Geophysical Research Abstracts, Vol. 9, 04116, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-04116

The San Valentin glacier (Chilean Patagonia): a potential high-elevation deep ice core site for paleoclimate studies. First results from a shallow ice core

F. Vimeux (1, 2), P. Ginot (3), M. de Angelis (4), O. Magand (4), B. Pouyaud (1), G. Casassa (5)

(1) IRD-UR Great Ice, Paris, France, (2) IPSL/LSCE, CE Saclay, Gif-sur-Yvette, France, (3) IRD-UR Great Ice/IHH, La Paz, Bolivia, (4) LGGE, Saint Martin d'Heres, France, (5) CECS, Santiago, Chile (vimeux@lsce.saclay.cea.fr)

Over the last decade, an increasingly number of tropical and subtropical ice cores has been extracted along the Andes of South America between 0 and 30S. At higher latitudes, numerous ice core studies have been completed, especially in the Antarctic Peninsula. In order to close the gap between subtropical and polar environment in this unique 8000km long meridional transect of ice core records, the Research Unit Great Ice (IRD), in collaboration with the centro de Estudio Cientifico (Chile), is initiating a new ice core deep drilling program in the Northern Patagonian Icefield (Chile), at 47S on San Valentin glacier (3900m). We present here the first results from San Valentin summit survey (radar sounding, firn temperature, stratigraphy) and chemical-isotopic records from a 16m-long shallow ice core drilled in April 2005. We show that this site offers a unique opportunity to study past climate variability in Patagonia and surrounding regions due to both a low accumulation and an excellent paleoclimate signal preservation.