Comment on egusphere-2022-49
Anonymous Referee #1

Referee comment on "FORCCHN V2.0: An individual-based model for predicting multiscale forest carbon dynamics" by Jing Fang et al., EGUsphere, https://doi.org/10.5194/egusphere-2022-49-RC1, 2022

In this manuscript, the authors developed an individual tree-based carbon model, FORCCHN2 by using the NSC pools to couple tree growth and phenology. It was tested that the model performed well in reducing uncertainty in predicting forest carbon fluxes. They described the framework in details and provide the source code of the model. The coding system is complete, and both research and development foundations were very solid. Besides, the model is very convenient to be called with other computer tools. I noticed that the results of application of the model in predicting carbon dynamics in the Northern Hemisphere was very ideal. I suggest accept the manuscript for publication after minor revisions. I have the following minor points need to be addressed by the authors.

1. Section 2, for description of FORCCHN2, you just told phenology, you may mean phenophase, was controlled by heat and chilling. You’d better tell what model was used to decide phenophase by climatic variables. Beside, in phenology, we often say heat and chilling requirements.

2. Line 75-76: does phenology here mean spring phenology? As it is difficult for the calculation of chilling requirements for autumn phenology.