



Standing Committee for Science Priorities (CSP) status

Interop meeting 08-12 May 2023

Ada Nebot for the CSP

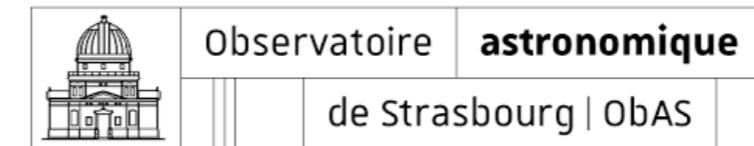
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CENTRE DE DONNÉES
ASTRONOMIQUES DE STRASBOURG



European Science Cluster of Astronomy &
Particle physics ESFRI research Infrastructures



□ The CSP of the IVOA: who?

Who is the CSP?

- It is expected that the Standing Committee of Science Priorities will be consisted largely of members of the science community and active astronomy projects.

Members

- Members: Mark Allen, Christophe Arviset, Chenzhou Cui, Raffaele D'Abrusco, Vandana Desai, Gregory Dubois-Felsmann, Janet Evans, Pepi Fabbiano, Mark Lacy, Marco Molinaro, Kai Lars Polsterer, Enrique Solano
- Chairs: Ada Nebot (chair) & Francesca Civano (vice-chair)

<http://ivoa.net/twiki/bin/view/IVOA/IvoaSciencePriorities>

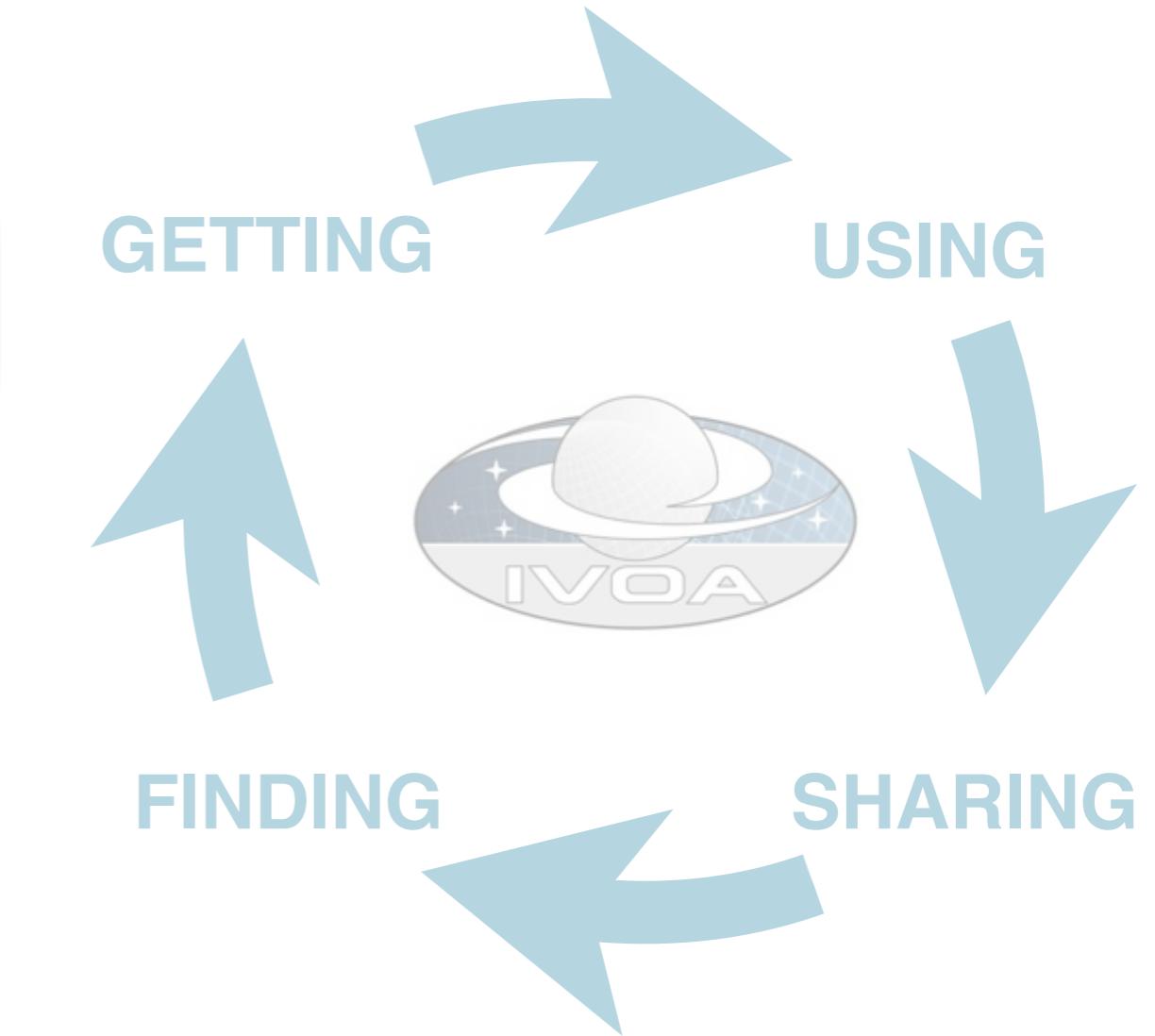
□ The CSP of the IVOA: what?

