Issue3, November 2013

We hope the AOSWA framework helps
our activities for improving space weather activities.

http://aoswa.nict.go.jp/

AOSWA Link

In this Issue...

Your contribution is always welcome!

If you should wish to submit an article, you are greatly appreciated. The articles should be approximately 500 words and contain either figures or pictures. Also It is available for use as a means of spreading information, such as upcoming conference and so on. Your feedback is always welcome.

Contact : sw-project-office@ml.nict.go.jp

Recent Activity of DOI-Minting to Database by WDCs in Japan

Masahito Nosé
World Data Center for Geomagnetism, Kyoto

Recent electric journal papers are published with a DOI (digital object identifier) such as doi:10.1029/2012SW000785. DOI is a persistent name that is resolved into URL, where readers can obtain digital objects of the journal papers; for example, abstract, figures, and pdf files. Figure 1 shows an example that the above DOI is resolved to a URL of the publishing company. The DOI system was launched around 2000 and becomes popular these days so that DOI is ordinarily indicated in references and citations.

The next dvelopment of the DOI system is to extend it to database. It makes possible for researchers to cite the data used in a scientific publication, which is called "data citation". Data citation provides the following benefits:

* Readers can more easily locate the data used in the paper, obtain necessary information of the data (i.e., metadata), and validate the findings of the paper.
* Readers can also easily discover datasets which are relevant to their interests but has not been noticed.
* Data contributors can gain professional recognition and rewards for their published data in the same way as for traditional publications.
* Data centers can measure the impact of individual datasets and receive proper credit of their work.

Recognizing the importance of data citation, World Data Centers (WDCs) in Japan including WDC for Aurora (National Institute of Polar Research), WDC for Geomagnetism (Kyoto University), WDC for Ionosphere and Space Weather (National Institute of Information and Communications Technology), and WDC for Space Science Satellites (Japan Aerospace Exploration Agency) started discussion to mint DOI to their own database in August 2013. The discussion finds that Japan Link Center (JaLC) is a proper agency to register DOI-URL mapping, because JaLC aims at public information services to promote science and technology in Japan and it handles scientific and academic metadata and content from holders nationwide, including national institutes, universities (Figure 2). Two representatives of the above 4 WDCs are working closely with JaLC to define a registration scheme to implement the DOI-URL mapping. It is expected to start a pilot program to mint DOI to the database from the early 2014.

Figure 1. Resolving a DOI to a URL via a resolver service at www.doi.org.

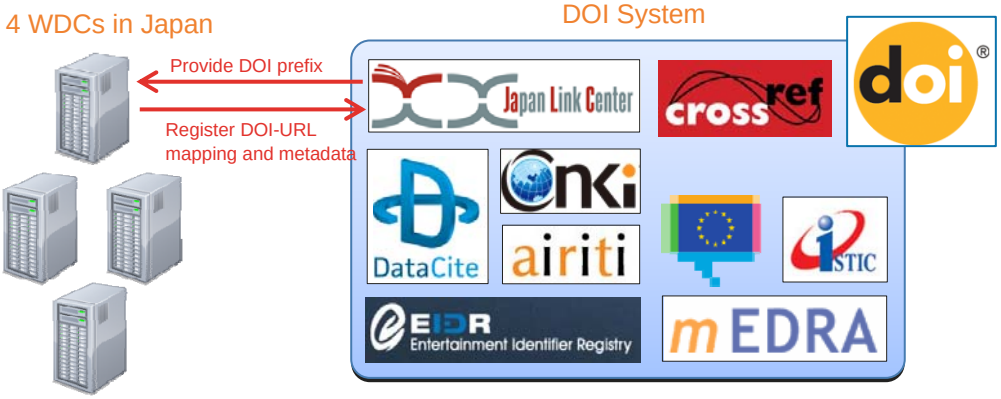

Figure 2. JaLC will serve as one of registration agencies of the DOI system for database of the 4 WDCs in Japan.

