**Geoscientific
Model Development
Discussions**

Interactive
Comment

Interactive comment on "The FAMOUS climate model (versions XFXWB and XFHCC): description update to version XDBUA" *by* R. S. Smith

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This manuscript is a well written and simple-to-follow documentation of recent updates and corrections to an existing published model. As such it would be very hard to publish in a more science-oriented journal, and is exactly what GMD is for. The manuscript is an excellent example of updating model documentation as the model develops and is very much required and appropriate to GMD.

The manuscript very clearly lays out what changes have been made and can be published with only very few revisions as listed below.

finally I should point out that when I accepted this review I didn't realise that I was acknowledged in the paper. However, I wasn't actually involved in the work itself reported

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here and so don't believe this compromises my ability to review objectively.

Chris Jones.

page 3052. Can you comment if the changes in boundary conditions might cause a change in simulated climate? e.g. a change of 8 ppm of CO_2 is about 10% of the pre-industrial-present day increase and so might account for 0.1 degree change?

page 3055. only from the figure can you see that you have you performed climate change experiments - these should be better described in the text. i.e. lay out the experiments you performed before describing results

p.3055 - its fair to show a figure of the winds under $2xCO_2$ as these are clearly impacted by your changes. But can you also at least mention if key metrics such as T and precip are affected? in particular, Jones et al 2005 showed a strong sensitivity of FAMOUS climate sensitivity to tuning - so it could also be sensitive to these new changes. How is delta-T$2xCO_2$ affected?

table 1 - The arcsin Mielke score is defined in Jones et al, but you could at least decribe here that it ranges technically from -1 to 1, with 1 being "perfect", and zero being an effective minimum value of no skill (negative values showing anti-correlation with obs).

Interactive comment on Geosci. Model Dev. Discuss., 4, 3047, 2011.

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