

# MAGDAS Project Activities under ISWI

G. Maeda, K. Yumoto, H. Kawano, A. Yoshikawa, H. Liu,  
M. Watanabe, S. Abe, T. Uozumi, A. Ikeda  
**International Center for Space Weather Science and Education**  
**Kyushu University, Fukuoka, Japan.**

Presented during  
*International Conference on Radiation Belts and Space Weather*  
May 29-June 1, 2012, at Hotel INTERCITI  
in Daejeon(太田), Korea.



during Technical Session 8-3,  
Lavender Hall



# Major Re-organization

As of 01 April 2012:

Space Environment Research Center (SERC) became the **International Center for Space Weather Science and Education (ICSWSE)**.



As ICSWSE is difficult to pronounce,  
the short-form name is

Iku – Sei

( 育 成 )



# The Director of Iku-Sei is Prof. K. Yumoto



**This photo was taken  
during the MAGDAS School  
at Redeemer's University  
near Lagos, Nigeria  
(15-20 August 2011)**

# The Agenda for Iku-Sei

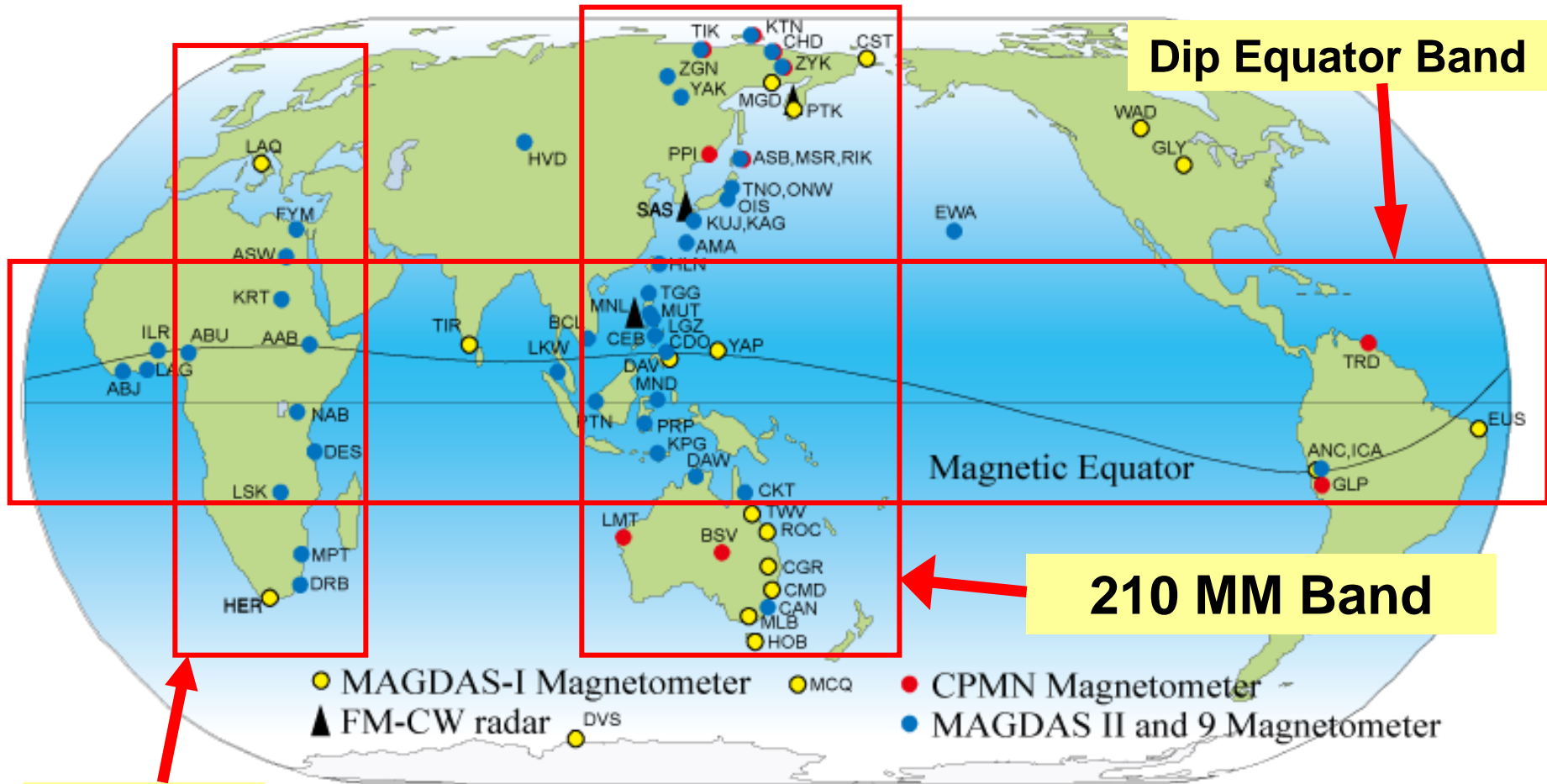
There are several agenda items but a central item is the execution of the

