

## NEWSLETTER

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### **1. Editorial –**

#### *MESSAGE FROM THE PRESIDENT*

#### **SEASON'S GREETINGS!**



The year 2013 has been extremely busy with simultaneous activities for bringing the CAWSES-II program to its completion and defining the new program, VarSITI (Variability of the Sun and Its Terrestrial Impact).

SCOSTEP appreciates the hard work of many members of the solar terrestrial physics community in the successful completion of these two activities. SCOSTEP is grateful to the CAWSES-II co-chairs Susan Avery & Alan Rodger (2009-2011), and Toshitaka Tsuda & Joseph Davila (2011-2013) for guiding the CAWSES-II program toward a successful completion.

The International CAWSES-II Symposium held in Nagoya last month was the culmination of four years of CAWSES-II activities. The symposium was attended by 317 participants from 32 countries who presented nearly 400 papers. The sessions highlighted the achievements of the CAWSES-II task groups and helped disseminate the work done over the past several years. The Local Organizing Committee had planned everything meticulously, so the participants were able to focus on science and benefit from the deliberations. On behalf of SCOSTEP, I would like to express my deepest gratitude to all the individuals in the organizing committees and to the co-conveners who led the symposium to a great success.

Plans are underway to bring out two publications based on the presentations made at the CAWSES-II Symposium. Original research papers presented at the Symposium will be published as a special issue in Earth, Planets and Space (EPS), following the normal refereeing process. Review Articles summarizing the achievements of the CAWSES-II program will be published in Progress in Earth and Planetary Science (PEPS), a peer-reviewed open access e-journal newly started by the Japan Geoscience Union (JpGU). These review articles will serve as a permanent record of the CAWSES-II program.

These publications will follow the 21 papers to appear soon in the Bulletin of Astronomical Society of India. These papers were based on the International Symposium on Solar Terrestrial Physics (ISSTP) held in Pune, India last year.

The definition of the VarSITI program has been a community effort. The primary input was a set of 9 white papers received by the end of last year from the community spanning the interests of all the scientific unions and interdisciplinary bodies of ICSU represented in the SCOSTEP Bureau. Community input was also received during the ISSTP when a panel discussion was held on the next scientific program. After a thorough discussion among the Bureau members, a set of 30 experts from the SCOSTEP community was invited to a brainstorming organized by the International Space Science Institute (ISSI) in Bern, Switzerland during May 7-8, 2013. The experts who participated in the ISSI Forum included the authors of the white papers, the SCOSTEP Bureau, and international scientists. The 9 white papers and the community input were synthesized into four projects with the following underlying themes: (i) Solar evolution and solar-stellar connection to understand the dynamo process and extreme events, (ii) Origin, propagation, and Earth impact of transient events (flares, CMEs, CIRs, SEPs), (iii) Inner magnetosphere and its connection to geospace and the Sun, and (iv) Earth's atmosphere with energy input from above and below. In addition, the peculiar state of the Sun with its weak activity will figure in the new scientific program. The name VarSITI was proposed and accepted at the ISSI Forum. Further

community input was received during the CAWSES-II Symposium in Nagoya and the VarSITI Town Hall during the AGU fall meeting in San Francisco this month. The VarSITI program will be launched in the New Year 2014. SCOSTEP is happy that Katya Goergieva and Kazuo Shiokawa have agreed to lead the VarSITI program. I take this opportunity to thank Professors Roger M. Bonnet and Ruedi von Steiger for their financial and logistic support in conducting the ISSI Forum. I urge the community to get involved in this effort to make significant progress over the next five years. More details can be found in <http://varsiti.org>.

The Solar-Terrestrial Physics Symposia are the primary scientific meetings of SCOSTEP held approximately every 4 years. SCOSTEP has been conducting these symposia for over 40 years to showcase important results obtained from the long-term international scientific programs run by SCOSTEP. The 13<sup>th</sup> of this series (STP13) will be held in Xi'An, China during October 12-17, 2014. Please save the dates - the organizing committees are working hard to develop an excellent meeting and program. You are all invited to this important event.

Based on the recommendations of the awards subcommittee, SCOSTEP instituted three biennial awards to recognize the outstanding work performed by members of our science community: SCOSTEP Science Award, SCOSTEP Young Scientist Award, and SCOSTEP Service Award. A selection committee was appointed by the Bureau to process the nominations for the awards. The first SCOSTEP Service Award was given to Joe Haskell Allan at the Nagoya symposium last month. Joe served as SCOSTEP's Scientific Secretary for many years and is an outstanding scientist. Calls for nominations for the other two awards is out. Please help identify scientists with acknowledged eminence in the solar-terrestrial sciences by nominating them to the SCOSTEP awards.

