Updates on time calibration

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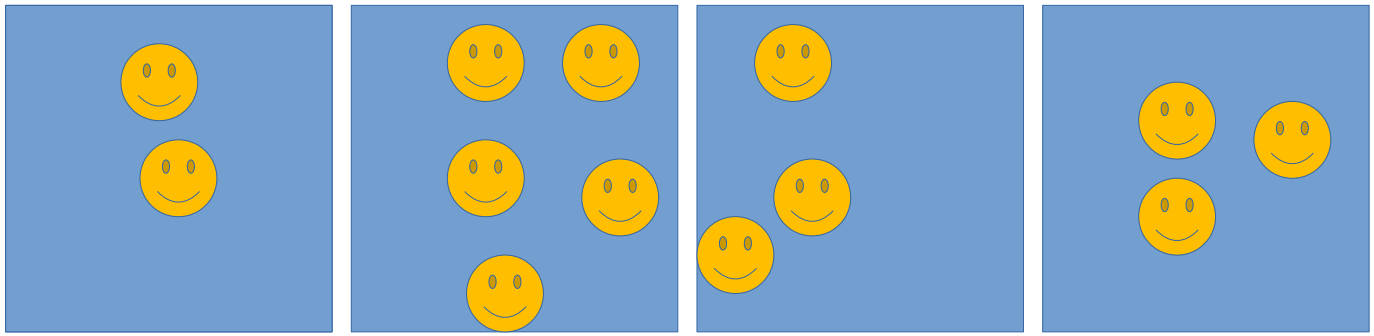
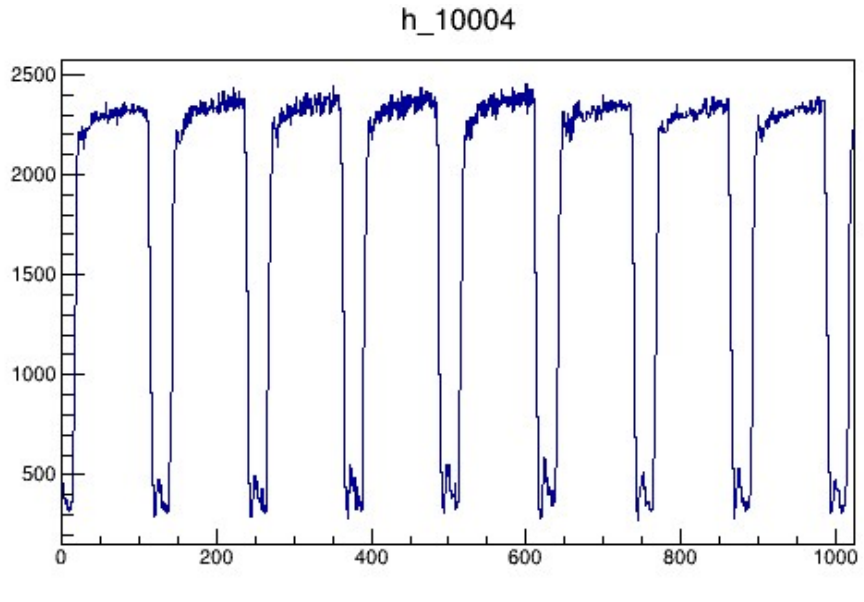
Silvia’s Rain Drop Model