*MAGDAS Project*



# MAGDAS/CPMN

(MAGnetic Data Acquisition System/Circum-pan Pacific Magnetometer Network)



**96 MM Band**

**Dip Equator Band**

**210 MM Band**

**Location of the 64 MAGDAS stations.**



# The 64 MAGDAS Stations

1	<b>AAB</b>	Addis Ababa, Ethiopia	21	<b>EUS</b>	Eusebio, Brazil	41	<b>MLB</b>	Melbourne, Australia	→
2	<b>ABJ</b>	Abidjan, Ivory Coast	22	<b>EWA</b>	Ewa Beach, Hawaii, USA	42	<b>MND</b>	Manado, Indonesia	→
3	<b>ABU</b>	Abuja, Nigeria	23	<b>FYM</b>	Fayum, Egypt	43	<b>MPT</b>	Maputo, Mozambique	→
4	<b>AMA</b>	Amami Oushima, Japan	24	<b>GLY</b>	Glyndon, USA	44	<b>MUT</b>	Muntinlupa, Philippines	→
5	<b>ANC</b>	Ancon, Peru	25	<b>HER</b>	Hermanus, South Africa	45	<b>NAB</b>	Nairobi, Kenya	→
6	<b>ASB</b>	Ashibetsu, Japan	26	<b>HNL</b>	Hualien, Taiwan	46	<b>OIS</b>	Oiso, Japan.	→
7	<b>ASW</b>	Aswan, Egypt	27	<b>HOB</b>	Hobart, Australia	47	<b>ONW</b>	Onagawa, Japan	→
8	<b>BCL</b>	Bac Lieu, Vietnam	28	<b>HVD</b>	Khovd, Mongolia	48	<b>PRP</b>	Pare Pare, Indonesia	→
9	<b>CAN</b>	Canberra, Australia	29	<b>ICA</b>	Ica, Peru	49	<b>PTK</b>	Paratunka, Russia	→
10	<b>CDO</b>	Cagayan De Oro, Philippines	30	<b>ILR</b>	Ilorin, Nigeria	50	<b>ROC</b>	Rockhampton, Australia	→
11	<b>CEB</b>	Cebu, Philippines	31	<b>KPG</b>	Kupang, Indonesia	51	<b>SMA</b>	Santa Maria, Brazil	→
12	<b>CGR</b>	Culgoora, Australia	32	<b>KRT</b>	Khartoum, Sudan	52	<b>TGG</b>	Tuguegarao, Philippines	→
13	<b>CKT</b>	Cooktown, Australia	33	<b>KUJ</b>	Kuju, Japan	53	<b>TIR</b>	Tirunelveli, India	→
14	<b>CMD</b>	Camden, Australia	34	<b>LAG</b>	Lagos, Nigeria	54	<b>TNO</b>	Tono, Tohoku, Japan	→
15	<b>CST</b>	Cape Schmidt, Russia	35	<b>LAQ</b>	L'Aquila, Italy	55	<b>TWV</b>	Townsville, Australia	→
16	<b>DAV</b>	Davao, Philippines	36	<b>LGZ</b>	Legazpi, Philippines	56	<b>WAD</b>	Wadena, Canada	→
17	<b>DAW</b>	Darwin, Australia	37	<b>LKW</b>	Langkawi, Malaysia	57	<b>YAP</b>	Yap Island, Micronesia	→
18	<b>DES</b>	Dar Es Salaam, Tanzania	38	<b>LSK</b>	Lusaka, Zambia				→
19	<b>DRB</b>	Durban, South Africa	39	<b>MCQ</b>	MacQuarie Island, Australia				→
20	<b>DVS</b>	Davis, Australia	40	<b>MGD</b>	Magadan, Russia				→

58-63: new stations in Russia.