What is the goal of the CSP?

- Sustain the scientific impact of the VO as an interoperable ecosystem to support science
- Ensure continuous engagement of the international astronomical community

Astronomy community

- The astronomy community comprises missions that are active or under development, operating observatories, astronomical archives, and teams of astronomers performing research and disseminating data products to the community.

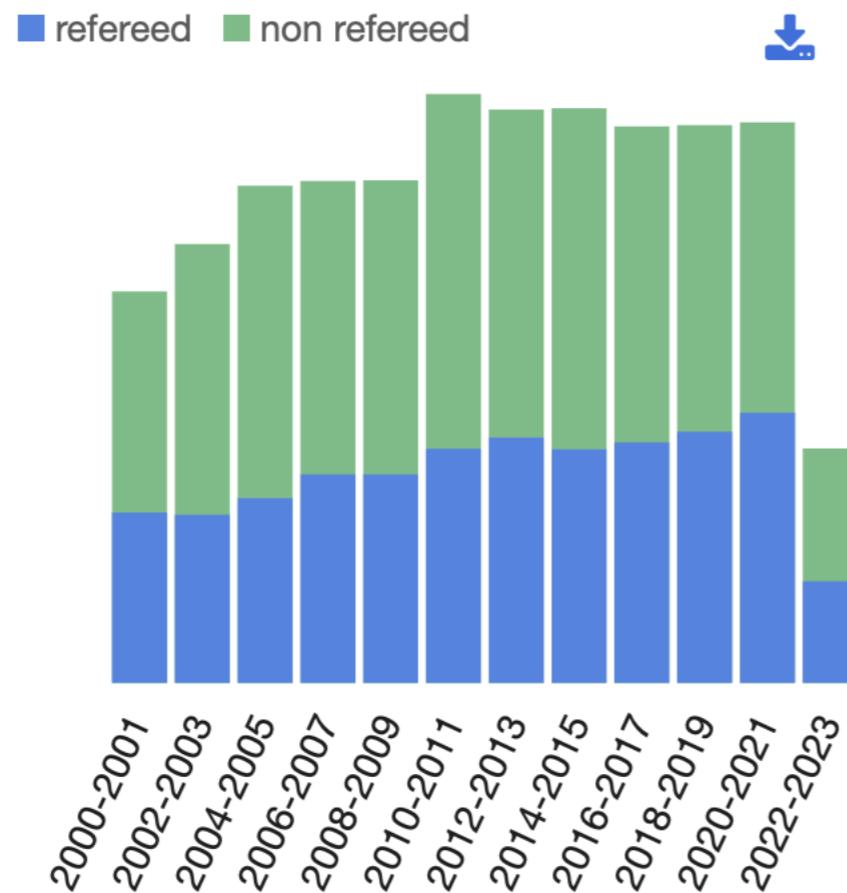


□ The CSP of the IVOA: why?

