



TEACHERS AND RESEARCHERS
EXPLORING AND COLLABORATING

Welcome to *PolarConnect*

With John Wood and the Carbon
Balance in Warming and Drying Tundra
PolarTREC Expedition

Monday 16 April 2012

12:45pm AKDT

(1:45pm PDT, 2:45pm MDT, 3:45pm CDT, 4:45pm EDT)

Slides will be shown here

Exit the presentation

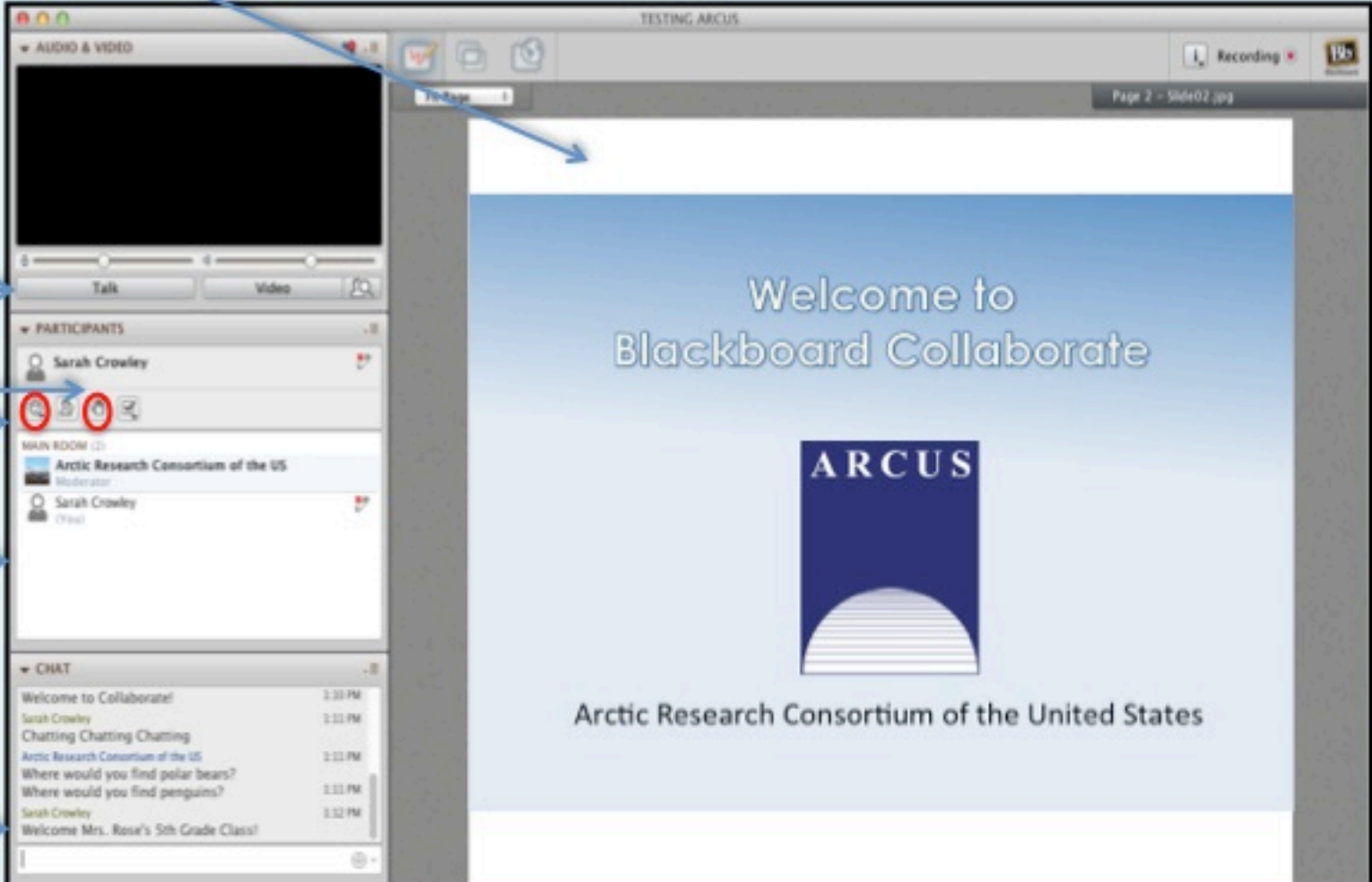
Click to Talk,
Unclick to finish talking

