



Janet AWS

# FUTURE WISCONSIN AWS FIELD SEASON 2018-2019

Matthew Lazzara

Lee Welhouse

Dave Mikolajczyk

Michael Penn

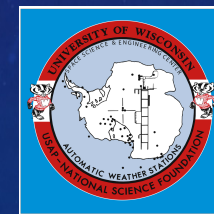
Elina Valkonen

**AMRC, SSEC, University of Wisconsin-Madison**

**Madison Area Technical College**

**Shaler Area School District**

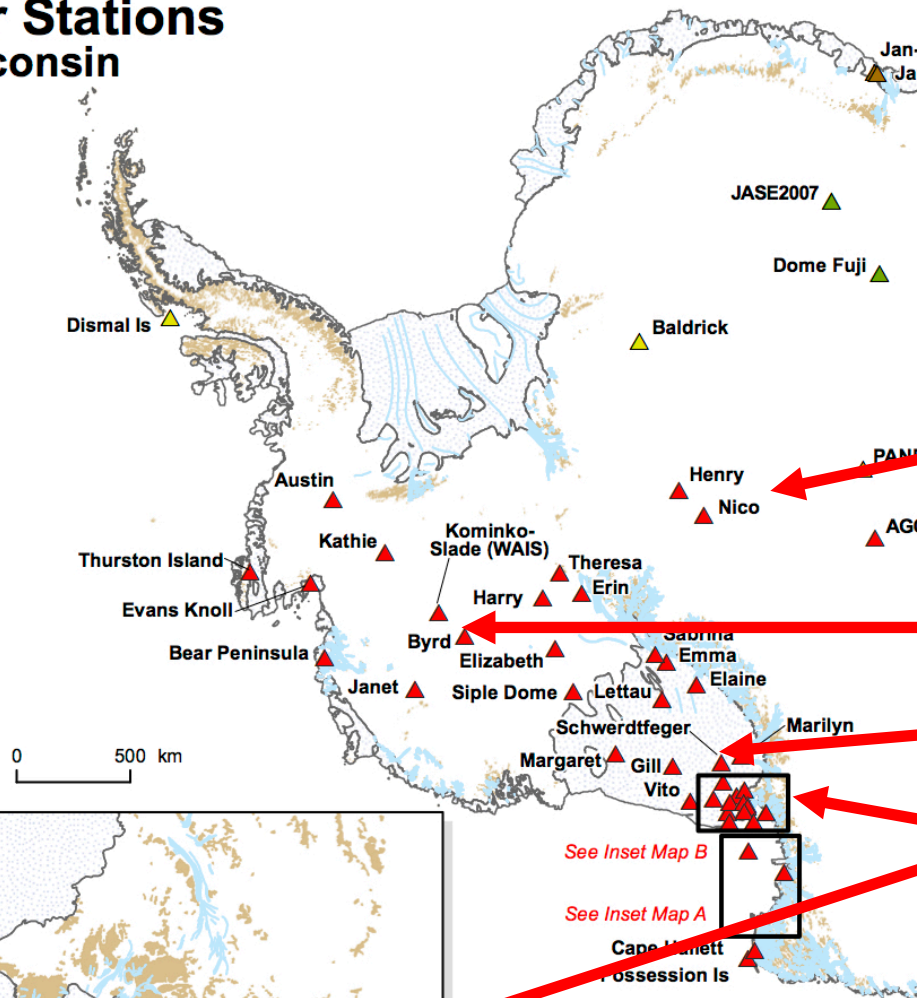
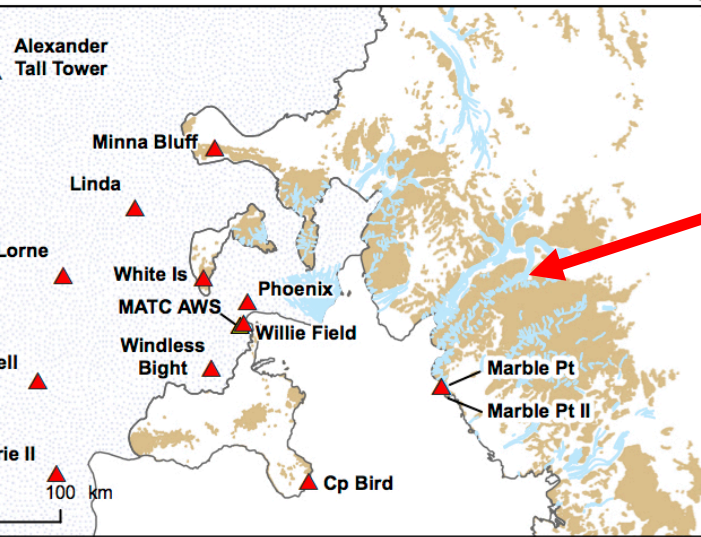
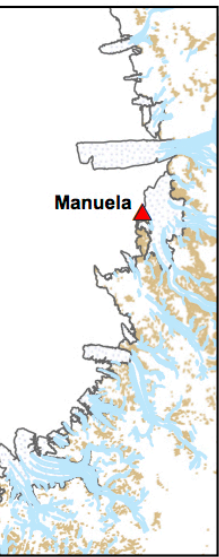
**University of Colorado-Boulder**



