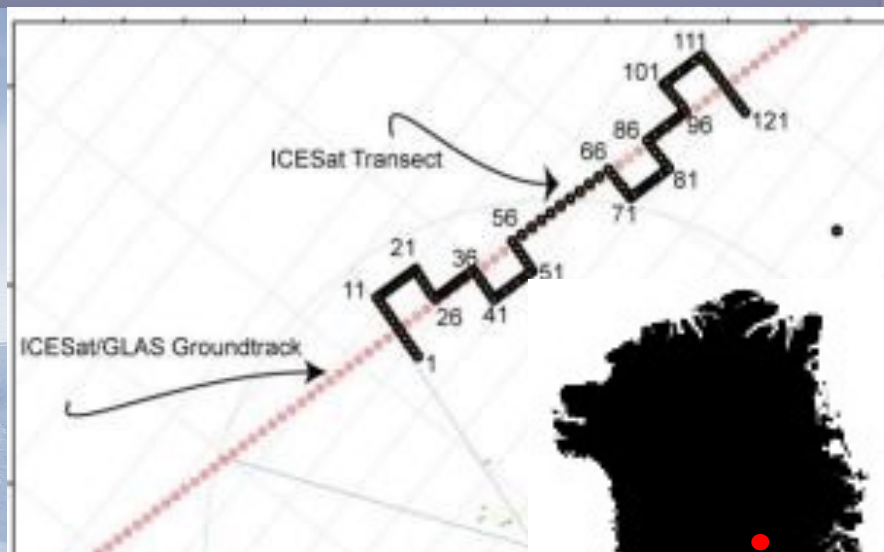




# National Science Foundation Summit Station, Greenland



Dr. Jennifer Mercer  
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Chair, Forum of Arctic Research Operators

May 27, 2021

*\*\*The presenter thanks the photographers for use of their excellent photos. Photo credits available upon request.*

# Summit Station History



Only high altitude, high latitude, inland, year-round observing station in Arctic

Began in 1989

Now supports a wide range of research, including meteorology, glaciology, atmospheric chemistry, and astrophysics

Summer population swells to 50; winter is only 4

Updating infrastructure to be more efficient, flexible, and scalable



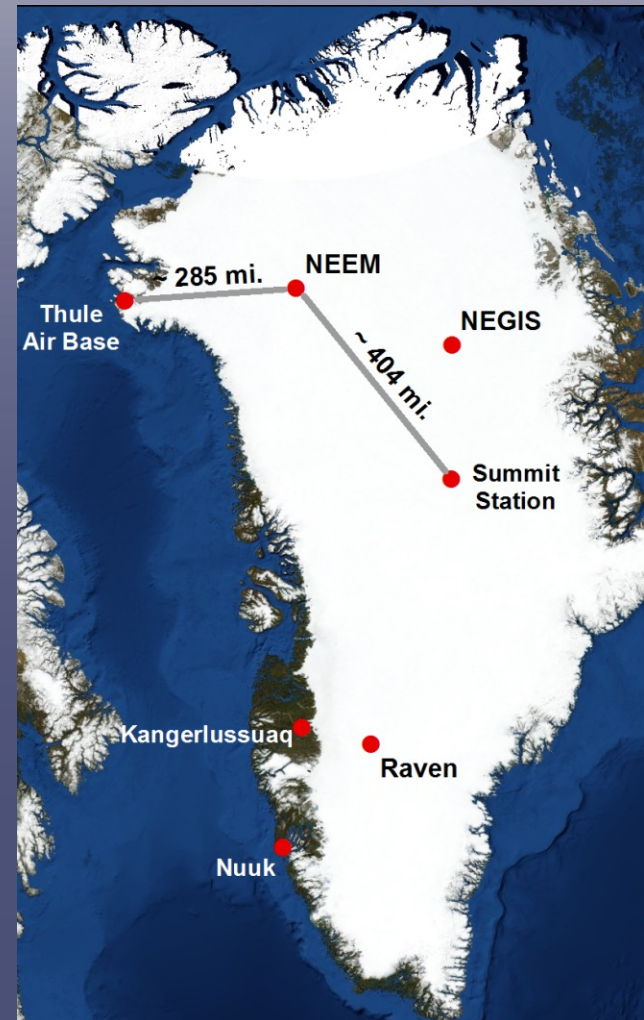
# NSF Approach to Arctic Infrastructure



- *Improve efficiency and safety of US researchers working in the Arctic by providing equipment, services, infrastructure, communication, and training*
- *Develop agreements that increase access to the Arctic*
- *Facilitate communication and collaboration between Arctic communities and researchers*
- *NSF provides services to other research programs on a reimbursable cost basis*
- *NSF relies on resources from other organizations*
  - *Other US and International organizations*
  - *Regional businesses (Air Greenland, Royal Arctic Shipping, Mittarfeqarfiit, KISS)*

