

NSF 02-146



NATIONAL SCIENCE FOUNDATION
4201 Wilson Boulevard
Arlington, Virginia 22230

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Dear Colleague,

I would like to bring the following information to your attention:

Availability of New Vostok Accretion Ice

The French-Russian-US collaboration in the collection and study of the Vostok ice core has made a significant contribution to documenting Earth's climate history. The confirmation in 1996 of the existence of a lake under the drilling site has enhanced the importance of this collaborative project and has stimulated much scientific discussion and speculation about the origin, nature and fate of subglacial lakes and associated ecosystems.

When drilling at the Vostok site was completed in 1998, the borehole had reached a depth of 3623 m, with an estimated 130 m of ice remaining to the lake surface. The top 3538 m of the core is glacial ice. The lower 84 m (3539-3623 m) is referred to as accretion ice and has distinct physical and chemical characteristics relative to the ice from shallower (glacier) portions of the core. In December 2001, the bottom 11.74 m of accretion ice was sub-sampled in the field. Half of the core was left at Vostok Station in a snow cave as an archive and the other half was transported from Antarctica to the Laboratoire de Glaciologie et Géophysique de l'Environnement (LGGE) in Grenoble, France with the understanding that the distribution of this ice would be decided by a joint meeting of science and agency representatives from the three nations.

Three Nations Agree to Share Ice Core

A meeting was held 17-18 April 2002 at the US National Science Foundation with scientists, directors and program managers from the U.S., French and Russian Antarctic programs. The group identified the essential analyses required to address the key scientific questions about the physical and biological aspects of the accretion ice layers and the lake ecosystem. A plan developed at this meeting will maximize the scientific return and ensure an accurate comparison of results and will foster international research collaboration among Russian, American and French scientists.

U.S. scientists interested in obtaining samples of this new ice should follow the instructions below. Please note that half of the accretion ice has been archived in Antarctica and that a portion of the ice that has been shipped to the LGGE in France is reserved for future international collaborations among the three partner countries (see Appendix 2 of the meeting report at the web site below).

For more information about Lake Vostok research (list of important web sites, previous workshop reports, press releases) and to see a copy of the report from the April 17-18 meeting, go to the following OPP web site:

<http://www.nsf.gov/od/opp/antarct/subglck.htm>

How to Request New Accretion Ice Core Samples

To obtain pieces of these new accretion ice core samples send a request of not more than 3 pages to the National Ice Core Laboratory (NICL)-Science Management Office (SMO) at the University of New Hampshire at nicl.smo@unh.edu by August 1, 2002. A list of available US ice samples can be found in Appendix 2 of the meeting report listed with the link above. The request should be a complete and concise statement describing the study for which samples are needed, methods and procedures to be used, the specific problem or objective of the study, samples required, source of funding (if any) and names and addresses of collaborating investigators. A special Sample Allocation Committee (SAC) consisting of members of the Ice Core Working Group (ICWG) and other pertinent researchers will consider the requests. Final approval of requests will be made by NSF. If you have questions about the selection process or related OPP programs please contact Dr. Deneb Karentz (dkarentz@nsf.gov).

Other Ice Samples Available

In addition to this new accretion ice, there are previous samples from Vostok and ice cores from various other sites that are archived at NICL. Those interested in accessing samples from NICL should also familiarize themselves with the Ice Core Sample Distribution Policy on the NICL-SMO home page at: (<http://www.nicl-smo.sr.unh.edu/>). A listing of available samples can be found by going to the NICL-SMO web site listed above and clicking on "NICL", followed by "Inventory". For further questions about available samples at NICL contact the Director, NICL-SMO (Mark Twickler) at nicl.smo@unh.edu. In addition to the ice core samples listed in the inventory, NICL, with the assistance of the ICWG, has placed several ice cores archived at the NICL facility on a de-accession list. These cores are available to any investigator for scientific studies (see EOS, Transactions, AGU, Vol. 79, No. 19, 12 May 1998). A list of ice core samples currently available on the NICL de-accession list can be found by going to the NICL-SMO web site and clicking on "De-accession of Ice Cores at NICL".

Please pass this information on to any other researchers who may be interested in studies of ice.

Sincerely,

Dr. Karl Erb, Director
NSF Office of Polar Programs