

Interactive comment on “Evaluation of the Surface Energy Balance System (SEBS) applied to ASTER imagery with flux-measurements at the SPARC 2004 site (Barrax, Spain)” by J. van der Kwast et al.

Anonymous Referee #1

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This paper is a nice evaluation exercise of the SEBS model for which I only have minor remarks:

- p. 1170, line 3: zero plane displacement height instead of displacement height
- p. 1171, lines 17-18: it is not clear to me what's the difference between V-LAS and V-EC + these are not indicated in figure 1
- p. 1172, equation 5: the denominator should be $N-1$ as one degree of freedom has been used to estimate the mean.
- p. 1174, lines 1-7: please expand. this is now very short and vague ("slightly influ-

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enced", "little influenced": please explain why you can make these statements)

p. 1174, line 10: explain how you did the weighting

p. 1175, line 9: typo, should read Obukhov

p. 1175, line 10: sensible heat flux is underestimated: does this imply that latent heat flux then overestimated?

p. 1176, equation 6: H_{\pm} : not clear how this should be applied: once with H_+ and another time with H_- ? Both (?) are called S_i , but how does one know with what it was calculated (with H_- or H_+)?

p. 1176, lines 4-6: there's a large difference between both deviations: one is 1%, the other 25%. Why such large difference? Couldn't the 25% be reduced to e.g. 5%?

p. 1178, line 11-12: due to these sudden changes in vegetation: doesn't this violate the Monin-Obukhov hypothesis? + how does the model deal with mixed pixels?

Figure 3: add in caption the explanation of EC, LAS, SA

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