Raise your hand to ask a question

Share with emoticons

List of all participants

Chat with one person or the entire group



The screenshot shows the Blackboard Collaborate interface. The main window displays a presentation slide titled "Welcome to Blackboard Collaborate" with the ARCUS logo and the text "Arctic Research Consortium of the United States". The slide is labeled "Page 2 - Slide02.jpg". The control panel on the left includes an "AUDIO & VIDEO" section with a "Talk" button and a "Video" button. Below this is a "PARTICIPANTS" list showing "Sarah Crowley" with a hand icon. The "MAIN ROOM" section shows "Arctic Research Consortium of the US" as the moderator and "Sarah Crowley" as a participant. The "CHAT" section shows a list of messages, including "Welcome to Collaborate!", "Sarah Crowley: Chatting Chatting", and "Arctic Research Consortium of the US: Where would you find polar bears? Where would you find penguins?".

Please Note:

- Participants using the telephone can mute/unmute by **pressing *6** on the phone.
- Today's event will be recorded and archived.



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Questions

During the Presentation:

- Type your question in the text chat box

At the End of the Presentation:

- Raise your hand with the “hand button”.
- PolarTREC staff will call on you.
- Speak loud and clear and directly into the phone to ask your question.

Click on the Talk button to speak.

Unclick when you are done.



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Participant Introductions

When called, please state your:

- ✓ Name
- ✓ School / Institution
- ✓ The number of students and adults participating with you in the same location



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What is PolarTREC?

PolarTREC is a professional development experience in which K-12 teachers are paired with researchers for 2-6 week research experiences in the polar regions.

From 2010-2013, nearly 50 teachers from around the United States will join scientists in the Arctic and Antarctica to learn about science, the polar regions, and to share what they have learned with their students and communities.

A photograph of a snowy tundra landscape. A path of tracks, likely from a vehicle or sled, leads from the foreground into the distance, curving slightly to the right. The snow is bright white, and there are some small, dark, leafless shrubs scattered across the terrain. The overall scene is a vast, open, and cold environment.

Carbon Balance In Warming and Drying Tundra

Winter Edition

PolarConnect Event
April 16, 2012

Dr. Susan Natali
University of Florida

John Wood
Talbert Middle School



Elizabeth Webb

Field Manager
Graduate Student





Home sweet home





Why did we choose this site for CiPEHR?

(Carbon in Permafrost Experimental Heating Research)

