題名　[See] ISWI Newsletter - Vol. 3 No. 98
差出人　maeda@serc.kyushu-u.ac.jp

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* I S W I = International Space Weather Initiative *
* (www.iswi-secretariat.org) *
*
* Publisher: Professor K. Yumoto, SERC, Kyushu University, Japan *
* Editor-in-Chief: Mr. George Maeda, SERC (maeda[at]serc.kyushu-u.ac.jp)*
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* to you, you must give proper credit to the original source. *
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Attachment(s):
(1) "Haubold_UNBSSI_1991_2012_short", 2 MB pdf, 19 pages.

: Re:
: A very brief summary
: of
: UNBSSI (1991-2012)

Dear ISWI Participant:

I attach it.

It came to me courtesy of Prof. Hans Haubold of UNOOSA, who asks if others could also comment on this long-term initiative. If you have contributed to UNBSSI during the past 20 years, please let us know what you think. As editor, I will be happy to circulate your comments using this newsletter.

In particular, it would be helpful if we could hear from the UN-affiliated centers. What was done? What is being done? and, What needs to be done? Put into words what is on your mind.

Sincerely and respectfully yours,
: George Maeda
: The Editor
: ISWI Newsletter

Office for Outer Space Affairs
United Nations Office at Vienna

UN BASIC SPACE SCIENCE INITIATIVE

Basic Space Science
International Heliophysical Year 2007
International Space Weather Initiative

United Nations Office for Outer Space Affairs
Vienna International Centre, Vienna, Austria

Information Dissemination: 193 UNDP Offices, Permanent Missions

BSS Workshops 1991-2004

Telescopes, Planetariums

IHY Workshops 2005-2009

Instrument arrays

ISWI Workshops 2010-2012

Array of arrays

UN-affiliated Regional Centres for Space Science and Technology Education (CMS India, CBSS Nigeria)

Published by SERC of Kyushu University
I S W I Newsletter
under the auspices of the United Nations

This pdf circulated in Volume 3, Number 98, on 2 November 2011.

Office for Outer Space Affairs
United Nations Office at Vienna

UN INFORMATION DISSEMINATION NETWORK

UN Development Programme (UNDP) Offices

Permanent Missions of 193 UN Member States

UNDP regional groupings
ESCAP, ECLAC, ESCWA, ECA, ECE

WORKSHOPS
BASIC SPACE SCIENCE (BSS)

Regional:
India, Costa Rica, Colombia, Nigeria, Egypt

Inauguration of optical telescopes:
Sri Lanka, Honduras, Jordan

International:
Germany, France, Mauritius, Argentina

Review of all workshops:
P.R. China


Mauritius


Argentina

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United Nations Office at Vienna

BSS TRIPOD: Telescope, Observing, Teaching

Government of Japan (NAOJ):

Japanese Cultural Grant Aid
45cm reflecting telescope
CCD & computer equipment
Building/ dome/ maintenance provided by local institution
Singapore 1987, Indonesia 1988, Thailand 1989, Sri Lanka 1995, Paraguay 1999, The Philippines 2000, Chile 2001, Mongolia 2008, India?

Sri Lanka 1996

American Association of Variable Star Observers (AAVSO):

Hands-on Astrophysics
Setting Up a Variable Star Observing Programme
Astronomy, mathematics, computer science

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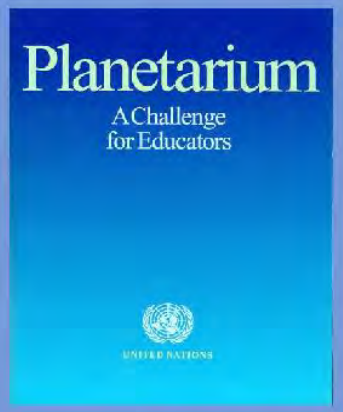
BSS TRIPOD: Telescope, Observing, Teaching

International Astronomical Union (IAU):

Astrophysics for University Physics Courses

- Study/ comparison of university education curricula in developing countries
- Elementary calculus
- Classical mechanics
- Statistical mechanics
- Thermodynamics applied to astronomy
- Advanced teaching material recommended: K.R. LANG / J. BENNET et al.