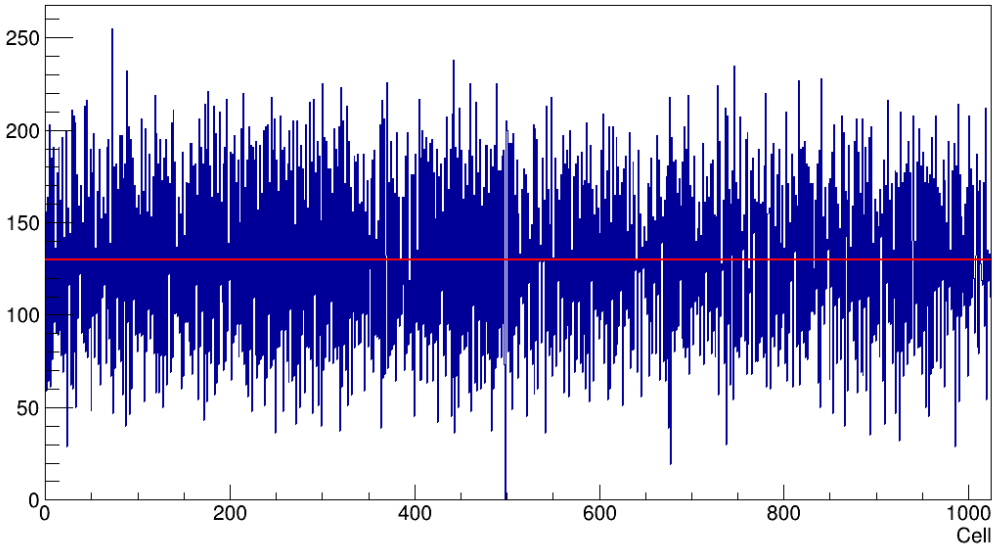
Given random smilies are falling uniformly
((Similie in Each Cell – Mean Number of smilies)/Mean Number of Smilies) = correction factor of that cell = (timeCorrection/Mean time)

deltaC/C = c_i = deltaT/T_mean

Sample example

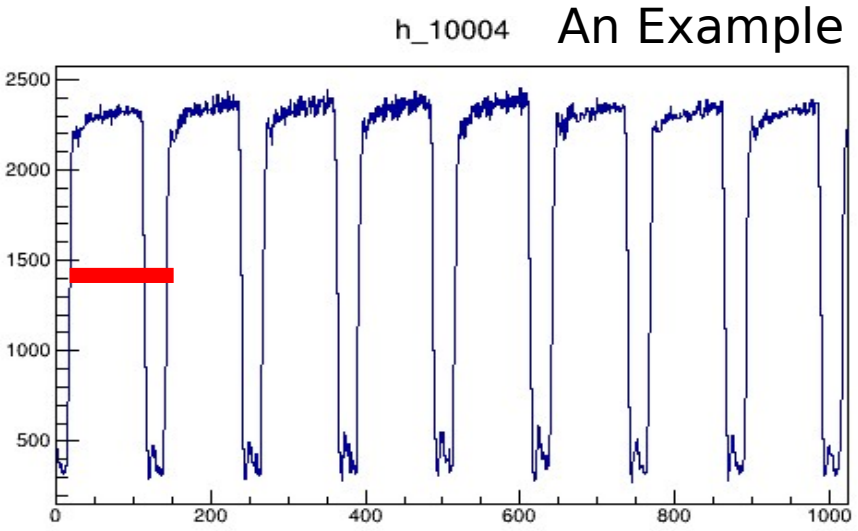


An Example Event



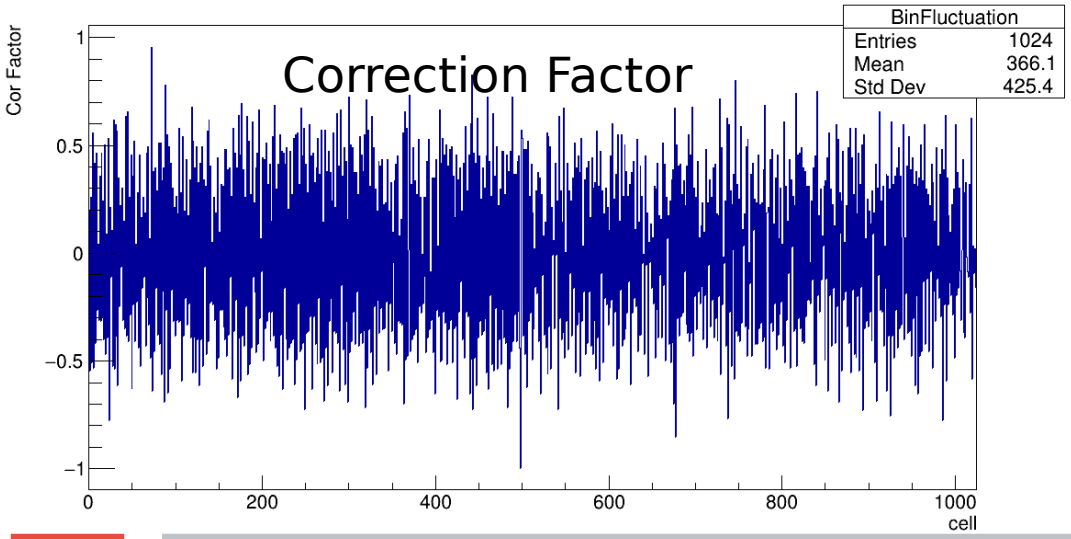
Histogram of Cell entries crossing 50% of rise edge

