



ISWI & MAGDAS School
on Space Science
September 17-26, 2012
Ciloto, West Java, Indonesia

<http://iswimagdas2012.bdg.lapan.go.id>

Nat Gopalswamy & Clara Yatini





School Scientific Organization

- Dr. Nat Gopalswamy (ISWI/NASA), Director
- Clara Y. Yatini (LAPAN, Director)
- Dr. K. Yumoto (ICSWSE, Kyushu U., Japan), Director

Science Committee

- »N. Gopalswamy (Chair), NASA/GSFC, Greenbelt, USA and ISWI
- »T. Djamaluddin, LAPAN Indonesia
- »K. Yumoto, ICSWSE Kyushu University, Japan
- »Philip Wilkinson, IPS Radio and Space Services, Australia
- »Hakim L. Malasan, ITB Indonesia
- »D. Herdiwijaya, ITB Indonesia
- »D. Pallamraju, Physical Research Laboratory, India
- »Wayan Suparta, Angkasa, UKM, Malaysia
- »Mamoru Yamamoto, RISH, Kyoto University, Japan



Local Organizing Committee

- »Clara Yono Yatini (Chair), Space Science Center of LAPAN, Bandung
- »Timbul Manik (Co-chair), Space Science Center of LAPAN, Bandung
- »Mamat Ruhimat (Co-chair), Space Science Center of LAPAN, Bandung
- »Elyyani, Space Science Center of LAPAN, Bandung
- »Johan Muhamad, Space Science Center of LAPAN, Bandung
- »Irvan Fajar Syidik, Space Science Center of LAPAN, Bandung
- »Varuliantor Dear, Space Science Center of LAPAN, Bandung
- »Adi Purwono, Space Science Center of LAPAN, Bandung
- »Syahril, Space Science Center of LAPAN, Bandung
- »Budiyanto, Space Science Center of LAPAN, Bandung
- »Iwan Sodikin, Space Science Center of LAPAN, Bandung
- »Nurkhamdani, Space Science Center of LAPAN, Bandung

Venue: Cilito near Bandung



Wisma Pendawa, Dept Sosial

2012.09.16

Welcome address by LAPAN Chairman



Dr. Bambang Tedja Sukmana

Welcome- ISWI



Dr. Nat Gopalswamy
ISWI/NASA

Welcome - LAPAN



Dr. Clara Yatini LAPAN

Welcome - MAGDAS



Mr. George Maeda
ICSWSE, Kyushu U.
on behalf of Prof.
K. Yumoto

Thanking LAPAN officials



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2012.09.16

Big School!





Lectures available online

http://iswimagdas2012.dirgantara-lapan.or.id/list_course.html



ISWI Lecturers

Dr. T. Djamaluddin (Indonesia)
Dr. H. Malasan (Indonesia)
Dr. D. Herdiwijaja (Indonesia)
Dr. N. Gopalswamy (USA)
Dr. Hannah Schunker (Germany)
Dr. A. Munoz-Jaramilo (USA)
Dr. M. A. Hidalgo (Spain)
Dr. Y. Miyoshi (Japan)
Dr. P. Makela (USA)
Dr. T. Hada (Japan)
Dr. M. Watanabe (Japan)
Dr. E. Yizengaw (USA)
Dr. T. Kikuchi (Japan)
Dr. W. Suparta (Malaysia)

Dr. M. Yamamoto (Japan)
Dr. M. Francis (Australia)
Dr. S. Wing (USA)
Dr. K. Georgieva (Bulgaria)
Dr. S. Gurubaran (India)
Dr. T. Tsuda (Japan)
Dr. Y. D. Park (Republic of Korea)
Dr. D. Scherrer (USA)
Dr. C. Amory-Mauzadier (France)
Dr. C. Monstein (Switzerland)
Dr. K-I. Oyama (Taiwan)
Dr. G. Vekstein (UK)
Dr. K. Kusano (Japan)

27 lecturers from 14 countries!