64: New one in Indonesia.

# When did this project begin?

Installation at sites overseas began in 2005 at Hualien, Taiwan.

So roughly a new MAGDAS installation occurred once per month.

Work done by staff and students of Iku-Sei.





# 1<sup>st</sup> overseas MAGDAS

Hualien, Taiwan (May of 2005)

Sensor

Hut of  
Data Logger



# MAGDAS Project Activities in support of ISWI

- Direct Capacity Building by installing ground magnetometers
- Capacity Building via MAGDAS Schools
- Participation in all IHY and ISWI workshops
- Publishing the ISWI Newsletter on the behalf of the United Nations Office for Outer Space Affairs
- Graduate-school level education for students from developing nations



# What is Capacity Building?

- Teaching local staff/students how to *maintain ground instrumentation* (e.g., magnetometers)
- Teaching them *data analysis skills* on the data from such instrumentation
- Teaching them how to do world-class science with the data analysis skills.



# Direct hands on instruction.



Dar Es Salaam, Tanzania

Khartoum, Sudan

Nairobi, Kenya

# MAGDAS Schools

- **MAGDAS Session** during *UN/Egypt Workshop on ISWI* (2010)
- **MAGDAS School** at Lagos, Nigeria (2011)
- **ISWI and MAGDAS School** at Bandung, Indonesia (2012)



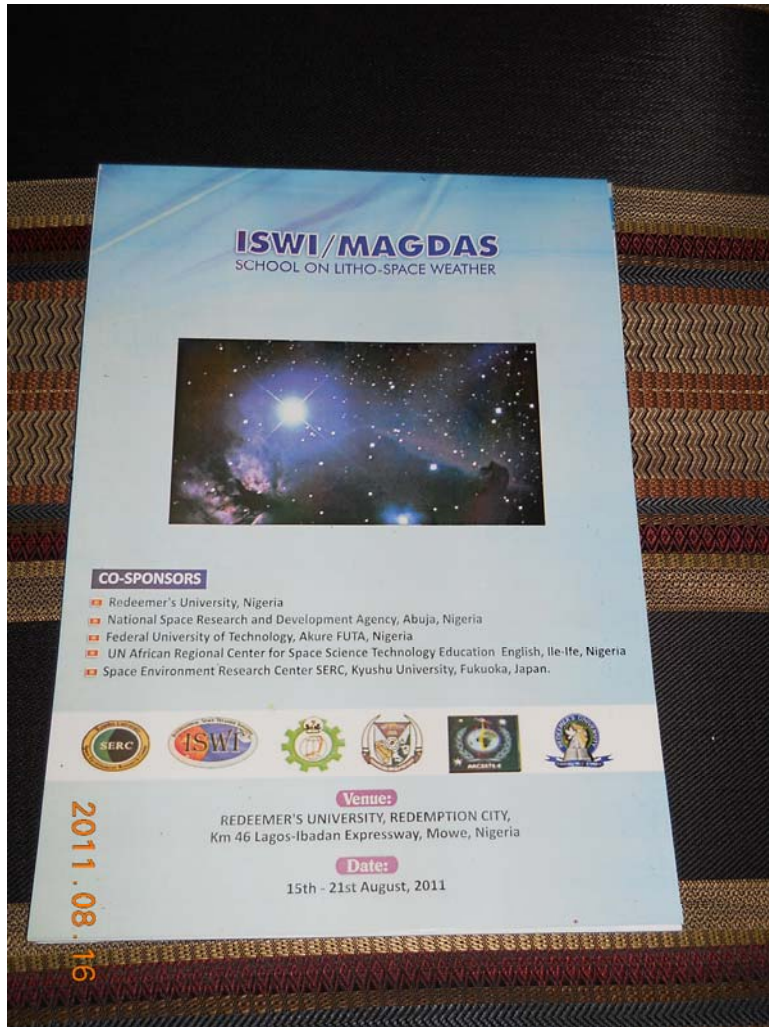


# MAGDAS School (Lagos)

15-21 August 2011.

