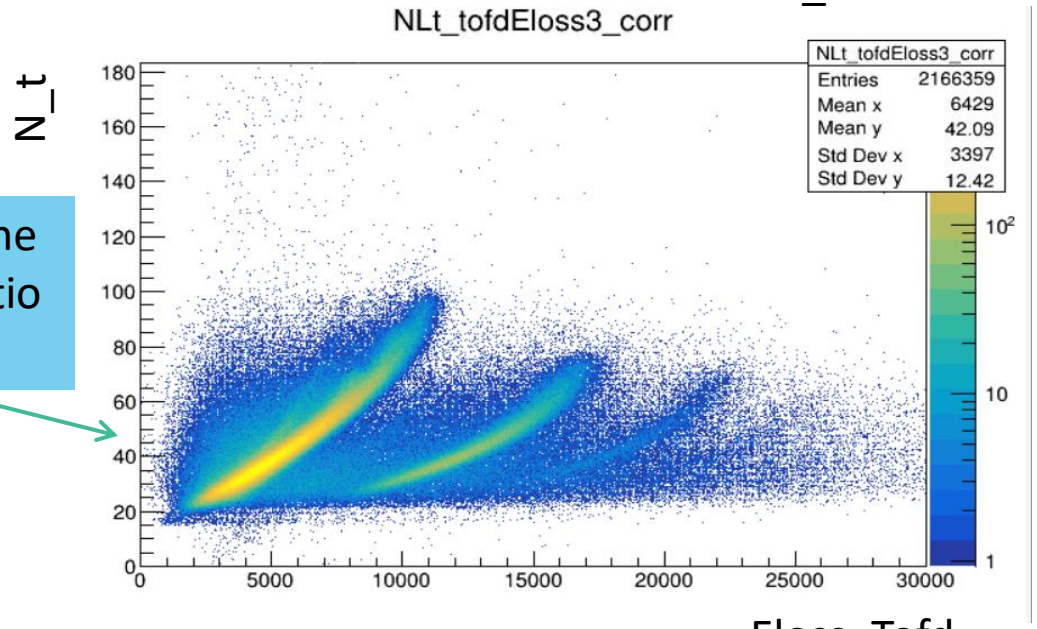
Neuland_time vs Energy loss in Tofd

Tofd Plane 3

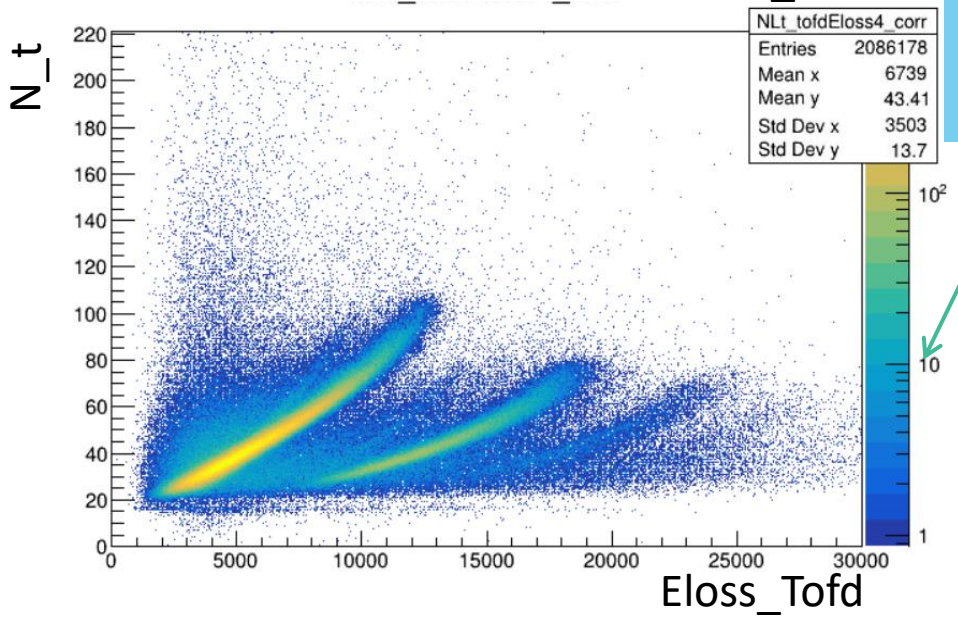


Tofd Plane 4





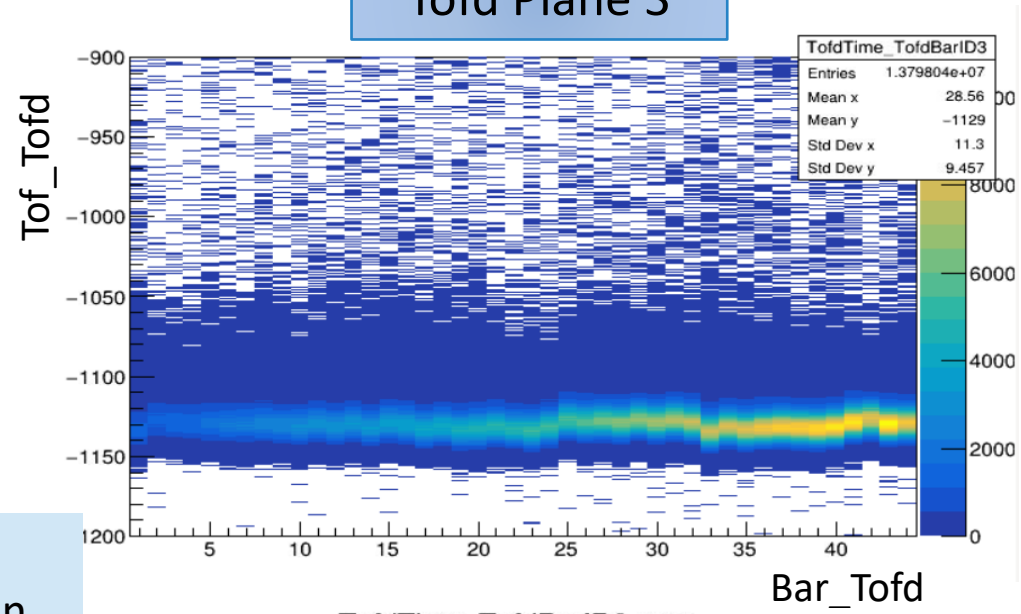
after the correctio n.



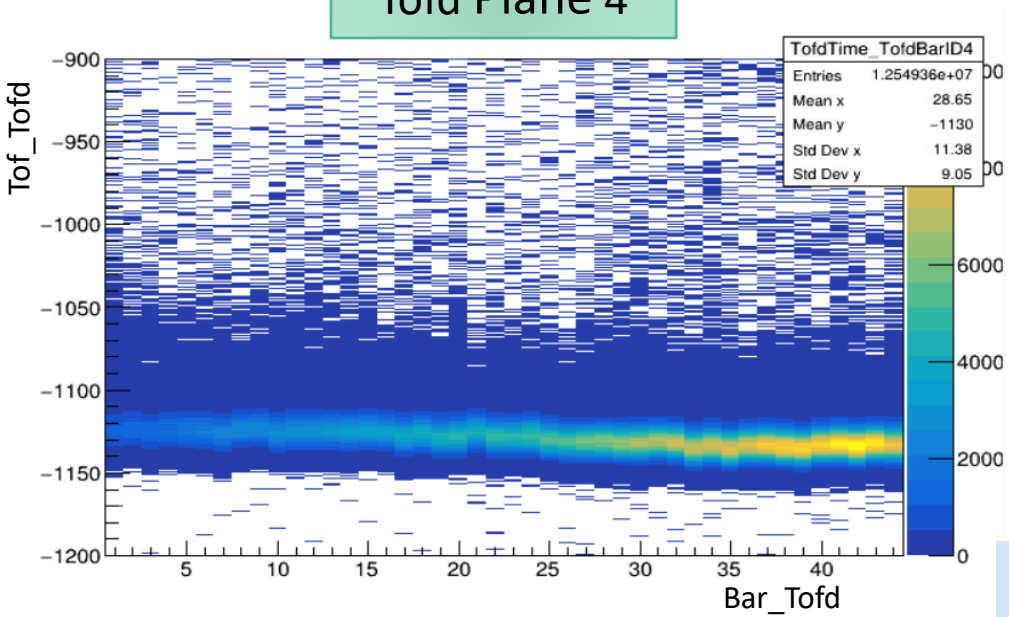
after the correction .

