

# ICE BITS NEWSLETTER

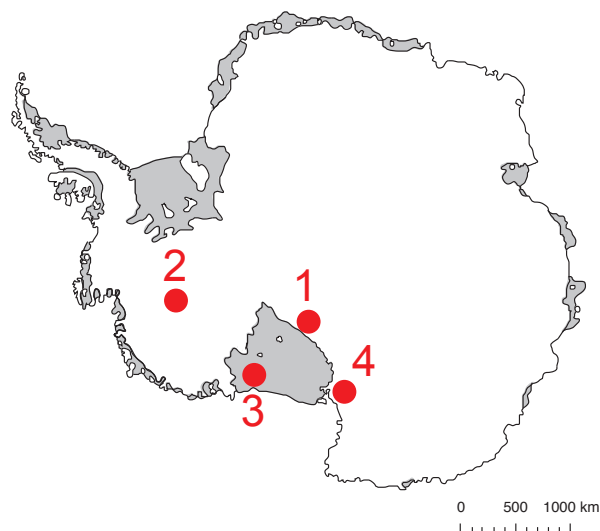
FALL 2012

**U.S. Ice Drilling Program**  
Ice Drilling Program Office | Ice Drilling Design and Operations

*Quarterly update of Ice Drilling Program Office (IDPO) and Ice Drilling Design and Operations (IDDO) activities*

## Field Support to Antarctic Projects

During the 2012-2013 Antarctic field season IDDO will provide support for four projects: (1) the Beardmore Glacier Dynamics project (PIs Conway and Winberry) will use a portable hot water drill to create the shot holes needed for their seismic characterization of the subglacial environment of Beardmore Glacier; (2) the WAIS Divide Replicate Coring project (Severinghaus, PI) will use the DISC Drill and its Replicate Coring System to obtain additional ice samples from intervals of high scientific interest within the existing WAIS Divide deep borehole; (3) the Roosevelt Island Climate Evolution (RICE) project (Hawley, PI) will use the IDDO logging tower to help log the RICE borehole to investigate the internal properties of the ice; and (4) the Taylor Glacier Horizontal Ice Core project (Schaefer, PI; Antarctica New Zealand) will use a hand auger and sidewinder to obtain several shallow ice cores from Taylor Glacier. In addition, IDDO prepared and deployed five PICO and six SIPRE hand auger kits as well as one Sidewinder kit for use by science teams this field season.



*Map of Antarctica showing IDDO 2012-2013 field season locations. The numbers shown on the map correspond to the project numbers in the text at left.*

## Future Plans for the DISC Drill

Scientists interested in using the DISC Drill in the future need to work with the Ice Drilling Program Office – Science Advisory Board (<http://icedrill.org/about/sab.shtml>) to formulate their plans and to ensure that their science is articulated in the Long Range Science Plan (<http://icedrill.org/scientists/scientists.shtml#scienceplan>), which is updated annually each spring. The current schedule for the DISC Drill is as follows:

Dec 2012 – Jan 2013: Replicate coring at WAIS Divide, Antarctica

Dec 2013: Disassemble and pack DISC Drill at WAIS Divide

Nov 2014 – Jan 2015: Disassemble arch and prepare for traverse back to McMurdo Station

Nov 2015 – Jan 2016: Traverse DISC Drill from WAIS Divide to McMurdo Station

Feb 2016: Retrograde DISC Drill to CONUS via vessel

May 2016: DISC Drill arrives in Madison, WI

May 2016 – Nov 2017: Inspect, re-build, re-design and replace drill system components if necessary

Given the anticipated schedule above, the DISC Drill could be ready for shipment to the field again in late 2017. For the latest information and schedule for the DISC Drill, visit: <http://icedrill.org/equipment/disc.shtml>

### STAY CONNECTED WITH US:

 <http://icedrill.org/listserv.shtml>

 <http://facebook.com/USIceDrillingProgram>

 [http://twitter.com/#!/US\\_IceDrilling](http://twitter.com/#!/US_IceDrilling)