Planetariums



Myanmar

Peru

Viet Nam

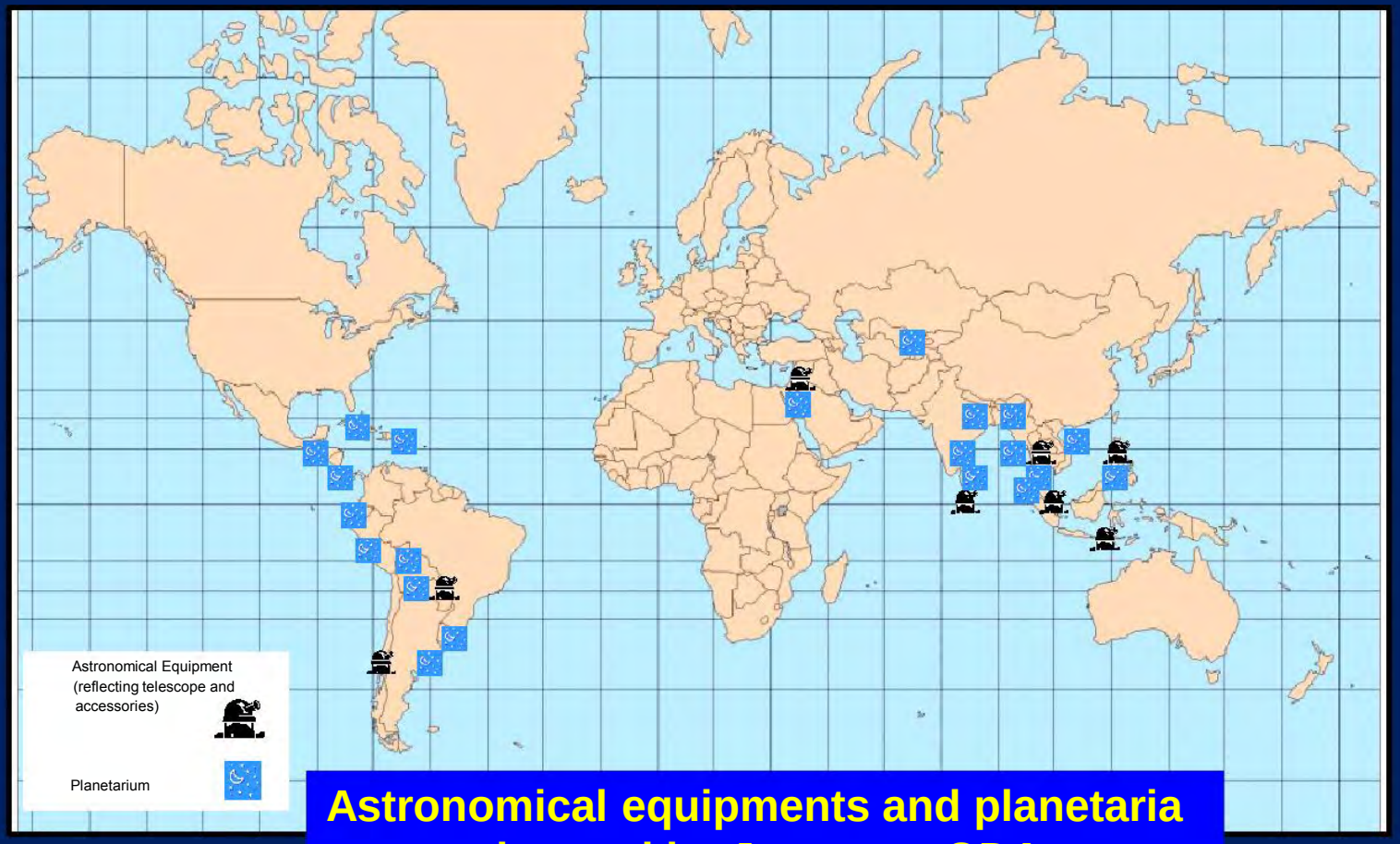
Government of Japan (NAOJ)

