This is a nonlinear, errors-in-variables, least-squares regression, very much a challenge for classical statistics.

The model used here illustrates one way to tackle this problem. The priors for the parameters are taken from the cited reference and that for trueT is deliberately vague.

It might seem that there is so much uncertainty in the data that there is little to be gained. However, results show that the uncertainty in the half-life of carbon-14 decreases slightly.