 <http://icedrill.org/news/subscribe.shtml>

 <http://youtube.com/user/USIceDrillingVideos>

## Scientific Drilling in the Polar Regions Town Hall Meeting



**Date:** 3 December 2012

**Time:** 6:15 pm - 7:15 pm

**Place:** Moscone Center; Moscone West, Room 2008

IDPO is once again organizing a Town Hall meeting at the Fall AGU Meeting entitled “Scientific Drilling in the Polar Regions”. Ice sheets and ocean sediments hold important climate evidence from the past. International collaboration for drilling in the polar regions requires coordination between science, technology, and logistics. Presenters at this meeting will report on recent planning by the IDPO/IDDO, IPCS, ANDRILL, IODP, SCAR-ACE and WAIS initiatives. Opportunities for community involvement in interdisciplinary planning will be highlighted and input solicited. The Town Hall is on Monday, December 3 from 6:15 pm - 7:15 pm in Moscone West, room 2008. Please check the 2012 Fall AGU Meeting website for more information:

<http://fallmeeting.agu.org/2012/calendar/town-halls/>

## 7<sup>th</sup> International Workshop on Ice Drilling Technology

The IDPO/IDDO will hold the 7<sup>th</sup> International Workshop on Ice Drilling Technology in 2013. The workshop will be held at the University of Wisconsin, Madison, WI, USA, from 9-13 September. Following in the footsteps of the six previous ice drilling technology workshops held between 1974 and 2006, the 7<sup>th</sup> International Workshop on Ice Drilling Technology will take a comprehensive look at the latest technological innovations in ice drilling technology, including ice coring, borehole logging, sub-glacial sampling, and field logistics. The workshop will promote the exchange of knowledge, ideas, and experience among many countries and individuals who are involved in ice drilling projects. People active in the technical side of ice drilling are especially encouraged to participate. Papers from the workshop will be published in a special issue of a peer reviewed journal. The first circular for the workshop will be released soon. For the latest information about the workshop, visit:

<http://icedrill.org/7th-international-workshop-on-ice-drilling-technology/>



## Intermediate Depth Logging Winch Now Available for Community Use

In collaboration with IDPO and the borehole logging community, IDDO completed the design and specification of an intermediate depth logging winch capable of logging boreholes to a depth of 1500 meters. The winch and associated Teflon-coated logging cable have been delivered to IDDO, and IDDO has finished its modifications readying the system for Polar use. The logging winch can operate at temperatures as low as -45 degrees C, is transportable by a single Twin Otter flight, and is now available for community use!

## Educational Outreach

The 2012 AGU conference offers a wonderful opportunity for scientists to interact with educational leaders and learn about best practices in climate education. In collaboration with NOAA and the National Earth Science Teachers Association, IDPO is convening multiple sessions on “Climate Literacy: Preparing K-12 Students to Address Next Generation Challenges”. Featuring nationally recognized speakers knowledgeable about the latest science standards and how to prepare classroom teachers to implement them effectively, two oral and one poster session are scheduled for Tuesday, December 4th. Discussion on innovative roles you can play as a scientist is welcome! Please visit the conference website for details on these sessions: ED 21D (8-10 AM), ED22B (10:20 AM-12:20 PM) and ED 23A (1:40-4 PM). For more information, please contact Linda Morris at [linda.m.morris@dartmouth.edu](mailto:linda.m.morris@dartmouth.edu)

## Visit Us on Facebook



IDPO/IDDO is now on Facebook at <http://www.facebook.com/USIceDrillingProgram>. We will be using the page to update the Facebook public audience on important announcements, news and journal articles of interest, solicitation deadlines, and interesting updates, photos and videos pertaining to IDDO drilling and field science support.

## NSF Solicitation for Ice Coring and Drilling Program for the Office of Polar Programs

The Office of Polar Programs at the National Science Foundation (NSF) requests proposals from interested groups to support current and future ice drilling activities. Specifically, proposals are requested for the continuation of the Ice Drilling Program Office (IDPO), which helps coordinate long-term and short-term planning for ice coring and drilling projects, in collaboration with the science community, and to be the principal supplier of ice drilling and coring support and expertise for NSF-funded research. The IDPO will work with an Ice Drilling Development Office (IDDO) that provides the engineering design support for new drilling systems as well as the operation and maintenance of existing systems. The NSF proposal deadline is January 22, 2013. For more information, visit:

[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504794&org=ANT&from=home](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504794&org=ANT&from=home)

IDPO/IDDO will be submitting a proposal for the competition.