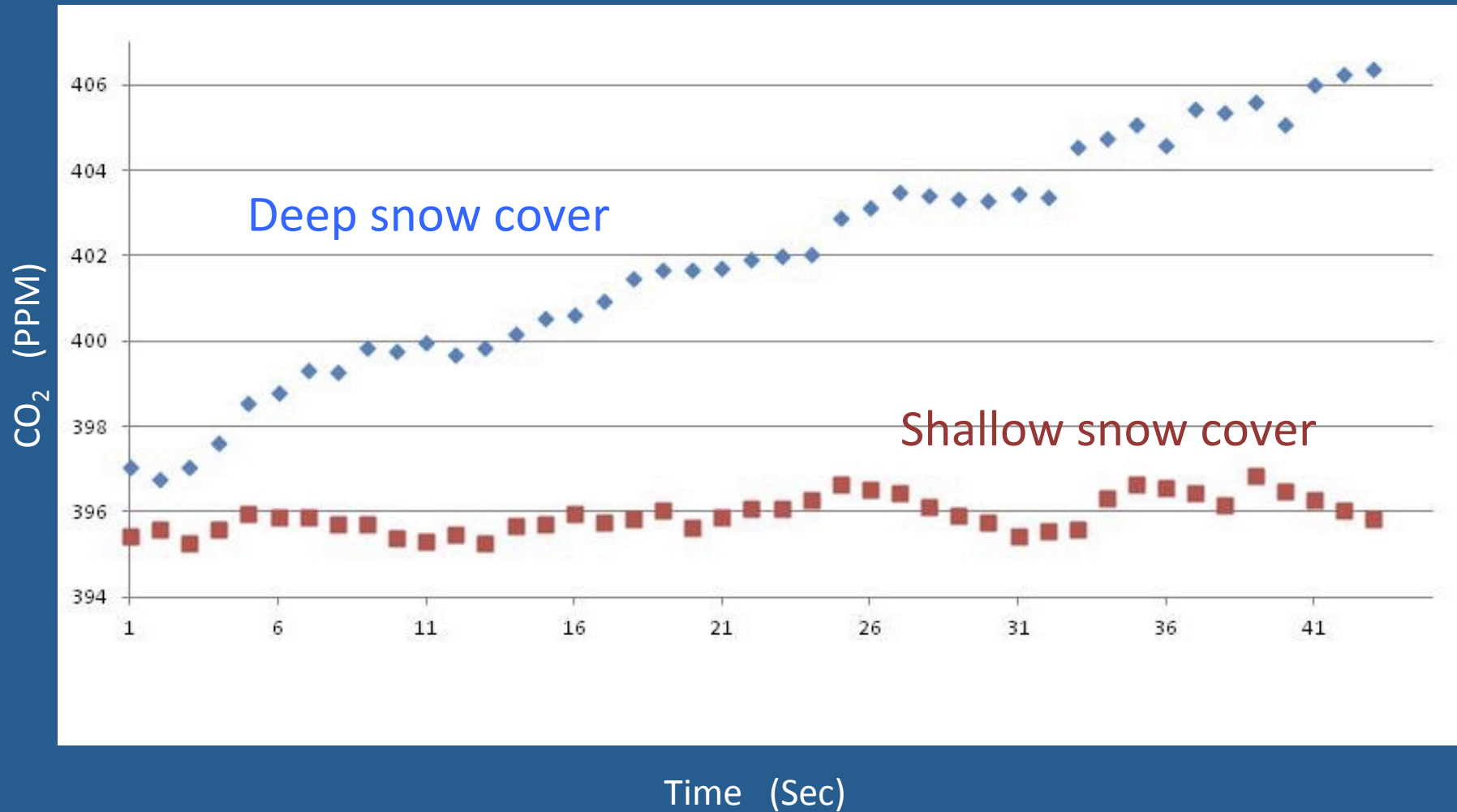
- ✓ Greatest amount of warming
 - ✓ 2-3° C since 1950
- ✓ Potential for Positive Feedback
- ✓ In the discontinuous permafrost
- ✓ On the edge of the change