TOF of tofd vs Bar Tofd

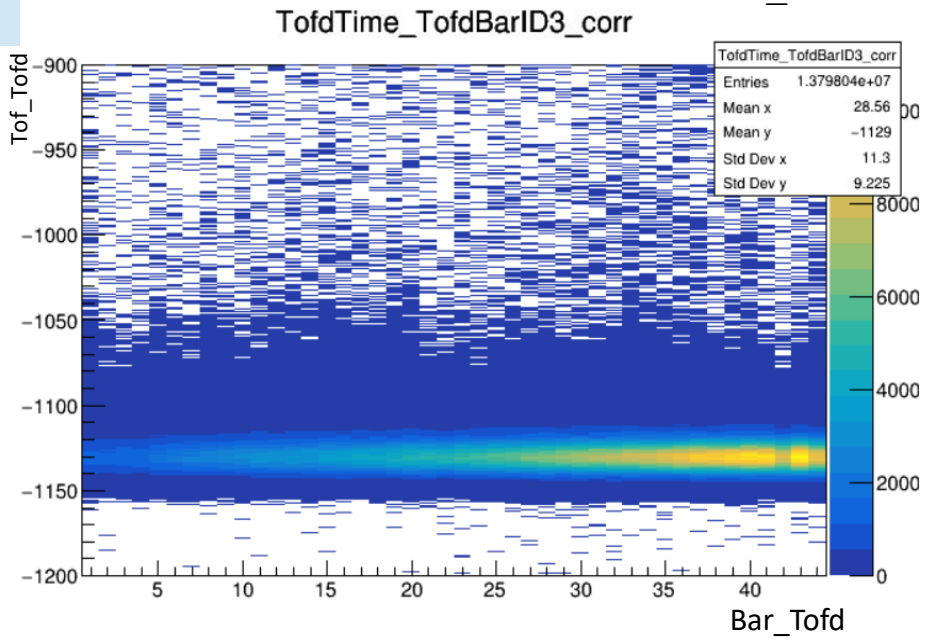
Tofd Plane 3

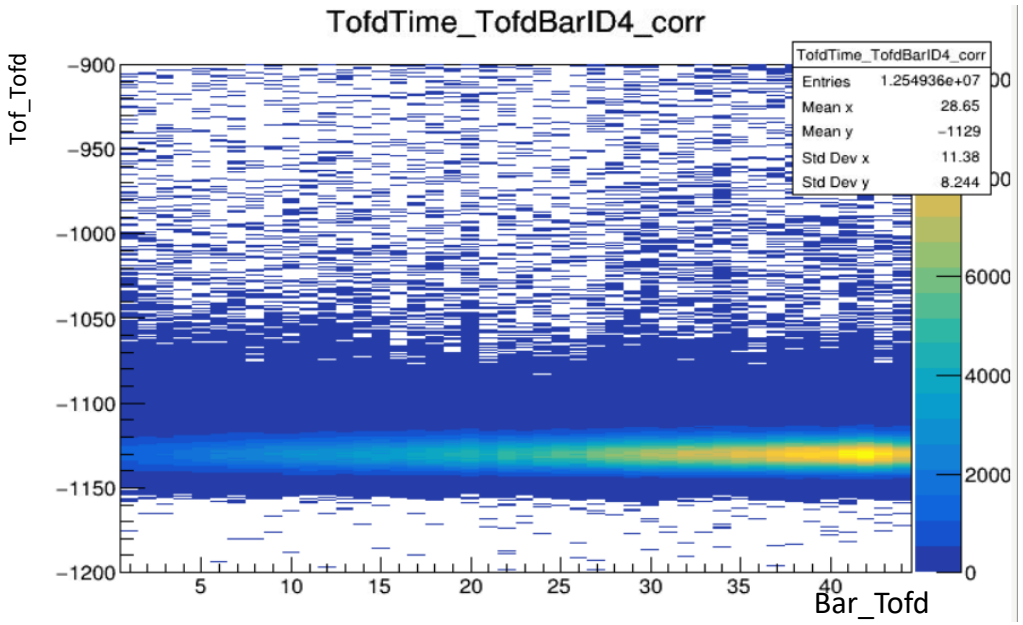


Tofd Plane 4



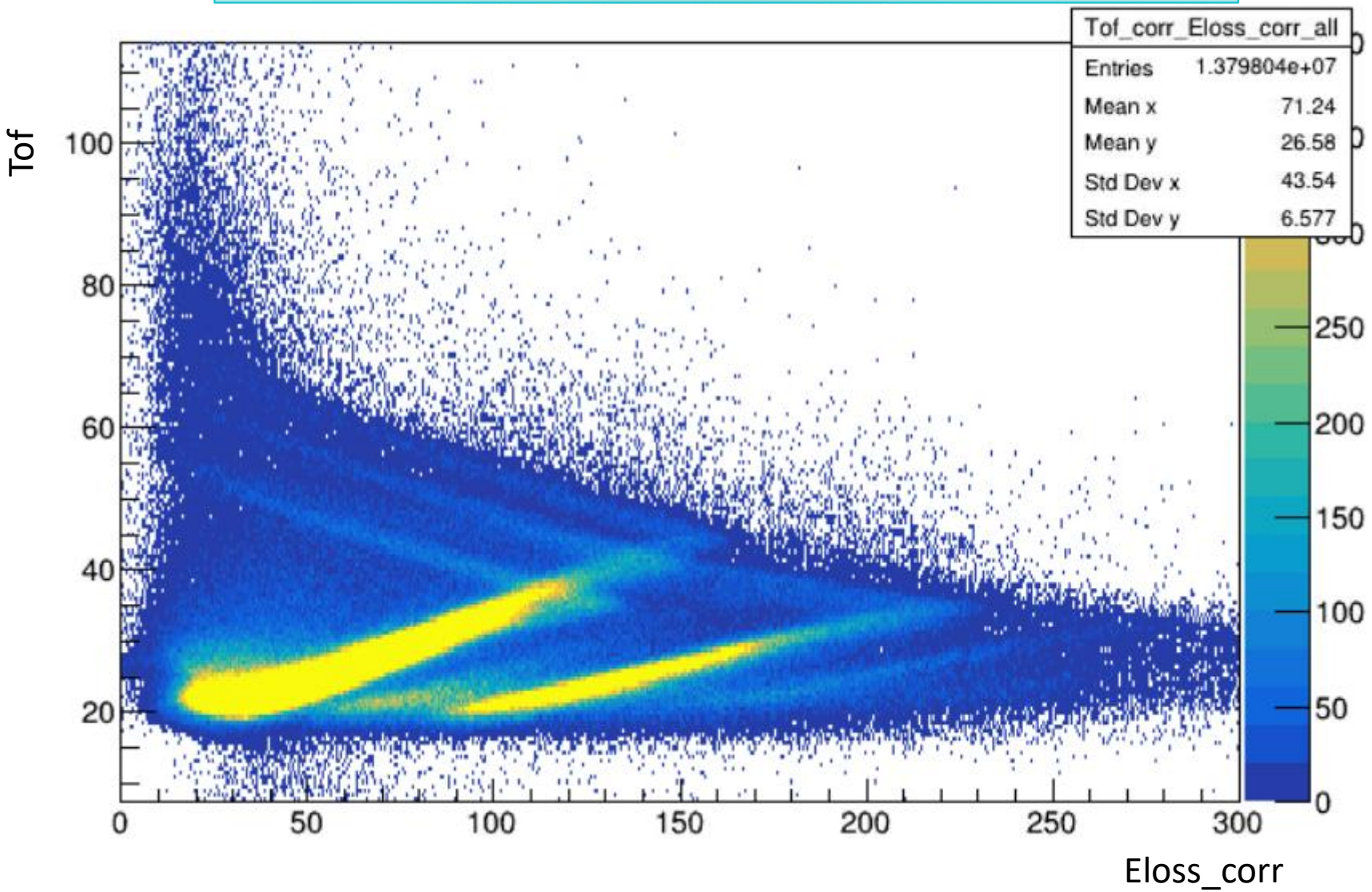
after the correction.





after the correcti on.

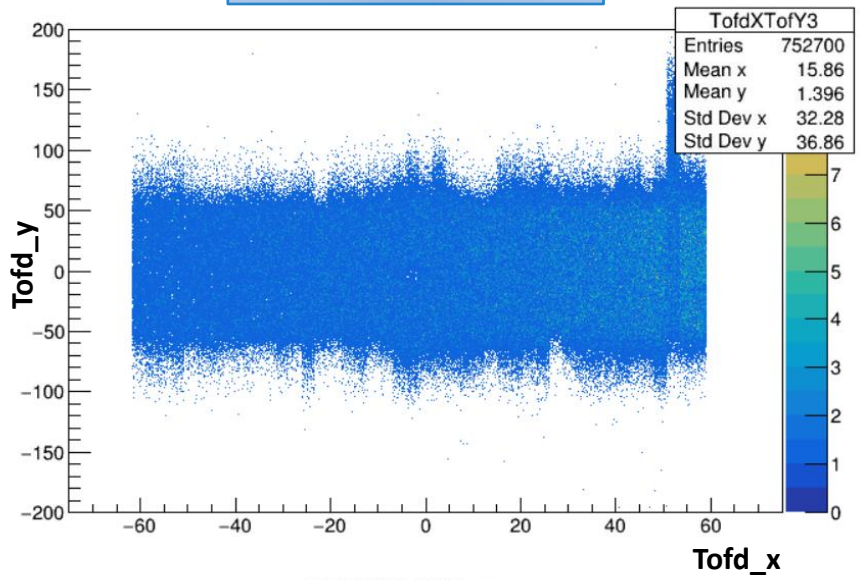
Tof_Tofd vs Energy loss in TODF



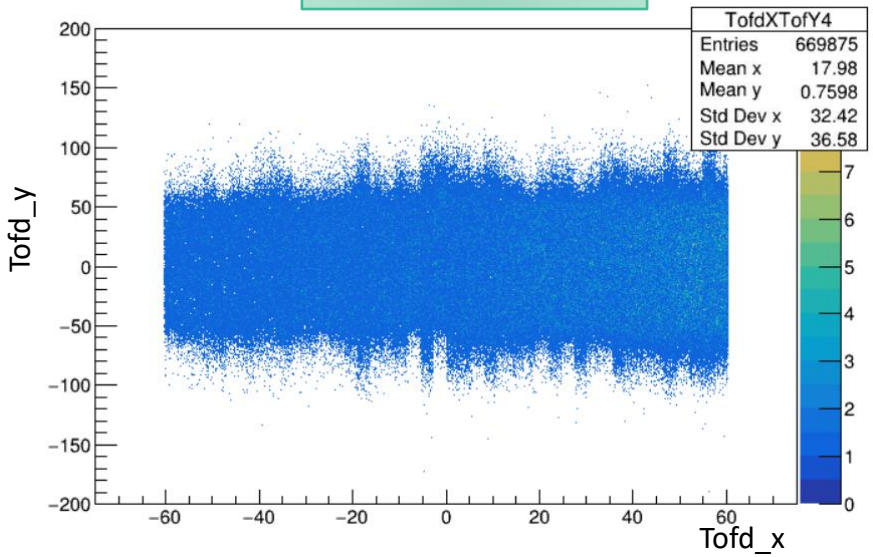
356 Empty frame 280MeV/A

Tofd-Y-Tofd-X

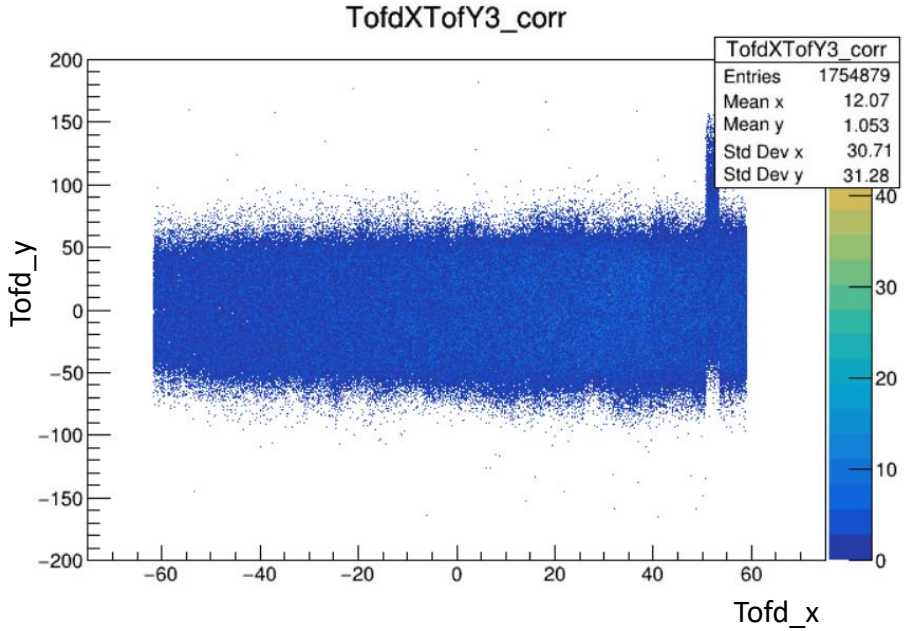
Tofd Plane 3

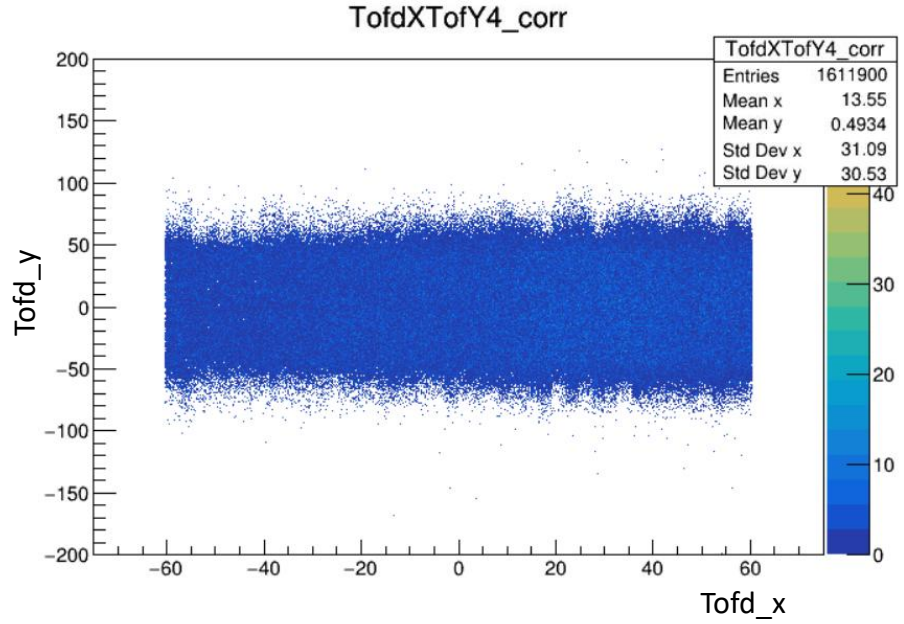


Tofd Plane 4



after the correction.