SCOSTEP has entered into new partnership with other international organizations such as the International Living with a Star, the International Space Weather Initiative, and COSPAR in promoting science and capacity building activities. The International Council for Science (ICSU), the parent body of SCOSTEP has provided a generous grant to run Space Science Schools in the Asia-Pacific, Africa, and Latin America/Caribbean regions. The Asia-Pacific (Indonesia, 2012) and Africa (Kenya, 2013) schools have already been completed. The next Space

Science School will be held in Peru in September 2014 hosted by the Jicamarca Radio Observatory. Each of these schools trains about fifty students in solar terrestrial physics covering topics from the solar interior to Earth's surface.

SCOSTEP has completed one full year of functioning as a permanent observer to the United Nations Committee on Peaceful Uses of Outer Space (UNCOPUOS). SCOSTEP helps promote the Permanent Space Weather Agenda of UNCOPUOS and informs the Science and Technology Subcommittee of UNCOPUOS of the progress in space weather. Many of the National members of SCOSTEP are also members of UNCOPUOS, so we have the opportunity to explain the beauty and relevance of solar terrestrial physics to policy makers and governments.

SCOSTEP is under discussion to expand its capacity building activity to provide short-term training to graduate students and young scientists from developing countries. SCOSTEP will identify a set of laboratories from around the world that can host the young researchers from developing countries to learn specific techniques and undergo training that will help advance their career.

The General Council meeting in Nagoya approved the application of Nigeria as the newest National member of SCOSTEP. Apart from South Africa, Nigeria is the first sub-Saharan nation to become a SCOSTEP member. SCOSTEP is proud of this achievement and welcomes more African Nations to become National members.

The SCOSTEP Bureau has made rapid progress towards gender balance with three of the seven representatives being women, in addition to the Scientific Secretary. SCOSTEP has made rapid progress in all its three core activities: science, capacity building, and outreach. SCOSTEP is looking forward to face new challenges and accomplish a lot more in the coming years for the continued growth and expansion of SCOSTEP.

Wish you all the very best for a great 2014!

*Nat Gopalswamy*

## 2. Reports on Meetings

### 2.1 IAUS300 in Paris “Nature of solar prominences and their Role in Space Weather”- Paris, France, June 10- 14 2013

The IAUS300 symposium was dedicated to Einar Tandberg Hanssen. Jean Claude Pecker (Académie des Sciences) , S.T. Wu, R. Moore (Hunstville) and B. Schmieder (LESIA Observatoire de Paris) presented reviews of his work throughout his long career as a specialist in Solar Prominences and Principal Investigator of the UV instrument aboard the SMM.

175 scientists coming from 30 countries attended the meeting, which took place at the Ecole de Chimie in Paris. These included 36 from France, 25 from US, 17 from Spain, 15 from UK, and 14 from China.

More than 6 scientists came from each of the following countries: Russia, South Korea, Germany, Belgium, India, Japan. Between 1 and 2 participants came from : Iran, Poland, Argentina, Norway, Brazil, Czech Rep., Costa Rica, Tajikistan, Slovenia, Austria, Sweden, Romania, Slovakia, Mexico, Portugal, Serbia, Italy, Canada.

The meeting was sponsored by: IAU, KLSA/CAS from China, SCOSTEP, ESA; From France: SF2A, CNES, Observatoire de Paris, LESIA, IAS, PNST.

The meeting was divided into 4 Sessions: Prominences, Coronal Mass Ejections and Space Weather, Ejections from Stars, Instrumentation. There were 28 invited reviews, 48 contributions and 98 posters. The topics covered in the presentations included new observations coming from the Hinode and SDO satellites, which were summarized by Eric Priest..

The aim of this IAU Symposium was to present a review of the state-of-the-art of the theoretical, numerical modeling, as well as space-borne (Hinode, STEREO and SDO) and ground-based observational studies of prominences and their role in the dynamics of Sun-Earth relations. It also opened new scientific perspectives especially young scientists, working in the field. Prominences have an active role in the Space Weather. Magnetic clouds and the Interplanetary Coronal Mass Ejections (ICME) associated with erupting prominences can produce severe perturbations in the Earth environment. Moreover, huge prominences and CME have been detected in solar-type stars (and others) and exoplanets. It was interesting to examine the properties of solar prominences in a broader perspective, on one hand,

and to present the status of the sophisticated solar analysis to the concerned stellar community on the other hand. Eric Priest made a very lively summary.

