

The Cryosphere Discuss., editor comment EC1
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Community comment on tc-2021-89 from H. Jiskoot

Nanna Bjørnholt Karlsson (Editor)

Editor comment on "Brief communication: Detection of glacier surge activity using cloud computing of Sentinel-1 radar data" by Paul Willem Leclercq et al., The Cryosphere Discuss., <https://doi.org/10.5194/tc-2021-89-EC1>, 2021

In addition to the referee reports, the manuscript has received the following comment from H. Jiskoot, University of Lethbridge, Canada:

1) I think a reference/comparison to Herreid & Truffer (2015: <https://doi.org/10.1002/2015JF003502>) is in order, as you do discuss several other "static" methods of detecting surge-type glaciers from morphological evidence, but this is an automated method based on medial moraine displacement amount.

2) In your comparison to reported glaciers you only use the RGI 6.0 classification (thus Sevestre and Benn, 2015). First, there are gross errors in their classification and they were very selective in certain regions: in East Greenland they only classified glaciers as surge-type when there had been an observed surge even though they used my Jiskoot et al (2003) database. If you compare your "newly found" Greenland surge observations in your Appendix table to my maps in Jiskoot et al. (2003; is your reference list) then you can see that several of the glaciers that you list have indeed been reported as having surge evidence. This includes Rosenborg and several nearby glaciers. Further, Sevestre and Benn's classification is now old (we have >10 more years of observations) and glaciers such as Wykeham Glacier South in the Canadian Arctic (which was already classified as surge-type by Copland et al., 2003: <https://doi.org/10.3189/172756403781816301>, but not in RGI) has now had some further observations of surging (Van Wychen et al., 2021: <https://doi.org/10.1080/07038992.2020.1859359>). So; these are just two examples of where your detection of surge-type glaciers is not really a new detection, but rather an independent confirmation of what had already been observed as surge-type by others. I suggest you are a bit more thorough and careful in your reporting on specific glaciers.