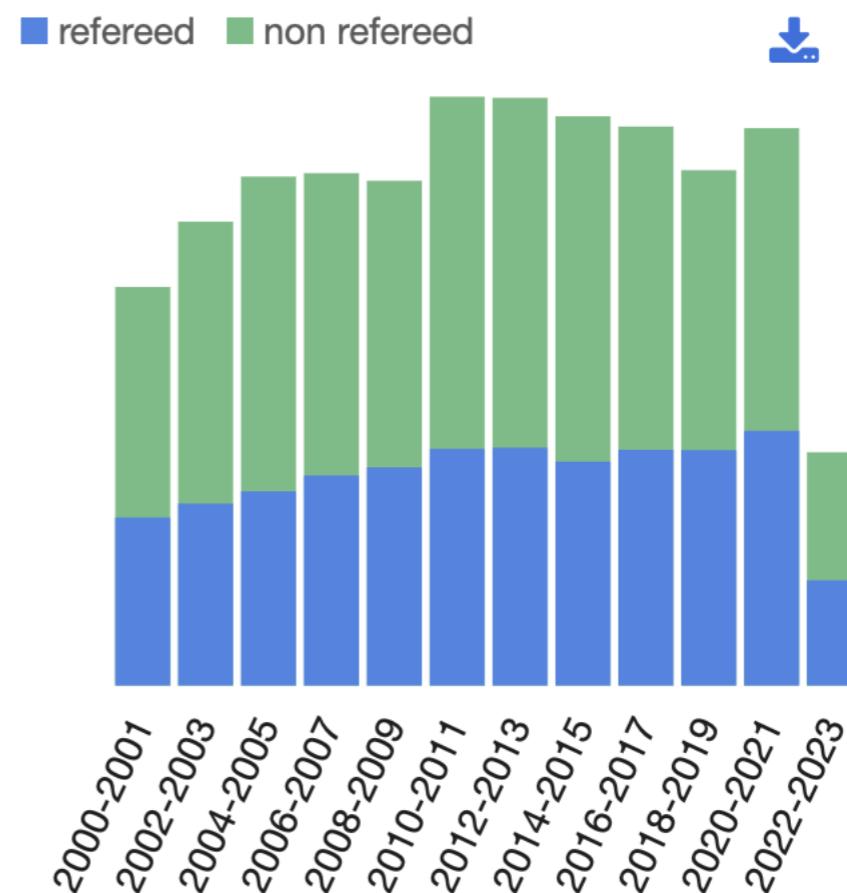
Clear benefits

- Growth in the scientific return of data
- Capability to discover and fuse multiple data sets
- Application of the VO in planning new observations and observing strategies

Multi-wavelength



Images & spectra



□ The CSP of the IVOA: how?

Recommend scientific priorities and scientific requirements

- Driven by scientific use cases that are developed in cooperation with the scientific community.
- Will drive the development of new protocols which will be developed by the IVOA and coordinated by the TCG



➡ Identify and transmit the needs of the community

The CSP of the IVOA: where and when?

A world wide continuous effort

- Encourages engagement, adoption and feedback of implementations of the international astronomical community
- Support VO members in developing tutorials, technical and scientific workshops and scientific training materials.



□ CSP important considerations

- Identify the current main science cases in the community
- Engage with large and small projects
- Ensure IVOA is building standards, tools and services responding to these science cases
- Ensure right balance for these standards
 - Not too generic, not too specific
 - Implementable standards, while not too simplistic
 - Need for new standards, or updating existing standards
 - Addressing new data types, new areas in astronomy

☐ Accomplishments

- Some accomplishments over the last semester:
 - Initiated coordination of the Interop Science Platform plenaries given community interest
 - Response to an request for enhancements with regard to the spectrum DM - the WG is working on it
 - Early discussions on a High Energy Interest Group

□ CSP outlook

- **Next generation missions coming up** - which are needed upgrades to protocols to keep up with the needs?
 - Different data types >> **Data cubes** >> **Spectra** >> **Time-series**
 - Are we ready for the exploration, visualisation and analysis?
 - e.g. finding light curves —> **EduIG session!**
- Transient phenomena **alert** distribution is evolving, implications? —> **Radio IG session!**
- Can VO protocols & formats help **ML and AI algorithms?**
 - **ChatGPT, AIGC, LLM** —> **KDIG session!**
- What is the role of **the VO in the Cloud & Science Platforms?**
 - **Interoperability of science platforms?**
 - Reproducibility & reusability? What is the role of the **provenance data model in this context?**
 - **Check the two plenary sessions on the topic!**
- Digital Object Identifiers in Open Science —> **Check the plenary session!**

□ Thanks!

- **Can only be achieved with community engagement → We need you**

Looking forward to a productive meeting!