Estimation of the mean time

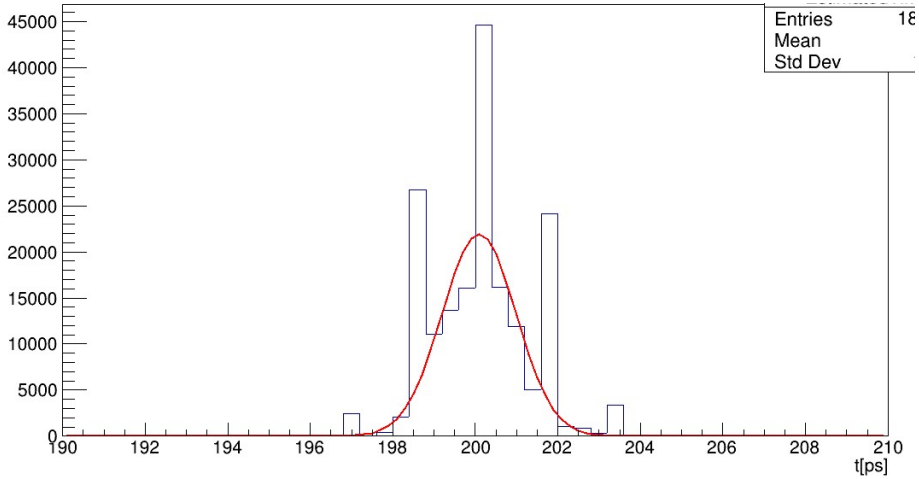


The red line is 25ns

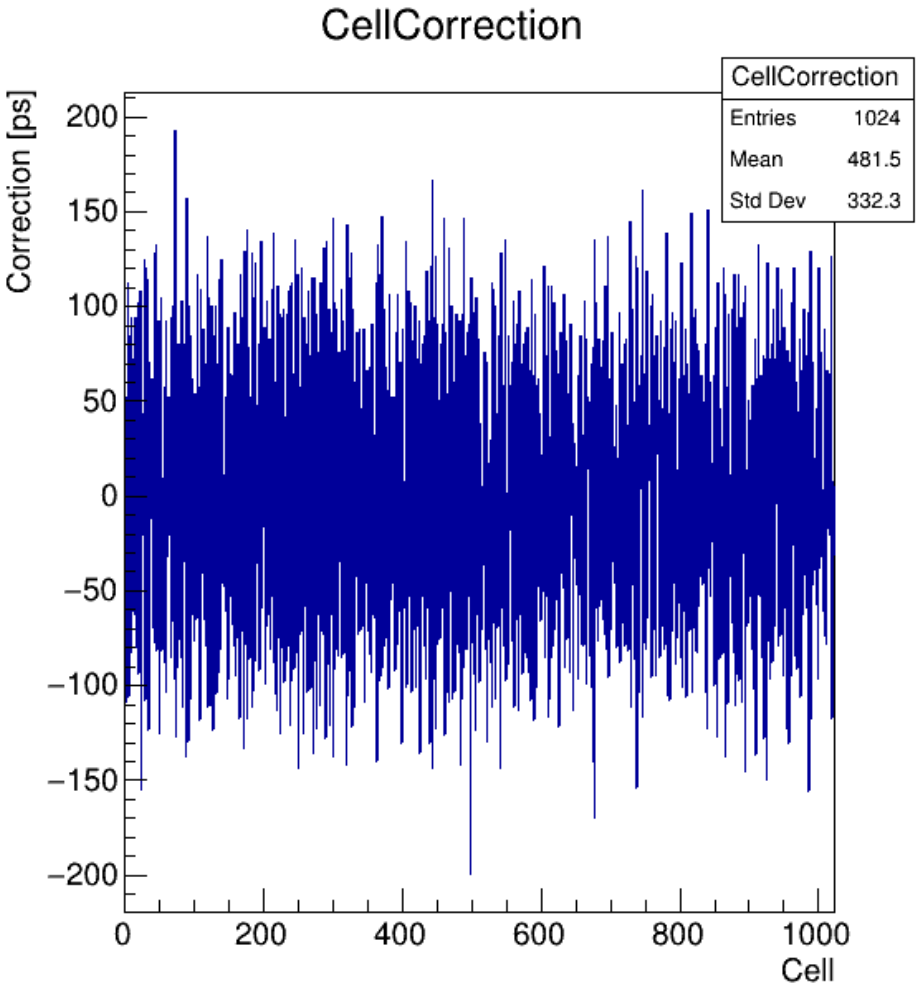
Sum over all cell time = 25 ns
=> Sum (MeanTime + deltaTime)= 25 ns
=> MeanTime*Number of cells(in this two edge) + MeanTime*Sum(Correction factors of cells)= 25 ns
=> MeanTime = 25/(NCells+Sum(C_i))

