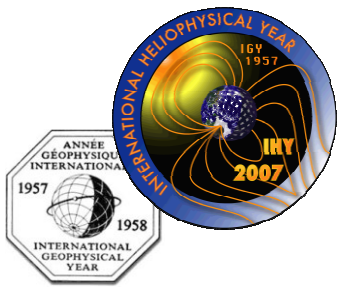


THE INTERNATIONAL HELIOPHYSICAL YEAR (IHY)

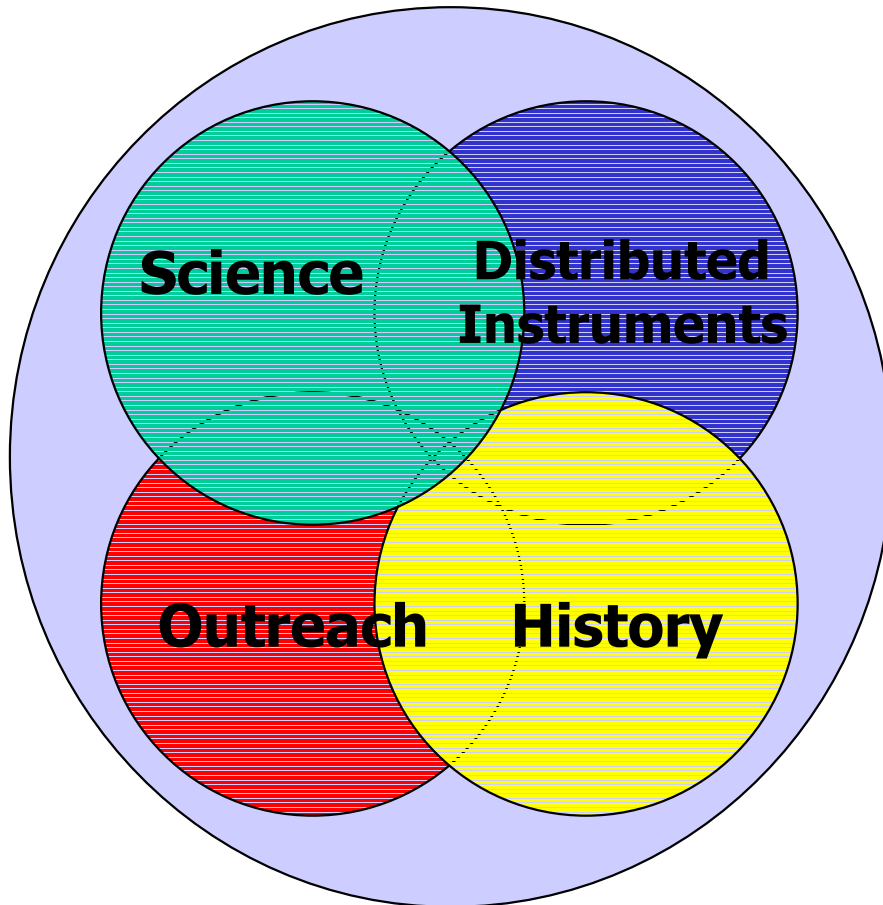
March 2007-2009

*Joseph Davila, Barbara Thompson, Nat Gopalswamy
NASA-Goddard Space Flight Center*

February 2008



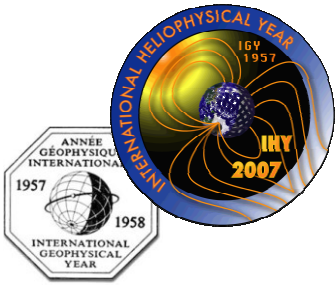
Four Elements of the IHY Program



- 1. Science of Universal Processes**
 - *Coordinated Investigation Programs (CIPs) Scientific Research*
- 2. Distributed small instrument program**
 - *New observational capability*
- 3. Education, outreach**
 - *Promoting space science*
- 4. IGY History preservation**
 - *Preserving the history of space physics*

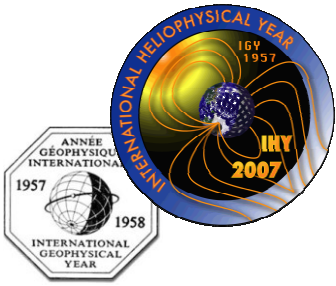
See website at <http://ihy2007.org> for more information.