Winter Smiley Plot

natural "control" site



Smiley CO₂



Winter Warming Experiment Snow Fence





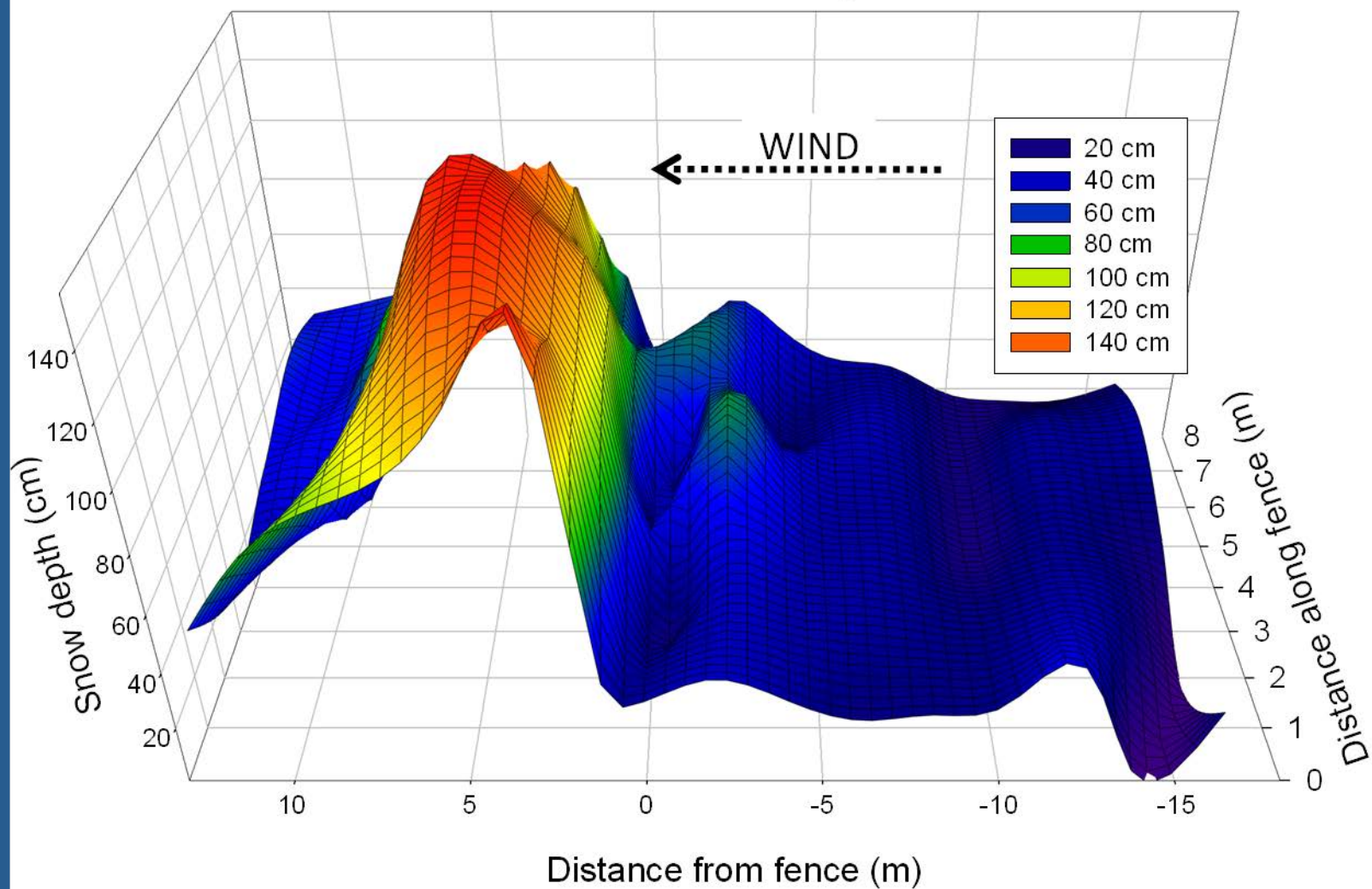
Winter snow cover
2011



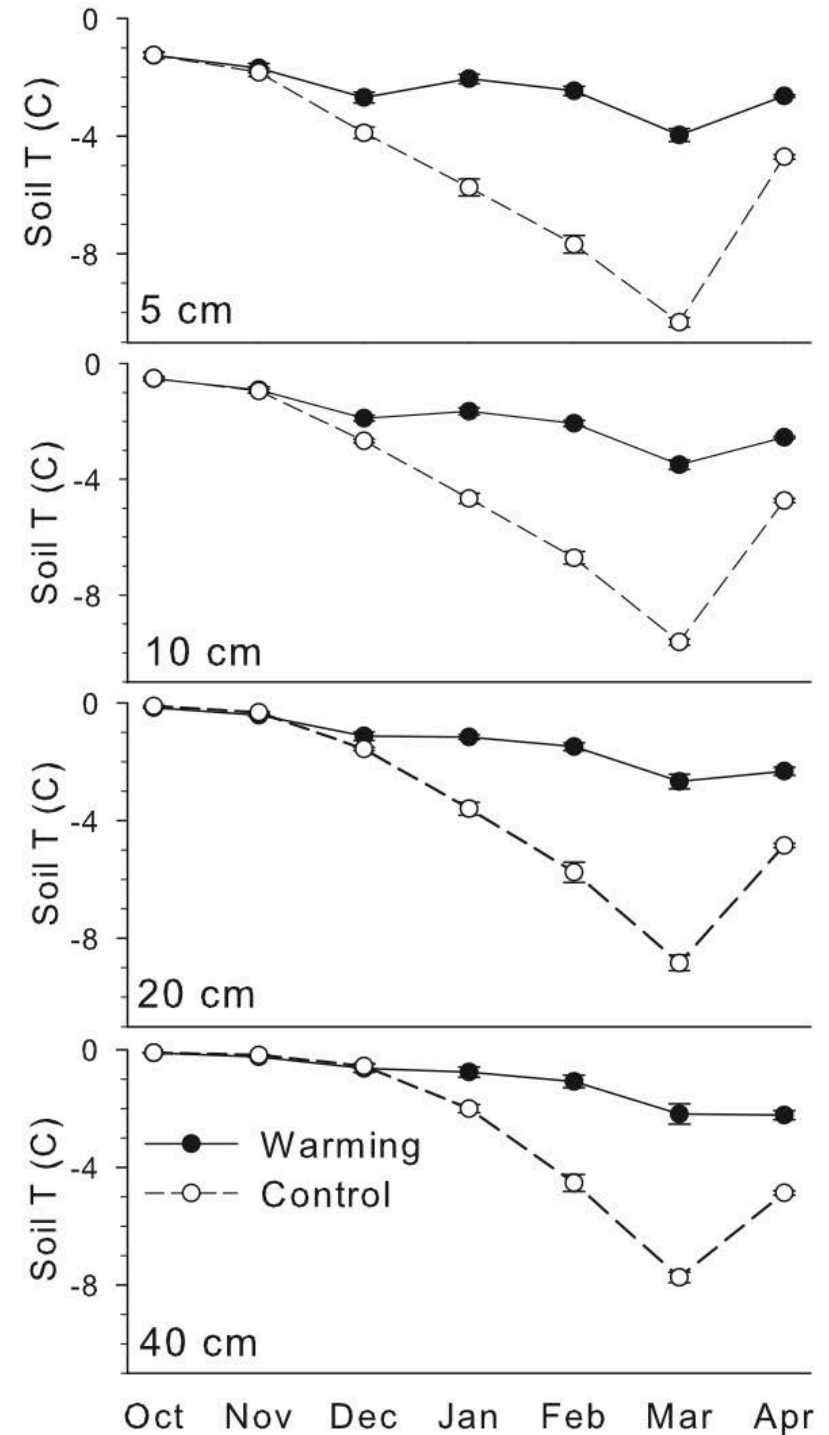
Winter snow cover
