ISWI Data Subcommittee Report

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ISWI Steering Committee Meeting, February 11, 2022

Discussion Topics

- ISWI (Open) Data Policy Status
- Enhancing ISWI Data Discoverability & Accessibility
- Opportunities for International collaboration and coordination
  - SCOSTEP/PRESTO
  - COSPAR/ISWAT
  - International Heliophysics Data Environment Alliance (IHDEA)

Please indicate changes

ISWI Data Policy Status

- The ISWI data policy has been established since November 2017
  - Instrument project data management plans (PDMPs) are integral to the policy
  - Promote international collaborations & coordination in data exchange to facilitate space weather research and capacity building
- Last updated on February 12, 2021 (version 1.3.8)
  [website needs updating]
  - 20 ISWI instruments (see Projects under http://www.iswi-secretariat.org/)
  - PDMPs yet to be furnished:
    - AMMA
    - CIDR
    - RENOIR
    - SCINDA

Enhancing ISWI Data Discoverability & Accessibility

By leveraging existing data service infrastructure

- NASA Heliophysics Data Portal
- Heliophysics Digital Observatory
  (formerly Virtual Wave Observatory)

By using standard, uniform data description to enable interoperability

- Space Physics Archive Search & Extract (SPASE) metadata model
  (now recommended by COSPAR Panel on Space Weather)

By registering and sharing metadata on the SPASE registry

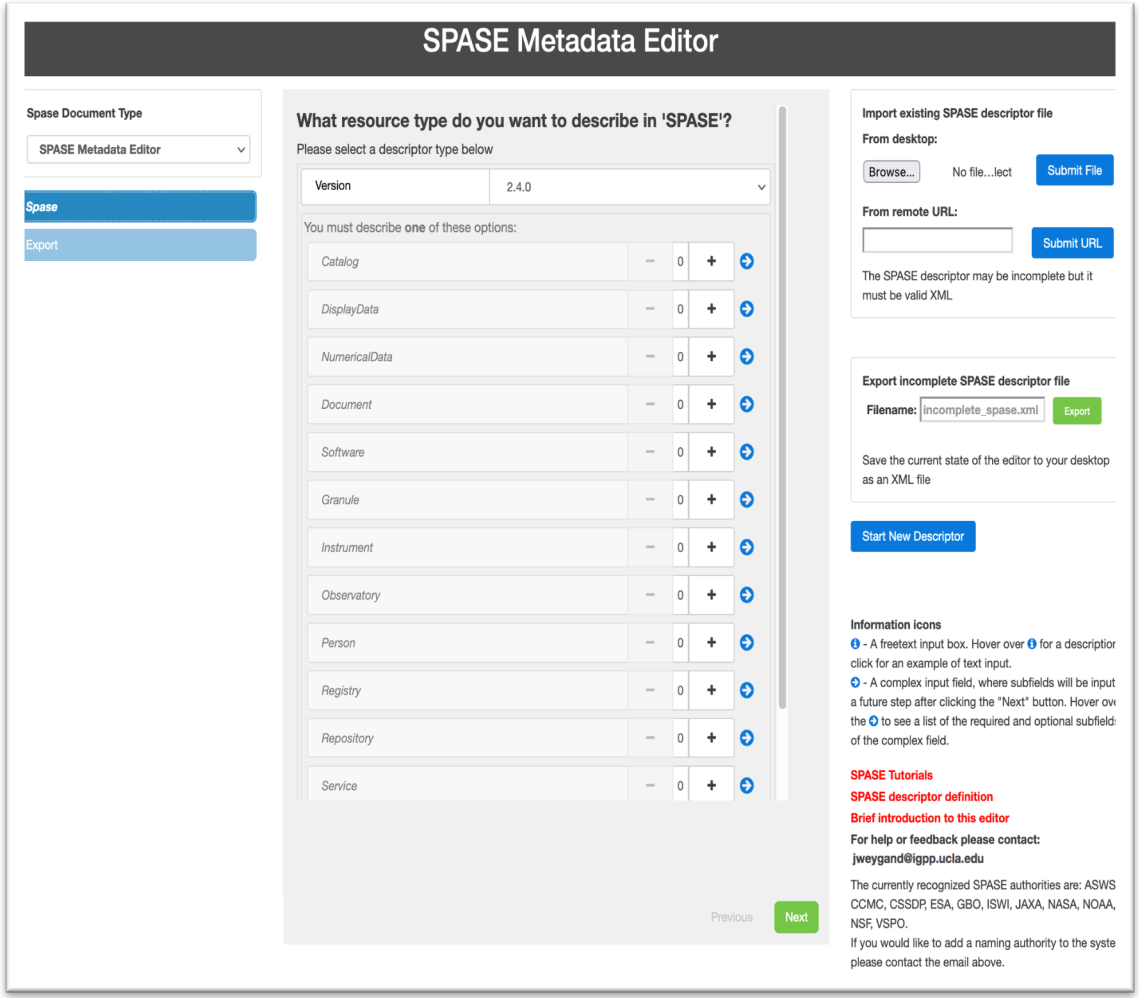
- AWESOME & e-Callisto are now registered

Web-Based SPASE EDITING Tool

http://xmleditor.spase-group.org/

Benefits to ISWI:

1) Data become more discoverable by broader user community
2) Searchable along with other related space-based & ground-based data resources

