

Item 11. Technical Presentation on the "International Center for Space Weather Science and Education (ICSWSE) of Kyushu University "



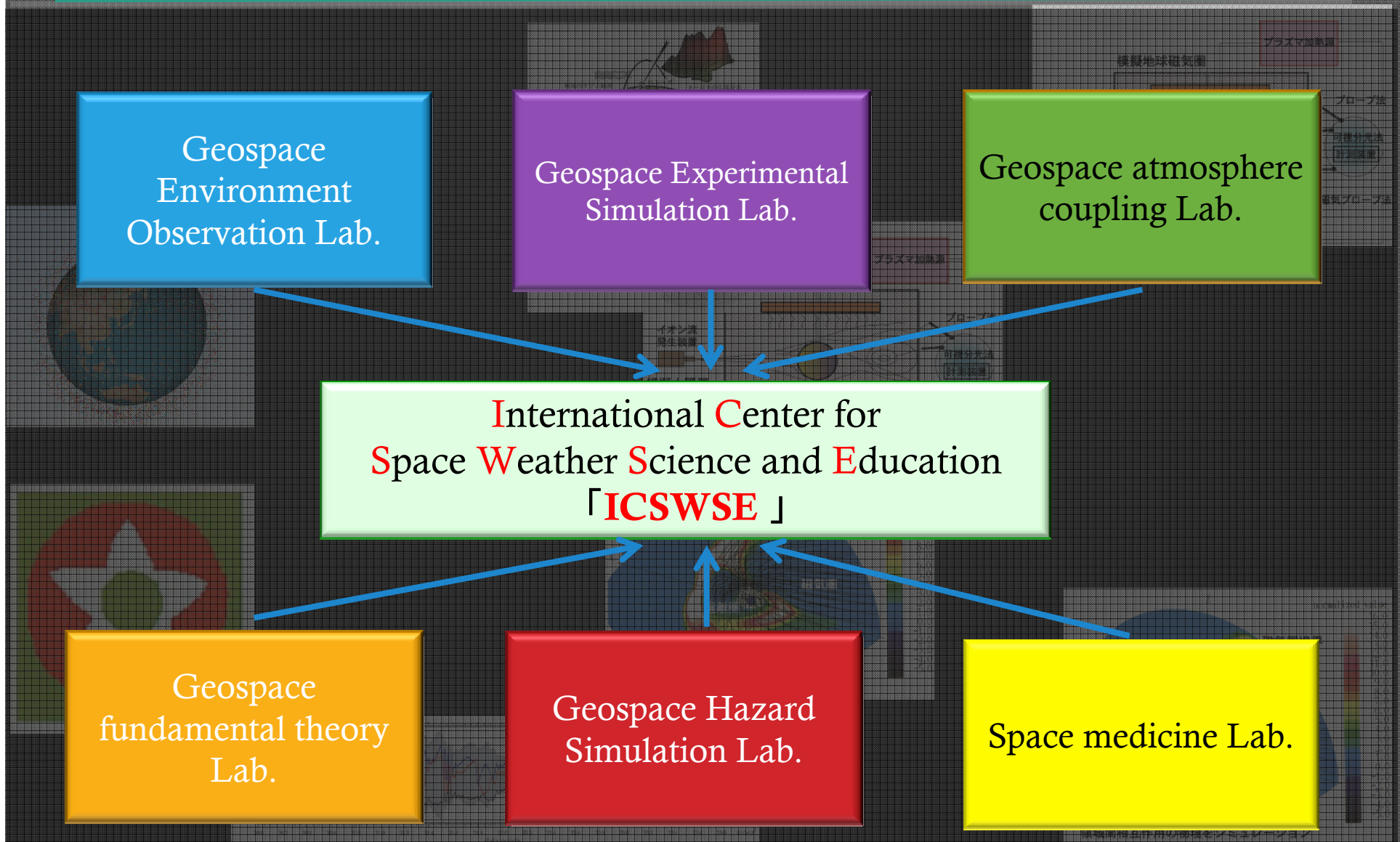
ICSWSE, Kyushu University, JAPAN

International Center for Space Weather Science and Education (ICSWSE) from April 2012 -



