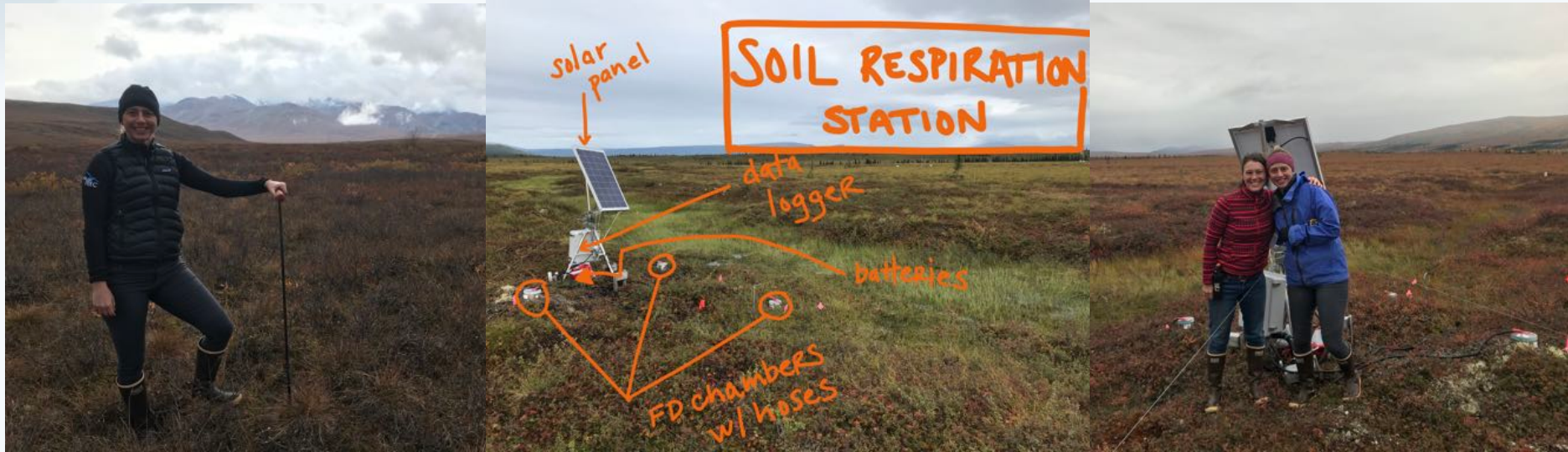


Welcome to *PolarConnect*



Winter Respiration in the Arctic

With PolarTREC Teacher Kim Young

& Team Researchers Dr. Jennifer Watts and Christina Minions

April 8th, 2019

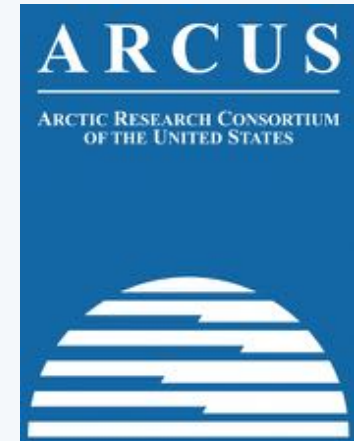
Participant Introductions

**In the Chat box, please introduce yourself
by typing in your:**

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

What is PolarTREC?

- Since 2004, the Arctic Research Consortium of the United States (ARCUS), a non-profit organization, has been administering the PolarTREC Program.
- PolarTREC is professional development for K-12 teachers. They are paired with researchers for 2-6 week research experiences in the polar regions.
- Over 150 teachers from around the United States have joined 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.



25 Years of Connecting Arctic Research
www.arcus.org

Questions

During the Presentation:

- Type your question in the text chat box

At the End of the Presentation, two options:

1. Type your question in the text chat box, or
 2. Raise your hand with the “hand button”.
- PolarTREC staff will call on you and activate your microphone.
 - Speak loud and clear, directly into the computer microphone or the phone to ask your question.

