

State of the IVOA

Southern Spring 2026 Interop · Perth, Australia

JJ Kavelaars

Chair, IVOA Executive Committee

NRC Herzberg / Canadian Virtual Observatory

6 November 2026

Who is the IVOA?

- Founded June 2002
  25 years old in 2027
- **23 member projects** on six continents
- 6 Working Groups, 9 active Interest Groups, plus the TCG, CSP and Standards & Processes committees
- About **30 000 VO resources** served by ∼50 data centres



The Executive Committee




JJ Kavelaars (CVO), Chair
Mark Allen (Euro-VO), Vice-Chair
since June 2025

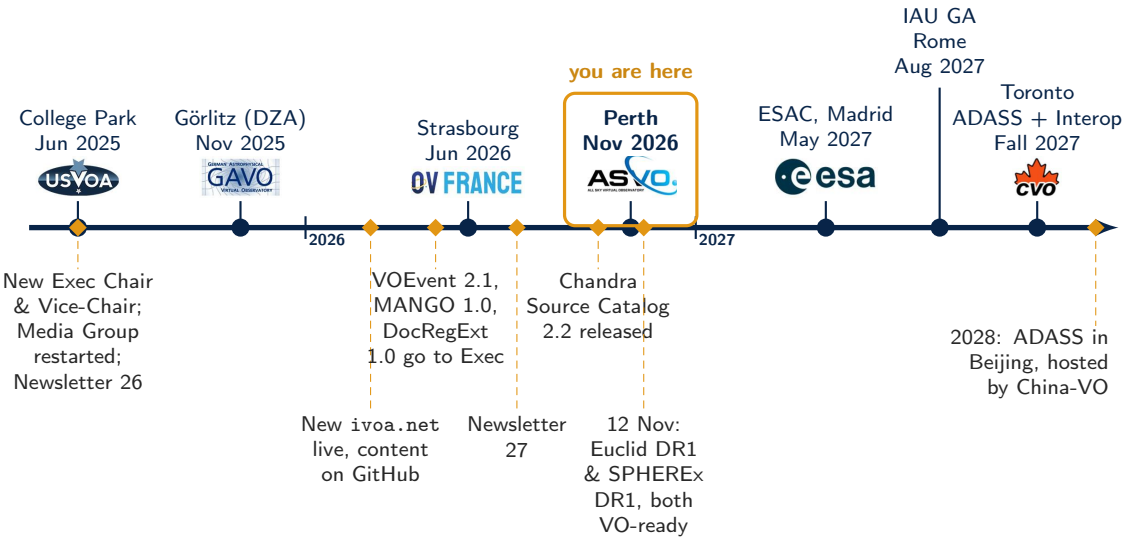
Secretary: Marcy Harbut (USVOA)

Reminder on "new" representatives

- Markus Demleitner, GAVO
  thank you Joachim Wambsganss, now retired
- Yerlan Aimuratov, KazVO
  thank you Chingis Omarov
- Sudhanshu Barway, VO-India
  thank you Ajit Kembhavi
- Mark Lacy (NRAO) joins the USVOA delegation

Thank you Simon O'Toole: Exec Chair 2023–2025, and our host in Perth. **Chair term (18 months) ends 11/2026!**

The last 18 months at a glance



Standards: steady, visible progress

Through the process, 2025–26

- **VOEvent 2.1**: Recommendation
- **MANGO 1.0**: Recommendation
- **DocRegExt 1.0**: Recommendation; register your educational material
- **StandardsRegExt 1.1**: Recommendation
- **DataOrigin**: Endorsed Note

In the pipeline: your review helps

- **VODataService 1.3**: RFC open, with a reading guide on the RFC page
- **DALI 1.2**: RFC
- **Simple Cone Search**: 2.0 WD after intensive review, and 1.1 on its way
- **AuthVO**: WD coming in DSP; **VOTable 1.6**
- ObsCore extensions: High Energy, Radio, Time Domain
- Vocabularies: calibration levels, object types, UCDs
- HATS Note; Document Standards revision; and more in the TCG report

Looking after a mature set of standards

A **deprecation process** (drafted, on GitHub) to retire obsolete pieces safely; guidance for **major-version transitions** (SCS 1.1 and 2.0 side by side is the first test); links from each standard to **working implementations** (an AAS 247 request). Input (to me) on deprecation process is VERY welcome.

