



The Abdus Salam  
International Centre for Theoretical Physics



Circulated in  
ISWI Newsletter  
Volume 2, Number 80

## International Advanced School on Space Weather Modelling and Applications

Cosponsor(s): EC COST Action ES0803 "Developing Products and Services for Space Weather in Europe", EC FP7 Project SOTERIA "SOLar-TERrestrial Investigations and Archives", National Institute for Astrophysics (INAF, Italy), European Space Agency (ESA)

Organizer(s): Directors: A. Belehaki, M. Messerotti, G. Lapenta, S. Radicella  
Trieste - Italy, 18 - 29 October 2010

**Venue: Adriatico Guest House Kastler Lecture Hall**

### Preliminary Programme

**Monday, 18 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**18 October 2010**

**09:00 - 13:00** --- Registration with Secretary in Office N. 5 ---

**13:00 - 14:00** --- Lunch Break ---

**14:00 - 17:00** **Volker Bothmer** / *Institute for Astrophysics, University of Goettingen, Germany*  
**OPENING: Introduction to the Physics of the Sun, Heliosphere and Space Weather**

**Tuesday, 19 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**19 October 2010**

**09:00 - 13:00** **Giovanni Lapenta** / *Centre for Plasma Astrophysics, KU Leuven, Belgium*  
**Theoretical and Numerical Physics Based Models with Focus on the Issue of Modelling Fundamental Processes Crossing Multiple Scales (Kinetic to MHD)**

**13:00 - 14:00** --- Lunch Break ---

**14:00 - 17:00** (Room: Adriatico Guest House Informatics Lab.)  
**David Berghmans and Daniel Seaton** / *Royal Observatory of Belgium, Brussels, Belgium*  
**Tracking Solar Activity with Online Facilities**

**17:00 - 18:30** **Free Practice**

**Wednesday, 20 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**20 October 2010**

**09:00 - 10:50** **Bernhard Kliem** / *University of Potsdam, Germany*  
**The Physics and Numerical Modelling of Coronal Mass Ejections**

**10:50 - 11:10** --- Coffee Break ---

**11:10 - 13:00** **William Matthaeus** / *University of Delaware, USA*  
**Theory of Turbulence in Solar System Plasmas: Observations of Solar Wind Turbulence and Connections to MHD Relaxation, Intermittency and Dissipation**

**13:00 - 14:00** --- Lunch Break ---

**14:00 - 17:00** (Room: Adriatico Guest House Informatics Lab.)  
**D. Berghmans and D. Seaton**  
**Downloading and Handling Solar Data from Satellites**

**17:00 - 18:30** **Free Practice**

**Thursday, 21 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**21 October 2010**

**09:00 - 13:00** **Susan McKenna-Lawlor\*** and **Hannu Koskinen\*\*** / *\*Space Technology Ireland; \*\*University of Helsinki, Finland*  
**An Overview of Space Weather Phenomena that Effect Technological Systems and Humans**

**13:00 - 14:00** --- Lunch Break ---

**14:00 - 15:00** (Room: Adriatico Guest House Informatics Lab.)  
**Mauro Messerotti** / *Astronomical Observatory of Trieste and University of Trieste, Italy*  
**G-B Instrumentation for for Solar Observations**

**15:00 - 17:00** (Room: Adriatico Guest House Informatics Lab.)  
**Peter Stauning** / *Danish Meteorological Institute, Copenhagen, Denmark*  
**G-B Instrumentation for Space Weather Observations in Geospace**

**17:00 - 18:30** (Room: Adriatico Guest House Informatics Lab.)  
**Free Practice**

**Friday, 22 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**22 October 2010**

**09:00 - 13:00** **Gabor Toth** / *University of Michigan, Ann Arbor, USA*  
**Adaptive Algorithms in the Space Weather Modelling Framework**

13:00 - 14:00 --- Lunch Break ---

14:00 - 17:00 (Room: Adriatico Guest House Informatics Lab.)  
**Petra Vanlommel** / *Royal Observatory of Belgium, Brussels, Belgium*  
**Monitoring and Predicting SpW in the Heliosphere: Operational Services**