Host country

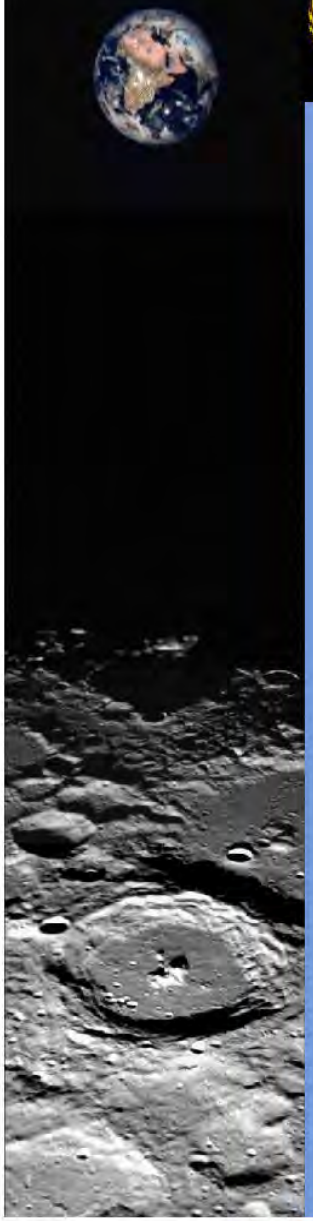
UNOOSA

Myanmar, Jordan, Malaysia, The Philippines, India, Argentina, Uruguay, Vietnam, Thailand, Sri Lanka, India, Uzbekistan, Paraguay, Ecuador, Honduras, Costa Rica, Peru, Bolivia, Cuba, El Salvador

Over 25 years of commitments by Japanese Government



Astronomical equipments and planetaria donated by Japanese ODA



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Final Report BSS

Wamsteker.xpc 11-11-2003 13:15 Pagina 1

Developing Basic Space Science World-Wide

A Decade of UN/ESA Workshops

Willem Wamsteker, Rudolf Albrecht and Hans J. Haubold (Eds.)

When the first United Nations/European Space Agency Workshop for Basic Space Science was planned to be held in Bangalore, India (1991) on the invitation of ISRO, few of those involved could expect that a unique forum was going to be created for scientific dialogue between scientists from developing and industrialized nations. As the format of the first workshop was on purpose left free with time for presentations, working sessions, and plenary discussions, the workshop was left to find its own dynamics. After a decade of UN/ESA Workshops, this book brings together the historical activities, the plans which have been developed over the past decade in the different nations, and the results which have materialized during this time in different developing nations. It aims to achieve for development agencies to be assisted in ways to find more effective tools for the application of development aid. The last section of the book contains a guide for teachers to introduce astrophysics into university physics courses. This will be of use to teachers in many nations.

Everything described in this book is the result of a truly collective effort from all involved in all UN/ESA workshops. The mutual support from the participants has helped significantly to implement some of the accomplishments described in the book. Rather than organizing this book in a subject driven way, it is essentially organized according to the common economic regions of the world, as defined by the United Nations (Africa, Asia and the Pacific, Europe, Latin America and the Caribbean, Western Asia). This allows better recognition of the importance of a regional (and at times global approach to basic space science for the developing nation's world wide. It highlights very specific scientific investigations which have been completed successfully in the various developing nations. The book supplements the published ten volumes of workshop proceedings containing scientific papers presented in the workshops from 1991 to 2002.

Information on the workshops is also available at
http://www.seas.columbia.edu/~ah297/un-esa/index.html
http://www.oosa.unvienna.org/SAP/ssi/index.html
http://www.oosa.unvienna.org/SAP/centres/centres.html

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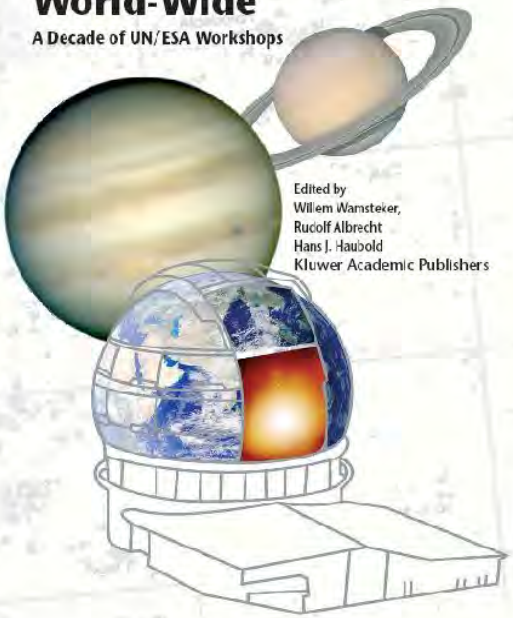


