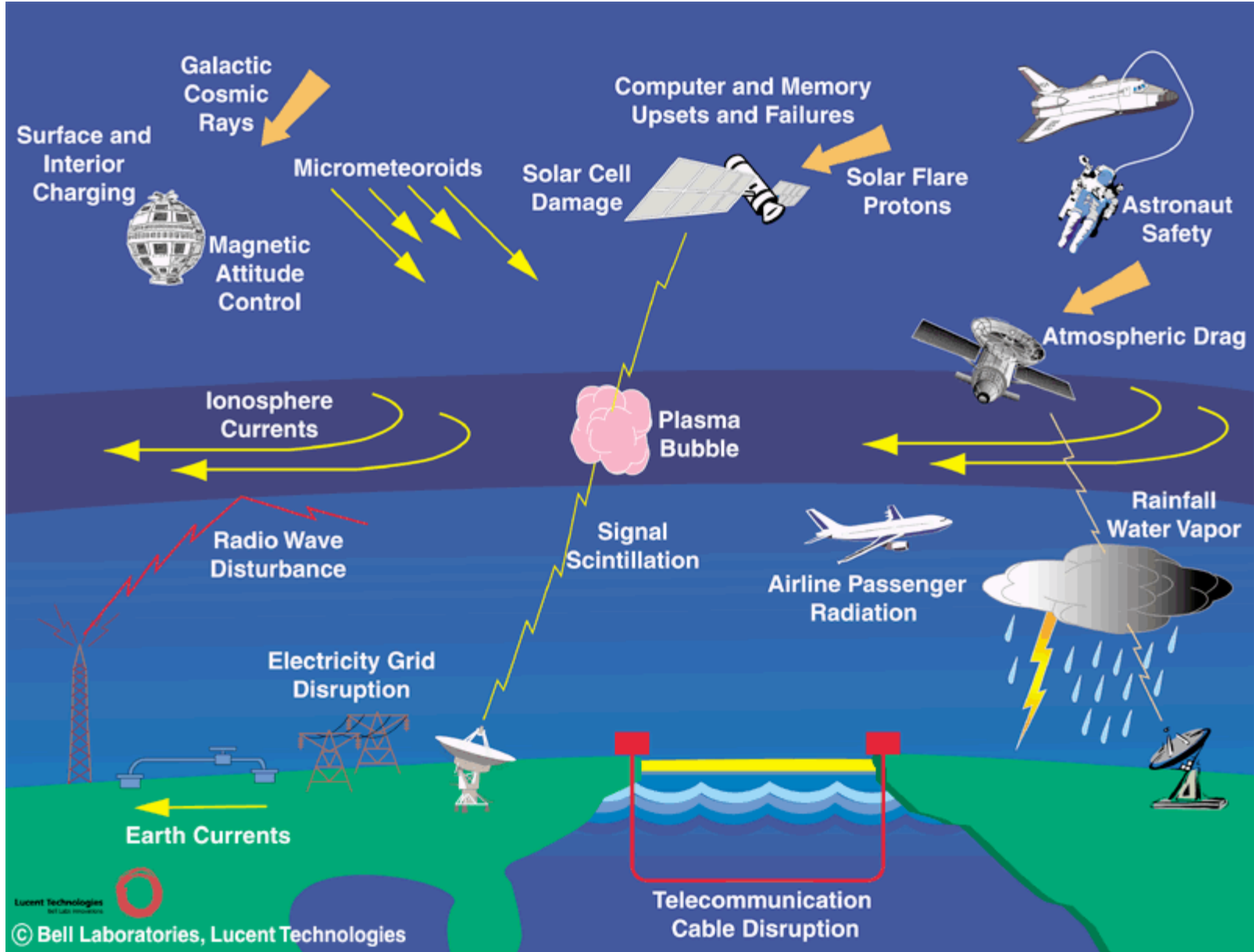


International Space Weather Initiative

