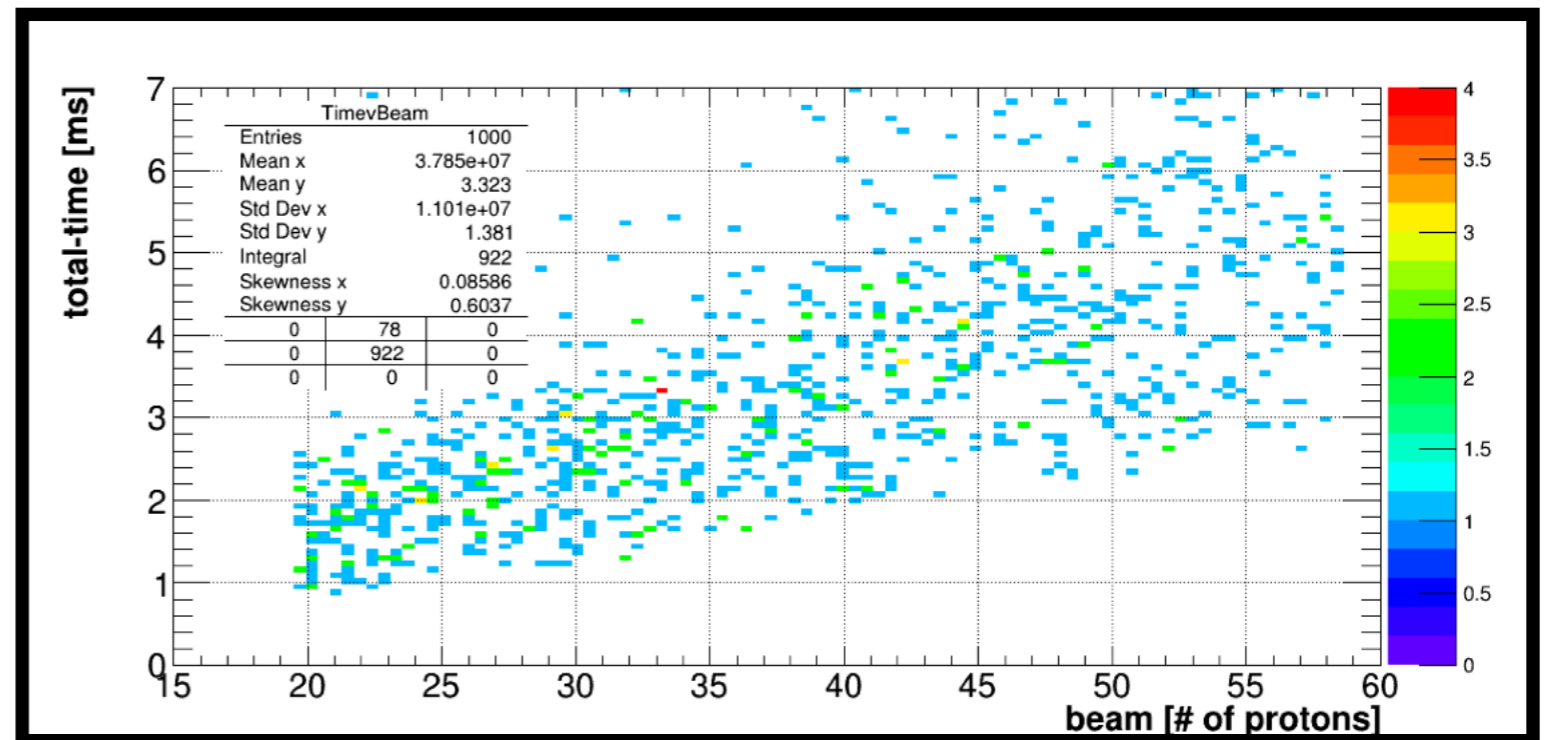
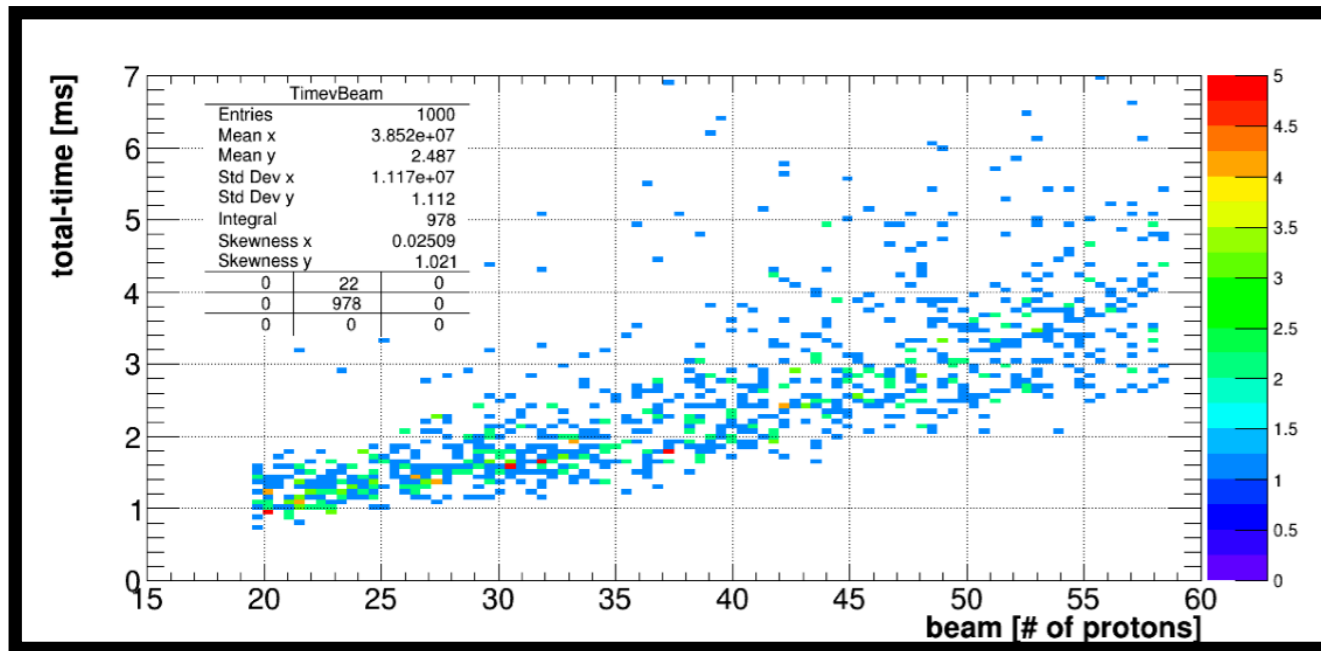