Institute of Geophysics (belonging to VAST), an active AOSWA Associate

Assoc. Prof. Ha Duyen Chau, Superior Researcher,
Institute of Geophysics, Vietnam Academy of Science and Technology

Institute of Geophysics (IGP) is one of 14 AOSWA Associates. It is a national Institute, belonging to the **VAST** (Vietnam Academy of Science and Technology), which includes 30 National Institutes and 7 Non-academic Units, 9 State-Own companies, over 20 production unions and 35 Units of Institutes, with 2649 permanent staff including 223 Profs and Assoc.Profs, 714 PhD. and 722 Masters of Sciences. VAST is responsible for realizing the functions of studying natural sciences and developing technologies based on key orientations by the State, in order to provide scientific ground for scientific and technological management, for the building of policies, strategies, planning and plans on socio-economic development, and for the training of high-quality scientific and technological human resources for the country according to laws.

Figure 1. Headquarter of Vietnam Academy of Science and Technology

IGP has the **functions** and **tasks** as: To observe and investigate geophysics; to manage the national geophysical stations network, to study the geophysical fields in Vietnam, the structure, geodynamics and evolution of the Earth, to apply geophysical methods to sound mineral resources, to study space weather sciences and to train PhD's in Geophysics.

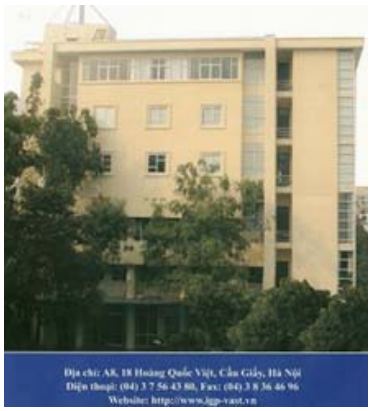

Figure 2. Headquarter of the Institute of Geophysics

As organization structure, it includes 7 laboratories: Seismology, Seismological Network, Geomagnetism and Ionosphere, Applied Geophysics, Geodynamics, Atmospheric Physics, Tectonics Physics, with 35 seismic stations, 4 geomagnetic observatories, 2 ionospheric observatory, 3 atmospheric physics stations, 2 stations to study the Earth's crust deformation. As **human resources**, it has more than 110 members, among them more than 20 Associate Professors and PhD, 25 Masters, 25 Bachelors…

In 2005, an international cooperation program on Ionospheric studies has been signed between VAST and the NICT (National Institute of Information and Communications Technology of Japan) in the **frame of the SEALION program.** Through this program, many modern equipments were installed in the magnetic and ionospheric observatories of Vietnam and many activities were realized in the studies of space weather:

- From 12/10/2005 : Installed Digital FMCW ionosonde at Phu Thuy observatory;
- From 1/12/2005 : Installed Digital FMCW ionosonde at Bac Lieu observatory;
- From 1/7/2007: Installed GPS-Scintillation at Phu Thuy observatory;
- 26-27/III/2007: NICT-VAST Workshop for Future Cooperating Project in Hanoi.
- 8/2009: Satellite beacon experiment
- From 2010: Joined to AOSWA

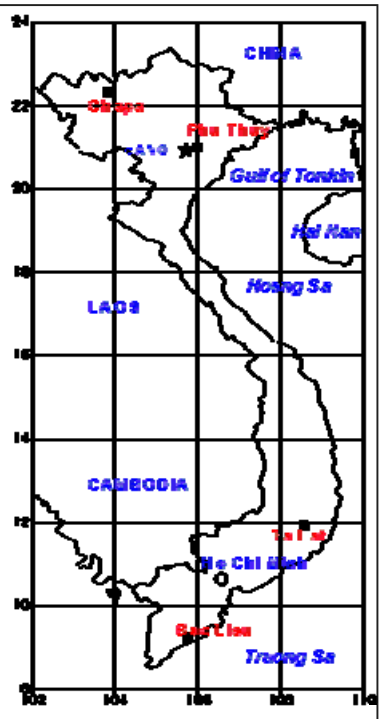

Figure 3. Magnetic and Ionospheric observatories in Vietnam

Figure 4. NICT-VAST Workshop for Future Cooperating Project in Hanoi

Some typical publications issued from SEALION program:

1) C. A-Mazaudier, C. Ha Duyen, et al., 2006. Sun-Earth System Interaction studies over Vietnam: an international cooperative project. Annales Geophysicae. Nr 24, Vol. 1, 3313-3327, ISSN: 0992-7689
2) Ha Duyen Chau, et al, 2007. Impact of the magnetic storms on the power-line transportation network and petrol and gas pipe-lines system in Vietnam. International Workshop "NICT-VAST Workshop for Future Cooperating Project Using Information and Communications Technology, Hanoi, March 26-27 , 2007.
3) T. Maruyama, C. Ha Duyen et al., Low latitude ionosphere – thermosphere dynamics studies with ionosonde chain in Southest Asia, Annales Geophysicae, Nr 25, 1569-1577, ISSN: 0992-7689, 2007.
4) Susumu Saito, Chau Ha Duyen et al, Observations of small-to large-scale ionospheric irregularities associated with plasma bubbles with a transequatorial HF propagation experiment and spaced GPS receivers, J.G.R, vol. 113, Al12313, doi:10.1029/2008 JAO13149, 2008. ISSN: 0148-0227, 2008.
5) Roland T. Tsunoda, Mamoru Yamamoto, Takuya Tsugawa, Ha Duyen Chau and Tsutomu Nagatsuma et al, On seeding, large-scale wave structure, equatorial spread F, and scintillations over Vietnam, Geophysical Research Letters, ISSN 0094-8276, VOL. 38, LXXXXX, doi:10.1029/2011GL049173, 2011.

The Report of 2nd Asia-Oceania Space Weather Alliance Workshop in Kunming, China

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The 2nd Asia-Oceania Space Weather Alliance (AOSWA) workshop was successfully held on Nov. 4th – 7th, 2013 in Kunming, China. The workshop was hosted and sponsored by the National Space Science Center (NSSC) of the Chinese Academy of Sciences, and was co-organized by the National Astronomical Observatories (NAO) and by the Yunnan Astronomical Observatory (YNAO) of Chinese Academy of Sciences.

The workshop began with the opening address from Dr. Ji WU, the Director General of NSSC, followed by the greeting from Dr. Toshio Iguchi, the Director General of NICT Applied Electromagnetic Research Institute. 59 oral and 30 poster presentations were arranged on 5 different sessions: Space Weather Research and Exploration, Space Weather Forecasting and Modeling, Space Weather Research to Operations, Space Weather Research on Solar Activities, and Space Weather Research on Ionosphere and Thermosphere.

Figure 1: Workshop Chair: Dr. Ji WU

Figure 2: Workshop Co-Chair: Dr. Toshio Iguchi

Figure3. Opening Ceremony

A total of 99 experts and scholars from 11 countries attended the workshop. They were coming from 29 institutions and agencies, such as Chinese Academy of Sciences (CAS), National Institute of Information and Communications Technology of Japan (NICT), Korean Space Weather Center (KSWC), NOAA Space Weather Prediction Center of USA (NOAA SWPC), Ionospheric Prediction Service of Australia (IPS) , Arctic and Antarctic Research Institute of Russia, Belgium Royal Observatory, National Physical Lab of India, Institutes of Geophysics of Vietnam, King Mongkut's Institute of Technology of Thailand, National Institute of Aeronautics and Space of Indonesia (LAPAN), etc.