University of Colorado  
Boulder



# Antarctic Weather Stations University of Wisconsin 2018



## University of Wisconsin AWS

- ▲ Univ. of Wisconsin (UW)
- ▲ UW / Australia
- ▲ UW / Belgium/Netherlands
- ▲ UW / China
- ▲ UW / France
- ▲ UW / Japan
- ▲ UW / MATC
- ▲ UW / United Kingdom

## OUTLINE

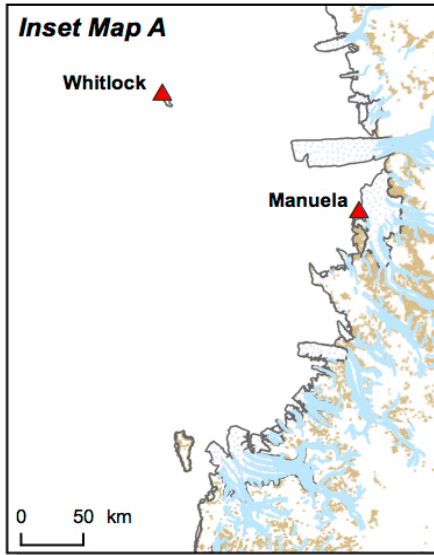
- South Pole and East Antarctica
- West Antarctica
- Ross Ice Shelf
- McMurdo Area/Ross Island Area

