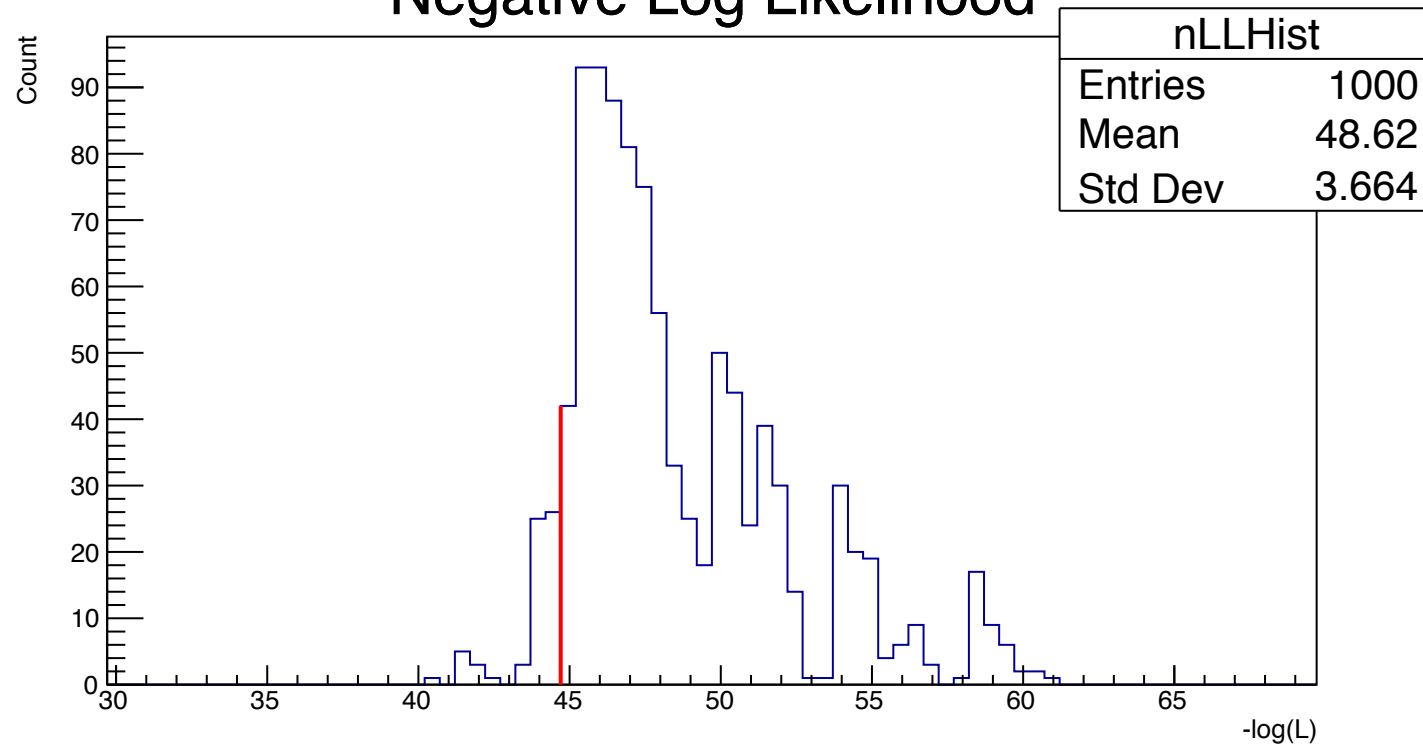


We see that the results match closely to the expected values (~50 for each type of fit) in each case. The distribution standard deviations for the mean also matched closely to the estimated uncertainty on the fit mean (which is ~0.35 for the fit). This confirms the goodness of our fit. In addition, we see that the width of the parameter distributions using log likelihood method is narrower compared to using chi-square method, indicating that log likelihood is a better fit for our data of small sample size.

Negative Log Likelihood



Here the red line represents the the NLL for the first fit on histo25.root histogram. We see that this NLL lies in the lower end of the distribution, and the fraction of the pseudo-experiments that lie below this line is much smaller than 1/2. This indicates that our original NLL fit is good.

