

Interactive comment on “Enthalpy benchmark experiments for numerical ice sheet models” by T. Kleiner et al.

Anonymous Referee #1

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General comments:

The paper presents two exact solutions (one is new) for enthalpy equations for a parallel slab and compares numerical solutions of three different models to them. It is certainly important to have such benchmark solutions to verify numerical schemes, even if the exact solutions concern unrealistic situations.

The paper is well written and well structured, and certainly deserves to be published.

Specific comments:

I have only very minor points which need clarification

p. 3211, line 18: please do not use @ (although it may become popular in SMS and

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other short communications)

p. 3213, lines 10-11: what do you mean with “co-located”? I guess that non-equidistant and regular grid in terrain following coordinates means “non-equidistant” in the original vertical coordinates and regular (equidistant) in the vertical terrain-following coordinates?

Interactive comment on The Cryosphere Discuss., 8, 3207, 2014.