Lectures

0. Solar Variability & Consequences: Dr. Nat Gopalswamy
1. Solar Interior: From thermonuclear reactions to helioseismology: Dr. Hannah Schunker
2. Solar magnetism: solar dynamo, solar cycle: Dr. Andres Munoz-Jarmillo
3. Solar magnetohydrodynamics: Dr. Kanya Kusano
4. Solar Atmosphere: Photosphere, Chromosphere, Corona
5. Coronal Heating and Plasma Processes: Dr. Grigory Vekstein
6. Solar eruptions: Coronal mass ejections, eruptive flares, confined flares: Dr. Nat Gopalswamy
7. Interplanetary CMEs and shocks: Dr. Miguel Angel Hidalgo
8. Solar Energetic Particles: Dr. Pertti Mäkelä
9. Space plasma physics: Dr. Tohru Hada
10. Physics of the Geospace: Dr. Takashi Kikuchi
11. Earth's currents and energy system: Dr. Ch. Amory-Mazaudier
12. Magnetospheric Physics: Dr. Masakazu Watanabe
13. Magnetosphere-Ionosphere coupling: Dr. Endawoke Izengaw
14. Solar wind - Earth's magnetosphere coupling: Dr. Yoshizumi Miyoshi
15. Space weather and mitigation: Dr. Simon Wing
16. Measuring, modelling and forecasting Space Weather impacts on HF communications and trans-ionospheric propagation: Dr. Matthew Francis



Lectures ...

- 17. Ionospheric Irregularities: Dr. Mamoru Yamamoto
- 18. Atmospheric Coupling processes I: Dr. S. Gurubaran
- 19. Atmospheric Coupling processes II: Dr. Toshitaka Tsuda
- 20. Upper and lower atmospheres in polar regions: Dr. Wayan Suparta
- 21. Earth-quake - ionosphere connection: Dr. K-I. Oyama
- 22. Sun-Climate Connection: Dr. Katya Georgieva
- 23. Ground based solar observations: Dr. Hakim L. Malasan
- 24. Space Weather Data Center for East Asia Region: Dr. Young-deuk Park
- 25. The SID Monitor: Dr. Deborah Scherrer
- 26. Earth's Current and Energy System Dr. C. Amory-Mazaudier
- 27. Space Weather/Space Science Activities in Indonesia Dr.T. Djamaluddin

Students

- China -1
- Egypt - 1
- Japan - 1
- Indonesia - 40
- India - 2
- Malaysia - 11
- Pakistan - 2
- Philippines - 8
- Uganda - 1
- Vietnam -1

68 students from 10 countries
Majority female!

Instrument Sessions

- Instrument sessions included MAGDAS, GPS Receivers, and CALLISTO presentations
- GPS receiver: presentation & Discussion by C. Amory-Mauzadier
- CALLISTO: Presentation & Discussion by C. Monstein
- MAGDAS had an extended two-day session. Details follow

MAGDAS Sessions

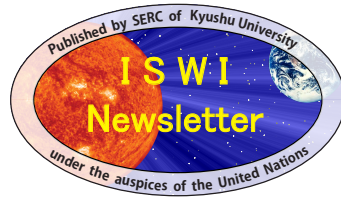
Speaker	Topic
A. Yoshikawa	Opening Remarks The Japan Society for the Promotion of Science (JSPS) Program and the International Center for Space Weather Science and Education (ICSWSE) Sq and Equatorial Electrojet 3D Model
M. Watanabe	Problem solving
G. Maeda	The World's Largest Magnetometer Array
H. Matsushita	An Overview of Kyushu University and An Overview of the Space and Earth Electromagnetism (SEE) Laboratory
N. Abdul Hamid	MAGDAS at Sumatra: Latest Installation and Possible Scientific Study
M. H. Jusoh	Application of MAGDAS Data in Long Term Analysis of Possible Solar-Seismicity Coupling
C. Y. Yatini	The History and Future of LAPAN's involvement in the MAGDAS project
Q. Sugon	Physics of motion of charges in EM fields for understanding MAGDAS and FMCW radar data
M. G. Cardinal	Equatorial MAGDAS data: Application in space weather studies JSPS Core-to-Core Program MAGDAS Data analysis, usage and request procedure Some exercises on data analysis and space weather

MAGDAS Sessions....

