

OSCARS

Open Science Clusters' Action
for Research & Society

Funded Project



Federation of Solar Data (FSD)

OSCARS 2nd Annual General Meeting
10-12 March 2026, Sevilla

Principal Investigator: A. Wiśniewska, Astronomical Institute Slovak Academy of Sciences (AISAS),  0000-0001-9037-5938

Project team members: **AISAS, KIS, IAC, UiO, SU, IRSOL, INAF, ROB**

Implemented
by



UiO
University of Oslo



Royal Observatory
of Belgium



INAF
ISTITUTO NAZIONALE
DI ASTROFISICA



Funded by
the European Union



CHALLENGE : Making European Solar Data Interoperable



Observatorio Los Muchachos



Sacramento Peak

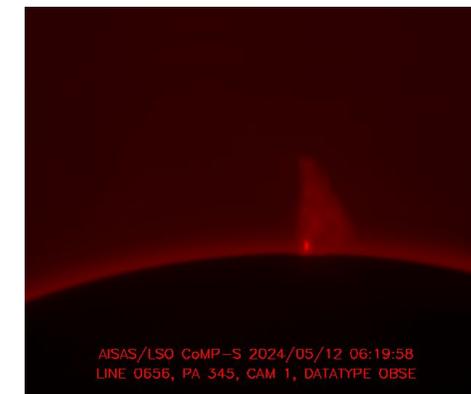
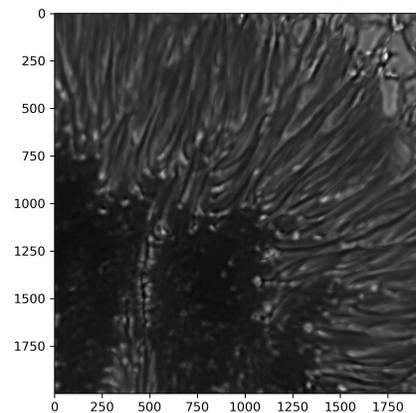
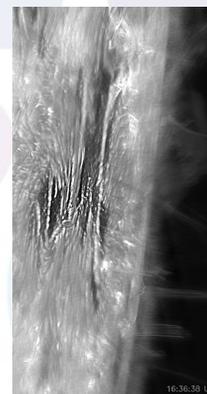
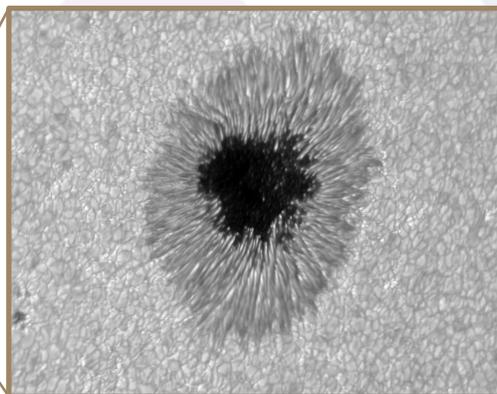
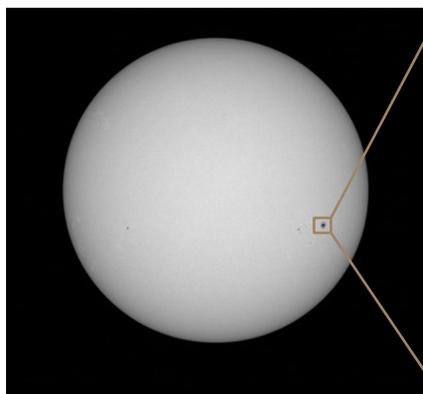


Observatorio del Teide



Lomnický štít Observatory

The volume and diversity of solar data pose major challenges for accessibility and interoperability. Without standards such as **SOLARNET** and the **IVOA**, much of this data remains siloed, restricting its scientific impact.



