



IPY deep ice core drilling in central West Antarctica, 2007-08

C. Bentley (1), K. Taylor (2), J. Johnson (1), A. Shturmakov (1), D. Lebar (1)

(1) Ice Coring and Drilling Services, Space Science and Engineering Center, University of Wisconsin, Madison, USA (2) Desert Research Institute, University of Nevada, Reno, USA
(bentley@geology.wisc.edu / Phone: 1 608 238-8873)

A major part of the IPY activities of the United States Antarctic Program is the project known as the WAIS (West Antarctic Ice Sheet) Divide Ice Core Project (<http://waisdivide.unh.edu>). The Ice Coring and Drilling Services (ICDS) group of the University of Wisconsin - Madison designed and built a new DISC (Deep Ice Sheet Coring) Drill and is providing crews to operate the drill in central West Antarctica. The main objective of the project, which is funded by the National Science Foundation, is to retrieve continuous core to a depth of approximately 3500 meters below surface. The core will provide a climatic record for Antarctica for the past 100,000 years with a resolution comparable to that of the GISP2 and GRIP cores in central Greenland.

The DISC Drill, a “tethered” electromechanical drill, is the replacement for the PICO 132-mm drill used on several previous US deep coring projects. It was successfully tested in Greenland during the summer of 2006 and modifications to the drill were completed before the drill was shipped to West Antarctica, where its installation at the WAIS Divide site was just being completed at the end of 2007. Drilling actually commenced early in January and was continuing as this abstract was submitted. The aim is to reach the subglacial bed in 2009-10, but the project will continue for up to six seasons, including drilling into the bed and perhaps additional sampling in depth regions of particular glaciological or climatic interest.

In this paper we will review the activities of this first season and summarize our plans for the next few years.