

題名 ISWI Newsletter – Vol. 2 No. 14  
 差出人 maeda@serc.kyushu-u.ac.jp

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* ISWI Newsletter – Vol. 2 No. 14                21 February 2010 *
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*           I S W I = International Space Weather Initiative      *
*                        (www.iswi-secretariat.org)                *
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* Publisher:      Professor K. Yumoto, SERC, Kyushu University, Japan *
* Editor-in-Chief: Mr. George Maeda, SERC (maeda@serc.kyushu-u.ac.jp) *
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Attachments:

(1) UN BASIC SPACE SCIENCE INITIATIVE; 17 pages, 1.6 MB pdf.

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Dear ISWI Participant:

ISWI is a subset of UNBSSI (United Nations Basic Space Science Initiative), and UNBSSI has been defined in this way:

\* UNBSSI = BSS (1990–2004) + IHY (IYA) (2005–2009) + ISWI (2010–2012).

Attached is a summary of the UNBSSI, 1990–2012. It comes from the "UN Office for Outer Space Affairs" in Vienna. As you can see, UNBSSI has been active since 1990.

If your country does not yet have an ISWI National Coordinator, why not volunteer for the job? From my experience with IHY, usually it is the person who raises his or her hand first that gets the job. You may wonder what the responsibilities are for the job. For the most part, you may decide what they are. But at the very least, you should organize a ISWI website for your country (in the language of your country).

Also, as you can see from Page 15 of the attached pdf, you can announce your country's ISWI activities (or entire agenda) by using the ISWI Newsletter (done by Japan) or by using the ISWI website (done by Bulgaria). If you take action, we can get the word out for you. We are pleased to do it for you.

Faithfully yours,  
 George Maeda  
 Editor of 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**

**Hans J. Haubold**

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

**[hans.haubold@unvienna.org](mailto:hans.haubold@unvienna.org)**

*Information Dissemination: 178 UNDP, 185 PM*

*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*



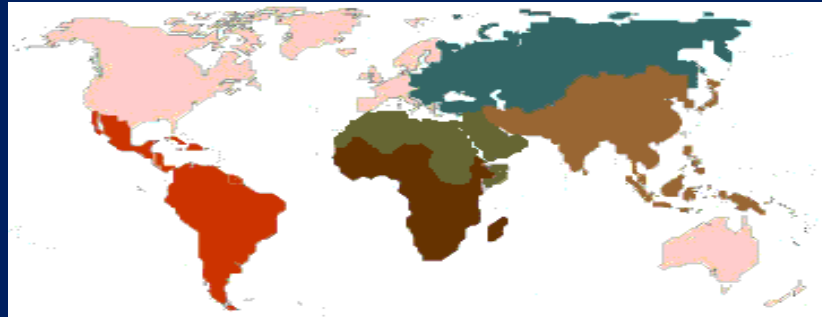


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United Nations Office at Vienna



## UN INFORMATION DISSEMINATION NETWORK

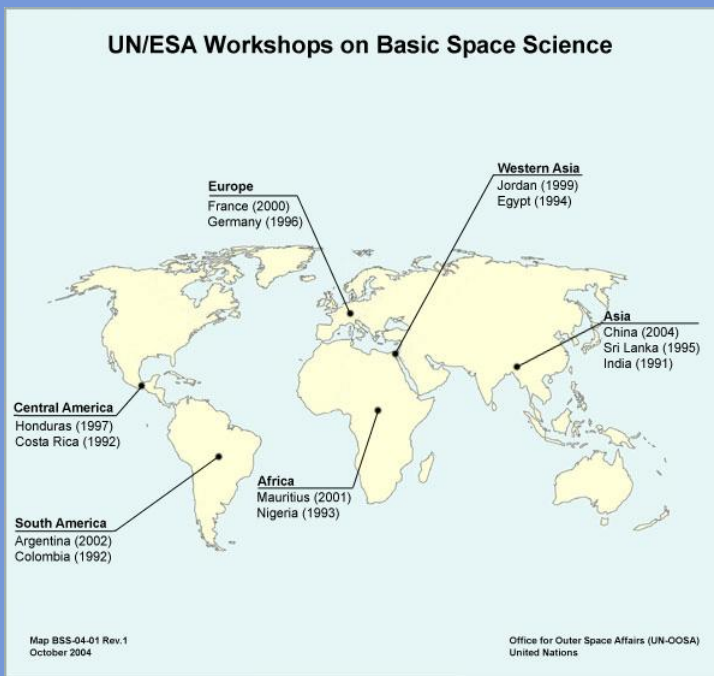
- ◆ 178 UN Development Programme (UNDP) Offices
- ◆ 185 Permanent Missions of 192 UN Member States



