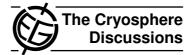
The Cryosphere Discuss., 5, C467–C468, 2011 www.the-cryosphere-discuss.net/5/C467/2011/ © Author(s) 2011. This work is distributed under the Creative Commons Attribute 3.0 License.



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Interactive Comment

Interactive comment on "Retrieval of snow grain size and albedo of Western Himalayan snow cover using satellite data" by H. S. Negi and A. Kokhanovsky

Anonymous Referee #1

Received and published: 16 May 2011

The paper is technically correct and provides a very useful introduction to the retrieval problem, its techniques and methods and data. The paper is well written and it is very helpful for a wide range of readers, from the most experienced colleagues dealing with retrieval of snow parameters from multispectral or hyperspectral data to newcomers.

There are few minor technical suggestions that I am suggesting at the bottom.

Though I understand the difficulties of finding a validation data set for the grain size, it would have been important to show the results of a snow model, for example, showing the differences between the results of the algorithm and those obtained with the snow model. I would strongly encourage the authors to perform such exercise in the future.

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Interactive Discussion

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Another point that I would have liked to see is the comparison of the results from Hyperion with those obtained from other sensors with a similar resolution such as LANDSAT or ASTER. Finally, it would be good to have a sensitivity analysis of how the results would be affected when different atmospheric corrections (that might be used for this case) are applied.

Minor suggestions:

- p 607 contamination, of what? specify
- p 607 'snow characteristics' Specify and expand
- p 607 Line 16 'initially' -> in previous studies reported in the literature
- p 607 Line 22 this sentence does not make sense. Please elaborate
- p 610 The word 'significant' should be used only in a statistical sense. Please replace it with, for example, 'considerable' or similar
- p 611 at Sect. 5 in Sect. 5
- p 611 Line 10 delete Average (if that's a range how can that be the average ?)
- p 611 Line 19 highly glaciated what do you mean?
- p 612 what is the 'standing snow'? please use technical terms
- p 615 why did you pick up 0.6 as a new NDSI value? why not 0.5 or another number?
- p 626 Line 2 is simple: sometyhing seems to be missing here
- p 626 Line 6 were used -> was used

Interactive comment on The Cryosphere Discuss., 5, 605, 2011.

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