

The International Space Weather Initiative (ISWI)

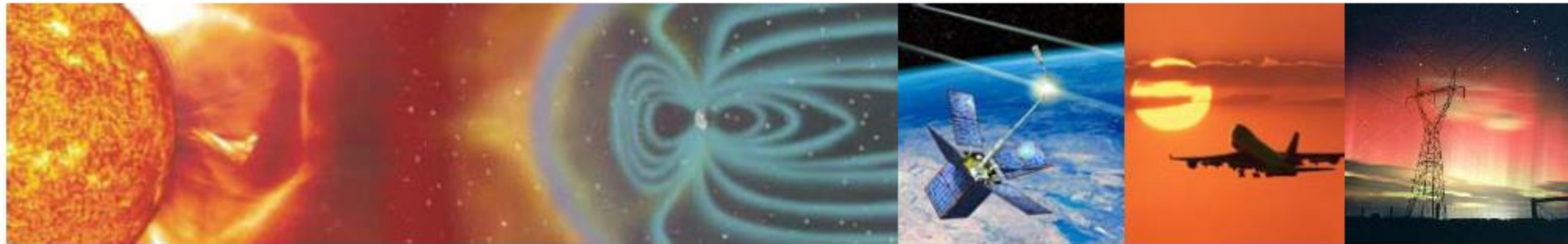
Patricia Doherty

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ISWI Meetings Coordinator



Nat Gopalswamy

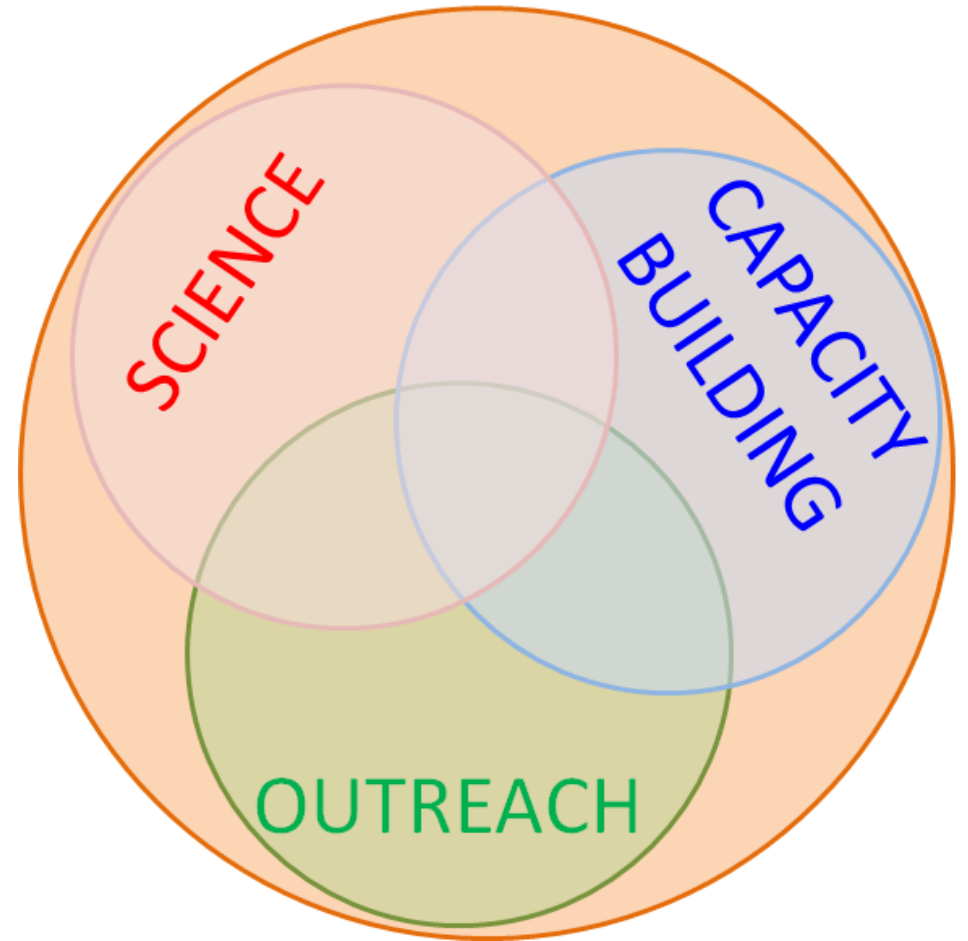
NASA GSFC, USA, ISWI Executive Director





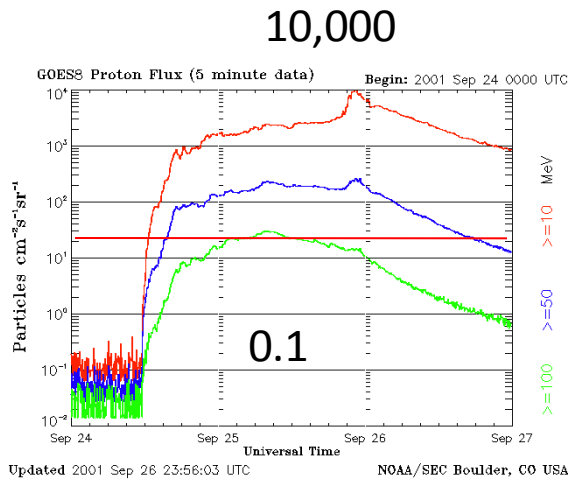
Science, Capacity Building & Outreach

- **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
- Grass-roots organization – bottoms-up approach to produce space-weather-literate communities especially in developing countries
- Accomplished via workshops, schools, and public events
- Collaboration with SCOSTEP, ILWS, & COSPAR