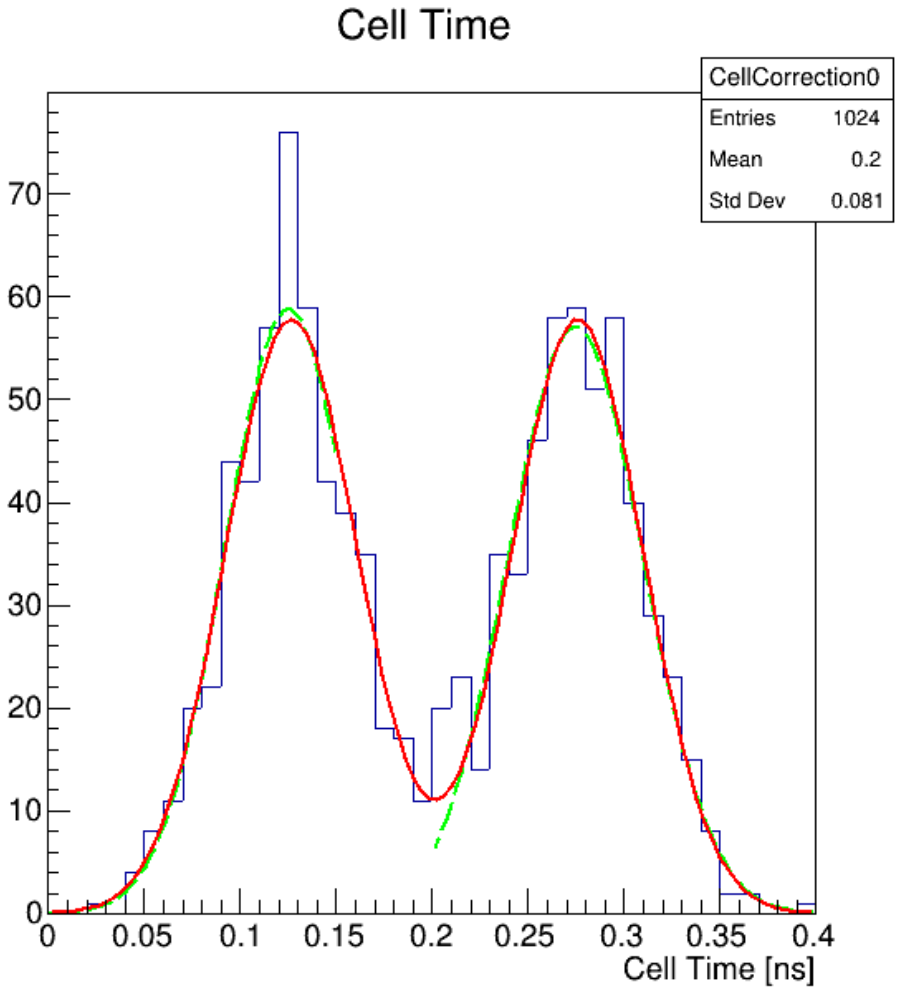


Mean Time

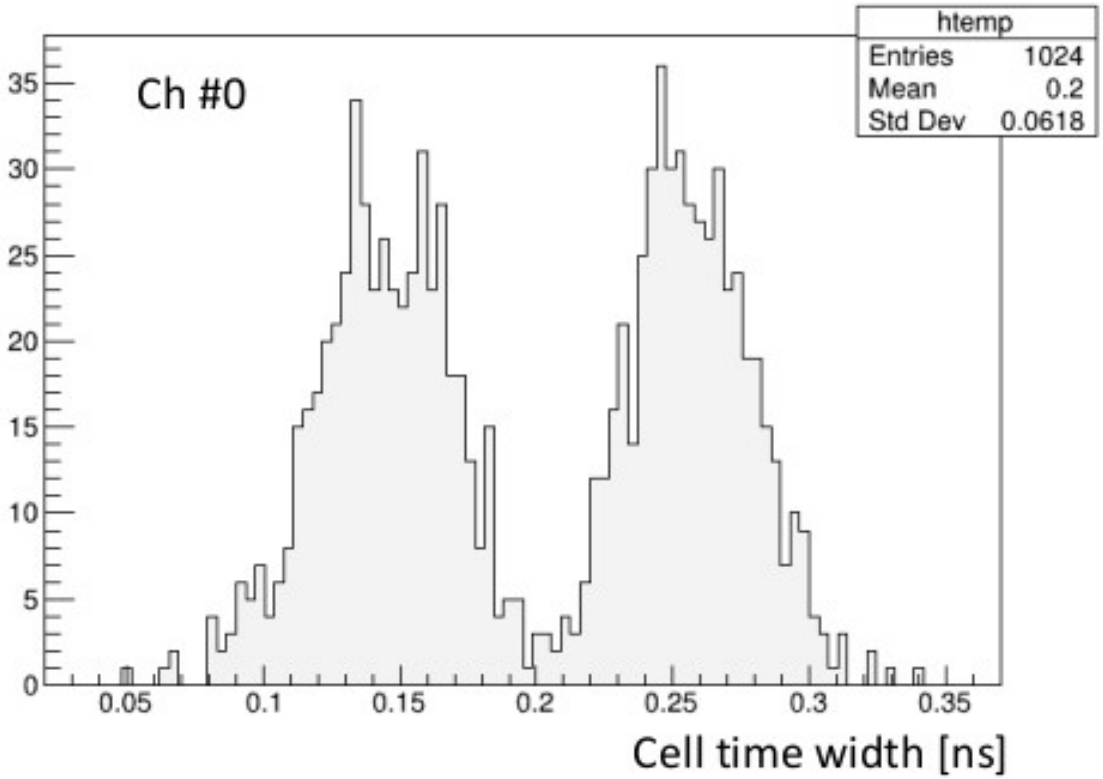