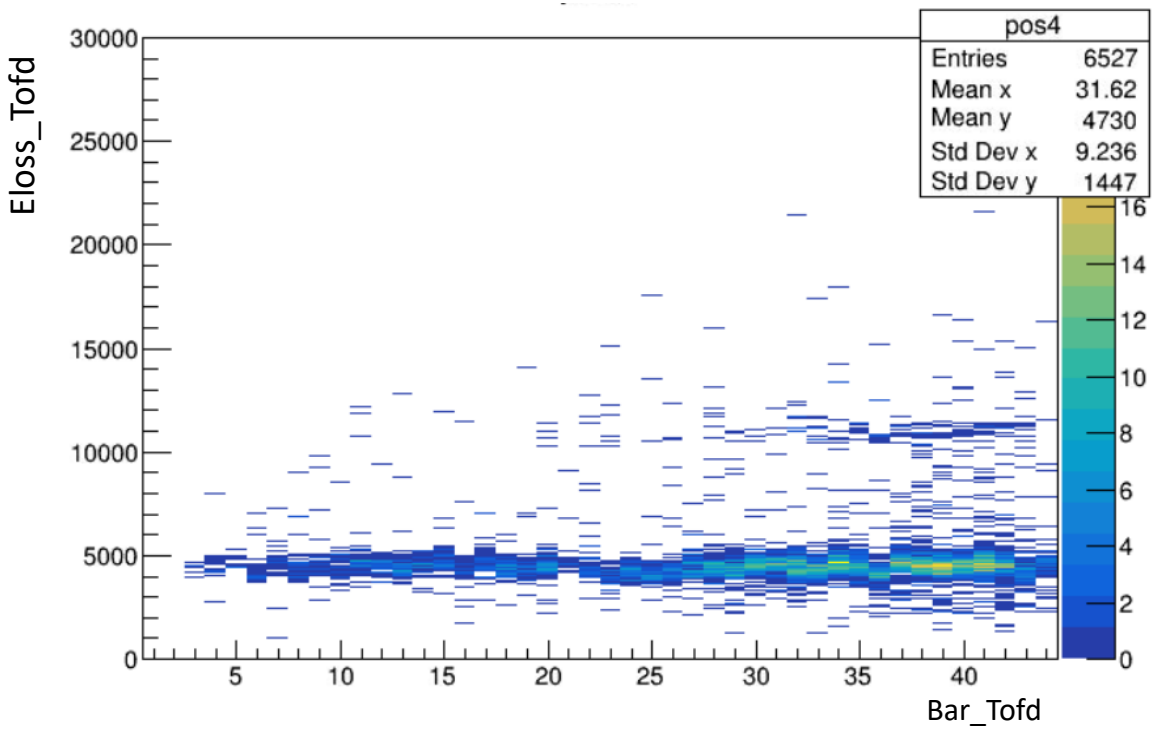


after the correctio n.