## U.S. SCAR Office and ANSWER News Digest Move to Ohio State University



The U.S. Scientific Committee on Antarctic Research (SCAR) Office has moved from Texas A&M to Ohio State University. The new website for U.S. SCAR is <http://usscar.org/us-scar-home>. The U.S. SCAR Office also manages the ANSWER (ANtarctic Science WEb Resource) electronic mailing list, so it too has moved to Ohio State University. Because of the move, the ANSWER mailing list is being migrated to a new system, and existing mailing list members will begin to once again receive the ANSWER News Digest in the coming weeks. For the latest information about the ANSWER mailing list, including how to post messages to it, visit:

<http://usscar.org/answer-news-digest>

## South Pole 1500 m Ice Core

The University of California-Irvine (Saltzman, PI), University of Washington (Steig, PI) and University of New Hampshire (Twickler, PI) have recently been funded to obtain a 1500 meter ice core at the South Pole. Drilling is planned for 2014-2015 (~700 m, through the Holocene) and 2015-2016 (to 1500 m / 40,000 years). The drilling will be conducted with the new Intermediate Depth Drill currently under development by IDDO. The ice core obtained will be 9.8 cm in diameter, about 1/2 the volume of the WAIS Divide core, so availability of ice to the community will be less. Proposals to work on the core will need a letter of support from the South Pole Ice Core Executive Committee, currently composed of Eric Saltzman, Eric Steig, Murat Aydin, and Tom Neumann. If you intend to submit a proposal to work on the South Pole ice core, please let the Executive Committee know by sending an email to [contact@spicecore.org](mailto:contact@spicecore.org). In particular, it is important to let them know if you have any special sampling needs, such as sampling in the field. Planning is already underway for the ice core trench; the intention is to process only minimally in the field.

In addition, the first planning workshop for the project is planned for Tuesday, March 19, 2013 at the Millennium Harvest House in Boulder, CO. The purpose of the workshop is to give scientists interested in participating in the South Pole Ice Core project an opportunity to discuss site selection, science goals, and analytical measurements, as well as an opportunity to coordinate the submission of science proposals (to analyze the ice) in June, 2013. The intention is to have web-conferencing capability for the workshop so that people can participate in the workshop remotely, if desired. To help plan for the workshop, please let the PIs know (by sending an email to [contact@spicecore.org](mailto:contact@spicecore.org)) if you are interested in participating in the workshop, and if so, if you believe you will attend the workshop in person or via web-conferencing.

For the latest information about the project, and to subscribe to the project's electronic mailing list, visit:

<http://spicecore.org>

## REQUESTING ICE DRILLING SUPPORT

If you are preparing a proposal that includes any kind of ice drilling or ice coring support from IDPO/IDDO, you must complete a Field Project Requirement Form ([www.icedrill.org/scientists/scientists.shtml](http://www.icedrill.org/scientists/scientists.shtml)) and submit it to IDPO/IDDO via [icedrill@dartmouth.edu](mailto:icedrill@dartmouth.edu) at least six weeks before your proposal deadline.

Once IDPO/IDDO receives your Field Project Requirement Form we will provide you with a Letter of Support and Scope of Work/Cost Estimate that MUST be included with your proposal. If you are submitting a proposal to NSF the Letter of Support and Scope of Work/Cost Estimate should be included as Supplemental Information in your proposal, and it is recommended that you also notify the relevant NSF Program Manager that your proposal requires support from IDPO/IDDO.

If you are preparing a non-NSF proposal, it is recommended that you familiarize yourself with the *Policy for Ice Drilling for Organizations other than NSF* available at [www.icedrill.org/scientists/scientists.shtml#otheragencies](http://www.icedrill.org/scientists/scientists.shtml#otheragencies).