*(Reported by B. Schmieder and S.T. Wu)*

### 2.2 International Study of Earth-Affecting Solar Transients (ISEST) workshop, Hvar, Croatia, June 17-20, 2013

The International Study of Earth-Affecting Solar Transients (ISEST) workshop was held in Hvar, Croatia, June 17-20, 2013. The goal of the workshop was to improve the scientific understanding of the origin and propagation of solar transients, and develop the prediction capacity of these transients' arrival and potential impact on the Earth.

This international workshop was attended by 27 people from 11 countries, including Austria, Belgium, China, Croatia, France, Germany, India, Iraq, Poland, Russia, and United States. In addition to the 27 participants on site, there were another 25 individuals signed up to participate in the program through online platform. The online platform was achieved through a WIKI website located at [http://solar.gmu.edu/heliophysics/index.php/Main\\_Page](http://solar.gmu.edu/heliophysics/index.php/Main_Page) (The meeting website is kept at <http://spaceweather.gmu.edu/meetings/ISEST/>)



**Photo 1:** Group Photo of ISEST Workshop, June 17-20, 2013, Hvar, Croatia

The four-day workshop was divided into two parts. The first part was for contributed presentations. The second part was for group work and discussions led by working group leaders. Four working groups were established: (1) Data Group, (2) Theory Group, (3) Simulation Group, and (4) Campaign Event Group. Individual presentations and working group

summaries can be found at

[http://solar.gmu.edu/heliophysics/index.php/ISEST\\_Presentations](http://solar.gmu.edu/heliophysics/index.php/ISEST_Presentations) .

The workshop made significant progress toward understanding and predicting solar transients through unprecedented international collaboration. It brought together several international research groups actively working in solar transients. The workshop became a unique platform for such collaboration. The workshop created a master event list for all Earth-affecting solar transients from 2007 to date. It has been agreed that the events in the master list will be analyzed as the participants provide data, and share the results obtained. Simulation group will carry out three-dimensional MHD simulations of these events, while the Theoretical group will make in-depth analysis of these events. In particular, the workshop identified multiple campaign events for a comprehensive collaborative study in the future.

The workshop was sponsored by SCOSTEP, Hvar Observatory and George Mason University. For more information on the meeting please see:

<http://spaceweather.gmu.edu/meetings/ISEST/>.

(Reported by J. Zhang and B. Vrsnak)

**2.3 10<sup>th</sup> AOGS (Asia Oceania Geosciences Society) meeting, Brisbane, Australia, June 24-28, 2013 – CAWSES II Session ST29.**  
<http://asiaoceania.org/aogs2013/public.asp?page=home.htm>

During the 10<sup>th</sup> AOGS meeting in Brisbane, Session ST29 “Understanding climate and weather of the Earth-Sun System” was dedicated to results from the SCOSTEP/CAWSES II program. The CAWSES II (Climate and Weather of the Sun-Earth System: Towards Solar Maximum) program has been a five-year (2009-2013) international program supported by SCOSTEP (Scientific Committee on Solar-Terrestrial Physics) established with the aim of addressing the complex characteristics of the Sun-Earth system, its variability and impacts on life and society. The Sun, heliosphere, magnetosphere, ionosphere and atmosphere act as a system of systems. The aim was to bring together worldwide resources, including space- and ground-based instruments, data archives, and the cyber infrastructure to understand the short-term (Space Weather) and long-term (Space Climate) processes throughout the Sun-Earth system under four major themes 1) What are the solar influences on

the Earth’s climate? 2) How will geospace respond to an altered climate? 3) How does short-term solar variability affect the geospace environment? What is the geospace response to variable inputs from the lower atmosphere?

The main objective of the ST29 was to highlight the coupling processes or coupled interactions in the Sun-Earth system, namely how the variability in one latitude /altitude/ region is coupled with the variability in other location(s)/region(s). These include coupling processes in the lower-upper atmosphere, magnetosphere-ionosphere, high-to-low latitude, Solar-wind / interplanetary medium to the magnetosphere, in addition to neutral – plasma coupling processes.

The main conveners of the ST29 session were Toshitaka Tsuda, (CAWSES Co-Chair, Kyoto University), Joseph M. Davila (CAWSES Co-Chair, NASA GSFC), with co-conveners: Nat Gopalswamy, (NASA GSFC), Franz-Josef Lübken (Leibniz Institute of Atmospheric Physics), and Marianna G. Shepherd (York University).