2012

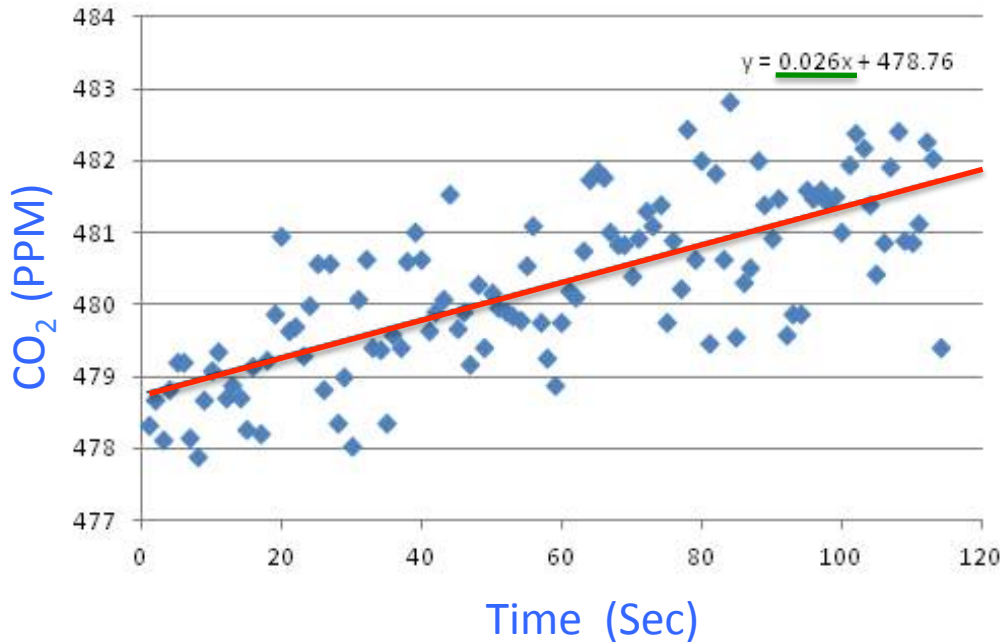


CiPEHR 2011 Snow cover: Site A, snow fence 2



The warming side of the fence
(with more snow!)
had higher (warmer) ground
temperatures at all recorded
depths