Edited by
Willem Wamsteker,
Rudolf Albrecht
Hans J. Haubold
Kluwer Academic Publishers

WORKSHOPS
INTERNATIONAL HELIOPHYSICAL YEAR 2007 (IHY)

1st 2005 UAE

Instrument providers: Japan, USA, France, Armenia, Brazil, Switzerland

and hosts: > 100 countries

Coordinated investigation programmes

Education and outreach

2nd 2006 India

3rd 2007 Japan

4th 2008 Bulgaria

5th 2009 Republic of Korea

IHY TRIPOD: Instrument Array, Data, Teaching

Since 2005, deploying small inexpensive instruments such as magnetometers, radio antennas, GPS receivers, particle detectors around the world to make global measurements of ionospheric, magnetospheric, and heliospheric phenomena

Partnership between instrument providers and instrument host nations.

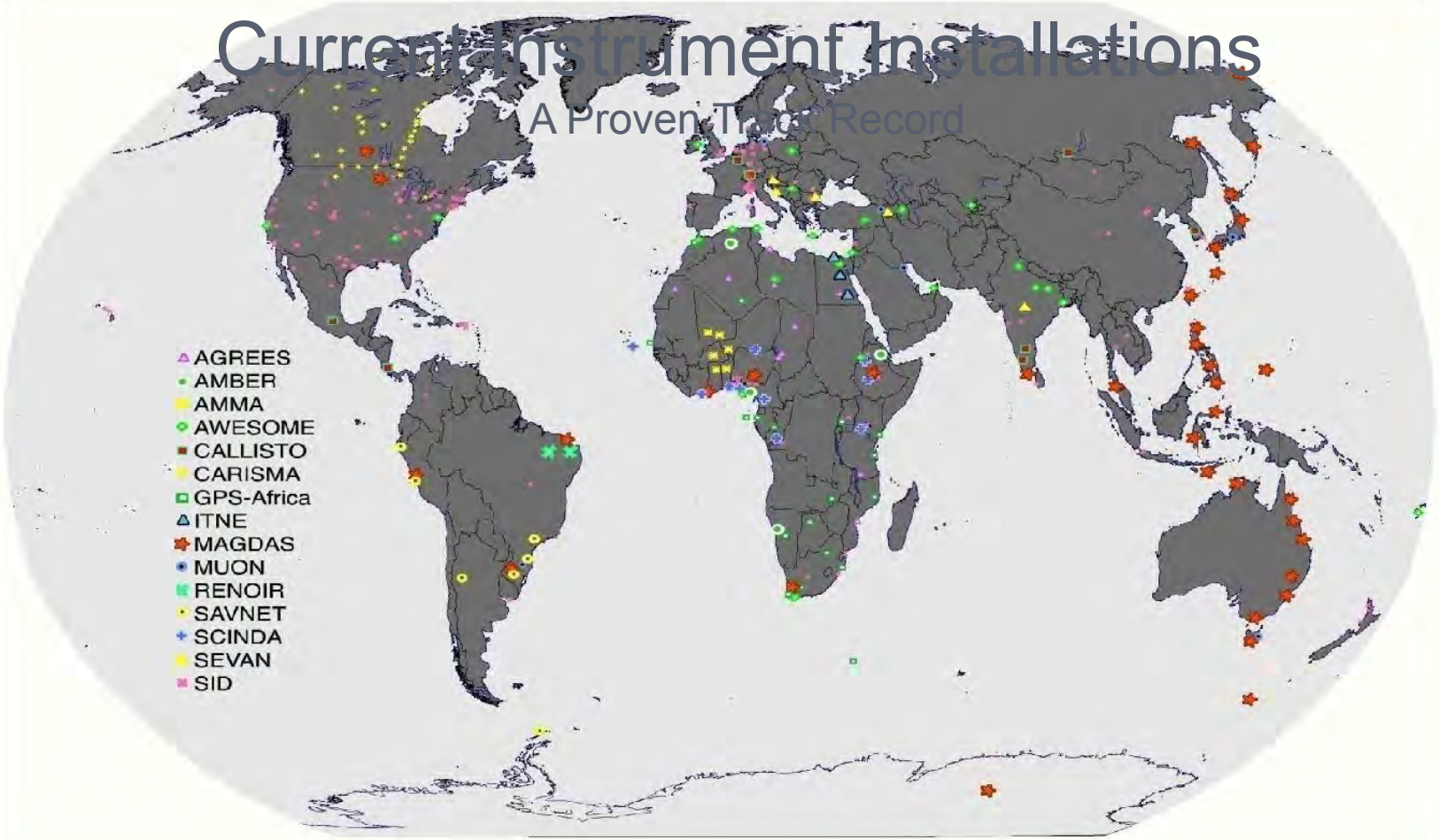
- Provision of instrumentation by PI
- Host institution makes available manpower, facilities, and operational support