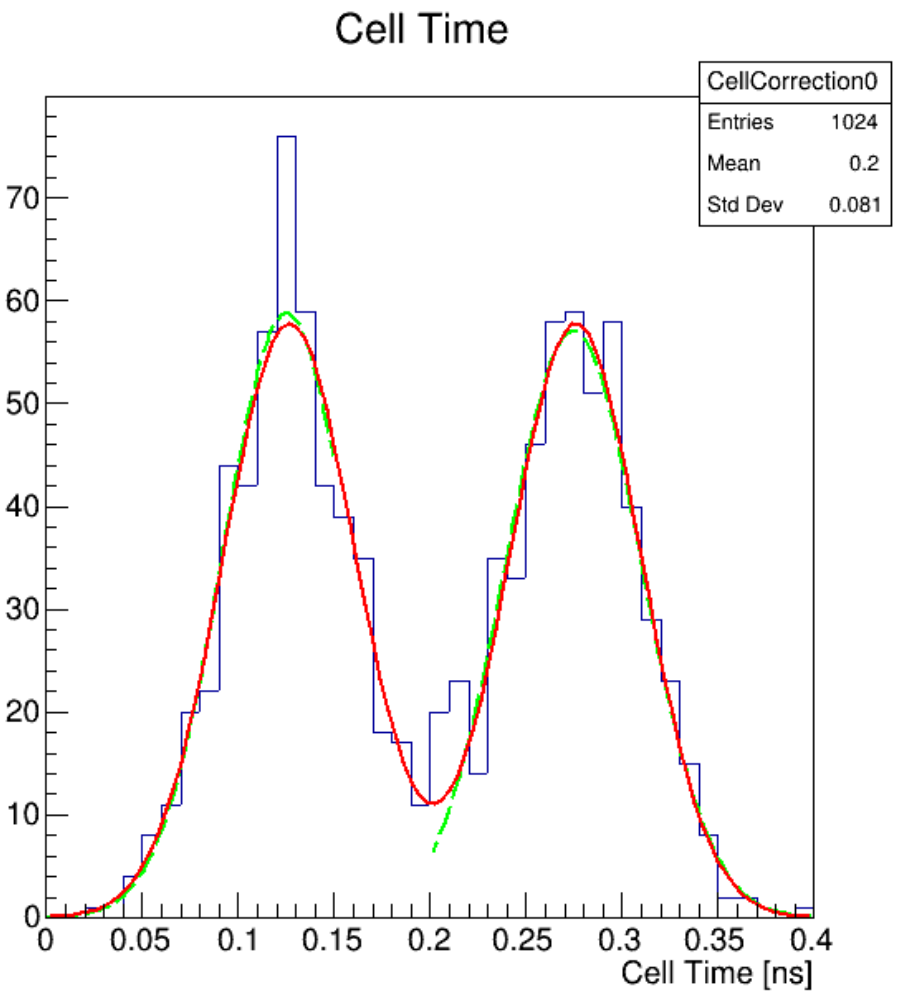
Time Correction factor