Simon Update 7/24

Proton Beam Intensity

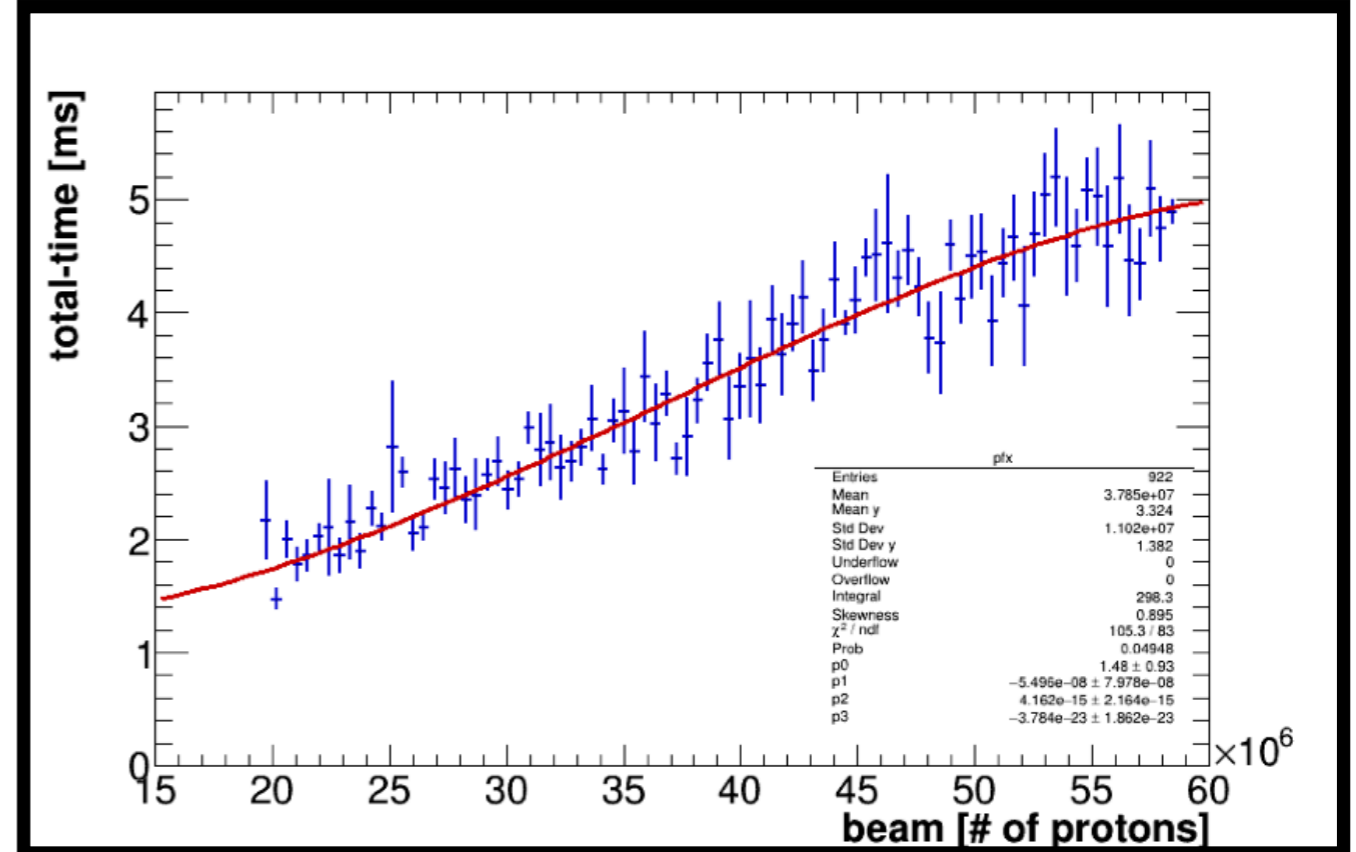
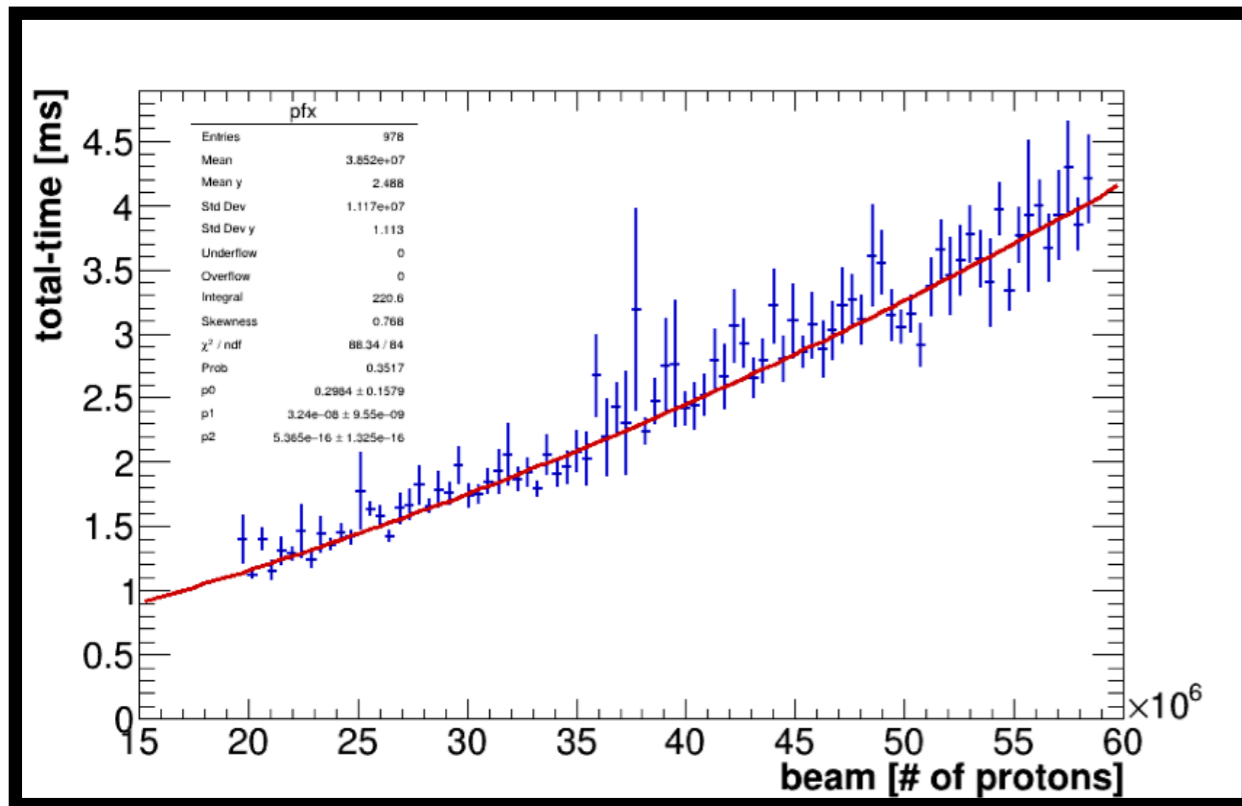
- What role does the beam intensity play in the timing performance of the trigger?
- Ran tests in Offline World...results should be the same in the Online World because the timing performance of trigger is the same
- Results shown are with 1000 events of a mixed dataset on `mu2edaq11`
- Top left is 0% Stress, bottom right 75% CPU Stress

