



Innovations from Ice Drilling Program Office / Ice Drilling Design & Operations

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IDPO-IDDO Vision



To enable scientific discoveries about changes in environment and climate, using evidence from glaciers and ice sheets, to inform environmental policy.





IDPO-IDDO Mission

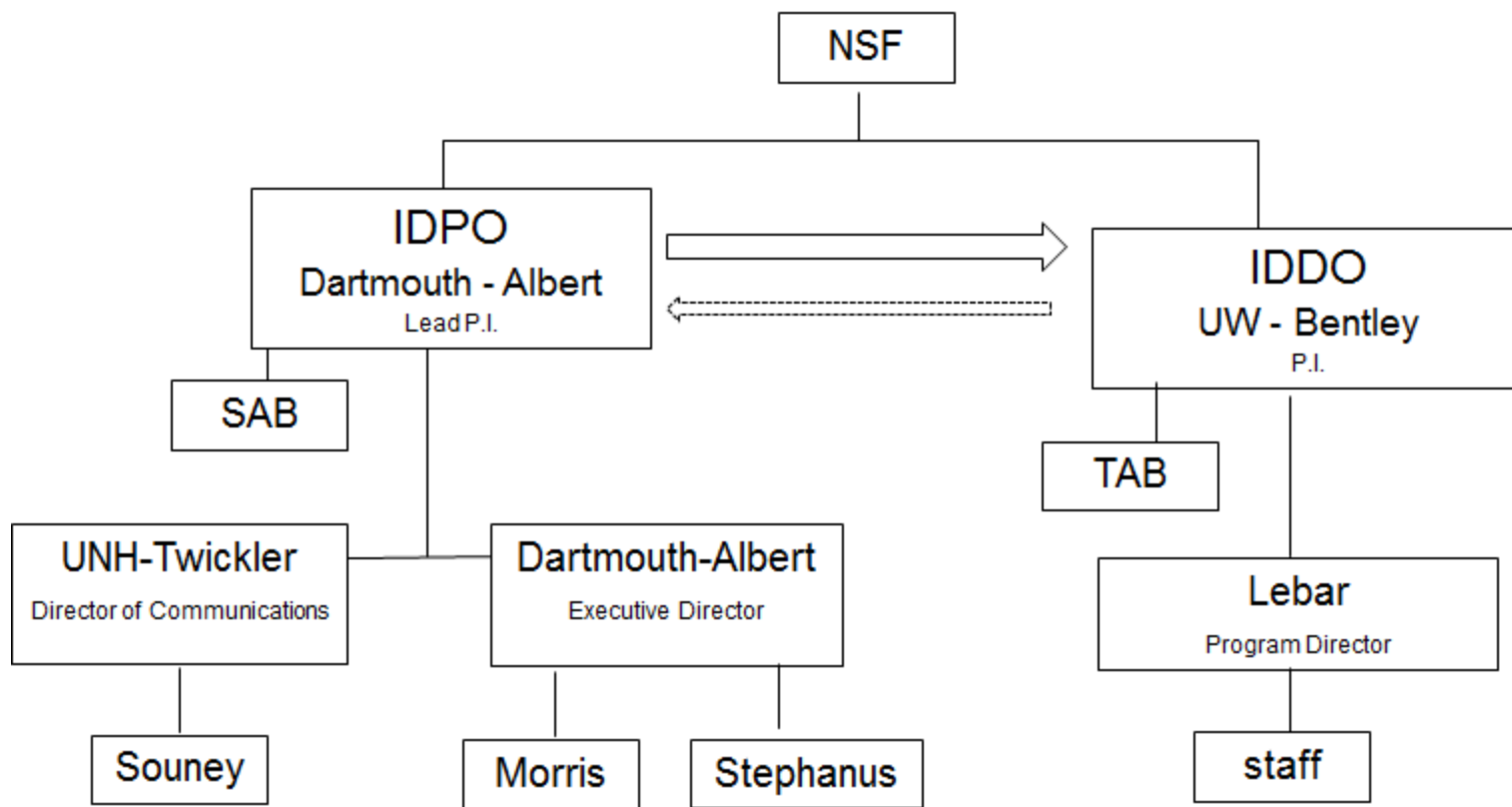


To conduct integrated planning for the ice drilling science and technology communities and to provide drilling technology and operational support that will enable the community to advance the frontiers of science.