Who? - Meet the Team



Kim Young
Grade 9 World History
Weston, Massachusetts
PolarTREC Teacher



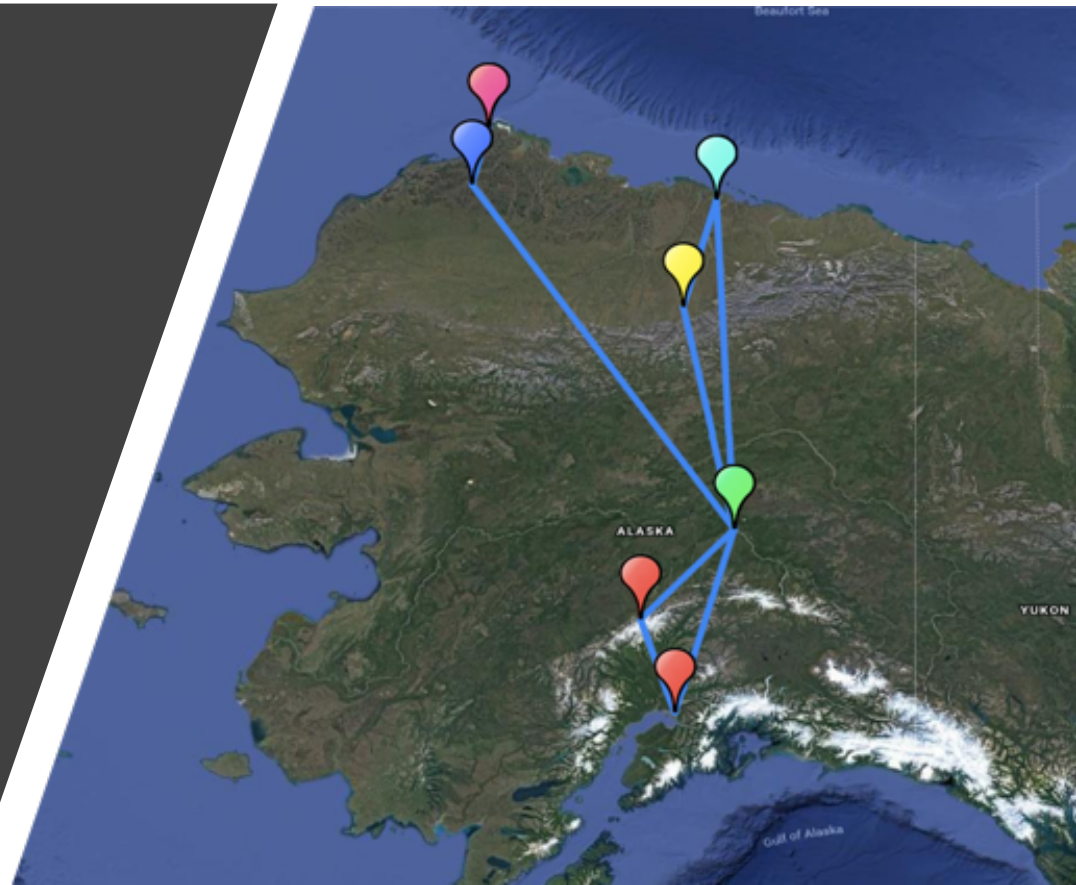
Dr. Jennifer Watts
Woods Hole Research
Center
Bozeman, Montana
PolarTREC Researcher



Christina Minions
Woods Hole Research
Center
Falmouth, Massachusetts
PolarTREC Researcher