Beam Intensity Total Event Time

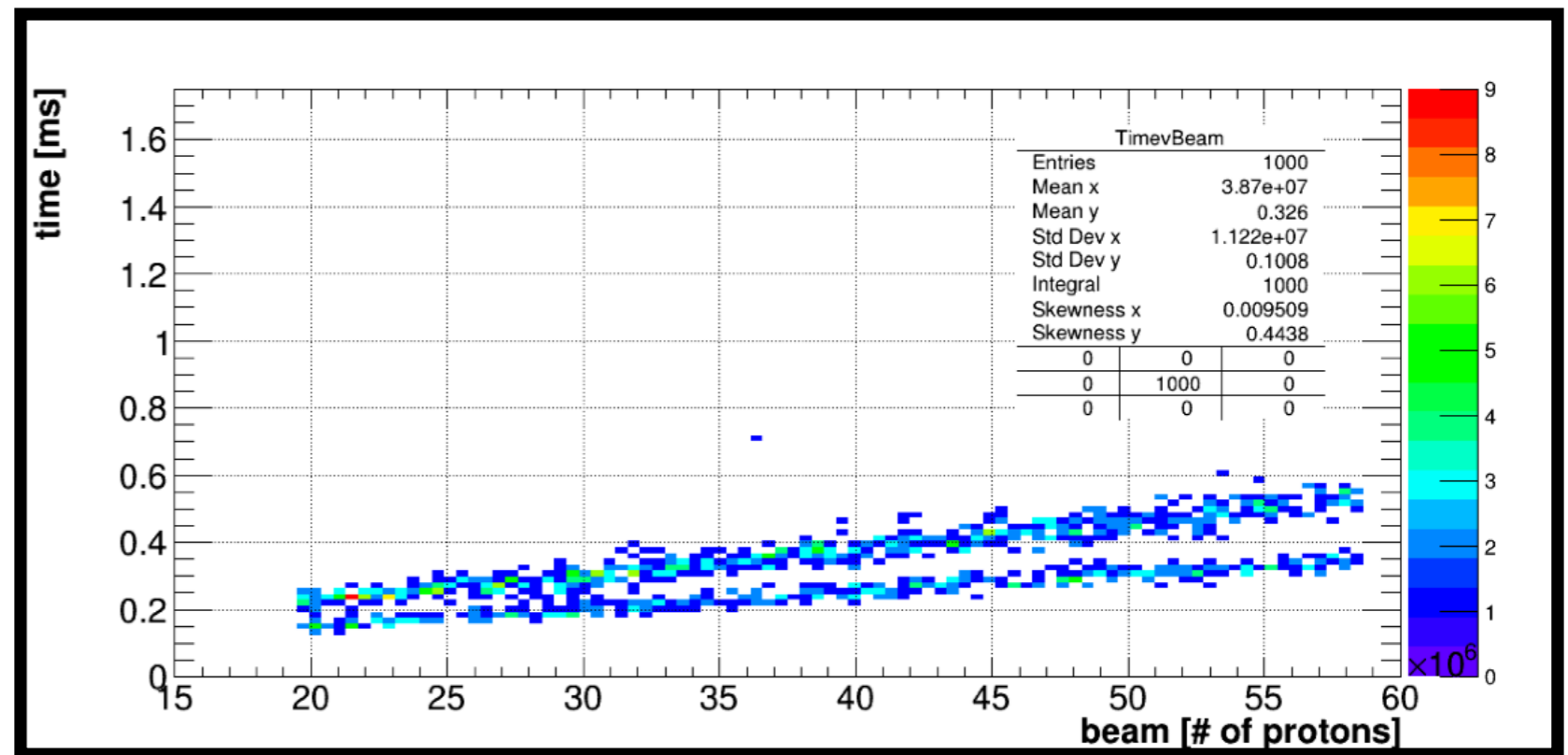
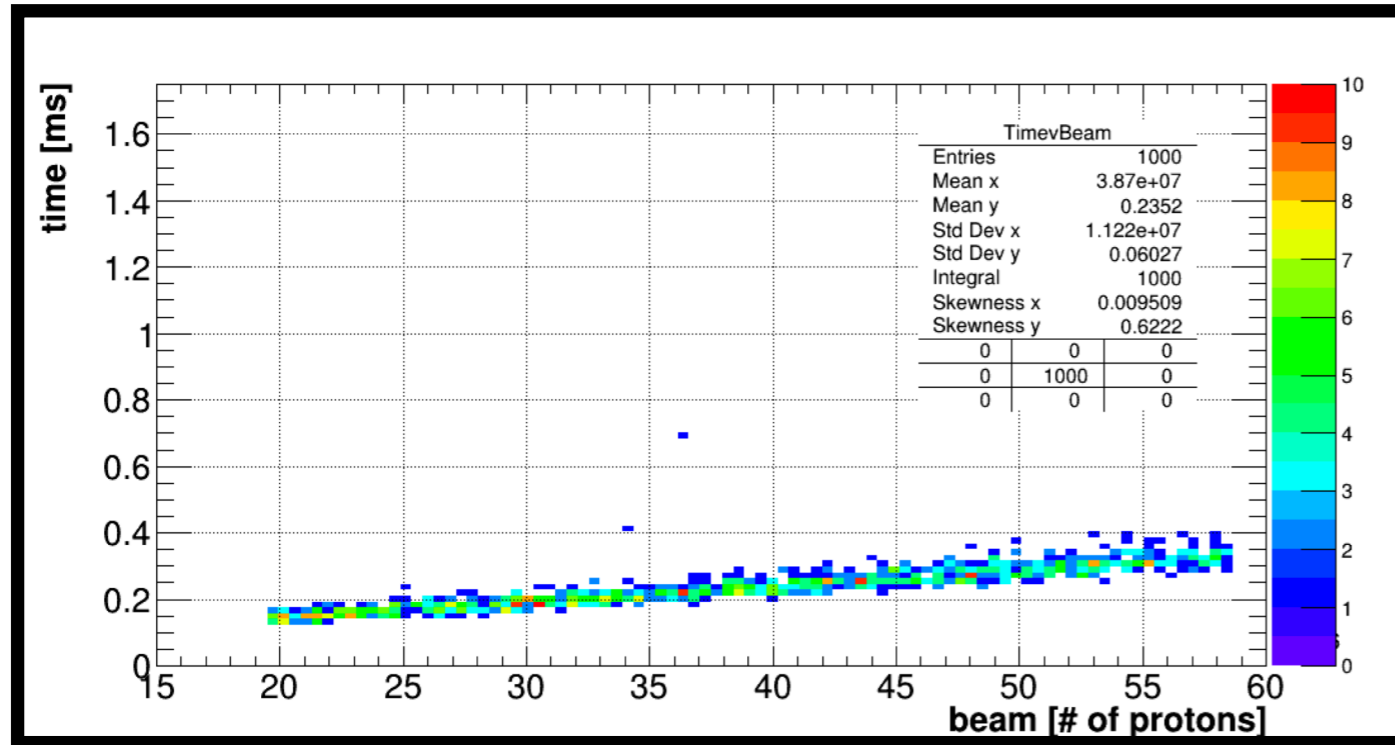