Data taking, sharing, analysis, publication

Teaching space science at university level utilizing data

Current Instrument Installations

A Proven Track Record



This model for developing instrument networks was proven during the IHY

Space Weather Monitor Sites

IHY Distribution 2007-2009

USA

Germany

Mexico

Nigeria

Ethiopia

China

AWESOME research monitors (26)

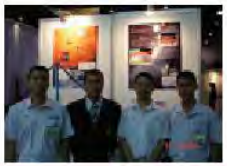
SID student monitors (300) *Larger dots indicate multiple sites*

USA

Romania

Lebanon

Thailand



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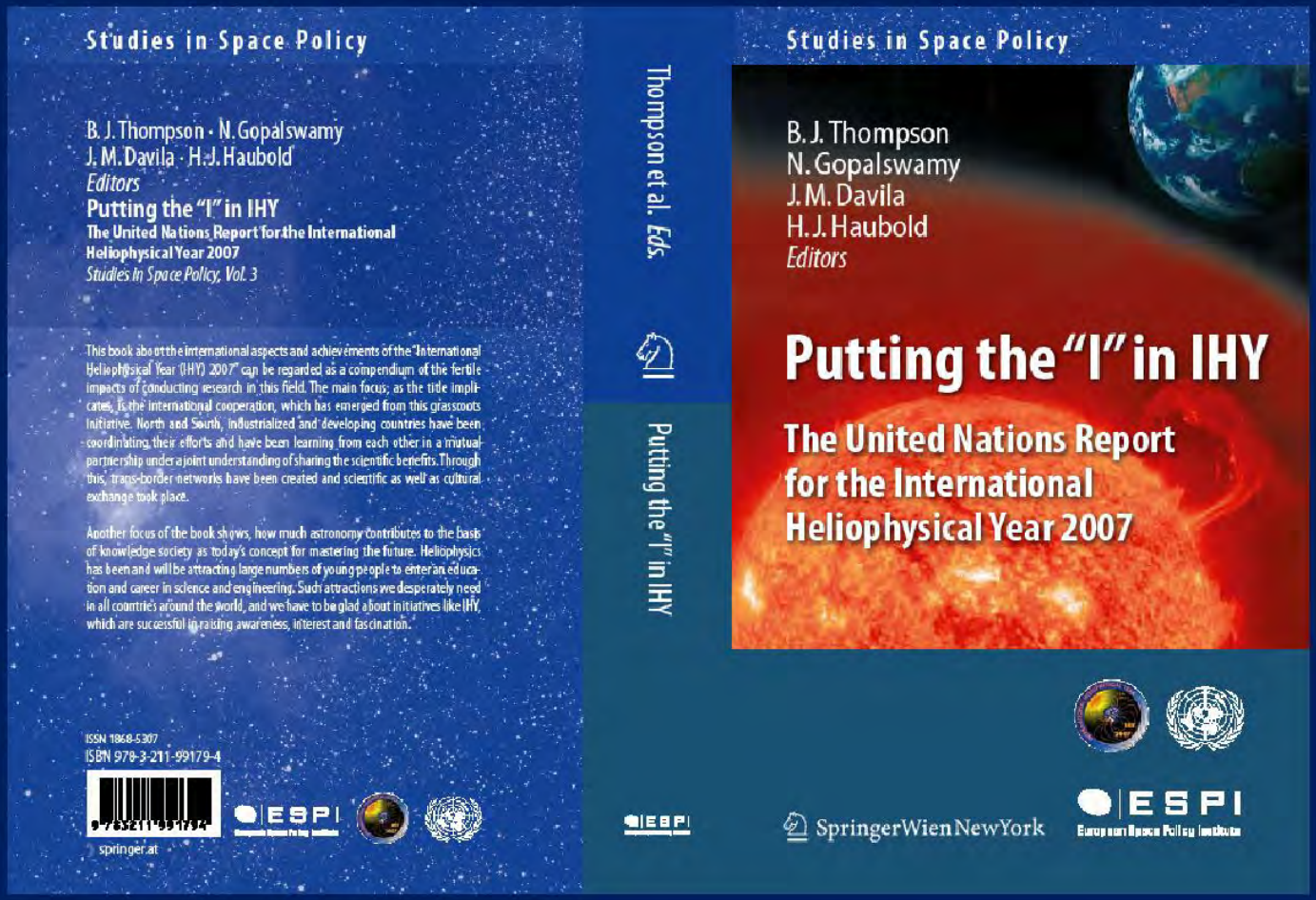
United Nations Office at Vienna

