

Modelling L-band Microwave Brightness Temperature Time Series for Firn Aquifers

Reviewer comments and Response

Reviewers' comments:

I thank the authors for making these changes to the manuscript, which is now suitable for publication. I have 3 suggestions for minor changes to help the reader. These are (numbers refer to non-change tracked version):

Line 48. Replace 'provide coupling between V and H pol brightness' with 'account for depolarization effects due to the assumption of flat interfaces between layers' (suggestion only: the public response to reviewers makes this clear)

Line 97. Add in text to reflect comment made to reviewer i.e. that exponential captures high frequency vertical changes whereas Gaussian reflects more low frequency changes in the structure. (suggestion only: the public response to reviewers makes this clear)

Line 383. 'tries to provide': replace with 'provides'!

Please note there are numerous missing spaces and single or two sentence paragraphs that should be joined to either the paragraph before or after. I would recommend the authors re-read this article carefully before submitting the final version for typesetting.

Response:

We would like to thank the reviewers' valuable comments. The suggestions are included in line 48, 97 and 383.

We have reviewed the manuscript for the spacing and merged the short paragraphs. Thank you.