Beam Intensity

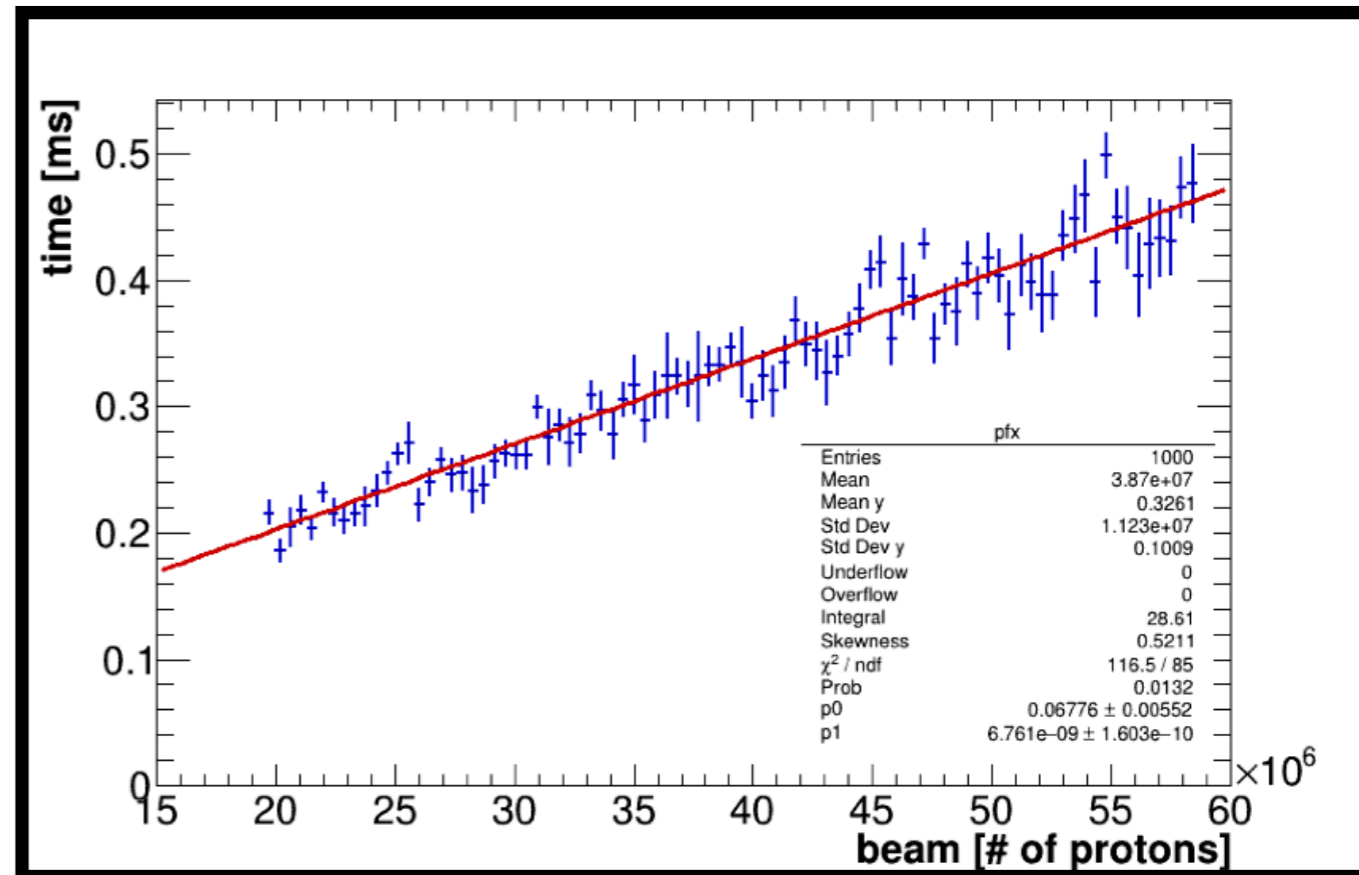
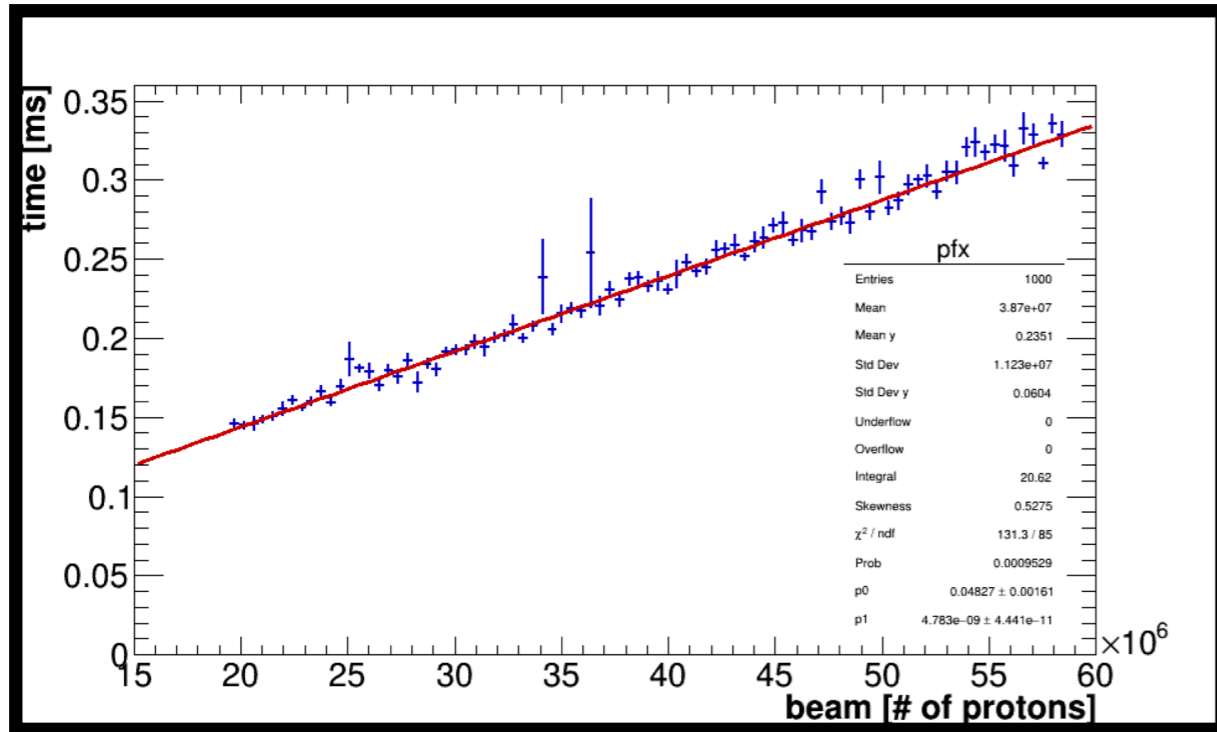
Total Event Time Profile