A total of 16 papers were included in ST29, held on June 27, 2013 with nine oral presentations. The session was started with a summary on recent CAWSES-II activities followed by national reports from India and Japan. Specific topics on coupling processes in the middle and upper atmosphere were presented from ground-based radar and optical measurements. A special focus was given on the atmospheric wave dynamics over Antarctica revealed with ST radar and lidars at the Davis station. The PANSY radar that has been recently installed at the Japanese Syowa base has shown its powerful capabilities in observing various phenomena in the Antarctic atmosphere. The PANSY radar is the largest atmospheric radar in the Antarctic. PANSY is a new plan to introduce the first MST (Mesosphere-Stratosphere-Troposphere)/IS (Incoherent Scatter) radar, which is a VHF monostatic pulse Doppler radar, in the Antarctic to Syowa Station as an important station observing the earth's environment with the aim to catch the climate change signals that the Antarctic atmosphere shows. The interaction of the neutral atmosphere with the ionosphere and magnetosphere as well as the global-scale atmospheric circulation including the low and middle latitude regions are also targets of PANSY.

(Reported by T. Tsuda and M. Shepherd)

**2.4 IconSpace 2013: International Conference on Space Science and Communication, Jul. 1-3, 2013, Malacca, Malaysia,**  
<http://www.ukm.my/iconspace2013/>

The 2013 IEEE International Conference on Space Science and Communication (IconSpace2013), organized by Universiti Kebangsaan Malaysia / IEEE Malaysia Section was held at the beautiful and historical city of Malacca, Malaysia from 1-3 July 2013. The IconSpace2013 with a theme “Facing the challenges of the solar maximum” is a premier forum for academicians, scientists, engineers and students to interact and disseminate information on the latest developments in space science, communication and technological advances. Conference presentations were submitted for publication in conference proceedings describing the state-of-the-art research and development. As practiced in the previous IconSpace conferences, the Proceedings of IconSpace-2013 with ISSN will be published in the IEEE Xplore database. Among the topics covered in the course of the conference were: Space weather, Upper atmosphere, Lower atmosphere, Pollution and climate change, Cosmology, Studies in the solar system, Space exploration and astronautics, Observational astronomy and instrumentation, Computational or statistical methods, Remote sensing applications, Environmental sciences, Satellite networks and networking, Satellite navigation and positioning systems, Satellite, nanosatellite and payload design, Satellite development and manufacturing, Space education, Space science outreach. The conferences also featured Solar Observation & Imaging Workshop, with Prof. Prof. Dato' Dr. Mohd Zambri Zainuddin (UM) as a key-note speaker. A complete brochure that consisted of synopsis and tentative of the workshop can be downloaded at <http://www.ukm.my/iconspace2013/>.

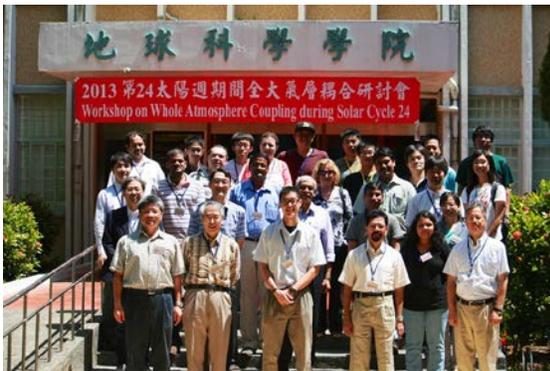
**2.5 Workshop on Whole Atmosphere Coupling during Solar Cycle 24 National Central University, Jhongli, Taiwan, July 14-17, 2013.**  
<http://www.ss.ncu.edu.tw/~watm24/>

Since the start of Solar Cycle 24 in 2008, there has been an explosion of scientific results highlighting the importance of vertical coupling between all layers of the atmosphere, as well as between the atmosphere as a whole and the Sun. From upper atmospheric and

ionospheric variability driven by atmospheric waves and tides excited by tropical rainfall in the troposphere, to potential signatures of magnetosphere and solar sources in the lower atmosphere, it is apparent that a system-wide approach incorporating scientists from all atmospheric regions is necessary to tackle the new challenges of both space and atmospheric weather and climate.