UNDP regional groupings



## 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







## 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 2009, 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





## 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

### Planetarium

A Challenge  
for Educators



UNITED NATIONS



Myanmar 1986



Peru 2003



Viet Nam 1998

- **Government of Japan (NAOJ)**
- **Host country**
- **UNOOSA**
- **Myanmar, Jordan, Malaysia, The Philippines, India, Argentina, Uruguay, Vietnam, Thailand, Sri Lanka, Uzbekistan, Paraguay, Ecuador, Honduras, Costa Rica, Peru, Bolivia, Cuba, El Salvador**





## Final Report BSS

Manotaker xpr 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/~sh207/un-esa/index.html>  
<http://www.oosa.unvienna.org/SAP/bss/index.html>  
<http://www.oosa.unvienna.org/SAP/centres/centres.html>

WWW.WKAP.NL  
KLUWER ACADEMIC PUBLISHERS



Developing Basic Space Science World-Wide

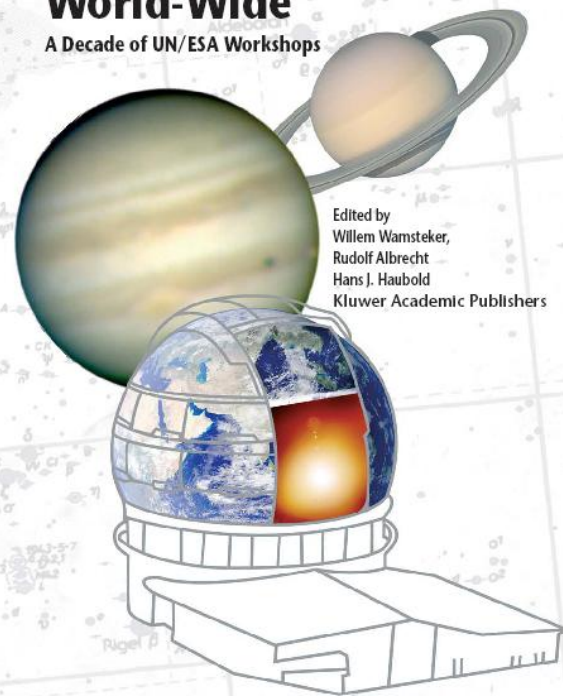
Willem Wamsteker,  
Rudolf Albrecht and  
Hans J. Haubold (Eds.)



### Developing Basic Space Science World-Wide

A Decade of UN/ESA Workshops

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







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United Nations Office at Vienna



## **WORKSHOPS**

### **INTERNATIONAL HELIOPHYSICAL YEAR 2007 (IHY)**

**1<sup>st</sup> 2005, Al-Ain, UAE**

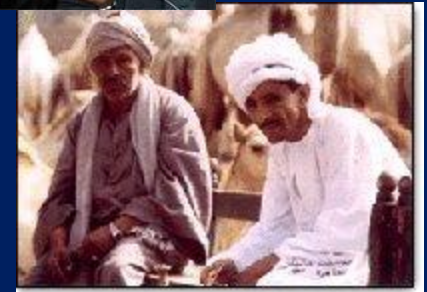
**Instrument providers and hosts**  
**Coordinated investigation programmes**  
**Education and outreach**