Final Report IHY



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THE 5TH UN/ESA/NASA/JAXA WORKSHOP

ON BASIC SPACE SCIENCE AND THE INTERNATIONAL HELIOPHYSICAL YEAR 2007

22 ~ 25 September 2009
HYATT REGENCY JEJU IN KOREA

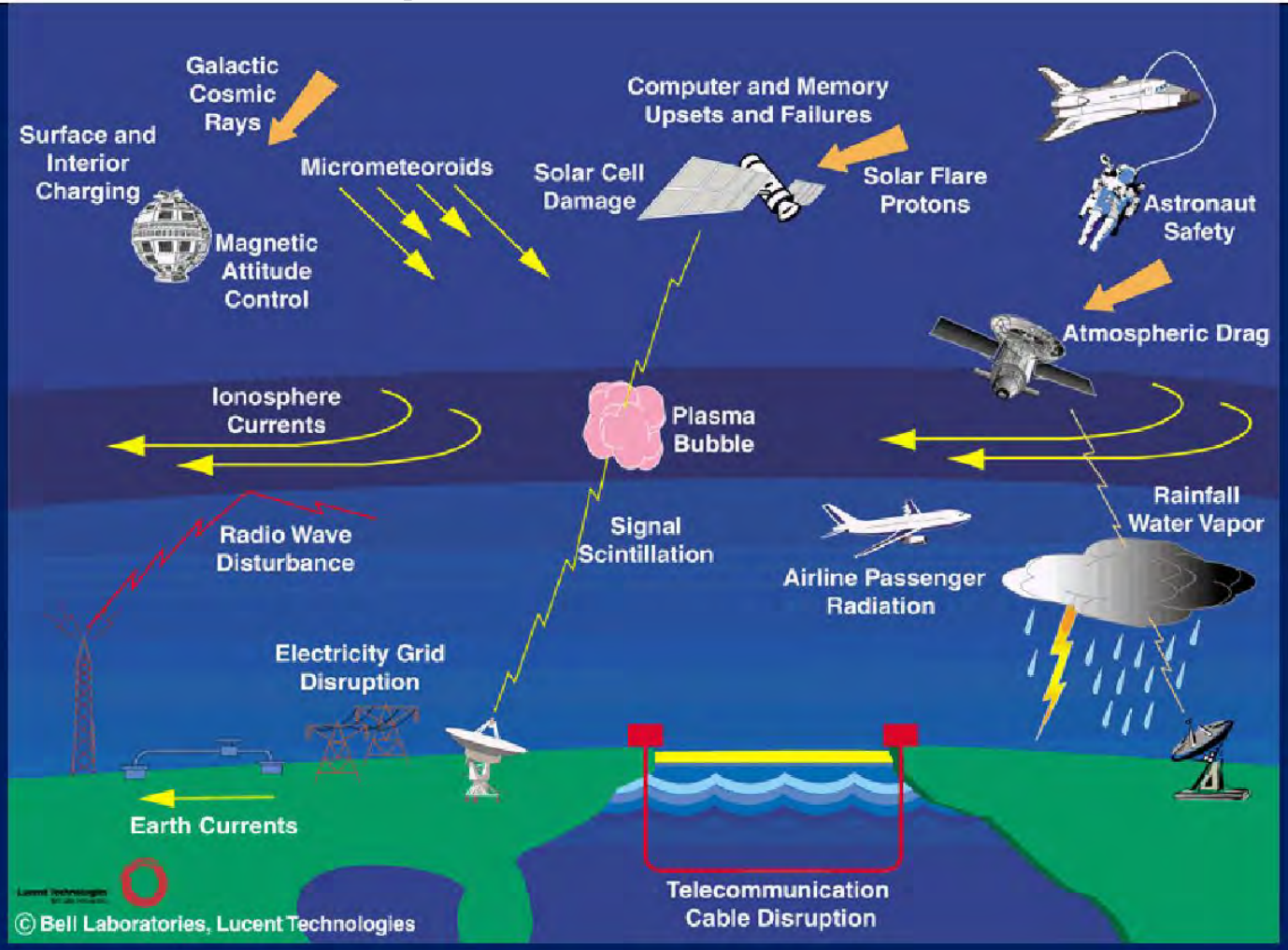
Topics

- Fundamental Physics
- Astronomy and Astrophysics
- Solar-terrestrial Interaction and Its Influence on Terrestrial Climate
- Planetary and Atmospheric Studies
- Origin of Life and Exo-biology

Hosted by Korea Astronomy and Space Science Institute (KASI)
on behalf of Korean Ministry of Education, Science and Technology (MEST)

IHY 2007

Space Weather



Information Dissemination

