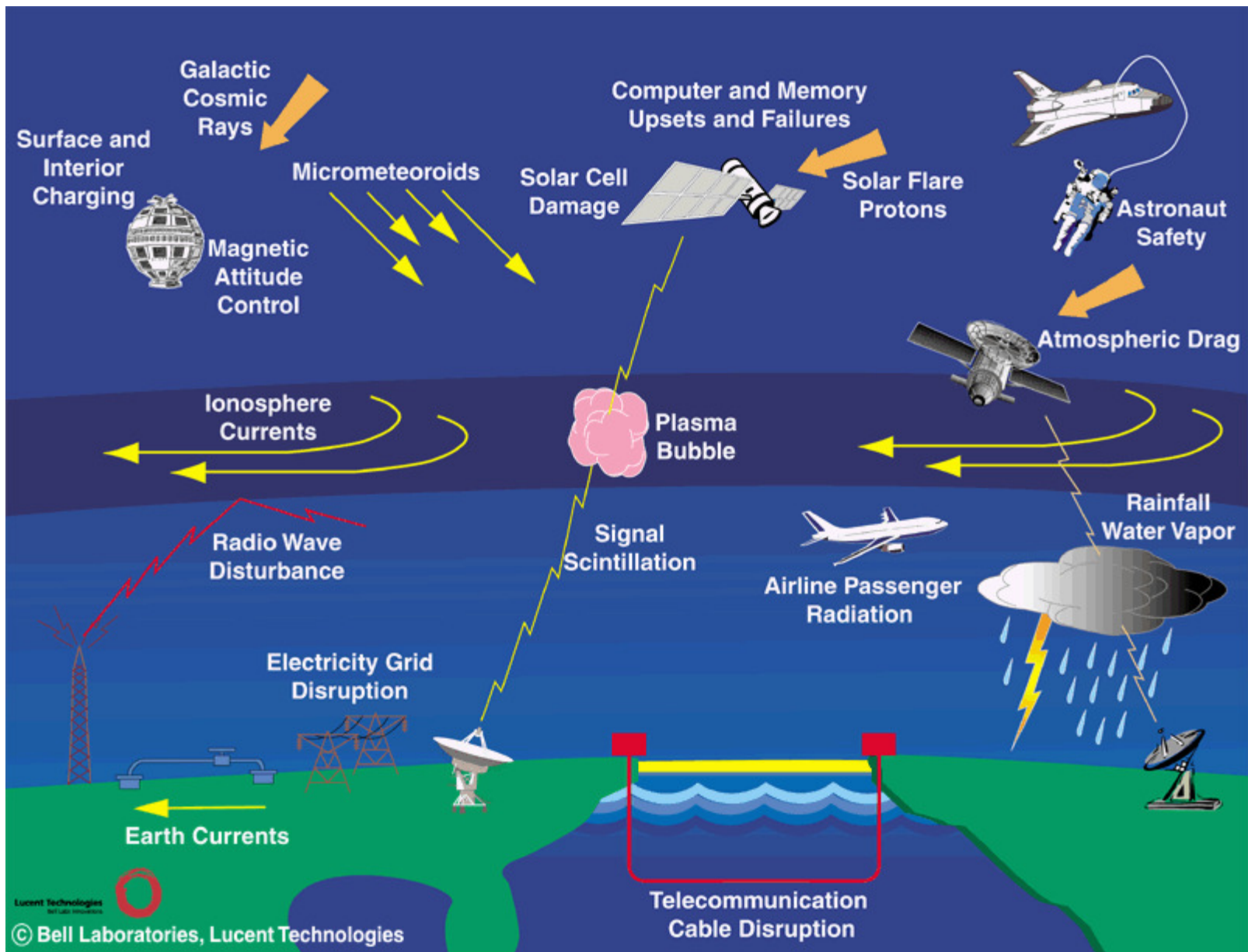


International Space Weather Initiative

