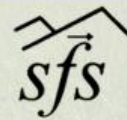




# 2011 ISWI-Europe Summer School in Space Science

August 21-27, 2011, Astronomical Institute of the SAS, Tatranská Lomnica, Slovakia



## ISWI School Report

21 – 27 August 2011, Tatranská Lomnica, Slovakia

([http://stara.suh.sk/id/iswi/summer\\_school](http://stara.suh.sk/id/iswi/summer_school))

Ivan Dorotovič and Nat Gopalswamy

# Scientific Program

A. Kučera – Centre of Space Research: Space Weather Influences

P. Heinzel – The Sun from Space

W. Dziembowski – Solar Interior

R. Erdélyi – Fundamentals of MHD in Space Research

E. D. Lopez – Solar Dynamo Processes,  
Solar Wind - Earth's Magnetosphere Coupling

M. Sobotka – Solar Photosphere

J. Koza – Solar Chromosphere

J. Dudík – Solar Corona and the Inner Heliosphere

I. Dorotovič – ISWI in Slovakia

M. Bárta – Reconnection Processes in the Sun and the Inner Heliosphere

N. Gopalswamy – Solar Eruptions, CMEs and Space Weather;  
CMEs / Data Analysis

D. Odstrčil – Numerical Heliospheric Code ENLIL and Space Weather Predictions

R. Huth – Effects of Solar Activity on Earth's Climate

D. J. F. Maia – Solar Energetic Particles, Solar Radio Emission Processes

D. Pérez-Suárez – The HELiophysics Integrated Observatory (HELIO)  
Hands-on with HELIO

K. Kudela – Cosmic Rays in Relation to Space Weather

J. Lastovička – Long-term Trends in the Ionosphere and Upper Atmosphere

# Scientific Program ...

A. Hanslmeier – Space Weather on Exoplanets

Ch. Amory-Mazaudier – Electric Currents in the Earth's Environment and Impacts  
on Nex Technologies

R.A. Ribeiro – Computer Intelligence Techniques in Time Series Analysis

F. Valach – Neural Networks as Universal Approximators

F. Kamalabadi – Inverse Problems and Methods in Space Data Analysis,  
Assimilation, and Imaging

J.M. Davila – Scientific Instruments for Space Exploration

M. Danielides – Sudden Ionospheric Disturbances Detected by Ground Methods

F. Jansen – International Space Weather Status: towards Space Situational  
Awareness



# Lecturers

**Christine Amory-Mazaudier**, LPP/CNRS-Ecole Polytechnique-UPMC,  
Saint-Maur-Des-Fossés, France

**Miroslav Bárta**, Astronomical Institute of AS CR, Ondřejov, Czech Republic

**Michael Danielides**, Institute of Communications and Navigation,  
German Aerospace Center (DLR), Neustrelitz, Germany

**Joseph M. Davila**, NASA/GSFC, Greenbelt, USA and ISWI

**Ivan Dorotovič**, Slovak Central Observatory, Hurbanovo, Slovakia

**Jaroslav Dudík**, Department of Astronomy, Physics of the Earth  
and Meteorology, FMPI, Comenius University, Bratislava, Slovakia

**Wojciech A. Dziembowski**, Astronomical Observatory, Warsaw University,  
Warsaw, Poland

**Robert Erdélyi**, Department of Applied Mathematics, University of Sheffield,  
Sheffield, UK

**Nat Gopalswamy**, NASA/GSFC, Greenbelt, USA and ISWI

**Arnold Hansmeier**, Institute of Geophysics, Astrophysics and Meteorology,  
University of Graz, Graz, Austria

**Petr Heinzel**, Astronomical Institute of AS CR, Ondřejov, Czech Republic

# Lecturers ...

**Radan Huth**, Institute of Atmospheric Physics of AS CR, Prague, Czech Republic

**Frank Jansen**, Institute of Space Systems, German Aerospace. Center (DLR),  
Bremen, Germany

**Farzad Kamalabadi**, National Science Foundation, Arlington, USA

**Július Koza**, Astronomical Institute of SAS, Tatranská Lomnica, Slovakia

**Aleš Kučera**, Astronomical Institute of SAS, Tatranská Lomnica, Slovakia

**Karel Kudela**, Institute of Experimental Physics of SAS, Košice, Slovakia

**Jan Laštovička**, Institute of Atmospheric Physics of AS CR, Prague, Czech Republic

**Ericson D. Lopez**, Quito Astronomical Observatory, National Polytechnic School,  
Quito, Ecuador

**Dalmiro J. F. Maia**, Astronomical Observatory, University of Porto, Porto, Portugal

**Dušan Odstrčil**, NASA/GSFC , Greenbelt and George Mason University, Fairfax, USA

**David Pérez-Suárez**, Trinity College, Dublin, Ireland

**Rita A. Ribeiro**, UNINOVA-CA3, Science and Technology Faculty, New University of  
Lisbon, Caparica, Portugal

**Michal Sobotka**, Astronomical Institute of AS CR, Ondřejov, Czech Republic

**Fridrich Valach**, Geophysical Institute of SAS – Geomagnetic Observatory,  
Hurbanovo, Slovakia

Total lecturers: **25** from 11 countries

# Students

- Argentina 1
- Armenia 1
- Austria 1
- Brazil 1
- Bulgaria 1
- Croatia 2
- Czech Republic 4
- Ecuador 1
- Egypt 1
- Germany 4
- Greece 4
- China 1
- India 2
- Ireland 1
- Italy 1
- Kenya 1
- Korea 1
- Mexico 1
- Nigeria 1
- Poland 4
- Portugal 1
- Romania 4
- Slovakia 2
- Spain 1
- Turkey 1
- Ukraine 3

