The International Space Weather Initiative

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ISWI-sectretariat.org

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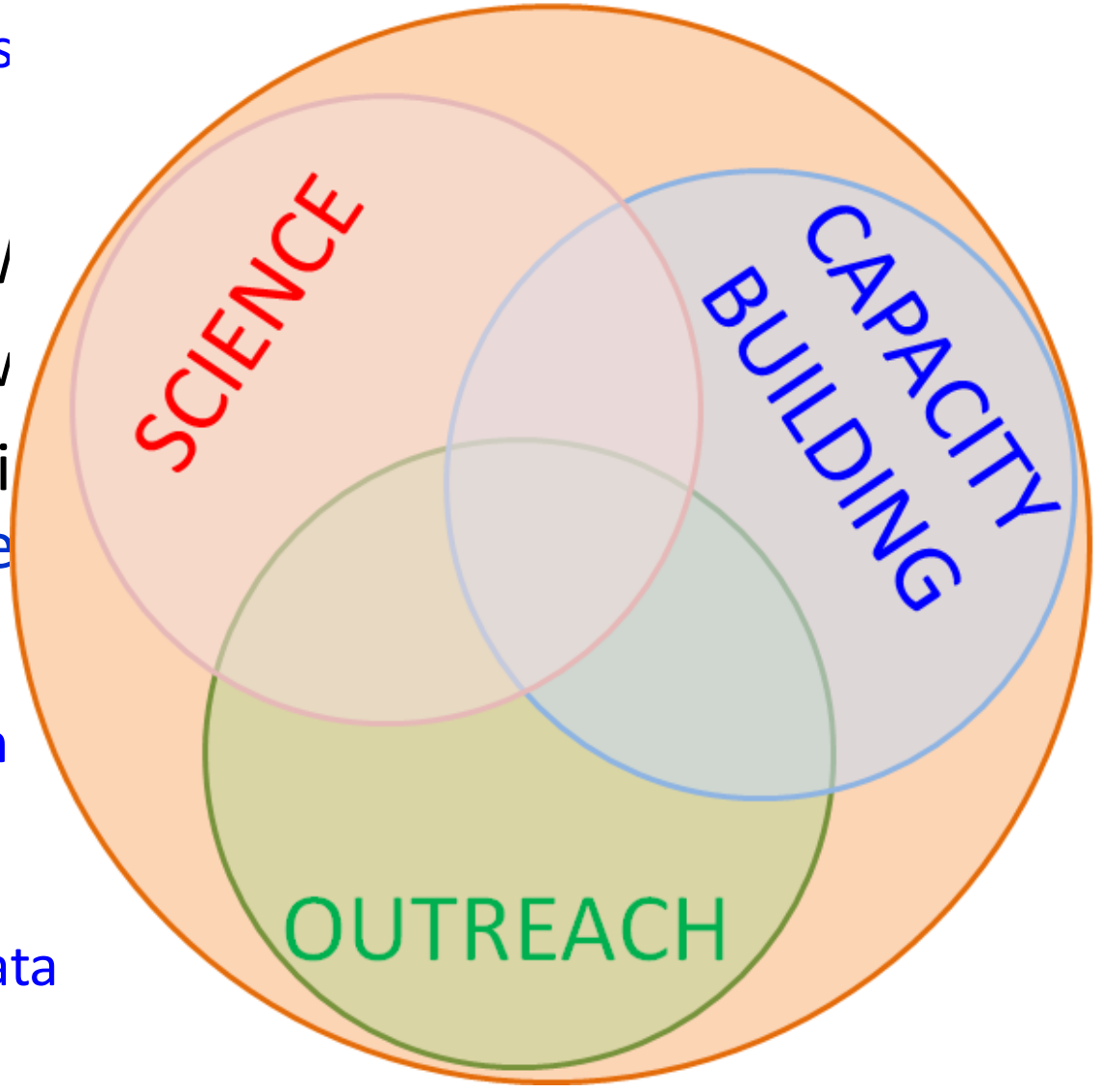
Shibata Chi Wang and Akimasa Yoshikawa

