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Interactive comment on "Sheet, stream, and shelf flow as progressive ice-bed uncoupling: Byrd Glacier, Antarctica, and Jakobshavn Isbrae, Greenland" *by* T. Hughes et al.

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May I stick with "holistic approach" instead of changing it to "experience-based emulation approach"? I appreciate what you're saying, but what we do is attempt to show how smooth transitions from sheet to stream to shelf flow are attained, and this is what we mean by "holistic".

I'm personally intrigued with possible applications to "exoplanatory" or "neoproterozoic" glaciations. However my co-author, James Fastook, has done that for Mars in a series of papers encouraged by NASA, and my holistic approach couldn't improve on his work.

My co-author, Prasad Gogineni, spotted "alone" which should be "along". I missed it.

Comment on page 4274, line 8 and beyond. Nearly all ice-sheet modelers use continuum mechanics. Perhaps glaciologists have a different concept of what continuum mechanics is. I don't use it myself, but my co-author James Fastook does.

Regarding Pascals and bars for stresses in ice sheets, the Founding Fathers of modern Glaciology (John Nye, Hans Weertman, Louis Lliboutry, Petr Shumsky, and others) used bars. Now modelers prefer Pascals. Entering glaciology in 1968, I prefer bars because they don't require expressing length-mass-time units by orders of magnitude that escape my senses. So I used both to try to satisfy everyone.

On page 4318, the word "Termination" is capitalized because in the glaciological literature it refers to the "abrupt" end of an approximate 100,000-year cycle of Quaternary glaciation. It's a proper noun. I'll clarify this in my revisions.

Thank you for your comments.

Interactive comment on The Cryosphere Discuss., 9, 4271, 2015.