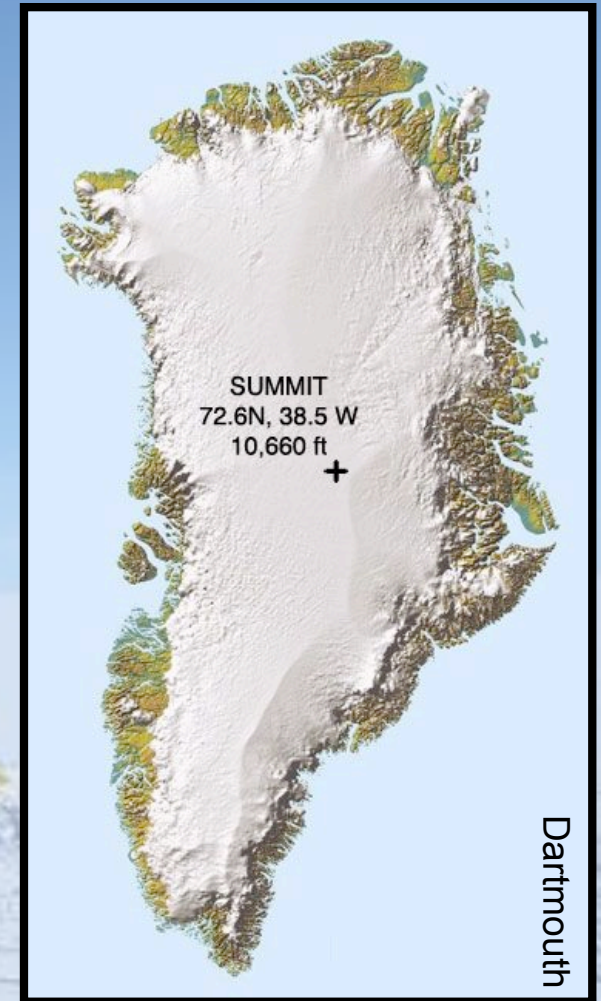


Live from IPY! with Jo Dodds

22 May 2007

Summit Station, on the Greenland Ice Cap





Raise your hand to ask a question

List of all participants

Return to the Lobby or Exit

Slides will be shown here

'Chat' with one person or the entire group

Connecting to server...
You have connected successfully!
You have entered the lobby.
You have entered 'Arctic Research Consortium of the United States (ARCUS)'.
Your media format is Third-party Conference Call.

Name	✓X	Hand
Heleen_Wiggins		

Exit Lobby - Help



What is PolarTREC?

PolarTREC is a professional development experience in which K-12 teachers are paired with researchers in authentic polar research experiences.

In the next three years 36 teachers from around the United States will join scientists in the Arctic and Antarctic in celebration of the International Polar Year!

[*www.polartrec.com*](http://www.polartrec.com)



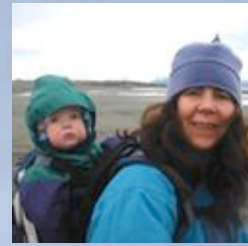
The PolarTREC Team



Wendy Warnick
PolarTREC PI
Executive Director



Helen Wiggins
Program Coordinator



Janet Warburton
PolarTREC
Project Manager



Katie Breen
PolarTREC
Project Manager



Kristin Fischer
PolarTREC
Project Assistant



Ronnie Owens
Web Developer



Ben Wade
Web Developer



Tina Buxbaum
Electronic Media
Project Manager

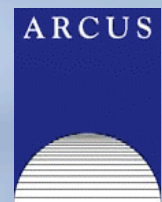


Zeb Polly
Systems Administrator



Joed Polly
Video Production

...with help from
the entire staff
at ARCUS





International Polar Year (IPY) 2007-2009

The International Polar Year (2007-2009) is an exciting scientific campaign focusing on the world's polar regions!

IPY is a time for discovery, science, learning, and awareness about the polar regions with activities for youth, scientists, and the public.