IHY Participation



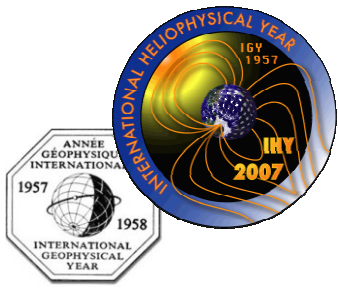
The IHY has been widely supported internationally

- *71 countries with National committees*
- *Thousands of scientists*
- *UNBSS*
 - 17 Distributed instrument observatory programs
 - 5 New data analysis programs for space data
- *200 Observatories*
- *65 Coordinated Investigation Plans (CIPs)*



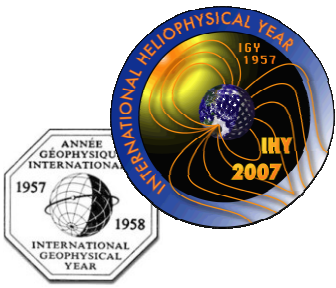
Major Events in 2007

- IHY Kickoff and Science Workshop, Feb, Vienna
- IHY-UNBSS Meeting, May, Japan
- European IHY, May, Italy
- IGY-IHY Science, May, Nainital India
- Science & Technology Week, Aug, Thailand
- North American School, July, Boulder CO USA
- Asia Pacific School #1, Dec, India
- IHY-IAGA, July, Italy
- Libya Eclipse DVD Released, Sep, Wash DC USA
- World-wide Observatory Open Doors Day, June 10
- World Space Week, Nov, Russia
- Heliosphere Science, May, Badhonnef Germany
- IHY-Russian Embassy Sputnik Golden Anniv, Nov, Wash DC
- New Heliophysics Journal started in Bulgaria
- IHY Africa, November, Addis Ababa Ethiopia



Major Events Planned for 2008

- Latin America School, Feb, Brazil
- Whole Heliosphere Interval research started
- IHY-UNBSS, May, Bulgaria
- IAU Symposium Universal Process, Sep, Greece
- AGU Chapman Conf Universal Process, Aug
- Asia Pacific School #2, Oct, Beijing
- ICTP School, Nov, Italy (focused on Africa scientists)
- AGU and COSPAR Special Sessions at upcoming meetings



Whole Heliosphere Interval

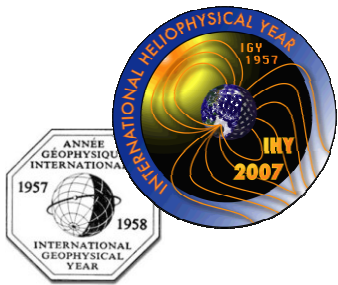
WHI will take advantage of new capabilities in observations and models to advance our understanding of the 3-D interconnected heliophysical system. The campaign will begin with the origins of solar structure and variability and will trace their impact to the outer reaches of the heliosphere.

Primary Goals:

- Characterize the 3-D solar minimum heliosphere
- Trace the effects of solar structure and activity through the solar wind to the Earth and other planetary systems