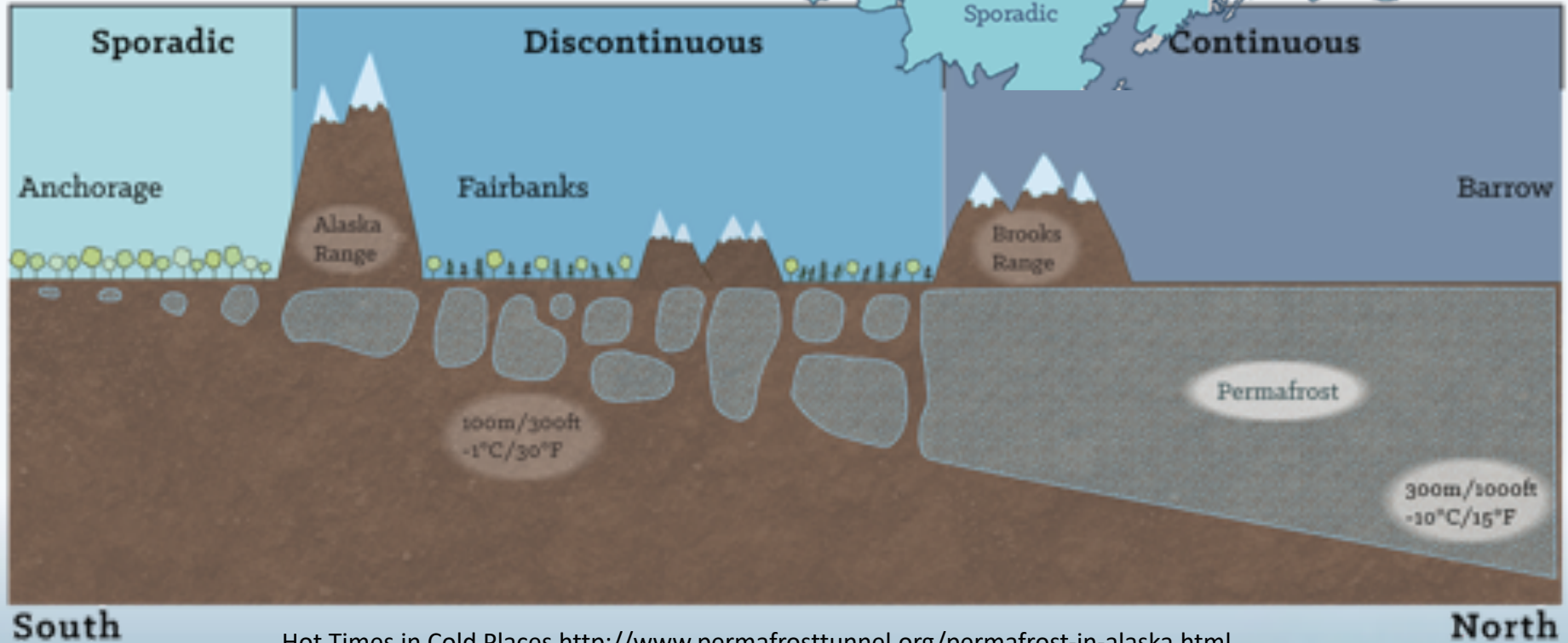
Where? - Expedition Locations





What? – Data Collection

What? – Permafrost





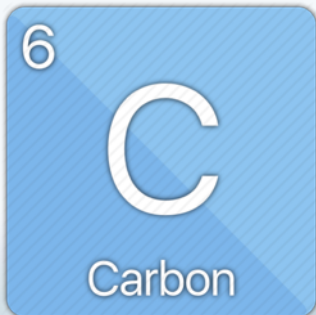
Quiz: What is the most dangerous thing permafrost holds?



a. animal bones



c. viruses



b. carbon



d. water

<https://siberiantimes.com/ecology/casestudy/features/f0065-global-warming-could-happen-quicker-in-russias-coldest-region/>



H2O

Zombie Anthrax

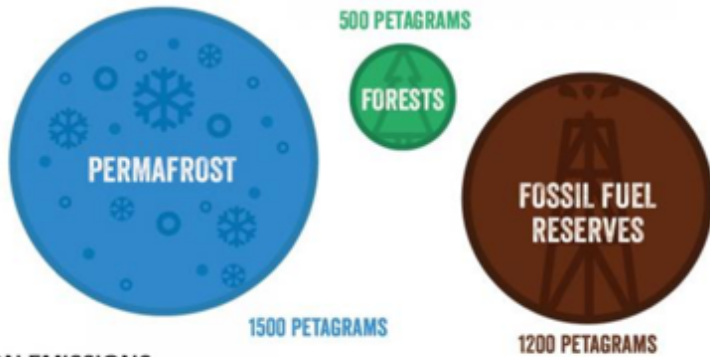


<https://www.21stcentech.com/diseases-trapped-permafrost-climate-change-problem/>