# Automatic Weather Stations

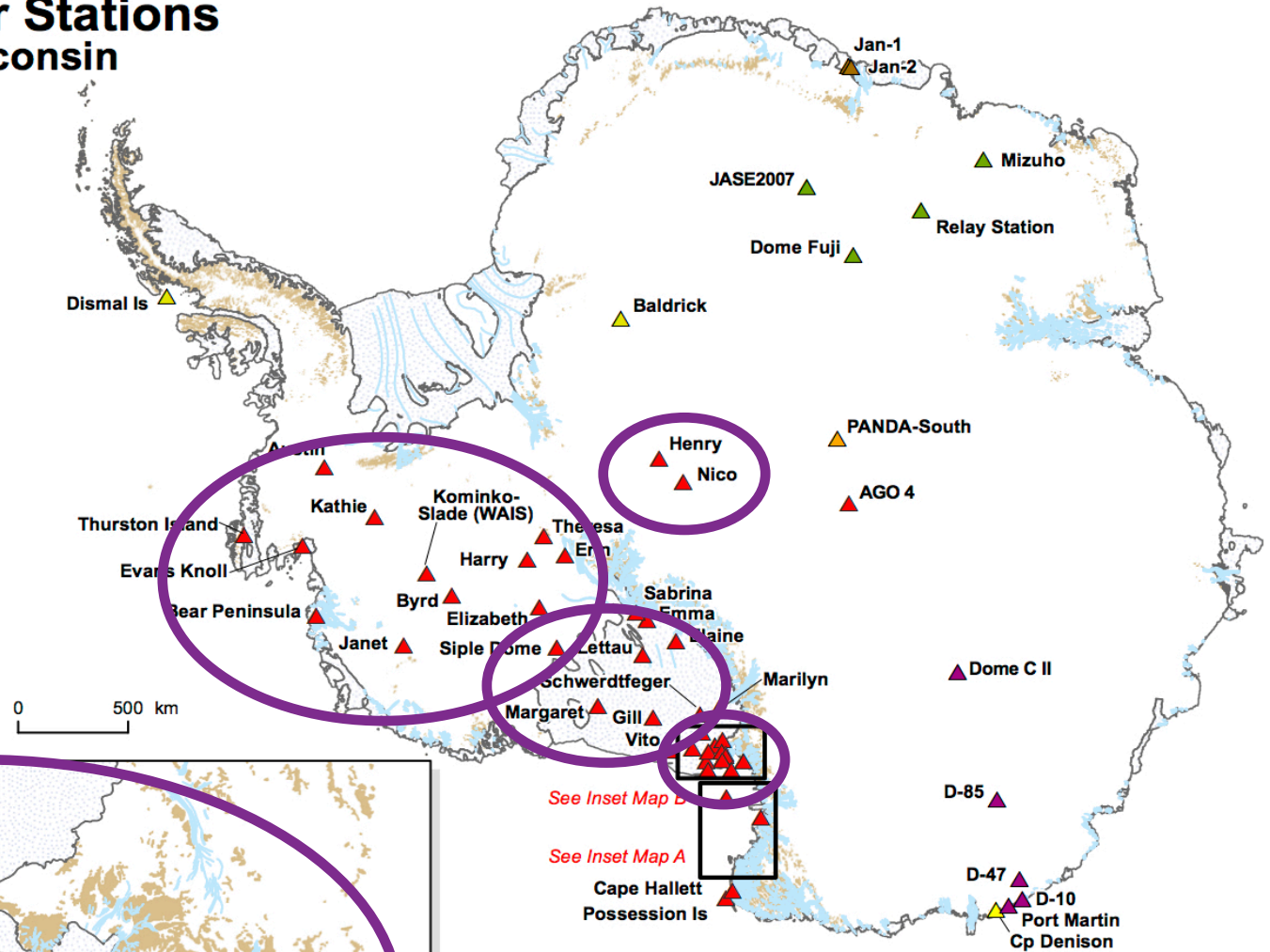
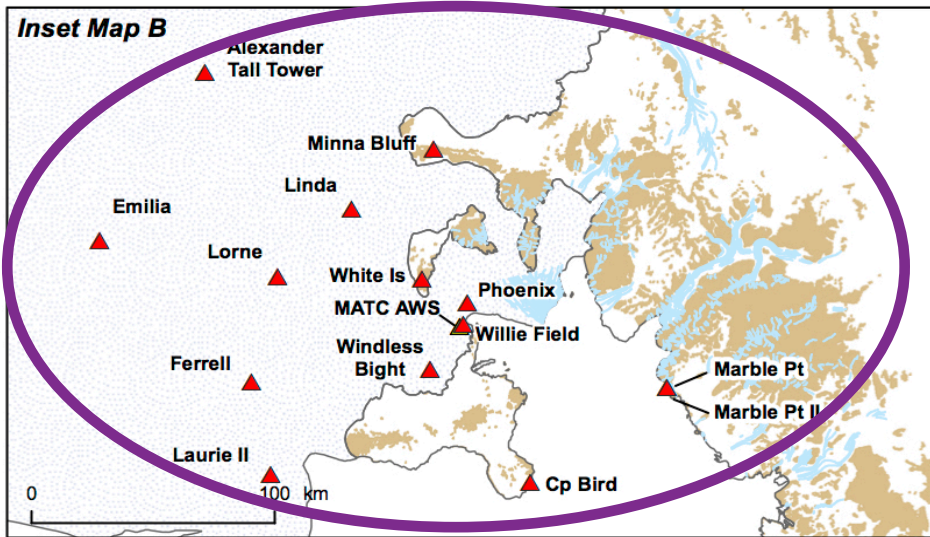
## University of Wisconsin

