



Consorzio Interuniversitario
per la Fisica Spaziale



CONSORZIO
AREA DI RICERCA IN
ASTROGEOFISICA



INTERNATIONAL SCHOOL OF SPACE SCIENCE

L'AQUILA - ITALY



SERSES (Series of Events on Relations in the Sun-Earth System and Space Weather)

2009 Course on: **Solar terrestrial physics from the polar regions**
L'Aquila, April 6 - 11, 2009

Programme and Lecturers

SOLAR PHYSICS AND GEOEFFECTIVITY OF SOLAR FEATURES

D. Moses Naval Research Laboratory, Maryland, USA
M. Denton University of Lancaster, UK

Recent solar missions
Geoeffectivity of solar features

MAGNETOSPHERIC PHENOMENA AS OBSERVED FROM THE POLAR REGIONS

U. Inan University of Stanford, California, USA
N. Ostgaard University of Bergen, Norway
E. Amata INAF-IFSI, Roma, Italy
U. Villante University of L'Aquila, Italy
A. Meloni INGV, Roma, Italy

ELF/VLF studies of the ionosphere and the magnetosphere
Earth currents and Energy system
SuperDARN in the two hemispheres
ULF waves at high latitudes
Magnetometer measurements of solar terrestrial influences

IONOSPHERIC RESEARCH

G. De Franceschi INGV, Roma, Italy
C. Mitchell University of Bath, UK
L. Alfonsi INGV, Roma, Italy

Ionospheric research in the polar regions and SCAR
The ionosphere and tomographic imaging
Monitoring and investigations of ionospheric irregularities using GPS signals

UPPER ATMOSPHERE AND TROPOSPHERE

M. Lopez-Puertas Inst. of Astr. of Andalusia, Granada, Spain

S. Avery Woods Hole Oceanogr. Inst., Mass., USA
TBD

The effects of energetic particles precipitation on the polar upper and middle atmosphere as observed by recent satellite instruments
The Polar Middle Atmosphere
Cosmic rays and the formation of clouds

Additional lectures on specific topics concerning SCAR, IASC and IPY are planned:

M. Candidi INAF-IFSI, Roma, Italy
S. Avery Woods Hole Oceanogr. Inst., Mass., USA
TBD
TBD

SCAR and physical research in Antarctica
CAWSES-II: New System Science Approach for Sun-Earth Science
IASC and physical research in the arctic region
The IPY programs

Contributions from all attendees (particularly young scientists and students) are welcome.
Please, contact the School Secretariat at ssc@aquila.infn.it

The implications of solar terrestrial effects have been identified as a crucial item in many aspects of human life, besides the inherent scientific motivations that make this field one of the most interesting for research. It is recognized that space weather and climate change depend on solar terrestrial effects to a large extent. Antarctica has been identified as one of the platforms from which solar terrestrial effects can be best studied, given the mapping of magnetospheric phenomena to the polar regions via the lines of the Earth magnetic field. This led SCAR (the Scientific Committee for Antarctic Research of ICSU), to approve in 2004 a multi-year research program of its own, ICESTAR (Interhemispheric Conjugacy Effects in Solar Terrestrial and Aeronomy Research). This research program was later proposed, and approved by the IPY (International Polar Year). The IPY comes to an end in March 2009, and this motivates the program of the school. The aim of the school will be to report advances and propose developments in several fields of research in the framework of SCAR and the IPY. The IPY has addressed both hemispheres, Antarctica and the Arctic; both will be focused on in the presentations.

The Director of the School **U. Villante**

The Directors of the Course **M. Candidi and D. Moses**

General Information

The fee of 1000 Euro includes board and lodging at the TILS - "Campus Reiss Romoli", a modern facility located in a nice park in the neighbourhoods of L'Aquila.

Persons wishing to attend the School should apply to:

WWW.CIFS-ISSS.ORG/APPLICATION

INTERNATIONAL SCHOOL OF SPACE SCIENCE

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M. Candidi maurizio.candidi@ifsi-roma.inaf.it

D. Moses moses@louis14.nrl.navy.mil

E-MAIL ADDRESSES OF
THE DIRECTORS OF THE COURSE

SERSES Program

March 2006
The Physics of the Sun:
the Active Sun on your Active Desktop

September 2006
Solar-Terrestrial Physics

April 2007
Magnetospheric Dynamics

September 2007
Turbulence and Waves in Space Plasmas

April 2008
Geomagnetism and Ionosphere

April 2009
Solar terrestrial physics
from the polar regions



Applications including a brief curriculum vitae are due before February 28, 2009. Some financial support will be available for a limited number of students. Applications will be evaluated by the Scientific Committee of the International School of Space Science, who will decide also on the financial support. Successful applicants will be notified by e-mail.