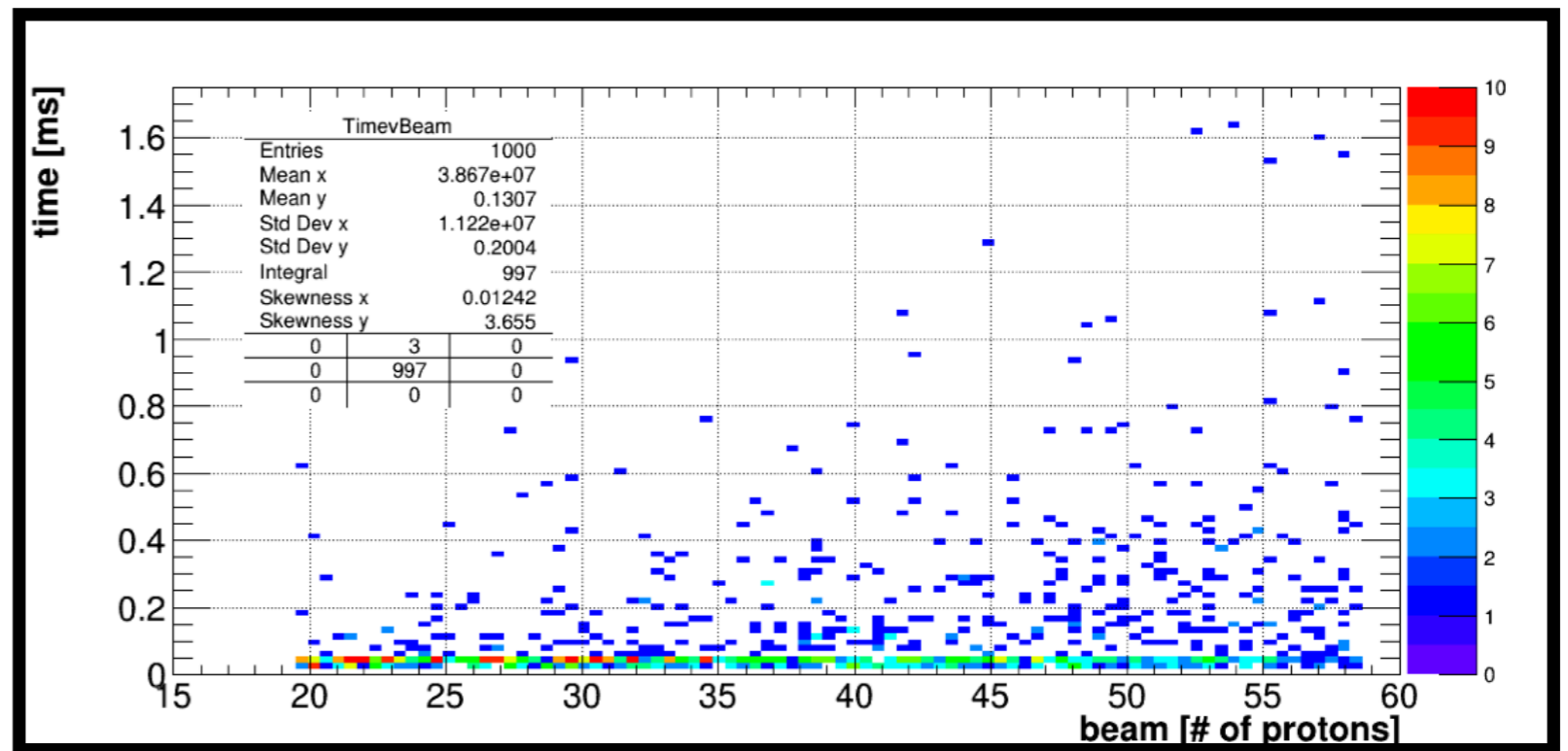
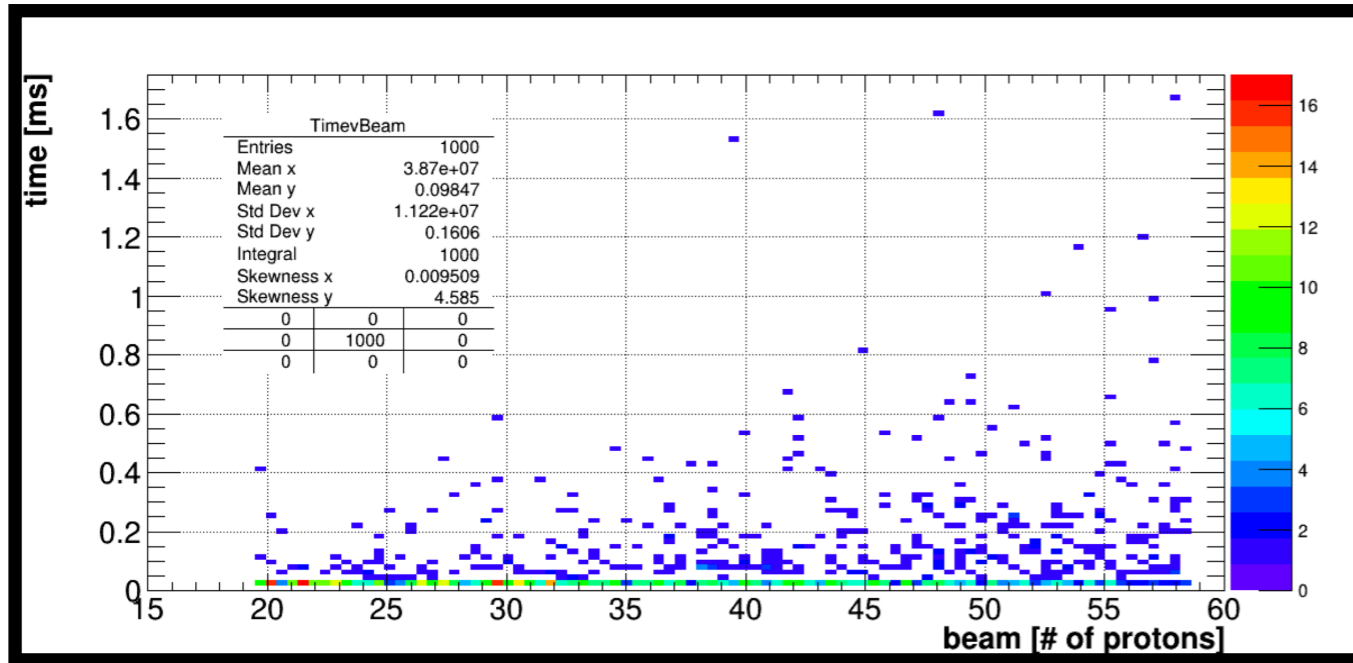
Beam Intensity CaloClusterFast