**46** students  
from 26 countries

Logistics and technical support **5**

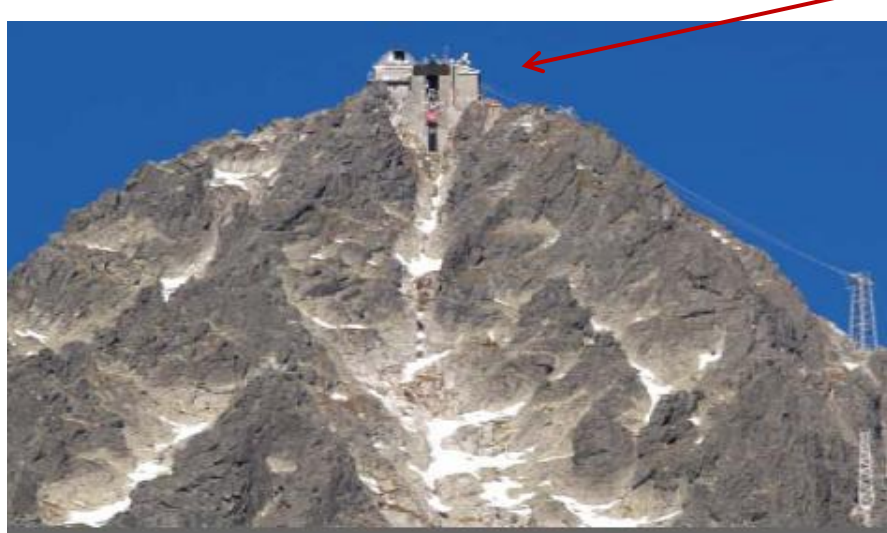
**Total participants: 76**



Participants

# Excursion to the Lomnický Peak Observatory

24 August 2011





# Sponsors

- The school was hosted by the Centre of Excellence '*Centre of Space Research: Space Weather Influences*' [**Astronomical Institute** of the Slovak Academy of Sciences (AI SAS), Tatranská Lomnica, **Institute of Experimental Physics** of SAS in Košice (IEP SAS), and **Institute of Physics** of UPJ Š in Košice (IP UPJŠ)] and the **Slovak Central Observatory** (SCO), Hurbanovo.
- Sponsored by NASA, SCOSTEP/CAWSES-II, ICTP, ESA, SPS, EADS-ASTRIUM, AEF



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The banner features the ISWI logo on the left, which includes the text 'INTERNATIONAL SPACE WEATHER INITIATIVE' and 'ISWI' over a background of a sun and Earth. Below the ISWI logo are several sponsor logos: Skalnaté Pleso, Slovak Central Observatory, NASA, SCOSTEP (Scientific Committee on Solar-Terrestrial Physics), CAWSES-II (Central and Western European Solar Wind and Space Environment Study), ICTP (International Centre for Theoretical Physics), ESA (European Space Agency), sfs (Slovak Space Agency), ASTRIUM (an EADS company), and AEF (Astronomical and Experimental Facility).

# Feedback

Great thanks for excellent school organization! I liked it very much. Participation in this summer school helped me a lot in understanding my future direction in science and expanded my knowledge in area of solar physics.

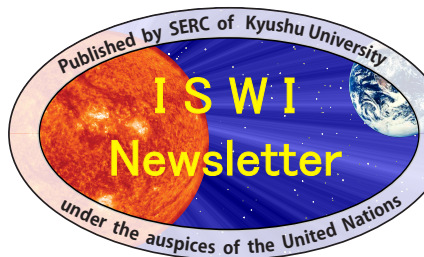
Antonina Klyuyeva (Ukraine)

Thank you for providing me the opportunity to participate in the ISWI summer school held in Tatranska Lomnica. I learned many things about Solar Physics and Space Weather and I am now seriously considering to start my career as a Solar physicist. Thank you for the support from EADS-ASTRIUM.

Alin Razvan Paraschiv (Romania)

# Post-School

- Lectures are on Summer School website  
([http://stara.suh.sk/id/iswi/summer\\_school/scientific\\_program](http://stara.suh.sk/id/iswi/summer_school/scientific_program))
- Link to lectures to be put on ISWI website (<http://iswi-secretariat.org>)  
and on SCOSTEP / CAWSES II website  
(<http://www.cawses.org/CAWSES/Home.html>)



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