

# eGY: electronic Geophysical Year, 2007-2008



## Japanese eGY Committee

### What is eGY?

The Electronic Geophysical Year, 2007-2008 (eGY) provides an opportunity for the international geoscientific community to focus effort on a 21st Century e-Science approach to issues of data stewardship: open access to data, data preservation, data discovery, data rescue, capacity building, and outreach.

eGY is an internationally-recognized resolve by the science

community to achieve a step increase in making past, present, and future geoscientific data readily, rapidly, conveniently, and openly available. eGY provides the international framework and a target for stimulating and coordinating activities to make this happen.

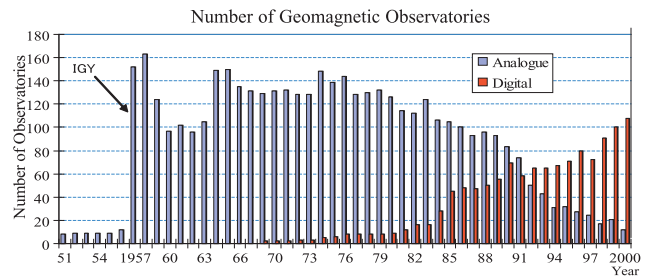
eGY Committee URL : <http://www.egy.org/>

Japanese eGY Committee URL : <http://swdft49.kugi.kyoto-u.ac.jp/egy/>



### eGY Background - From Analogue to Digital and Internet Era -

International data exchange and open access to scientific database are essential to promote Earth science. At the IGY (International Geophysical Year, 1957-1958), the World Data Center system has been established under the ICSU. Top-right panel shows the number of observatories which provided analogue magnetograms (Normal-run magnetograms) and/or digital magnetic data with 1 minute resolution to the WDC-Kyoto. The sudden increase in observatories after 1957 indicates how the IGY and establishment of the World Data Center system effectively promoted magnetic observation and data exchange over the world. It is also seen that a digital era in geomagnetic observation started around middle of the 1980s.



### eGY Drivers

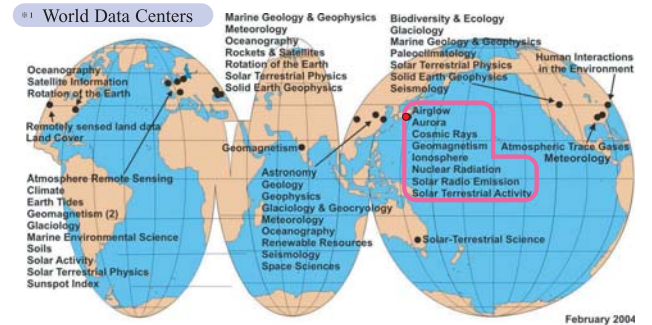
- Growth of data volumes, with higher space-time resolution
- Demand for real-time response
- Need for a multidisciplinary/multi-institutional approach to understanding the Earth-space system
- Data assimilation and integration requirements for modeling and knowledge development
- Availability of e-Science options
- The demonstrable benefits of universal (equal) access to data by everyone
- The benefits of cooperation and sharing across the many different programs and initiatives with common data stewardship requirements

### Activity of Japanese eGY Committee

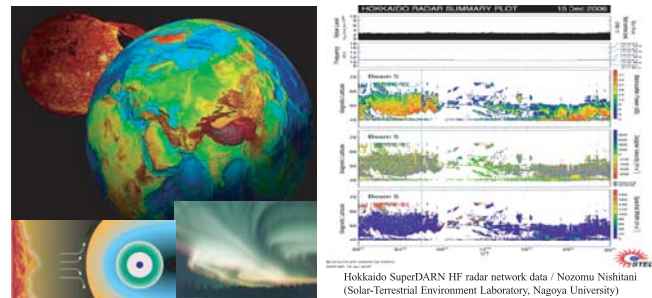
- Oct. 2005 Japanese eGY Committee established
- Mar. 2006 J. eGY HP open (<http://swdft49.kugi.kyoto-u.ac.jp/egy/>)
- July 2006 AOGS session "Electronic data collection and use of real-time database in eGY"
- Jan. 2007 "eGY Sub-committee" under Science Council of Japan established
- May 2007 A domestic meeting on meta-database at NIPR in Tokyo
- Nov(?) 2008 An international symposium on "Fifty Years after IGY: Modern Information Technologies and Earth Sciences" (under planning)

### Examples of Data and Network Activities in Japan

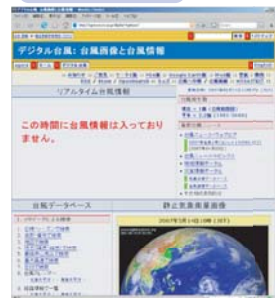
- World Data Centers (ICSU/WDCs)
  - Airglow, Aurora, Cosmic Ray, Geomagnetism, Ionosphere, Solar Radio Emission, Space Science Satellites
- Database for international programs (e.g., STEP: 1990-1997, SRAMP: 1998-2002, CAUSES: 2004-2008)
  - Database activities at Japanese institutions: (e.g., JAXA (DARTS), JAMSTEC (NINJA), NiCT (JGN-II), etc.)
- Other activities (STARS, Digital-Typhoon, Dagik, etc.)



### CAUSES Space Weather Database in Japan (2007)

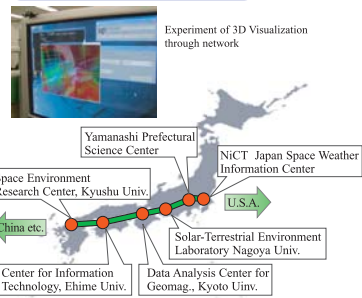


### Digital Typhoon



URL: <http://www.digital-typhoon.org/>

### Giga-bit Network (JGNII)



### New Trend in Earth Sciences

#### - Inter-disciplinary Data Exchange -

As is evident in the planning of IPY, GEOSS, etc., or symbolized with the establishment of a new WDC for "Biodiversity and Ecology", inter-disciplinary Earth science or the related data exchange system is a new trend. The eGY should play an important role in it.

### Daily Geospace data in KML (Dagik)

