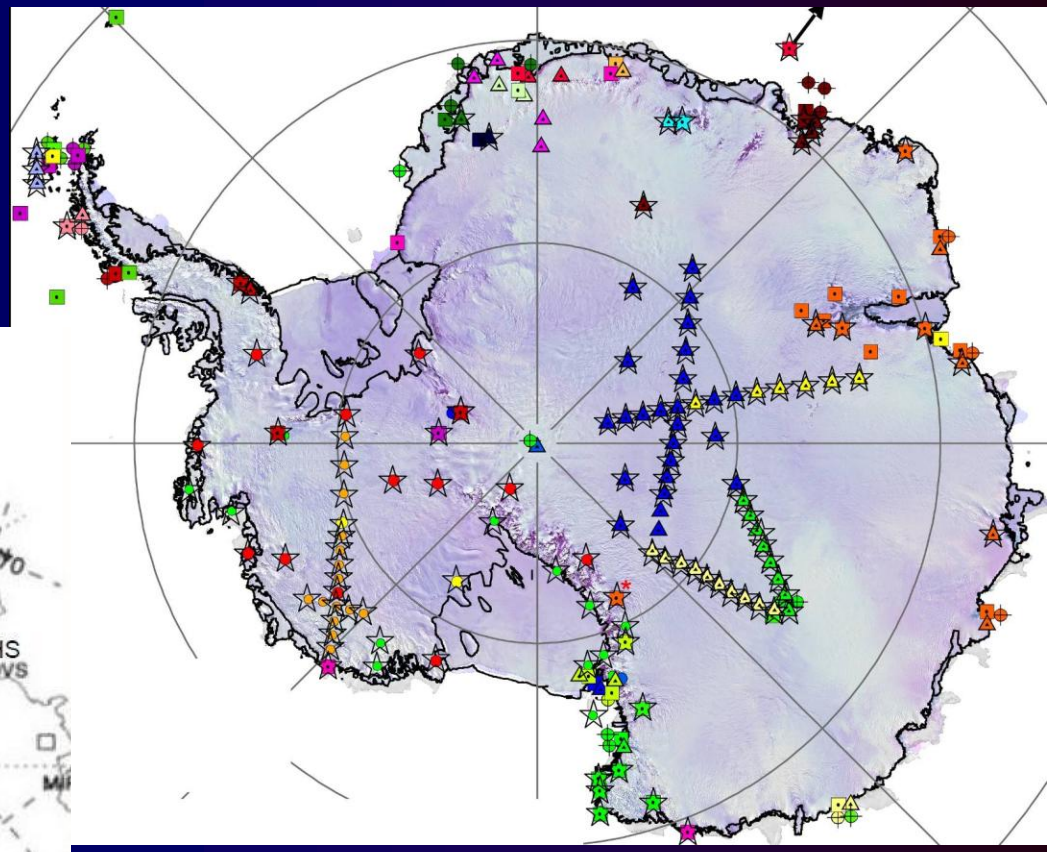
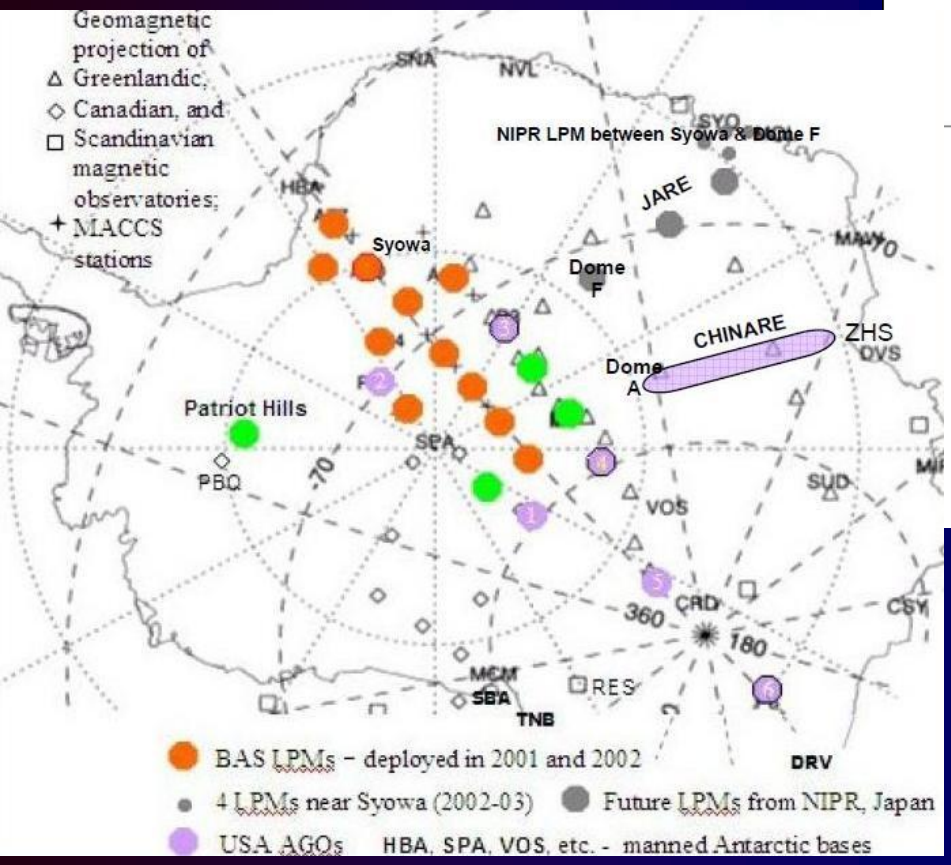


