

Antarctic Space Sciences Workshop

27 - 28 September 2007 Embry-Riddle Aeronautical University, Daytona Beach, FL

Workshop Location: Instruction Center (IC) Room-104

Preliminary Agenda and Potential Talking Points

- 8:30 – 8:45AM Welcome and Opening Remarks (Provost ERAU, I. Azeem)
- 8:45 – 9:00 AM Outline of Meeting Goals (I. Azeem and A. Weatherwax)
- 9:00 – 9:15 AM Report from NSF (V. Papitashvili)
- 9:15 – 9:30 AM Report from Raytheon Polar Services (C. Kaminski)

Brief Overview of Current Space Science Projects in Antarctica

- 9:30 – 9:40 AM PENGUIn meets THEMIS, Marc Lessard
- 9:40 – 9:50 AM Autonomous magnetometer platforms along the 40 degree magnetic meridian, Bob Clauer
- 9:50 – 10:00 AM VLF Studies in the Antarctic, Umran Inan
- 10:00 – 10:10 AM Search coil magnetometer systems at South Pole, Mark Engebretson
- 10:10 – 10:20 AM Antarctic Research on LF/MF/HF: past and future, Jim Labelle
- 10:20 – 10:40 AM BREAK**
- 10:40 – 10:50 AM South Pole Meteor Radar System, Scott Palo
- 10:50 – 11:00 AM Sodium allsky imager for the South Pole station, Bifford P. Williams
- 11:00 – 11:10 AM New mesospheric temperature mapper measurements at South Pole, M. Taylor
- 11:10-11:20 AM Gravity wave anisotropy over Antarctica, Allan Wald
- 11:20 – 11:30 AM Auroral and Airglow spectroscopic observations from South Pole, Irfan Azeem
- 11:30 – 1:00 PM LUNCH BREAK**
- 1:00 – 1:10 PM Comparison of satellite derived surface temperatures to AGO observations, Noel Petit
- 1:10 – 1:20 PM AMISR data and capabilities with application to the southern high latitude region, John Kelly, SRI International
- 1:20 – 1:30 PM More than just Astronomy: Using a Radio Telescope to Study the Mesosphere, Chris Martin

Tuesday, September 25, 2007

Antarctic Space Sciences Workshop

South Pole Station Focus

- *South Pole User's Committee Report (A. Weatherwax and/or C. Martin)*
- *New space science building (remote facility)*
- *Best use of B2 lab*
- *What is the future use of ARO facility at Pole?*
- *Sector management for space science projects (quiet and active)*
- *What can we learn from the larger astronomy groups?*
- *Umbrella group discussion - perhaps funded for meetings and coordinated management etc.*
- *Future science goals and directions at Pole; big and small plans.*
 - *Solution to the interference problems at South Pole, Marc Lessard*
 - *A New Community-Based Research Facility for Active Magnetospheric and Ionospheric Probing, Umran Inan*
 - *A proposed configuration to improve scientific data quality, Marc Lessard*
- *What is left unattended in the Antarctic SP&A projects - what is the goals of observing certain upper atmospheric and geospace parameters at Pole.*

Other Stations

- *McMurdo*
- *Palmer*
- *Field and Remote Sites*

What is left unattended yet in the Antarctic SP&A projects - what are the goals of observing certain upper atmospheric and geospace parameters at Pole, at McMurdo, at Palmer, and over the Antarctic Plateau.

The Space Sciences community should identify the needs for particular instruments (or systems of detectors) at certain locations over the continent. For example, if a SuperDARN radar at McMurdo is constructed, would we need another radar at Pole or somewhere else - e.g., Palmer? Would we need to build a bigger IS radar at McMurdo to work with the conjugate AMISR at Resolute Bay?

What kind of network needs over the Plateau and in West Antarctica?

What could be proposed in the "research corridor" between McMurdo and South Pole along the snow traverse route, including WiFi infrastructure for the technology development support and for science projects?

Wrap Up — Moving Forward

The final session of the workshop will discuss recommendations for a white paper/report to be submitted to NSF.

Identify a cohesive and collaborative program for the next 5 years.

Recommendations for SP&A

Costs and funding model for instrument operations.