For this historical fit of NEE, LE, and soil moisture we created three random walk models. These models are Bayesian state-space models and include a data model, process model and priors. The data model is as follow y[t] ~ dnorm(x[t], tau\_obs) where y[t] is determined by the latent variable (x[t]) and some observation error. The process model x[t]~dnorm(x[t-1],tau\_add) states that the following time point is the previous time point plus some Gaussian process error. Lastly, we define priors for the initial conditions, process error and observation error. The prior for the initial conditions is x[1] ~dnorm(x\_ic, tau\_ic) which states that the initial conditions are pulled form a Gaussian distribution where the mean is the initial conditions of x and the variance is the initial conditions error. The observation error and process error are both pulled from a gamma distribution where the distribution parameters are a\_obs and r\_obs for the observation error and a\_add and r\_add for the process error.