



## Towards a global view of the Laschamp excursion

C. Laj (1), C. Kissel (1), R. Leonhardt (2), K. Fabian (3), M. Winklhofer (4), A. Ferk (2), and U. Ninnemann (5)

(1) Laboratoire des Sciences du Climat et de l'Environnement/IPSL, CEA-CNRS-UVSQ, 91198 Gif-sur-Yvette Cedex, France (carlo.laj@lsce.ipsl.fr, 33 1 6982 35 68), (2) Department of Applied Earth Sciences and Geophysics, Montanuniversity, 8700 Leoben, Austria, (3) Geological Survey of Norway, 7491 Trondheim, Norway, (4) Department of Earth and Environmental Sciences, Ludwig-Maximilians University, 80333 Munich, Germany, (5) Bjerknes Center for Climate Research, Allegaten 55, Bergen Norway

A new record of a geomagnetic excursion has been obtained from Core MD07-3128 taken at (75° 34' W ; 52° 40' S) off the Pacific coast of Southern Chile, during the IMAGES XV-MD159-PACHIDERME cruise of the R/V Marion Dufresne (IPEV). Radiocarbon datings extend for the moment to 36.3 kyr BP at 18 meters. Linear extrapolation of the last 2 dates downcore, gives an age of 40.7 for the middle point of the excursion at 20.5 m. This age is virtually identical to the most precise and reliable dating of the Laschamp excursion (obtained by K/Ar and 40Ar/39Ar) at the type locality at Laschamp, where Norbert Bonhommet first discovered the excursion during his PhD research work. We therefore consider that we have obtained a new record of the Laschamp Excursion.

Because of the extraordinarily high sediment accumulation rate, the directional excursion is recorded over about 2 meters of sediment (between 19,65 and 21,5) and corresponds to a prolonged marked low in the relative paleointensity record. Details of the directional and relative paleointensity changes will be discussed.

The high southern latitude at which this new record was obtained and its very detailed nature make it ideal to further constrain the inverse model of the Laschamp Excursion (IMOLEe) (Leonhardt et al. EPSL in press). The results obtained when these new data are considered in the model will be discussed in terms of dipolar versus non-dipolar components of the transitional field and comparison between predicted (modeled) and observed directions at all the sites used for the construction of this last version of the inverse model (IMOLEf).