

## ***Interactive comment on “ICESHEET 1.0: A program to produce paleo-ice sheet models with minimal assumptions” by E. J. Gowan et al.***

### **Anonymous Referee #1**

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The advance in science and computer power have led to an enormous increase in modelling techniques, number of models in computations, and complexity of models. Ice (sheet) models are input to several of modellings when it comes to e.g. climate change or sea-level rise. As the authors note, they also turn out to be more complex recently. I welcome this study as it (1) provides an easy tool for generating your own ice model and (2) shows that for many studies on glacial isostatic adjustment (GIA) the ice model does not have to be so complex as often indicated. The manuscript is well written and concise, figures and tables provide all information needed to understand the tool. While reading I made a few notes only where some additional information would help make points finally clear.

Minor suggestions: L109. Specify the "limited impact". L111. What is "a component of GIA"? L114. Add a few words on CALSEA such as underlying theory, resolution,

C1

dimension, e.g. is it a spheric harmonic viscoelastic Maxwell body description up to degree 256 using PREM? Does it include rotational feedback and moving shorelines? 1-2 sentences here or in section 4.3. Sect. 3.2. Add maximum differences in the text. Aren't the narrow ice streams at the edge and in the fjord areas? L231/2. This sentences is out of place here. Suggest to remove and add to L226 "...were performed, whose results can be found in Table 1." Also add "(Table 1)" after polygons in L234. Figure 1. What are the red and green lines (name it in caption!)? Figure 4. Add ", see text" after ice sheet. Figure 5. Specify spacing and contour interval of the reference ice sheet model here as well. Table 1. Highlight/mark the reference model, the recommended result and the one used in Fig 5b.

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