~80 Member countries

ISWI, ILWS, & SCOSTEP

International Organizations
complementary aspects of

- ISWI: International Space V
- ILWS: International Living v
- SCOSTEP: Scientific Commi
  Physics (long-term science

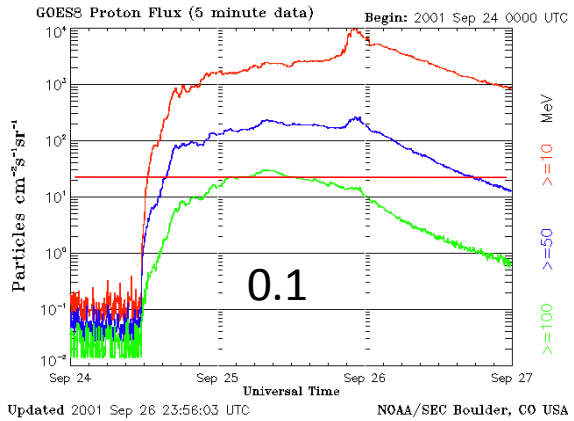


ISWI is a program of international cooperation
to advance the space weather science by a combination of instrument deployment, analysis and interpretation of space weather data

ISWI Instruments in Sun-Earth Connection

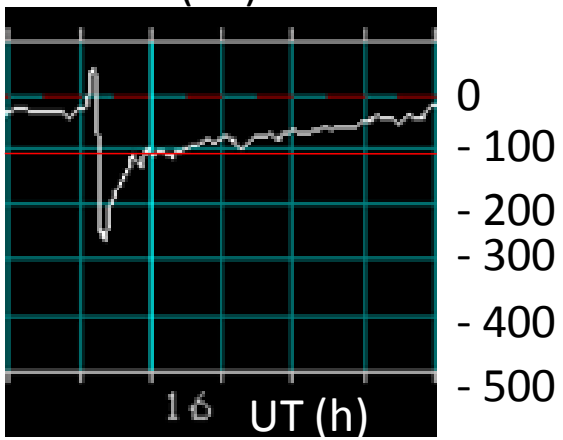
Also solar flare effects

10,000



CMEs

Dst (nT)



CIR

Radio telescope network
H-alpha Telescope network
Particle detector networks

SEPs

?

Magnetic storms

Combine with in-situ space measurements

Combine with remote-sensing space- and ground-based measurements

Space systems
Airplanes
atmosphere

Space systems
Magnetosphere
Ionosphere
Atmosphere
Ground

magnetometer networks
GPS receiver networks
VLF receiver network
Atmospheric instruments

