

Interactive comment on “On the interest of positive degree day models for mass balance modeling in the inner tropics” by L. Maisincho et al.

Anonymous Referee #1

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I would like to thank the authors for their comments on my review. I am glad to see that the essence of my points came across, but would like to add a short note here for final clarification.

(1) My intention with terminology was not to exaggerate (and I think I did not do so). For example, if you submit to Nature or Science you are not allowed to use the term "significant" unless you refer to your statistical analysis. Hence, all I am asking is, whenever the authors employ statistical significance testing, to not use this term for meanings like "important" or "big" or "strong" or "evident". This will help to not confuse readers.

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(2) By including uncertainty in the model I mean to provide a plus/minus range for results. Having an "idea" of uncertainty from sensitivity tests is useful but not enough in the context of the intended application.

(3) My understanding was that energy balance studies of Antizana were made for a point in the ablation zone (i.e. not with a distributed model). If I am mistaken and the distributed modeling already exists, you should include the output from this, for example to check how well the simple model reproduces energy balance-based VBPs.

(4) My suggestion to drive a simple model with monthly values implied to also use monthly data as input in the model construction phase. This is what I mean by "consistency".

(5) I looked at the chapter of Gurgiser's thesis. Without doubt using simple models in the tropics is of interest. Yet I could not find explicit support for PDD modeling in this chapter.

(6) Please note that with my review I did not draw a conclusion, but provide a recommendation for the editor. Again, due to the inherent problem of PDD modeling with regard to the tropics, I am hoping that my review is stimulating the authors to come up with alternative ideas for simplified mass-balance models of tropical glaciers.

A quick style suggestion: In response to reviewer letters, it would be helpful to distinguish between reviewer comments and author reply more clearly, e.g. by different colors, font styles, or at least by line breaks. This makes it easier for editor, reviewers, and readers.

Interactive comment on The Cryosphere Discuss., 8, 2637, 2014.

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