SCOSTEP-WDS Workshop

Global Data Activities for the Study of Solar-Terrestrial Variability

28-30 September 2015

National Institute of Information and Communications Technology (NICT), Tokyo, Japan



ome Programme Venue Committees Schedule Contact Links

SCOSTEP-WDS Workshop on Global Data Activities for the Study of Solar-Terrestrial Variability

Takashi Watanabe
WDS International Programme Office
NICT
STELAB, Nagoya Univ.





Variability of the Sun and Its Terrestrial Impact

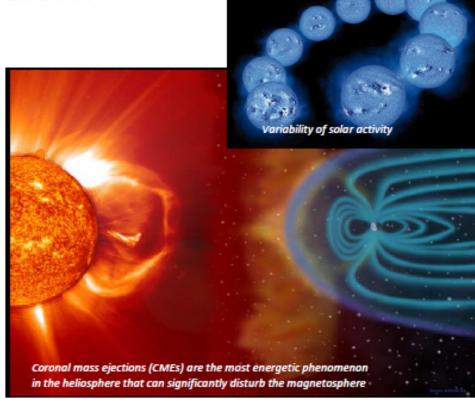
VarSITI

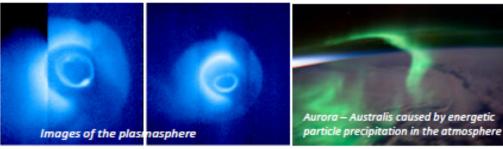
SCOSTEP is an ICSU Interdisciplinary Body tasked with the responsibility to organize long-term scientific programs in solar terrestrial physics and *Variability of the Sun and Its Terrestrial Impact (VarSITI)* is that program for the period 2014 – 2018. VarSITI was defined based on a community effort in the form of a forum organized by the International Space Science Institute (ISSI) in Bern in May 2013. The VarSITI program will strive for international collaboration in data analysis, modeling, and theory to understand how the solar variability affects Earth. The VarSITI program will have four scientific elements that address solar-terrestrial problems keeping the current low solar activity as the common thread:

- 1) SEE (Solar evolution and Extrema)
- ISEST (International Study of Earth-affecting Solar Transients/MiniMax24)
- SPeCIMEN (Specification and Prediction of the Coupled Inner-Magnetospheric Environment), and
- ROSMIC (Role Of the Sun and the Middle atmosphere/ thermosphere/ionosphere In Climate).

VarSITI Co-Chairs:

Prof. Katya Georgieva, Bulgaria Prof. Kazuo Shiokawa, Japan





Data Systems in SCOSTEP Community (partial listing)

- Virtual Observatories
- > SPASE
- > SPIDER
- > ESPAS
- > IUGONET
- > WDC for STP, Moscow
- > Data systems operated by individual scientific projects

The ICSU World Data System

The International Council for Science's World Data System (ICSU-WDS) is striving to build a worldwide 'community of excellence' for scientific data by certifying Member Organizations—holders and providers of data or data products—from wide-ranging fields using internationally recognized standards. WDS Members are the building blocks of searchable common directories and catalogues with which to form a data system that is both

interoperable and distributed.

TRUSTED

DATA SERVICES

FOR GLOBAL

SCIENCE

Goals

- Enable universal and equitable access to quality-assured scientific data, services, products and information
- Ensure long-term data stewardship
- Foster compliance to agreed-upon data standards and conventions
- Provide mechanisms to facilitate and improve access to data and data products

Initial System Architecture & Functional Structure

ICSU-WDS is an interdisciplinary global federated system of long-term data archives and data services. Roles in the system encompass the entire data management chain, from data production to publication, and WDS Members can hold a number of these roles. Emphasis is also placed on linking with data production facilities, in particular, science projects and programmes.

