Comment on gmd-2021-303
Xavier Fettweis (Referee)

This paper presents improvements and tunings of the firn model IMAU-FDM. The paper is well written, fits very well with GDM and deserves to be published. In addition of the remarks from reviewer #1, I have a few additional minor remarks about Section 4:

- where the old and new version of the model are compared at 3 sites, its should be interesting to evaluate the impacts of the new developments in deep. For example, by showing time series of temperature and density at 10m.
- adding 2D map showing the differences of elevation, integrated snow temperature/density (or at 10m) at the end of the simulation (2020) will be useful because I’m note sure if the 3 selected locations are representative of the whole ice sheet.
- evaluating the statistic significance (with respect to the interannual variability) of the differences between the new and old version of IMAU-FDM will be useful. Are the new results (in particular for elevation, temperature and density) significantly different than the former ones? Is it a new major version of IMAU-FDM?