To help build new lines of communication between these different communities in CAWSES-II activities, and review recent advances affecting TG4, the Workshop on Whole Atmospheric Coupling during Solar Cycle 24 (WATM24) was held at National Central University (NCU) in Jhongli, Taiwan during July 14 – 17, 2013. Financial support was kindly provided by the Taiwan National Science Council and SCOSTEP, while facilities and additional support were provided by NCU and the students and staff of NCU. As a reminder on the importance of atmospheric variability, Taiwan was hit by Typhoon Soulik on July 12 and 13, causing flight delays and several fallen branches around the NCU campus. For attendees who arrived early, the typhoon provided the experience of seeing what  $50 \text{ m s}^{-1}$  winds look like at the bottom of the atmospheric column!

Despite the typhoon, attendance was strong with a total of 55 registered scientists and students, including 18 international attendees from institutions in the USA, Bulgaria, India, and Japan. 38 oral presentations were given, including both invited reports on new advances, as well as longer tutorial-style reviews of subjects pertaining to the CAWSES-II activities. Major themes covered throughout the four days of the workshop included tides in the thermosphere and ionosphere, ionosphere-thermosphere coupling, tropical rainfall variability responsible for tidal and wave excitation, downwards coupling between the stratosphere and troposphere, gravity wave-driven middle atmospheric oscillations, the global electric circuit, lithosphere-atmosphere coupling, severe space weather events driven by intense CMEs (coronal mass ejections), as well as middle and lower atmospheric changes driven by solar and anthropogenic sources. The talks were accompanied by enthusiastic discussions, as well as questions from students and scientists.



**Photo 2:** WATM24 participants who made it past Typhoon Soulik on day 1.

Dedicated discussion sessions were also held over lunch, as well as on the final afternoon of the workshop, where participants discussed future prospects for CAWSES-II science. Topics and proposals discussed included encouraging the development of constellations of small satellites as both educational and scientific platforms, prediction of severe space weather events, the need to engage with the tropospheric community, as well as questions concerning atmospheric coupling with the solid Earth and cryosphere.



**Photo 3:** Professor Kazuo Shiokawa (Nagoya U., Japan) leads a discussion on atmosphere-ionosphere coupling over lunch.

The workshop then adjourned as planned, just in time for Typhoon Cimaron to sweep by. Overall, the workshop was a success with new connections being made, while laying the ground work for future collaborations. An archive of presentations is being compiled, and is available.

*(Reported by L. Chang)*

## 2.5 SCOSTEP/ISWI School Nairobi, Kenya, Oct 21 – Nov 1, 2013

The 2013 Space Science School was held from October 21 to November 1, 2013 in Nairobi, Kenya. It was organized by Nat Gopalswamy (SCOSTEP), and Paul Baki (Technical University of Kenya) (School directors) with the help of the Local Organizing Committee: Paul Baki (Technical University of Kenya); Andrew Oduor (Maseno University); Harrison Amwayi (Technical University of Kenya). This was the second SCOSTEP Science School supported by ICSU (the 1<sup>st</sup> was held in 2012 in Indonesia). During the Science School a teacher workshop, led by Deborah Scherrer (Stanford University) was also held. The International Advisory Committee consisted of Dr. Sharafat Gadimova (UNOOSA); Prof. K. Yumoto (Japan); Dr. Madhulika Guhathakurta (NASA); Prof. Marius Potgieter (South Africa); Dr. Nicole Vilmer (France), and Prof. Vafi Doumbia (Cote D'Ivoire).

Key-note lectures were presented on: Sun in the Universe (Legesse Kebede, Ethiopia); Solar Interior (Jesper Schou, Germany); Solar Dynamo (Mark Miesch, USA); Solar Atmosphere and Solar Wind (John Raymond, USA); Solar Flares and Coronal Mass ejections (Nat Gopalswamy, USA); Energetic Particles from the Sun (Dalmiro Maia, Portugal); Cosmic Rays and climate (Nadir O. Hashim, Kenya); Space weather & Dynamos (Christine Amory Mazaudier, France); Solar wind-magnetosphere- ionosphere System (Nikolai Østgaard, Norway); Sudden Ionospheric Disturbance (Deborah Scherrer, USA); Basic Ionospheric Physics (Paul Baki, Kenya); Ionosphere and GNSS (Florence D'Ujanga, Uganda); Equatorial Ionosphere (Babatunde Rabi, Nigeria); Data Processing in Ionospheric Studies (Andrew Akala, Nigeria); Atmospheric Physics (F.-J. Lübken, Germany); Data Analysis techniques (Farzad Kamalabadi, USA); Sun and Climate (Chris Oludhe, Kenya).

