

Holocene Event Record of Aysén Fjord (Chilean Patagonia): an Interplay of Volcanic Eruptions, Crustal and Megathrust Earthquakes

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Introduction

The supporting information includes one figure and a table (as separate excel-file). Figure S1 shows one of the seismic profiles (without any interpretations) acquired during the University of Barcelona DETSUFA cruise in March 2013 on board BIO Hespérides. The table includes all results of major-element geochemical analysis on 10 tephra layers in the core. Volcanic glass shards were handpicked for each of the samples. Subsequently, they were mounted on epoxy resin beads and polished on an automated polish wheel to avoid compositional variations due to surficial alteration processes. Major-element analyses were performed on CAMECA-SX 100 Electron Microprobe (EPMA-CAMPARIS) at the University Paris VI (France). Ten elements were analyzed (Na, Mg, Si, Al, P, K, Ca, Ti, Mn et Fe) using an accelerating voltage of 15 kV, a current of 10 nA and a beam size of 5 mm to minimize loss of alkalis (i.e. Na). Precisions on individual shards (1σ) were better than 0.6% for Si, ~1% for Al, <3% for Ca and Mg, <4 % for Na, < 5% for Fe, <6% for K, 10% for Ti and about 30% for P and Mn. Finally, analytical measurements of individual glass-shards have been normalized to 100 wt%.

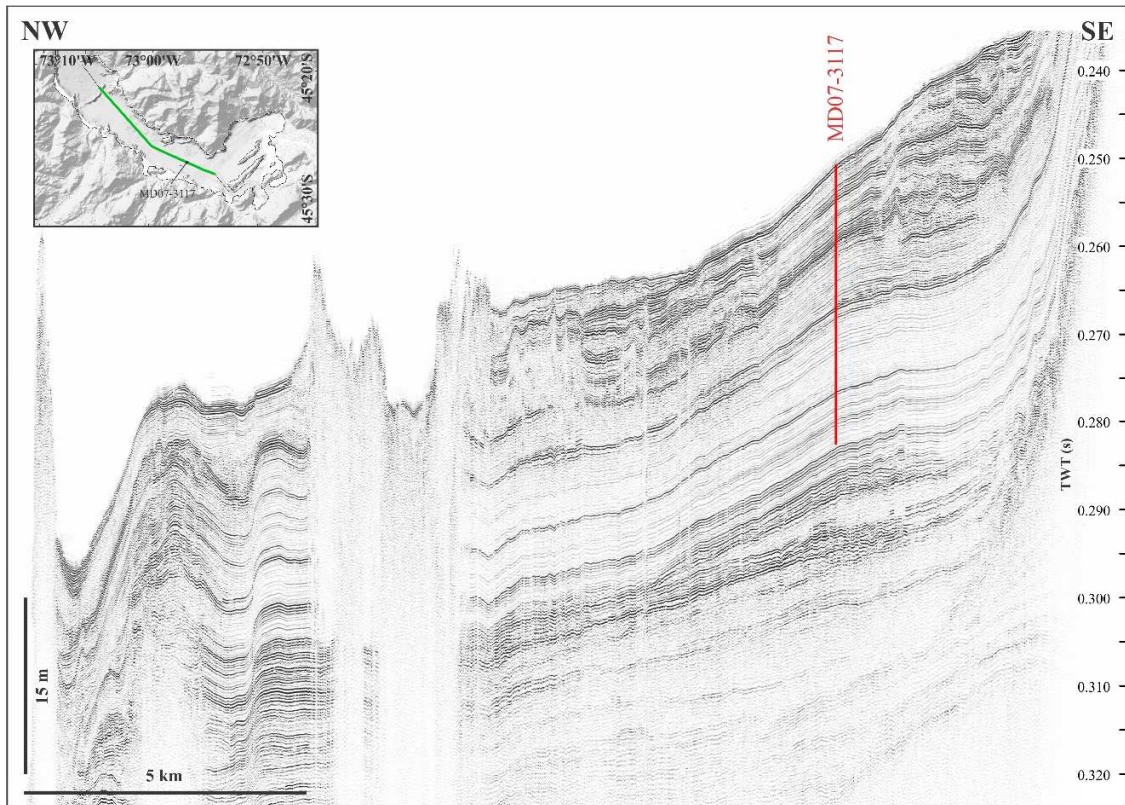


Figure S1. Uninterpreted TOPAS seismic line 209_000, expressed in two-way travel time (TWT). The location of the profile with respect to the fjord is given in the upper-left corner and the sediment core (MD07-3117) is indicated in red. This profile is the same as the one interpreted in **Figure 3**.

Table S1. Major-element analysis of individual glass shards from tephra layers in the MD07-3117 core.