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Interactive Comment

Interactive comment on "Improvement of surface albedo parameterization within a regional climate model (RegCM3)" by Y. Bao and S. Lü

Y. Bao

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Dear anonymous referee, Thanks for your comments. My reply are as following:

1.Page 1660, line 4: The similar decreases happen to the albedo simulations in other seasons like spring and autumn but as obvious as that in summer (not shown). I think it should be shown here. R: I'm working on the figures, I try to make them more readable than before. Figures of albedo difference between RCM_ORI and RCM_SZA in spring and autumn will be shown very soon.

Page 1661, line 22 and 23: "The latent heat flux peak lags the sensible heat flux by a few months. Due to the onset of monsoon season." Should be "The latent heat flux peak lags the sensible heat flux by a few months due to the onset of monsoon season."

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R: I'm sorry for the writing mistake. I've changed them into "The latent heat flux peak lags the sensible heat flux by a few months due to the onset of monsoon season."

Page 1661, line 29: "In northern China (not shown): : :" I suggest this paragraph can be Canceled . R: I tried to provide the reader with more details about the simulations even without figures for lack of space forbits, but sometime which make people confused since they cannot see the figures. So I agree with you to cancel this paragraph since I cannot show so many figurs in a paper for lack of space forbids.

Page1663, line 13: "The simulated East Asia summer monsoon precipitation is also evaluated with CRU precipitation (not shown)". I suggest this paragraph can be canceled. R: I agree with you to cancel this paragraph for the same reason with last question.

Page 1676, Figure 6: Where is figure (d)? R: I'm sorry for missing figure 6(d) in the paper. It was found in my previous versions, I don't know why it didn't show up in the discussion version. It seems there is some technical problem I cannot fix. When I tried to upload the two-page figure 6(4 plots in one panel is too small, so I put them into two pages), the things in the last page are always missing. I have asked the editors for help to upload the entire figure 6. I apologize for the inconvenience I made for you. Part of figure 6 (include (d)) is uploaded in advance, please check. If you have any questions, please feel free to contact with me.

Check the reference list, some family name and given name of the authors are confused. R:I'm trying to fix the reference list.

Thanks for your time and effort.

Yan Bao

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 1651, 2009.

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Diurnal ground temperature (degree) 20 12 20 12 20 12 ----TG_ORI 40 -TG_SZA 06Z 09Z 12Z 15Z 18Z Local time Ground temperature cycle (degree) Cound temperature cycle (degree) Cound temperature cycle (degree) Cound temperature cycle (degree) Cound temperature cycle (degree) (d)

Fig 6 Diurnal and seasonal energy cycle (Units: Wm⁻²) and air surface temperature (Units: Degree) at Dunhuang Gobi. (b) Ground temperature diurnal cycle (d) Ground temperature seasonal cycle. Marks 'TG' means ground temperature; '_OBS' mean the observations, others on the panels have the same meanings with Fig 4

Aug

Oct

Dec Feb/2001

Dec/1999 Feb Apr/2000

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Fig. 1. Fig 6 Diurnal and seasonal energy cycle