The Electronic Geophysical Year
2007-2008

www.egy.org

IHY meeting, Paris 12 January 2006
Science in the 21st century

Earth (Complex) System Science
New science opportunities (cross-disciplinary)
Rapid response
Higher resolution - space and time
Large data sets
Assimilation of data into models
Data integration - multiple data sets
Embrace and extend IGY principles ...

International cooperation and data sharing
Global, cross-disciplinary scope
Universal, open access to distributed data
Timely and convenient access to data
Data preservation
Capacity building, especially in developing countries
Education and public outreach
Technically possible
Limited resources so sharing essential
IGY model

21st century model
What is eGY?

eGY is a cooperative international effort to address the challenges of modern data stewardship, interoperability (e-Science), and integrative science:

- Ready and open access to distributed data, information and services
- Access to large, complex, and multi-disciplinary data sets
- Real-time access and assimilation of data into models
- Data integration and knowledge discovery
- Data discovery (who holds what, where, how? Metadata issues)
- Data release (secure access permission)
- Data preservation (preserve existing and future data)
- Data rescue (identify and rescue critical data sets at risk)
- Education and public outreach; informing decision makers
- Advancement of science in developing countries (reducing the digital divide)
Role

Facilitate, inform, stimulate, encourage, and promote:

- Modern data access and services ("e-Science for Geoscience")
- Responsible data stewardship
- Cooperation among bodies/initiatives to reduce duplication and proliferation of standards, and share expertise
- Establishment of virtual observatories throughout the geosciences
- Realignment of funding priorities for research vs. data activities

eGY also serves to provide a link between programs with related data and information requirements - IPY, IHY, Planet Earth, and initiatives such as GEOSS.
Structure

Secretariat (at LASP, Univ. Colorado)
- Executive Director: Dan Baker, LASP
- Secretary: Bill Peterson
- Communications: Marissa Rusinek
- Public Relations and E/PO: Emily CoBabe-Ammann

International Committee
- Chair: Charlie Barton
- Representatives from key participants and regions

Thematic Working Groups
- Virtual Observatories: Peter Fox
- Data Integration & Knowledge Discovery: Paul Berkman
- Best Practice (joint with CODATA): Herb Kroehl, Jean Bonnin
- Data Rescue: Jeff Love
- Education and Public Outreach: Emily CoBabe-Ammann
Working Group on Education and Public Outreach

**eGY Education:** Connecting Teachers to Science

**The eGY Portal:** Bringing Data into the Classroom in a Contextual Way
- Data-Rich Activities
- Inquiry-Based Lessons
- Online Interactives, Images, and Animations
- Web Resources
- Tutorials, Primers, and other Teacher Support

**Virtual Observatories**
- **Climate Change**
  - Earth Observing System Data & Information System (EOSDIS), NASA Earth Observatory
- **Our Oceans & Environment**
  - IOC eMarine
- **Global Seismology**
  - Incorporated Research Institutions for Seismology (IRIS)
- **The Sun-Earth Connection**
  - Virtual Solar Observatory (VSO), Space Physics Interactive Data Resources (SPIR)

**Virtual Communities**
- **Virtual Teacher Workshops**
  - 50 pairs of Master Teachers
  - 150 Workshops in 2007
  - 2000 Teachers Worldwide
- **Virtual Educational Community**
  - Synchronicity & Asynchronous Tools
  - The Sakai Project
- **Web-Streamed Science and Education Seminars**
- **Sustainable Architecture for the Future**
  - DUSEE

**Goal:** To Develop a Non-Specialist 'Use Case' for Virtual Observatories and Other Online Data Systems

**Goal:** To Forward the Models on Virtual Education, Pushing the Boundaries in the Developing World

More information: Contact Emily CoBabe-Ammann
Working Group on Best Practice

Working with the CODATA Task Group on Virtual Laboratories in Earth Physics and Environmental Sciences to publish a white paper on:

Best Practices for Environmental Data Systems

More information: Contact Herb Kroehl or Erik Kihn
Working Group on Virtual Observatories

Preparing a white paper on VO’s in conjunction with IPY-DIS, and IHY. Several meetings are scheduled for early 2006.

Sponsored Sessions at AGU, EGU and Western Pacific Geophysics Meeting

NASA’s Living With a Star Data Environment

http://lwsde.gsfc.nasa.gov/#workshop
Working Group on Data Integration and Knowledge Discovery

The Physics of Information

They way we think about data has changed

BORROMEAN RINGS

Three interlinked circles that represent inseparable parts of the whole. Remove any one ring and the other two fall apart. Borromean Rings have been used as a symbol of unity in many fields.

Working with CODATA to develop methods to bring knowledge discovery technology to large data centres.

More information: Contact Paul Berkman
Working Group on Data Rescue

Slough ionogram
11 January 2006

Slough ionosonde
11 January 1931

More information: Contact Jeff Love
Discussions are underway with GEO to explore how to use eGY in the development of GEOSS.
IHY and the eGY

- Participate in an eGY Working Group
  - share knowledge
  - develop portals
  - generic approach

- Identify new opportunities for eGY

- Contribute to eGY sponsored sessions and meetings

- Broadcast eGY opportunities

- Use eGY as a lever to get funds from your national agency

- Coordinated education and outreach activities

www.egy.org
• New Science
• Better Science

www.egy.org

Email lists
eGY_Team
eGY_Participants
eGY_Observers

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