There were 39 students from 7 countries (Ethiopia, Kenya, Uganda, Tanzania, Rwanda, Malawi and Nigeria) and 17 lecturers from 9 countries (Ethiopia, Germany, USA, Portugal, Kenya, France, Norway, Uganda, Nigeria). High School students from Brookhouse School learned about Space Situational Awareness and Space Weather.

The teacher workshop led by Deborah Scherrer had 20 participants from Kenya. The teachers'

Information on SCOSTEP is regularly updated at the SCOSTEP site:

<http://www.yorku.ca/scostep/>

workshop is to engage participants in hands-on activities so they can teach more effectively; There were about 20 participants in the teacher workshop. The teacher workshop on solar terrestrial relationship was combined with the astronomy teaching conducted by NASE (Network for Astronomy School Education). This is an activity by IAU Commission 46 <http://www.iau.org/education/commission46/nase/>.

In addition an instrument workshop was also held led by D. Maia, C. Monstein, C. Amory – Mazaudier, N. Gopalswamy, B. Rabiou, and D. Scherrer, as well as a public lecture to high school students on Space Situational Awareness and Space Weather (D. Maia); All lectures were followed by hands-on exercises; Discussion on SCOSTEP's VarSITI program (N. Gopalswamy), and VarSITI's ROSMIC program (F.-J. Lübken) were conducted. The discussion also addressed the participation of African countries in international organizations such as SCOSTEP, ISWI, ILWS; Discussion on African Geophysical Society (B. Rabiou).

*(Reported by P. Baki)*

## 2.6 International CAWSES Symposium– Nov 18 - 22, 2013, Nagoya, Japan

The International CAWSES-II Symposium was held at the Toyoda Auditorium of Nagoya University in Nagoya, Japan during November 18 - 22, 2013. There were 251 participants with 393 abstracts submitted from 32 countries: Argentina, Brazil, Bulgaria, Canada, China, Cote d'Ivoire, Czech Republic, Fiji Islands, Finland, France, Georgia, Germany, Greece, India, Indonesia, Japan, Korea, Malaysia, Mexico, Netherlands, New Zealand, Nigeria, Russia, Rwanda, Sweden, Switzerland, Taiwan, Thailand, Turkey, UK, USA, Vietnam. Six tutorial lectures were presented by T. Tsuda, L. Gray, J. Laštovička, H. Lühr /J. Park and P. Fox. Aspects of the research conducted during the CAWSES II program and the future research following the completion of the CAWSES program were addressed during 3 panel discussions, moderated by P. Martens, J. Oberheide and N. Gopalswamy. The Symposium provided an excellent opportunity to discuss the scientific accomplishments of the CAWSES-II program and a look forward to SCOSTEP's future programs.



**Photo 4:** Group photo of the CAWSES II Symposium participants (courtesy to Dr. Tsutsumi).

The symposium covered the major CAWSES-II tasks: 1) What are the solar influences on the Earth's climate? 2) How will geospace respond to an altered climate? 3) How does short-term solar variability affect the geospace environment? 4) What is the geospace response to variable inputs from the lower atmosphere? 5) Capacity Building, and 6) Informatics and eScience.

The main functions of CAWSES-II have been to help coordinate international activities in observations, modeling, and applications crucial to achieving this understanding, to involve scientists in both developed and developing countries, and to provide educational opportunities for students of all levels. The symposium featured keynotes/lectures which were of interest to all participants in the mornings and more specific sessions held in the afternoons. The program book can be found at [http://www.stelab.nagoya-u.ac.jp/cawses2013/Program\\_Book\\_CAWSESII\\_Symposium.pdf](http://www.stelab.nagoya-u.ac.jp/cawses2013/Program_Book_CAWSESII_Symposium.pdf), while the book with abstracts is at <http://www.stelab.nagoya-u.ac.jp/cawses2013/>

The Science Organizing Committee consisted of J. Borovsky, P. Fox, S. Gurubaran, T. Hirooka, M. Hoshino, T. Iyemori, J. Kozyra, K. Kusano (vice-chair), J. Laštovička, D. Marsh, K. Matthes, H. Motoyama, Y. Murayama, T. Obara, J. Oberheide, Y. Omura, T. Sakao, A. Seppälä, K. Shibata, T. Shimizu, I. Shinohara, K. Shiokawa, Y. Takahashi, S. Ueno, I. Usoskin, M. Yamamoto (chair), K. Yumoto. T. Nakamura, K. Shiokawa, M. Yamamoto and N. Gopalswamy were the symposium's conveners. Please see also [http://scostep.apps01.yorku.ca/wp-content/uploads/2010/11/CAWSES\\_report\\_20131118.pdf](http://scostep.apps01.yorku.ca/wp-content/uploads/2010/11/CAWSES_report_20131118.pdf)