Member highlights: data and services

USVOA

Chandra (CXC)
CSC 2.2 (Oct 2026): 432 713 sources; TAP, Cone and image services.

NAVO
IRSA: SPHEREx DR1 and Euclid DR1 on 12 Nov, VO-ready. **NED:** major update. **HEASARC:** ObsCore for MAXI, RXTE, Suzaku. **MAST:** HiPS, Roman.

NOIRLab, NRAO
MANNA: an MCP server for AI agents using VO TAP and SIA.

Rubin
Serving DP2; TAP over Qserv and BigQuery; 2.5 billion rows in a day.

OV-France / CDS
CDS passed 1 PB; HiPS3D heading to a standard; Simbad mirror in South Africa.

ESA archives
Euclid DR1 on 12 November via the full VO stack; JWST, HST, INTEGRAL and XMM-Newton TAP fully compliant.

Euro-VO Registry
Validator reports to 75 providers; Registry 5.5 adds an ObjObsSAP validator.

ASVO
AuthVO for Data Central TAP; CASDA VO Tools v2.0 (ADQL 2.1); ATOA moving into CASDA.

GAVO / DaCHS
DaCHS supports SLAP 2; prototypes SCS 2 and VODataService 1.3.

KazVO
UWS 1.1 for HPC *and* telescope time; VOEvent alerts; MESA grids via TAP.

SKAO SRCNet
v0.2 (Nov 2026): federated execution with AuthVO and ExecutionBroker.

CVO / CADC
2.65 PB delivered in 2025; Rubin DP1/DP2 in the Canadian IDAC; pyVO, AAI, CAOM, Science Platform and SRCNet work.

Member highlights: growing the community

Euro-VO / Astro-CC
VO Schools: Madrid (Dec 2025), Strasbourg (Sep–Oct 2026, 48 participants). Data Provider Forum, Heidelberg (Mar 2026). Tech Forums, Trieste and Paris.

China-VO
First Citizen Science Summit in Astronomy (2025); annual meeting on "API & MCP" (180+ people); Open Science symposium at the ISC meeting in Beijing (Oct 2026).

ArVO
ASBD-3 symposium and 4th Regional Summer School, Byurakan; MoU with China-VO on AI-ready archives.

VObs.it
National VO School, 24–26 November 2026; COSPAR talk; MAGIC DL5 resources.

USVOA
AAS 247 splinter session (Jan 2026): the VO, its science impact, Rubin, SPHEREx, Roman, ADS.

OV-France
Renewed to 2029; national VO meeting, Paris (Mar 2026); CDS and PADC hosted Astro-CC events.

GAVO → Görlitz
The data centre moves to the new DZA: first new staff member started 1 November; more hiring in mid-2027.

KazVO
KazVO framework paper (Izmailova et al., *Galaxies*, under revision).

CVO / CANFAR
268 active users a month, up 65% since 2024; DOI releases for CHIME-FRB, WALLABY, MAUVE-MUSE, VERTICO.

AI and the VO: from talk to practice

MANNA (USVOA: NOIRLab & NRAO)
An open-source MCP server connecting AI agents to VO TAP and SIA services (Astro Data Lab, ALMA).

AstroFetch (USVOA: IPAC)
Ask archives in plain language and it writes the ADQL. Beta since May 2026: 300+ users, ∼20 new each week.

API & MCP; AI-ready archives
China-VO's 2025 meeting theme; the ArVO and China-VO MoU.

ML as a VO service
CNN-based wavelength calibration, registered in DaCHS.

In the IVOA
`ai-interop` mailing list; KDD IG (today, 14:00); AI & Applications (Sunday, 09:00); a CSP plenary on AI-ready data at ESAC.

The message

AI systems need well-described, discoverable, provenance-aware data.

Registry, ObsCore, DataLink, DataOrigin and our vocabularies are **AI-enabling infrastructure**.

The more machine-assisted astronomy becomes, the more our "boring" standards matter.

The IVOA Newsletter is back, and it needs your news

- Back on track: **Issue 26** (June 2025) ended a three-year gap; **Issue 27** followed in July 2026
- For the IVOA *and* the wider community: new services and tools, data releases, papers that used the VO, events
- Next issue: after the ESAC Interop (2027)

Have something to share? Email the editors

ivoa-news-editors@ivoa.net

Editor: Deborah Baines (ESA). New editors welcome.