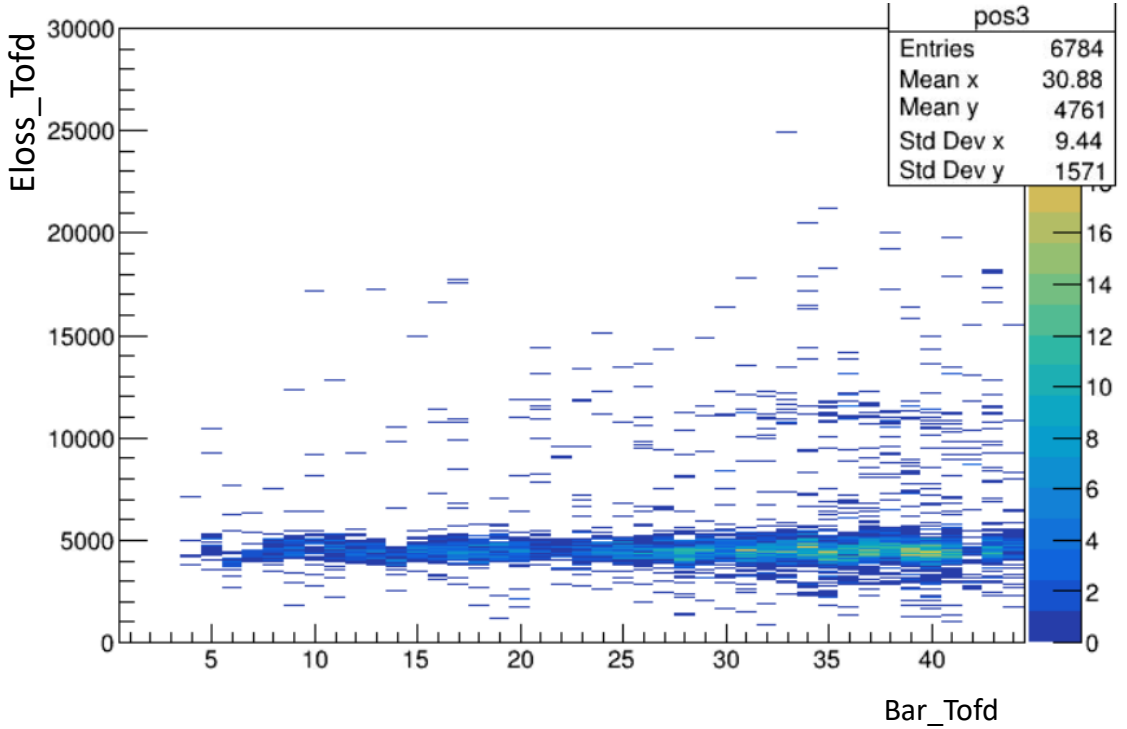
Energy loss in Tofd vs Bar_Tofd

after the correction

Tofd Plane 3



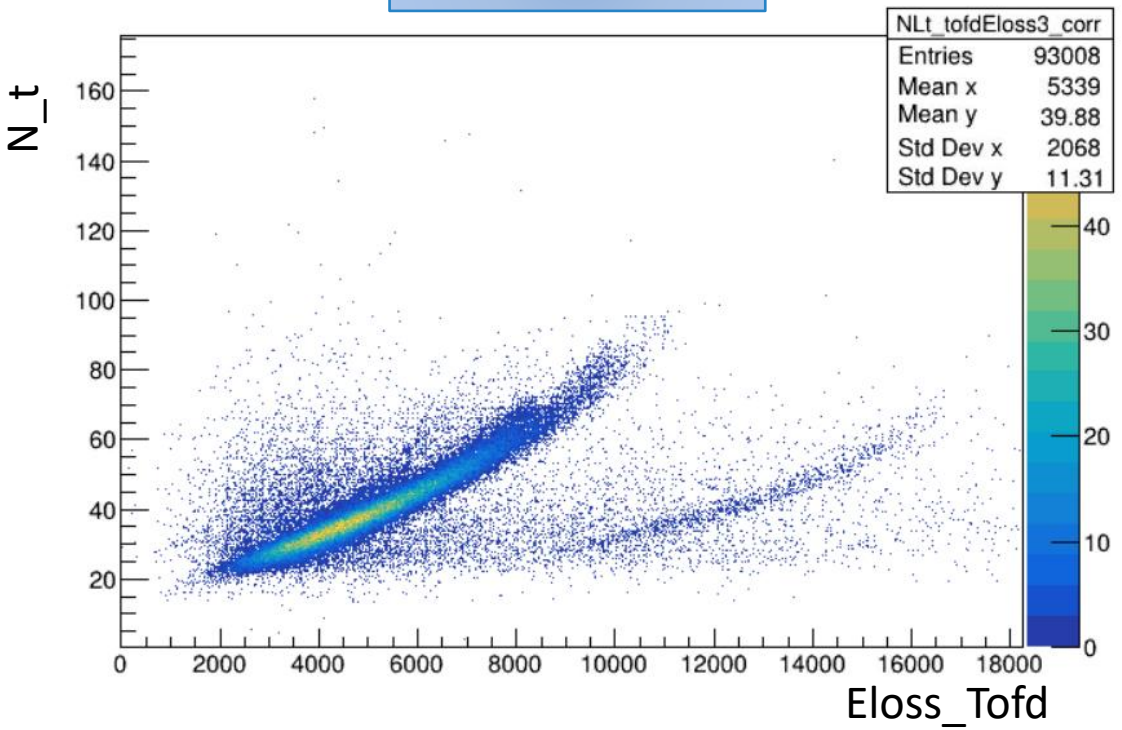
Tofd Plane 4



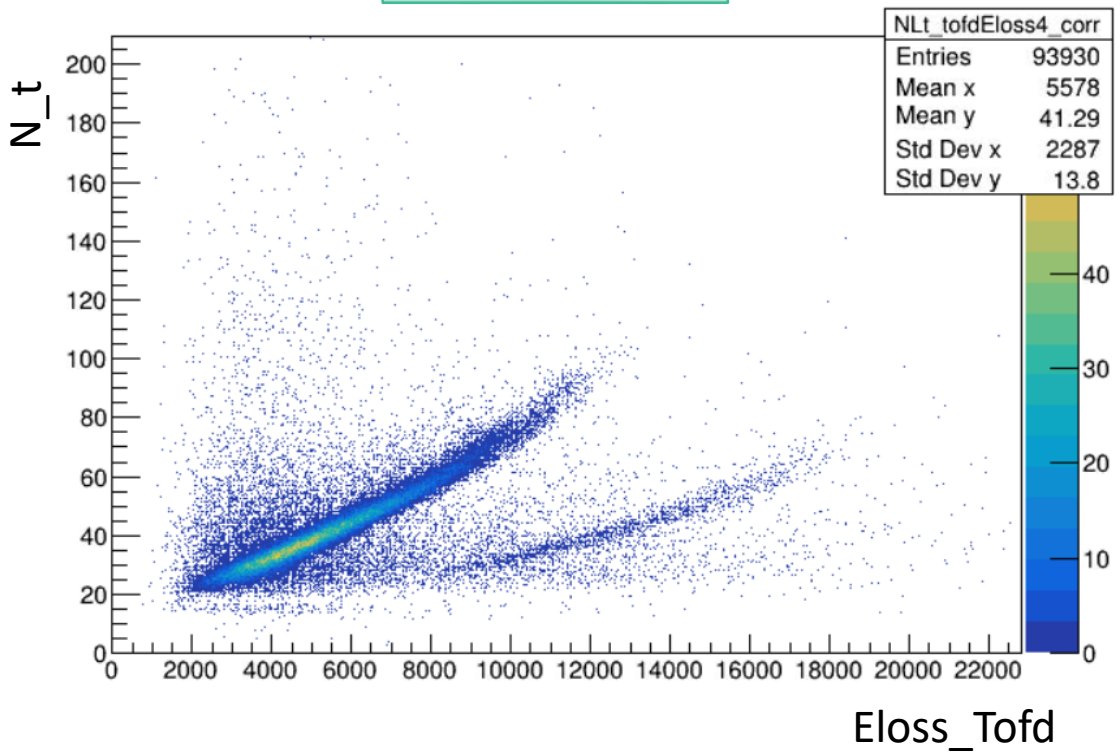
Neuland_time vs Energy loss in Tofd

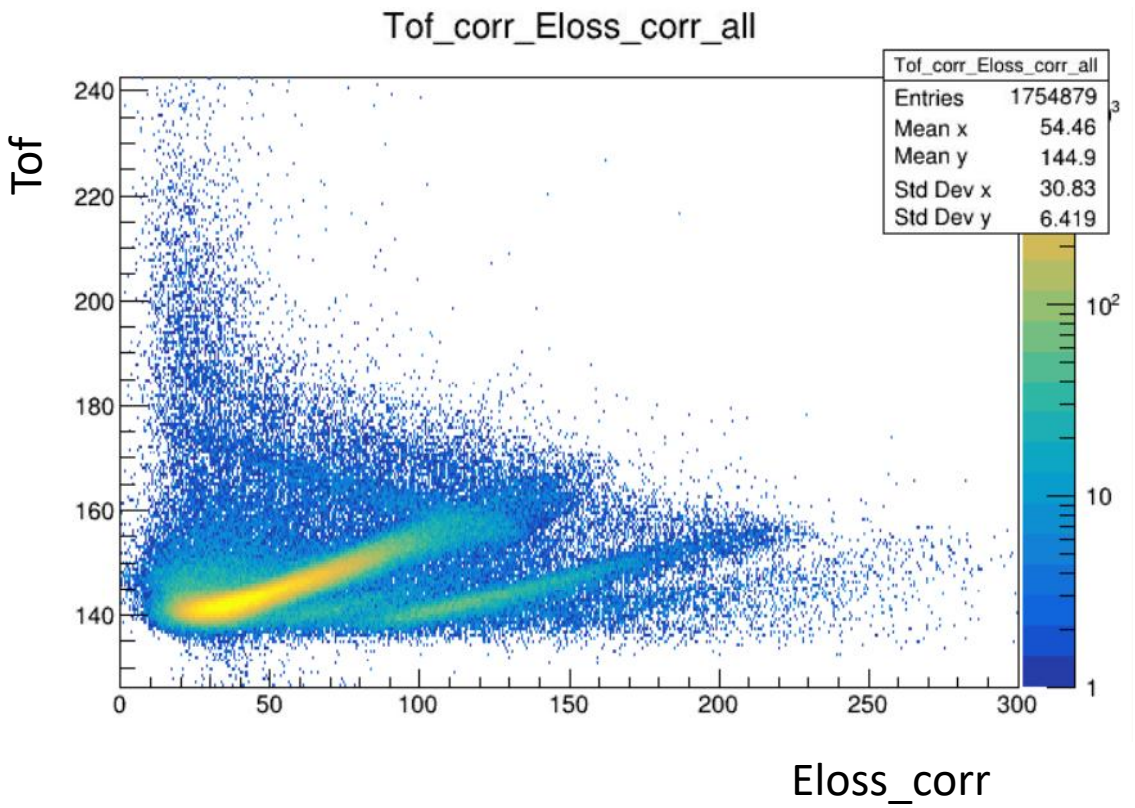
after the correction.