Speaker	Topic
S. Abe	Space weather, Inter-university Upper atmosphere Global Observation NETwork (IUGONET) Project
T. Uozumi	Equatorial Electrojet Index: EE Index
S. Ahadi	Geomagnetic studies at BMKG
S. C. Pranoto	An Overview of MAGDAS Data Transfers And Data Processing in Indonesia
M. Z. H. Makmud	Universiti Malaysia Sabah: An Introduction
M. H. Jusoh	Application of MAGDAS Data in Long Term Analysis of Possible Solar-Seismicity Coupling
C.D. G. Bennett	Ionogram Simulations
A. M. Hasbi	Space Science Research at the Institute of Space Science (ANGKASA), UKM Part II
R. R. Violanda	Description of Interplanetary Magnetic Field during Magnetic Storms using Hurst Coefficient
M. K. K. Shariff	Using ELF/VLF radio to measure D-region weather conditions observed in Malaysia
A. A. Sulaiman	Investigation of the D-Region Ionosphere Characteristics at Palmer Station Antarctica using Tweek Atmospherics

MAGDAS Sessions....

Speaker	Topic
S. Ismail	MAGDAS and Space weather Programmes in Malaysia
M. Zinampan	MAGDAS data transmission in the Philippines
M Commandante	XUERC and MAGDAS Station
IJD Mangampo	Legazpi City, MAGDAS Station: Learning and Re-learning
A. R. Quebral	Our MAGDAS station situation and other local issues



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on 8 November 2012.

In the Classroom



Trip to Boscha Observatory



60 cm Telescope



Astronomer explaining solar evolution



Cultural visit: Visiting “Saung Angklung Ujo”



Social Events: School Reception



Teacher Workshop

- New addition to ISWI/SCOSTEP capacity building activity in the vicinity of the Space Science School
- Travel supported by SCOSTEP for workshop instructors (Debbie Scherrer and Dave Rodrigues for this workshop)
- Other expenses borne by the LOC of the Space Science School
- 35 teachers participated

Science Teacher Workshop



Other activities



Aerobics in the morning



At “Taman Bunga Nusantara” (Indonesian Flower Garden)



Thank You

- Thanks to the scientific committee for suggesting topics and lecturers
- Thanks to the Lecturers for the inspiring talks
- Thanks to the Sponsors: LAPAN, ISWI, MAGDAS, SCOSTEP, NASA, JSPS, ICSWSE, Kyoto University,
- Additional Sponsors: IPS/ Australia, KASI/Korea, Alcala/Spain



Sample Feedback

The 2012 ISWI @ MAGDAS school on Space Science was very successful. It had so many lectures and colorful activities, during which I obtained new knowledge and made friends with other participants.

I am happy to meet very accommodating LOCs, fellow participants, committed and intelligent lecturers/organizers and to know that many cares for what we have to know to understand the world/universe we live in.

Overall are great. Thanks for the LOC, lecturers, Nat, and everyone that I miss to mention. Thanks for your hardwork, ~~and~~ your time, ~~that~~ and your knowledge that you give for us students. Hope each time, ISWI / MAEDAS school is getting much much better.

I JUST WOULD LIKE TO THANK EVERYBODY WHO ORGANIZE THIS ~~LECTURE~~ SCHOOL AS IT GIVE ME KNOWLEDGE AND EXPERIENCE THAT I COULD ALSO SHARE TO OTHERS ESPECIALLY THE YOUNGER GENERATIONS.

Thank you for your feedback – The Directors.