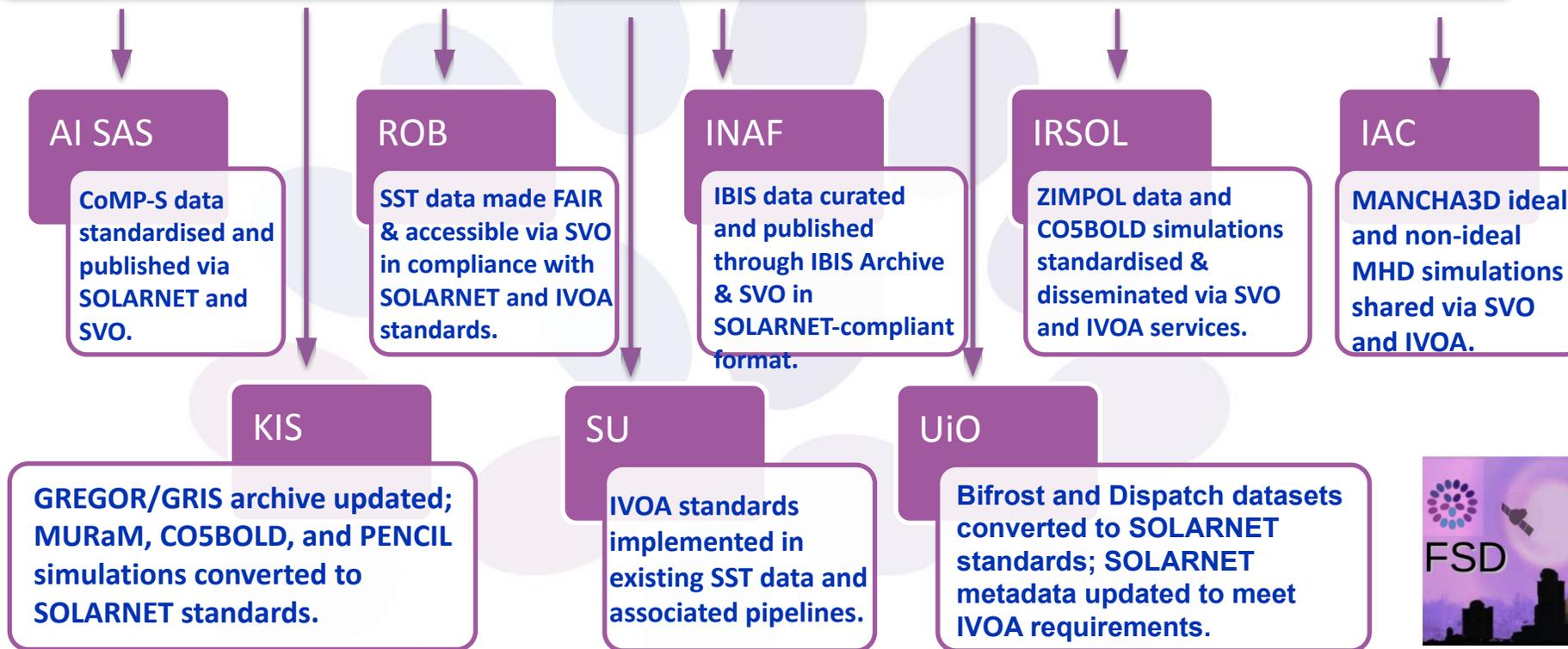


- 1** We overcome the fragmentation of European solar data by establishing a unified standards-based framework that ensures seamless access, interoperability, and cross-platform integration.
- 2** Solar datasets will achieve **FAIR** compliance through the systematic implementation of **SOLARNET** and **IVOA** standards and their integration into a unified European framework via EPN-TAP.
- 3** The archive enables seamless discovery, interoperability, and efficient access through its integration with the SOLARNET Virtual Observatory (**SVO**) client, the Heliophysics Event Knowledgebase (**HEK**), and advanced web-based metadata search and retrieval services



Archiving, curation, and dissemination of solar data in compliance with SOLARNET standards.

FSD Institutional Contributions and Key Responsibilities



FAIR: Findability, Accessibility, Interoperability, and Reusability



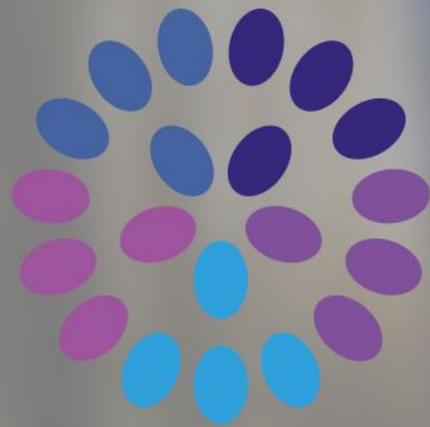
- 1 Standardised, archived, and disseminated multi-observatory solar observations and advanced simulation datasets via **SVO**, ensuring full **SOLARNET** and **IVOA** compliance.
- 2 Federated services with **EOSC** (AAI integration) and expanded community access to high-precision datasets (**ZIMPOL**, **IBIS**, **SST**, **GREGOR/GRIS**, **CoMP-S**).
- 3 Converted and published major rMHD simulation outputs (CO5BOLD, Bifrost, MURaM, PENCIL, MANCHA3D, Dispatch), with hosted storage at UiO.
- 4 Strengthened community standardisation through metadata upgrades, pipeline compliance, archive enhancements, and delivery of a dedicated **IVOA**-focused online workshop.





Aneta Wiśniewska (PI, AISAS, ORCID 0000-0001-9037-5938),
Manuel Colados (IAC, 0000-0002-6210-9648),
Svetlana Berdyugina (IRSOL, 0000-0002-2238-7416),
Mats Carlsson (UiO, 0000-0001-9218-3139),
Ilaria Ermoli (INAF, 0000-0003-2596-9523),
Nazaret B. Gonzales (KIS, 0000-0002-0479-9134),
Peter Gömöry (AISAS, 0000-0002-0473-4103),
Stein Vidar Hagfors Haugan (UiO, 0000-0001-9648-7260),
Mats Löfdahl (SU, 0000-0002-2472-5677),
Mariarita Murabito (INAF, 0000-0002-0144-2252),
Renzo Ramelli (IRSOL, 0000-0002-1976-1024),
Ján Rybák (AISAS, 0000-0002-6782-6283),
Robbe Vansintjan (ROB, 0009-0009-0987-1295)





OSCARS

Thank you