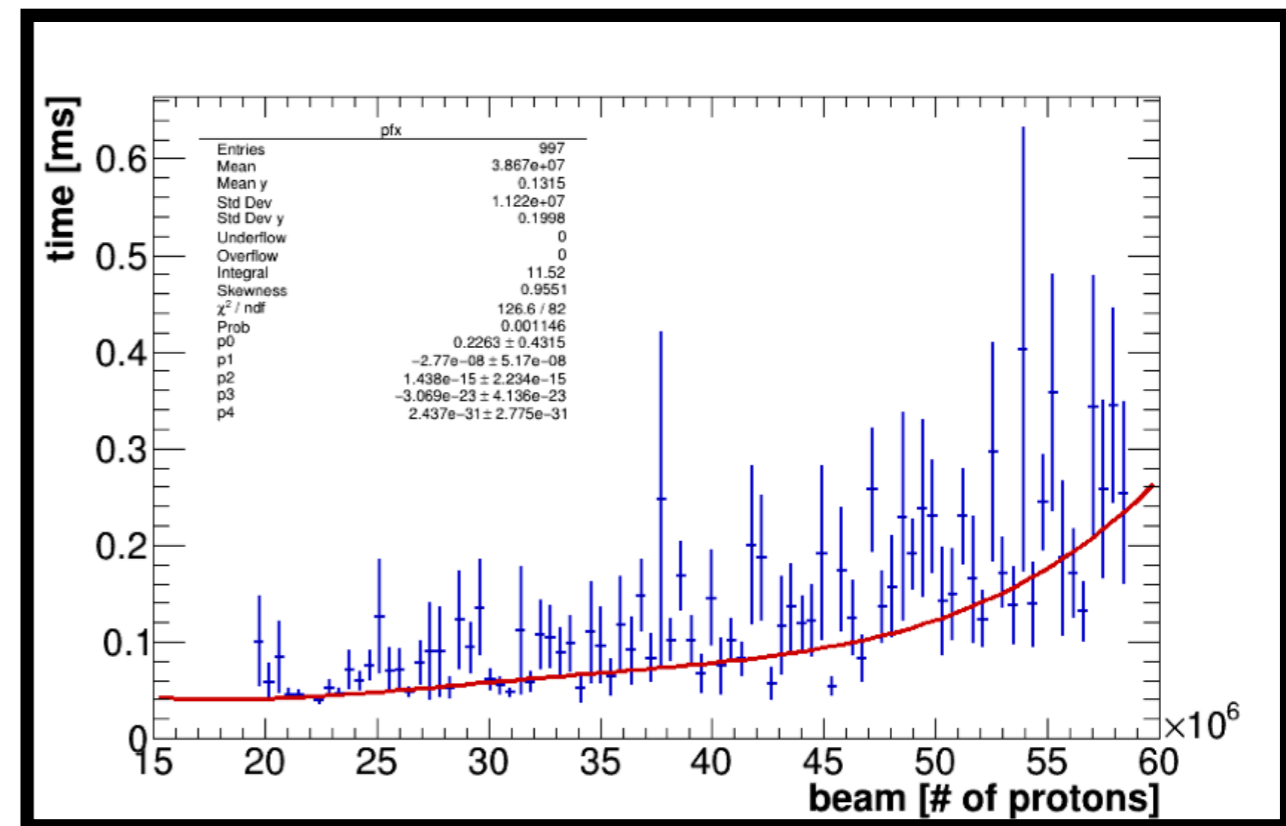
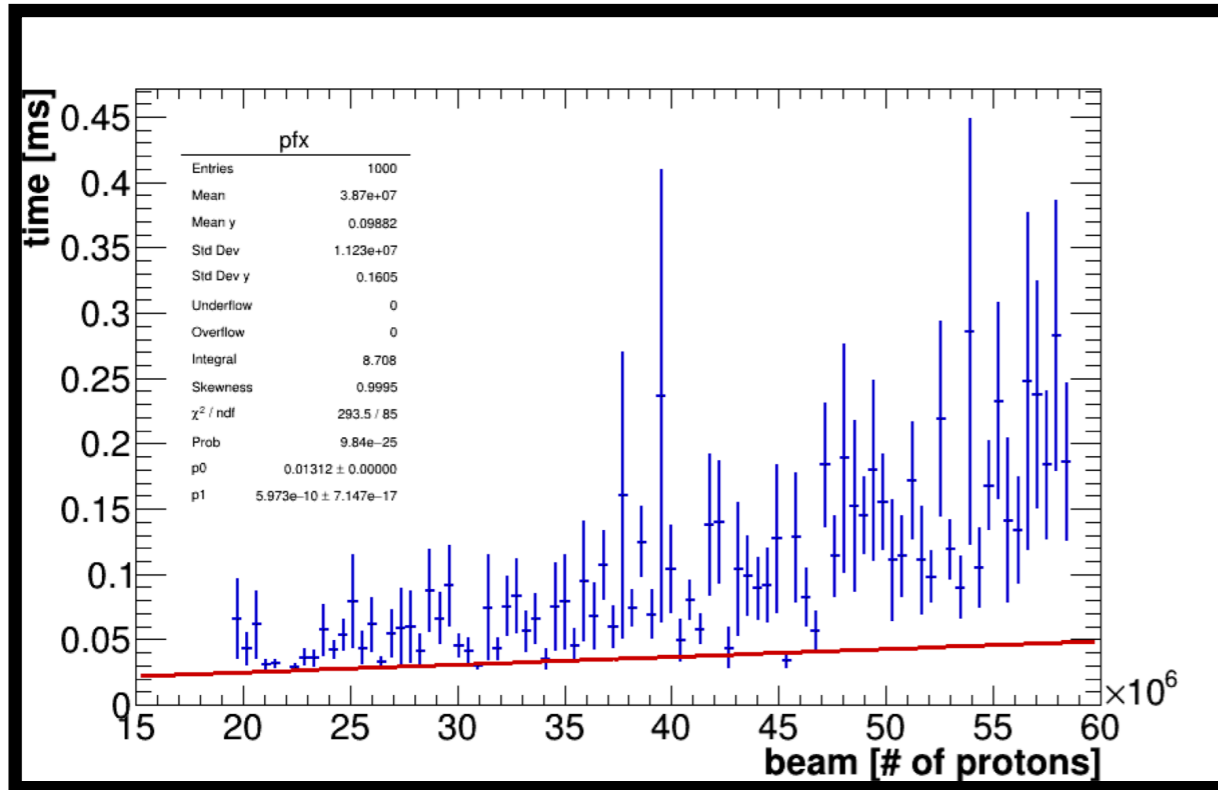
Beam Intensity CaloClusterFast Profile



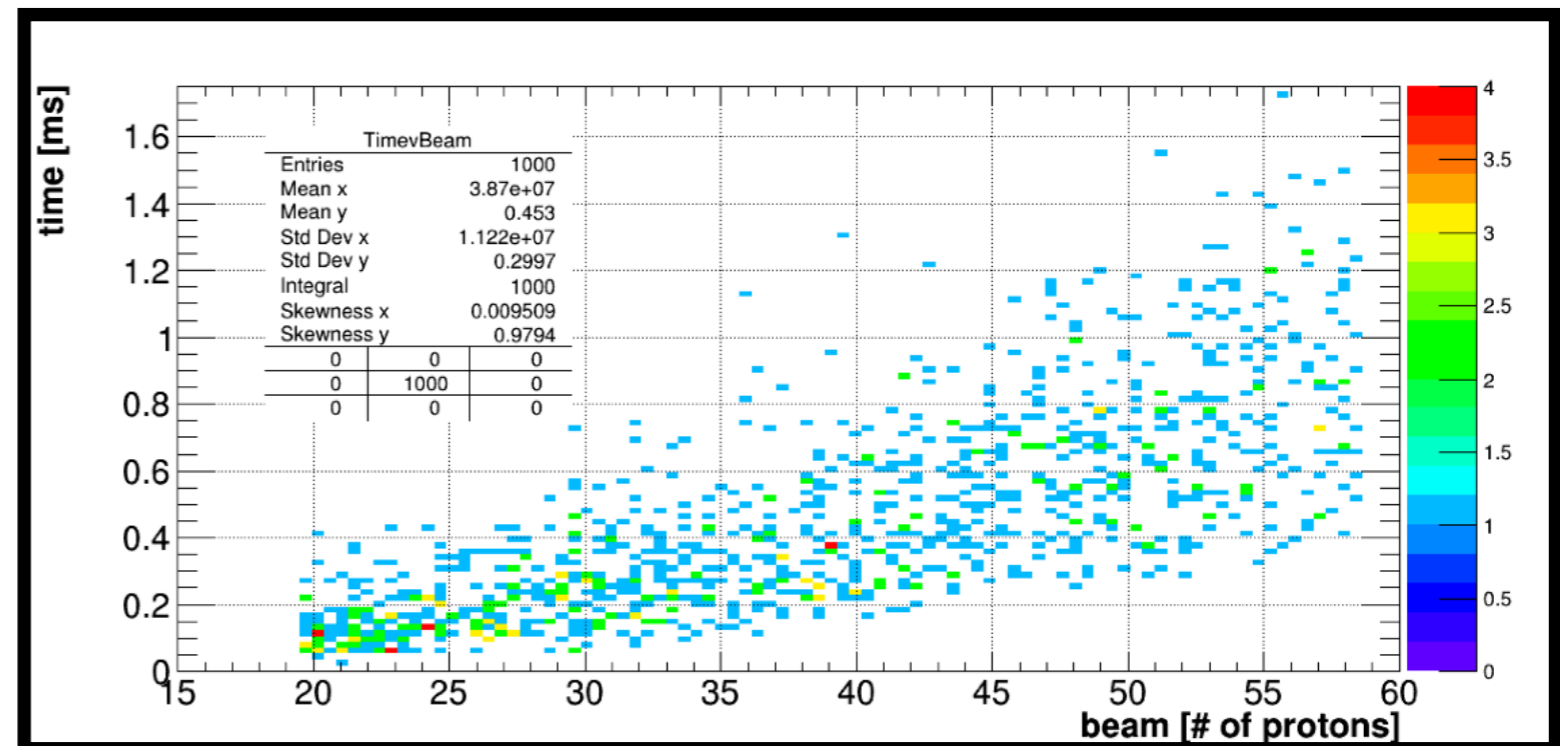
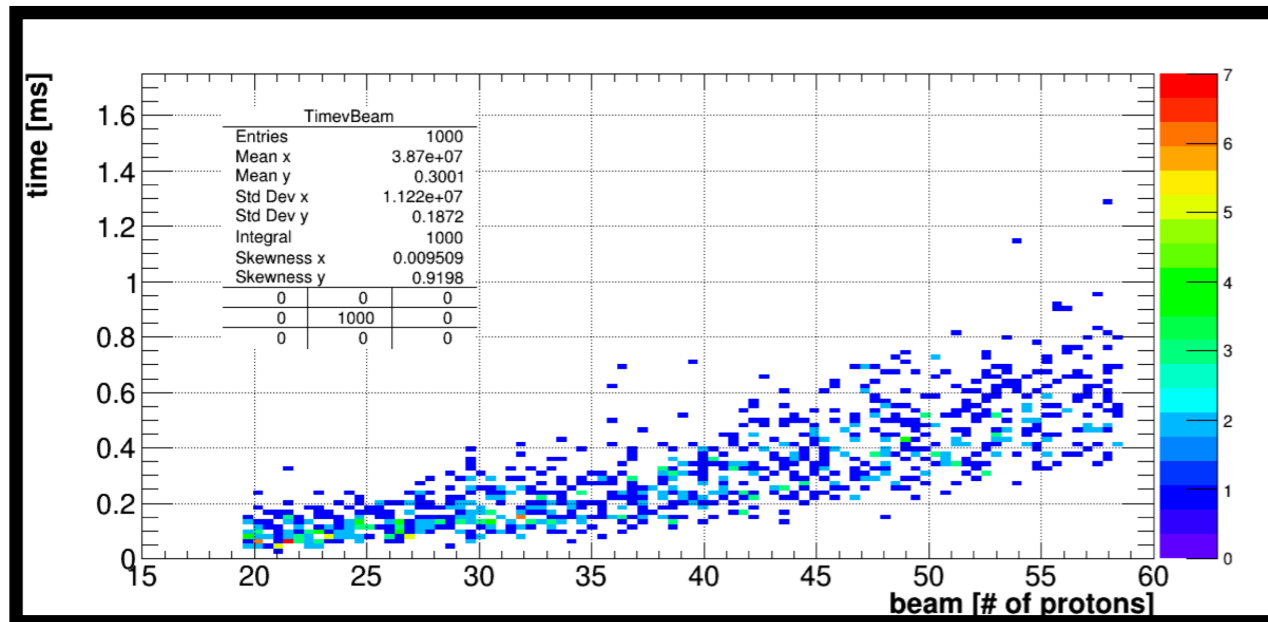
Beam Intensity CalHelixFinder