www.ipy.org

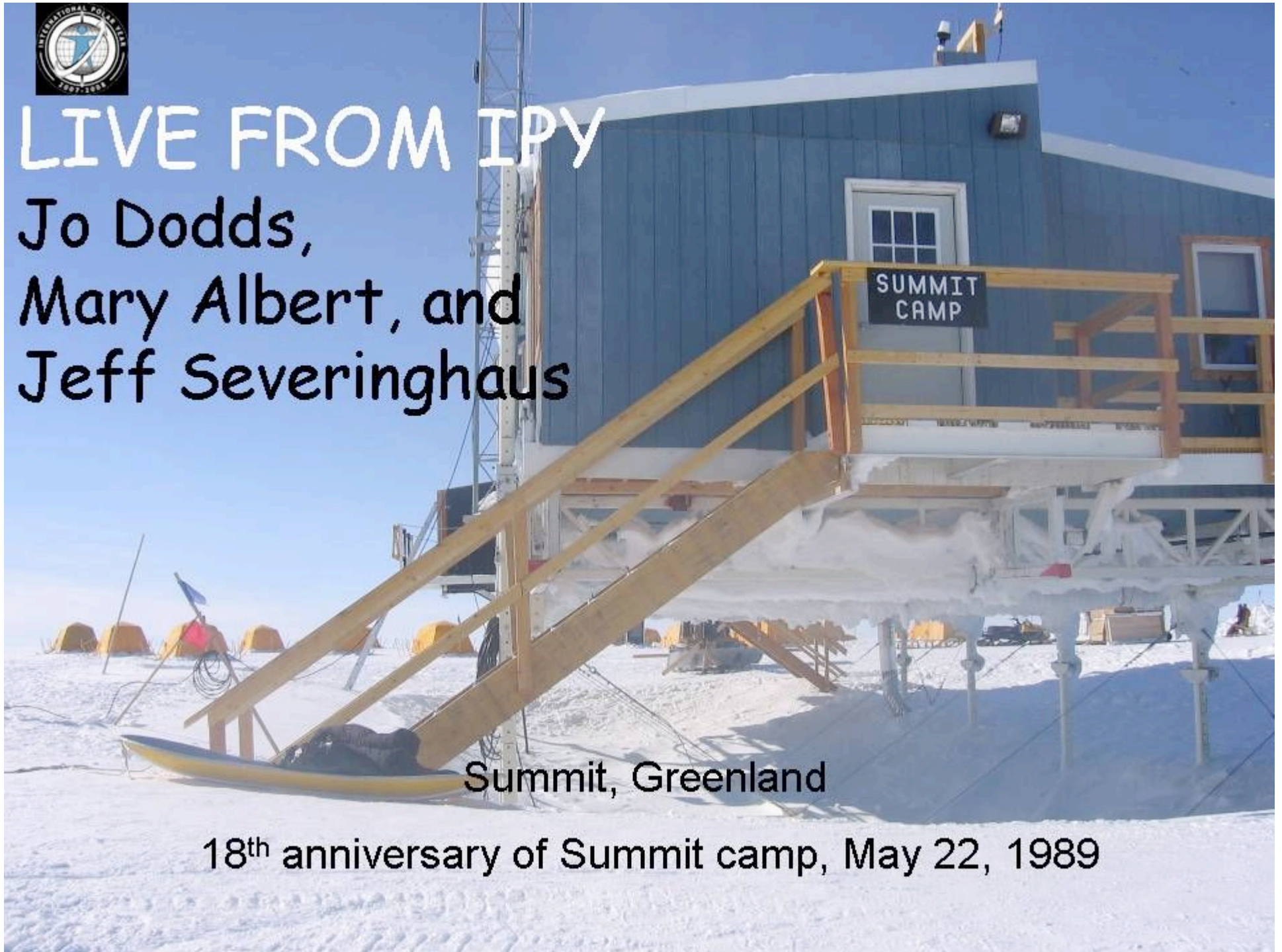


LIVE FROM IPY

Jo Dodds,
Mary Albert, and
Jeff Severinghaus

Summit, Greenland

18th anniversary of Summit camp, May 22, 1989





Who are we talking with today?



Teacher

Jo Dodds

O'Leary Junior High School
Idaho



Researcher

Mary Albert

Cold Regions Research &
Engineering Laboratory
New Hampshire

e in the world
e?