Organization: IDPO-IDDO





IDPO Planning Examples



- Community involvement in IDPO planning since SAB meeting last year:
 - - IDPO initiated Community Planning Workshop spring 2011
 - - IDPO led interdisciplinary AGU Town hall 2011
- Community input drives new technology planning & development:
 - Intermediate Depth Drill (IDD)
 - Rapid Access Ice Drill (RAID)
 - Intermediate Borehole Logging Winch
- Updates to be included in Long Range Plans



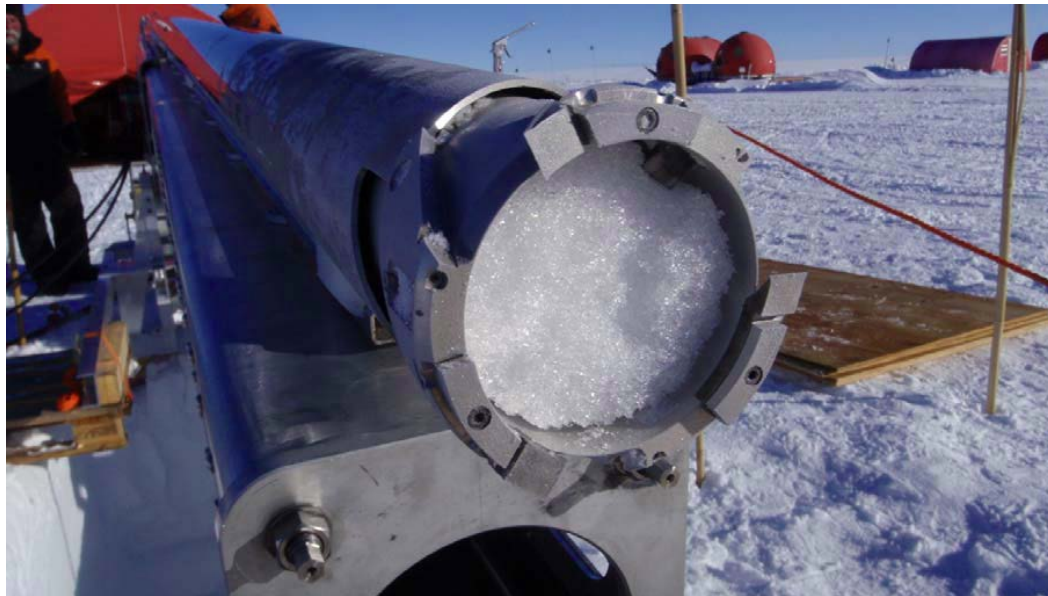


IDPO Planning & Oversight



Updates on planning for drills - examples:

- **Intermediate Depth Drill (IDD)** – IDPO negotiated with the Danish CIC, IDDO, and NSF to establish a basis for international collaboration. IDPO led development of Science Requirements with community scientists and IDDO. IDPO & IDDO form yearly plan & IDPO manages IDDO progress against the plan.





IDPO Planning & Oversight



Updates on planning for drills - examples:

- **Rapid Access Ice Drill (RAID)**
- – IDPO convened the RAID workshop with interdisciplinary scientists, industry, and IDDO to form a common vision and led establishment of the Science Requirements for the drill. IDPO helped John Goodge write aspects of the proposal, and IDDO developed a Prospectus for the drill that is part of the proposal. Proposal to be submitted soon to NSF.





