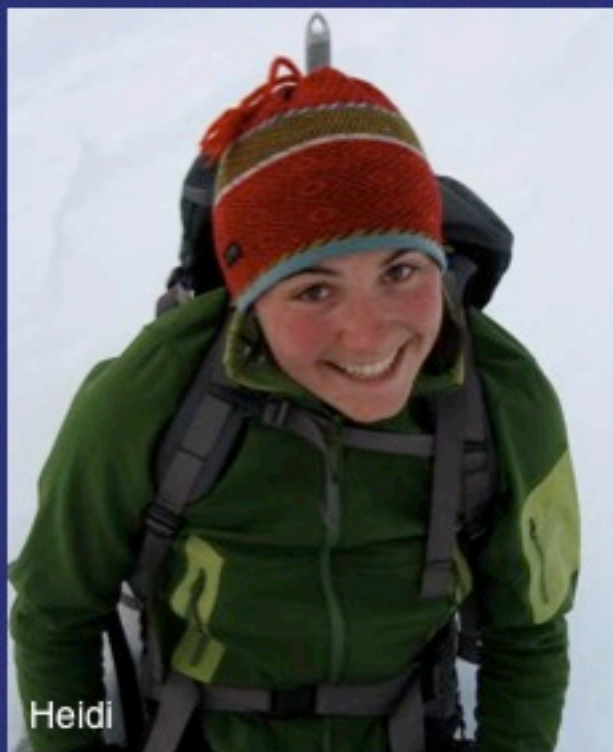




NASA

# Live from Antarctica!

With PolarTREC Researcher Heidi Roop



Heidi



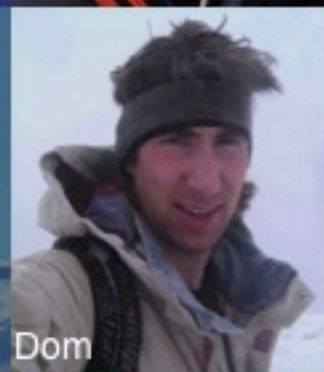
Giff



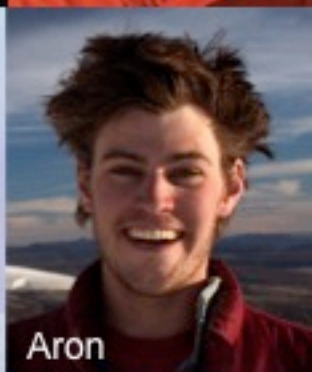
John



Don



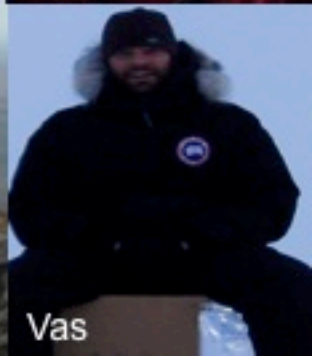
Dom



Aron



Tommy



Vas

and the  
WAIS Divide Ice Core Team

# Life on an Ice Sheet at the bottom of the world





# Where are we in Antarctica?

## West Antarctic Ice Sheet (WAIS) Divide

Latitude:  $79^{\circ} 28' S$