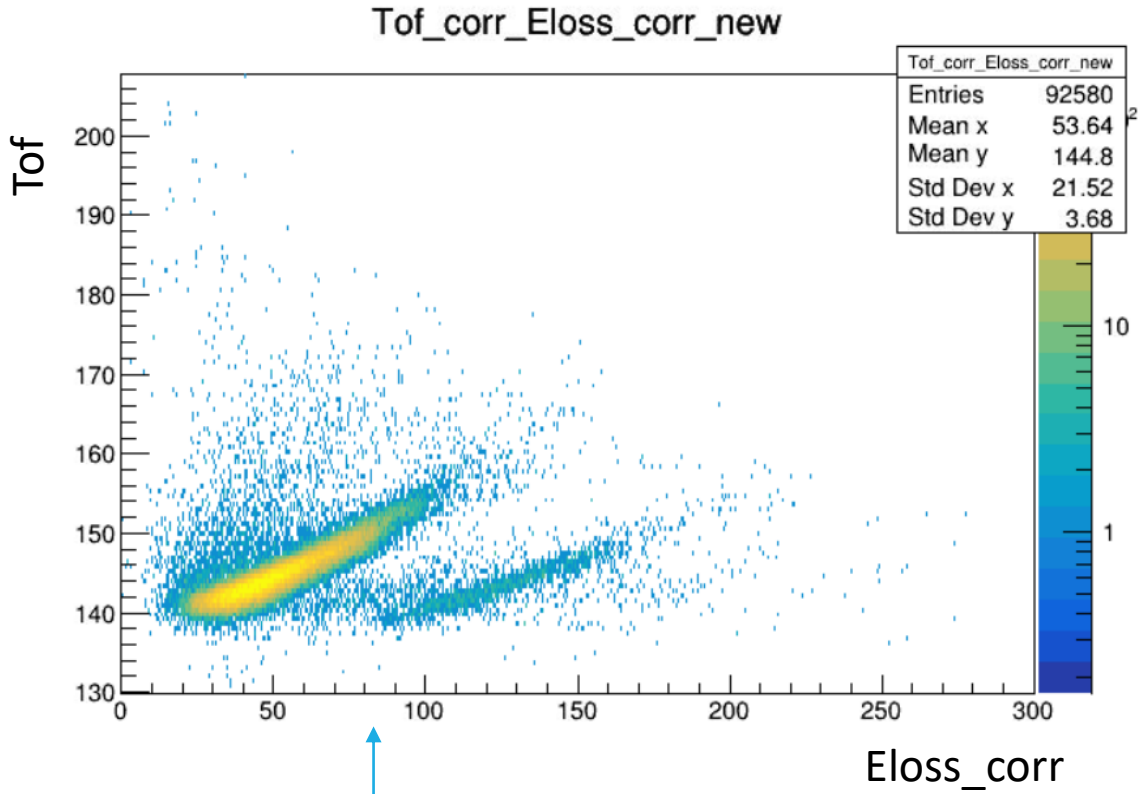
Tofd Plane 3



Tofd Plane 4





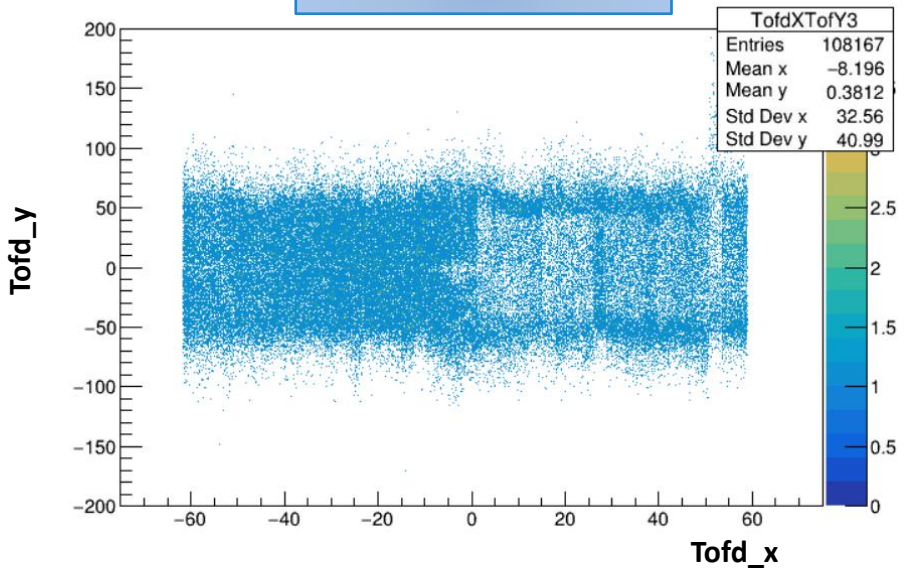


Selection conditions have been applied on spatial and timing parameters

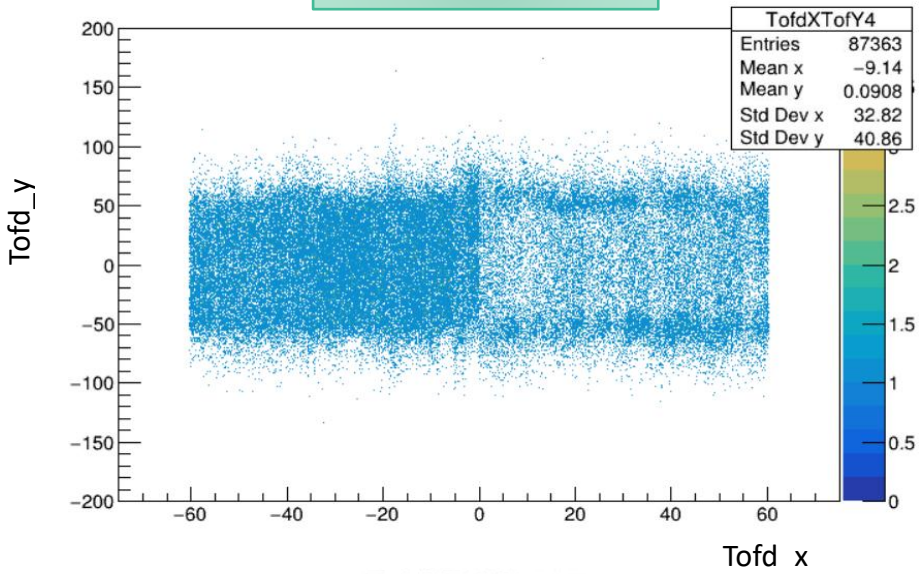
329 Empty +SB 280MeV/A

Tofd-Y-Tofd-X

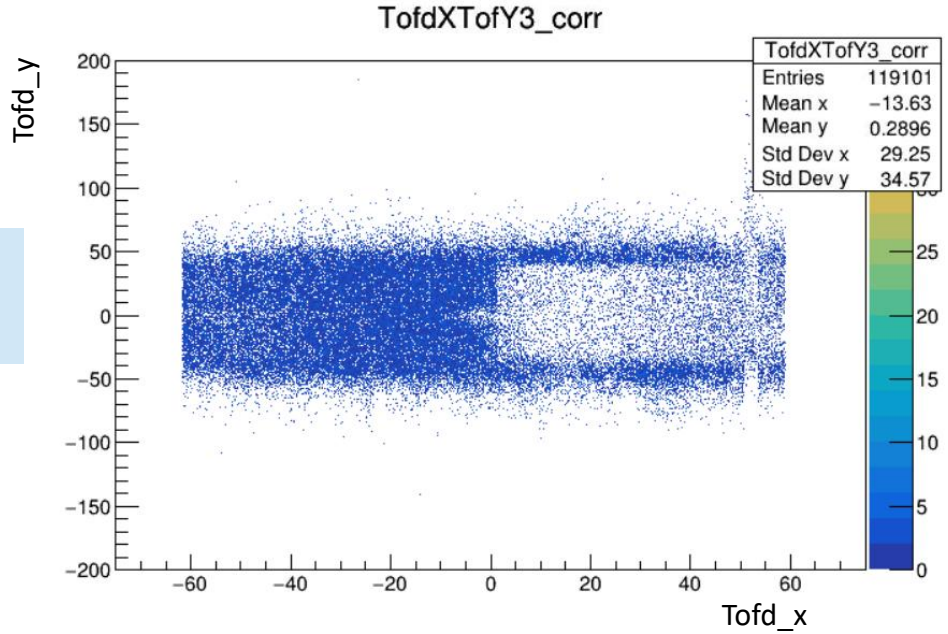
Tofd Plane 3

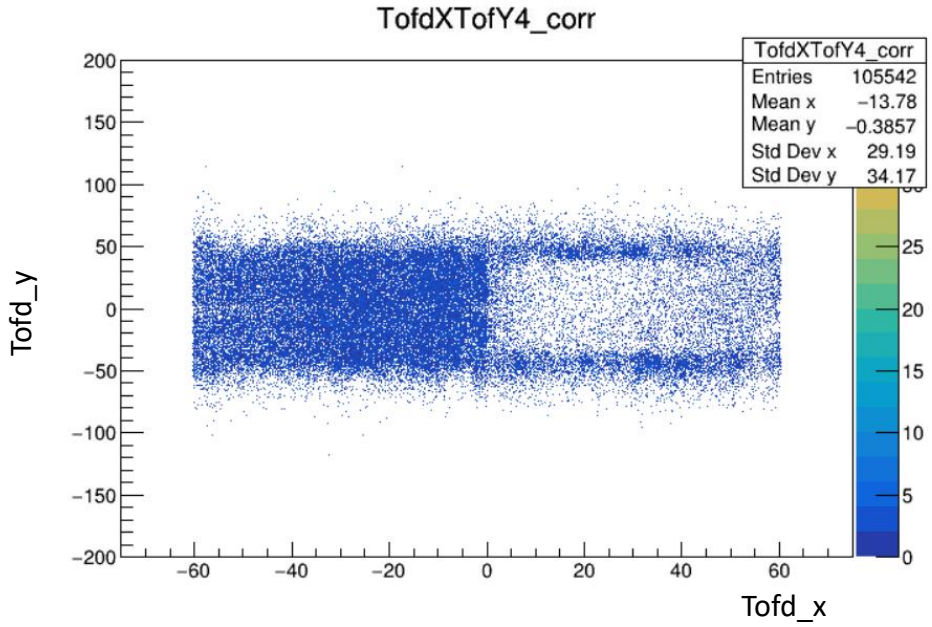


Tofd Plane 4



after the correction.



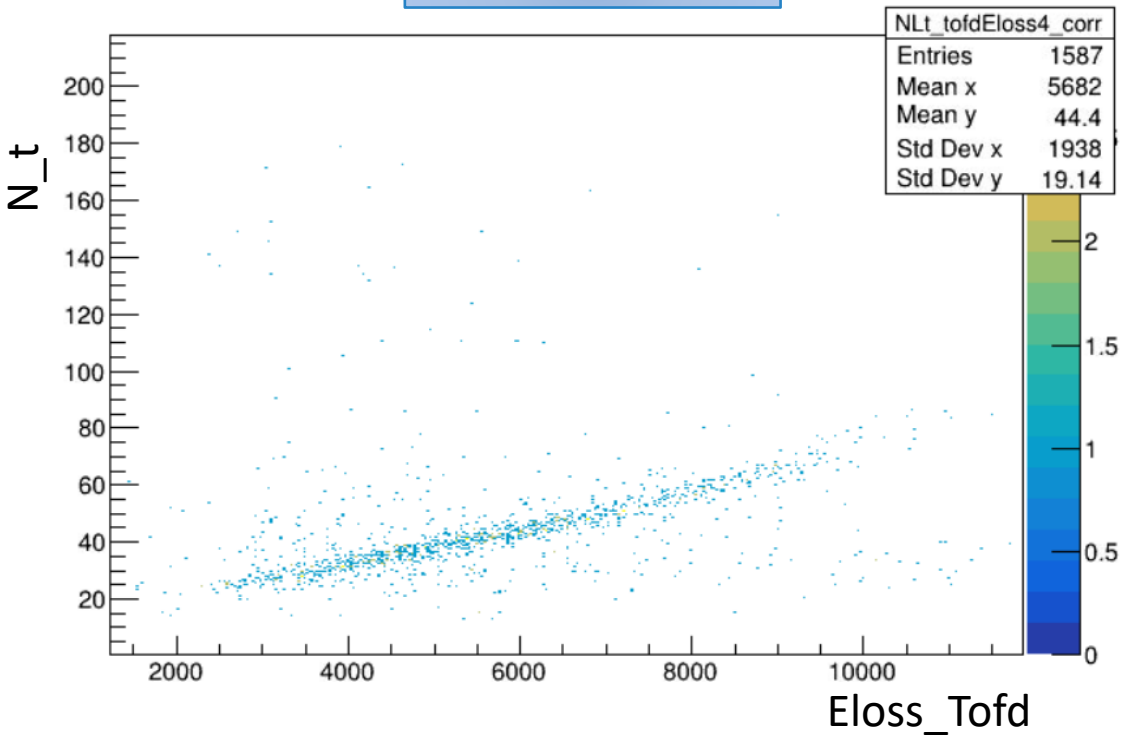


after the correction.

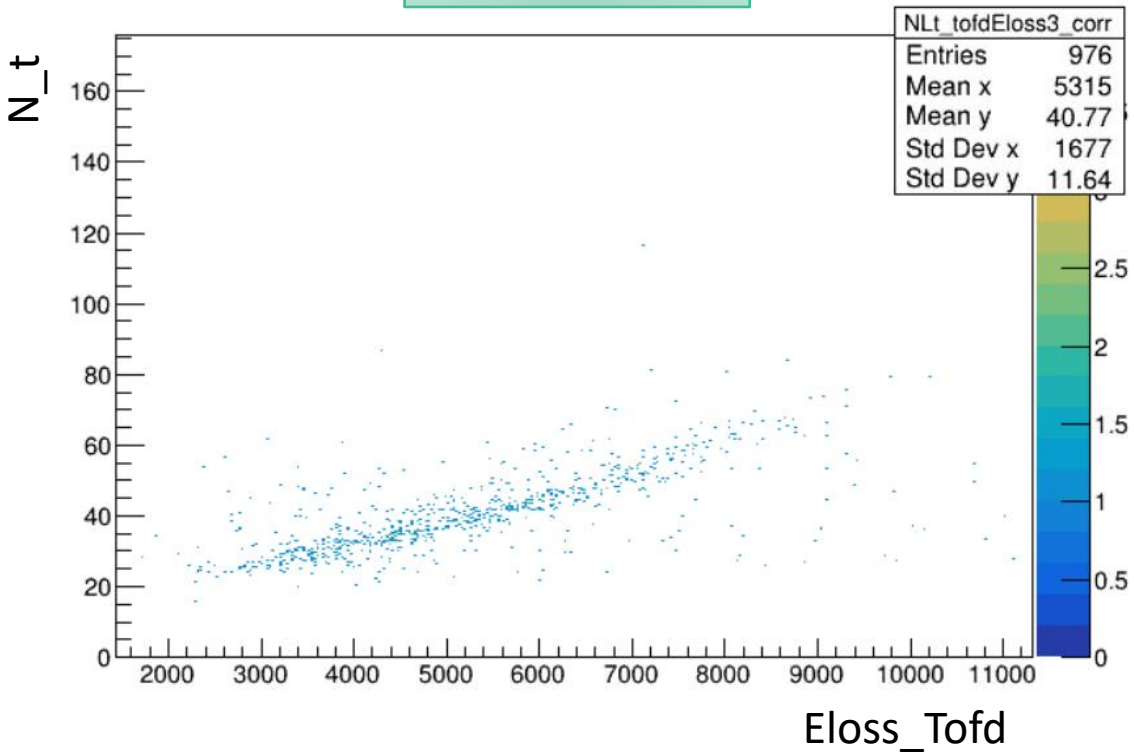
Neuland_time vs Energy loss in Tofd

after the correction.