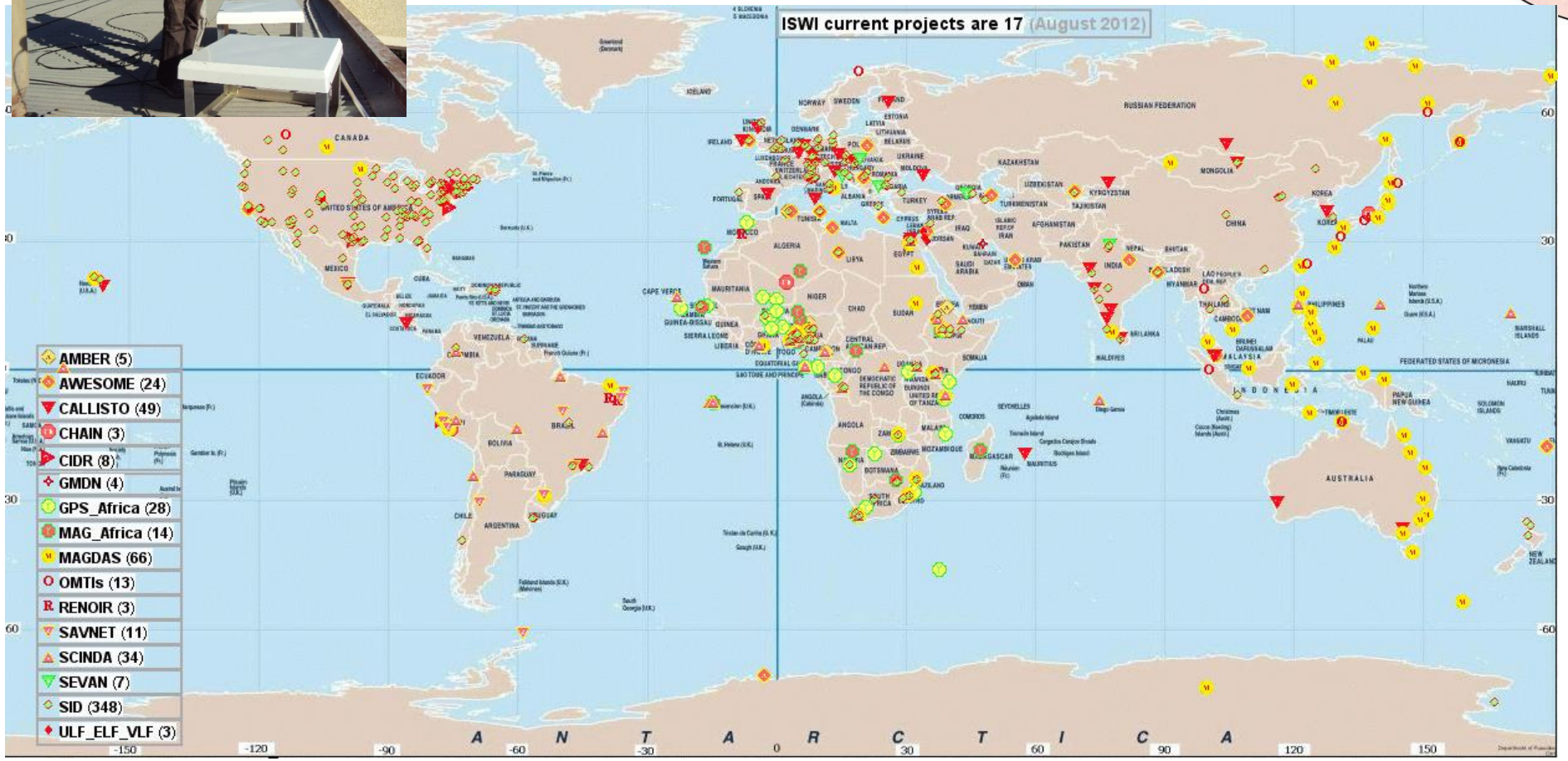
17 Instrument Concepts from 8 Countries

- 17 Approved Instrument Concepts: AMMA, AMBER, AWESOME/SID, CALLISTO, CHAIN, CIDR, GIFDS, GMDN, LISN, MAGDAS, OMTI, RENOIR, SOFIE, SAVNET, SCINDA, SEVAN, UEV

- from Armenia (1), Brazil (1), France (1), Germany (2), Israel (1), Japan (4), Switzerland (1), and USA (6)