Venue: Redeemer's University, near Lagos, Nigeria.

Participants:  
59 persons.

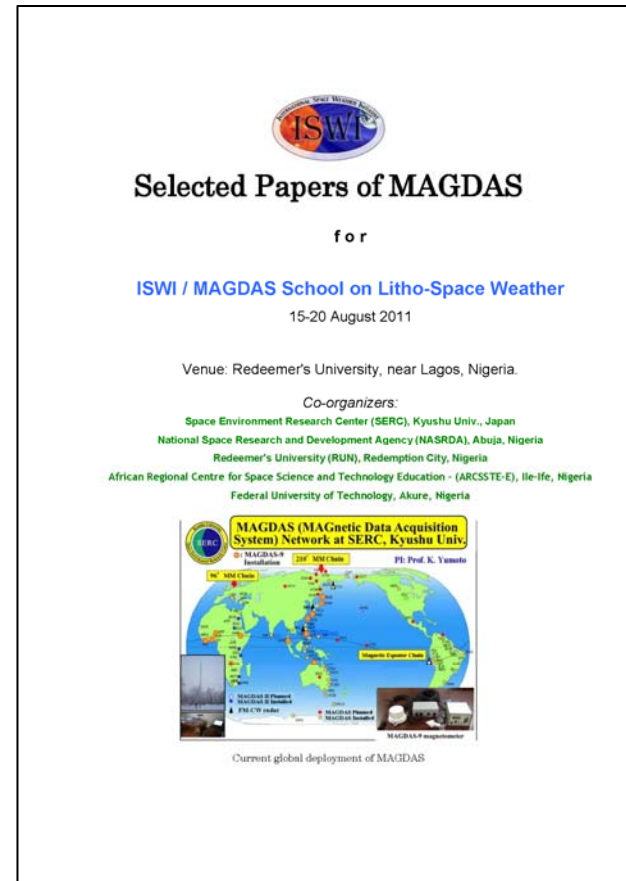


# Group Photo after the Opening Ceremony



# Selected Papers of MAGDAS

- The textbook for MAGDAS School at Lagos.
- 24 papers – all in peer-reviewed journals.
- 264 A4 pages in full color.
- I can give you the (55 MB) pdf for this book.





# The ISWI Newsletter



# PR for this conference

- At the request of Dr Park, this newsletter provided publicity:

**Vol. 4, No. 12**

**Vol. 4, No. 36**



Newsletter Office is located on  
the campus of Kyushu University.  
(Fukuoka, Japan)

- **Publisher is: Prof. K. Yumoto**
- **Editor is: George Maeda (me).**

**If you want to subscribe, see me or  
visit the ISWI website (see Slide 22).**



Inaugural issue of the

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(International Space Weather Initiative)

**Newsletter**

published by *SERC*

(Kyushu University, Japan) under the  
auspices of the *United Nations*



**The first issue of  
this newsletter**

**was**

**12 November  
2009.**

← **This was the  
cover sheet.**



The number of subscribers as of  
28 May 2012:

376.

But I am sure we can do better than this.  
Please encourage potential subscribers  
to try out this newsletter.



The newsletter is archived at the official ISWI website

<http://www.iswi-secretariat.org/>

Prof. Yumoto (the publisher) and I (the editor) offer  
profound thanks to

**Mr. Dimitar “Mitko” Danov** and **Dr. Katya Georgieva**  
for making all back issues readily available on the web.

Both are with Solar Terrestrial Influences Laboratory  
of the *Bulgarian Academy of Sciences* .



**Thank you !  
from all of us at Iku Sei.**



Participants of the  
*Closing Ceremony of*  
**MAGDAS School**  
at Redeemer's University  
near Lagos, Nigeria,  
15-20 August 2011.