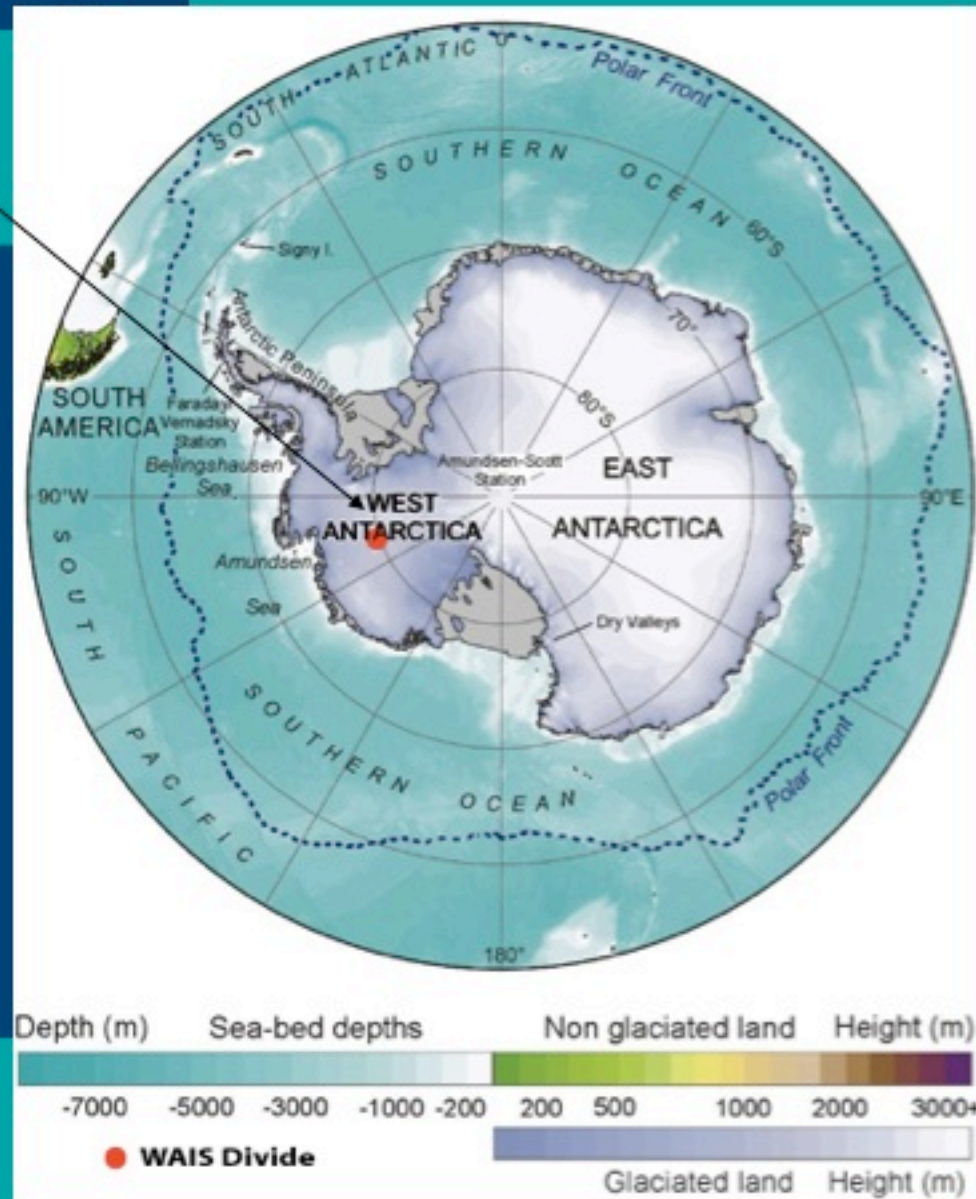
Longitude:  $112^{\circ} 5' W$

Elevation: 6,500 ft

Ice sheet thickness: 3,465 m

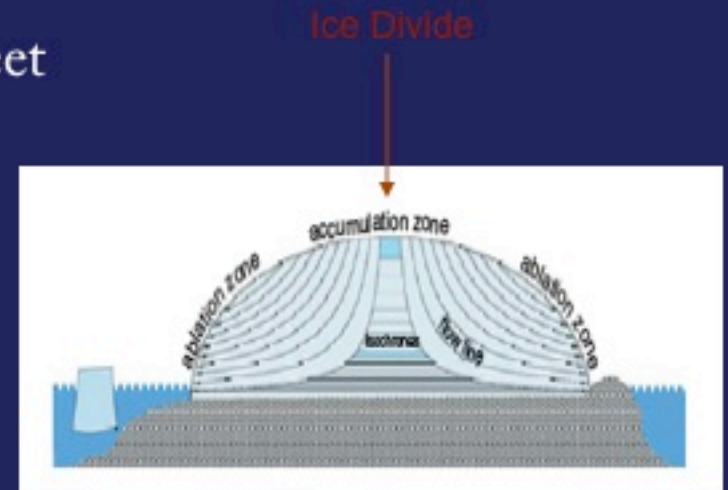
Annual Ice accumulation: 22 cm/yr

Average surface temp:  $-31.1^{\circ}C$



# Primary WAIS Divide Ice Core Project Goals

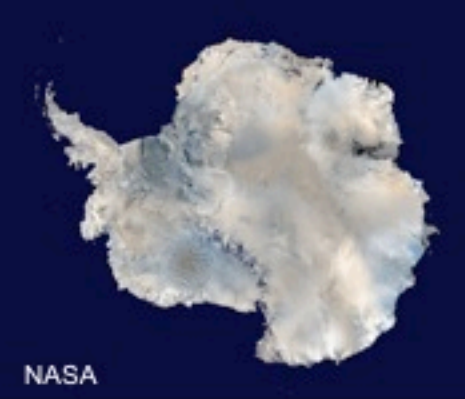
- Recover a 2-mile-long ice core
- Develop a record of the Earth's climate over the last 100,000 years, with annual resolution back 40,000 years
