Editor Decision: Publish subject to minor revisions (Editor review) (12 Dec 2014) by Mr Ross Brown
Comments to the Author:
Please respond to the minor comments on the revised m/s by Reviewer 1 included below.

This paper might benefit from from a table in the discussion or collusion about the strengths and weaknesses of the different methods - or rank the methods based on usability for different attributes.

Than you for this suggestion, we add table 6 to into the discussion listing the major strength and weaknesses of the different method:

Table 6. **Overview on the most important strength and weaknesses of the applied methods for large-scale snow depth mapping in high alpine terrain based on the experiences gained through this investigation.**

Method	Strength	Weaknesses
Airborne Laser Scanning (ALS)	• Large coverage • Fast measurements • Spatially continuous • High precision • Nadir view	• Expensive • Costly data processing • Need for an airplane • Expensive device
Airborne Photogrammetry	• Very large coverage • Fast measurements • Spatially continuous • Many devices in use • Nadir view	• Limited precision • Costly data processing • Need for an airplane • Expensive device
Terrestrial Laser Scanning (TLS)	• Intermediate coverage • Spatially continuous • High precision • Suitable for steep slopes (> 50°)	• Oblique view • Need for being in the field • Costly data processing • Expensive device
Ground Penetrating Radar (GPR)	• High precision • Direct snow depth measurement	• Limited coverage • Transect measurements • Extreme terrain inaccessible • Need for being in the field

		• Expensive device
Hand plots	• Most economic method • Direct snow depth measurement • No special devices necessary • Possible in forested areas	• Very limited coverage • Point measurements • Extreme terrain inaccessible • Need for being in the field
Differential Global Navigation Satellite System (dGNSS)	• High precision	• Very limited coverage • Point measurements • Extreme terrain inaccessible • Need for being in the field • Expensive device

Figure 2 is unnecessary, it does not add to the story (it has also been published elsewhere by the same authors).

We deleted Figure 2

Can the colour ramp in figure 5 be expanded to show more details. Also the black and grey for buildings and trees is nearly impossible to find. (same in fig 6)

We changed the color table of figure 4 & 5 to maker more details visible. We also change the color for trees and scrub to green.

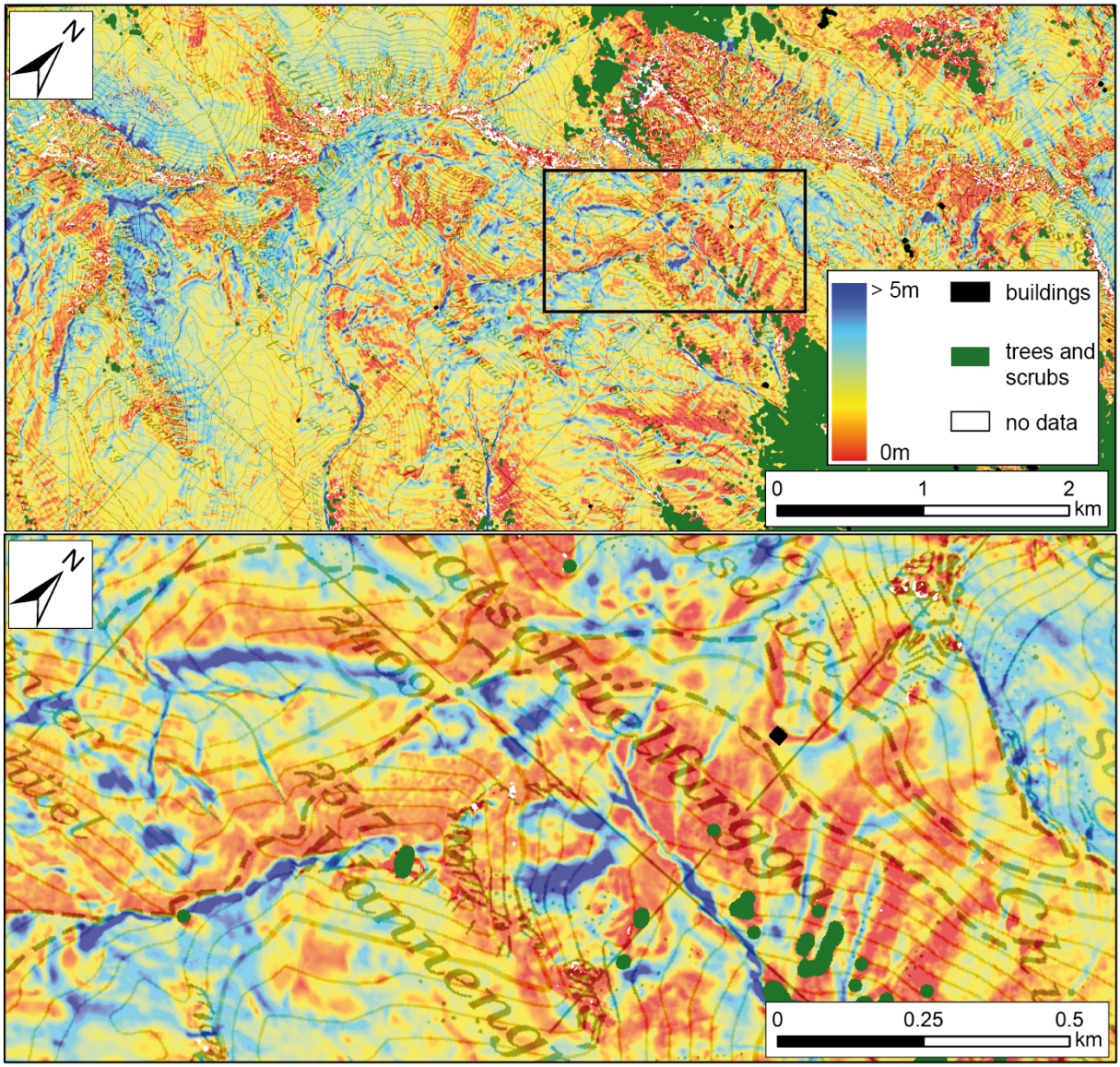

Figure 4. Snow depth map of the entire Wannengrat area (top, see Fig 1. for orientation) and a close up view from area where the reference data was acquired (bottom). Traps for wind-blown snow, cornices and deposits from past avalanche events can be identified by the highest snow depth values.

