

Interactive comment on “The Interactions between Soil-Biosphere-Atmosphere (ISBA) land surface model Multi-Energy Balance (MEB) option in SURFEX – Part 1: Model description” by Aaron Boone et al.

Anonymous Referee #2

Received and published: 9 December 2016

This paper describes the introduction of a multi-energy balance version in the ISBA SVAT model. This more complexity-based approach is a major development modification of the model and has the goal to improve the land surface processes, particularly on forest medium. I found this paper well written, well documented and clear. Model history and working context is well introduced. I'm sure that this ISBA option will serve the land surface model community. Therefore, I suggest minor revisions before accepting the paper for publication.

p5. L146: "and" is misplaced

[Printer-friendly version](#)

[Discussion paper](#)



p6. L188: define V_a in equation

GMDD

Fig. 1: this figure is central and commented P.6 from L176 to 201. For a better understanding of different resistances and temperatures, a table showing symbology indices elements would be welcome such vg: vegetation, c: canopy, g: ground, n: snow surface ...) Moreover, this symbology is repeated in many other terms.

Interactive comment

P8. L234: I supposed the reference is Eq. 5 instead of 6

p8. L248: reverse vegetation and snow position.

p10. L321: Snow surface temperature is missing.

p11. L355: replace "over liquid water and ice" by "air and snow".

p13. L393: define "pn" as evaporative efficiency or adapted terminology

p13. L394: define "LAI"

p14. L449: replace "m-6" by "10-6 m" (2 times)

p16. eq. 45: define LAI as Leaf Area Index

p17. eq. 52: define "lw" (denominator)

p18. eq. 58: is LAIf a particular LAI?

p22. L698: boeotian question: I supposed the maximum snow load per unit branch area is different according to species. Is value of 6.3 kg m-2 proposed could be consider as a median estimator? or a default value?

Interactive comment on Geosci. Model Dev. Discuss., doi:10.5194/gmd-2016-269, 2016.

[Printer-friendly version](#)

[Discussion paper](#)

