



TOPIC: DEMONSTRATION OF ICE CORING

PROJECT PERSONNEL:

Charlie Bentley

GENERAL BACKGROUND INFORMATION ON THE SUBJECT:

Drills for collecting ice cores come in a wide range of sizes, from easily held in one hand, like the one here, to as big as a 4-story building and weighing many tons. They all do essentially the same thing -- cut and remove a cylindrical sample of ice from a glacier or ice sheet (or, in the case of this demo, from a block of ice).

TERMS YOU SHOULD KNOW (VOCABULARY):

Ice core: a cylindrical sample of ice cut from a glacier, ice sheet, or other body of ice

WAIS: West Antarctic Ice Sheet

WAIS Divide: site of deep ice coring in the WAIS

WHY ARE WE STUDYING THIS IN THE POLAR REGIONS?

Ice cores contain a great store of valuable information about the past climate of the Earth, information that will help scientists predict the climate of the future. Just two weeks ago (January 2008) U.S. drillers finished a first (southern) summer of coring at WAIS Divide in Antarctica using one of the really big drills. After two or three more summers of drilling, we hope have cores taken from all depths in the ice sheet, right down to the bottom of the ice, more than 2 miles below the surface.

HOW DOES THIS AFFECT US HERE IN THE UNITED STATES?

Climate affects everybody everywhere, including the U.S. The deep ice core from WAIS Divide will reveal how climate changed over the last 100,000 years; comparison with a similar record already obtained from Greenland in the Arctic will be particularly important for learning how the polar regions interact with each other and the rest of the world in between.

TO LEARN MORE ABOUT THIS TOPIC:

Visit the exhibit by Tom Neumann and Zoe Courville, "Norway-USA IPY Traverse of East Antarctica," in table #12 GG

Go to: <http://www.waisdivide.unh.edu/>

ACTIVITY YOU CAN TRY:

Handle a real ice core after watching it being cut from a block of ice.