Hydrology and Earth System Sciences Discussions

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Comment

Interactive comment on "Snow distribution over the Namco lake area of the Tibetan Plateau" *by* M. Li et al.

Z. Vekerdy (Referee)

vekerdy@itc.nl

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Review of: Snow distribution over the Namco lake area of the Tibetan Plateau M. Li, Y. Ma, Z. Hu, H. Ishikawa, and Y. Oku

General comments:

The article is concise, short. Maybe a little too short.

Nevertheless, the article shows an interesting analysis to define the effect of the presence of lakes on the Tibetan Plateau on the snow distribution. This is an important link in the feedback chain that drives the Asian monsoon.

There is an underlying hypothesis, that due to the different heat capacity and albedo of

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water, the lakes show skin temperatures different from their environment, and as such, they should be explicitly considered in the weather modelling; and RS can be used as input data. Unfortunately, this hypothesis is not spelled out in the article, although it would help the reader.

Naming of the model runs are confusing. The first model run should be called base line run (or reference run), then for the second run the revised run term could be used. “Sensitive” run is a confusing term.

It is not discussed that which RS method was used to get the surface skin temperatures which were used in the study.

The approximately 20 K difference between the RS based skin temperature and the one used in the base line model run is obviously far too big. The original run therefore is basically wrong, since the original input was incorrect. A very careful and clear reasoning is needed why it was originally modeled as it was… The lake temperature did not change more than 2 degrees (as I can read the charts) during the modeled period. This seems to be reasonable.

It would have been interesting to compare the snow distribution in the modeled period to satellite image based snow maps. It would have given a regional validation to the modelling experiments. A more rigorous quantitative validation of the results could have been shown.

A number of figures are not clearly readable. See comments in attached file.

The article needs a rigorous linguistic revision. Some sentences are not clear and many minor grammatical errors make reading difficult. A complete correction of the article is beyond the scope of this review, but some critical parts of the text with some suggestions are indicated in the attached file.

The literature referencing is not consequent. References to articles written by two authors should be always “Author1 and Author2, YEAR” and not

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“Author1 et al., YEAR”. At this stage both versions are used in the article that is not elegant.

Acronyms, abbreviations should be listed or explained in the text.

Specific comments: The proposed technical corrections are attached in a separate pdf file.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 843, 2009.

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