IVOA Newsletter

This biannual newsletter for astronomers is intended to highlight new capabilities of VO tools and technologies for doing astronomy research. It also lists recent papers, and upcoming events. Comments are of course welcome, and you may contact the editors directly via ivoa-news-editors@ivoa.net.

Latest Issue: 027, July 2026

- Reflections from Strasbourg
- Advancing Virtual Observatory Standards for High-Energy Astrophysics
- VO applications and implementation highlights
- Featured Science Publication
- Featured Paper
- Refereed Publications
- VO calendar
- ...

Archives:

ivoa.net/newsletter

A new www.ivoa.net, maintained on GitHub

- Rebuilt as a static Hugo site: mobile-friendly, full-text search of all documents
- Pages are Markdown in github.com/ivoa/ivoa-web: **anyone can propose an edit with a pull request**
- Open issues down from ∼70 in September to 27
- **New (PR #162):** `make docker-preview` lets you see your change locally before you submit; forks get a preview build from CI
- The wiki (like the CDS) is under heavy AI-bot load; static wiki pages will move to the website



Help keep the website alive

We need a **media coordinator**, one or two **technical maintainers**, and **people who keep providing content**, or the site goes stale. Interested? Find me this week.

Getting involved: where we need people

Most groups are healthy and well staffed. **Thank you** to all chairs, vice-chairs and contributors!

Groups that need more hands now

- **Applications WG**: client software is where users meet the VO. **pyVO recently lost two maintainers**: could you, or your institution, help?
- **Data Model WG**: MANGO is done; now we need to connect the models to DAL, Registry and real services.

Leadership terms coming up

Nov 2026: Radio IG vice-chair

May 2027: DAL, DSP and Semantics WGs; TCG; CSP; Education and KDD IG chairs; Time Domain IG vice-chair

Nov 2027: Applications WG chair; High Energy IG; KDD IG vice-chair

After the 2027 IAU GA: IAU–IVOA liaison (Bruce Berriman)

We fill vice-chairs as terms end, hoping the vice-chair moves up to chair. **Interested? Talk to the group chairs or any Exec member this week.**

Working and Interest Group leadership

Working Group	Chair	Vice-chair	
Applications§	**Damian** 11/27	**Sipőcz** 5/28	●
DAL	Mantelet 5/27	Fraustro 5/27	●
Data Model	Servillat 5/29	Dowler 5/29	●
DSP	Salgado 5/27^{+1}	Bertocco 5/27^{+1}	●
Registry	Landais 5/29	Dower 5/29	●
Semantics	Cecconi 5/27^{+1}	Derriere 5/27^{+1}	●
Committee			
TCG	Molinaro 5/27*	Donaldson 5/27*	●
CSP	Civano 5/27*	Desai 5/27*	●
Std. & Processes	Demleitner 2026–		●
IAU liaison	Berriman GA 2027	—	●

Interest Group	Chair	Vice-chair	
Data Curation	D'Abrusco 5/29	Raugh 5/29	●
Education	Li 5/27	Hasan 5/29	●
High Energy	Khelifi 11/27	Evans 11/27	●
KDD	Tao 5/27	Schaaff 11/27	●
Operations	Civera 5/29	Norman 5/29	●
Radio	Kettenis 5/27^{+1}	*Wagg 11/26*	●
Solar System	Erard 5/28	Taylor 5/29	●
Time Domain	Racusin 5/28	Fernique 5/27^{+1}	●
Theory	resting		

● settled ● term ends by late 2027 Term end month/year. $^{+1}$ in a one-year extension; * nominal three-year term.

§ New Applications vice-chair: **François-Xavier Pineau**, for approval at the Exec meeting on 5 November 2026.

This week in Perth, and the year ahead

This InterOp

Fri 6: Status (Exec, CSP, TCG) · Charge to the WGs · **XXXIII IAU GA discussion** · Knowledge Discovery IG · Time Domain IG + Apps

Sat 7: DSP · Data Model · Registry + Operations · DAL

Sun 8: AI & Applications · Closing plenary

Thank you to Simon O'Toole, Andreas Wicenec, ASVO and the ADASS XXXVI hosts!

17–21 May 2027: Interop at ESAC, Madrid
Exec and TCG on 16 May; CSP plenaries on current and future missions and AI-ready data.

June 2027: the IVOA turns 25
Ideas for celebrating? Tell the Exec.

August 2027: XXXIII IAU General Assembly, Rome
A VO session at the Division B days: join today's 11:00 discussion.