Earth Sciences (potential overlap) Aeronomy and Space Physics



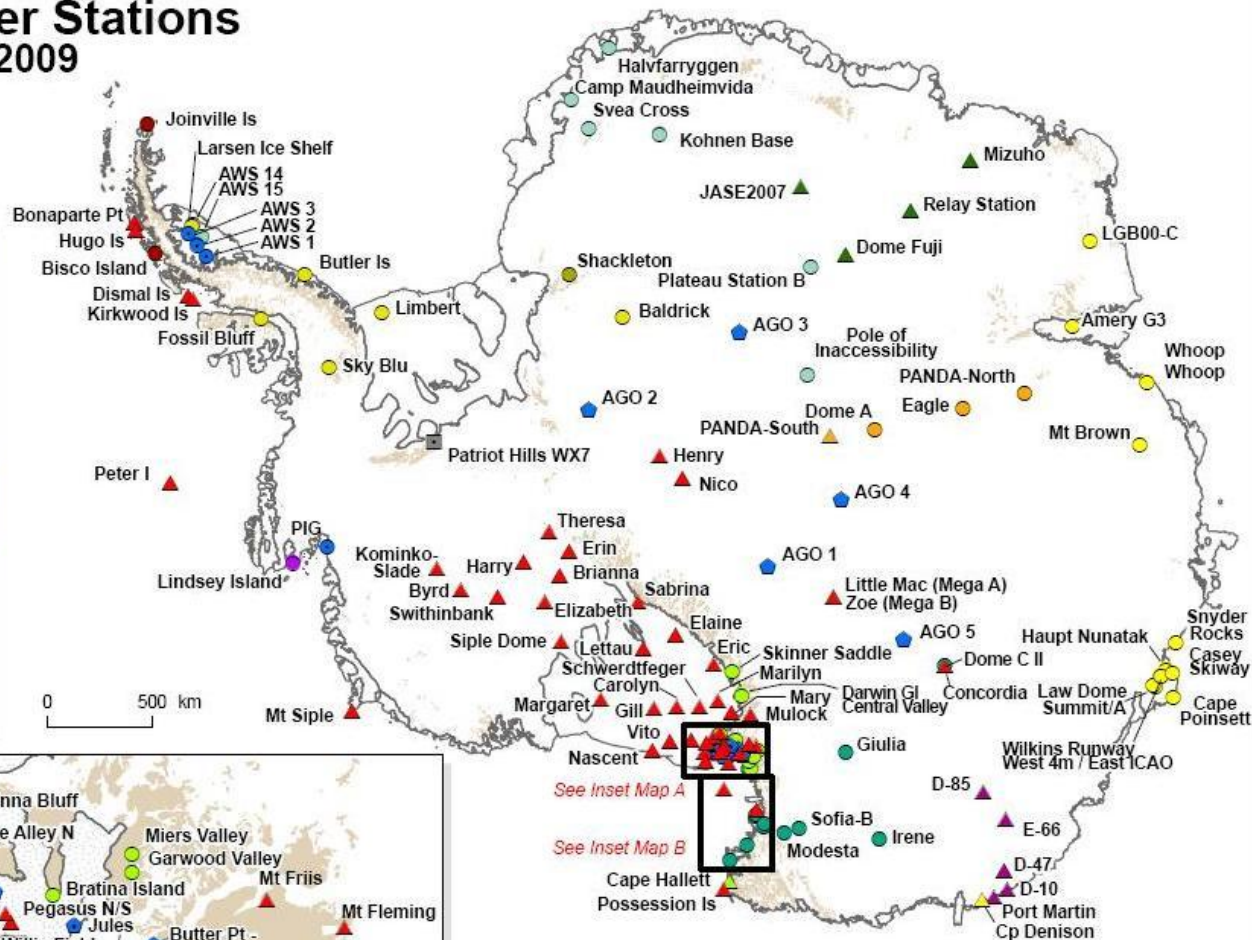
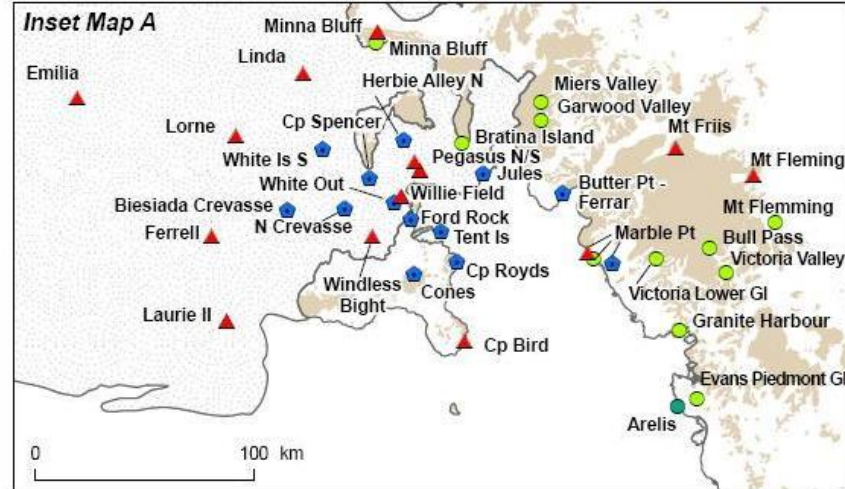
□ GPS	△ Seismic	⊕ Other	★ New
Australia	Chile	China	Japan
New Zealand	Belgium	Ukraine	Norway
Italy	India	Spain	South Africa
Germany	Finland	France	Sweden
U. K.	Argentina	Poland	United States