### 3. SCOSTEP News

#### 3.1 New SCOSTEP Bureau members



**Dr. Annika Seppälä**, Finnish Meteorological Institute is the newest member of the SCOSTEP Bureau, representing SCAR (Scientific Committee on Antarctic Research). Dr. Seppälä replaced Dr. Maurizio Candidi. In 2012 Annika Seppälä was selected

for the EMS (European Meteorological Society) Young Scientist Award for her outstanding publication "Geomagnetic activity and polar surface air temperature variability".

Annika received her PhD in 2007. Her work treated the effects of solar storms and the associated solar charged particles on the neutral atmosphere. A major result of this research was the first confirmation from observational data that solar storms lead to significant amounts of NO<sub>x</sub> being produced in the polar mesosphere and stratosphere and that these amounts are maintained and transported downwards during the darkness of the polar night.

After finishing her PhD, Dr. A. Seppälä worked at the British Antarctic Survey in Cambridge, UK, for a number of years, including a two year Marie Curie Fellowship, before returning to the Finnish Meteorological Institute in 2011. She was recently awarded a Finnish Academy Fellowship to start her own research group looking into the potential climate connections from solar particle forcing. She has been also a co-leader of the SCOSTEP science program CAWSES-II (Climate And Weather of the Sun-Earth System) Task group 1 "What is the solar influence on climate?", and takes part in the COST-action "TOSCA" which is aiming to provide a complete assessment of the impact of solar variability on the Earth's climate.

#### 3.2 SCOSTEP Awards – Distinguished Service Medal

At a ceremony during the International CAWSES II Symposium in Nagoya, on November 20, 2013 the SCOSTEP *Distinguished Service Award* for 2013 was given to **Mr Joe Haskell Allen** for his outstanding service to the SCOSTEP community in particular and to the broader space science community in general.

Joe Allen's service to space research and to SCOSTEP began when he commenced his scientific

career in 1963 after he joined what was to become the NOAA Geophysical Data Center. It coincides with the development of SCOSTEP, first as an ICSU Inter-Union Commission, then a Special Committee in 1972 and finally as a Scientific Committee in 1978. Joe Allen played a key role in the first SCOSTEP international science program, the International Magnetospheric Study (IMS) that commenced in 1976. He established and ran the Central Information Office (IMSCIE) that help coordinate the various activities and bodies that were involved in IMS, for which he was given SCOSTEP's Service award for outstanding services to the International Magnetosphere Study in directing the IMS Information Exchange Office. (For the full citation of Mr. Joe H. Allen please see [http://www.yorku.ca/scostep/?page\\_id=1356](http://www.yorku.ca/scostep/?page_id=1356))



**Photo 6:** SCOSTEP's President Nat Gopalswamy presents the SCOSTEP medal for Distinguished Service to Mr. Joe H. Allen.

Perhaps Joe's most significant service to SCOSTEP was as Scientific Secretary, a position that he held from 1994 to 2006, making him one of the longest serving members in this position. It is difficult to overstate the importance of the Scientific Secretary to the successful running of SCOSTEP; the responsibilities are many and varied.

Joe H. Allen is awarded the SCOSTEP Distinguished Service Medal for his selfless service in supporting SCOSTEP programs. This service covers virtually all aspects of SCOSTEP activities, including serving as Scientific Secretary for 12 years and for his outstanding contributions to the solar-terrestrial community over nearly four decades.

### 3.3 SCOSTEP Bureau Meeting – November 18 2013, Nagoya

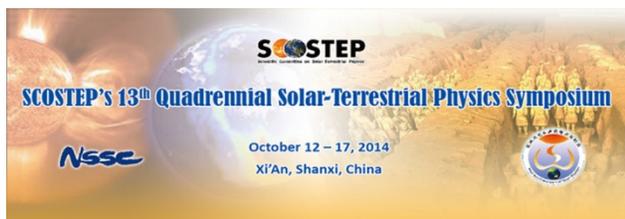
The second SCOSTEP Bureau meeting for 2013 was held on November 18, 2013, in Nagoya, Japan. In the agenda were the results from the CAWSES II program, including the preparation of review papers for the CAWSES II Special Issue of the Progress in Earth and Planetary Science (PEPS) peer-review e-journal. The organization of the new SCOSTEP program, VarSITI (2014-2018) and the upcoming STP<sub>13</sub> symposium in Xi'an, China, in October 2014 were also discussed.