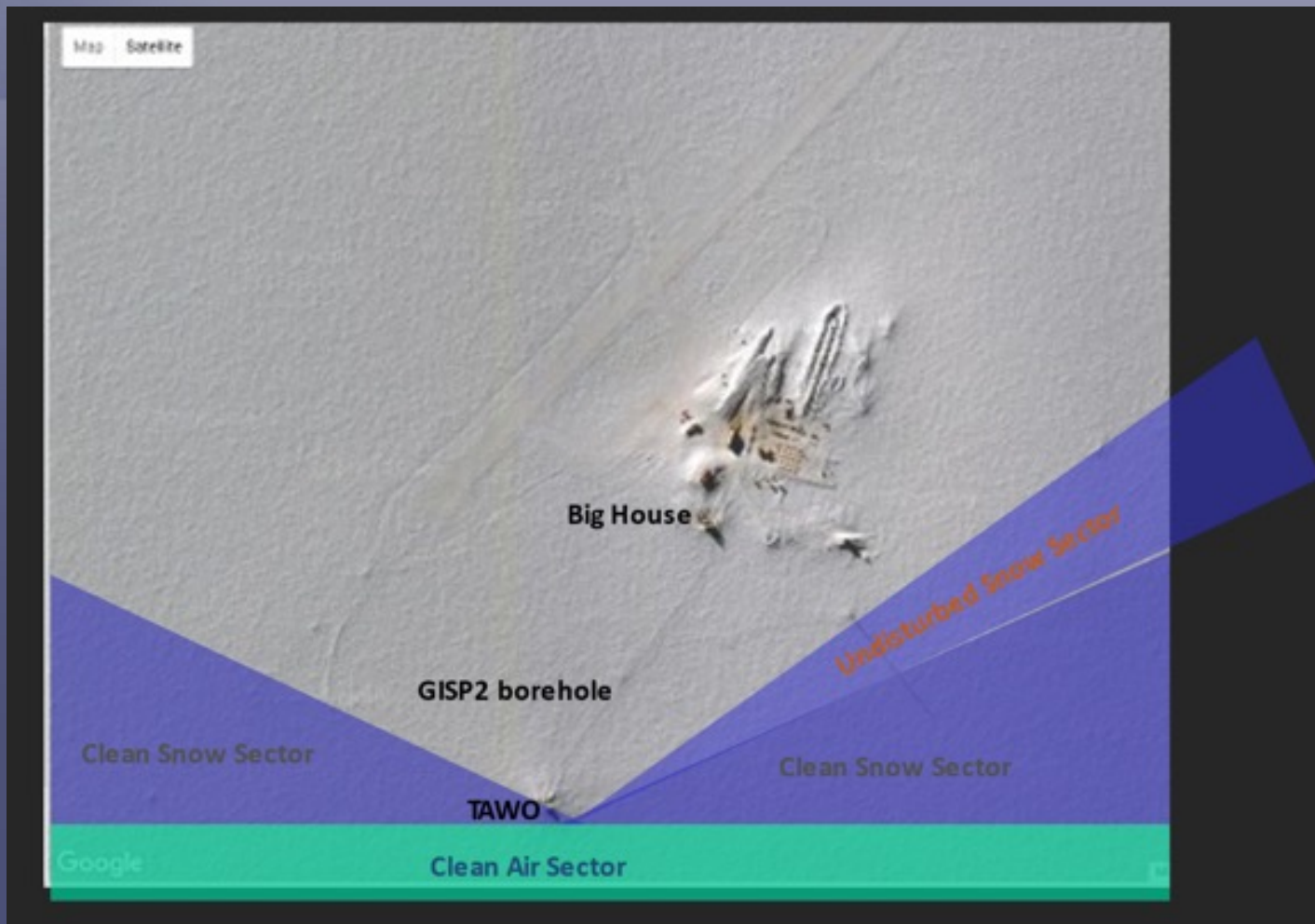
## *Philosophy:*

- *Logistics and Infrastructure follow the Research*
- *Rely on local infrastructure and resources as much as possible*
- *Only build/own if necessary (Summit Station)*