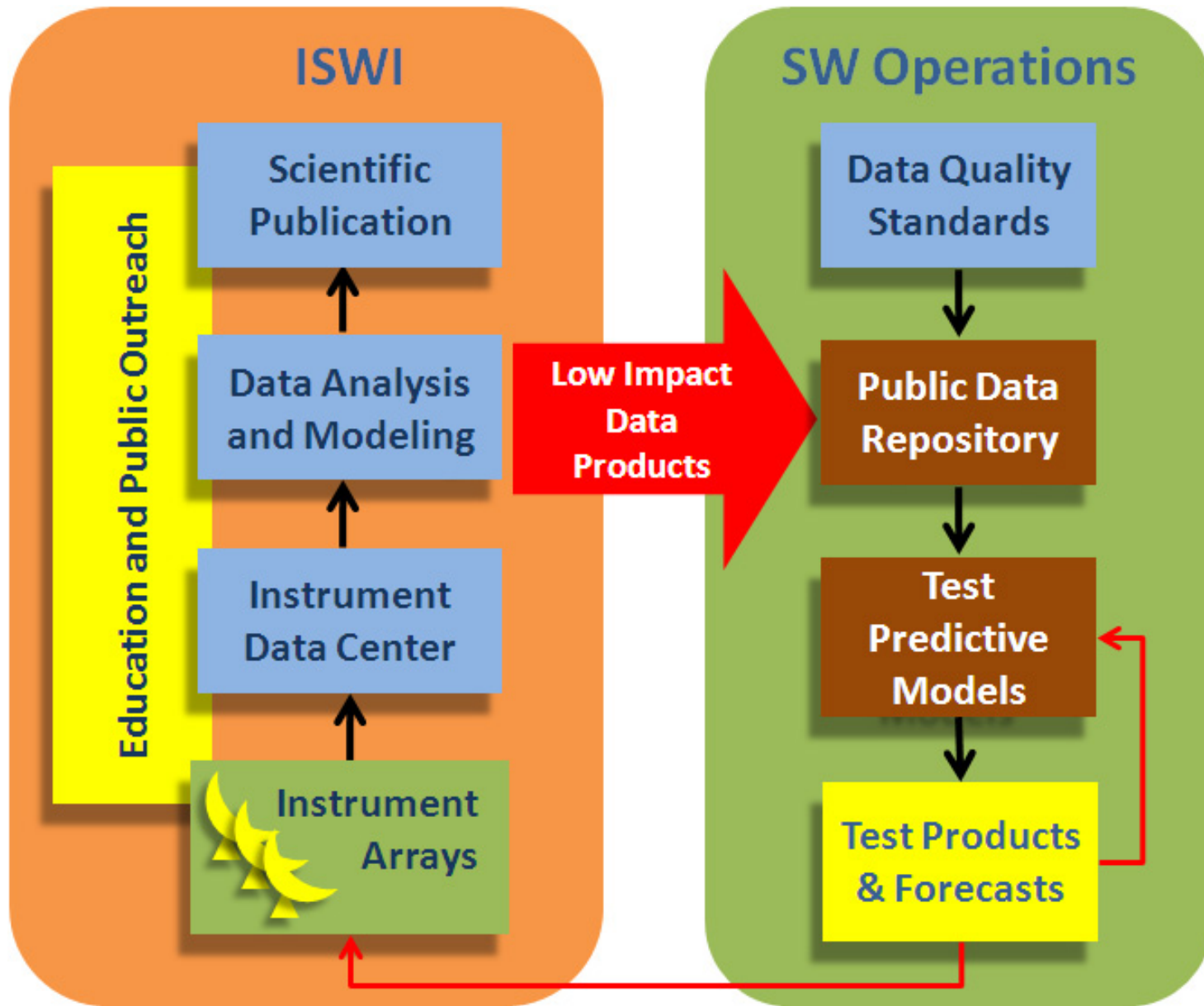
Joseph M. Davila (GSFC) and Nat
Gopalswamy (GSFC)

