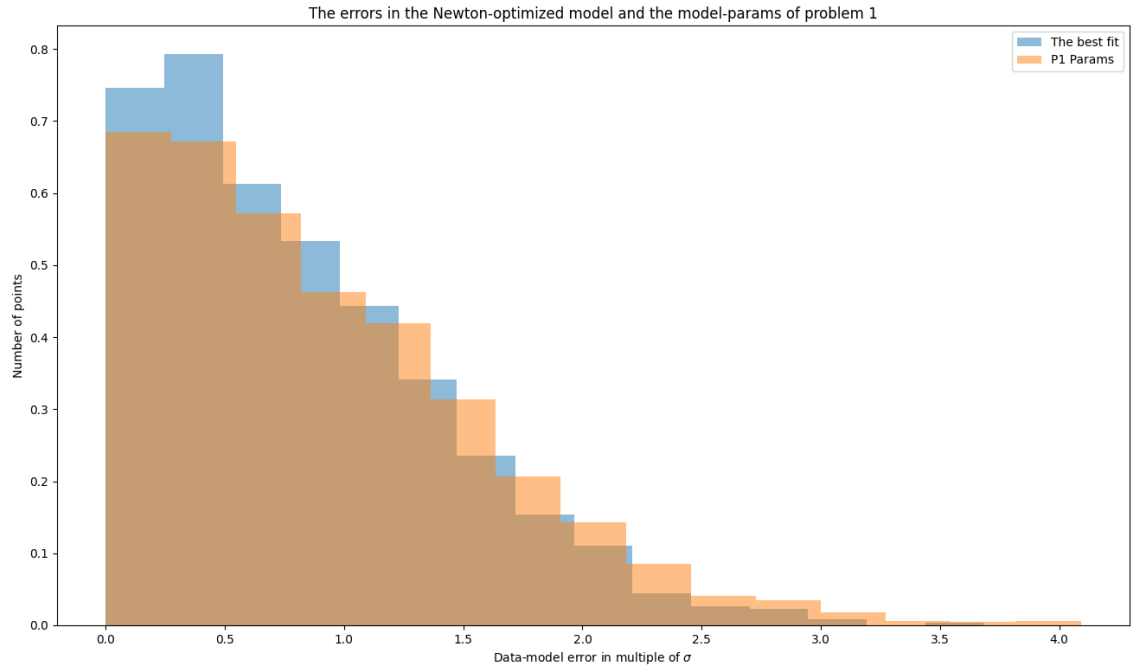


## Problem 2

The optimal parameters are  $[68.01, 0.02234, 0.118, 0.0797, 2.2196 \cdot 10^{-9}, 0.9723]$ . With a final  $\chi^2$  of 2576.22, which is  $1.06\sigma$  from the 2501 predicted by the number of degrees of freedom. Below a histogram illustrating the difference between this parameter set and the one proposed in problem 1.



Where you can notice, these new model parameters lead to more points being within  $1\sigma$  of the data.