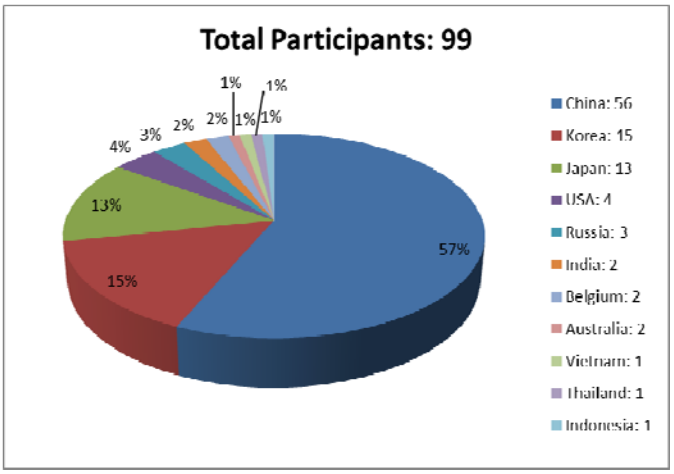

Figure4. The distribution of Participants

The purpose of this workshop is to promote the regional linkage and information sharing of operation and research on space environment by bringing together members of the Asian-Oceania scientific community as well as other international organizations concerning with space weather. It will also provide an opportunity in which various communities can come and discuss recent achievements of observational, theoretical, modeling, forecasting, and application addressing the research areas of space weather and environment.