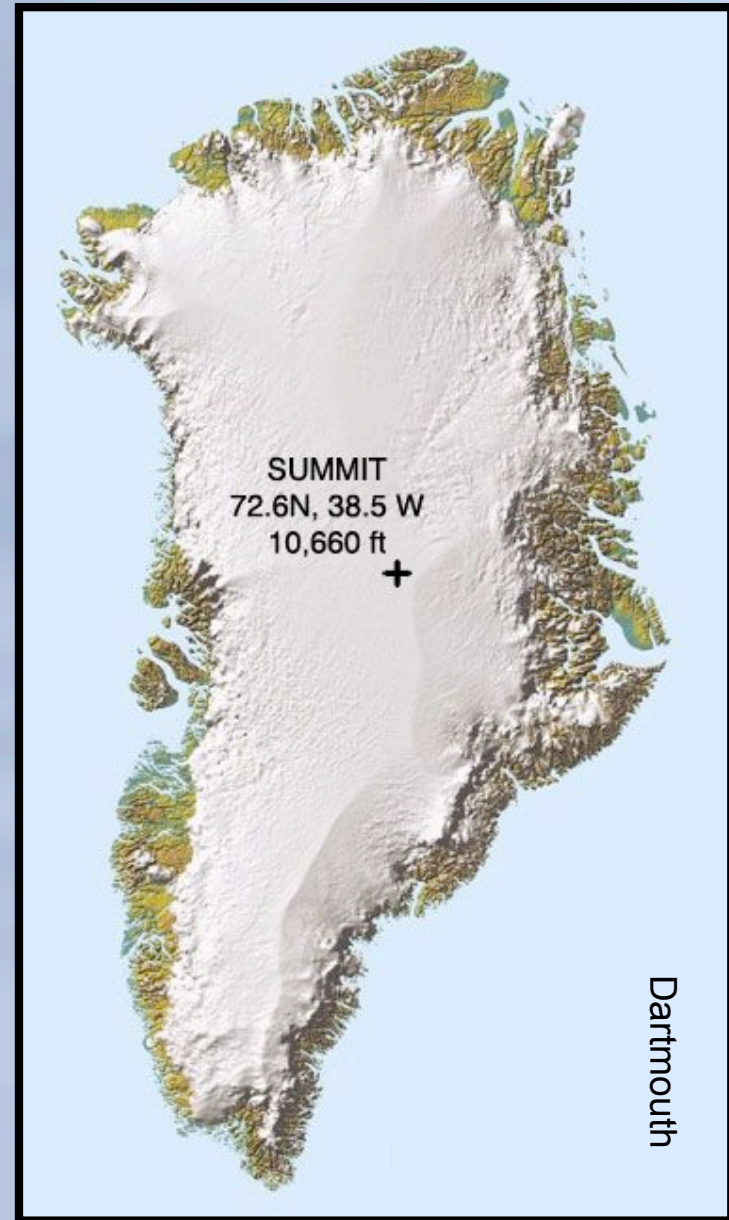
Twin Falls,
ID

Summit,
Greenland

© 2007 Europa-Technologies
Image © 2007 TerraMetrics
Image NASA



Area of Study: Greenland Ice Cap





The research at Summit all started with the Greenland Ice Core Project and Greenland Ice Sheet Project Two (GISP2). Pictured here is the drill in the geodesic dome.