17:00 - 18:30 (Room: Adriatico Guest House Informatics Lab.)  
**Free Practice**

**Monday, 25 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**25 October 2010**

09:00 - 10:50 **Jurgen Watermann** / *jfwConsult, La Tetrade, Tourrettes, France*  
**Solar Wind-Magnetosphere-Ionosphere Coupling**

10:50 - 11:10 --- Coffee Break ---

11:10 - 13:00 **Alan Aylward** / *University College London, UK*  
**Coupling between the Earth's Magnetospheric, Atmospheric and Ionospheric Regions and Comprehensive Modelling of the Sun-Earth Environment**

13:00 - 14:00 --- Lunch Break ---

14:00 - 17:00 (Room: Adriatico Guest House Informatics Lab.)  
**Norma Crosby** / *Belgian Institute for Space Aeronomy, Brussels, Belgium*  
**The European Space Weather Portal and SPENVIS**

**Tuesday, 26 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**26 October 2010**

09:00 - 13:00 **Jean Lilensten** / *Laboratoire de Planetologie, Grenoble, France*  
**The Earth's Ionosphere and Thermosphere and Ionospheres of Other Planets**

13:00 - 14:00 --- Lunch Break ---

14:00 - 17:00 (Room: Adriatico Guest House Informatics Lab.)  
**Robert Bentley** / *University College London, UK*  
**The Role of Virtual Observatories in Space Weather and HELIO Use Cases**

17:00 - 18:30 (Room: Adriatico Guest House Informatics Lab.)  
**Free Practice**

**Wednesday, 27 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**27 October 2010**

09:00 - 10:50 **Ivan Kutiev** / *Bulgarian Academy of Science, Geophysical Institute, Sofia, Bulgaria*  
**The Earth's Plasmasphere and Topside Ionosphere**

10:50 - 11:10 --- Coffee Break ---

- 11:10 - 13:00**     **Ivan Kutiev**  
**Space Weather Empirical Modelling Techniques**
- 13:00 - 14:00**     --- Lunch Break ---
- 14:00 - 17:00**     (Room: Adriatico Guest House Informatics Lab.)  
**Alexi Glover** / *European Space Agency, Madrid, Spain*  
**Space Weather Monitoring for Space Weather Services**
- 17:00 - 18:30**     (Room: Adriatico Guest House Informatics Lab.)  
**Free Practice**

**Thursday, 28 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**28 October 2010**

- 09:00 - 10:50**     **Sandro Radicella** / *ICTP, Trieste, Italy*  
**Ionospheric Research with Satellite Derived TEC**
- 10:50 - 11:10**     --- Coffee Break ---
- 11:10 - 13:00**     **Ioanna Tsagouri \*** and **Bruno Zolesi \*\*** / \* *Institute for Space Applications and Remote Sensing, Athens, Greece;* \*\* *Istituto Nazionale di Geof*  
**Space Weather Empirical Modelling Techniques**
- 13:00 - 14:00**     --- Lunch Break ---
- 14:00 - 17:00**     (Room: Adriatico Guest House Informatics Lab.)  
**Anna Belehaki \*** and **Bruno Zolesi \*\*** / \* *Institute for Space Applications and Remote Sensing;* \*\* *Istituto Nazionale di Geofisica, Rome, Ita*  
**Ionospheric Active Experiments and Monitoring Systems**
- 17:00 - 18:30**     (Room: Adriatico Guest House Informatics Lab.)  
**Free Practice**

**Friday, 29 October 2010** (Room:Adriatico Guest House Kastler Lecture Hall)

**29 October 2010**

- 09:00 - 10:50**     **Esa Turunen** / *EISCAT Scientific Association, Kiruna, Sweden*  
**SpW Simulation Experiments on the Earth's Upper Atmosphere**
- 10:50 - 11:10**     --- Coffee Break ---
- 11:10 - 13:00**     **Mauro Messerotti**  
**Direct Effects of Solar Radio Weather**
- 13:00 - 14:00**     --- Lunch Break ---
- 14:00 - 15:00**     **Closing**