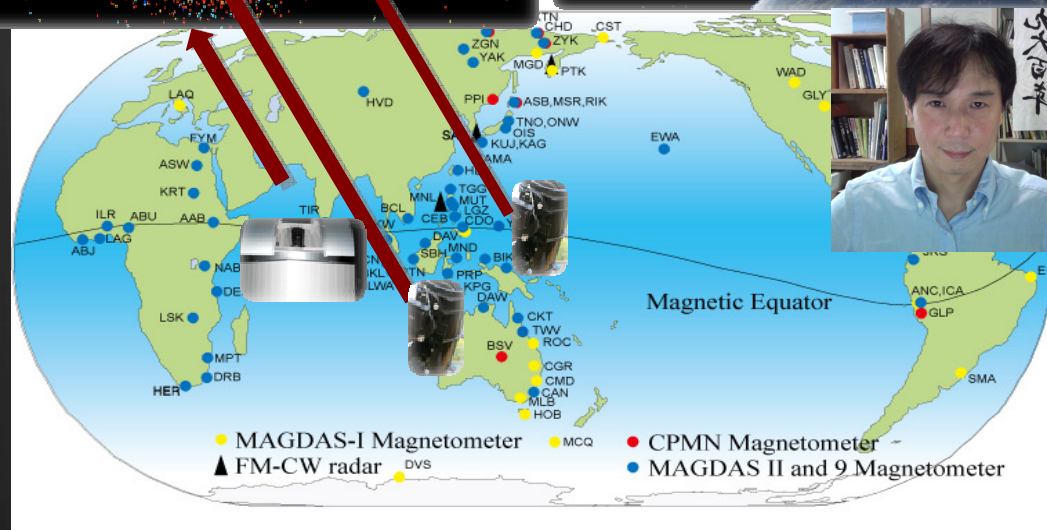
UNITED NATIONS
Office for Outer Space Affairs

Research divisions of ICSWSE...



DEBDAS

(DEBris Data Acquisition System)



Prof. Yoshikawa

MAGDAS

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(Magnetic Data Acquisition System)

Practical Education through DEBDAS

❁ DEBDAS

- ❁ Collaborative measurements in combination of robotic telescopes and small satellites
- ❁ Space environmental awareness and space science

❁ Practical Astronomy

- ❁ Planning and observation, processing and detection, and origin identification

❁ Space Engineering

- ❁ Small satellite design, production, and operation



MAGDAS/CPMN started in 2003 (MAGnetic Data Acquisition System/Circum pan Pacific Magnetometer Array)



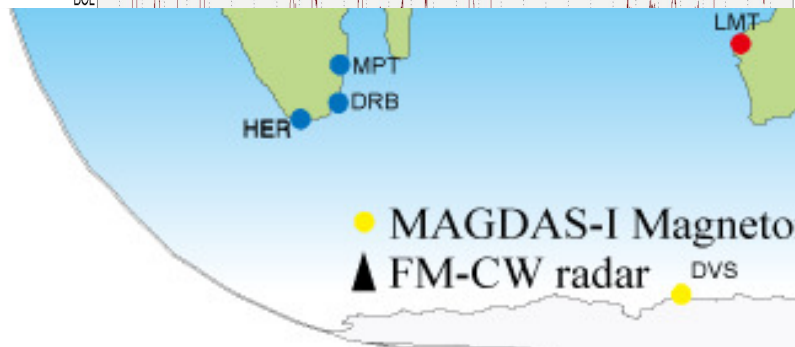
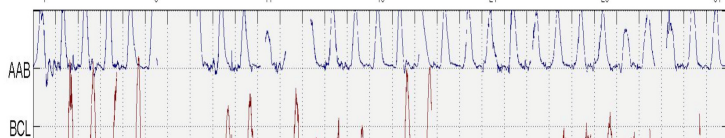
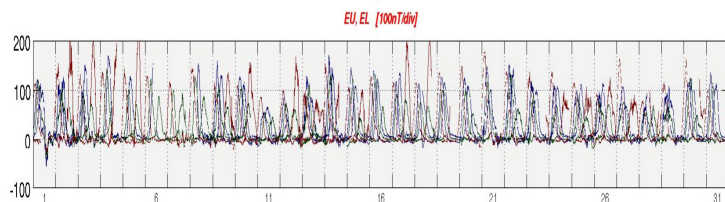
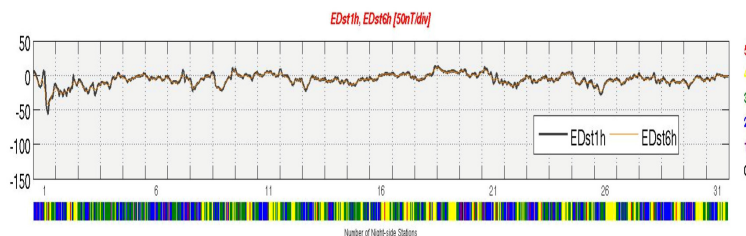
Quick Look Plot