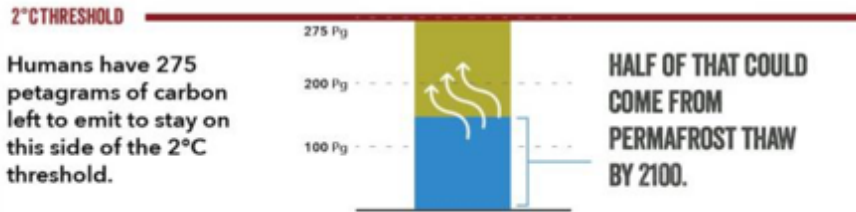
PERMAFROST & GLOBAL CLIMATE CHANGE



CARBON STORAGE ON LAND

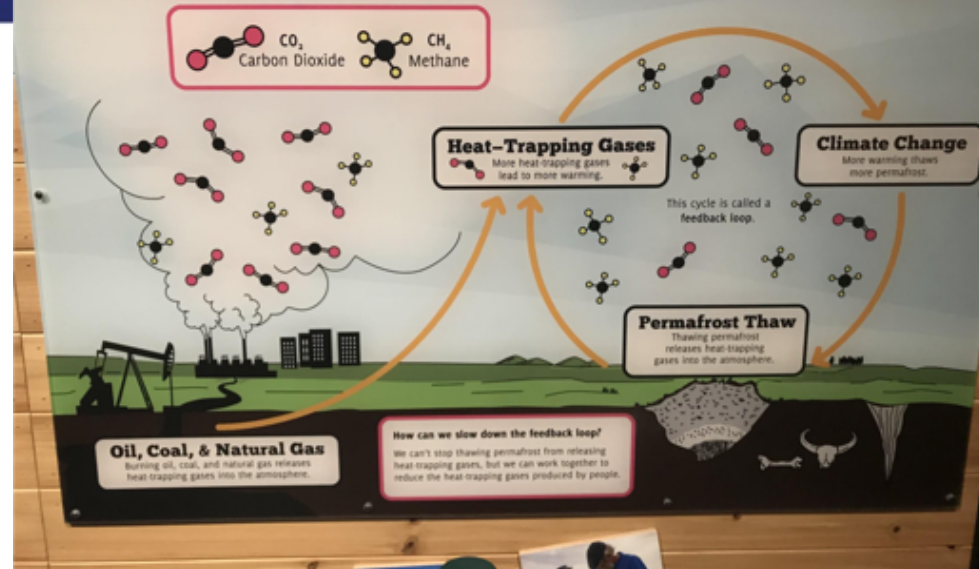


CARBON EMISSIONS



