

Precipitation as the main driver of Neoglacial fluctuations of Gualas glacier, Northern Patagonian Icefield

S. Bertrand, K. A. Hughen, F. Lamy, J.-B. W. Stuut, F. Torrejón, and C. B. Lange

This is a straightforward article that documents a range of good complimentary data sources that serve as proxy-indicators for the behaviour of Gualas glacier on the Northern Patagonian Icefield. I applaud the fact that this range of data have been drawn together by the authors in an effective way. The data are all discussed effectively, and in sufficient detail to capture the essence of what they document. Overall, sound interpretations of the data are made to infer probable glacier behaviour and causes, drawing from their own work, and the extant literature that can further inform these arguments. I recommend the article be published; it would be suitable in its current form though I make the following suggestions for the authors.

First, it might be possible to streamline, condense some of the preliminary discussion, and technical details. I point to no specific areas, but I feel the core arguments could still be made without some of the detail given suitable referencing in some instances. Second, the (admittedly slight) possibility that the fluctuations are internally dynamic of surge-type is not really discussed. This seems unlikely given the known glacial behaviour of the area, but one sentence to exclude it based on the local evidence and the apparent regional synchrony with other glaciers from the region is worth including.

I have spotted one grammatical typo:

Higher winter precipitation before 1900AD were also described by Neukom et al. (2010a).

Line 5 Page 2958 “Higher winter precipitation before 1900AD *were* also described by Neukom et al” Line 5 Page 2958 should I think be: “Higher winter precipitation before 1900AD *was* also described by Neukom et al”