**2<sup>nd</sup> 2006, Bangalore, India**

**3<sup>rd</sup> 2007, Tokyo, Japan**

**4<sup>th</sup> 2008, Sozopol, Bulgaria**

**5<sup>th</sup> 2009, Seoul, Republic of Korea**

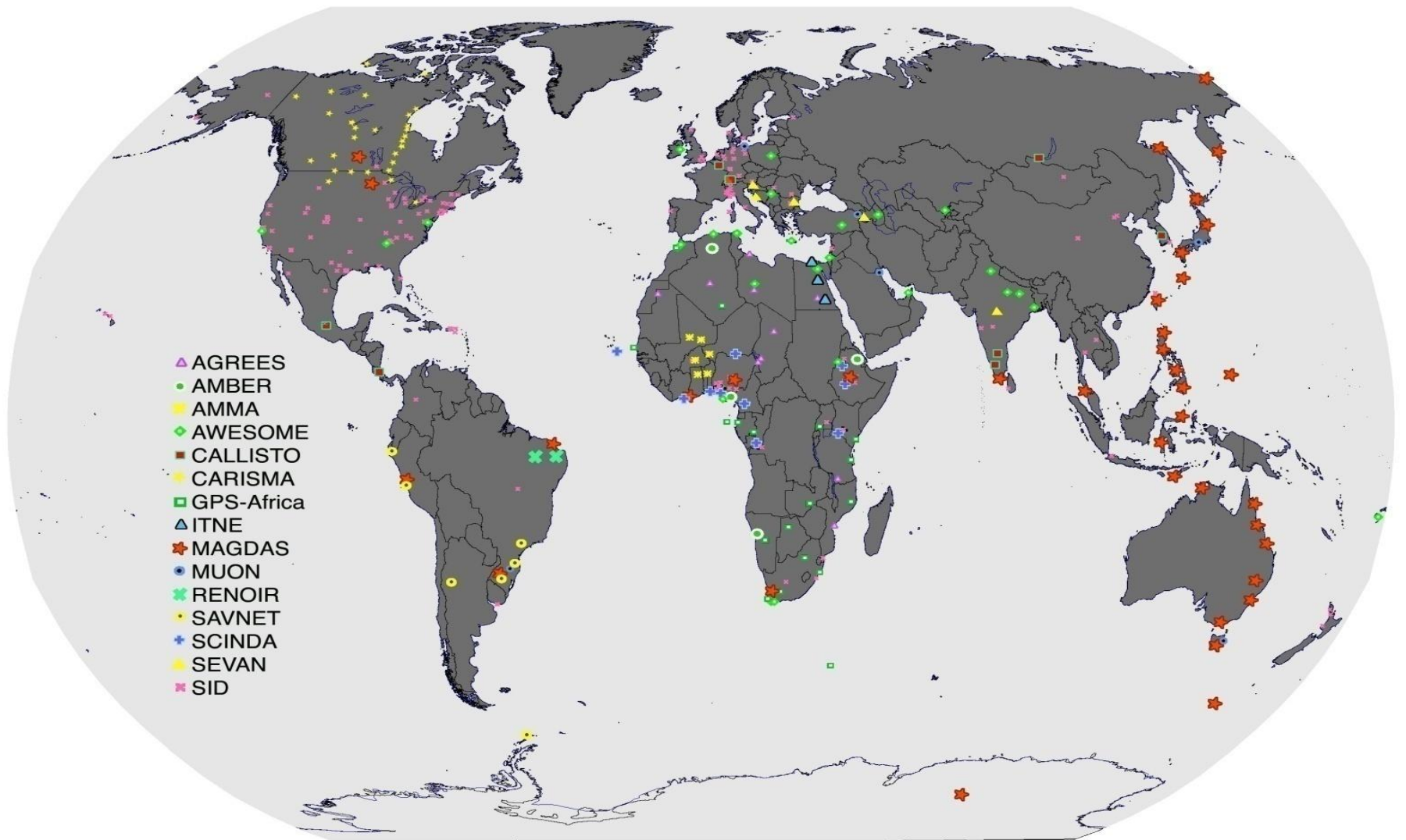




## IHY TRIPOD: Instrument Array, Data, Teaching

- ◆ 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

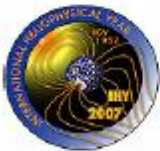




<http://www.ihy2007.org>

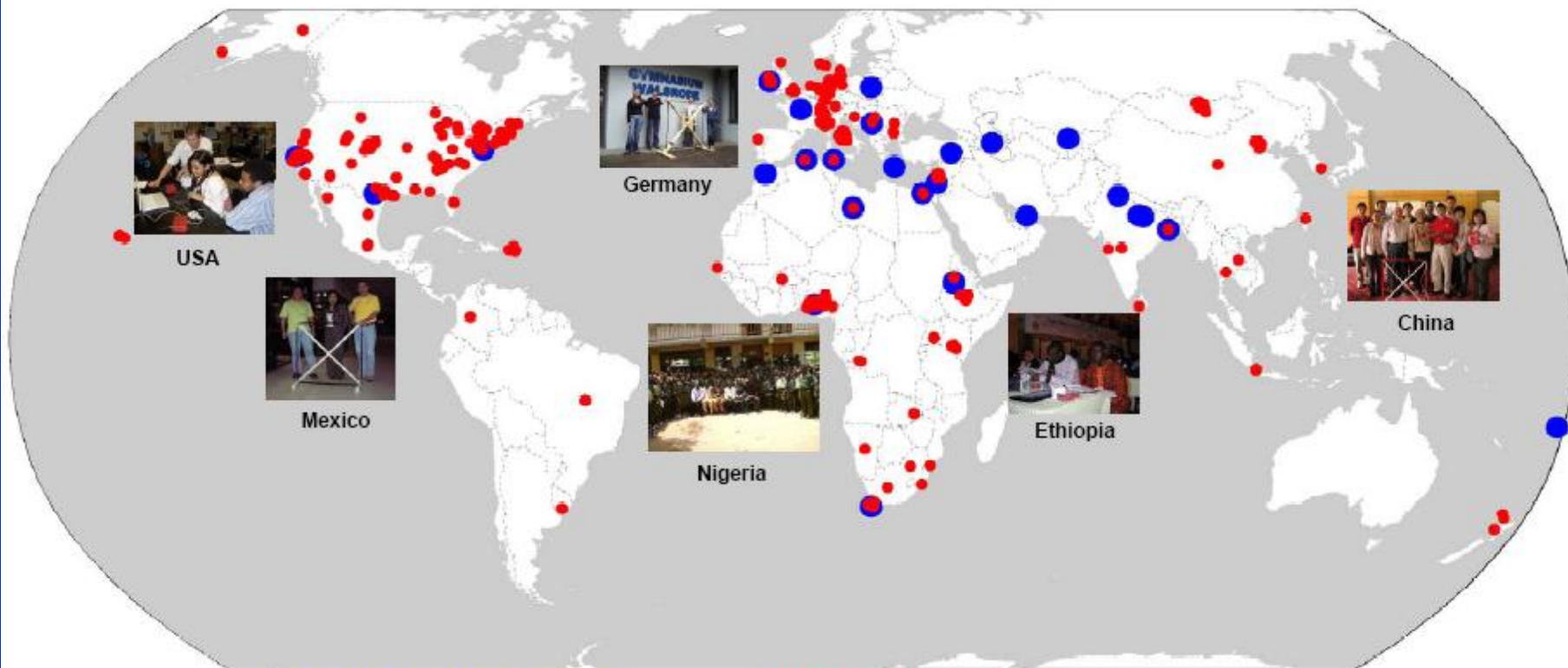
**This model for developing instrument networks was proven during the IHY**





# Space Weather Monitor Sites

IHY Distribution 2007-2009



● AWESOME research monitors (26)

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



USA



Mexico



Romania



Lebanon



Thailand



Office for Outer Space Affairs  
United Nations Office at Vienna



## Final Report IHY

### Studies in Space Policy

B. J. Thompson · N. Gopalswamy

J. M. Davila · H. J. Haubold

*Editors*

#### Putting the "I" in IHY

The United Nations Report for the International

Heliophysical Year 2007

*Studies in Space Policy, Vol. 3*

This book about the international aspects and achievements of the "International Heliophysical Year (IHY) 2007" can be regarded as a compendium of the fertile impacts of conducting research in this field. The main focus, as the title implies, is the international cooperation, which has emerged from this grassroots initiative. North and South, industrialized and developing countries have been coordinating their efforts and have been learning from each other in a mutual partnership under a joint understanding of sharing the scientific benefits. Through this, trans-border networks have been created and scientific as well as cultural exchange took place.

