

Interactive comment on “Dedradation of buried ice and permafrost in the Veleta Cirque (Sierra Nevada, Spain) from 2006–2013” by A. Gómez-Ortiz et al.

PhD Díaz del Olmo (Referee)

delolmo@us.es

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–On the suitability or not to incorporate LIA to the Title:

1. I consider that it is required to incorporate the LIA period to the Title because, like this, it is collected by the authors in the paper in three epigraphs: Abstract, Introduction and Conclusion. 2. Abstract. On page 1038 (line 4-8): the paper say “During the Little Ice Age it sheltered 5 a small glacier, the most southerly in Europe, about which we have possessed written records since the XVII century. This glacier still had ice residues until the mid-XX century. This ice is no longer visible, but a residue persists along with discontinuous permafrost trapped under strata of rock blocks that

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make up an incipient rock glacier”. Introduction. On p. 1040 (line 3-7): “The high peaks of Sierra Nevada, concretely its highest northerly cirques, were home to the most southerly glaciers in Europe during the Little Ice Age (LIA; Gómez-Ortiz 5 et al., 2012b). The thermal rise since the last decades of the XX century was measured at 0.93 _C in Sierra Nevada (Oliva and Gómez-Ortiz, 2012), which has brought about the disappearance of these final redoubts of glaciers in the massif”. Conclusions. On p. 1054 (line 14-18): “A core extracted from this site enabled us to define this body as a succession of fossil ice descended from the LIA glacier and a frozen pack of permafrost formed as a consequence of the physical contact of the detritic mass with the overlying sediments (Gómez-Ortiz et al., 1999)”.

From the reading of these three paper’s epigraphs stated by the authors clearly defined and collected the period of formation (LIA) of the buried ice in the Veleta cirque’s rock glacial. More even, this is emphasized in the Conclusions by including the bibliographical citation of Gómez-Ortiz et al., 1999.

Then, it is not understood the “Author comment” to my “Referee comment” for the Title when they say “We have serious concerns about adding to the title the idea of “Little Ice Age”, since it is not clear that the ice existing during the LIA (. . .)”. This being the case, I consider that the authors have to clarify if the ice in the Veleta cirque’s rock glacial is LIA or not LIA. In the case that as well is, LIA must be incorporated to the Title, because of its paleoclimatic significance. If it is not, they should correct the text of the three epigraphs indicated.

–About my question in relation to the Alps Mountains theme (Page 1053, line 19-20): At present I have no time to reply but I’ll do as soon as possible.

Interactive comment on Solid Earth Discuss., 6, 1037, 2014.

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