

Title: Late Holocene intensification of the westerly winds at the subantarctic Auckland Islands (51°S), New Zealand

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Revision notes in response to editor's comments are provided in blue text.

Why do the Temperature and salinity and other variables don't have error bars? The temperature and salinity profiles do not have error bars, because these variables are continuously measured in the water column by the CTD sensors that have accuracies of ± 0.001 °C and ± 0.0003 S/m, which is 2-3 orders of magnitude smaller than the changes we observe in the water column. We have updated the error bars for all measured geochemical data ($\delta^{18}\text{O}$, $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, and C/N) that were collected during these CTD casts and have used the average standard deviation of replicate analyses for error bar width. We overlooked the fact that some of our measurements lacked error bars and we are grateful for the opportunity to correct this before publication.

What exactly does “dry” and “rainy” conditions mean? I would like to understand if these profiles are really representative of “dry” and “wet” conditions.... is it just 1 profile or an average of samples from various days?

CTD006 (Fig. 4b) is a single profile collected immediately after a low-pressure system passed over the Auckland Islands and produced strong W/SW winds, precipitation, and cool air temperatures. These weather conditions mixed the fjord water column and produced the uniform temperature, salinity and geochemical profiles in the water column seen in this CTD cast.

CTD007 (Fig. 4a) is a single profile collected after high pressure was building over the Auckland Islands for 48 hours. Calm winds, no precipitation, relatively warm temperatures, and limited cloud cover (sunny conditions) during this time caused the upper part of the water column to warm quickly and cause weak stratification in the upper 6-8 m of the water column.

Taken together, we use these two CTD casts as synoptic end members of how the westerly winds would influence the fjord hydrography over longer timescales (seasonal to centennial). If the winds over the Auckland Islands were weak for a sustained amount of time, we would expect the water column to have some degree of thermal and chemical stratification (like CTD007). Conversely, sustained strong westerly winds would produce prolonged conditions in the fjord like CTD006.

We have updated the main text (lines 349-352) and the figure caption (lines 1289-1292) to clarify these conditions.

In the text the reference to the “Landschützer” paper are misspelled. This reference has been corrected in the text.

