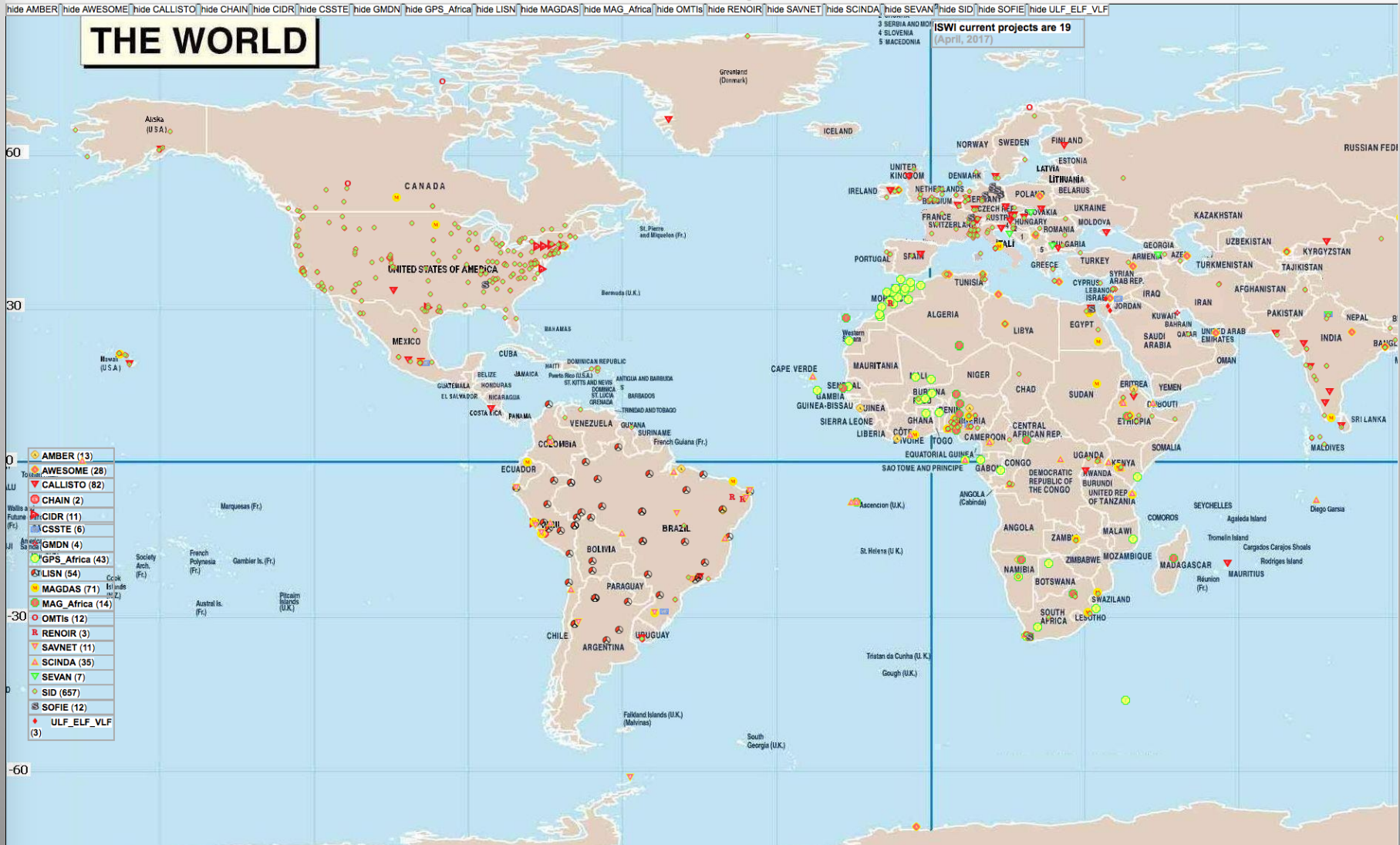# ISWI Open Data Policy: An Instrument of International Cooperation