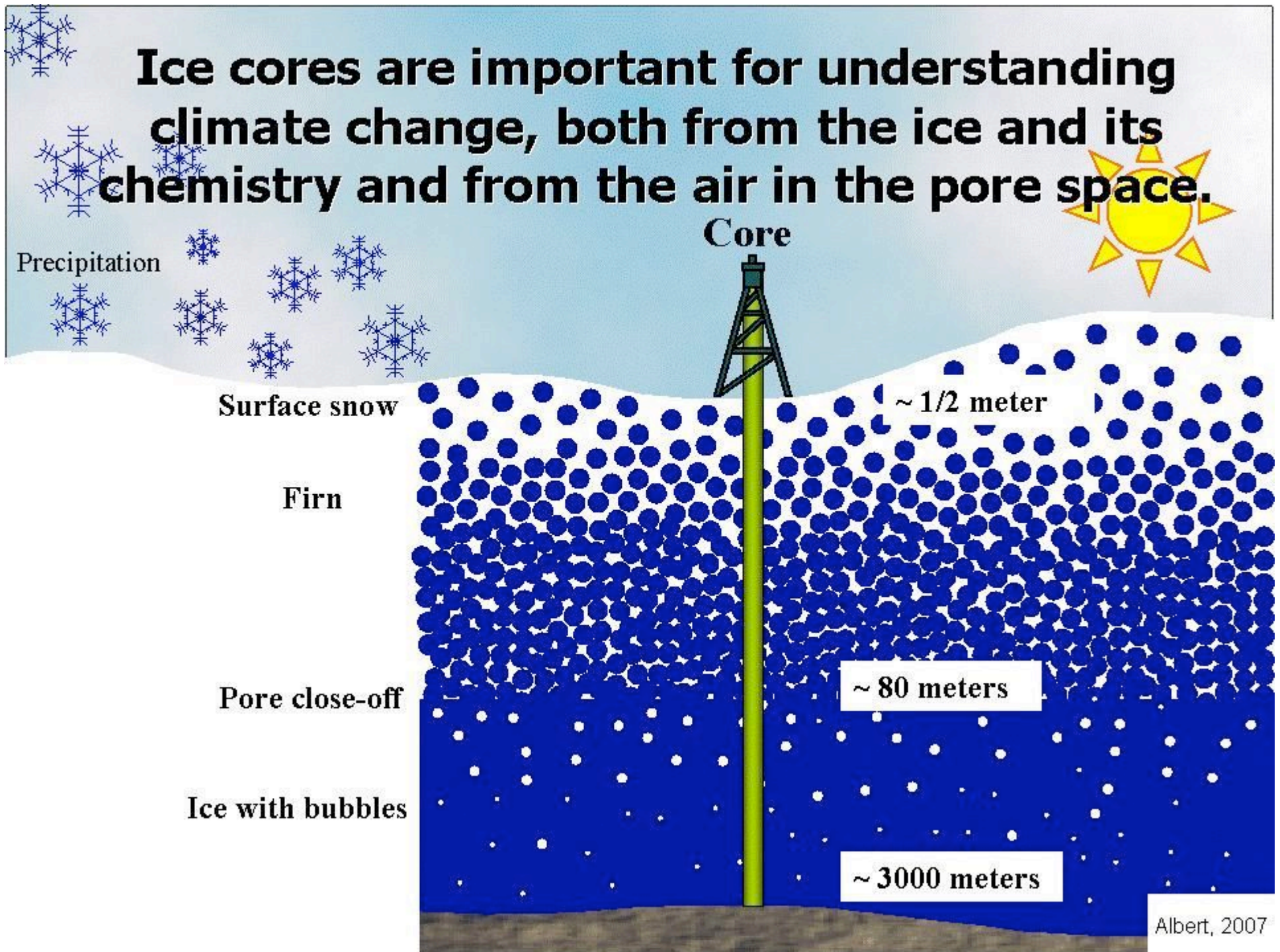
General map of Summit, Greenland

<http://www.summitcamp.org>

Summit, Greenland

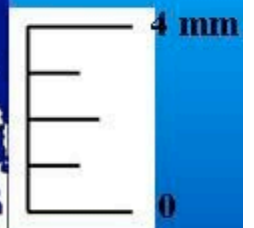
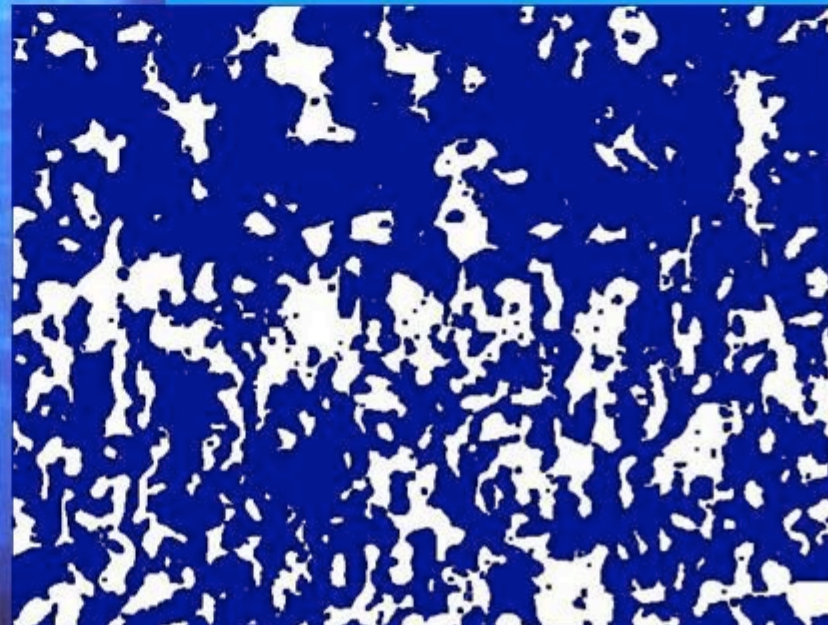
What are we doing here? We are in Greenland investigating how the snow and firn archives evidence of past atmospheres.

Ice cores are important for understanding climate change, both from the ice and its chemistry and from the air in the pore space.



Snow & firn layering and microstructure are created by deposition and altered by age and weather.

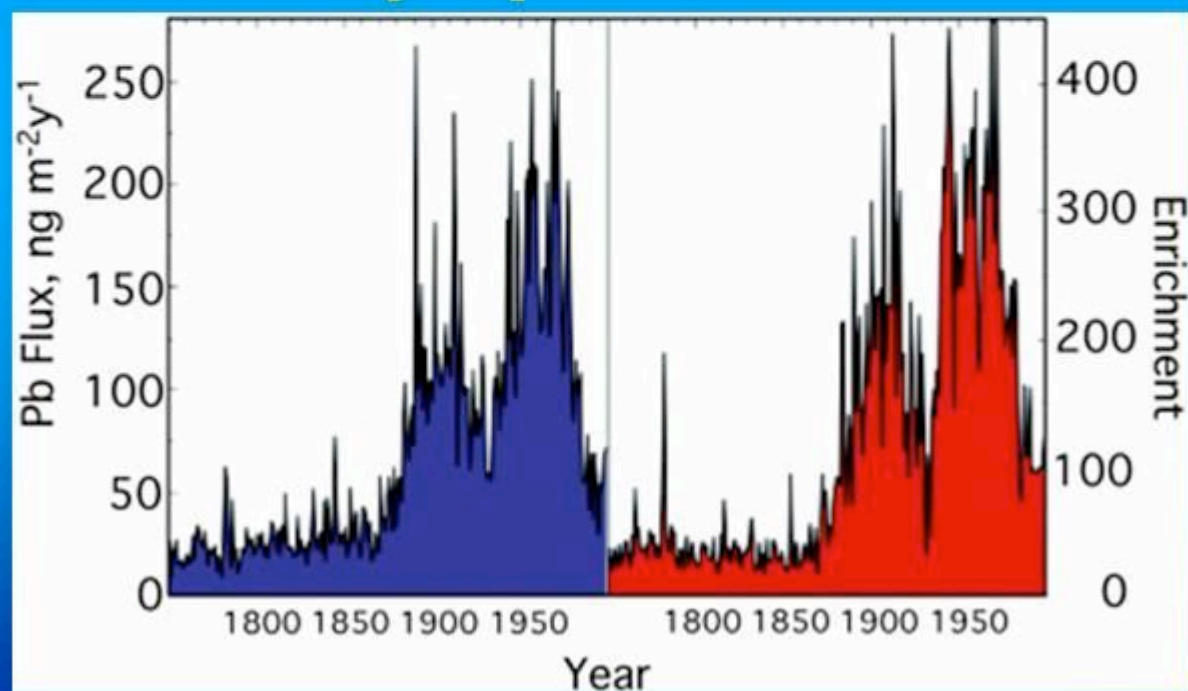
This impacts snow-air transfer, the firn & ice core record, and remotely sensed signatures.