### 2018

**Inset Map A**



**Inset Map B**



#### University of Wisconsin AWS

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# Background

- Year 3 of a three year grant
- Goals for this season include:
  - Maintenance and Service Work
    - Complete work not completed last season
    - Accomplished work outlined for this season
  - Deal with issues with the 900 MHz UHF radio modem network in Ross Island Region
  - Raise Alexander Tall Tower! AWS if approved
  - Assist [Madison College](#) installation of Polar Climate and Weather Stations (PCWS)
    - See talk later on this!



# Field Team

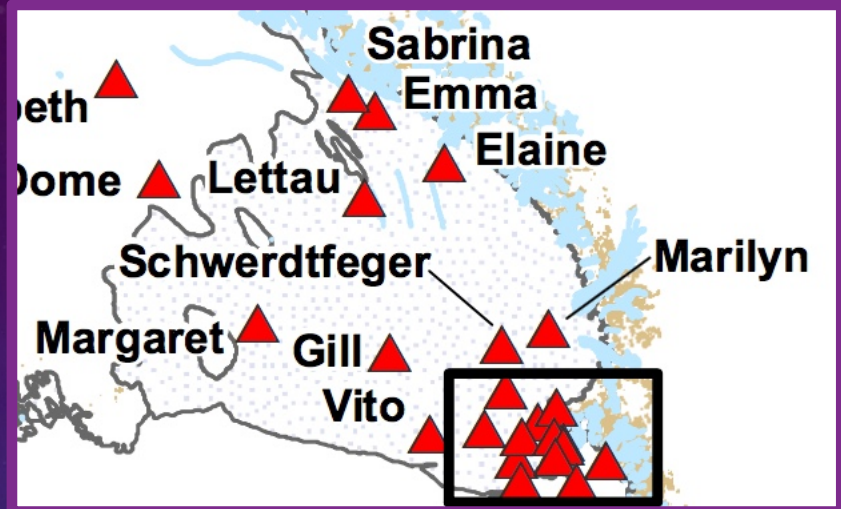
- AMRC/University of Wisconsin-Madison:
  - Lee Welhouse
  - Dave Mikolajczyk
  - (TBD)?
- University of Colorado-Boulder:
  - Elina Valkonen
- Madison Area Technical College:
  - (TBD)?
- PolarTREC/Shaler Area School District:
  - Michael Penn



# Ross Ice Shelf

Sites not visited last year:

- Sabrina – Station raise
- Gill – Programming problems



Site due/overdue for servicing:

