



TCD

6, C48–C49, 2012

Interactive Comment

Interactive comment on "Spatial patterns of North Atlantic Oscillation influence on mass balance variability of European Glaciers" by B. Marzeion and A. Nesje

Anonymous Referee #2

Received and published: 23 February 2012

This is an interesting paper on the influence of NAO on glacier mass balance in the European Alps and Scandinavia. The manuscript needs to be more carefully checked for - mainly minor - presentational errors through a more thorough copy-editing, but the scientific reults are generally clear although part of them have been known before from previous studies on this subject. I have several specific queries about the methods: (1) I'm not sure how the threshold length of 12 years for glacier mass balance measurements (p.9, last sentence) was chosen. (2) p.12, line 6 from bottom "the climatologically derived model provides the most reliable results": why should this be given that the other models are trained against mass-balance measurements? - this seems counter-intuitive. (3) I am concerned that the correlation maps merge mass





balance records based on different time periods, which are not clearly specified in the paper and could bias the results if the NAO-mass balance relation is time-dependent with different spatial correlations and strengths according to the exact timeframe being considered (which it most likely is to some extent). p.10, ,line 14 (& elsewhere): change "exemplary" to "example". Also on p.13, l.15. p.11, ll.12-13: "...(mean correlation of 0.74), but the performance suffers only a little when applied over all of Europe (mean correlation 0.3)." - this seems to me to be a big correlation difference, so can the authors reword and/or clarify?

Interactive comment on The Cryosphere Discuss., 6, 1, 2012.

TCD

6, C48–C49, 2012

Interactive Comment

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

