

***Interactive comment on “Downscaling  
ERA-Interim temperature data in complex terrain”  
by L. Gao et al.***

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Received and published: 3 August 2012

Dear Editor, Thank you very much for the comments made and for the attached literature. We will include the main findings of the respective authors into our introduction. We can conclude that there are similarities between our approach and the approach used within the mentioned publications. Both make use of temperature information of different model layers at different geopotential heights and both are using reanalysis data. So we have to mention this with respect to our approach and we will refer to these publications. However, there are also significant differences between the referred literature and our approach. The study of Mokhov and Akperov does only show a comparison of modeled lapse rates and global averages of the surface temperature.

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They do not use the lapse rates for reproducing station data. The temporal resolution on which we are focusing on is 3 hours to 1 day, as an interval of 1 month is used in the named literature. Furthermore, we are using only specific pressure levels as the other methods are focused on the whole tropospheric lapse rate, or are using the lower 7 pressure levels as a standard. This means that the used amount of data is significantly smaller when using the technique presented in our paper. It should be also mentioned that there was no quality assessment of the temperature data made in the paper of Gruber which makes a direct comparison to our approach problematic. Furthermore, no correction for the real station elevation was included. This on the other hand is a key aspect of our work.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 5931, 2012.