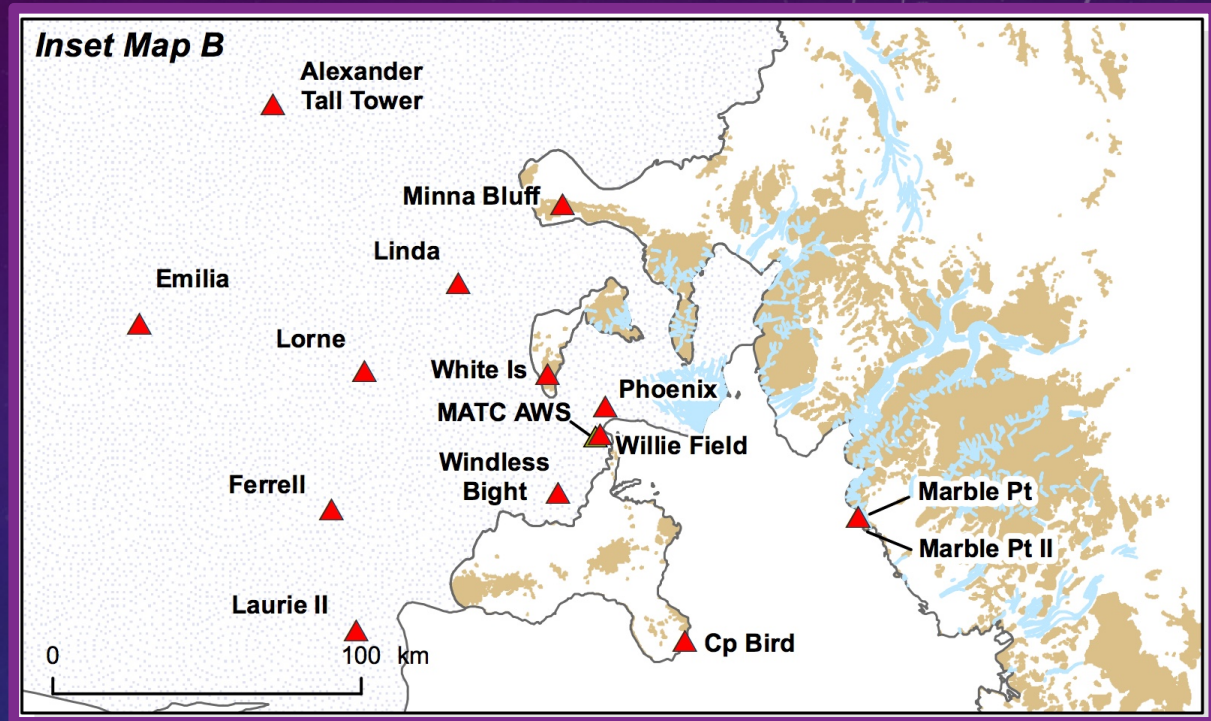
- Marilyn
- Margaret
- Lettau
- Alexander Tall Tower! – Station raise
  - If approved...



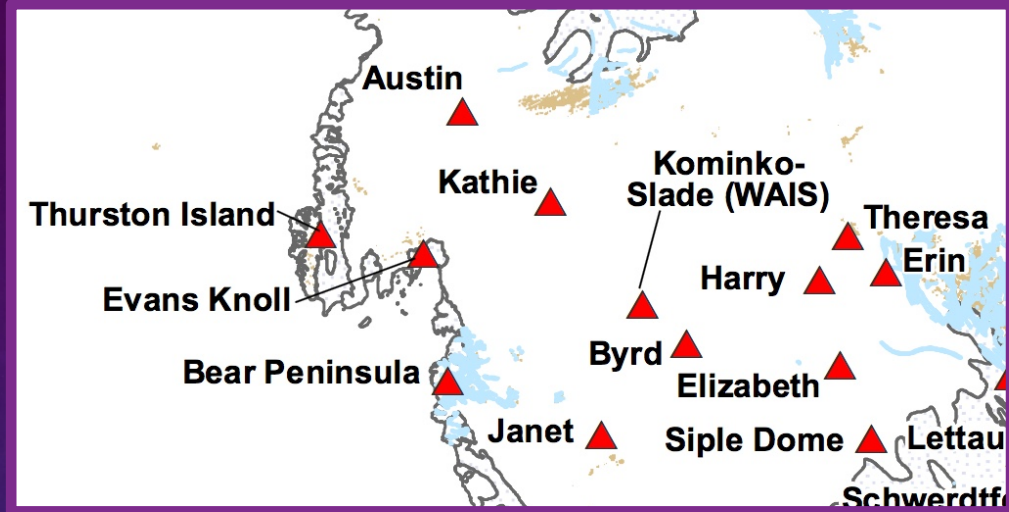
# McMurdo Area/Ross Island Area

We need to visit it all:  
(900 MHz UHF issues)

- Lorne
- Cape Bird
- Marble Point I and II
- Willie Field
- White Island
- Phoenix
- Windless Bight
- Minna Bluff
- Linda/Ferrell/Laurie II ?
- *Phoenix – Failed this winter – investigation warranted...*



