

Physics 493L: Homework #2
Due April 17, 2012
10 points

For the following, write your own MATLAB script and functions.

The data set 'HW2data.mat' contains Poisson distributed measurements *data* at positions *x*. Model the data as

$$y = A\exp(-x/\delta)$$

and make a maximum likelihood estimate of *A* and δ . Your matlab code should print the found values to the screen.

Use the log-likelihood ratio to calculate a p-value. Would you reject or fail to reject your fit model at the 0.01 significance level?

Turn in the MATLAB m-files (via e-mail) that I can use to reproduce your results.