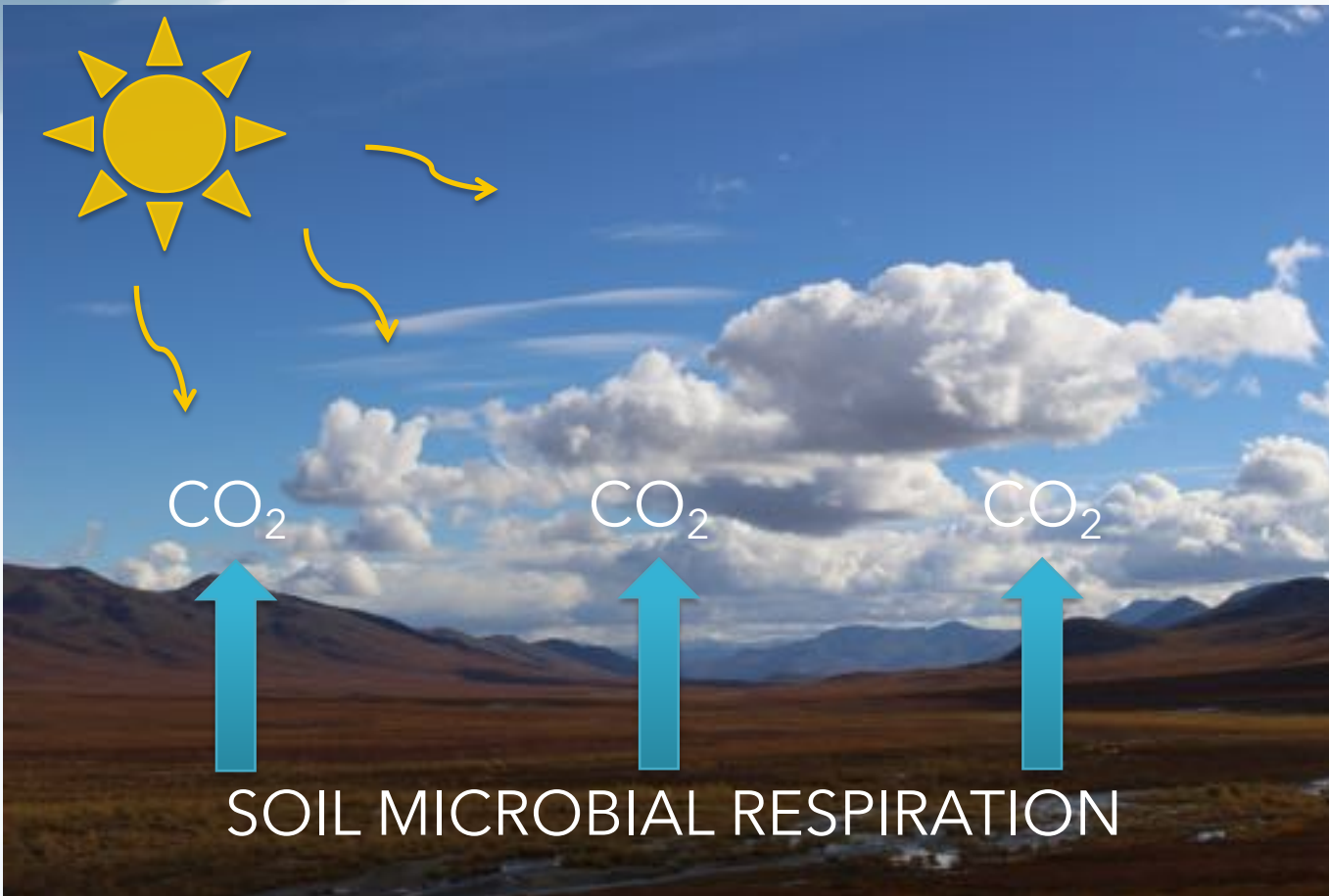
Carbon

Thawing Permafrost Contributes to Climate Change



OSMI, Digging Under the Arctic

Soil Carbon and CO₂ Flux!



