

REPORT ON THE 6TH COSPAR CAPACITY BUILDING WORKSHOP

Solar-Terrestrial Interactions: Instrumentation and Techniques (STIINTE)

Sinaia, June 4-16, 2007

The Committee for Space Research (COSPAR) initiated in 2001 a series of Capacity-Building Workshops with the objective to develop the scientific skills of a small group of young scientists from developing countries by a well-targeted and high level course on space data processing. The sixth workshop of this series took place in Sinaia (Romania, June 4-16, 2007), and was dedicated to the analysis of data from multisatellite space missions such as Cluster.

This workshop was attended by 24 very motivated PhD and post-doc students coming from Central and Eastern Europe: Romania, Hungary, Bulgaria, Czech Republic, Poland, Ukraine, Russia, Armenia, and Georgia. The scientific programme focused on various aspects of multisatellite missions, ranging from data analysis and instrument design to kinetic modelling, the analysis of boundaries, and the analysis of auroral processes. What the students learned during the morning lectures was directly put into practice in the afternoon, using hands-on multilevel computer sessions. Thanks to an excellent network of computers, the students had the opportunity to try out some the public data archives, to process wave-field and particle data, to carry out conjugate observations of auroral signatures, and much more.

After a first and already quite intensive week, the work culminated in the preparation of scientific projects by five teams. Each team had to address a specific problem in magnetospheric physics, gather the appropriate data or carry out the proper simulations, and get results. This led to very intensive team-work (24hrs a day), and provided an excellent opportunity for the students to interact, put together their competences and apply what had been learnt. On the last day of the school, each team defended its project to a panel of senior scientists who were participating at the simultaneous STIMM-2 (Solar Terrestrial Interactions from Microscales to global Models) meeting.

The lecture material of this workshop, together with the computer programmes and the data files are now available in a single repository, which will remain accessible; see the addresses below.

The lectures and computer sessions at this workshop were given by: Uli Auster (Braunschweig), Thierry Dudok de Wit (Orléans), Marius Echim (Bruxelles and Bucharest-Măgurele), Edita Georgescu (Garching), Stein Haaland (Bergen and Garching), Tomas Karlsson (Stockholm), Berndt Klecker (Garching), Joseph Lemaire (Bruxelles), Octav Marghita (Bucharest-Măgurele and Garching), Götz Paschmann (Garching), Ondřej Santolík (Prague), and Joachim Vogt (Bremen). Most of the lecturers also acted as tutors for the project teams. Adrian Blăgău (Garching and Bucharest-Măgurele) and Dragoş Constantinescu (Braunschweig and Bucharest-Măgurele) joined as tutors during the second half of the school.

Getting to interact so intensively with the students will certainly be a lasting experience. This school also revealed the need for a follow-up. Missions such as Cluster, FAST, and THEMIS have provided a wealth of high-quality data that are particularly appropriate for collaborative research, and could help young scientists from Central and Eastern Europe to interact more strongly with their colleagues from other countries. The STIINTE school has confirmed the need for this and hopefully will lead to a more regular series of such events.

The sponsors and supporters of STIINTE were: COSPAR (host), the Romanian Space Agency (ROSA), the Romanian Authority for Scientific Research (ANCS), ESA, URSI, UNESCO, the United Nations Office for Outer Space Affairs (UNOOSA), ICSU, ITT Visual Information Solutions, the Mathworks Inc., and the Phoenix Business computer company. Satellite data were generously provided by PI and CoI institutions involved in the Cluster, FAST, and THEMIS missions.

Costel Bunescu, Vlad Constantinescu, Horia Comișel, and Dragoș Constantinescu, together with Mariana Țeglet and Cosmin Rogojină, ensured the challenging setup and maintenance of the computer environment. Adrian Blăgău and Gabriel Voitcu had an instrumental contribution to the efficient solving of various logistic problems before and during the workshop. Thanks also to Cătălina Țeglet and Marius Stelea, for the reliable and well appreciated transport support.

The meeting took place in the COTA1400 hotel high above Sinaia, a small resort in the Carpathian mountains. We are grateful to the hotel personnel, particularly to Ionuț Bârlă, Dan Comărniceanu, Ovidiu Costea, Alin Dimache, and Radu Stănescu, for the high quality service provided, and for the prompt response to the specific needs of the workshop.

Finally, we would like to express our deepest gratitude to the members of the local organizing committee, to the Space Plasma and Magnetometry Group from the Institute for Space Sciences, Bucharest, for the preparation of this school, for their hospitality, and for highly appreciated social events. For sure we will not forget soon the thunderstorms and the close encounters with the bears !

For more information about the school and to access the school material, see

<http://www.faculty.jacobs-university.de/jvogt/cospar/cbw6/>
or <http://iss30.nipne.ro/cbw6/>

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