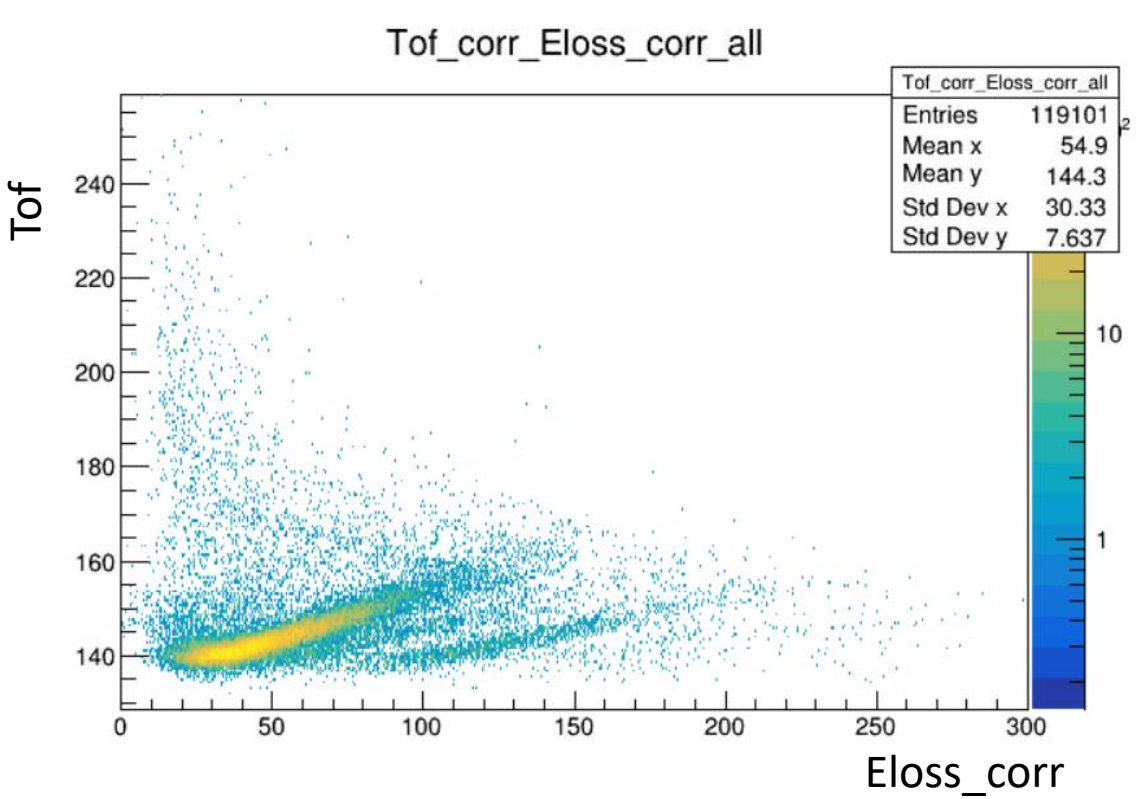
Tofd Plane 3

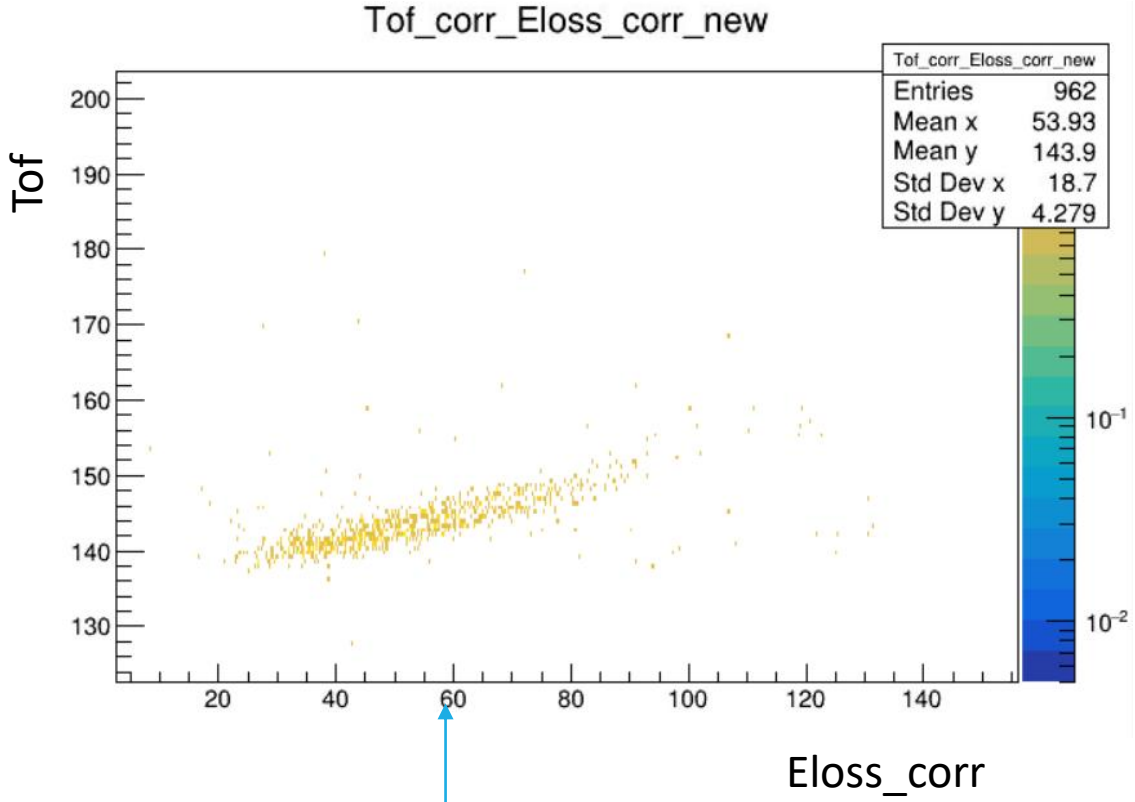


Tofd Plane 4



Tof_Tofd vs Energy loss in TODF



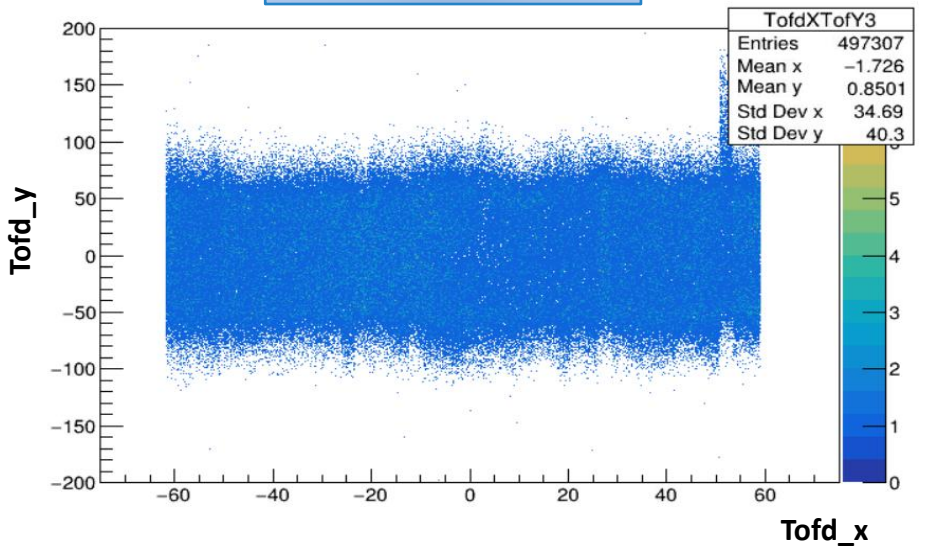


Selection conditions have been applied on spatial and timing parameters

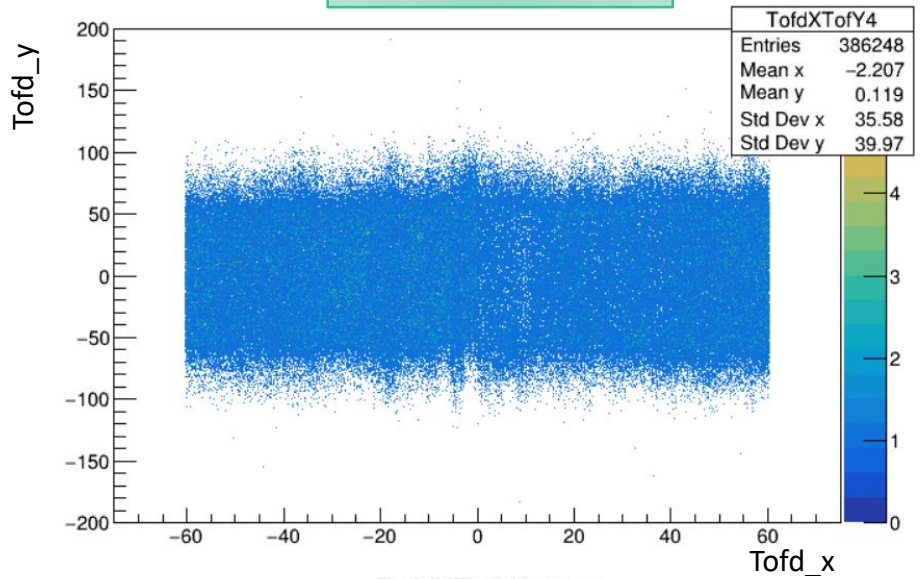
331 Au%+SB 280MeV/A

Tofd-Y-Tofd-X

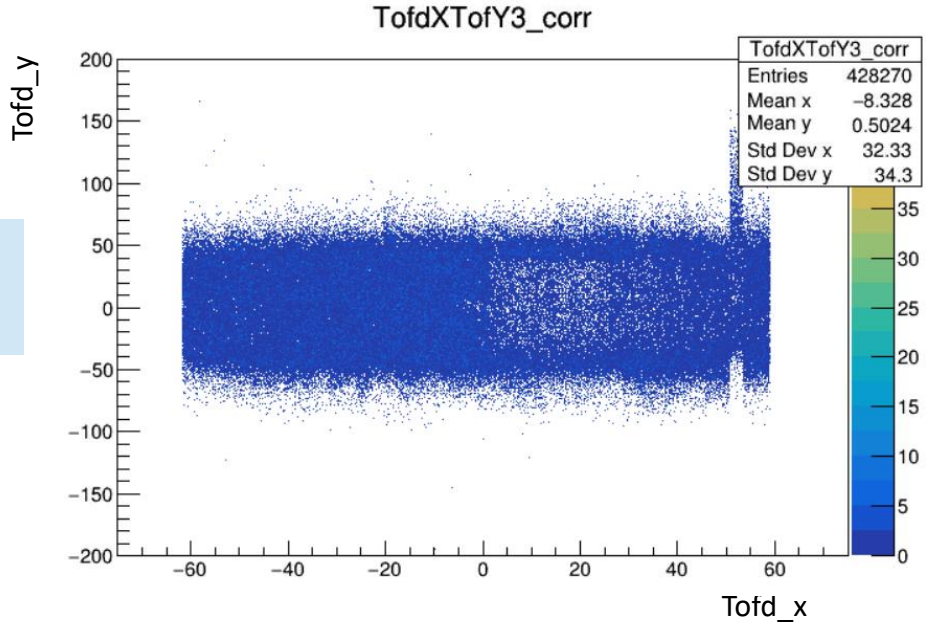
Tofd Plane 3

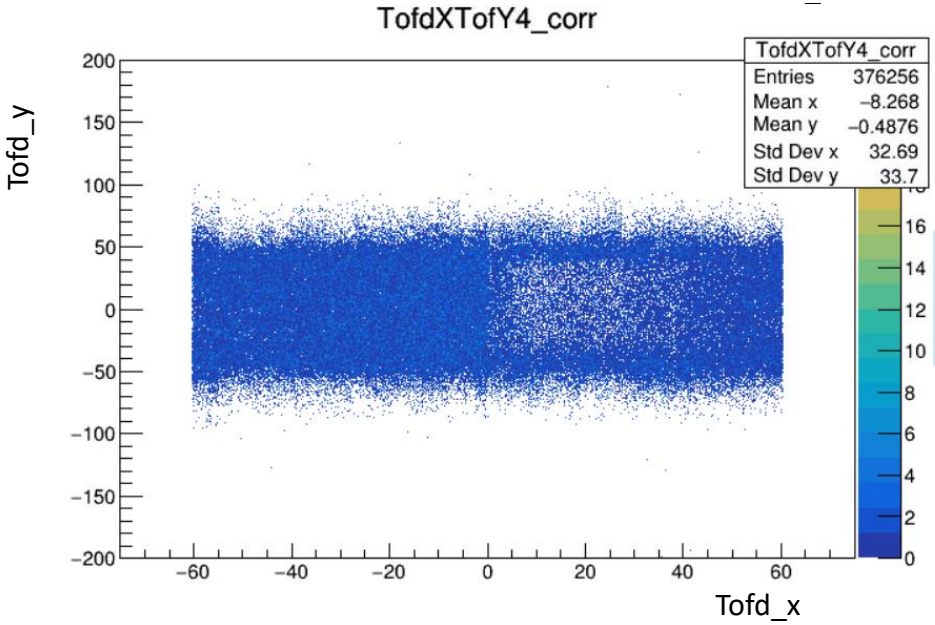


Tofd Plane 4



after the correction.