Soil Temperature

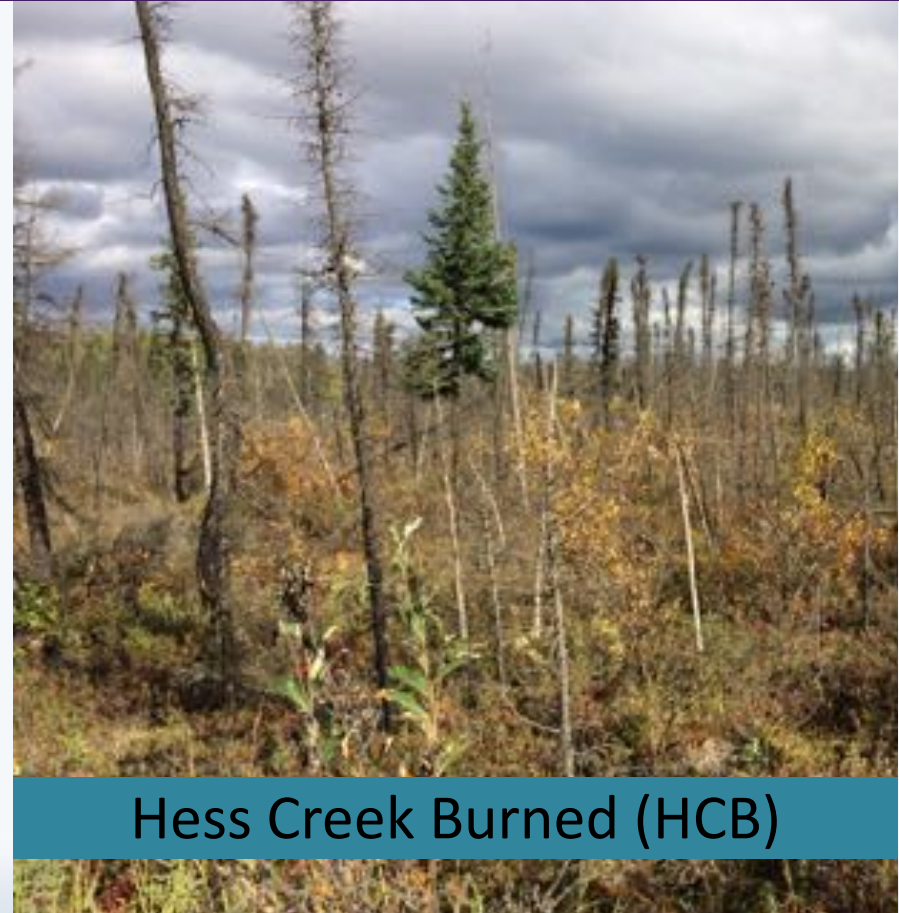


Soil Moisture

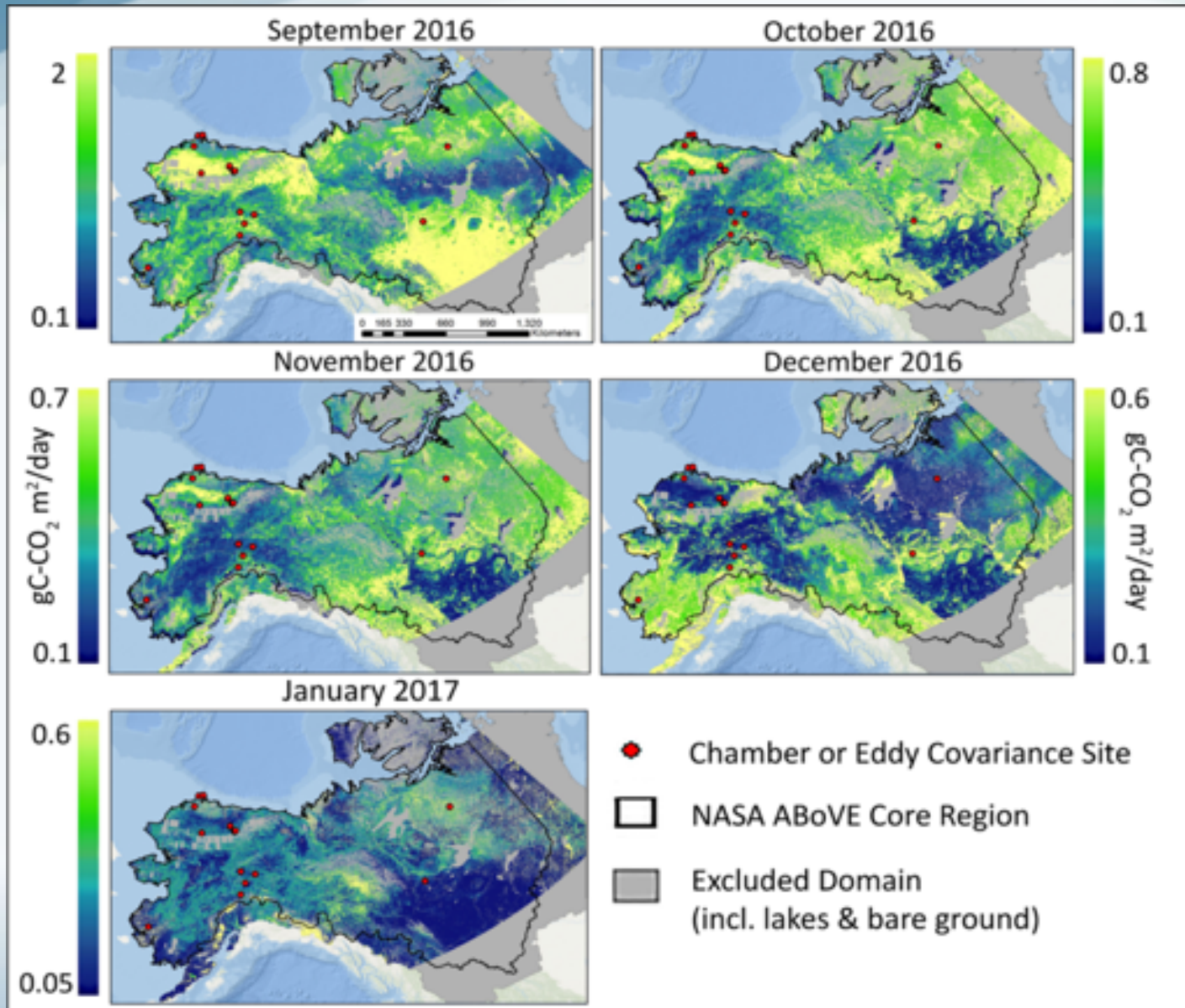
Impact of Fire Disturbance



Hess Creek Unburned (HCU)

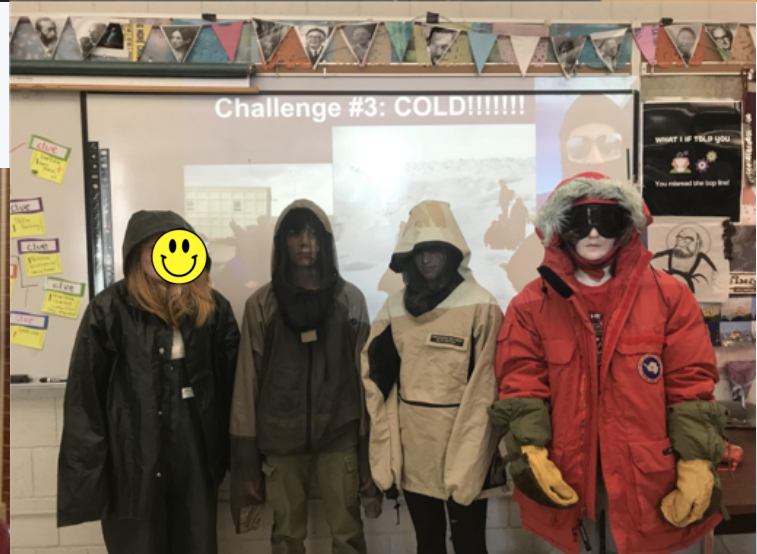
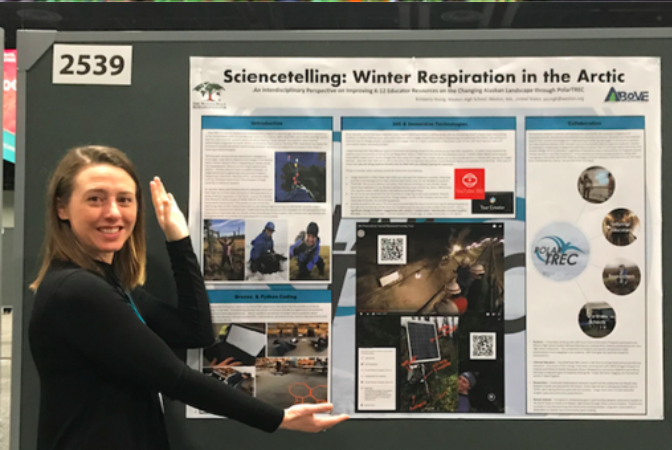


Hess Creek Burned (HCB)





How? – Outreach



Join PolarTREC!

www.polartrac.com/about/join

Everyone can participate in different ways:

- **Follow Expeditions**
- **Participate in PolarConnect Events**
- **Join the Polar Education Email List**
- **Check out the great resources**
- **Become a PolarTREC Teacher or Researcher**
- **Become a member of ARCUS**

Thank You!

An archive of the event will be available shortly.

<http://www.polar-trec.com/polar-connect/archive>



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www.arcus.org