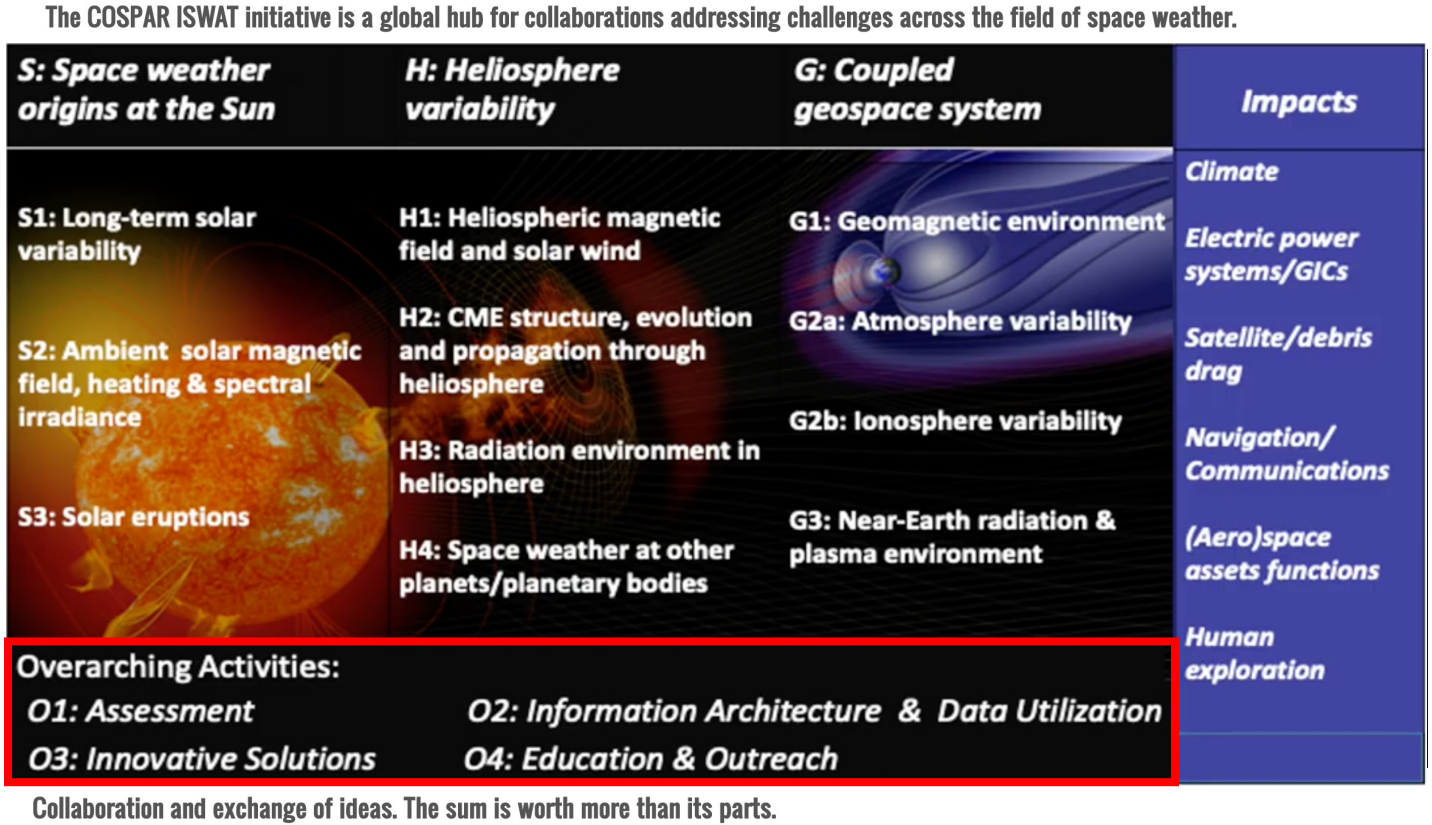


Collaboration and Coordination with SCOSTEP/PRESTO

- ISWI and SCOSTEP share similar goals in science, international collaboration, and capacity building.
- PRESTO, the current SCOSTEP project (2020-2024), has called (ended December 2021) for the creation of solar-terrestrial databases to support their 3 pillars of science studies:
  i. Sun, interplanetary space and geospace
  ii. Space weather and the Earth's atmosphere
  iii. Solar activity and its influence on the climate of the Earth System
- ISWI instruments should be valuable data resources for SCOSTEP/PRESTO.

COSPAR International Space Weather Action Teams (https://iswat-cospar.org/): Preparing for Next COSPAR Space Weather Roadmap

- Space weather
  - Multi-disciplinary
  - Cuts across all Heliophysics domains
  - Requires the global community to work together.
- Action Teams
  - Community driven
  - Self-guided efforts
  - Organized into ***ISWAT Clusters*** **(see chart)**.
- ISWI and ISWAT can collaborate to their mutual benefits.



2022 COSPAR Activities…cont.

- 44th Scientific Assembly (https://www.cosparathens2022.org/)
  - July 16- 24, 2022, Athens, Greece
  - Abstract submission deadline February 18, 2022 (extended from Feb 11)

- ISWAT Meeting @ Coimbra University, Portugal
  - September 26-30, 2022

Collaborating with the International Heliophysics Data Environment Alliance (IHDEA; https://ihdea.net)

- Established in December 2019 with vision:

  "To enable the international heliophysics and space weather research community to seamlessly find, access, & use all electronically accessible HP/SW data sets in accordance with the *FAIR principles* (*Findable, Accessible, Interoperable, and Reusable*)."

- IHDEA focuses on:
  - Fostering **coordinated development of heliophysics standards** for (i) data formats, (ii) metadata model, (iii) data services and (iv) analysis tools;
  - Promoting and assisting the adoption of data standards and "best practices" to enable interoperability of data systems; and
  - Enabling efficient access, exchange, and use of diverse digital resources from space-based and ground-based experiments, and models.
- ISWI will benefit directly from collaboration and coordination of information architecture in the international heliophysics data environment.