EDst, EU, EL (Realtime Ver.)

[Quick Look Top](#) [EE-index Home](#)

January 2014

[Last Month](#) - [Next Month](#)

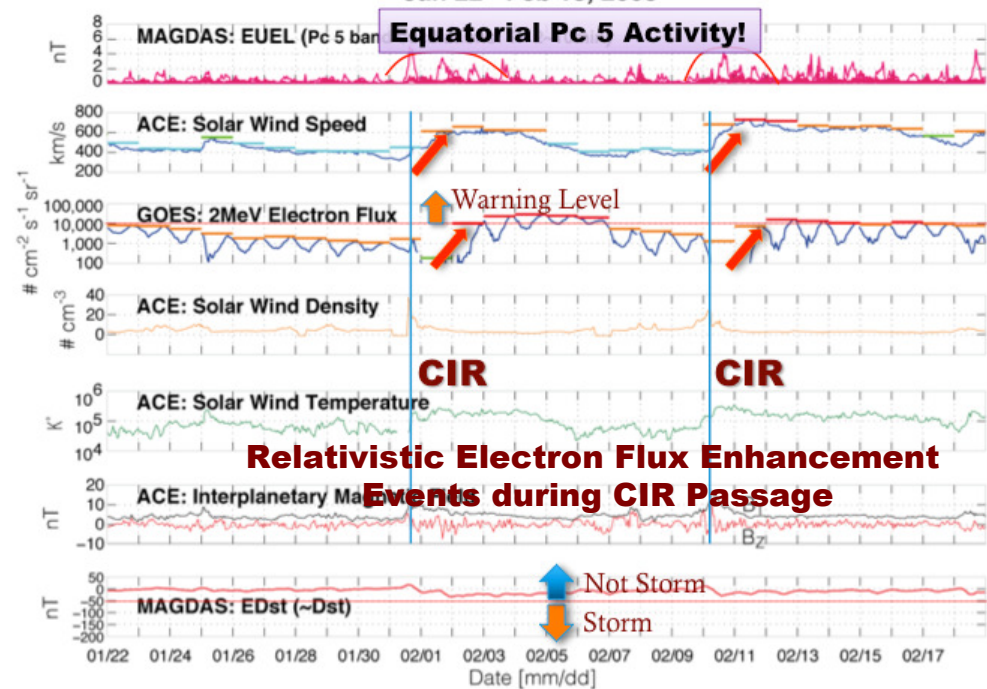


MAGDAS/CPMN

Circum-pan Pacific Magnetometer Network



Jan 22 - Feb 18, 2008



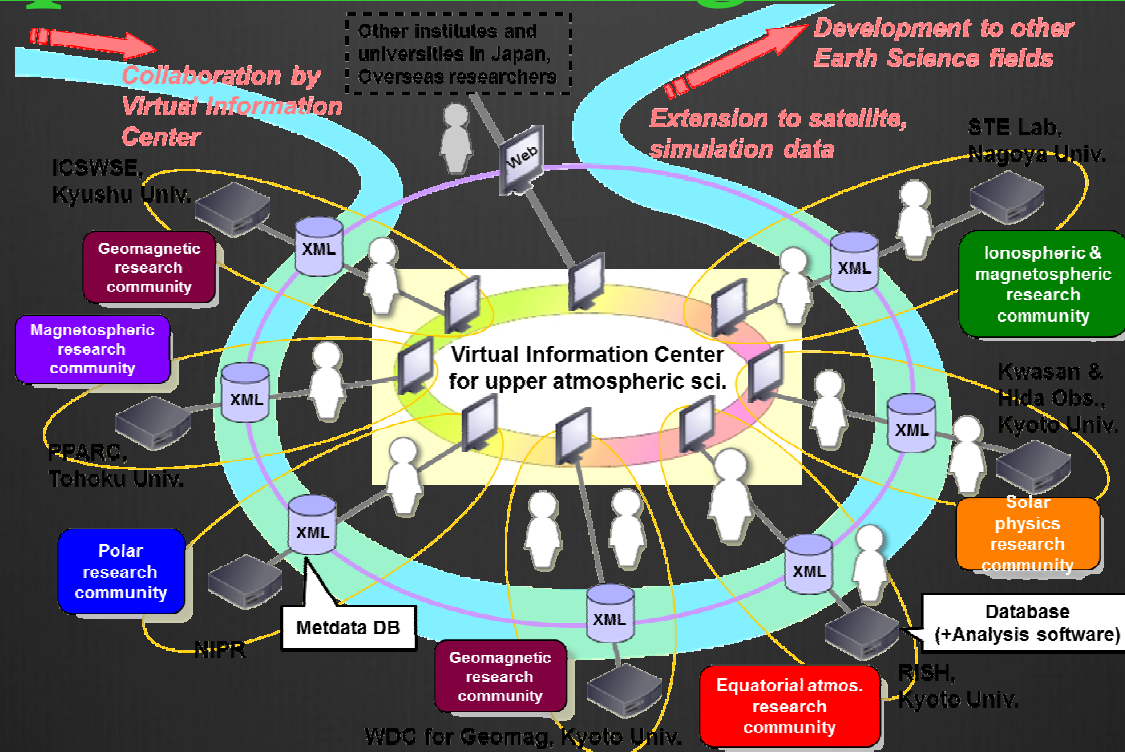
IUGONET

Metadata DB for Upper Atmosphere

超高層大気長期変動の全地球上ネットワーク観測・研究
Inter-university Upper atmosphere Global Observation NETWORK

Inter-university Upper atmosphere Global Observation NETWORK

<http://www.iugonet.org/en/>



- Develop a metadata database ground-based upper atmosphere observation data.
- Promote effective use of the observational data spread across the institutes/universities.
- Investigate mechanism of long-term variation in the upper atmosphere.

MAGDAS installation and maintenance is strongly supported by local collaborators' cooperation

Upgrade at Hermanus, South Africa, in 2013.



Construction of MAGDAS preamp hut in India.

MAGDAS team requires both strength and intelligence!



Small MAGDAS training at local station



Upgrade at Abidjan (2013)

MAGDAS installations and upgrades during 2013

- Sabah, Malaysia.
- Tirunelveli, India.
- Hermanus, South Africa.
- Townsville, Australia.
- Culgoora, Australia.
- Abidjan, Cote d'Ivoire.

Space weather science education

Space weather summary report

Since October 2002, daily reports on space weather have been issued by students.

