Interactive comment on "CLASSIC v1.0: the open-source community successor to the Canadian Land Surface Scheme (CLASS) and the Canadian Terrestrial Ecosystem Model (CTEM) – Part 1: Model framework and site-level performance" *by* Joe R. Melton et al.

Anonymous Referee #2

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Moving CLASS-CTEM to an open source community model is an important initiative. This paper is a well-written discussion – perhaps a little unbalanced in the level of technical detail between different sections and with a few typos to pick up in copy editing, but those are not major problems. I judge that is acceptable for publication essentially as it stands, but I have some minor suggestions and questions:

- soil freezing and fire are mentioned in the text but not represented in Figure 1.

- can separate reference heights be provided for temperature and wind speed? They often differ, both in site measurements and global datasets

- total precipitation is required as an input, but what flexibility is there in specifying how the model will divide it into snow and rain?

- the single model snow layer is a historical feature of CLASS, but is there a scientific justification for maintaining it in a model with many more ground layers?

- other models have used FLUXNET data for benchmarking. Could a short discussion of CLASSIC performance in the context of other studies be added?

Interactive comment on Geosci. Model Dev. Discuss., https://doi.org/10.5194/gmd-2019-329, 2019.