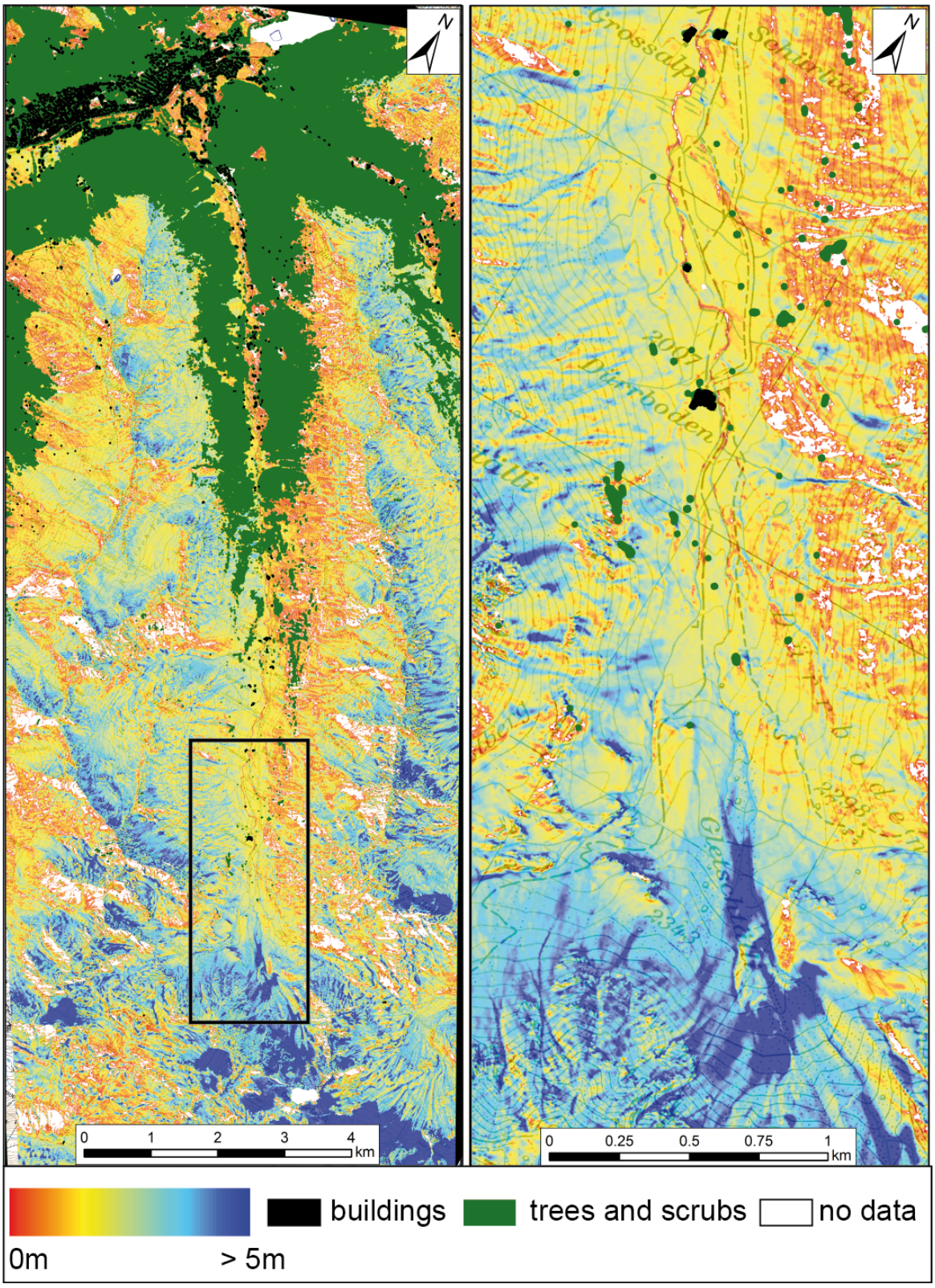

Figure 5. Snow depth map of the entire Dischma area (left, see Fig 1. for orientation) and a close up view (right) from area indicated by the black box.

Throughout the entire paper there numbers followed by units sold always have a space, this should be corrected in various locations.

We checked all numbers and put a space between the number and the entity.

The conclusion section contains a lot of information that might be better in a discussion section, for example the discussion on if a UAV would be a good platform is not a conclusion of this paper.

We moved a large part of the former Conclusion section to the new Discussion section. Now the conclusions are shorter and more concise.

"Now the successor sensor Leica ADS100 is available." This is not a sentence, i think something is missing.

We change the sentence to: "Now the successor sensor Leica ADS100 is available, incorporating almost twice as many detectors than the ADS80 sensor, resulting in a better spatial resolution for the same flying height above ground."

"In any case" This is not technical language

We deleted "In any case"