- Compare the WAIS ice core climate record to Greenland ice cores records for a better picture of global climate change
- Study the stability of West Antarctic Ice Sheet



Source: Brook, 2007



# The Journey South



- Over 10,000 miles from Seattle to WAIS Divide
  - Our camp is supported by the Air National Guard
    - We have a skiway for ski-equipped planes (LC-130) to land at WAIS Divide

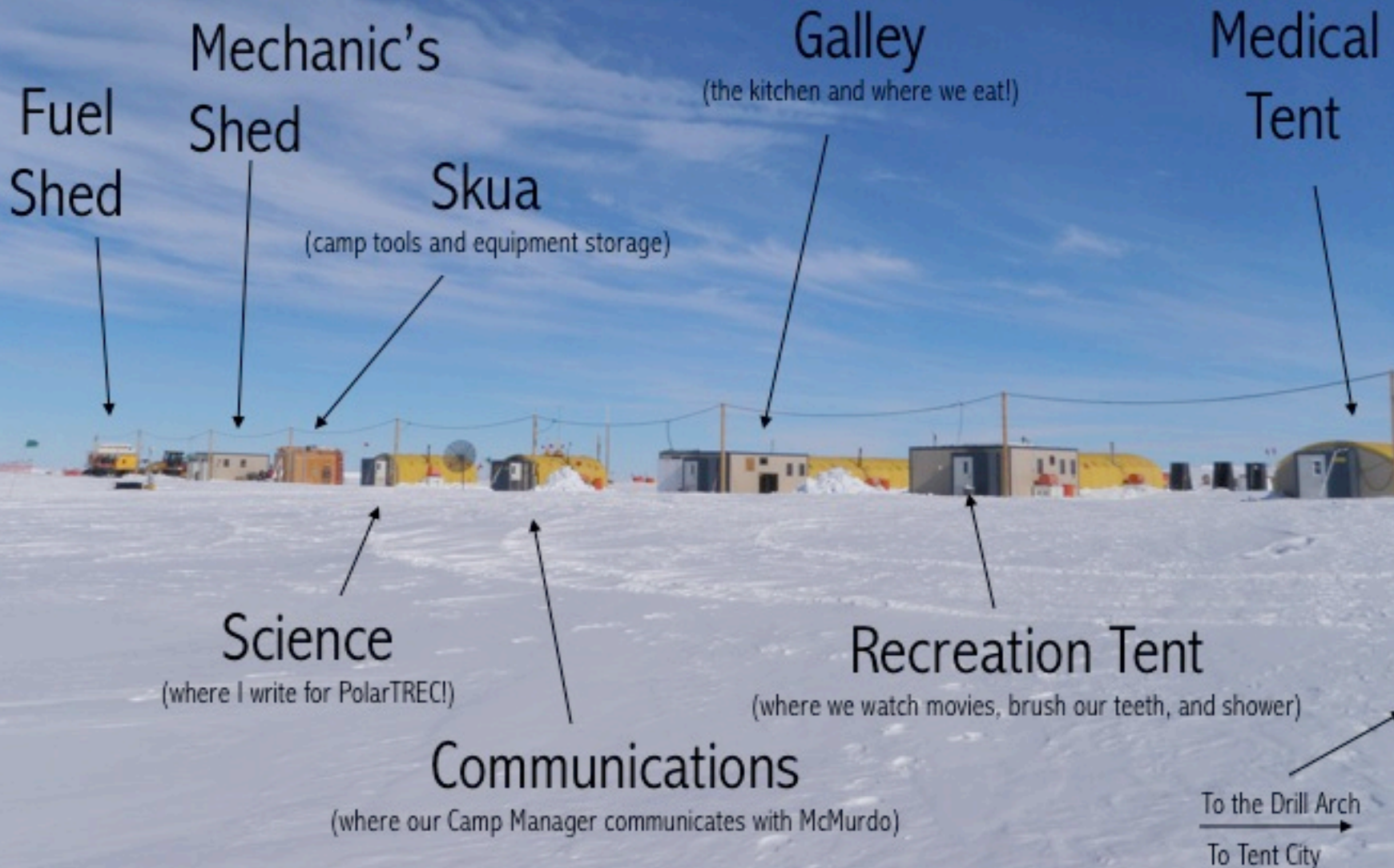
# Camp Statistics!