Evidence in ice cores confirm that societal decisions can improve the environment

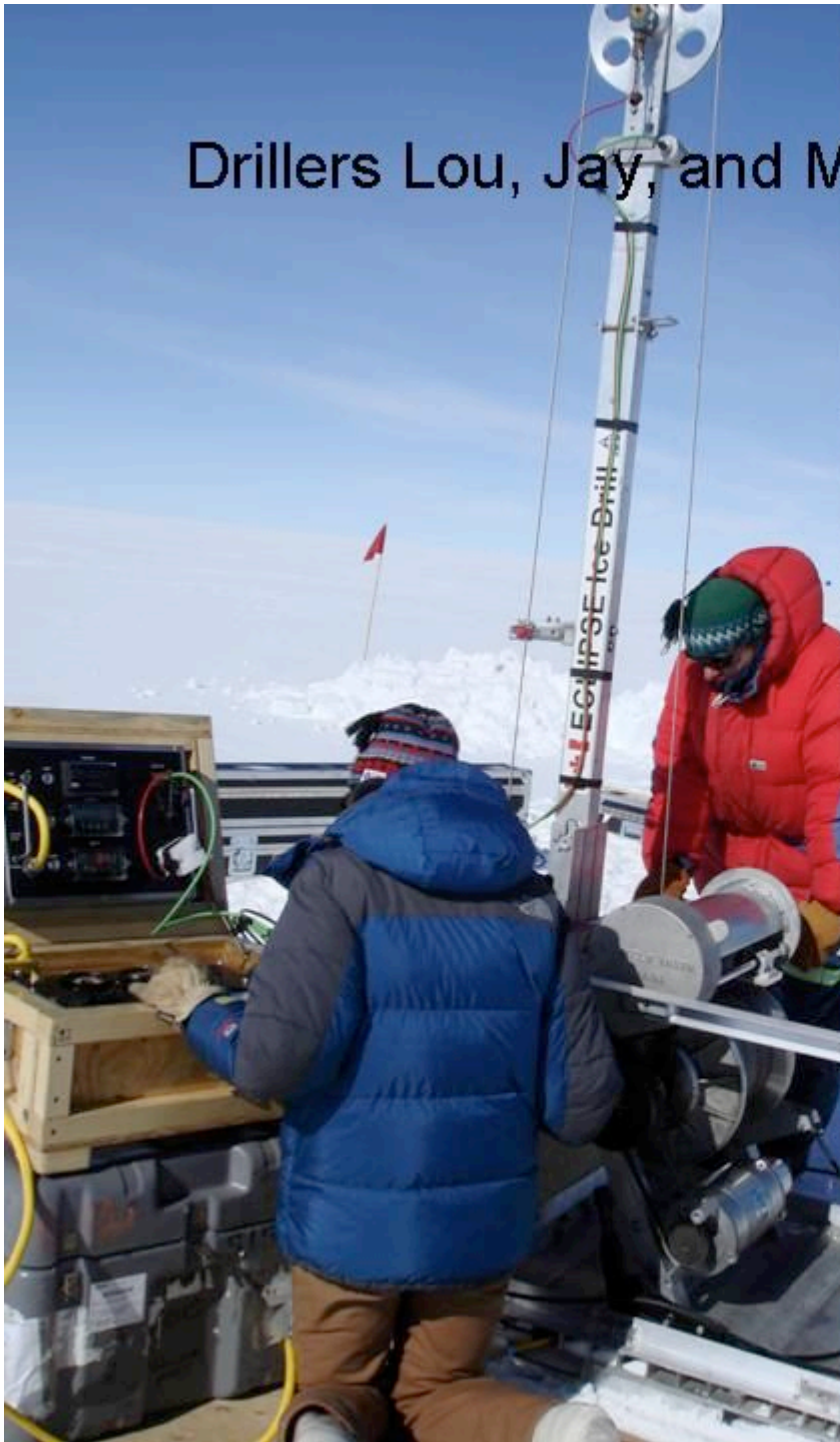
Lead is an atmospheric pollutant. The history of anthropogenic lead pollution can be detected in ice cores.

The evidence from Greenland shows that the clean air laws had a positive effect on reducing air pollution.



McConnell et al., 2002.