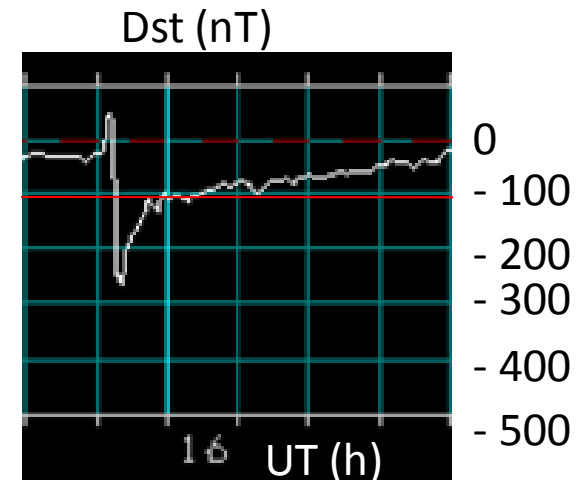


ISWI Instruments Measure Source & Impact of Space Weather

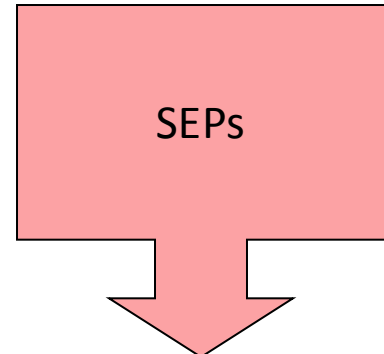
Also solar flare effects



CMEs
CIRs
from the Sun

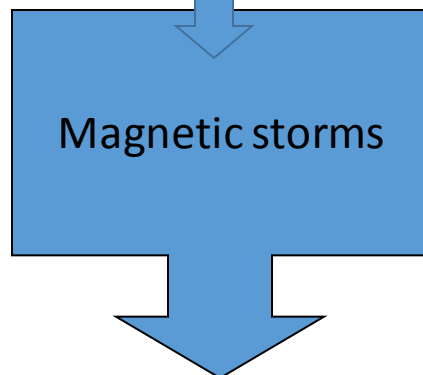


Radio telescope network
H-alpha Telescope network
Particle detector networks



Space systems
Airplanes
atmosphere

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



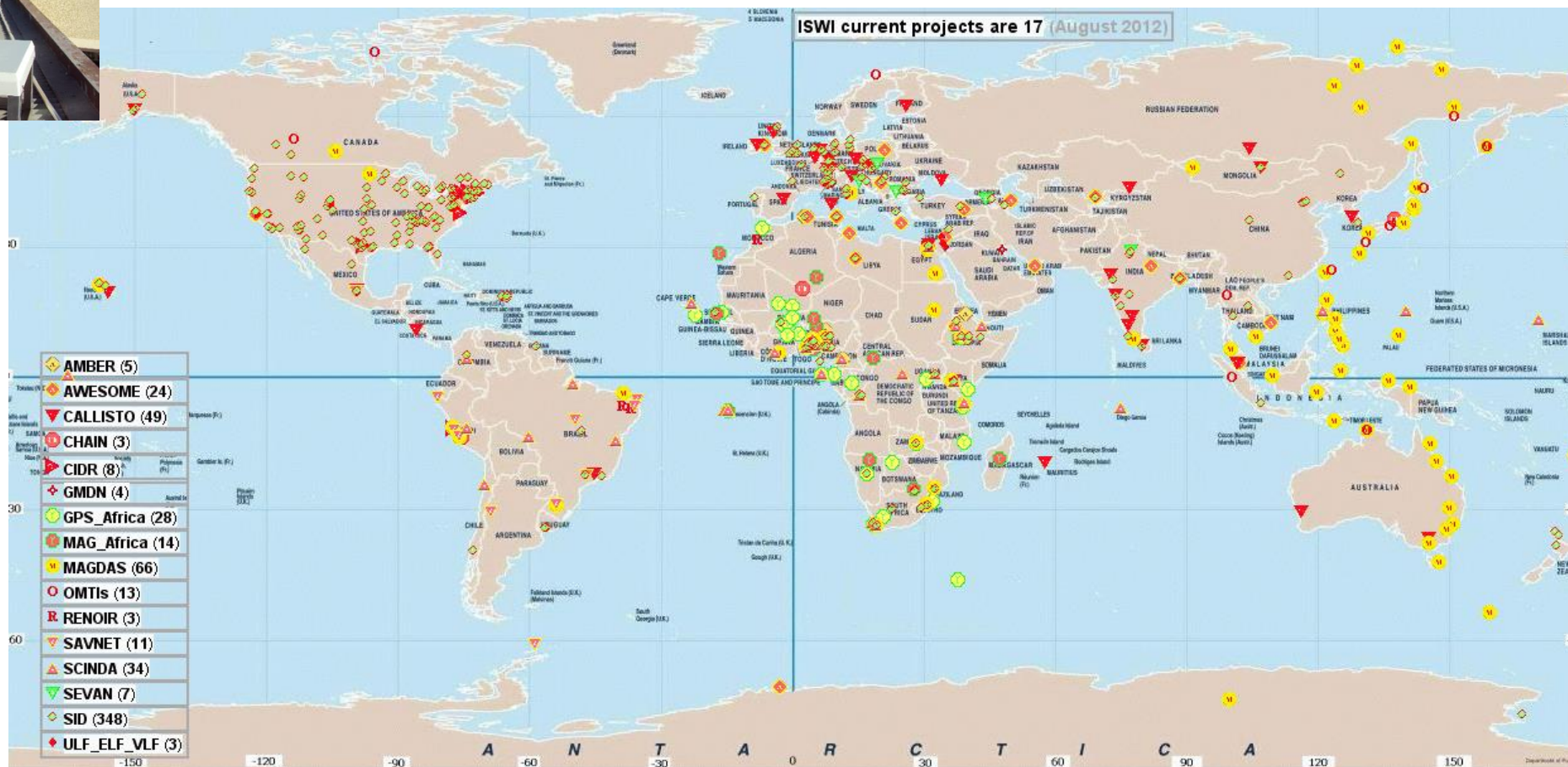
Space systems
Magnetosphere
Ionosphere
Atmosphere
Ground

Combine in-situ and
space measurements

magnetometer networks
GPS receiver networks
VLF receiver network
Atmospheric instruments



ISWI Instrument Sites



- Scientists from developing and developed nations work together in deploying and operating space weather instruments (currently there are more than 1000 deployments in more than 100 countries)
- Students and faculty participate at all levels of the instrument project and science
- 17 instrument networks from 8 countries (USA, Germany, Japan, Brazil, France, Israel, Armenia, Switzerland)



Data Utilization and Operational Use

- ISWI data are currently used for Space Weather science
- The ISWI SC has recently adopted an open data policy and Rules of the Road for data use (Steering Committee in UN on Feb 19, 2016)
- All ISWI data will be made accessible, available and independently usable
- This means data can be used by any space weather service that needs data on any aspect of the Sun-Earth space
- Some of the applications were identified during the COSPAR-ILWS workshop held in the fringes of UNCOPUOS/STSC meeting during Feb 15-17, 2016

Capacity Building: Space Science Schools



Indonesia (2012); Kenya (2013),
Peru (2014), India (2016)

Science and Outreach: Workshops



Egypt (2010), Nigeria (2011), Ecuador (2012),
Japan (2015)
Next one in USA (2017)

The banner features a dark space background with stars. On the left is a bright, fiery orange and red sun. On the right is a colorful aurora-like pattern in shades of purple, blue, and green. The text 'ISWI2017' is centered in large white letters, with the full workshop name below it in smaller white letters.

ISWI2017

UN/US International Space Weather Initiative Workshop

**UN/US International Space Weather Initiative Workshop:
Boston College, Chestnut Hill, MA, USA
July 31 – August 4, 2017
<http://iswi2017.bc.edu>**

- An international forum on the economic and societal effects of extreme space weather
- Preparation for UNISPACE+50
- Global forum for space weather experts from developed and developing countries to focus on recent advances in space weather phenomena by utilizing ISWI instruments and data.

The 3 components of the workshop may help develop a coherent international policy towards an appropriate response to space weather.

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