

Interactive comment on “Towards a public, standardized, diagnostic benchmarking system for land surface models” by G. Abramowitz

Anonymous Referee #1

Received and published: 27 March 2012

Overall this is a very interesting paper that tackles a very important issue for the modeling community – benchmarking. The author proposes interesting strategies and makes some very interesting arguments throughout the manuscript. There are minor issues in the presentation and phrasing, which I believe should be addressed prior to publication. Thus, my recommendation is that the manuscript be published with minor revisions. Table 1: This table needs to be more self explanatory – i.e. consider using headings. As it stands the caption is too long. Change 5 yr, to something more general – i.e. an older model version. L 15 page 552, the statement: “ask yourself whether the red or blue model is:”, this is a confusing statement. Perhaps color is missing in Table 1 since it is unclear which model version is red, blue, or has any associated color. Item 3 on page 554 needs to be more succinct. The description includes a partial definition of what a physically-based model entails, and the author should aim to keep the point as concise

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as possible, since this distracts the reader from the major point of the item. L19 page 555 is a typo “score_mooth” Figure 1: The labels and statistics should be written in a clear fashion, without the need for underscores within words. In the spirit of this paper, this disambiguation is warranted. The only things clear on Figure 1 are the line labels. Everything to the right of these needs to be more clearly presented, although even the label B_Emp1ln could be replaced by “regression”, or something to this effect. Figure 2: Same comment as Figure 1. Make the figures self-explanatory without the need for extensive captions and explanation in the text to the basic meanings of what is included on the plot. Figure 3: Same comment. Avoid the use of computer-code variable names as labels. The second to last paragraph of page 555 could use some re-writing as it is a choppy read. Table 2: Although the general sentiment behind this table is discernible, the choice of cases, or at least their presentation appear to be incomplete: e.g. “Within observational uncertainty (strongest)”, does this mean that model output falls within observation uncertainty, or that the uncertainty in model inputs/structure have equivalent uncertainty to observational sensors? Quite confusing. Also, this appears to be somewhat of an outlier compared with the context of the other three lines in the table. A general point, the author frequently uses statements like “While we feel...” L 14 pg 557, yet this is a single-author manuscript, so perhaps alternative wording or a clearer expression of “we” is warranted. The references to Oreskes, and Medlyn papers need further context or at least a simple statement describing what they summarize would be helpful. Need to define “ALMA” The second paragraph on page 559, starting on L12 reads like it was constructed from bullet points and should be re-written, or simply converted to bullets. The same is true to lesser extent for the paragraphs that follow within section 4. Grammar: L14 of page 561, the comma needs to be moved later in the sentence after the word “project”.

Interactive comment on Geosci. Model Dev. Discuss., 5, 549, 2012.