Outreach activities on space weather

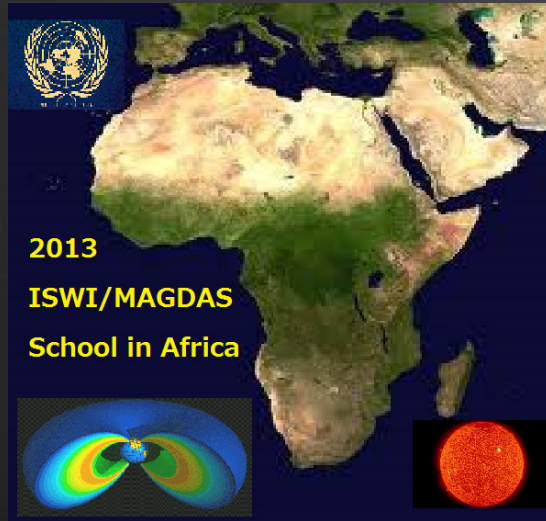
Over 50 public lectures have been conducted on Space Weather science for children and general citizens in Japan.

Foreign students from Asian/African nations

Several students from Egypt, Sudan, Indonesia, Philippines, Malaysia, have completed Phds/masters at ICSWSE, Kyushu University.



2013 ISWI/MAGDAS School in Africa



The MAGDAS School for this year was conducted at Abidjan in Cote d'Ivoire in western Africa. This is the official group photo.

At the right is the schedule
for MAGDAS schools

2011	Nigeria
2012	Indonesia
2013	Côte d'Ivoire
2014	Peru

2013 ISWI/MAGDAS School in Africa





The school poster.

The school venue



Presenting the school certificate during the closing ceremony.

Capacity Building at ICSWSE

MAGDAS-9 Training Course

Philippines, Malaysia, Indonesia, Vietnam and Peru

1st Batch -2012/11



2nd Batch-2013/01



3rd Batch -2013/08



Capacity Building at ICSWSE

MAGDAS-9 Training Course

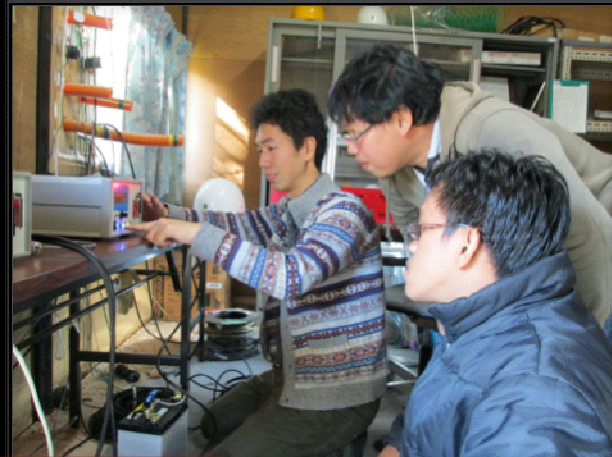
4th Batch- 2014/01 Ivory Coast, Mozambique, Nigeria and Egypt



Capacity Building at ICSWSE



Pre-installation of magnetometer



Installation of magnetometer



Monitor magnetometer data



Use magnetic data to do research



Capacity Building at ICSWSE



For more information, access the Research Note, Space Research Today, Volume 188, December 2013, Pages 18-20, ISSN 1752-9298, <http://dx.doi.org/10.1016/j.srt.2013.11.007>.
(<http://www.sciencedirect.com/science/article/pii/S1752929813000601>)

ISWI Newsletter results for 2013

- In 2013, 126 issues of the newsletter were sent out.
- There are now about 420 subscribers to this newsletter.
- All issues are archived at the ISWI Website (<http://www.iswi-secretariat.org/>)

Future Plan of ICSWSE

- We plan to host *UN/Japan Workshop on Space Weather* next year at Kyushu University. We have already secured a considerable amount of funding for this purpose.
- We are making efforts to bring the *ISWI Secretariat* to Kyushu University. ICSWSE has strongly supported IHY and ISWI in the past because we believe ground-based observation is crucial for space weather forecasting.
- We plan to conduct, or participate in, at least one space weather school each year. It is necessary to bring in talented young people into our field of research to maintain vitality in future research efforts.

Future Plan of ICSWSE



The new ICSWSE will conduct *ISWI activity* for young scientists in Japan and in the world through a wide-variety of approaches:

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Thank you very much for your attention!!