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



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

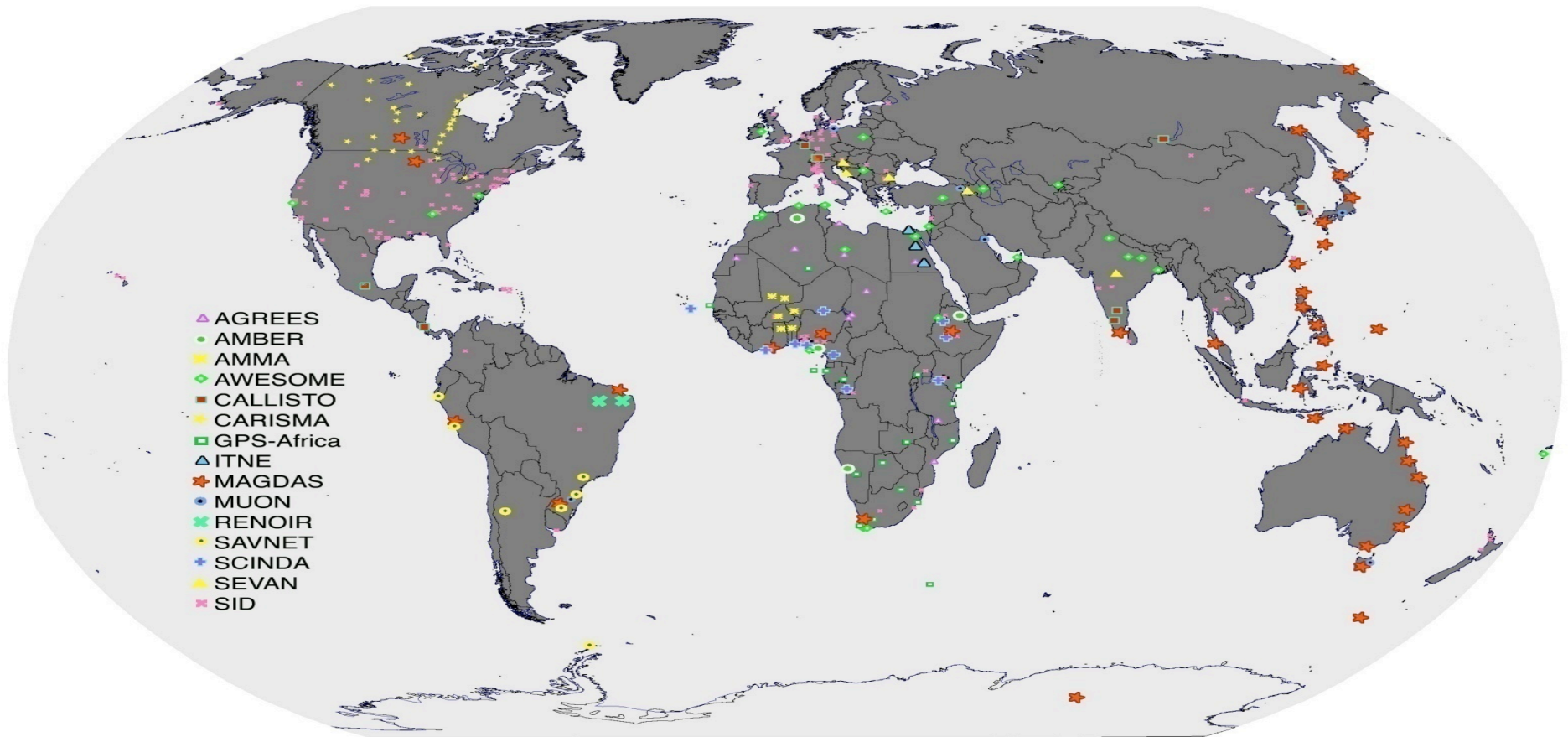


Principles of the Instrument Program

- The lead scientist or principle investigator funded by his/her country provides instrumentation (or fabrication plans) and data distribution
- The host country provides the workforce, facilities, and operational support typically at a local university.
- 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

Current Instrument Installations

A Proven Track Record



This model for developing instrument networks was proven during the IHY

Principles of the Data Analysis and Modeling Program

- The lead scientist or principle investigator funded by his/her country provides initial modeling code, scientific guidance, and data distribution
- The host country provides the workforce, facilities, and operational support for modeling capability, typically at a local university.
- 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

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 DIP 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
- Allows the completion of labor-intensive modeling projects by sharing the work

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

Outreach Activity

- Hands-on space science and Public Nights
- A collaboration with Tree of Hope (US-NGO)
- 6000 students age 8-15 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