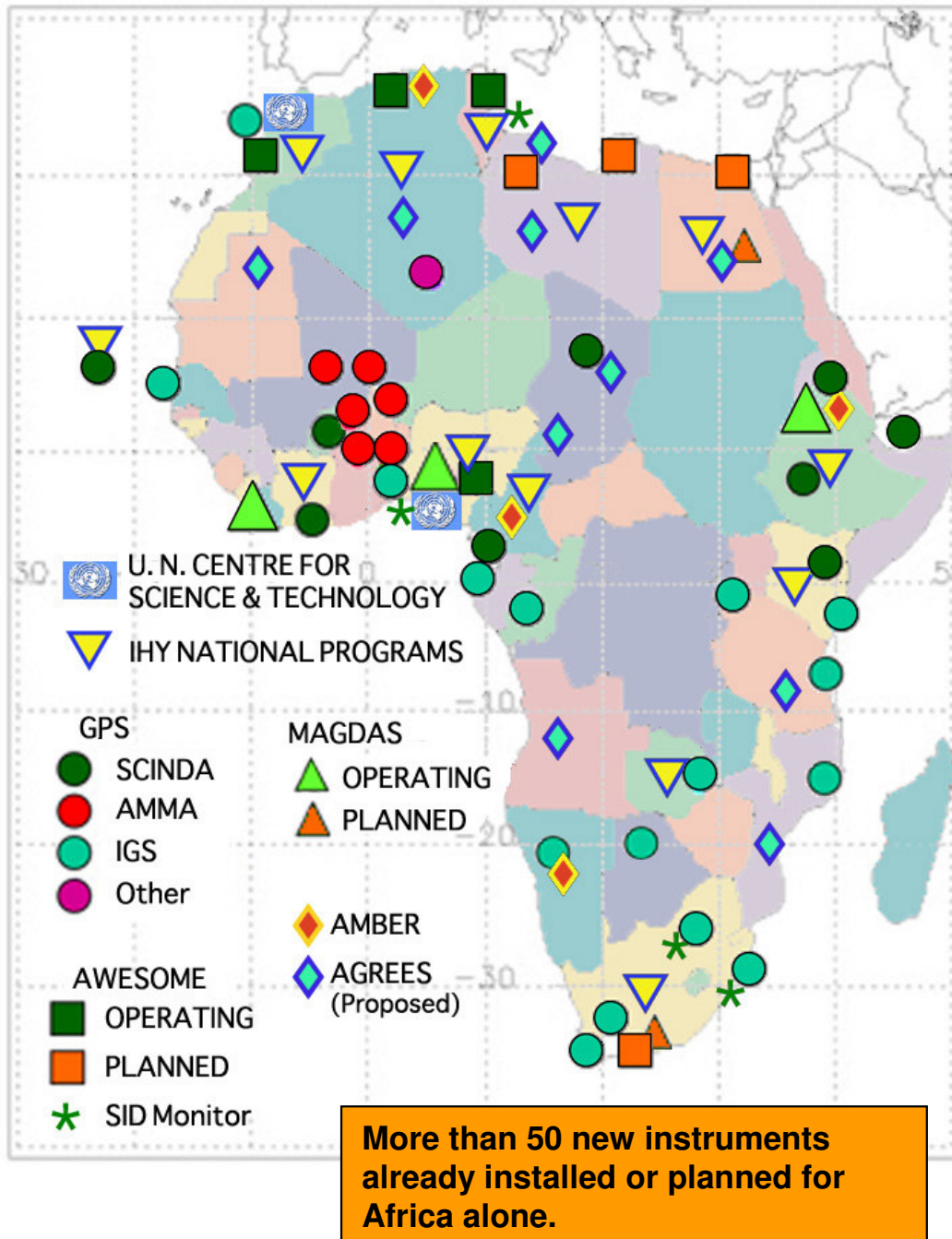


Go the IHY Website to join and for additional information !

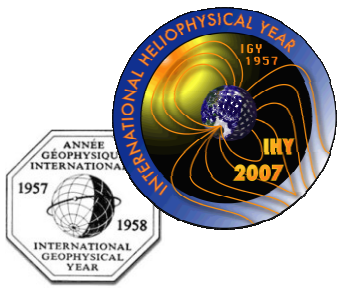


UNBSS Instruments

| | INSTRUMENT | CONTACT | STATUS |
|----|-----------------------------|---|---|
| 1 | CALLISTO | C. Monstein (Switzerland) | Deployed in India, others in progress |
| 2 | H-alpha Telescope | K. Shibata, S. Ueno (Japan) | First observatory operating in Chile |
| 3 | MAGDAS Magnetometers | K. Yumoto (Japan) | Deployed in Malaysia, Ethiopia, Nigeria, Ivory Coast |
| 4 | GPS Scintillations | C. Amory-Mazaudier (France), and T. Rowell (USA) | More than 25 new installations across Africa (see map) |
| 5 | SCINDA GPS | K. Groves (USA) | Deployed in Cape Verde, Nigeria, others in progress |
| 6 | CIDR | T. Garner (USA) | 4-instrument chain planned for Egypt |
| 7 | VLF Radio | U. Inan (USA) | Installed in Morocco, Algeria, Tunisia |
| 8 | RENOIR | J. Makela (USA) | Instrument funding obtained, development in progress |
| 9 | SEVAN Particle Detectors | A. Chillingarian (Armenia) | Instrument for Bulgaria being fabricated |
| 10 | AMBER-AGREES | E. Yizengaw (USA) | In progress |
| 11 | SAVNET | J.-P. Raulin (Brazil) | Instrument funding obtained |
| 12 | Low-cost Ionosonde | J. Bradford (UK) | Seeking instrument funding |
| 13 | IHY Mag | I. Mann (Canada) | Seeking instrument funding |
| 14 | Low-frequency Radio Array | J. Kasper (USA) | In progress |
| 15 | Muon Network | K. Munakata (Japan) | In progress |
| 16 | Liulin | T. Dachev (Bulgaria) | Instruments available, seeking sites for deployment |
| 17 | SAMA | J. H. Fernandez (Brazil) | Seeking funding for instruments |