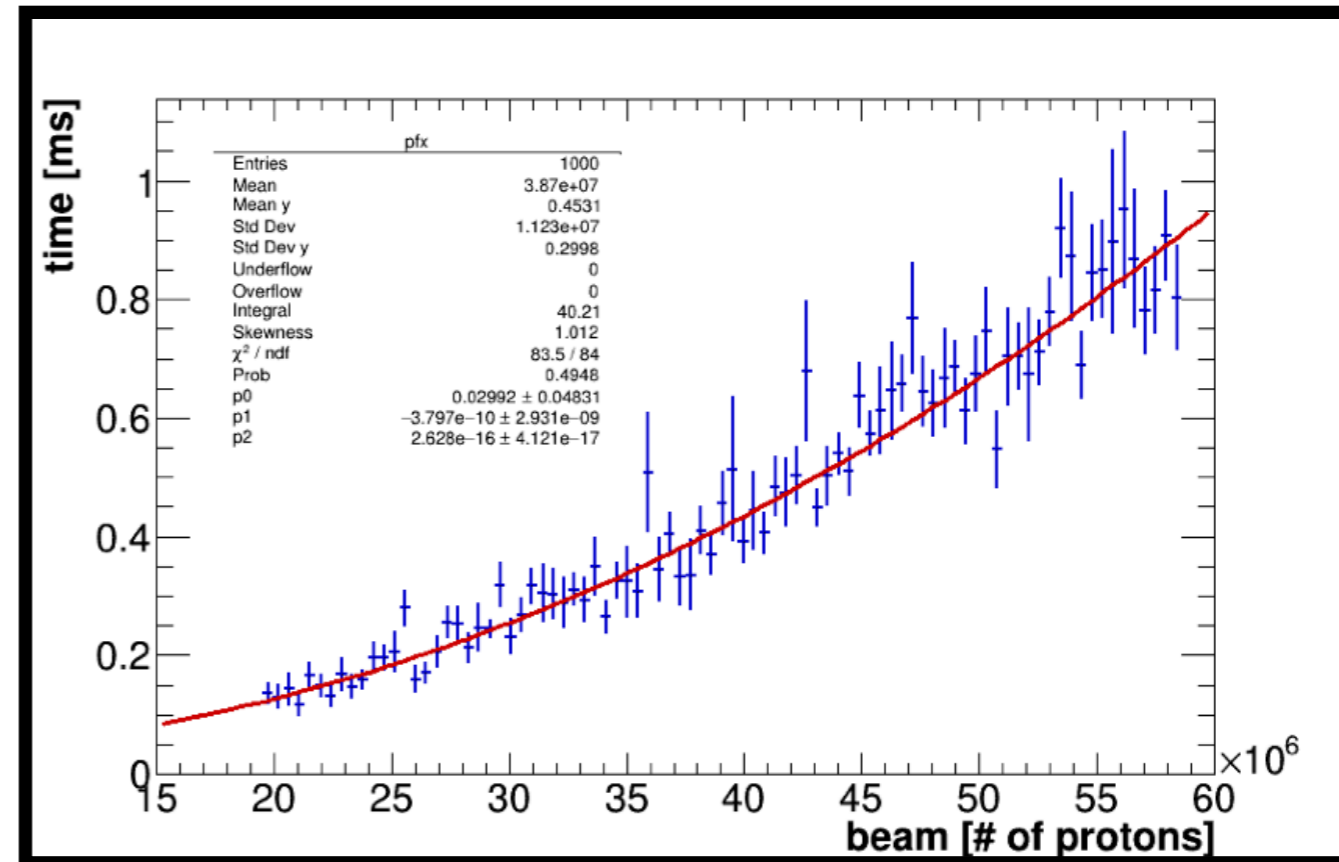
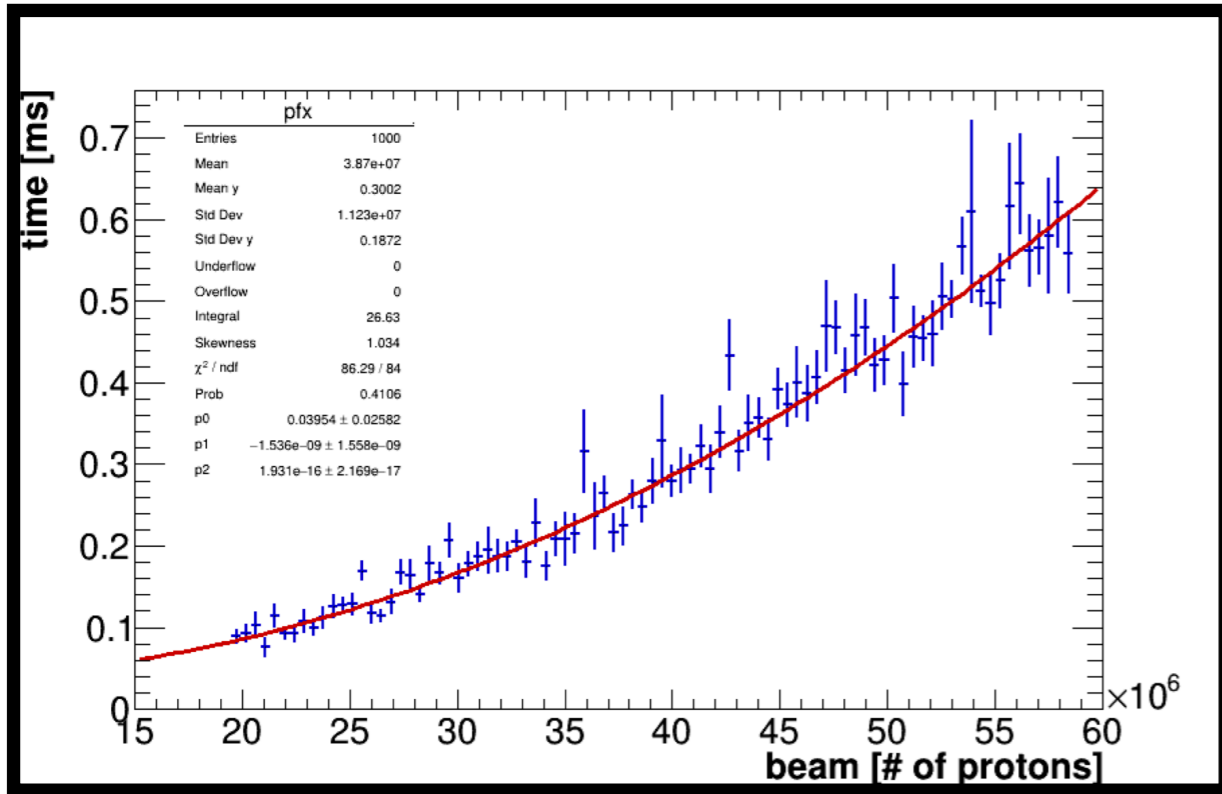
Beam Intensity CalHelixFinder profile