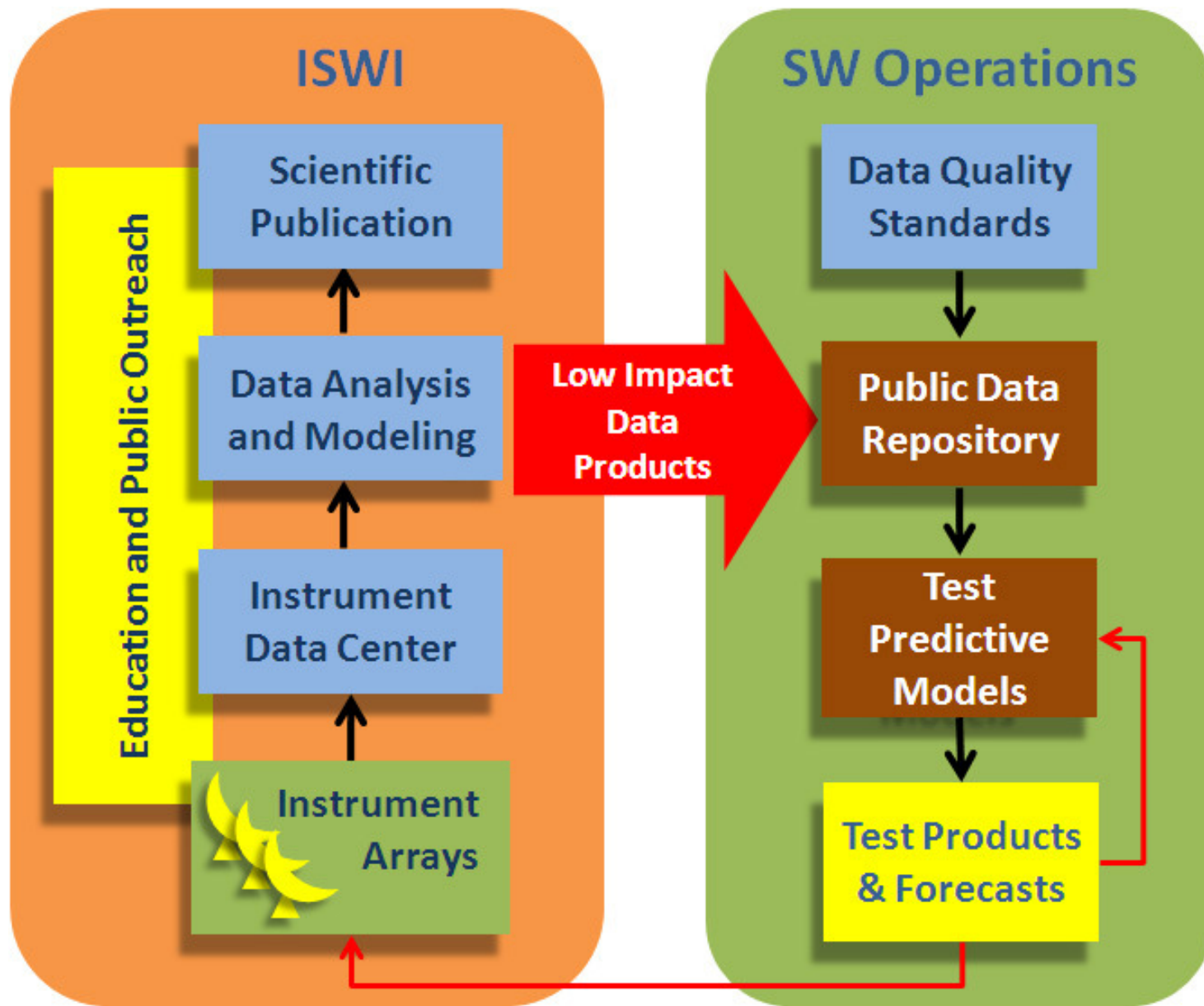
Joseph M. Davila (GSFC) and Nat
Gopalswamy (GSFC)

