

Interactive comment on “Pluri-decadal (1955–2014) evolution of glacier–rock glacier transitional landforms in the central Andes of Chile (30–33° S)” by S. Monnier and C. Kinnard

S. Monnier and C. Kinnard

sebastien.monnier.ucv@gmail.com

Received and published: 26 June 2016

We sincerely acknowledge the two referees for the meticulous examination they did of our study and the valuable critics, remarks, and advices they provided.

Both referee highlighted issues related to the use of cross-correlation image matching, i.e., the presence of mismatches in the presented horizontal displacements, and inefficient graphical rendering. They were correct and we spent much time addressing this issue. We identified two problems: (i) an incorrect importation of the vector directions in the mapping software, and (ii) an unappropriated definition of the filtering criteria of the measurements. We have now resolved these problems. In particular, we used stricter criteria to filter the measurements performed (see below). In addition, we

C1

interpreted the main stream lines from the displacement vector maps produced and presented them in separate (sub)figures, in order to help the interpretation.

Consequently, most parts of the Results and Discussion sections as well as several figures have been reworked and now differ significantly from the initial version of the manuscript, in content and in structure. Especially, we had to renounce to the use of the 1955 aerial image in the case of the Navarro landform, and of the 2000 aerial photo for the Las Tetras landform; the former produced two much noisy and mismatched data while the latter gave coherent but very sparse and therefore unsatisfactory results. Consequently, we now present displacement measurements for the 2000–2014 period at Navarro, for the 1955–2000 and 2000–2014 intervals at Presenteseracae, and for the 1956–1978 and 1978–2012 intervals at Las Tetras. Also, for each site we included new figures with the original images. Finally, we did our best to enhance the graphical design and rendering of the displacement and altitudinal change figures.

In the detailed responses to referees' comments we sometimes refer directly to the current General comment.

Author's methodological change in manuscript: see supplement file. See also all the corresponding figures.

Please also note the supplement to this comment:

<http://www.earth-surf-dynam-discuss.net/esurf-2016-16/esurf-2016-16-AC1-supplement.pdf>

Interactive comment on Earth Surf. Dynam. Discuss., doi:10.5194/esurf-2016-16, 2016.

C2