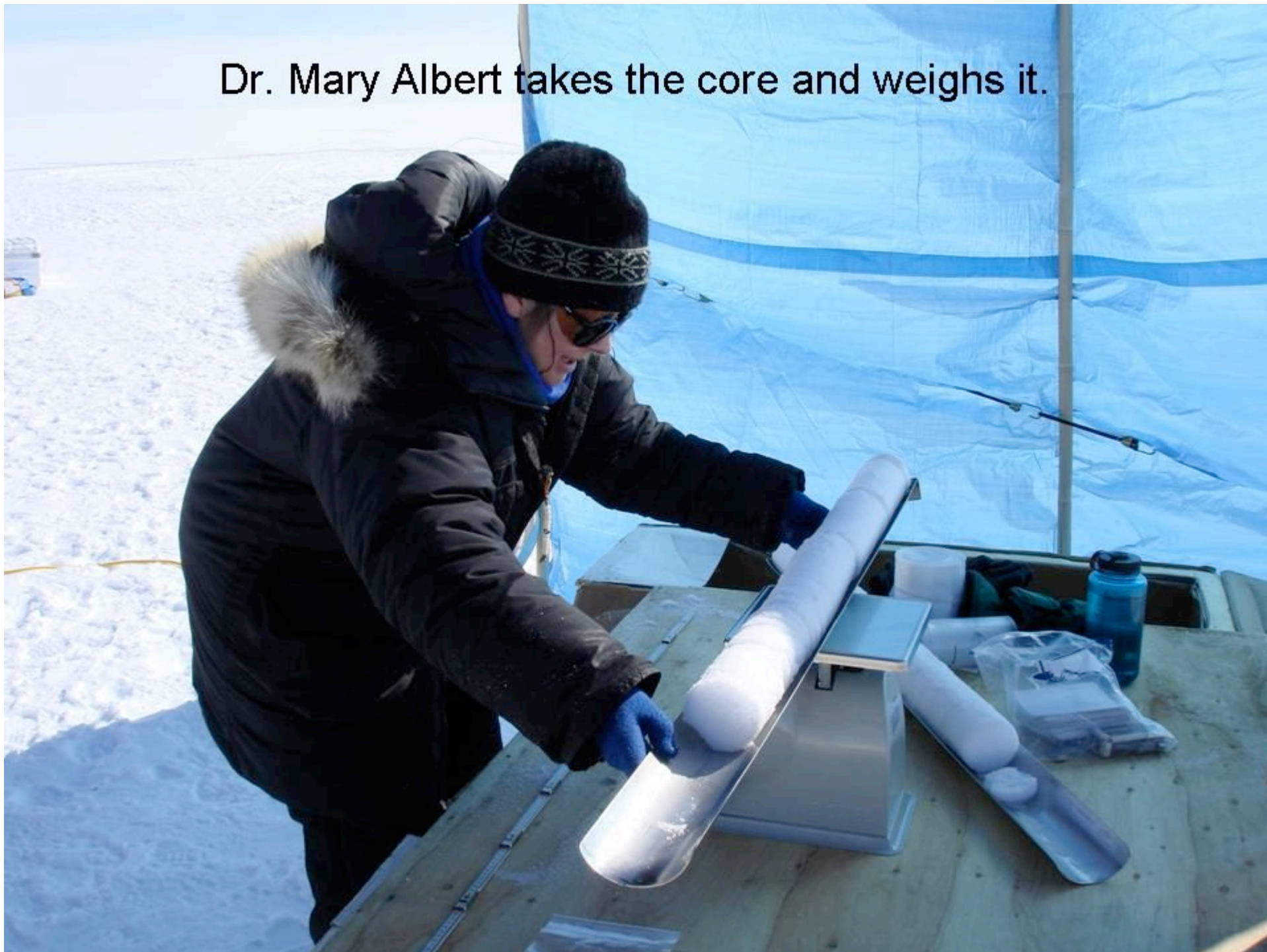
Drillers Lou, Jay, and Mike getting ready to drill a core.



Drillers, Lou, Jay, and Mike, help to push the core out.



Dr. Mary Albert takes the core and weighs it.



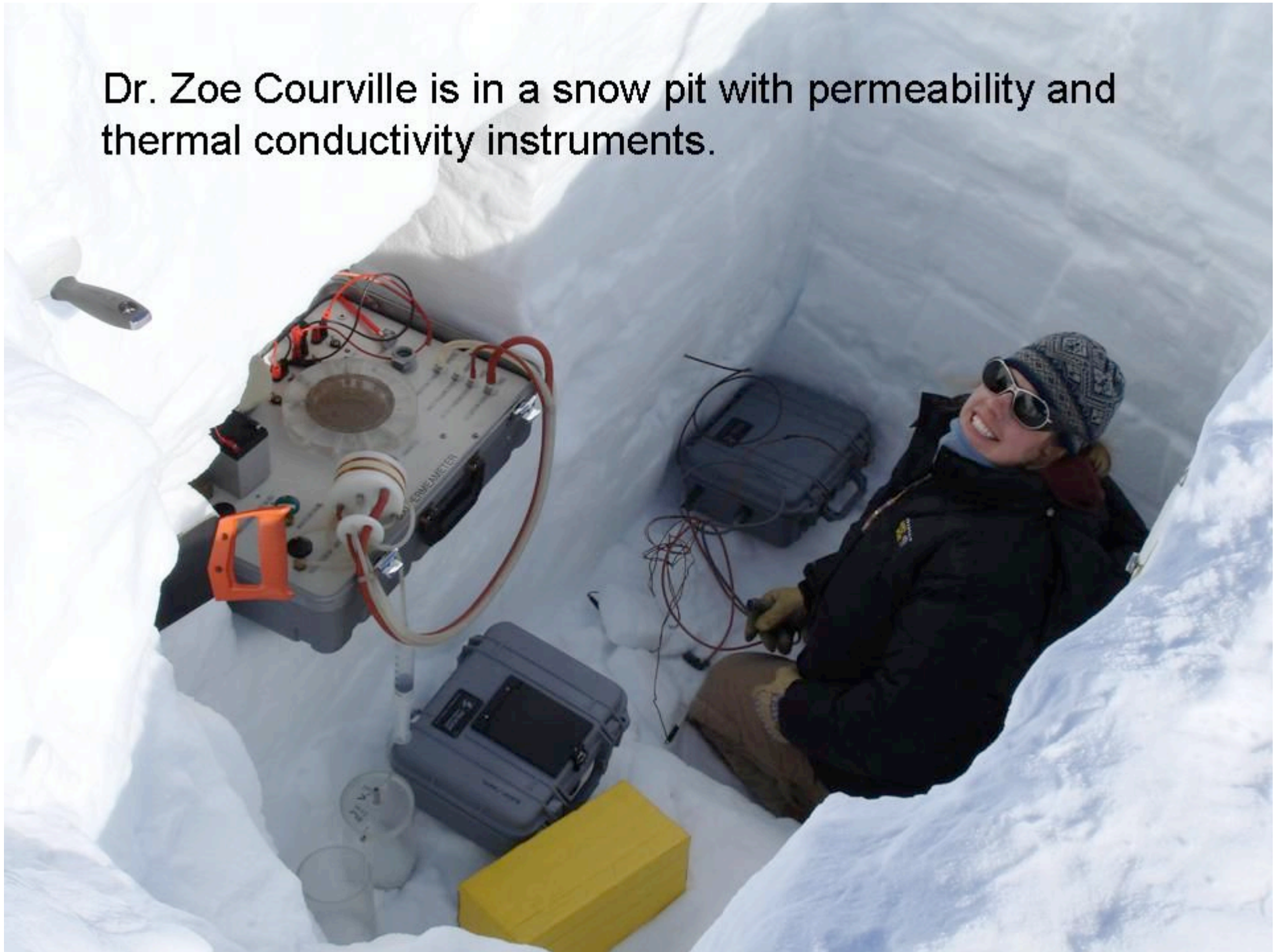
Dr. Mary Albert and Elyse Williamson seal and label the core samples.