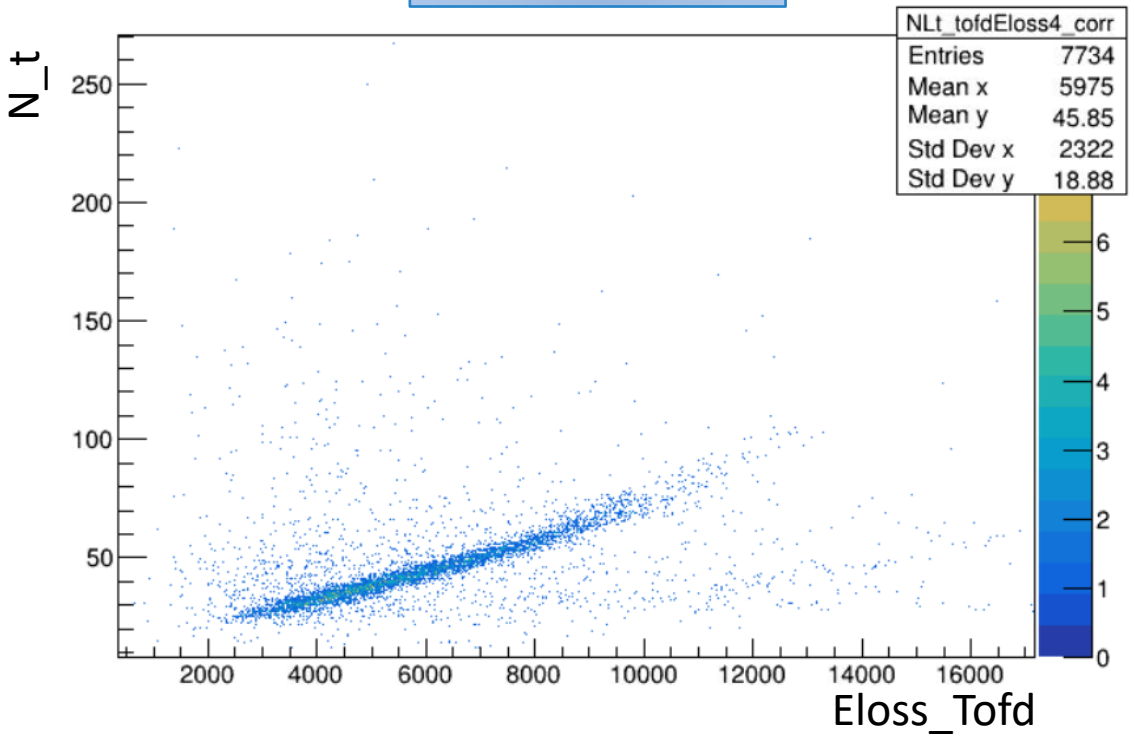




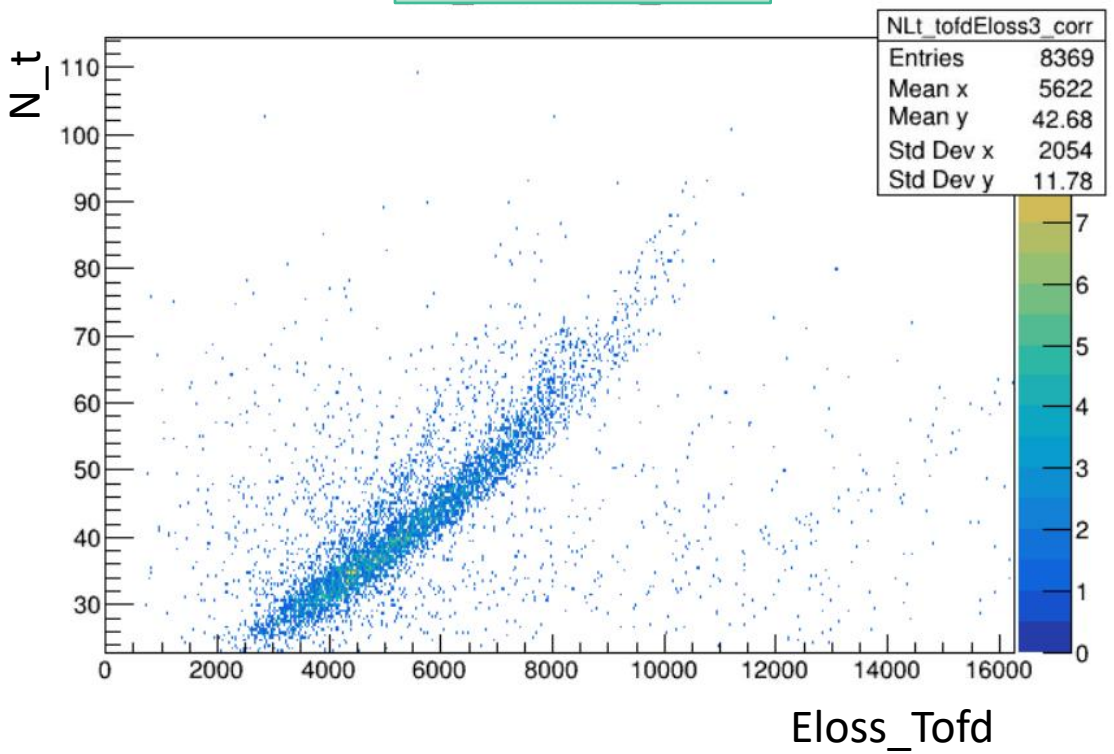
after the correction.

after the correction.