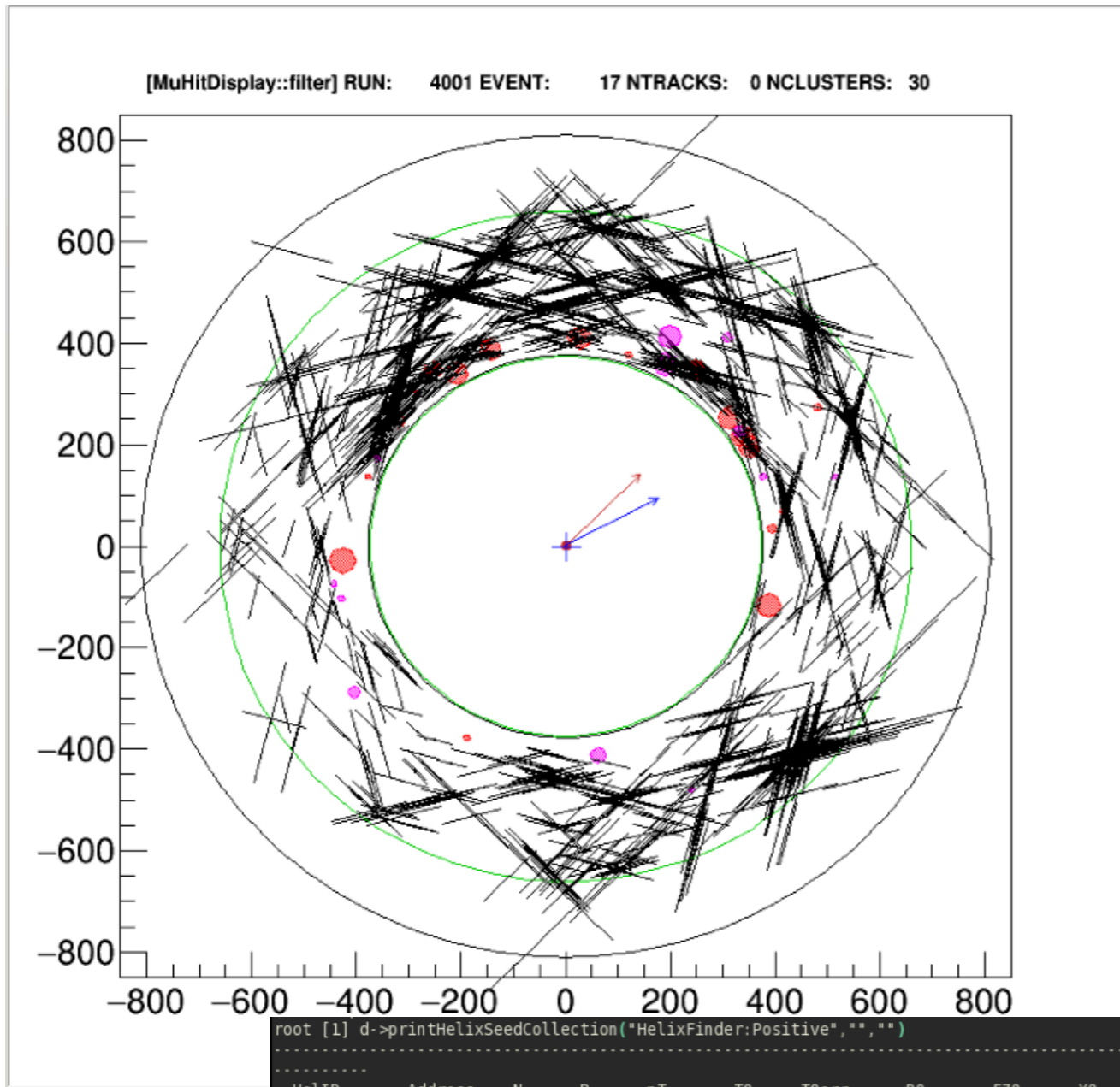
TimeClusterFinder



Beam Intensity TimeClusterFinder profile



Event 17 on Kalman-seed Fit



- Next step in project would be to inspect tails on these plots.
- Event 17 is a tail on KSFDeM

```

root [1] d->printHelixSeedCollection("HelixFinder:Positive","", "")
-----
HelID   Address  N   P   pT   T0   T0err  D0   FZ0   X0   Y0   Lambda  radius  caloEnergy  chi2XY  chi2ZPhi
flag
-----
-1      0x1346e590 22 102.853 80.354 517.901 2.600 -40.584 2.681 -98.162 204.969 214.007 267.847 -1.000 43.210 46.383
000007cf
-1      0x1346e600 23 89.857 69.706 634.806 5.546 31.522 -0.679 -130.817 229.165 189.016 232.352 -1.000 50.115 133.536
000007cf
-1      0x1346e670 17 91.854 79.483 571.450 2.161 -13.818 0.000 -15.740 250.632 153.465 264.944 -1.000 16.207 152.513
0000054b
root [2] d->printHelixSeedCollection("HelixFinder:Negative","", "")
-----
HelID   Address  N   P   pT   T0   T0err  D0   FZ0   X0   Y0   Lambda  radius  caloEnergy  chi2XY  chi2ZPhi
flag
-----
-1      0x1349a680 17 104.919 79.483 601.900 5.823 -13.818 0.000 -15.740 250.632 -228.289 264.944 -1.000 16.207 79.165
0000054b
root [3]

```

Future Work

- Tests for MEM and CPU & MEM are done and plots made. Just need to get screenshots once VNC is working and put them into report
- Finish report