# Bird's eye view





## SUMMIT STATION

72.58°N, 38.46°W, 3256 M

OCTOBER 2017

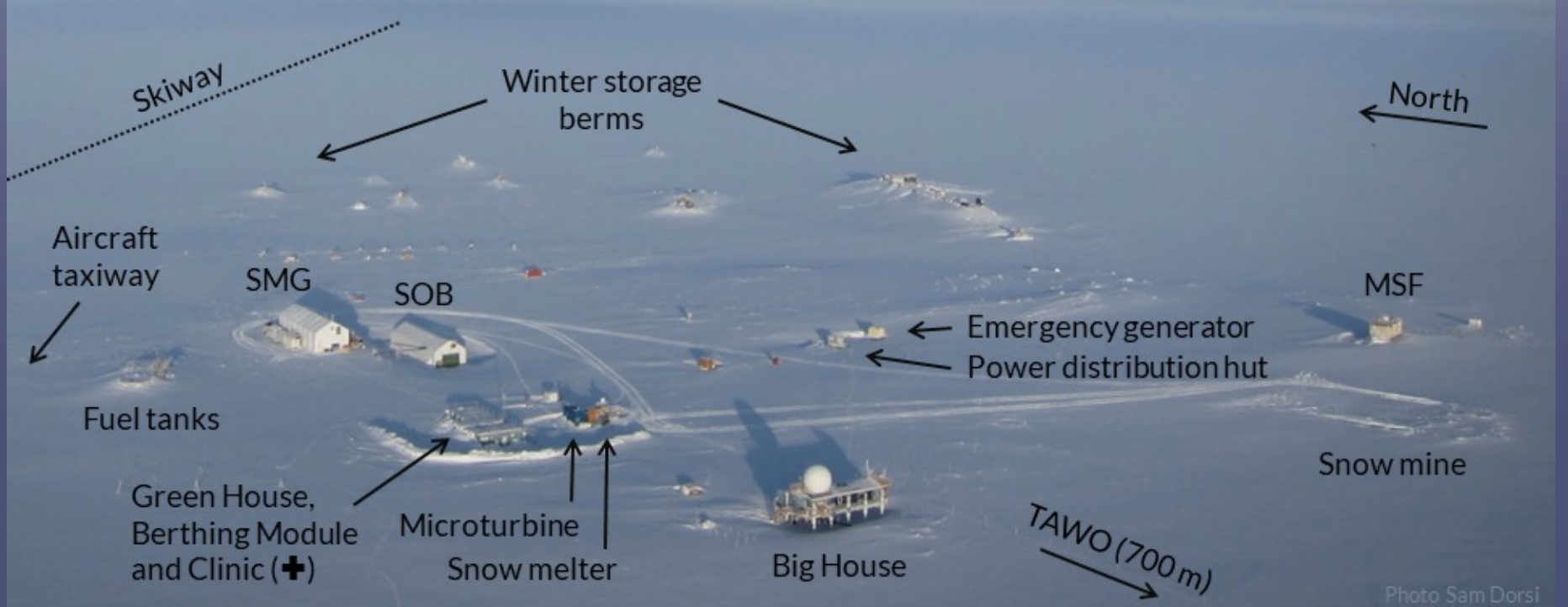
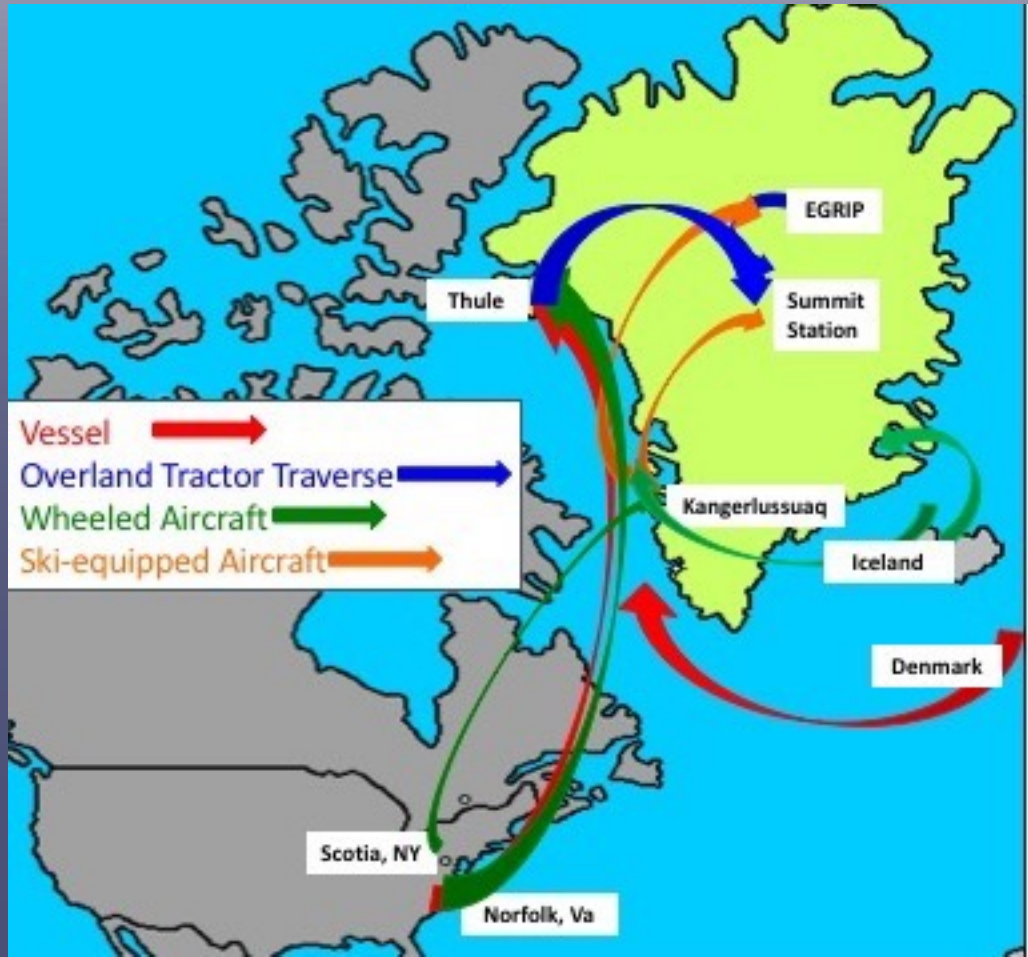