Shing F. Fung

ISWI Data Coordinator
NASA Goddard Space Flight Center

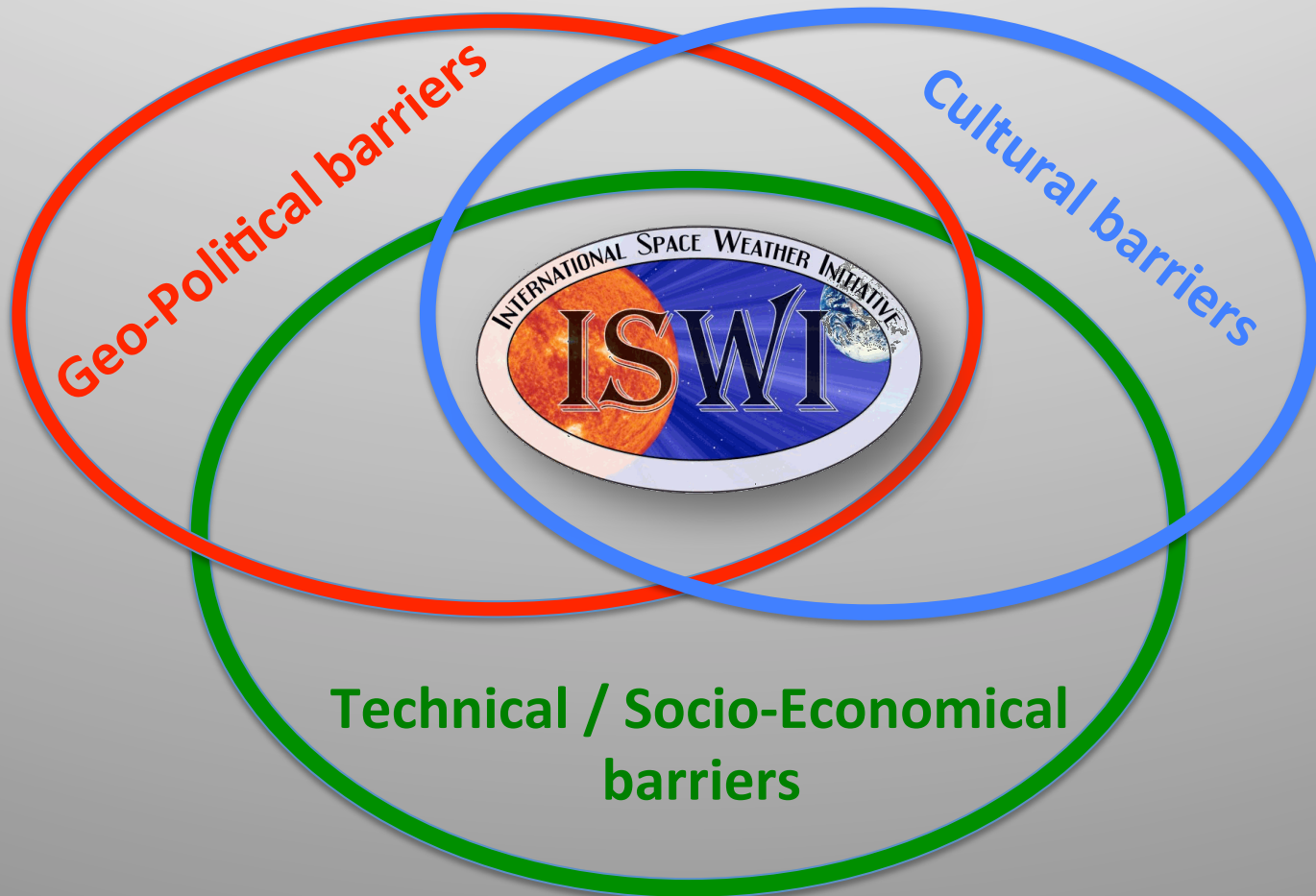Greenbelt, Maryland, USA

Global Distributions of ISWI Instruments
[http://www.iswi-secretariat.org/]

Data Flow Barriers

- Programmatic barriers: Provenance or authority of data
- Technical barriers: Diversity in data contents, formats, storage mechanisms, access protocols, etc.

Removal of Barriers: ISWI Success

- An Open data policy can
  - Remove political, cultural, & administrative barriers
  - Ensure data availability & accessibility

- Using standard data & metadata formats can
  - Reduce technical barriers
  - Promote usability and interoperability

ISWI Data Policy Timeline

- March 2015 - Open data policy proposed & recommended at ISWI at UN/Japan ISWI workshop in Fukuoka, Japan

- April 2015 - ISWI data policy subcommittee formed

- February 2016 - Draft open data policy approved by ISWI Steering Committee (EC)

- February 2017 – Minor text revision approved by ISWI EC

- Will be posted at *<http://www.iswi-secretariat.org>* shortly after the UN/US ISWI workshop

ISWI Data Policy Subcommittee

Shing Fung (Chair), *NASA Goddard Space Flight Center, USA*

Christine Amory-Mazaudier, *CNRS, France*

Keith Groves, *Boston College, USA*

Christian Monstein, *ETHZ, Switzerland*

Terry Onsager, *NOAA, USA*

Babatunde Rabiu, *University of Nigeria, Nigeria*

George Maeda, *Kyushu Institute of Technology, Japan*

Jesper Gjerloev, *Johns Hopkins University, USA*

ISWI Data Policy

- ISWI Data Policy consists of
  - *Policy statements*
  - *Project data management plan (PDMP)*

- The policy stipulates that all ISWI data should be
  - *Available promptly after their acquisitions;*
  - *Accessible freely and openly;*
  - *Usable independently (calibrated, documented, in standard formats);*
  - *Utilized with compliance to the rules of the road.*

- The PDMP consists of individual instrument PDMPs
  - *Represent teams' commitment to support ISWI*
  - *Describe the instruments, data products, access methods, etc.*
    - *Maintained by instrument teams*

Use Standards to Develop "*Lingua Franca*" for Removing Technical Barriers

- Standard data formats
  - Data organization
  - CDF, HDF, netCDF, FITS, ASCII, etc.
- Standard data access protocol
  - Data retrieval
  - Heliophysics Application Programming Interface (HAPI)
- Standard metadata model & data dictionary
  - Data descriptions and search mechanism
  - *SPASE*

SPASE--*Space Physics Archive Search & Extract <www.spase-group.org>*

- Community-developed metadata model

- Designed for heliophysics datasets
  - Observations & simulations

- Metadata are stored in XML documents

- Web-based editor under development
  - Will be available to all instrument data providers

SPASE--*Space Physics Archive Search & Extract <www.spase-group.org>*

- Community-developed metadata model

- Designed for heliophysics datasets
  - Observations & simulations

- Metadata are stored in XML documents

- Web-based editor under development

Successful *International Cooperation!*

Open data policy + data standards