### 3.4 SCOSTEP General Council meeting – November 22, 2013

SCOSTEP General Council (GC) meeting was held on November 22, 2013, in Nagoya, Japan. The SCOSTEP President and the Scientific Secretary presented a report on SCOSTEP's activities and achievements since the last GC meeting in July 2011, in Melbourne, Australia. The GC unanimously approved the applications for a membership to SCOSTEP by Brazil, Nigeria, and Switzerland.

### 3.5 SCOSTEP's 13<sup>th</sup> Quadrennial Symposium on Solar-Terrestrial Physics STP<sub>13</sub> – Xi'an, Shanxi, China

The STP<sub>13</sub> will be held in Xi'an, Shanxi, China during **October 13-17, 2014**. Information on the meeting can be found at <http://stp13.csp.escience.cn/>



### 3.6 SCOSTEP Town-Hall meeting on VarSITI – December 11, 2013

A town hall meeting on the new VarSITI program, organized by SCOSTEP, was held on December 11, 2013 in San Francisco, during the Fall meeting of the American Geophysical Union.

Presentations were made by SCOSTEP's President, N. Gopalswamy, the VarSITI Co-chair, K. Shiokawa and the VarSITI theme leaders P. Martens and J. Bortnik. A review of the VarSITI program can be found at [http://www.yorku.ca/scostep/?page\\_id=1426](http://www.yorku.ca/scostep/?page_id=1426) and [http://scostep.apps01.yorku.ca/wp-content/uploads/2013/08/SCOSTEP-VarSITI\\_Brochure2013.pdf](http://scostep.apps01.yorku.ca/wp-content/uploads/2013/08/SCOSTEP-VarSITI_Brochure2013.pdf)

### 3.7 US SCOSTEP Coordinating Group meeting – December 23, 2013

SCOSTEP's President N. Gopalswamy gave an update on SCOSTEP and its activities to the US SCOSTEP Coordinating Group. The presentation can be found at [http://scostep.apps01.yorku.ca/wp-content/uploads/2010/07/scostep\\_info\\_USCG.pdf](http://scostep.apps01.yorku.ca/wp-content/uploads/2010/07/scostep_info_USCG.pdf)

### 3.8 2014 International Geophysical Calendar

The ISES 2014 International Geophysical Calendar available by ftp from [ftp://ftp.ngdc.noaa.gov/STP/publications/igc\\_calendars/2014/](ftp://ftp.ngdc.noaa.gov/STP/publications/igc_calendars/2014/). The website for the International Geophysical Calendar, including recent versions, can be found at <http://www.ises-spaceweather.org>.

## 4. Upcoming Events in 2014

**January 13, 2014:** Kick-off of the VarSITI program – Global outreach via Internet

**February 10-21, 2014:** Fifty-first session, Scientific and Technical Subcommittee, UN COPUOS, Vienna, Austria

**March 20, 2014:** SCOSTEP Bureau meeting, Prague, Czech Republic

**July 28-31, 2014:** 8th Workshop on Long-Term Changes and Trends in the Atmosphere 2014, Clare College, Cambridge, United Kingdom

**July 28 – August 1, 2014:** 11<sup>th</sup> AOGS Meeting, Sapporo, Japan. **Deadline** for submission of abstracts – **February 11, 2014**

**August 2-10, 2014:** 40<sup>th</sup> COSPAR Scientific Assembly, Moscow, Russia. **Deadline** for submission of abstracts – **February 14, 2014**

**October 13 – 17, 2014:** 13<sup>th</sup> Quadrennial Symposium on Solar-Terrestrial Physics, STP13, Xi'an, China

**November 10-14, 2014:** 12<sup>th</sup> International Conference on Sub-storms (ICS-12), Ise-Shima, Japan.

## **5. General Information about SCOSTEP**

### **5.1 SCOSTEP Web Site**

Information on SCOSTEP can be found at:

<http://www.yorku.ca/scostep/>

### **5.2 SCOSTEP Contact**

The Scientific Secretary is the main point of contact for all matters concerning SCOSTEP.

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[http://www.yorku.ca/scostep/?page\\_id=135](http://www.yorku.ca/scostep/?page_id=135)