- Length of season: November- early February
- Current camp population: 38
- Number of AMAZING cooks: 3
- Current Drill Depth: 2,750 meters
- Average number of calories consumed daily: 3,500
- Working hours: 24/day, 6 days a week
- Most common mode of transportation: snow machine or foot
- Number of outhouses: 7





# WAIS Divide Camp



# Home Sweet Home

Lines hold the tent in place  
and keep the yellow fly tight.

Marker flag for my tent site. Each site  
is documented so camp staff can  
locate you if there is an emergency.



Bamboo stakes hold  
the fly in place.

Blue foam is placed under  
the tent for warmth.

My front door. When it is windy, a  
drift will form around my door.

Inside a tent

Heidi's Tent



# Rec Tent



# Keeping clean!



Shower- 1x week  
1x 50 gallon barrel of snow



Laundry- 1x every 2 weeks  
3x 50 gallon barrel of snow



Snow melter and water tank



# Outhouses aka the Black Box

(I know you all wanted to ask!)



**An  
Inside  
View**





# Making Water at WAIS Divide



Each day, we have to shovel over 20 large buckets of clean snow in order to make enough cooking, washing, and drinking water for the camp.



The clean snow is dumped into one of the snow melters at camp.

Heat element



...Sometimes we have a little too much fun

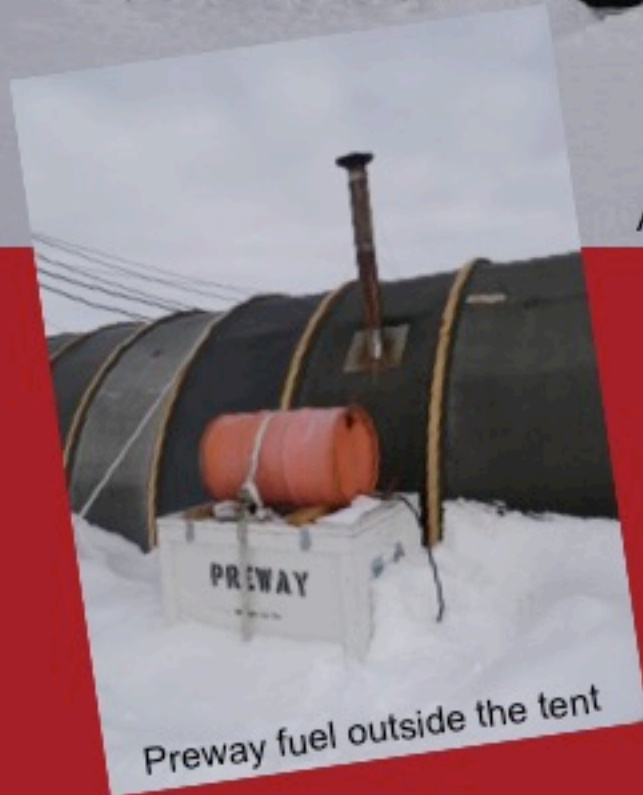




# Heat!



A heated Jamesway



Preway fuel outside the tent



Preway stove inside a tent

- There are several heated structures at WAIS
- Preway stoves produce the heat
- Water pots are added to increase moisture
- We have 10 heated structures in camp

# Power!



Generator buildings

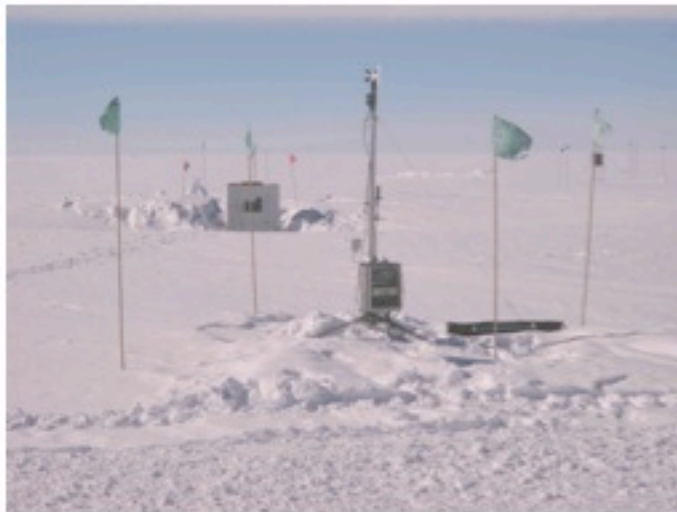
- ✓ 2 generators for Camp and the Arch
- ✓ 1 generator is always back-up
- ✓ Our mechanic Shawn keeps them running smoothly



Generators



# Weather!



- Weather is monitored by Stephanie, our camp meteorologist.



**Condition 3:** Clear, low winds

**Condition 2:** Decreased visibility, med. winds

**Condition 1:** No visibility, high winds

- Highest temperature this season: +23 °F
- Lowest temperature: -50 °F

# Modes of Transport: planes, snow machines, Tuckers, and more!



An LC-130 bringing food and gear



Snow machines for travel around camp



A tucker grooming after a snow storm



Heavy equipment





Fuel  
for  
the  
body!

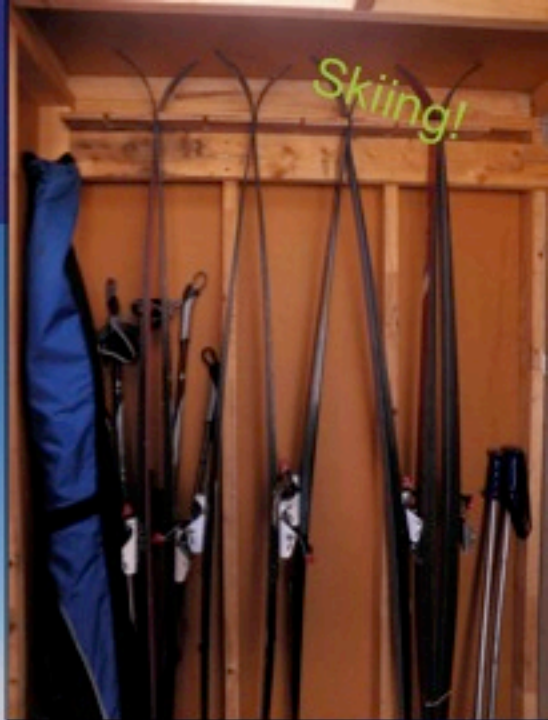


Golf!



# Our wild, white backyard

Skiing!



Lounging!



Snow!





# Questions?



Yes, Santa did find us!