Northern fall 2027: ADASS in Toronto
Location of the fall 2027 Interop to be confirmed.

2028: ADASS in Beijing
Hosted by China-VO, 20 years after the 2007 Beijing Interop.

***Galaxies* special issue: VO, astroinformatics and AI**
Guest editors Oleg Malkov (RVO) and Areg Mickaelian (ArVO); due 17 April 2027.

How you can help

Send newsletter items to `ivoa-news-editors@ivoa.net`: services, releases, papers, events.

Improve `www.ivoa.net` with a pull request; preview locally with `make docker-preview`. **Website maintenance: let's talk this week.**

Join Applications (pyVO!) or Data Model: both need more contributors.

Review open RFCs: VODataService 1.3, DALI 1.2, and the SCS 2 Working Draft.

Acknowledge the IVOA in papers and archive pages that use VO standards (a template is on the way).

The state of the IVOA is strong, and it is all of you. Thank you!



Appendix: Member project updates

Member project updates

Euro-VO / Astro-CC

OV-France

GAVO

VObs.it

KazVO

USVOA: Chandra

USVOA: NAVO

USVOA: NOIRLab

USVOA: NRAO

USVOA: Rubin

ASVO

China-VO

ArVO

Galaxies special issue

CVO: CADC

Each project's own slide follows; click a logo to jump to it.

Supported by the OSCARS | Astro-CC project

Current focus on community events:

- **For Ph.D students and early career researchers:**
  - Science use-case tutorials on interoperable tools/services and Open Science.
  - **School 1:** 2-4 December 2025, Madrid, https://indico.in2p3.fr/event/36738/
  - **School 2:** 29 Sep – 1 Oct 2026, Strasbourg, https://indico.in2p3.fr/event/38575/



- **For Data Providers:**
  - Tutorials and sharing expertise on the use standards and implementing FAIR principles.
  - **Data Provider Forum event**: 25-27 March 2026, Heidelberg, https://indico.in2p3.fr/event/37439/



- **For Developers of Software/Services:**
  - Discuss and refine community open interoperability standards.
  - **First Tech Forum:** 7-9 Oct 2025, Trieste, https://indico.in2p3.fr/event/36318/
  - **Second Tech Forum:** 19-21 Oct 2026, Paris, https://indico.in2p3.fr/event/40198/



Euro-VO web pages: https://www.euro-vo.org

Astro-CC partners :

OSCARS Open Science Clusters' Action for Research & Society

Funded by the European Union

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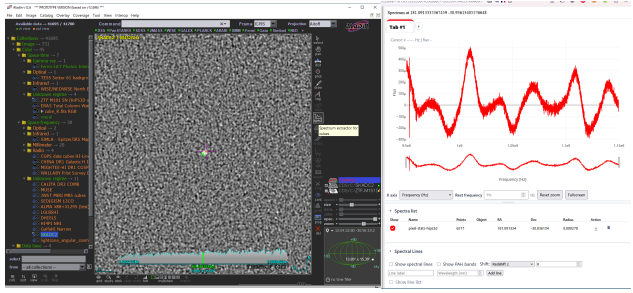
News from the CDS:

- **1PB data** milestone passed
- **HiPS3D** towards a standard
- New **Simbad mirror** in South Africa
- Organisation of the 2nd Astro-CC **Scientific Training event** - 29 September - 01 October 2026 in Strasbourg, 48 participants
- IA agressive scrapping adaptation + shared experience at ADASS/IVOA



News from the PADC:

- Organisation of the 2nd Astro-CC **Technology Forum** 19-21 October 2026 in Paris 20 participants

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GAVO: German Astrophysical Virtual Observatory

- **Organisation:** on 1 November the first new GADC employee started in Görlitz. GAVO's activities will increasingly shift to the DZA; we will be hiring again in mid-2027.
- **Standards:** SCS 2 has had an intensive review: please look at the new WD. Please also take part in the RFC for VODataService 1.3; there is even a reading guide on the RFC page.
- **Server side:** DaCHS now supports SLAP 2. If you have line data, give it a try.
- **Client side:** two people recently left the pyVO maintainer team. Could you see yourself helping out?