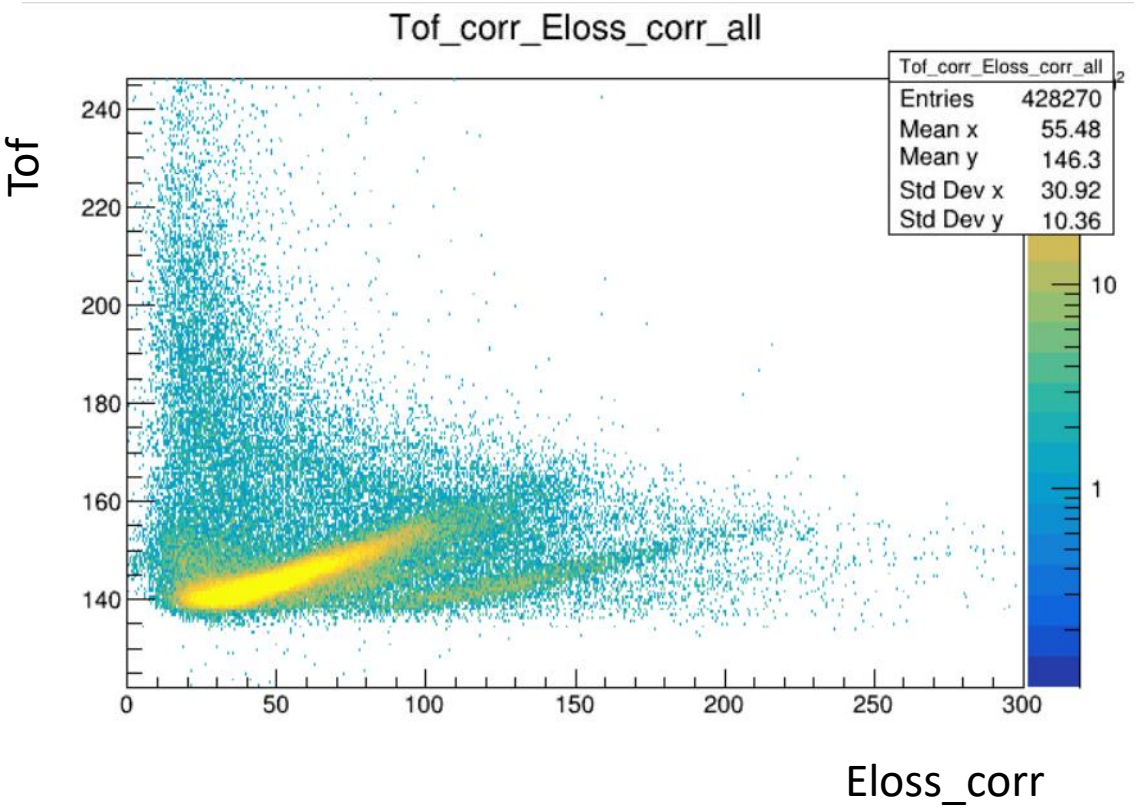
Tofd Plane 3

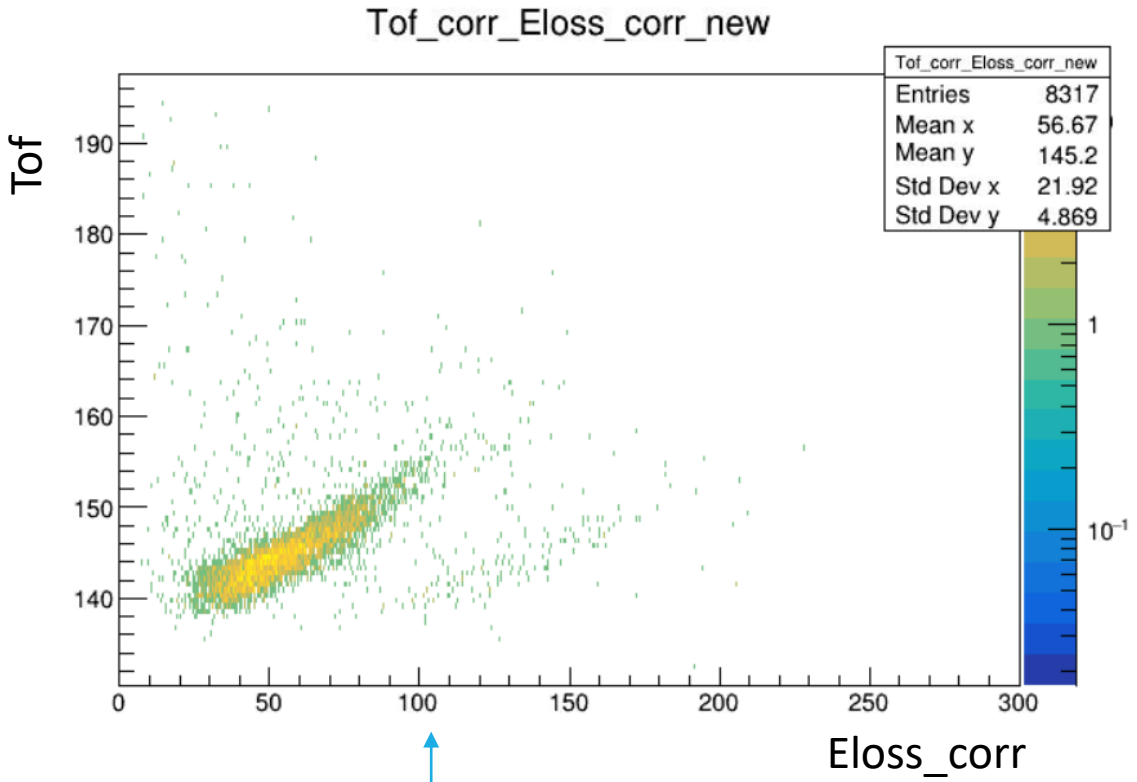


Tofd Plane 4

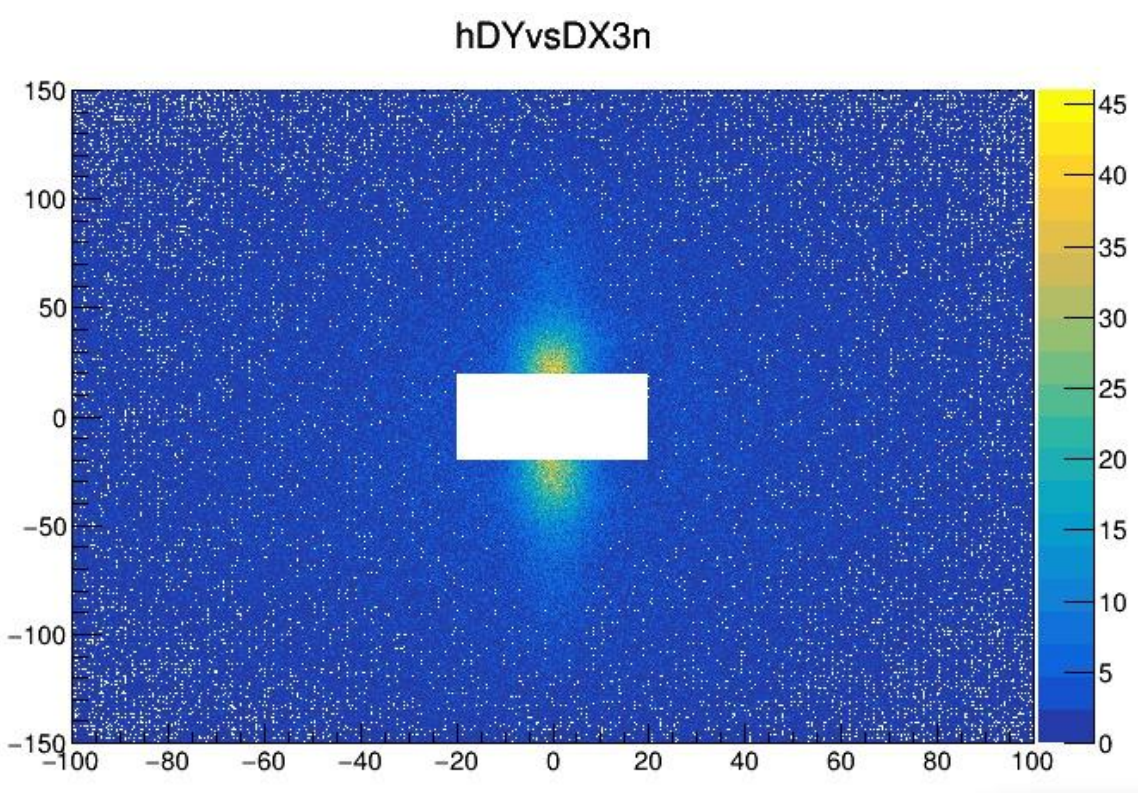


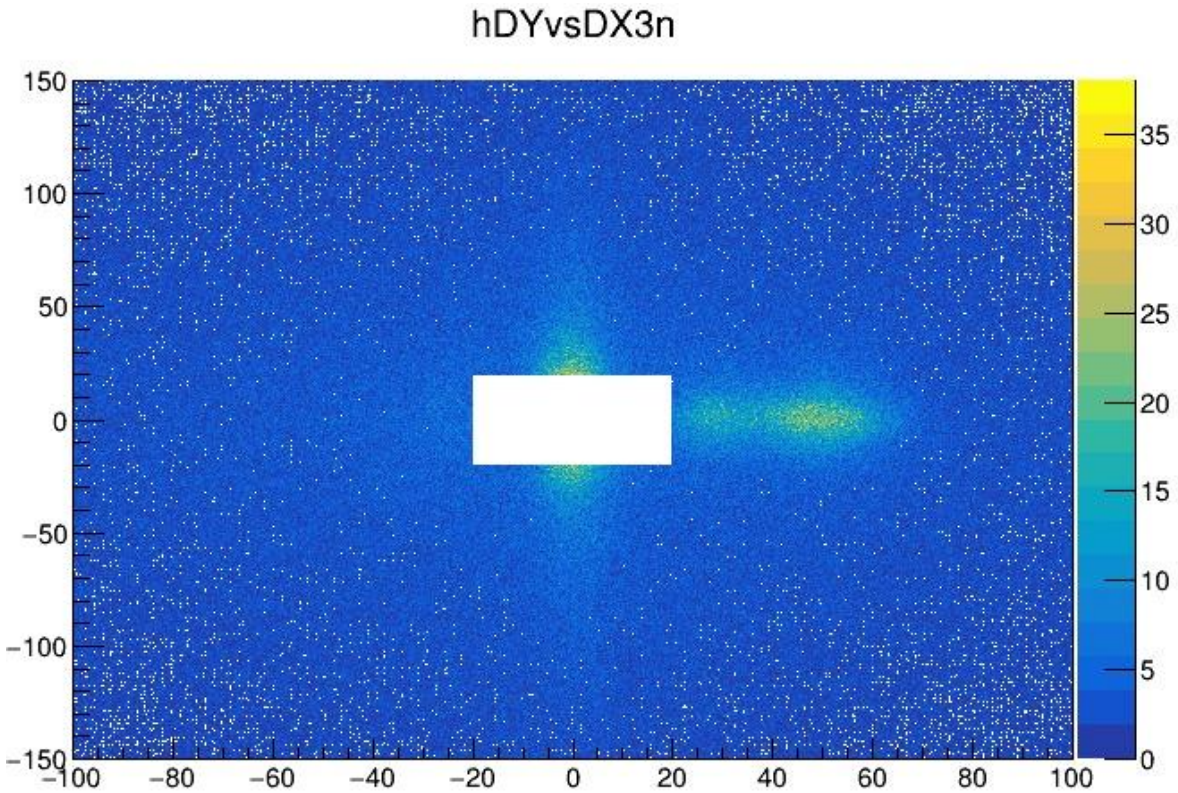
Tof_Tofd vs Energy loss in TODF





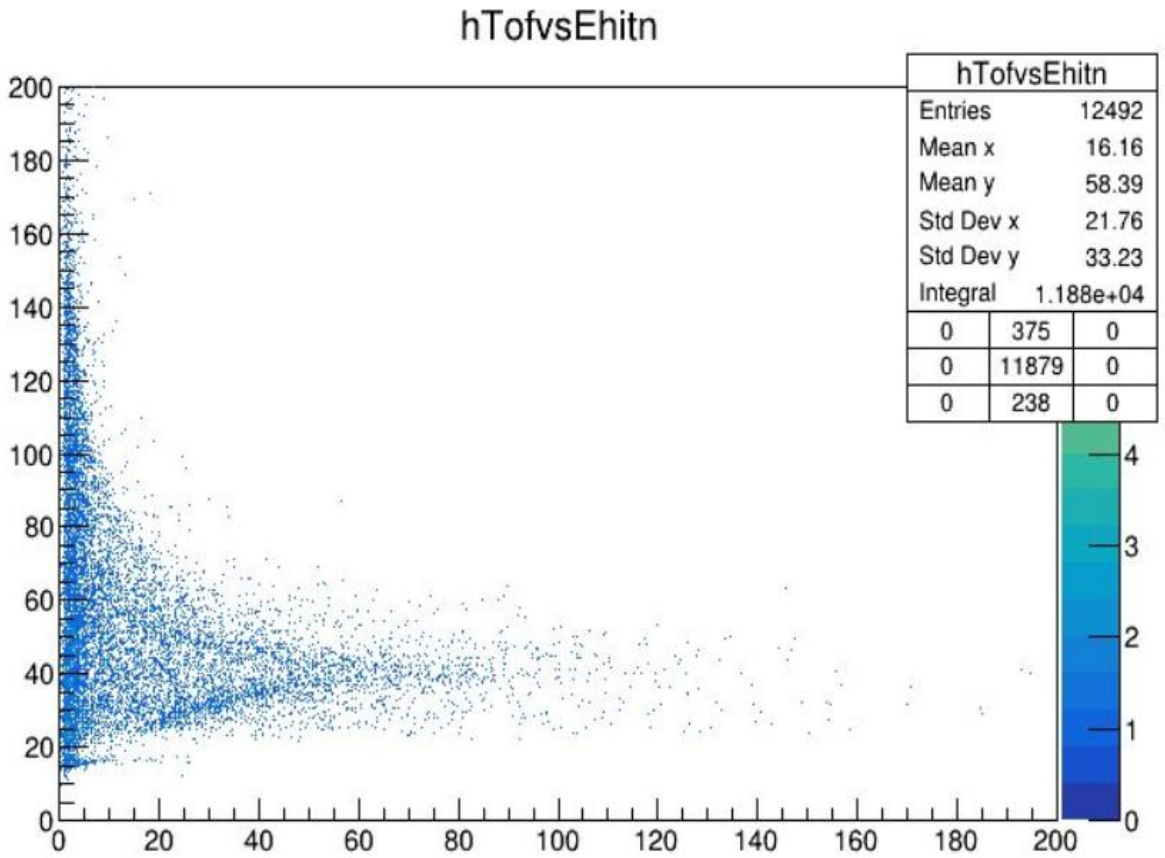
Selection conditions have been applied on spatial and timing parameters



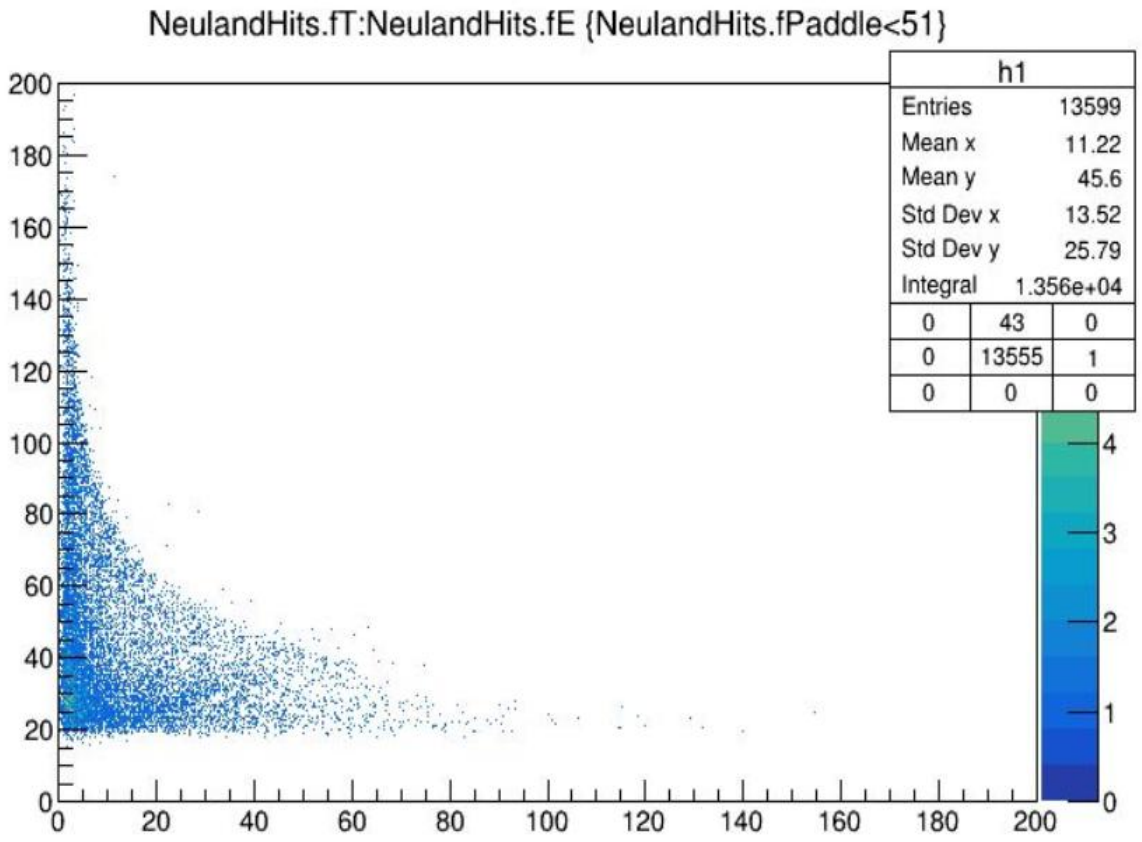


It is with condition that multiplicity cut on KRAB multiplicity , i. e. for reaction coming from the target

it is without multiplicity cut on KRAB multiplicity in forward rings which rejects upstream events



Tofd vs ehit with strong veto condition



simulation Au + Au 400 AMeV