IDDO Drilling Support Examples

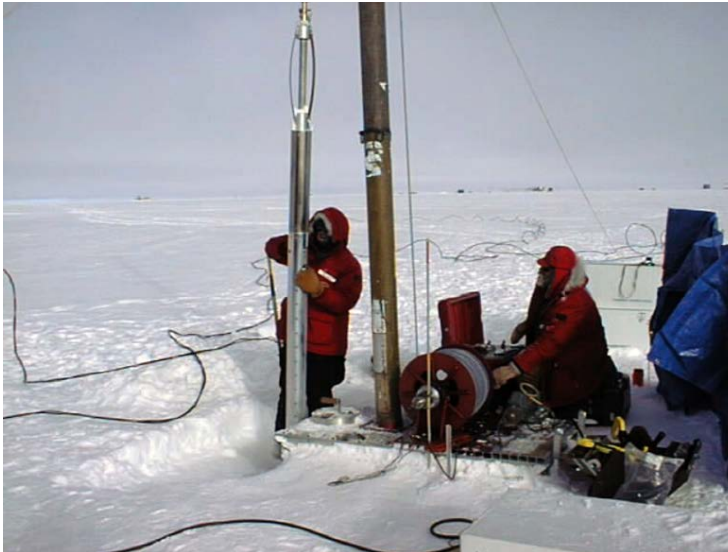
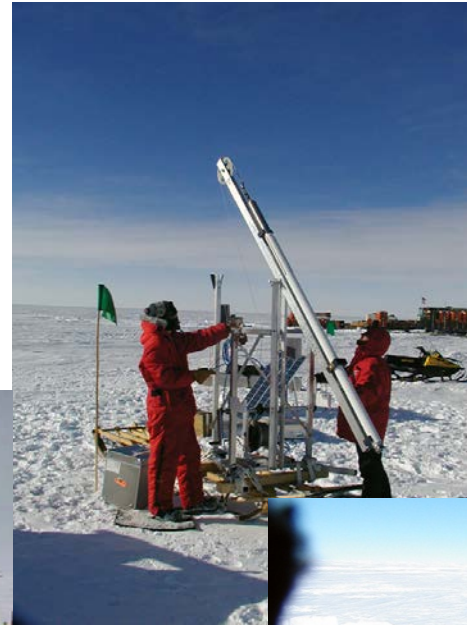
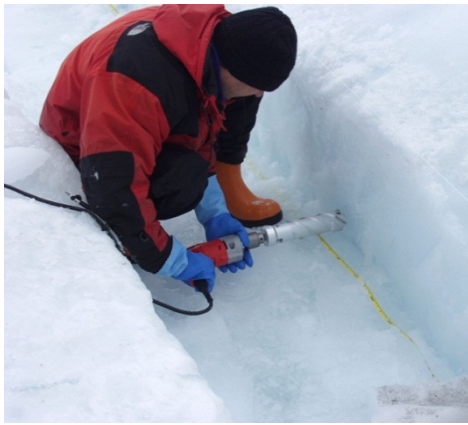


- WAIS-D deep core: excellent core quality, timing on track, deepest U.S. core ever, 3331 meters
- Good results with agile drilling for smaller community projects
- Innovative new drilling technology





Drilling Technology





Drilling Technology





Drilling Technology





IDPO Communication Examples



- Engaging and useful web site *Icedrill.org*
- Quarterly newsletter *Ice Bits*
- *Icedrill.news* listserv announcements
- IDPO presentations / interactions at community meetings (WAIS-D, AGU, ICWG, State of the Arctic, etc)

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Drilling Ice Cores with the Badger-Eclipse Drill at Allan Hills, Antarctica
Photo credit: Andrei Kurbatov

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The U.S. Ice Drilling Program conducts integrated planning for the ice drilling science and technology communities and provides drilling technology and operational support that enables the community to advance the frontiers of climate and environmental science. [Learn more about the U.S. Ice Drilling Program.](#)



Highlights: Education & Outreach Examples



- Broadening public exposure to science, e.g. U.S. Science Festival
- Creating new education web site *Climate-Expeditions.org*
- Developing outreach skills in graduate students
- Building scientist collaborations for curriculum and outreach
- Delivering teacher workshops

