Response to the comments by R. R. Colucci,(CC3)

I read this work with interest, as it certainly represents a necessary contribution to the better understanding of glacial evolution in perhaps the most studied mountain sector in the world when dealing with mountain glaciers. Nonetheless, my view is that the uncertainties of assessment that a work of this type inevitably entails could have been minimized by wider cooperation. In a mountain chain as deeply studied as the Alps, the individual specificities of the various Alpine sectors are certainly clearer locally.

Thank you for your comments. We fully agree that such a work is best be done by working together and have thus reached out to several colleagues who described datasets in publications, but have not shared the digital data (shape files) so far. We also decided to publish the study in The Cyosphere as its open discussion potentially allowed identifying even more datasets. This worked very well. It is also clear that this study could only be a starting point. Further improvements can likely be applied at the scale of individual glaciers and we hope that colleagues will contact us in the case our outlines need to be revised.

After this general comment, I will go into the specifics of the area of my major competence. Particularly, on line 163 and in several figures, I may disagree with the subdivision of area 13, as it would be more correct to indicate Dolomites and Julian Alps, instead of Carnic Alps. In fact, in the Carnic Alps there is only one documented glacier in Austria, the Eiskar Glacier.

Thank you for this suggestion. As the Eiskar Glacier in the Carnic Alps is quite famous (also due to its isolation) we would like to keep the name but add the Julian Alps. So region 13 is now named ‘Dolomites, Carnic & Julian Alps’.

I might suggest also reading and citing the following as it represents the first detailed inventory of the LIA Julian Alps glaciers with the first details on what in this preprint is discussed at paragraphs 3.1, and 4

Thank you for the note. So far we have cited the study Colucci and Zebre (2016) for the dataset you provided. There is no problem to change the citation to the ESPL paper mentioned below, if this is the correct reference. In any case, we are happy to add the results of the area changes in our discussion section.

Colucci R.R. (2016). Geomorphic influence on small glacier response to post Little Ice Age climate warming: Julian Alps, Europe. Earth Surface Processes and Landforms, 41: 1227-1240