

# ***Interactive comment on “Improving semi-automated glacial mapping with a multi-method approach: areal changes in Central Asia” by T. Smith et al.***

**T. Bolch (Editor)**

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Dear authors,

I have now studied in detail your manuscript, the reviews and your reply. As you have noted both reviewers highlighted many concerns which need to be carefully addressed before the manuscript can be considered for publication in TC. From your comprehensive reply I have the feeling that you would be able to handle the concerns in a proper way. Therefore I would like to ask you to resubmit a revised manuscript within a reasonable amount of time where all comments are addressed.

Please especially consider the following:

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Interactive Discussion

Discussion Paper



- Focus on the glacier mapping algorithm only
- Clearly show and discuss the importance of each different processing step for improving the results
- Show and discuss the influence of different thresholds (e.g. band ratio, TM 1 ratio, velocity) and clearly justify your chosen ones
- Make sure that all smaller debris-free glaciers are also included in the final results.
- Put more emphasis on the upper glacier boundary so that the outlines are here also consistent and reliable.
- Debris-covered Inylchek glaciers are special (and maybe therefore also difficult to map) in regard of glacier flow, the periodically draining Merzkacher Lake, calving and surging activities which may need special consideration. Show that your algorithm works also for other debris-covered glaciers in Tien Shan, e.g. the Koxkar and Tomur Glacier in the region south or Tomur/Pobeda/Jengish Chokosu Peak or the glaciers of Kokshal Too.

The revision should contain a response to each of the comments from the reviewers and explain how the comment was handled. If you disagree with a comment, please explain why. If the text was modified as a response to a comment, please indicate how the text was modified, including the new text and its position in the manuscript (line numbers) and/or highlight the changes in the manuscript.

I am looking forward to the new version of your manuscript.

Best regards,

Tobias Bolch –Editor TC-

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Interactive comment on The Cryosphere Discuss., 8, 5433, 2014.

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