

Response to associate editor comments

[Seismic monitoring of small alpine rockfalls – validity, precision and limitations]

September 7, 2017

AE 1: *This is an interesting paper on the use of seismic methods for the detection of small-magnitude rockfall validated using multi-temporal TLS surveys. This manuscript has already undergone a great improvement after implementing most of the recommendations expressed by the reviewers. However, there are several points that still need to be addressed mainly concerned with the structure and writing of the manuscript. Overall, this can be considered as a moderate revision. Please find the details in the attached file with my comments over the revised manuscript. The main aspects that need improvement are the following:*

Reply: The suggestions in the annotated pdf file were revised to the extent the consulted native speakers confirmed their correctness or when technical modifications were sound.

AE 2: *1. In some places the structure is confusing, especially regarding section 3, 4.3 and the conclusions.*

Reply: Section 4.3 was expanded by providing a flow chart of data handling. Conclusions were restructured according to suggestions. For section 3 please see below.

AE 3: *a) Section 3 should be moved to the introduction as one of the reviewers already suggested and Fig 2 should be included on a appropriate section.*

Reply: For the suggestion to move section 3 to the introduction, please see our argumentation regarding comment 8 of referee 2. Moving this section would inappropriately inflate the introduction and spoil its main role: justifying the study. Likewise, presenting figure 2 as part of the results the scope of the article would blur. In this article we do not intend to discuss event evolution analysis, mainly because we want to show the overall validity of the approach and ten events are not a sufficient size to draw robust conclusions. Thus, we decided early in the writing process of the manuscript to present one explanatory example on what seismic monitoring delivers and how this can be interpreted.

AE 4: *b) Section 4.3 could be improved by explaining more carefully the different stages, parameters and threshold values of the manual and automated detection procedure. This is critical since many of the questions of the reviewers ask for clarification on these aspects and it is a central aspect of this contribution. I strongly recommend depicting a diagram in which this quite complex methodology is clearly explained. Since currently there are 8 figures, including one more is reasonable. The authors have incorporated the different suggestions of the reviewers in the text but a proper graphical view of the multiple stages is really necessary.*

Reply: Figure is added. Most of the referee comments concerned justification of the parameters and clarifying the basis for the set values.

AE 5: *c) Regarding the conclusions, a clearer division in advantages, limits and future lines could be performed.*

Reply: Done as suggested.

AE 6: *2. The writing must be improved in many places. There are missing colons, hyphens and articles throughout the manuscript and many expressions do not sound correct, even for a non-native english speaker like myself. It is clear that the original or revised version of the manuscript have not been carefully revised by a native english speaker. This correction should be carried out to achieve a suitable version for publication.*

Reply: Two native speakers were consulted and changes were implemented when appropriate.