- Details about the projects and Lead Scientists in: iswi-secretariat.org

ISWI Instrument Sites



Scientists from developing and developed nations work together

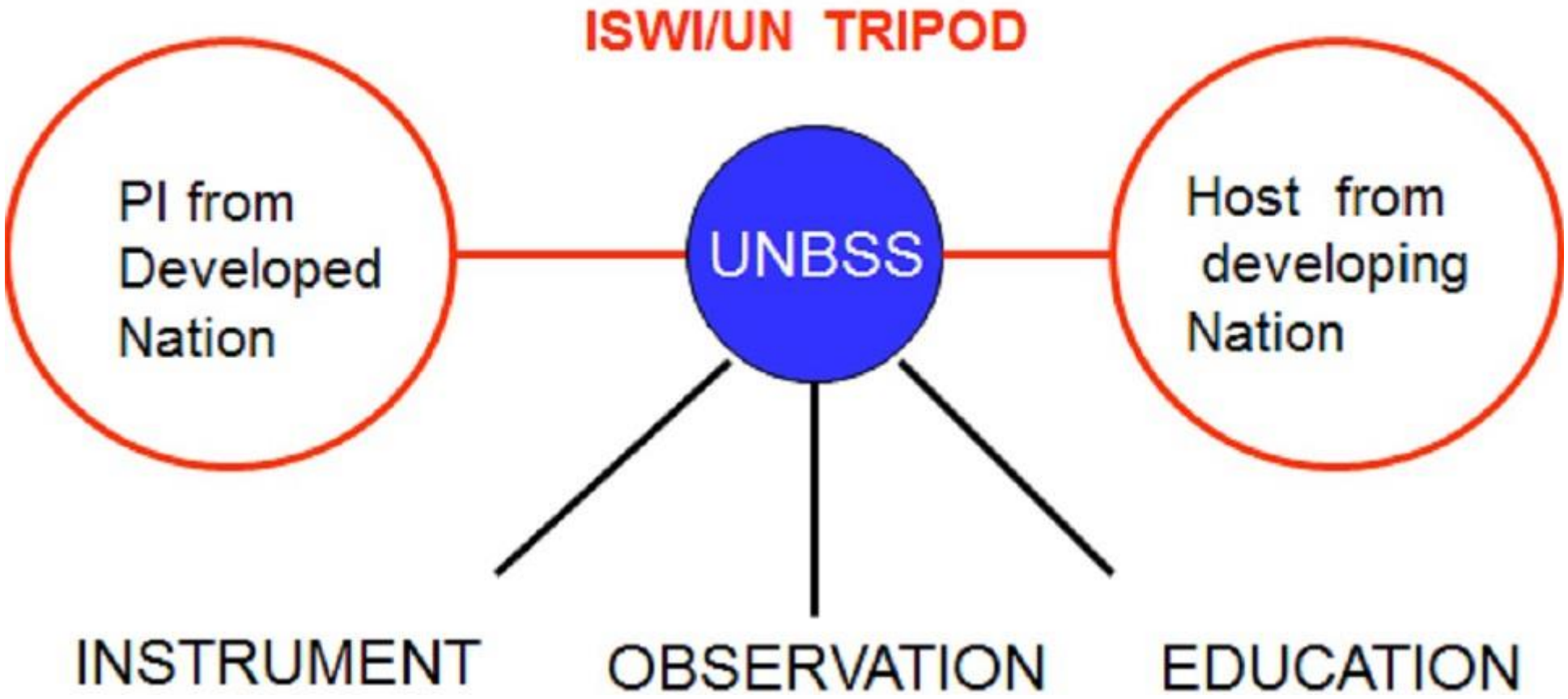
Students and faculty participate at all levels of the instrument project and science

Data gaps closed due to deployment in crucial locations

Heavy focus on Africa, with added schools and workshops

The UN Connection

GNSS for Space Weather Applications



More from C. Amory-Mazaudier and Werner Balogh

Capacity Building

Recent schools in
Indonesia, Kenya, & Peru
in cooperation
with SCOSTEP

Lectures are available online
in SCOSTEP and ISWI websites

Debbie Scherrer explains
how to make a spectrograph
during the teacher workshop in Kenya

Outreach:
Teacher
workshops

Lectures in
local high schools

Lecture in a Nairobi High School

Dalmiro Maia
in Brooksfield School
in Nairobi

Questions/Issues

- Long-term goal: continue to push the frontier of space weather science
- Exploit synergy with other international organizations to make rapid progress on all the three aspects of ISWI: Science, capacity building, and outreach
- How to encourage increased exchange between national coordinators and the national mission to the UN
- Explore space weather overlap with other UNOOSA activities to enhance ISWI activities (e.g. GNSS, Space Debris, ….)
- Interact with the space weather service/operational community to inject ISWI data into operational models (Onsager panel)
- Continue to identify gaps and expand the networks; do life-cycle analysis of networks
- Problems with deployment, maintenance, and data generation (Fung panel)
- Problems in data availability (infrastructure), interpretation, and modeling

Panel

- Chair: Nat Gopalswamy, NASA, United States
- Members: Christine Amory, University Pierre and Marie Curie, France
- Vafi Doumbia Cote d'Ivoire
- Hans Haubold, United Nations Office for Outer Space Affairs
- Christian Monstein, ETH Zurich, Switzerland
- Akimasa Yoshikawa, ICSWSE, Kyushu University, Japan