Geoscientific
Model Development
Discussions

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Interactive comment on "Validating a 1-D SVAT model in a range of USA and Australian ecosystems: evidence towards its use as a tool to study Earth's system interactions" *by* G. P. Petropoulos et al.

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My interpretation of this paper suggests it has screened cloudy days in the analysis - and it has limited the analysis to 72 data in 2011.

If I am right in this interpretation the conclusion "The model presents itself as an important tool to acquire regional specific data, essential for numerous hydrological modelling, agriculture and water resource management applications"

seems flawed. Each of these applications need to accommodate inter-annual and

seasonal variability. If there is anywhere in the world a model needs to account for inter-annual variability it is Australia. It does not seem clear to me that evaluation over 72 days provides any real capacity to make robust conclusions. The model also has to be able to cope with cloudy days (!) since in any application for hydrological modelling, agriculture or water resource management one might presume that periods of cloud cover and potential rainfall are rather profoundly important to the resulting applicability of the model.

I may well have misunderstood of course but I suggest these issues need to be addressed. There is also a lot of activity in Australia linked to model evaluations of land surface models not cited here - perhaps see papers by Haverd or Abramowitz or Ying Ping Wang .... all in the international literature.

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