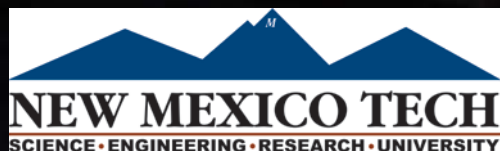


# Challenges In Deploying Temporary Polar Seismic Equipment

Paul Carpenter

IRIS / PASSCAL

6/11/2013

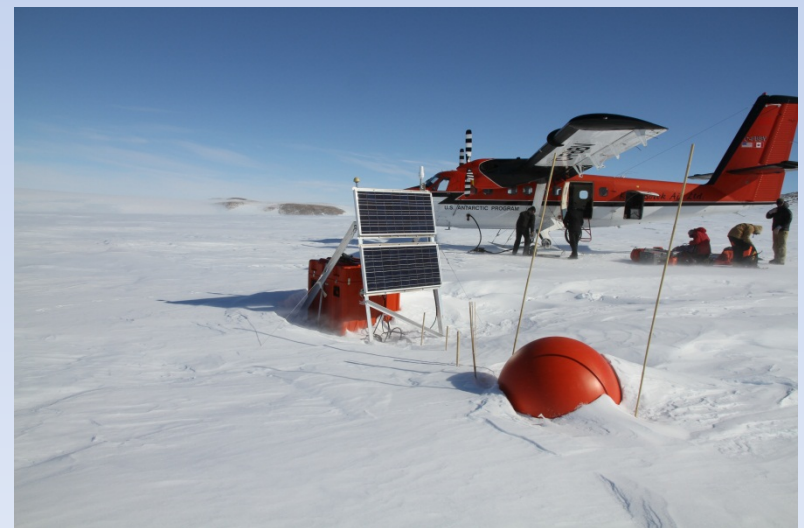


# Outline

- Current Systems & Design Philosophy
- Schedule
- Logistics
- Challenges from Field Conditions
- Design philosophy

# Current Systems & Design Philosophy

- Current systems well built and designed
- High data return
- Further refinement
  - Easy to install or service

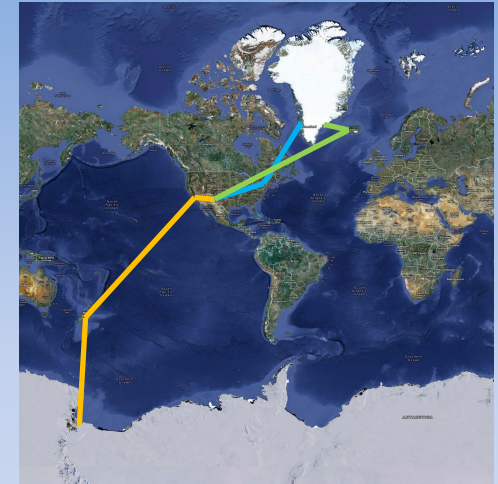


# Schedule



# Logistics to the Ice

- Long shipping lead times
- Documentation & paperwork
- Hold ups
  - Weather
  - Environmental
  - Mechanical



# Logistics on the Ice

- Staging Area
  - Paperwork & coordination
  - Equipment handling
  - Storage
- Equipment Movement
- Pre Site visit prep
- Weather has a large role



# Field life

- Big or small camp
- Several to no support staff
- Subjected to weather
- Camping life style
- Diet changes
- Removed from society
- 24 Hour Sunlight



# Weather

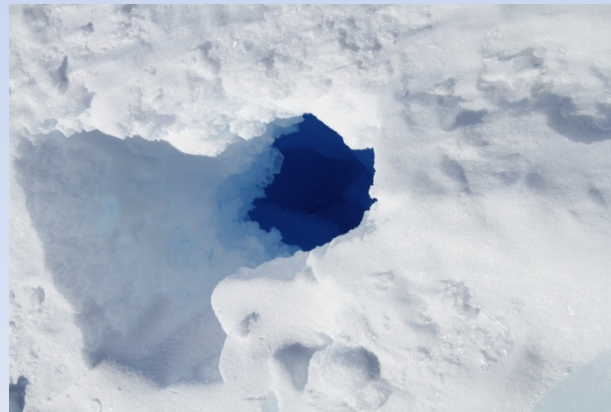
- Dynamic weather
  - Low temperatures
  - Wind
  - Dry or Wet
  - Warm!?
- Clothing management
- Remember to review body condition





# Climate & Terrain

- Snow & Ice
  - Crevasse
  - Blue Ice
  - Animals
  - Accumulation
- Altitude
  - 0' to >10,000'



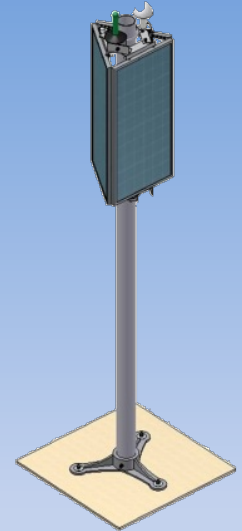
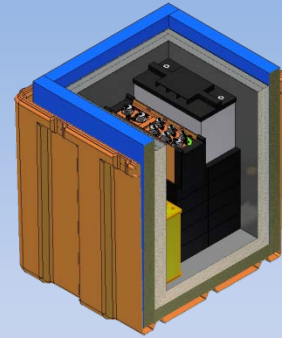
# Field Crew at Site

- Physical state
  - Long hours
  - Fatigue, exhaustion
- Mental state
  - Stress
  - Distracted



# Design Philosophy

- Easy to install or service
  - Pre-assembled
  - Ready and running
  - Minimal construction needed
  - Modular
  - Quick swap components
  - Easy to read and understand lights or screens



# Design Philosophy cont.

- One Opportunity to Install or Service
- Focus
  - Sensor placement
  - Data recording