For additional information go to <http://iswi-secretariat.org>



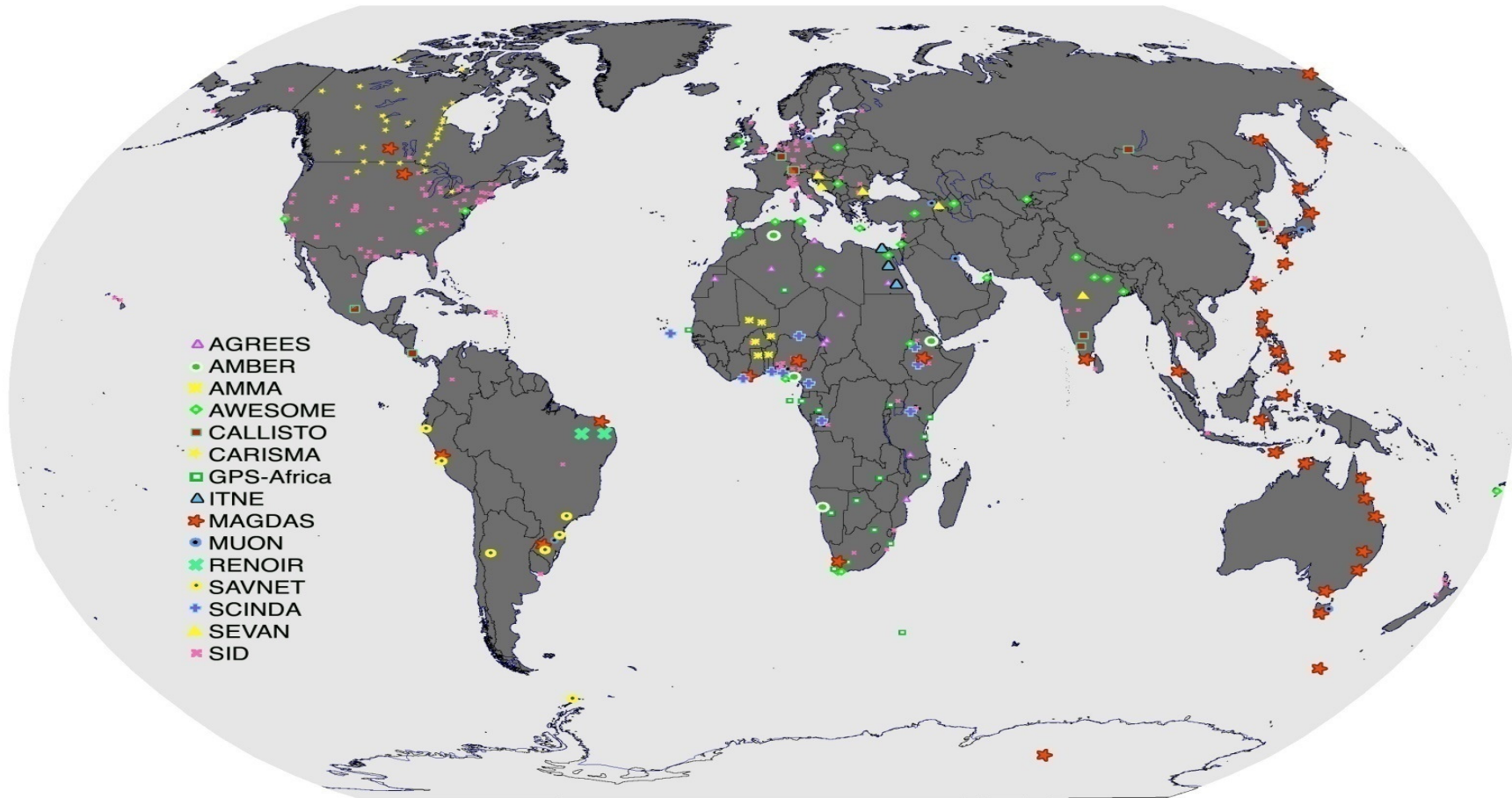
Objectives

- **Develop the scientific insight necessary to understand the science, and to reconstruct and forecast near-Earth space weather**
 - **Instrumentation**
 - Expand and continue deployment of new and existing instrument arrays
 - **Data analysis**
 - Expand data analysis effort for instrument arrays and existing data bases
 - **Coordinate data products to provide input for physical modeling**
 - Input instrument array data into physical models of heliospheric processes
 - Develop data products that reconstruct past conditions in order to facilitate assessment of problems attributed to space weather effects
 - **Coordinate data products to allow predictive relationships to be developed**
 - Develop data products to allow predictive relationships that enable the forecasting of Space Weather to be established
 - Develop data products that can easily be assimilated into real-time or near real-time predictive models
- **Education, Training, and Public Outreach**
 - **University and Graduate Schools**
 - Encourage and support space science courses and curricula in Universities that provide instrument support
 - **Public Outreach**
 - Develop public outreach materials unique to the ISWI, and coordinate the distribution



Current Instrument Installations

A Proven Track Record



This model for developing instrument networks was proven during the IHY

Principles of the Instrument Program

- The lead scientist or principle investigator funded by his/her country provides instrumentation (or fabrication plans) and data distribution service
- The host country provides the workforce, facilities, and operational support typically at a local university or research institute.
- Host scientists become part of science team
- All data and data analysis activity is shared
- All scientists participate in publications and scientific meetings where possible