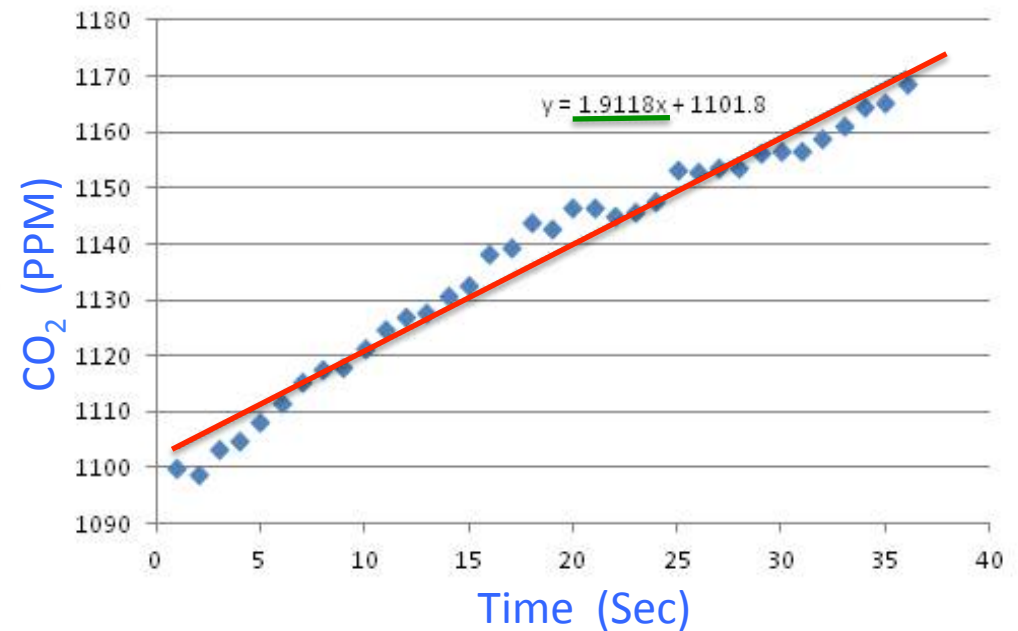


CONTROL

Changes in CO₂ levels under the control side of the fence. (normal snow cover)

WARMING

Changes in CO₂ levels under the experimental side of the fence. (increased snow cover)



In the winter:



How much CO₂ is lost during the winter?

In the summer:



Is CO₂ uptake by plants cancelled out by CO₂ loss due to decomposition?



What else
have we
been doing?

Turning boiling water into snow at -18 F

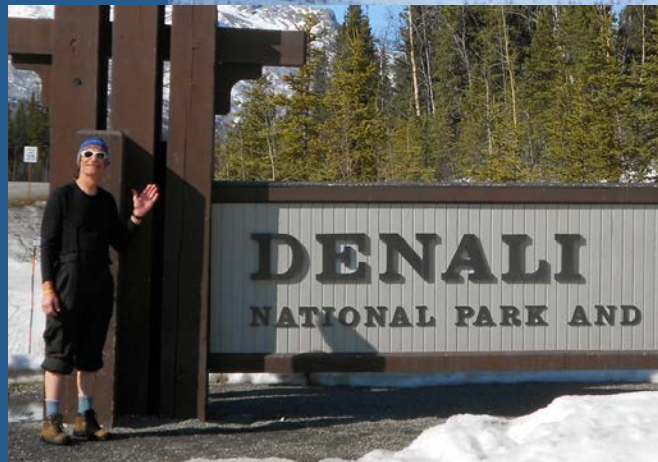




Freezing
bubbles !



Denali National Park





**Thank you for
supporting our
expedition!**



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Teachers: Join PolarTREC!

www.polartrec.com/about/join

Every teacher can participate in different ways:

- **Following Expeditions**
- **Participate in PolarConnect Events**
- **Join the Polar Education Email List**
- **Take Online Professional Development Courses**
- **Become a PolarTREC Teacher!**



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Upcoming Events

Watch for and register for upcoming events at www.polartrac.com!

Monday, 23 April 2012

PolarTREC Teacher Tim Spuck

and the NASA IceBridge Team in Greenland

9:30am AKDT [10:30am PDT, 11:30am MDT, 12:30pm CDT, 1:30pm EDT]



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Thank You!

An archive of the event will be available shortly.
<http://www.polar-trec.com/polar-connect/archive>

