The authors thank Mauri Pelto for his valuable comments and suggestions. We will add a comment on the differences between LiDAR and orthophotos or satellite imagery as basis for deriving inventories. If these differences will be considered as advantage or disadvantage of a specific method will depend also on the specific setting of a study. In the current version, this topic has been outsourced to the paper of Abermann et al. (2010), describing the method.

Specific comments:

Title: Austria should appear in the title.

Title: We can of course add 'Austria' to the title.

5204-11: This paragraph does a poor job of relating the key temporal results for all of Austria. Proceed in a logical progression from LIA are to GI than GII and finally GIII. How many glaciers were lost between LIA and GI? For example see below:
The total glacier LIA area was 941.13 km2 without disappeared glaciers, which is a bit lower than the 945.50km2 found by Groß (1987). By GI the area had declined 40% to an area of 564.88 km2. There was a further loss of 94.21 km2 in the 29 years between GI and GII. In GI III, glaciers cover 415.11 km2, equivalent to 44% of the glacier area at the LIA. Only four glaciers wasted down completely since. The loss of area between GI II and GI III is 55.97 km2, which is the highest annual area loss, at: 0.23 km2 year□1. Losses between LIA and GI I averaged□0.16 km2 year□1 and exceeded the ones between GI I and GI II of 0.13 km2 year□1. There was a period when the majority of glaciers advanced between LIA and GI and GI and GII. The relative annual area loss was only 0.02% until GI II, rising to 0.05%year□1 for the latest period.

5204-11: We can reformulate the paragraph as suggested. Answering the question 'How many glaciers were lost between LIA and today' is more difficult: No exact maps of these glaciers exists, because also in contemporary maps or art snow patches in the highest elevation does not allow a reliable judgement if these snow patches cover glaciers or are only perennial snow fields. Mapping of geomorphological evidence (moraines) in highest elevations might end up in misinterpretation of early Holocene glaciers as LIA glaciers. Therefore, we follow Groß in his estimate of downwasted LIA glaciers, which is based on an extrapolation on what is actually known about downwasted glaciers between LIA and GI I. We can repeat his estimate here.

5205-4: In Figure 3 and Table 3 it is evident that the change for Lechtaler is the lowest from GI to GII and form GII to GIII it is Silverettagruppe and Rakiton. Is there something about the elevation range or other characteristic of the glaciers in these areas that led so the most limited changes?

5205-4: In Lechtal Alps and Rätikon, most glaciers are very small, located in cirques and avalanche fed. In Silvretta, glaciers are small to medium size. We will try to better describe the different response characteristics of the ranges, which are always a mixture between altitude range, mass balance, ice thickness, glacier size and local topography.

5205-19: Can the shift in the area elevation curve in Figure 4 be used as an approximate indicator of ELA change? Since mass balance programs have been reporting the

ELA this can be easily tested too. If not that is good to know as well.

5205-19: Yes, this is a promising parameter including mass balance as well as glacier dynamics. The data set shown here indeed is not the right one to show or proof that parameter and give a profound background. We have much more data available for the mass balance glaciers, and will work that out. In any case, we consider that an independent topic, with potential applications in multitemporal inventories.

5206-27: It is worth emphasizing the difference statistically in the deviation of summer temperature versus sunshine and precipitation, which indicates that summer temperature has been the principal driver or area lost at least from GII to GIII.

5206-27: We decided to skip the climate section as suggested by the two referees.

5208-16 to 28: Why is this not in section 3.3?

5208-16 to 28: Thank you, we will shift that part in the right place.

5208-13: Reference needed.

5208-13: We will add two references:

G. Patzelt (1970): Die Längenmessungen an den Gletschern der österreichischen Ostalpen 1890 - 1969. Z. f. Gletscherkunde u. Glazialgeologie, Bd.6 (1970): 151-159.

and

Fischer, Andrea; Patzelt, Gernot; Kinzl, Hans (2013): Length changes of Austrian glaciers 1969-2013. *Institut für Interdisziplinäre Gebirgsforschung der Österreichsichen Akademie der Wissenschaften, Innsbruck*, doi:10.1594/PANGAEA.821823

as references.

5210-5: “Salzburger Kalkalpen, the plateau glacier seems likely to vanish. “ Is this a specific glacier, and is this because the annual ELA has risen above the plateau glacier?

5210-5: Yes, both correct, the Übergossene Alm glacier is vanishing. We can add a reference on past mass balance measurements.

Figure 5: Axis font labels too small.

Figure 5: We will increase the font size.