Another focus of the book shows, how much astronomy contributes to the basis of knowledge society as today's concept for mastering the future. Heliophysics has been and will be attracting large numbers of young people to enter an education and career in science and engineering. Such attractions we desperately need in all countries around the world, and we have to be glad about initiatives like IHY, which are successful in raising awareness, interest and fascination.

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ISBN 978-3-211-99179-4



springer.at



Thompson et al. Eds.



Putting the "I" in IHY

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*Editors*

## Putting the "I" in IHY

The United Nations Report  
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SpringerWienNewYork



European Space Policy Institute





**Office for Outer Space Affairs**  
United Nations Office at Vienna



# 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

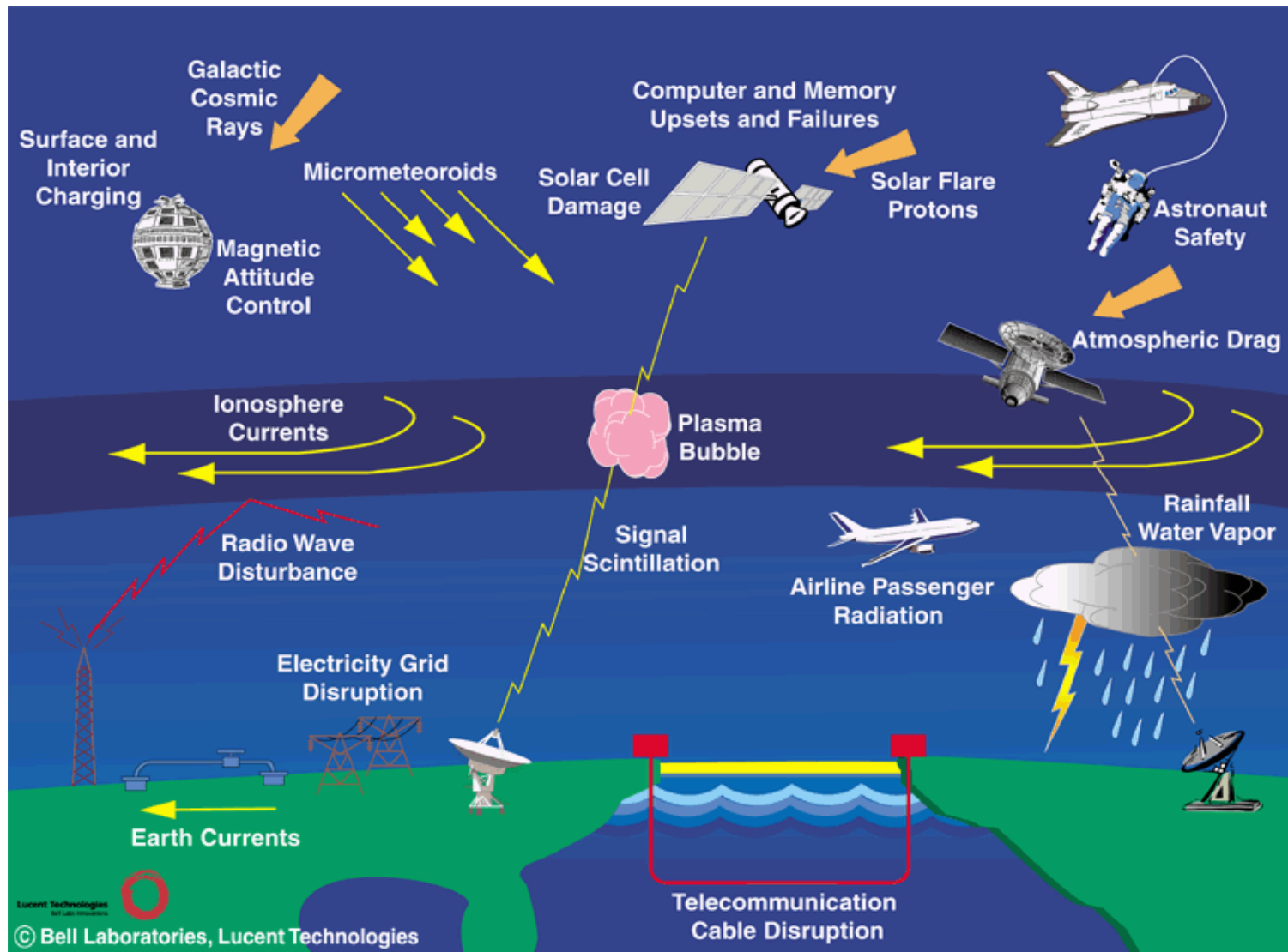
- Fundamental Physics
- Astronomy and Astrophysics
- Solar-terrestrial Interaction and Its Influence on Terrestrial Climate
- Planetary and Atmospheric Studies
- Origin of Life and Exo-biology