Figure 5: poster session

Figure 6: Technical Tour at Fuxian Solar Observatory

Figure 7: the group photo for bus # 1 at Stone Forest

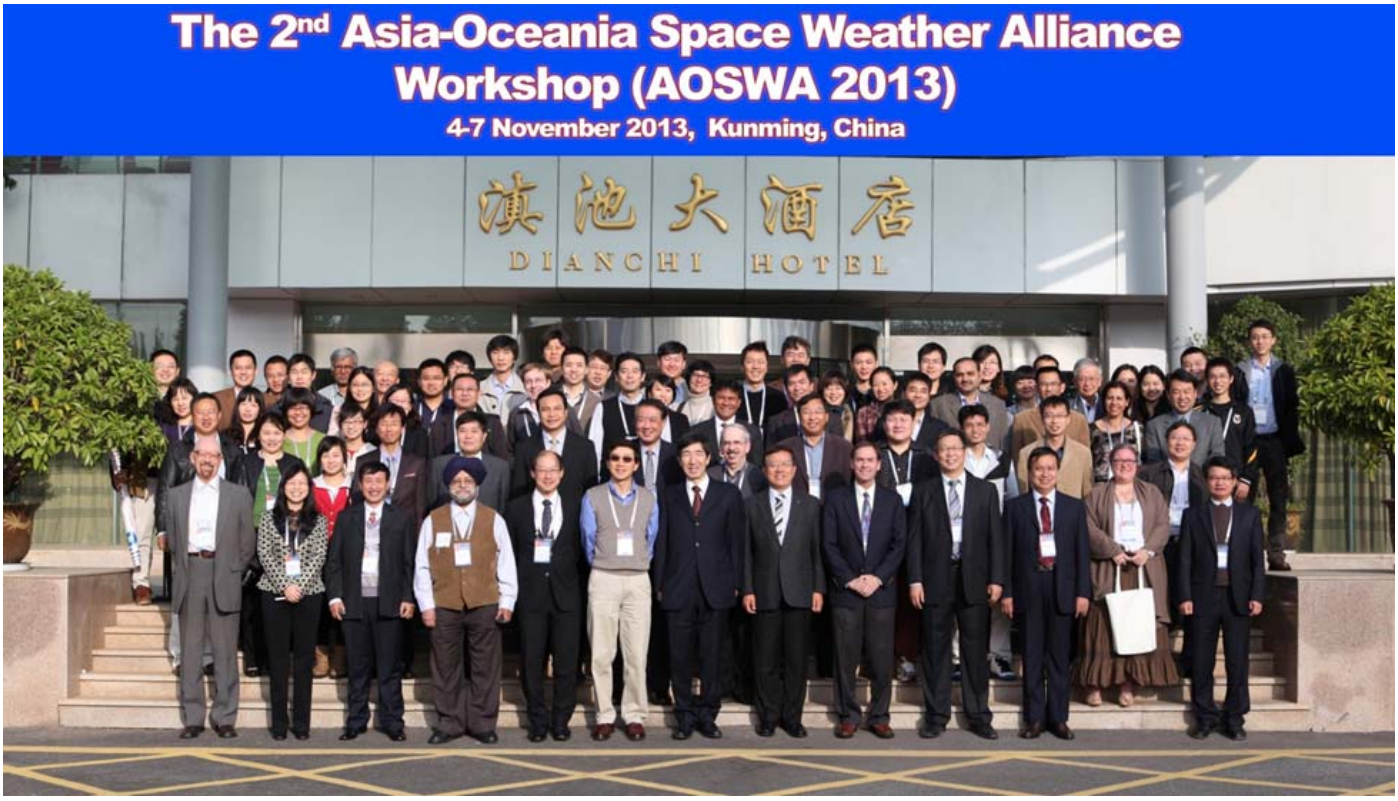

Figure 8: the group photo

- The 2nd AOSWA workshop 2013 program and presentation materials can be download here http://www.aoswa2013.cn/dct/page/65580

Introduction of 3 types of AOSWA communication tool

AOSWA Secretariat Office, NICT

As you may know, NICT Space Weather and Environment Informatics Laboratory has been managing AOSWA Secretariat Office. The secretariat functions support organizing the meetings and making practical arrangements for them, maintaining registries of associates and keeping them informed about matters related to the AOSWA framework. On behalf of those supports, we are managing 3 types of communication tools, **the Mailing list, the newsletter and the website.** All tools are for encouraging communication among associates, which create a mutual understanding that leads to a better collaboration.

Mailing List

Firstly we introduce about **The mailing list "AOSWA@ml.nict.go.jp"** The list is open only to the AOSWA Associates who have been registered. By means of it , we can quickly and effectively distribute messages to all associate's members. It is a useful tool for sharing information such as conference information and the newsletter delivery and so on...

If you are not a subscriber yet, please contact the secretariat and we will give you the registration form.

AOSWA Link the news letter

The second tool is **AOSWA Link the newsletter.** It has been published since January 2013 and every three months we try to publish a new issue.

The former issue of AOSWA Link

The Article is always for encouraging communication among Associates. So the topic might be your research approach, introduction of your institute, AOSWA activity and conference information that will be held in your country. If you wish to submit an article, you are greatly appreciated. The suggested length is 500 words or more containing either figures or pictures. We ask authors to submit a face photo to make the article visually attractive to readers.

AOSWA Website

The last one is **AOSWA website.** Besides the website of the specific workshops, the website of AOSWA Secretariat is online. It was redesigned and launched just before the 2nd workshop in Oct 2013. As it is redesigned to increase the site profit, the focus is not only for associates, but all visitors, including the users, interested in our activities can encounter the sites as well.

The AOSWA Website
http://aoswa.nict.go.jp/

Therefore all contents are supposed to be understood AOSWA clear frameworks, such as lists of associates, records of workshops, newsletter materials and contact information and so on. Also new rich image and smooth navigations will help to lead to the preferable contents easily.

Now this site is in the first phase of construction, which is a really simple introduction of our activities. In the next step we should discuss the idea of contents to increase more benefit to the Associates, such as download system or shared information system etc.

We hope this website is to provide a venue for Associates to connect with each other and to disseminate information, which build strong tie among us.

Editor's notes

Yuko Uchida, Editor of AOSWA LINK

I joined the 2nd AOSWA Workshop in Kunming as a secretary of AOSWA Office and I can say it was one of the best conference I have ever joined, thanks to such a great hospitality of NSSC, NAO and YNAO, China.

Actually the collaboration and the communication among the people concerned with AOSWA are so active and really impressive. There were a pleasant atmosphere for fruitful scientific discussion between all participants. Again I feel honored that I can support your communication and get involved in the AOSWA activities.

So far, there might be high possibility to have the 3rd Workshop in Fukuoka, Japan. Fukuoka is located in the Kyusyu island, southwest part of Japan, which offers modern city ,natural beauty and fine weather. I bet it would be a fabulous experience for all of you.

I look forward to seeing you in next workshop !

In front of Telescope of Fuxian Solar Observatory with Director Ishii.

AOSWA LINK is issued by AOSWA Secretariat

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