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VObs.it

- finalising participation in the OSCARS Astro-CC project
  - contribution to VO focued project events
  - follow up contribution to the OSCARS-2 Competence Centre scenario
- VO training
  - tutoring contribution to Euro-VO / Astro-CC events
  - VObs.it National VO School
    - happening on 24-26 November 2026
    - benefiting from Astro-CC material & tutors
- dissemination
  - INAF funded talk at COSPAR Assembly (August 2026)

- contribution and uptake
  - UniPD/INAF
    - MAGIC DL5
    - registration and update of resources
  - DT-Lab project
    - includes simulated data FAIR management
    - again trying to involve communities
- community services
  - wiki overload mitigation
  - new docrepo services nearly there

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The Latest Updates on KazVO Activity:

Data Infrastructure

- **Data Lake (9.6 TB):** Strict FITS and storage standardization across the telescope network.
- **"Scientific Showcase":** On-the-fly dynamic data masking *(zeroing arrays)* in DaCHS. Protects binary data while keeping metadata FAIR via SIAP/SSAP.

Unified UWS 1.1 & HPC

- **Unified UWS 1.1:** Single interface managing HPC (SLURM) and telescope time. Features a custom HELD phase for mandatory moderation;
- **400 Gbps HPC Upgrade:** Expanded FAI's cluster interconnect to InfiniBand NDR network enabling ultra-low-latency parallel computing (MPI/RDMA) for large-scale simulations, Big Data processing and ML tasks.

Web Services & Integrations

- **Global Cone Search Service:** Tool for spatial cone searches of astronomical objects querying 32k+ IVOA registries (ADQL/XML).

Cone Search

- **ML Spectral Processing Service:** Client-side intelligent service (CNN + DTW-RANSAC) for automated wavelength calibration. Registered as a DaCHS external resource.

Calibration Tool

- **Simulations via TAP:** Converted MESA stellar evolution grids into FITS tables, making 80+ physical parameters fully queryable via ADQL and TAP.

MESA service

VOEvent 2.0 Ecosystem

FastAPI+Comet hybrid gateway for automated routing.

- **Near-Earth Space Monitoring:** Predicts KazSat/debris close approaches with km-level accuracy.
- **Space Weather Service:** Automated K-index anomaly alerts via InfluxDB.

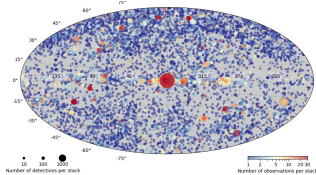
New Publication

Izmailova I. et al., "*FAIR-Compliant Architecture for Heterogeneous Astronomical Data: KazVO Framework*" 2026 [under revision in Galaxies].

arXiv

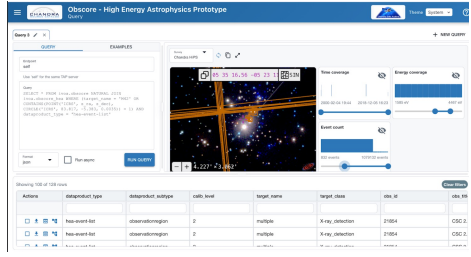
Chandra X-ray Center Updates

- **New release of the Chandra Source Catalog** in October 2026. (CSC2.2)
- All imaging data up to the end of 2023
- VO interfaces include CSC2.2 TAP, Cone, and Image access services



- 432,713 unique sources with extensive properties tables
- ~130Million calibrated data products

- Continued work on the **HEIG Note and HEA OBSCore specification** as a high priority.
- Prototype extracts metadata from CSC 2.1 data products and creates a HEA OBSCore table. It extends ObsCore TAP to enable discovery of CSC 2.1 data products with high-energy-specific ADQL queries (direct energy ranges, event counts, and TMOC/GTI time intervals.)



- New FAIR-compliant landing pages for **Chandra Data Collection DOIs** bringing their FAIR-ness score from ~20% to 70%
- 500 DOIs created since June 2023

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NAVO | IVOA Interop update

Highlights since June 2026

NEW DATA IN THE VO	**NED**	Major database update
	HEASARC	ObsCore: **MAXI, Ariel V, RXTE, Suzaku**
	MAST	New HiPS holdings; **Roman** support
	IRSA	**Euclid** DR1 + **SPHEREx** DR1 (Nov 12)
VO SERVICES	**TAP**	Performance, validation; HEASARC TAP 1.1
	DataLink	HEASARC + IRSA performance improvements
	Registry	MAST infrastructure improvements
VO TOOLS	**Jdaviz**	VO plugin adds SSA + SCS
	Firefly	Standalone tool: uploads, TAP, SIA2, HiPS searches

