

Editor comments to the author:

The authors need to do some technical corrections, before final accepted.

Response: Thanks for your decision. We have done these technical corrections following the comments of the three referees.

Report #1

The paper was considerably improved from its earlier version. The authors complied with all recommendations from four reviewers. The paper is recommended for publication.

Response: Thank you very much.

Report #2

Thank the authors for improving the manuscript according to the reviewers' comments. It can be accepted subject to some technical corrections, e.g., in Line 267, "table 4" should be "Table 4"; in the equations of Table 4, the use of "T" is not needed. You can directly use " $SS + SN + NS + NN$ " as the denominator.

Response: Thanks for your careful review for our manuscript. We have gone through the manuscript again and corrected the problems you had pointed out.

Report #3

I am satisfied with the revisions. The revised manuscript is suggested to be accepted. I only have a minor suggestion. At line 69, I do not think Zhang et al. 2019 is a good citation to be used here as their work is not related with the contents.

Response: Thanks for your constructive suggestion. Indeed, this citation seems inappropriate. We have changed it into that of Hall et al. (1995). In their paper, they wrote "Furthermore, if there are any inaccuracies in the input products, that is, inaccuracy in the calculation of the atmosphere correction, this may cause errors in the amount of snow " in page 133, which indicate the importance of the atmosphere correction.

Hall, D. K., Riggs, G. A., and Salomonson, V. V.: Development of Methods for Mapping Global Snow Cover Using Moderate Resolution Imaging Spectroradiometer Data, Remote Sens Environ, 54, 127-140, Doi 10.1016/0034-4257(95)00137-P, 1995.

Thanks again!