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



**IHY 2007**





## **ISWI Newsletter**

- **Space Environment Research Centre, Kyushu University,  
Japan**

## **ISWI Website**

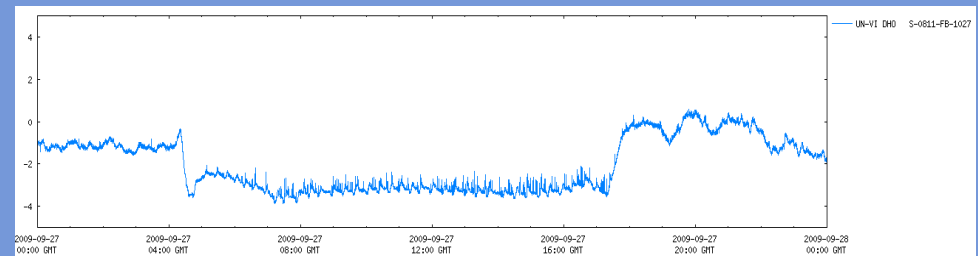
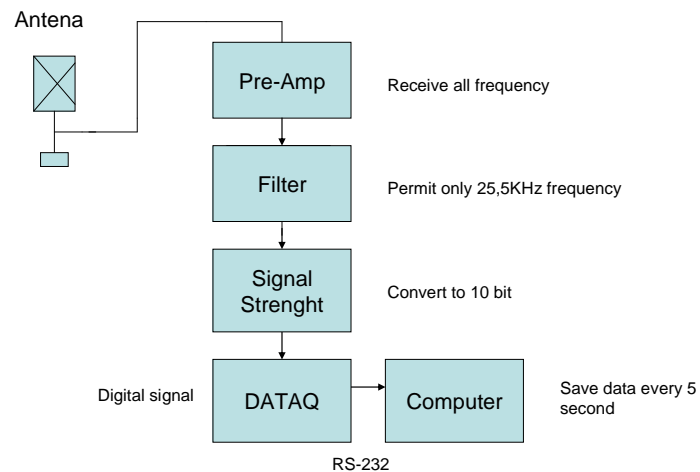
- **Solar Terrestrial Influences Laboratory, Bulgarian Academy of Sciences,  
Bulgaria**



# Sudden Ionospheric Disturbance Monitor (SID) operated by UNOOSA



## Principle of SID monitor







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

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



- ◆ 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

### ◆ Regional Centres located in:

- ◆ Africa: CRASTE-LF (Morocco), CSSTE-E (Nigeria)
- ◆ Asia and the Pacific: CSSTEAP (India)
- ◆ Latin America and the Caribbean: CRECTEALC (Brazil/Mexico)