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NOIRLab/CSDC/Astro Data Lab

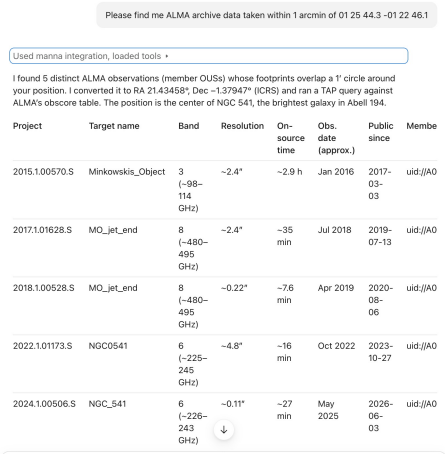
- CosmicAI-funded summer projects w/ three students around “AI”.
- One, at NOIRLab/Data Lab jointly with NRAO/ALMA, created an MCP server (“MANNA” for “MCP Architecture for NOIRLab, NRAO, and additional Archives”) that connects LLM bots with ***VO-compliant*** TAP and SIA services (Data Lab, ALMA archive, and others).
- Instance at Data Lab currently in testing. Local LLM runs on local GPUs to ensure equal access for all users.
- Paper to be submitted soon (Gause et al., in prep.)
- Open-source, PRs welcome!
  `https://github.com/NSF-Simons-CosmicAI-Institute/manna`

NOIRLab/CSDC/Astro Data Lab

- New (web) xmatch service at Astro Data Lab science platform still planned.
- Integration of Aladin Lite v3 viewer at Astro Data Lab Web Portal will include hipscat and pymoc integration. ETA now early FY27.
- Maintenance and corrections of existing CSDC VORegistry records (TAP, SIA, SCS); addition of new ones.

AUI/NRAO

- In collaboration with the NSF-Simons Institute for COSMIC AI, intern Dan Gause built a Model Context Protocol for VO access to the NOIRLab and ALMA archives. When installed, this greatly speeds up (and reduces the load) for AI agents to search these archives.
- https://github.com/NSF-Simons-CosmicAI-Institute/manna



VERA C. RUBIN OBSERVATORY

U.S. National Science Foundation

U.S. Department of ENERGY | Office of Science

Rubin IVOA 6-month updates

May 2024 to Oct 2026



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Big Query back end for TAP

- We are about to launch the first Rubin TAP service backed by Google's Big Query database for the Rubin Prompt Product catalogs. This follows the same architecture as our Qserv-backed service: the CADC TAP server implementing the protocol, with a "bridge" service between the TAP server and the database regulating load and applying throttling.
- For Big Query, we now apply a "bytes scanned" quota, since that is the Big Query unit of charge.
- We have added temporary table uploads capability to the CADC TAP Big Query back end.

More TAP improvements

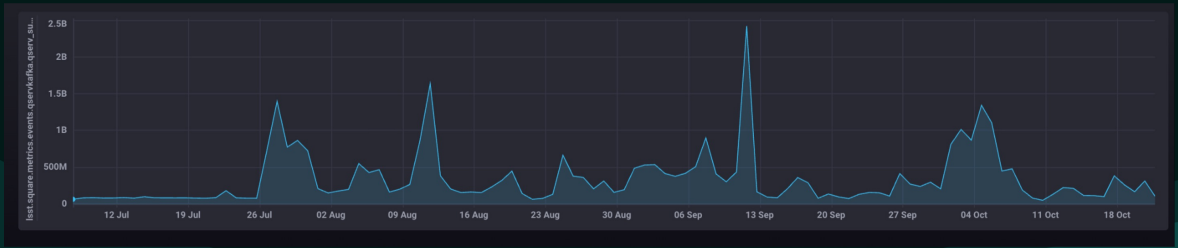
- We consolidated our variously backed TAP services into one TAP implementation with pluggable backends (Qserv, BigQuery, PostgreSQL).
- We now automatically spatially partition table uploads for Qserv-backed cross match queries, which increased performance by over an order of magnitude
- When a query reaches its maximum execution duration, we make sure it also gets cancelled in the back end as well.

Standards and community

- TAPRegExt forMode: support added in pyvo, TAP service implementation ready.
- SCS 2.0: giving feedback and planning a reference implementation.
- pyvo and astropy upstreams:
  - fixes to auth
  - async job timeouts and VOTable handling
  - VOParquet support in progress.