WORLD DATA SYSTEM

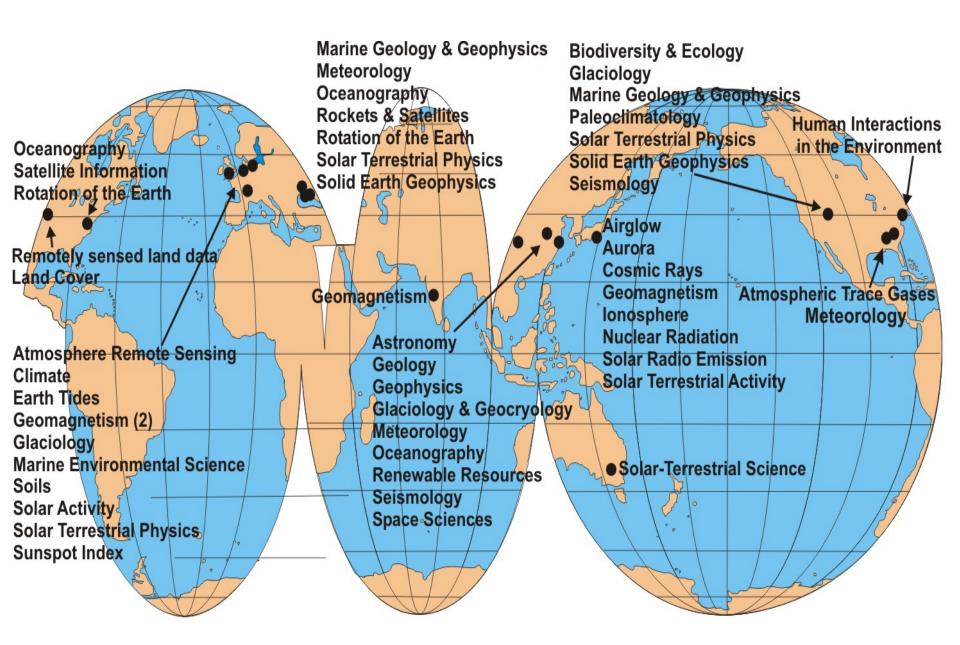
Membership & Certification

Different membership-types are available for organizations, depending on their activities and interests. As of July 2014, ICSU-WDS has accredited **66 Members** and co-opted another **20**:

- **56 Regular Members**—organizations dealing directly with data curation and data analysis services.
- 10 Network Members—umbrella organizations representing groups of data centres and/or data services.
- 3 Partner Members organizations that do not deal directly with data, but contribute funding or other support to ICSU-WDS.
- 17 Associate Members—organizations interested in the WDS endeavour, but that do not contribute direct funding or other material support.



ICSU WDS Regular and Network Members (07/2014)



World Data Centers

SCOSTEP-Related WDS Members (Feb. 2015)

Alaska Satellite Facility				
Atmospheric Science Data Center (Distributed				
Active Archive Center)				
Australian Antarctic Data Centre				
Canadian Astronomy Data Centre/ Canadian				
Virtual Observatory				
Centre de Donnees astronomiques de Strasbourg (CDS)				
Chinese Astronomical Data Center				
Chinese Space Science Data Center				
DKRZ- WDC Climate				
Environment Climate Data Sweden				
Goddard Earth Sciences Data and Information				
Services Center (GES DISC)				
INTERMAGNET				
INTERMAGNET				
INTERMAGNET International Service of Geomagnetic Indices				
INTERMAGNET International Service of Geomagnetic Indices International Space Environment Service (ISES) International Virtual Observatory Alliance (IVOA) IPS Radio and Space Services				
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INTERMAGNET International Service of Geomagnetic Indices International Space Environment Service (ISES) International Virtual Observatory Alliance (IVOA) IPS Radio and Space Services Italian Centre for Astronomical Archive - IA2				

WDC - Geoinformatics and Sustainable Dev	elopment
WDC - Geomagnetism, Copenhagen	
WDC - Geomagnetism, Edinburgh	
WDC - Geomagnetism, Kyoto	
WDC - Geomagnetism, Mumbai	
WDC - Ionosphere and Space Weather	
WDC - Meteorology, Asheville	
WDC - Meteorology, Obninsk	
WDC - Remote Sensing of the Atmosphere	
WDC - Rockets, Satellites and Earth Rotation	n
WDC - Solar Activity / BASS2000	
WDC - Solar-Terrestrial Physics, Moscow	
WDC - Sunspot Index and Long-term Solar	Observations
(SILSO)	
World Data Services for Geophysics (NGDC)
WDC for Cosmic Rays	
WDC for Aurora	
WDC for Scientific Satellites	

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Variability of the Sun and Its Terrestrial Impact (VarSITI) SEE / ISEST-Minimax24 / SPeCIMEN / ROSMIC http://www.varsiti.org/

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VarSITI Newsletter

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Article 3



Collaboration between ICSU World Data System and SCOSTEP/VarSITI

T. Watanabe^{1,2,3} and R. Edmunds¹

¹ICSU WDS International Progeamme Office, Tokyo, Japan

²Solar-Terrestrial Environment Laboratory, Nagoya University, Nagoya, Japan

³National Institute of Information and Communications Technology, Tokyo, Japan



Takashi Watanabe



Rorie Edmunds

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Web Page: http://isds.nict.go.jp/scostep-wds.2015.org/

Contact Point: contact-scostep-wds@icsu-wds.org

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Dates: 28-30 September 2015

Place: National Institute of Information and

Communications Technology (NICT), Tokyo

Principal Sponcers: SCOSTEP, WDS

Co-Sponcers: STEL, NIPR, NICT



Important Dates

Abstract Submission:

1 April – 1 August 2015

Registration:

1 April - 15 September 2015

Proceedings Submission:

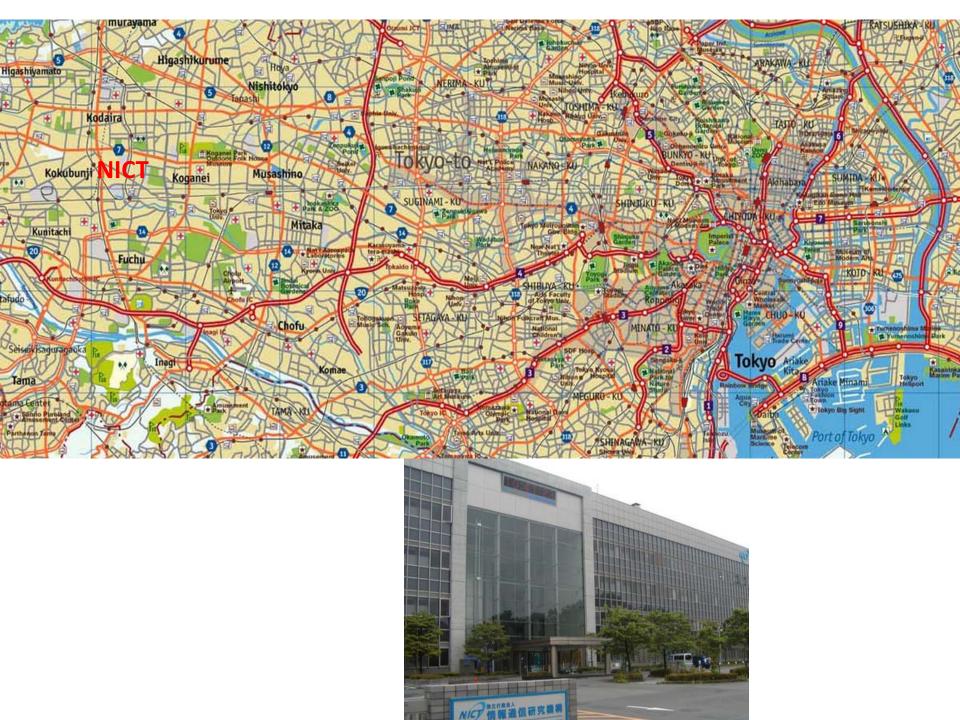
1 October 2015 - 31 January 2016

information technology. Data analysis of VarSITI Campaign Intervals will be another importa-









SCOPE

- ☐ Stimulate collaboration between SCOSTEP and WDS in long-term archiving and opening of quality-assessed data produced by VarSITI and related programs
- Build a "feed-back loop" between data providers (+archivers) and data users
- □ Introduce advanced information technologies to data-oriented activities under VarSITI

Scientific Organizing Committee (* Committee Chairs)

T. Watanabe* ICSU WDS International Programme Office

K. Shiokawa* Solar-Terrestrial Environment laboratory, Nagoya University

J. Zhang* George Mason University

J.B. Minster Scripps Institute of Oceanography, University of California

M. Mustapha ICSU WDS International Programme Office

V. Kopylov All-Russian Research Institute of Hydrometeorological Information-World Data Center

W. Hugo South African Environmental Observatory Network
T. Iyemori WDC for Geomagnetism, Kyoto, Kyoto University

N. Gopalswamy
V. Obridko
JZMIRAN, Russian Academy of Science
National Institute of Polar Research

Y. Miyoshi Solar-Terrestrial Environment laboratory, Nagoya University

Local Organizing Committee (* Committee Chairs)

K. ShiokawaN. Nishitani*Solar-terrestrial Environment Laboratory, Nagoya University

M. Mokrane
 T. Watanabe*
 WDS-International Programme Office
 R. Edmunds
 WDS-International Programme Office

Y. Murayama National Institute of Information and Communications Technology
K. Murata National Institute of Information and Communications Technology
S. Watari National Institute of Information and Communications Technology

T. Nakamura* National Institute of Polar Research

T. Iyemori WDC for Geomagnetism, Kyoto, Kyoto University

Y. Ebihara Research Institute for Sustainable Humanosphere, Kyoto University

S. Abe International Center for Space Weather Science and Education, Kyushu University

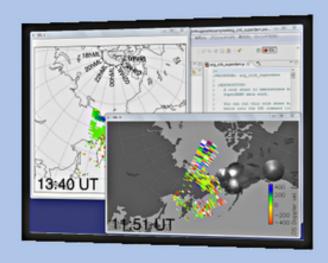
General structure of the workshop (TBD):