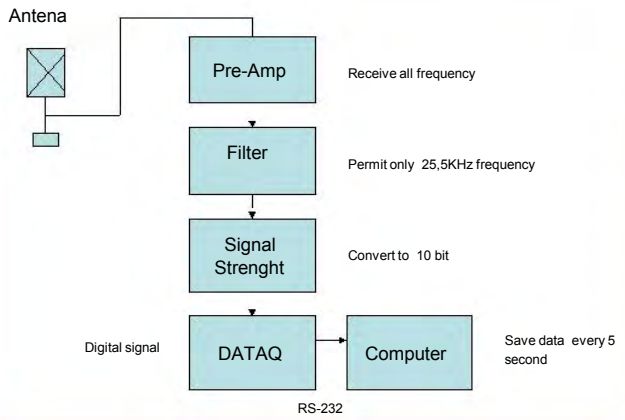
- ISWI Newsletter
  - Space Environment Research Centre
  - Kyushu University, Japan
  - To register send empty email to ISWInewsletter-on@mail-list.com

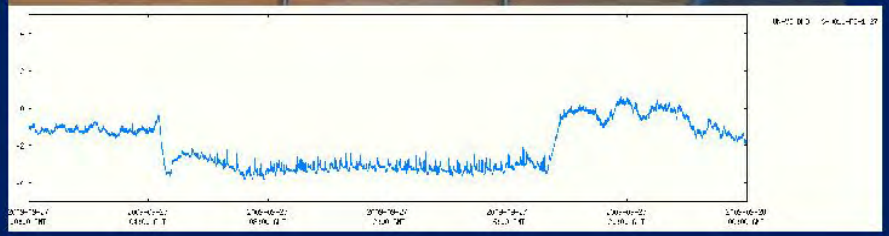
ISWI Website
  - Solar Terrestrial Influences Laboratory
  - Bulgarian Academy of Sciences, Bulgaria
  - www.iswi-secretariat.org

Instrument Programme

- Sudden Ionospheric Disturbance Monitor (SID) operated by UNOOSA

Principle of SID monitor





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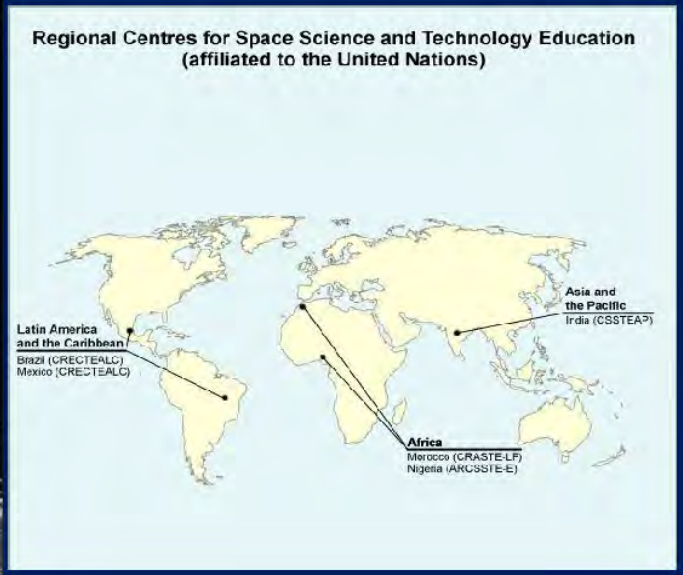
Regional Centres for Space Science and Technology Education (affiliated to the UN)