Photo Sam Dorsi



# Summit Access



# Operations

Berthing

Food

Water

Waste

Snow drifting

Power generation

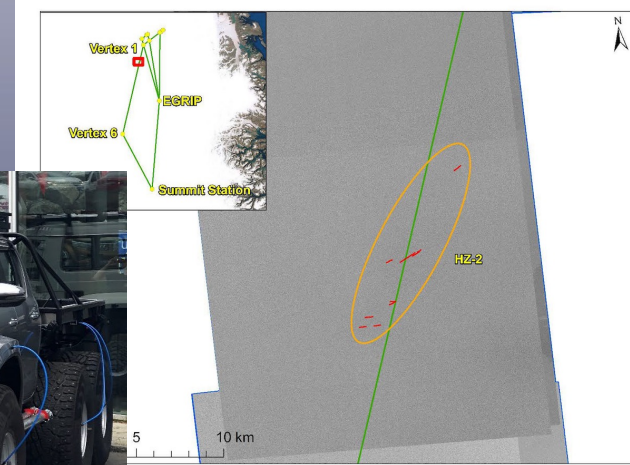




# Safety



- Altitude
- Operational (heavy equipment, etc.)
- Temperature, wind
- Polar bears
- Crevasses and melt





# Medical Capability



## Summit Clinic Supplies and Rescue Equipment

- Cardiac Monitor/Defibrillator
- Psychological First Aid
- Oxygen
- AEDs
- IV Capabilities
- Advanced Cardiac Medication
- Wide selection of medications
- Basic Dental Supplies
- Essential Diagnostic Equipment
- Basic Surgical Tools & Wound Closure Devices
- Trauma Care
- Gamow Bag
- Rescue Sled
- Tower Rescue
- Confined Space Rescue
- Transportable Trauma & Cardiac Bag

*Staffed by a paramedic or doctor in summer, and all winter staff are trained wilderness first responders*



# Questions and Discussion