Automatic Weather Stations Antarctica - 2009

Inset Map B



Inset Map A



United States AWS

- ▲ Univ. of Wisconsin (UW)
- ▲ UW / Australia
- ▲ UW / China
- ▲ UW / France
- ▲ UW / Japan
- ▲ UW / New Zealand
- AGO
- SPAWAR
- Other US

International AWS

- Australia
- Brazil
- China/Australia
- Italy
- Netherlands
- New Zealand
- Russia
- South Korea
- United Kingdom

Other AWS

- Commercial

Coastline: ADD v4.1, 2003

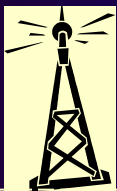
2009_AWS_Siteo_ALL

November 2009 Sam Batzli SSEC

University of Wisconsin-Madison

National Science Foundation ANT-0636873

Basic Block Diagram



GPS receiver
(precise timing,
coordinates)

Data transmission
and Communication
System

Data storage unit

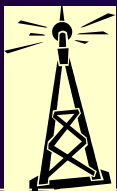
Discipline-specific
or common-use
Data Acquisition
System

Discipline-specific
sensor

Power system – gel-cell and/or
lithium batteries, solar panels,
wind turbines, RTGs (?)

Thermal enclosure

Basic Block Diagram



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(precise timing,
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Autonomous Polar Observing Systems Workshop

September 30 - October 1, 2010



Workshop's scope:

Balanced disciplinary discussion of how we can encourage collocation of common research sites for different Antarctic research programs.



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Within this context we hope the assembled group would discuss:

- Cross-cutting science that would be enabled by common sites,
- Polar autonomous instrumentation that would have interdisciplinary benefits,
- Leveraging of common logistical needs, and
- Ways to keep an active dialogue going amongst Antarctic research communities to better integrate common research sites into future planning.



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Challenges for proposing and maintaining autonomous observing networks in the Polar Regions:

- What are overarching outstanding scientific objectives (goals, questions) that require middle -and large-scale autonomous observing networks?
- What is expected life span for these networks: 2-3 years addressing very specific problems or longer? ... but how longer – studying trends in upper atmosphere over 11-year solar activity cycles, maintaining long-term research observations of climate change... collecting better data/statistics on Antarctic continent rebound... what else?
- Can these objectives overlap the Atmospheric, Geospace, and Earth science disciplines?