Press release Kangerlussuaq, Greenland July 17th 2003

Mission completed : International ice coring project completes drilling through the Inland Ice in Greenland

After 7 years of work, the NorthGRIP deep ice core drill penetrated the Greenland Inland Ice. In the afternoon of Thursday July 17th, the drill reached bedrock at a depth of 3084.99 m when subglacial melt water entered the lower 20 m of the borehole from below. The electrical equipment of the drill shorted, and the drill was brought to surface. A fantastic spectacle awaited the drillers : a 30 cm long structure of refrozen subglacial water was hanging underneath the drill. This refrozen water is brown due to its contents of subglacial material. The core segment drilled just before reaching bedrock was perfectly clean and normal, and in the next run the subglacial water came fast and unexpected.

Just after reaching bedrock, the 13 scientists gathered in the drill trench within minutes and the champagne corks popped to celebrate the event, which is the culmination of 7 years of effort. The chief driller Sigfus Johnsen gave a short speech and the NorthGRIP deep drilling was officially terminated.

We are enthusiastic about the fact that we have also retrieved subglacial water. We hope that the water will contain information about the biological life in Greenland 2 million years ago, before the Inland Ice was formed.

The drilling has been completed and the 3 kilometers of ice core will now be analysed. The ice close to bedrock is more than 120.000 years old and originates from a time period when the climate was undergoing a transition from the warm Eemian interglacial (or *the Sangamon* in North American terminology) into the last ice age. The Eemian (from ca.130.000 to 115.000 years Before Present) is the interglacial that separates the two last ice ages, and was characterized by considerably warmer conditions than our present interglacial. The results from the NorthGRIP ice core are expected to yield new information on the sudden change from warm conditions into an ice age. Considering the global warming that the World is experiencing now, increased knowledge about these climatic transitions is highly relevant.

The ice core will now be packed and transported to the Niels Bohr Institute at the University of Copenhagen, Denmark, where the core will be stored and samples will be taken out for the analyses that will be carried out by the international collaborators.

News about the project are posted en English and Danish on a daily basis at the project home page www.glaciology.gfy.ku.dk.

Additional information about the international NorthGRIP ice coring project can be obtained from J.P.Steffensen, NorthGRIP Field Operations Manager in Kangerlussuaq, Greenland.

On behalf of the many individuals that have participated in the NorthGRIP project,

From the NorthGRIP camp

NorthGRIP chairman and field leader Dorthe Dahl-Jensen
Professor, Niels Bohr Institute, University of Copenhagen

Facts on the NorthGRIP project :
NorthGRIP (North Greenland Ice Core Project) is an international collaboration between Denmark, Germany, Japan, Sweden, USA, Switzerland, France, Belgium and Iceland. The camp is situated on the middle of the Inland Ice at 75.09°N, 42.32°W, 2930 m above sea level. The project is led by Danish researchers. The deep drilling project was started in 1996 and the camp has been manned by approximately 25 researchers for 3 months each summer. The international team of participants has worked in shifts around the clock in order to drill and perform measurements on the precious ice cores.

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