

Some sub-projects in IPY ID 63

Background image: Zoological
Museum University of Copenhagen
(background image)



DEEVERT-IPY #12

- Coupling processes in the atmosphere and their response to solar variability
- Field measurements both Arctic and Antarctic
- ALOMAR lidar, EISCAT, Halley radiometer, Rothera spectrometer.
- Howard Roscoe, BAS, Sheila Kirkwood IRF

GSSS-07, #14

- Greenland Space Science Symposium
- May 4-9 2007, Registration going on!
- Registration, abstract submission and hotel booking deadline March 19
- Sessions:
 - Outreach and Outlook talks
 - Energy transport in SW-M-I-A system
 - Interhemispheric relationships
 - High-latitude networks
- Bob Clauer Univ. Michigan, Jurgen Waterman, DMI



<http://www.gsss-2007.org>

NOBILE, #155

- Northern Balloon Investigations of Earth, Atmosphere and Space in the Polar Regions
- Earth's magnetic field in the stratosphere
- Cosmic Microwave Background!
- Italy-Norway collaboration: Svalbard and Mario Zuchelli stations
- Silvia Masi, Kjell Boen

MULTIPLEX, #163

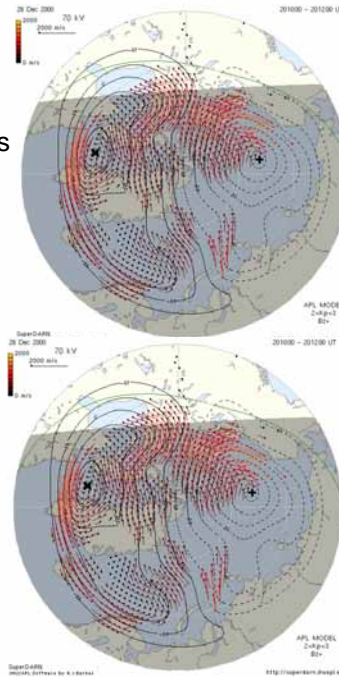
- Multi-scale plasma exploration: magnetic reconnection, wave-particle interaction, irregularity generation
- EISCAT, SPEAR, HAARP heaters
- Also auroral physics M-I coupling, collaboration with satellites: Cluster and IMAGE
- Ian McCrea, Mikes Kosch and Rietveld, Ingrid, Anita Aiko

SuperDARN in the IPY and IHY

Mervyn Freeman

SuperDARN and IHY/IPY

- Super Dual Auroral Radar Network
- Global international network of HF radars
 - 9 countries
 - 12 radars in north, 7 radars in south
- Measure convection of plasma in the ionosphere (300 km altitude)
- Network will expand
 - 1 or more radars in north
 - 4 or 5 in south
- Almost complete coverage of convection over both polar regions



SuperDARN Eol Science Goals

- To continue and enhance the state-of-the-art measurements of space weather circulation patterns made by SuperDARN to investigate:
 - the effect of solar variability on the upper atmosphere
 - multi-scale complexity of upper atmospheric convection
 - planetary waves and tides
 - the role of convection and waves in particle acceleration and loss in the Earth's radiation belts



Integration with IHY and ICESTAR

- SuperDARN operates 24/7 according to a schedule with 2 month lead time
 - Common time: All radars operate in same standard mode
 - Special time data: All radars operate in different special mode
 - Discretionary time: All radars operate independently from one another
- Single CIP facility representative for SuperDARN
 - Mervyn Freeman (mpf@bas.ac.uk)
 - will negotiate special time or discretionary time on behalf of CIP proposals requiring non-standard SuperDARN support
- Archive data also available on request
 - over whole solar cycle



Conclusion

- SuperDARN is powerful tool to study convection in earth's magnetosphere-ionosphere system
- Capability will improve further for IPY/IHY
- SuperDARN is available for you!
- <http://superdarn.jhuapl.edu/>





IASWR, #274

- Antarctic Space Weather Service (auroral and subauroral regions)
- Especially ionospheric conditions for radiowave propagation
- Data bases: International GPS data Service, and INGV (GPS receivers for geodetic purposes)
- Antarctic stations: Casey, Mario Zuchelli, Mawson, Scott Base, and Hobart, Macquarie Island, Christchurch
- Phil Wilkinson and Giorgiana Francheschi!
- The POLENET connection, ICESTAR TAG-E



Alaska Project, #352

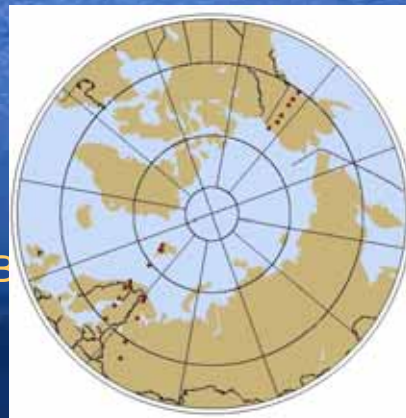
- Dynamics, chemistry and electrodynamics in the Arctic middle and upper atmosphere
- Lidars, Fabry-Perot interferometers, CCD imagers, MF radars
- Polar vortex and atmospheric waves
- SALMON data server
- C.f. ISPAM and DEEVERT IPY in the Scandinavian sector
- Yasuhiro Murayama, H. Stenbaek-Nielsen

PANSY, #355

- MST/IS radar to Syowa station
- Design study phase
- Building will start in 2007, operated for one solar cycle
- Funding? (Japanese national resources)
- Kaoru Sato

IITC, #547

- Tomographic imaging of the Arctic ionosphere
- Receivers of radion transmissions from polar orbiting satellites (Tsykada, NIMS, 150 and 400 MHz)
- Collaboration with UAMPY
- Eleri Pryse, J.A. Secan, G.B. Bust, Esa Turunen





CRSAAMU, #550

- Radar studies of Arctic and Antarctic middle and upper atmospheres
- EISCAT, SuperDARN, MF and meteor radars
- Interaction between different scale sizes
- T. Aso, K. Sato, M. Tsutsumi, Akira Yukimatu



Canada#45, #648

- Probing the Space and Upper Atmospheric Polar Environment
- Canadian Geospace Monitoring Program in its full beauty: CARISMA, riometers, ASIs, PolarDARN, SuperDARN, AMISR in Resolute Bay,
- THEMIS, e-POP, and SWARM
- G. Sofko, E. Donovan, J.P. StMaurice, A. Koustov, C. McWilliams