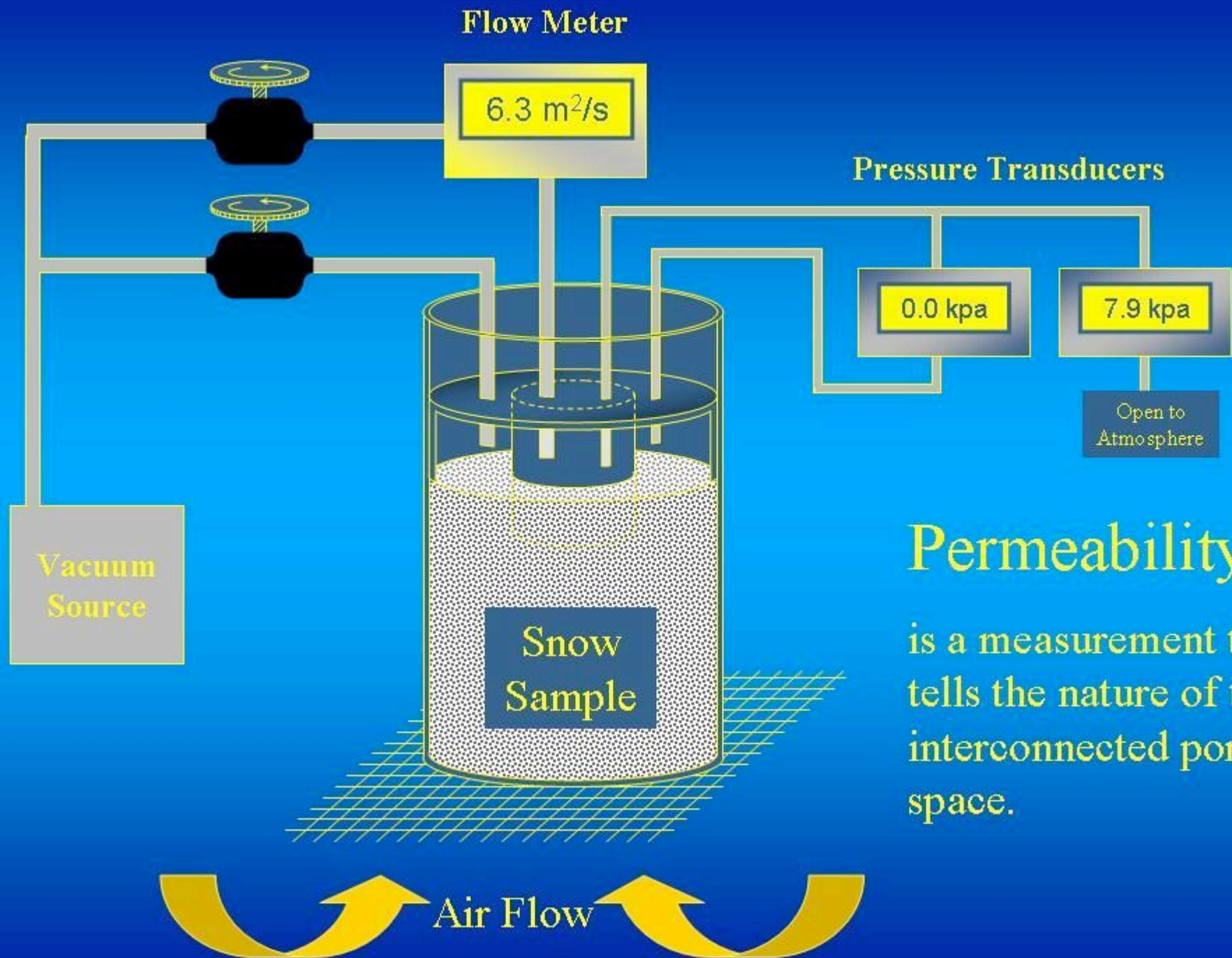


Mary carefully positions core samples for shipping.