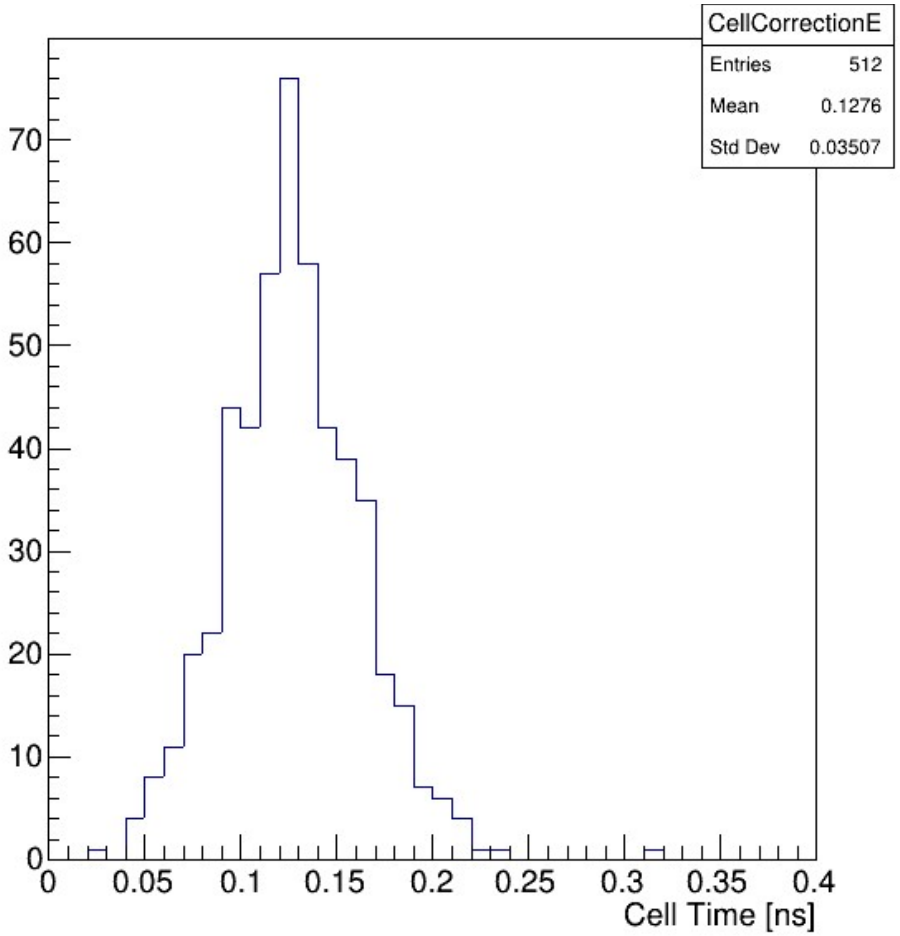
Comparison with Vincenzo

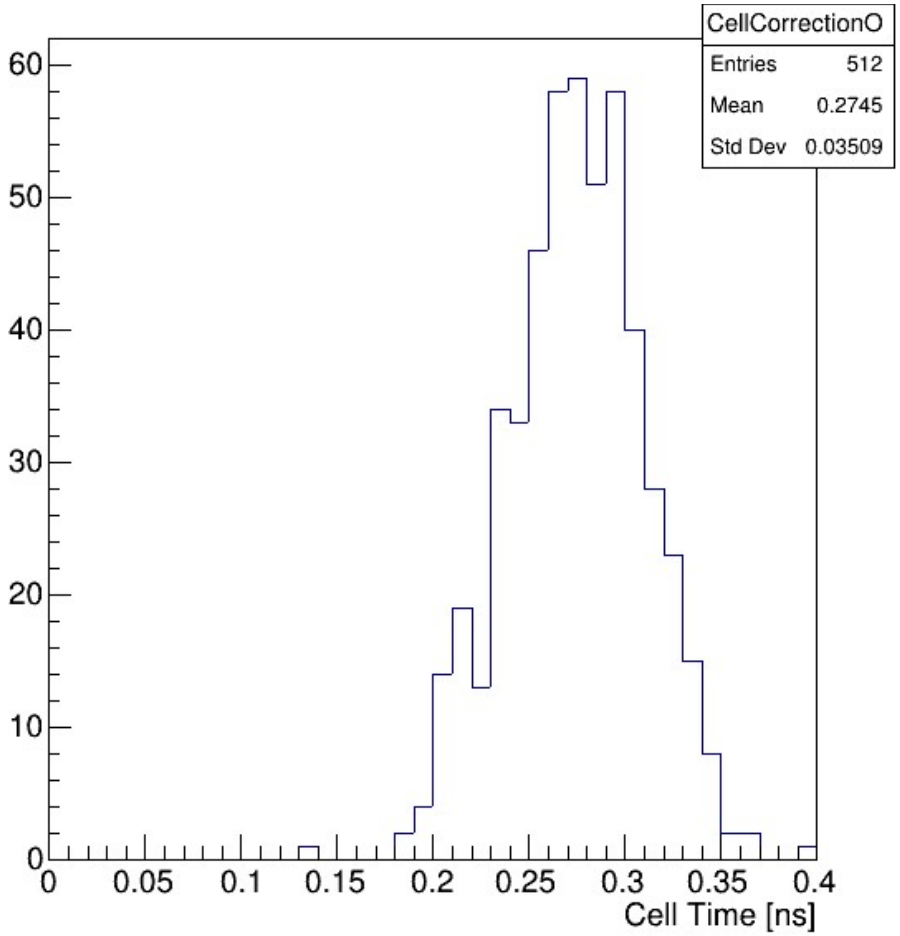




Very similar shape

Odd Cells and Even Cells





Discussions