ISWI Participation

Albania, Algeria, Argentina, Australia, Austria, Belgium, Benin, Bolivia, **Brazil**, Bulgaria, Burkina Faso, Cameroon, Canada, Chad, Chile, **China**, Colombia, Cuba, Czech Republic, Ecuador, Egypt, **France**, Hungary, Germany, Greece, India, Indonesia, Iran, Iraq, Italy, **Japan**, Kazakhstan, Kenya, Lebanon, Libyan Arab Jamahiriya, Malaysia, Mexico, Mongolia, Morocco, Netherlands, Nicaragua, Niger, Nigeria, Pakistan, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, the Russian Federation, Saudi Arabia, Senegal, Sierra Leone, Slovakia, South Africa, Spain, Sudan, Sweden, **Switzerland**, Syrian Arab Republic, Thailand, Turkey, the United Kingdom of Great Britain and Northern Ireland, **the United States of America**, Ukraine, Uruguay, Venezuela , and Viet Nam

Key: **Instrument Lead** Instrument Host

Scientific Benefits

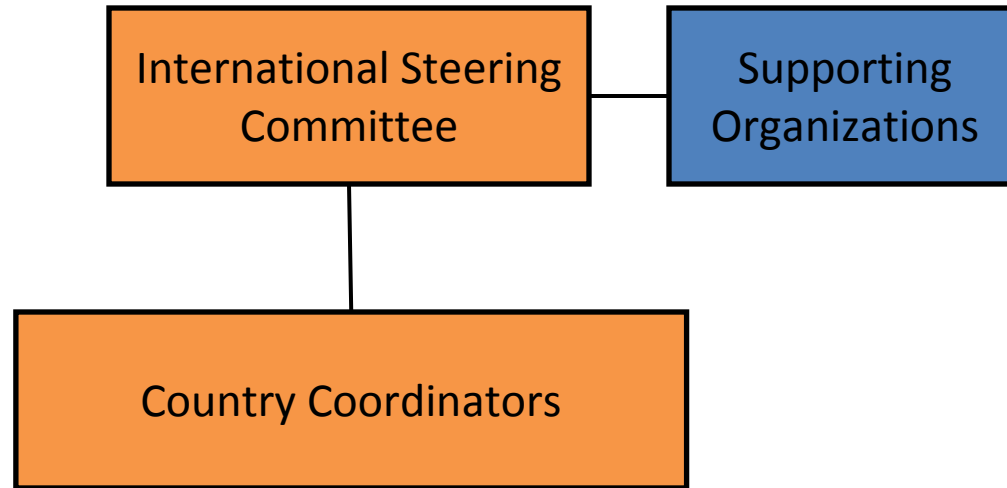
- By observing in new geographical regions, a more global picture of Earth's response to various inputs can be obtained
- New and interesting global phenomena along the magnetic dipole equator and in other regions can be studied for the first time
- Arrays provide 3D information that can be used in tomographic reconstructions
- Long term these networks will provide real-time data valuable for forecasting and nowcasting
- Modeling projects allow better exploitation of existing data sets

First ISWI Coordination Meeting

- June 2009 Organizational Meeting at the Academy of Science
- Nov 18-19, 2009 Coordination Workshop in Rabat Morocco
- Resulted in the plans for the installation of 6 new instruments at various Moroccan universities
- Follow-on meeting planned for next year
- **Would like to arrange similar workshops in other interested countries**

Contact Joseph.M.Davila@nasa.gov

Simple Organization



- Steering committee to meet once/yr to decide policy
- Country coordinators organize activities at the grass roots level

Outreach Activity

- Plans for Hands-on space science and Public Nights

Example in Morocco (November 2009)

- A collaboration with Tree of Hope (US-NGO)
- More than 6000 students age 8-15 engaged in 3 cities over 1-week period
- 10 Outreach specialists, and former astronaut Loren Acton
- Similar events are in the planning process for other countries

Planned Activities

- Major ISWI Workshop in Luxor, Egypt, Nov 6-10, 2010
- Follow-on workshops in Nigeria (2011) and Ecuador (2012)
- Planning additional single country events similar to the Workshop in Morocco
- First Steering Committee Meeting early summer 2010
- For more information see website:

<http://iswi-secretariat.org>