The Regional Centres for Space Science and Technology Education were created under the auspices of the United Nations

Goal: to develop, through in-depth education, an indigenous capability for research and applications in the core disciplines of:

- **Remote Sensing & GIS**
- **Satellite Communications**
- **Satellite Meteorology and Global Climate**
- **Space and Atmospheric Sciences (GNSS)**

Regional Centres located in:

Western Asia: Jordan 2011

Africa: CRASTE-LF (Morocco), ARCSSTE-E (Nigeria)

Asia and the Pacific: CSSTEAP (India)

Latin America and the Caribbean: CRECTEALC (Brazil/Mexico)

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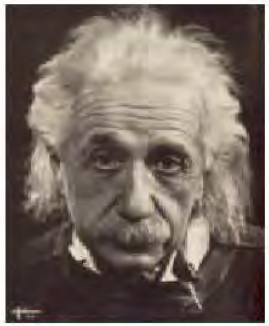
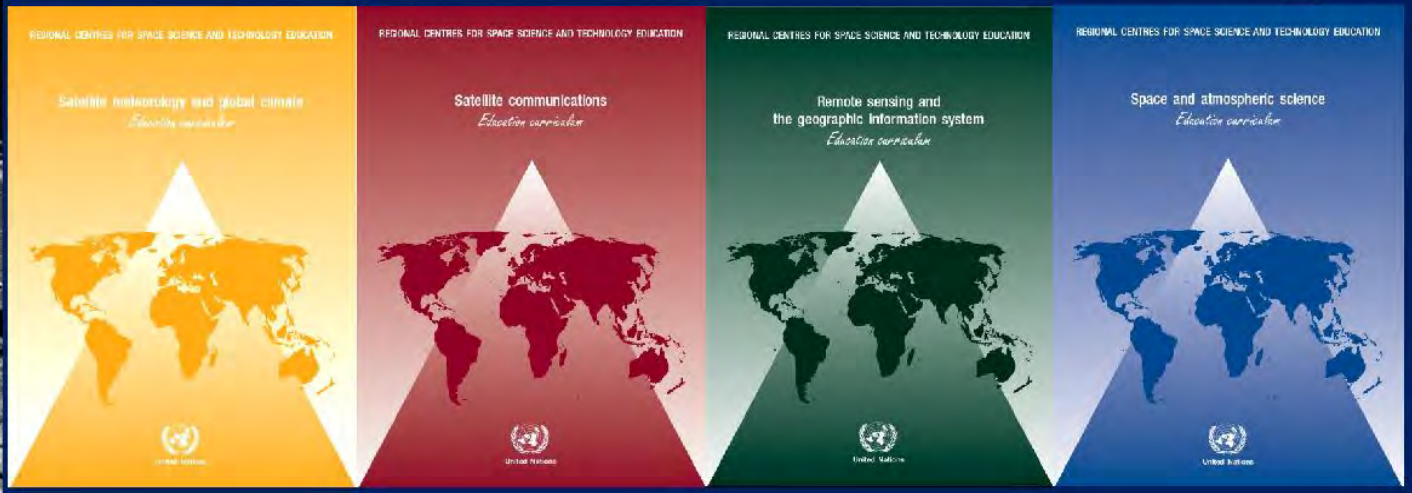
United Nations Office at Vienna

Regional Centres for Space Science and Technology Education (affiliated to the UN)

$$ds^2 = -\left(1+\frac{2\Phi}{c^2}\right)(c\ dt')^2 + \left(1-\frac{2\Phi}{c^2}\right)(dx^2+dy^2+dz^2)$$





Meteorology | Communications | Remote Sensing | Space Science

Future: GNSS, Space Law