co-host Institute of Earth Sciences (CSIC Barcelona)- 7-13.11.2004 (application deadline 1.8.2004). This course will focus on the processes potentially affecting and distorting the archived climate record, in particular in ultra high-resolution marine and lacustrine settings, and its interpretation. Courses 3 to 5 will provide a fully integrated data and computer model based assessment of the processes controlling Earth’s climate on different time scales.

- **Course 3: Paleoclimate I: Integrating modern processes data evaluation and models** (Host: University of Southampton) – February-March 2005. This course assesses key aspects of the modern climate system, e.g. the carbon cycle and its changes in past time slices.

- **Course 4: Paleoclimate II: Orbital forcing – data and models**

We invite qualified PhD students and suitable post docs from the EU and other countries to attend these courses. Details of the application procedure can be found on the PROPER website (www.proper-training.nl). Applications should be directed to proper@falw.vu.nl.

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**The Catalan Network of Palaeoclimatology (Palaeocat)**

**L. Schulte**, R. Julià and A. Rosell-Melé

1Department of Physical and Regional Geography, University of Barcelona, Spain; schulte@ub.edu

2Institute of Earth Science – CSIC, Barcelona, Spain; rjuli@ia.csic.es

3Institute of Environmental Science and Technology, Autonomous University of Barcelona, Bellaterra, Spain; antoni.rosell@uab.es

Since June 2003, palaeoclimatologists and palaeoecologists from Catalan universities and research centres have been cooperating to promote research on past global climate changes in Catalonia (northeastern Spain). This palaeoclimatology network is supported by the Catalan government. The principal objective of the initiative is to promote research on the understanding of the nature, causes and effects of past climate changes. Special attention is devoted to studying the transformations undergone by human societies and natural systems related to climate variability, and to improving natural hazard management policies. In addition, emphasis is placed on strengthening international cooperation and networks, increasing public understanding of palaeoclimatic issues, and supporting student training.

The pluridisciplinary network of 40 scientists undertakes research on a broad range of time scales, at annual and millennial resolution, using instrumental, historical, phenological, sedimentological and geomorphological archives. The most frequently employed analytical techniques involve stable isotopes, organic and inorganic geochemistry, pollen, sedimentology, biota remains, and artefacts. Geochronology is based on radiocarbon, excess $^{210}$Pb, $^{137}$Cs fallout and uranium disequilibrium series. Research projects are undertaken in the western Mediterranean, especially in Catalonia but member groups also undertake research elsewhere; in marine (e.g. Mediterranean Sea, Atlantic and Pacific Ocean), lacustrine (e.g. Caspian Sea, Issikul and Baikal Lakes) and high mountain environments (e.g. Alps, Andes).

Activities to date have included three internal network meetings, for members to exchange experiences, and the creation of a web page, (see below) to present an overview of the network and links to Catalan palaeoclimatic research groups. Network members have also participated in the compilation of a Current State Report of climate changes and implications in Catalonia (www.iecat.net/canviclimatic). Another activity, planned for March 2005, is a two-day Open Meeting to analyze the interaction between...
climate and the hydrological cycle in the Western Mediterranean, and its influence on human societies through time.

Studies of Late Pleistocene organic-rich lacustrine deposits in the Banyoles area, on the foothills of the Pyrenees, are representative of research being carried out on Catalonia’s palaeoclimate. Palaeo-
temperatures were reconstructed from ostracode valve geochemistry, and vegetation history from pollen analysis over the last 40,000 years. Other continental and marine sequences record older palaeoenvironmental data, e.g. Abric Romani travertine or western Mediterranean marine cores. The composite palynological profile of Fig. 1 shows major climate changes during the last 70,000 years. At the beginning of the Holocene, the environment of the northeastern Iberian Peninsula was characterized by humid climate conditions, which became drier after 6,000 yr BP. There is also evidence from fluvial sedimentary deposits and historical documentary data that the overall Holocene climate trend was punctuated by minor climatic episodes, such as the Little Ice Age. In spite of frequent signs of early Neolithic land-management, the first noticeable human impact on natural environments dates from the Bronze Age. Archaeological, palynological and sedimentological data all point to the fact that major landscape changes occurred during the late Middle Ages and the Industrial period.

Despite all the research being carried out, there is still a shortage of palaeoclimatic records for Catalonia. Hopefully this will change in the future. The establishment of this research network is a first step towards determining research priorities on the understanding of past and present climate variability, and possible impacts on the region.

Information regarding the Catalan network of palaeoclimatology, its participating groups and workshops can be found at: antalya.uab.es/_c_ceambientals/Xarxes/XT_Paleoclima/index.htm
To request further information, please send an email to gr.xtpaleocat@uab.es.

Paleoclimate Research within DEKLIM

G. Lohmann1,2 and F. Sirocko3

The overarching aim of DEKLIM (German Climate Research Programme) is to improve climate predictability at global and regional scales by achieving a better understanding of long-term processes and climate modes. This includes:

(i) Detailed reconstructions of the temporal and spatial structure of climate change at centennial-
to-millennial timescales from palaeoclimatic proxy data.

(ii) Climate modeling studies to disentangle the physical and biogeochemical processes involved in the generation of these modes.

The research objective within DEKLIM-Paleo is related to the driving mechanisms of past and future climate change. Specific questions are related to the interaction of vegetation, atmospheric dynamics,