

RC 1 Feedback

1. I recommend including a **more detailed geomorphological, geological and stratigraphical description of the area interested by the El Forn landslide**. For a complete characterization of a landslide through InSAR data, it is essential to investigate the geologic context in more detail to understand the conditions under which it is developing.

The reason we had a brief description of the site is because characteristics of the landslide have been published extensively. However, we understand the importance of including a more detailed description of the landslide for the purposes of serving as a stand-alone work. We are happy to include this in a revised version.

2. I recommend extending this InSAR analysis to the entire landslide body and not just the Cal Ponet-Cal Borronet lobe sector. Because chapter 2.1 describes the presence of 12 scattered boreholes in the landslide body for monitoring that should be exploited as a real opportunity for comparison with the InSAR data. The greatest strength of satellite interferometry is the ability to monitor large areas, here authors have focused only on a very small sector of a very large landslide, missing the most important information provided by the InSAR data.

We have an InSAR analysis of the entire landslide, as seen in Figures 4 and 5 of the initial manuscript. The reason we focus on the lobe is because of the presence of borehole S10, which is the only continuously-monitored borehole on the landslide, with measurements every 20 minutes. Other boreholes are monitored via analog non-continuous measurements (irregularly, approximately once per month), which is why chose to work exclusively with S10. That being said, we are happy to include a comparison of InSAR with said other boreholes outside the lobe in a revised version.

3. I recommend expanding the monitoring period of InSAR data, as the abstract specifies that Sentinel-1 data processed for 2019-2021 has been exploited, while Chapter 2.2 explains that interferograms from only a narrow time period between June and November 2019 were used. Again, this choice comes at the expense of one of the major strengths of the InSAR data, namely the possibility of providing long time series. Instead, focusing the analysis only to a 6-month time period and on a narrow area of the landslide appears as a serious limitation in the study. When analysing the behaviour of a landslide, it is a good practice to expand the analysis of the time series as much as possible in order to know as much information as possible.

We have a time series detailing a yearly comparison of *in situ* and InSAR displacements on S10 and we are happy to include them in a revision version.

4. I strongly recommend adding a chapter discussing the results before the conclusions. A chapter of discussion is essential for the explanation of the results and to understand applicability, advantages, and limitations of the proposed approach.

Our original thought in the writing of this work was to have a short communication, but we agree the reviewer that the manuscript would benefit from a more detailed discussion fo the results. We will include this discussion in a revised version.

About the figures I suggest:

- Figure 1: a geographical localization is missing. North arrow between the large-scale image of the landslide and the focus are not in the same direction. I recommend pointing the north arrow upward. In addition, for the purpose of characterizing the study area please add the location of all 12 boreholes.
- Figure 2: the deformation map on the left has neither north arrow nor scale, also in the legend there is no explanation of what the coloured circles are. Moreover, the figure on the right is just a screen captured by EGMS: I recommend downloading the data and reshaping the figure (you can use the EGMS-stream application to download the data).
- Figure 4: it is not clear why the representation of the landslide is now rotated 90°. I recommend defining a direction for the landslide representation and using it for all the figures in the paper.
- Figure 5: the colour scale of the ordinary kriging results of various random samples are always different, this makes it so that an immediate visual comparison between the figures is not possible.

We will make suggested edits to the figures mentioned above.