



UNIVERSITÀ DEGLI STUDI DELL'AQUILA

OPERATIONAL SPACE WEATHER FUNDAMENTALS

13-17 May 2024

L'Aquila - ITALY

Programme and Lecturers

Thomas Berger (University of Colorado Boulder, USA)
Solar cycle activity and its forecasting

Manolis Georgoulis (Johns Hopkins University Applied Physics Laboratory APL, USA)
Solar Flares, CMEs and their Forecasting

Mauro Messerotti (INAF, Italy)
Solar Radio bursts and their forecasting

Ian G. Richardson (University of Maryland, USA)
Solar wind and transient structures

Emilia Kilpua (Univ. of Helsinki, Finland)
ICMEs, SEPs, CIRs, SIRs and their forecasting

Petra Vanlommel (Solar-Terrestrial Centre of Excellence, Bruxelles, Belgium)
Lab activity (focus on solar and heliospheric weather)

Domenico Di Mauro and Stefania Lepidi (INGV, Italy)
The Geomagnetic Field and the Magnetosphere

Lucilla Alfonsi (INGV, Italy)
The Terrestrial Ionosphere

Dedong Wang (GFZ-Potsdam)
The Solar Wind – Magnetosphere Coupling, Radiation Belts, Plasmasphere

Kirsti Kauristie (Finnish Meteorological Institute, Finland),
Effects of space weather on the Earth's ionosphere

Antti Pulkinen (NASA/GSFC, USA)
Effects of space weather on technological systems and society

Yana Maneva (Royal Observatory of Belgium)
Lab activity (focus on magnetosphere, ionosphere, aviation, and ground based impact)

Thomas Berger (University of Colorado, USA)
Research to operations (R2O) and operations to research (O2R)

Tamitha Skov (Millersville University, USA)
Space weather: from expert to non-expert

Jennifer Meehan (NOAA, Washington, USA)
Careers in Space Weather

SCHOOL SECRETARIAT:

info@astrogeofisica.it

BOARD OF DIRECTORS:

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Tamitha Skov (Millersville University, USA) tamitha.skov@millersville.edu

SCHOOL RATIONALE

The school will serve as a comprehensive introduction to the multi-faceted field of Space Weather, covering solar-heliospheric, magnetospheric, and ionospheric weather, with a specialized focus on operations and forecasting. By establishing the links from research to operations (R2O) and from operations to research (O2R) and by highlighting the effects of space weather on technological systems and society, this curriculum aims at stimulating the involvement of the next-generation researchers in this rapidly growing discipline.

Lectures on phenomenology will be complemented by laboratory activities and applications with the direct and active involvement of the attendees. Another practical aspect will be covered by the "career section" aimed at illustrating which skills are desirable for a job in the frame of space weather research and surveillance centres, and how good strategies should be used for educational and communication purposes.

This school is addressed to PhD students and young scientists in space physics, planetary sciences, aerospace engineering, or related fields. Early-career stage professionals from monitoring agencies and industries related to space weather are invited to apply as well.

GENERAL INFORMATION

The School will be in L'Aquila at the Università degli Studi dell'Aquila.

Applications, including a brief curriculum vitae, are due before 23 March 2024. See the website <https://www.astrogeofisica.it/oswf> for details.

The fee of 1000 Euro includes board and lodging in shared double rooms at nearby hotels and B&Bs. Some financial support will be available for a limited number of students on request.

Applications will be evaluated by the Board of Directors of the School. All applicants will be notified by e-mail.

School Secretariat

c/o Dipartimento di Scienze Fisiche e Chimiche. Università degli Studi dell'Aquila (Italy)

Email: info@astrogeofisica.it - Website: www.astrogeofisica.it/oswf



LOCAL ORGANIZING COMMITTEE:

Domenico Di Mauro (Course co-Director)

Stefania Lepidi (Course co-Director)

Patrizia Francia (Università degli Studi dell'Aquila)

Anna Rita Leone (School secretariat)

The School is supported/sponsored by:

Università degli Studi dell'Aquila, Istituto Nazionale di Geofisica e Vulcanologia (INGV), Consorzio Area di Ricerca in Astrogeofisica, Istituto Nazionale di Astrofisica (INAF), European Space Weather and Space Climate Association (E-SWAN), Millersville University, IUGG, IAGA, Fondazione Carispaq, PECASUS Consortium, Space Weather Italian Community (SWICo).