



Lacustrine isotope records reflect environmental changes in southern Patagonia (Argentina) since the Late-Glacial

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Sediment cores from volcanic lakes situated in the steppe of southern Argentina are used within the project SALSA (South Argentinean Lake Sediment Archives and Modelling) to reconstruct Late-Glacial and Holocene climatic and environmental conditions. The 19 m long sediment core PTA03/12 recovered from Laguna Potrok Aike provides a 16,000 calendar year environmental record. Age control is given by 14 AMS- ^{14}C dates and two dated tephra layers.

A high resolution $\delta^{13}\text{C}_{org}$ record of this continuous sediment archive reveals distinct variations that reflect climatic changes during the Late-Glacial and the early Holocene. The $\delta^{13}\text{C}_{org}$ variations of the Laguna Potrok Aike sediment record are interpreted in terms of changes in the sources of organic matter and lacustrine bio-productivity triggered by climatic changes. For the period of the Late-Glacial and the transition to the Holocene, $\delta^{13}\text{C}_{org}$ variations are in phase with TOC/TN ratios, suggesting variable input from different organic matter sources as a possible reason for isotope variations. Maximum values of TOC/TN and $\delta^{13}\text{C}_{org}$ around 13,500 cal. BP occur contemporaneously to a last glacier advance in the Strait of Magellan and to the Antarctic Cold Reversal. $\delta^{18}\text{O}$ values of aquatic moss cellulose (mainly *Drepanocladus* sp.) extracted from various sections of the sediment core allow reconstructing the isotopic composi-

tion of lake water for several time slices.