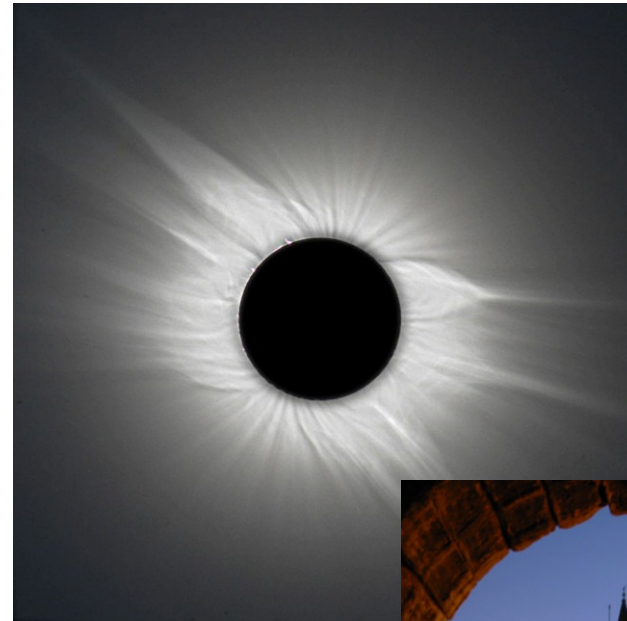


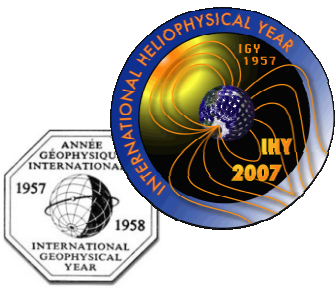
- **AWESOME** space weather monitor in Tunisia Oct 2005. Instruments were installed in Algeria and Morocco in summer 2006, upcoming sites will be in Libya, Egypt and South Africa, with the goal of widespread instrumentation activities taking place in 2007-2008.
- IHY-Japan has made significant progress towards the completion of its 51-magnetometer MAGDAS global network with a new installation site on MacQuarie Island, Ethiopia, Ivory Coast, Nigeria, and Malaysia.
- The RENOIR ionospheric observing station program has received support for development, and will be making plans for instrument host sites later this year.
- The deployment Latin-American SAVNET VLF receiver chain funded 2006 with the target of being operational in 2007.
- The SCINDA scintillation network will double the size of their equatorial network, instrumenter's meeting Nov 2007 in Ethiopia to continue new deployments.
- Radio spectrometer network deployment in Japan, India, US, Switzerland, Mexico. First light in India Nov 2006.
- Armenian particle detector will be deployed in Bulgaria, in progress.



Public Outreach

- **Documentary released showing eclipse activities 2006**
- **EOS article “Science Eclipses Politics”**
- **Open Doors day**
- **Traveling exhibits in Germany and France**



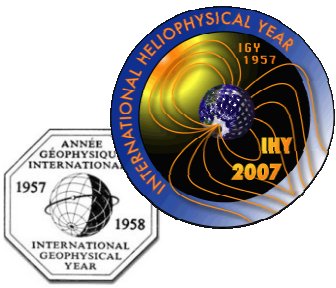


IHY Gold

Preserving the history of the IGY

- 197 IHY Gold Certificates have been handed out to IGY participants
- Including one to Prince Philip in the UK





Future Plans

- IHY officially ends Feb 2008
- Closing ceremony
- Coordinate follow-on activities for the study of space weather with
 - *ILWS*
 - *COSPAR*
 - *SCOSTEP*