# West Antarctica

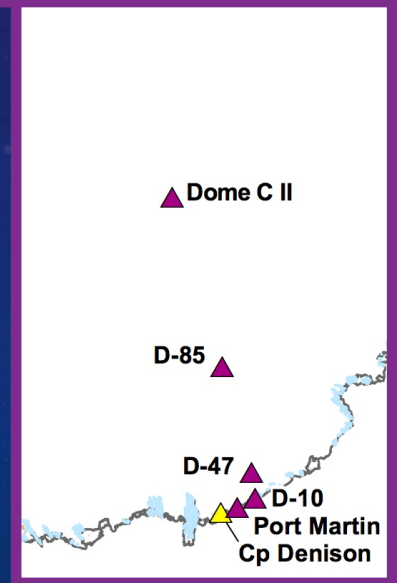
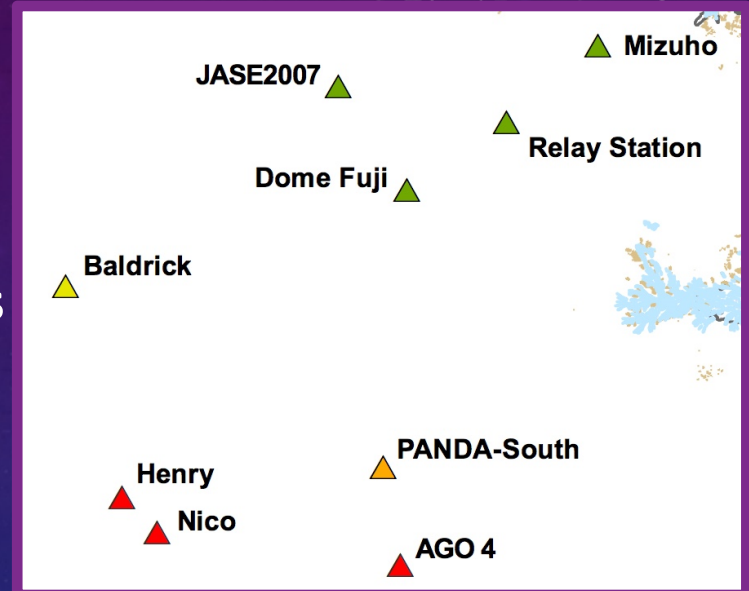


- Elizabeth - Service
- Harry - Service
- Evans Knoll - Removal (Crevasse issues)
- Bear Peninsula – Service (high wind speed sensor)
- Thurston Island – Service (high wind speed sensor)
- Austin – Service (Not operating correctly)

- *Evans Knoll – Comments from the community?  
Please note them in the breakout session today!*

# South Pole and East Antarctica

- Nico – Offline
- Henry – Offline
  - Repair/replace both core systems
- Other possibilities (?)
  - Joint Wisconsin – Japan (JARE)
    - Future Power System Replacements
  - Joint Wisconsin – France (IPEV)
    - Miscellaneous Service work
  - Joint Wisconsin – Mawson's Hut Foundation
    - Cape Denison



# PolarTREC AWS Activities

- Educational outreach to dozens of K-12 schools, scout troops, homeschool groups, community centers and museums in 9 states
- Create AWS Antarctic based "missions" for Dreamflight educational simulators that will impact 7,000 students annually
- Journals about deployment with the AWS project in Antarctica, the equipment, meteorology, geography, science and AWS team <https://www.polar trec.com/node/43288>
- Live PolarConnect event from Antarctica with classrooms - archived for future reference on PolarTREC.com and Youtube.

# **THANK YOU! QUESTIONS?**

- **Attend the discussions at the end of the day!**
- **Topics:**
  - **A. Automatic Weather Stations (Matthew Lazzara)**
  - **B. Observations aiding Numerical Modeling (John Cassano)**
  - **C. Observing aiding Forecasting/Logistics (Art Cayette)**
  - **D. Observing to support science/research (Dave Bromwich)**
- This material is based upon work supported by the National Science Foundation, Directorate for Geosciences, Office of Polar Programs, under Grant PLR-1543305.