The Cryosphere

Discussions

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Interactive comment on "Brief communication: Rapid machine learning-based extraction and measurement of ice wedge polygons in airborne lidar data" *by* Charles J. Abolt et al.

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The authors did a good job addressing the reviewers' comments and concerns. They rewrote large parts of the manuscript to significantly improve the manuscript, especially the validation part. In its current state, the manuscript only needs some minor editorial improvements and clarifications. In some places the wording/style may need some improvement. Therefore I recommend a minor revision. Ingmar Nitze

Specific comments:

Page and line numbers (P:L) refer to the latest manuscript version with tracked

changes.

3:4: I think it would be good to have one or two more (recent) examples of CNNs. This would strengthen your point using CNNs.

6:8: It would be more consistent if you use rather "100 x 100" m instead of "100m" edges. For your thumbnails and filter sizes you also use "n x n".

7:6: neighbour (British English, you used American English otherwise)

7:8: "tend measure" –> "tend to measure"

10:18: Somewhat...somewhat. This sentence may need some slight style improvement.

10:22: I don't really like the word "crisp", maybe use some better term, which describes that 25cm is a sufficient resolution for your target.

12:2: "A relatively simple CNN is capable ...". I think here you should also mention that you applied some image processing techniques, as they are also important for you workflow in my opinion.

Figure 3 B and D: The color scale now looks very nice, but be aware of color-blindness (probably avoid red to green).

Table 1: It would be great to quickly indicate the size of each site in the caption. This would help to put the # of polygons into context and to interpret the table without the text.

Figure S1: I would say it is more commonplace to use "Easting" and "Northing" without "s". I think geographical coordinates (Latitude and Longitude) would be nicer and easier to find for most readers. A scalebar would be helpful. An inset box showing the site's location within Alaska would also help.

Interactive comment on The Cryosphere Discuss., https://doi.org/10.5194/tc-2018-167, 2018.