- (S1) Data activity of VarSITI and WDS
- (S2) Data-oriented information technology
- (S3) Reports of data activities by participants of VarSITI and WDS
- (S4) VarSITI data analysis session
- (S5) Collaboration of WDS and SCOSTEP/VarSITI

Date (2015)	AM	PM	Evening
27 Sep. (SUN)			Registration Icebreaker
28 Sep. (MON)	Data activity of VarSITI and WDS (S1)	Data-oriented Information Technology (S2)	Meetings
29 Sep. (TUE)	Reports of data activities by participants of VarSITI and WDS (S3)	VarSITI Data analysis Session (S4)	Informal Banquet
30 Sep. (WED)	VarSITI Data analysis Session (S4)	Collaboration of WDS and SCOSTEP/VarSITI (S5)	

For radar data analysis UDAS

SuperDARN, EISCAT, MU, and so forth >>



@Tweets by @iugonet

- Information -

New IUGONET pamphlet has been released. (Apr 1, 2014)
UDAS v3.00.3 has been released. (Dec 28, 2013)
Join IUGONET users mailing list.

IUGONET provides new research platforms, <u>metadata database</u> and <u>analysis software UDAS</u>, to facilitate the use and distribution of the long-term observation data for upper atmospheric physics that have been archived by the IUGONET members and collaborators. The efforts of IUGONET not only lead to the establishment of the research platforms to better understand global upper atmospheric phenomena, but also help to facilitate interdisciplinary researches.



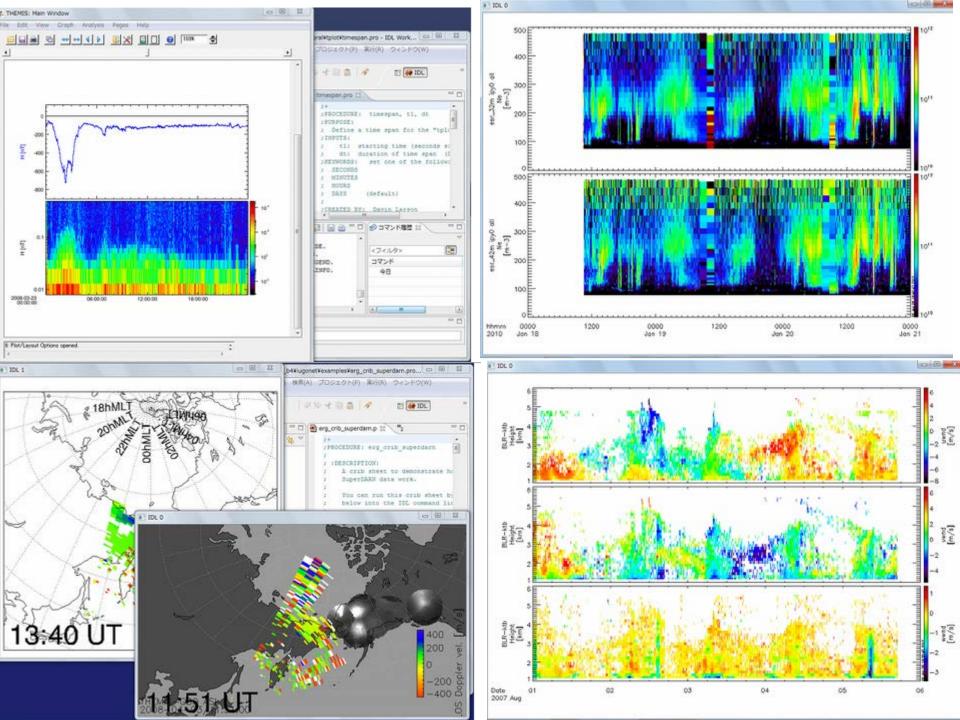






Contact on this page: lugonet2009@gmail.com

last update: 2014-04-01



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This joint workshop of the Scientific Committee on Solar-Terrestrial Physics (SCOSTEP) and the ICSU World Data System (ICSU-WDS) on 'data' will be held on 28–30 September 2015 in Tokyo, Japan. The principal objective of the workshop is to stimulate interaction among data providers (WDS members, data centres, data networks, etc.), data scientists, and data-oriented researchers of the SCOSTEP community. The new VarSITI* program of SCOSTEP will strive for international collaboration in data analysis, modelling, and theory to understand how the solar variability affects the Earth's environment. Long-term preservation and provision of quality-assessed data and information will be common objectives for SCOSTEP and WDS. Development of advanced data systems to enable scientists to perform multidisciplinary data-analysis will be another common target. This workshop will be a remarkable opportunity to initiate close collaboration between SCOSTEP and WDS to promote our data-oriented activities by introducing outcomes from the information technology. Data analysis of VarSITI Campaign Intervals will be another important





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