Dr. Zoe Courville is in a snow pit with permeability and thermal conductivity instruments.





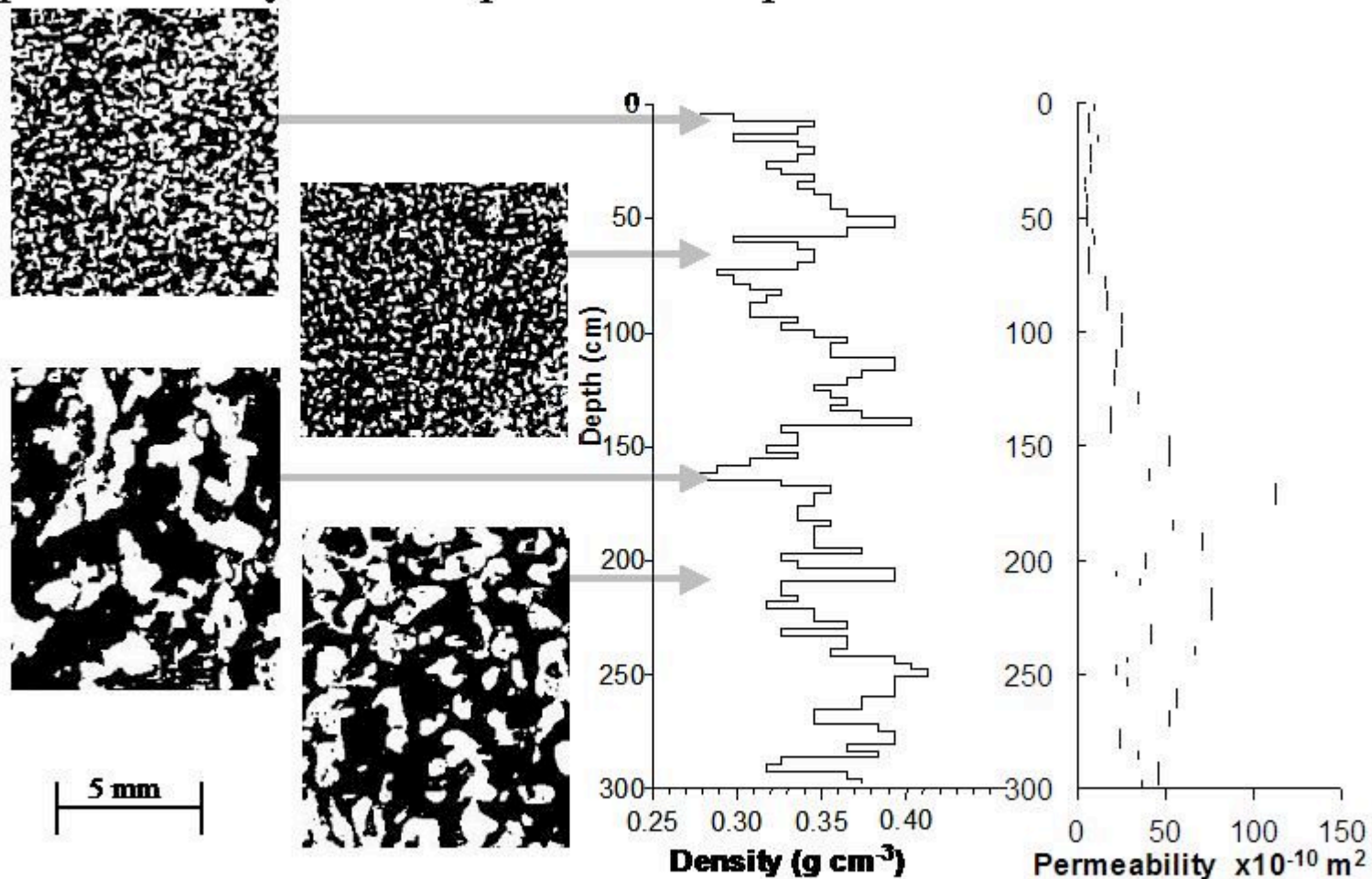
Permeability

is a measurement that tells the nature of the interconnected pore space.

Jo working on density measurements from samples in the snow pit.



Seasonal cycles in physical properties are clearly visible at Summit. Snow crystal growth is accompanied by increasing permeability with depth in the top several meters.



Undisturbed site at Summit

Vas Petrenko testing the firn air sampler's "bladder" to see if it will inflate and not leak before putting it in the bore hole.



After drilling, firm air is sampled. The rubber hose that seals the bore hole for taking air from deeper in the firm is being lowered into the bore hole.




Dr. Jeff Severinghaus testing the firn air sampler



Dr. Jeff Severinghaus examining firn air data.





**Students: Work hard and learn
as much as you can in school...
YOU are the scientists and
engineers of tomorrow!**

Continue to follow and be involved with polar expeditions at the following websites:

<http://www.polartrec.com>

<http://crrel.usace.army.mil/sid/Summit>

<http://traverse.npolar.no>

<http://www.ipy.gov>

[http://www. passporttoknowledge.com/polar-palooza/](http://www.passporttoknowledge.com/polar-palooza/)

Check out and register for upcoming events!



Live from IPY!

www.polarrec.com

*Thank
You!*



*If you have further questions,
please contact us at
info@polartrec.com or call
1-907-474-1600*