How’s it going, you ask

- Now serving Data Preview 2
- New daily record of 2.5 billion rows of catalog rows returned on some random day for no particular reason (maybe the MLMs were bored)
- We don’t even notice anymore 🤷‍♀️



All-Sky Virtual Observatory

$19M funding application for Data Central and CASDA expansion was unsuccessful ☹

CASDA

- CASDA Virtual Observatory Tools v2.0 was released in Oct (used by MWA).
  - Updated for ADQL 2.1 compliance.
- Migrating ATOA to CASDA
- Trialling the CSIRO EASI (Earth Analytics Science & Innovation) platform for data analysis

Data Central

- Continued work on an AuthVO implementation for the DC TAP service
  - PyVO and OAuthlib PRs
- New web portal with decoupled frontend and API
  - Incorporating VO services
  - User testing starting soon

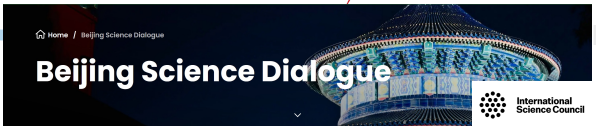
Satellite Symposium on Open Science, Research Assessment and Publishing

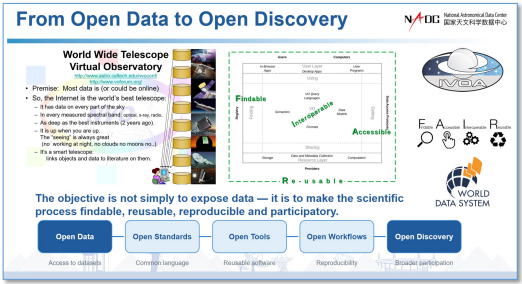
National Astronomical Data Center 国家天文科学数据中心

- On 20 October, Satellite Symposium 5, “**Open Science, Research Assessment and Publishing**”, was held successfully under the framework of the 2026 International Science Council (ISC) Midterm Members Meeting and Beijing Science Dialogue.

- Diana Mary Worrall, General Secretary of the IAU and Chenzhou Cui gave keynote presentations on Open Science in Astronomy.

- Diana and Vanessa McBride (ISC Science Director) visited the China-VO/NADC on Oct. 23.









Chenzhou's slides

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Armenian Virtual Observatory (ArVO) updates

- International Symposium *"Astronomical Surveys and Big Data 3"* (ASBD-3), 15-19 Sep 2025, Byurakan, Armenia
- IV Regional Astronomical Summer School (4RASS) *"Astronomy and Data Science"*, 08-12 Sep 2025, Byurakan, Armenia
- Collaboration Agreement between ArVO and China-VO (2025)
- MoU with Chinese National Astronomical Data Center (NADC / China-VO): *AI-Ready Astronomical Archives and Time-Domain Interoperability within the IVOA Framework*
- Collaboration with the Institute of Informatics and Automation Problems (Armenia) on *Automatic classification of the DFBS spectra*
- Keynote Talk at MEARIM-2025 (Amman, Jordan): *Astronomical Surveys, Catalogs, Big Data and Virtual Observatories*
- Invited Talk at APRIM-2026 (Hong Kong): *Astronomy and Big Data*
- Invited Talk at IAU WG-PDPP Virtual Workshop: *The digitization of the Markarian Survey*

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Special Issue for the journal Galaxies (ISSN 2075-4434): “0 and 1 in The Universe - Astroinformatics, Virtual Observatory and AI as Tools for Investigating the Variable Universe”

Keywords: Astronomical data; Virtual Observatory; Time-domain astronomy; Astronomical surveys; Astronomical catalogues, archives and databases; Transient phenomena; Multiwavelength data; Astroinformatics and Astrostatistics; Data mining in astronomy; Variable astrophysical sources; Time-series analysis; Machine learning in astronomy

Guest Editors: Oleg Malkov (Institute of Astronomy, Moscow, Russia), Areg Mickaelian (Byurakan Astrophysical Observatory, Armenia)



Submission deadline is Apr 17, 2027

https://www.mdpi.com/journal/galaxies

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CVO / CADC: IVOA standards in practice

DSP / AuthVO Authentication and authorization

Group Management Service rebuilt and open-sourced (`opencadc/ac/gms`) to the IVOA GMS interface, with federation across sibling GMS instances. CADC moving to OAuth2/OIDC (Keycloak) with external identity providers (SKA IAM, CILogon/eduGAIN), token exchange, and RFC 9728 resource metadata as in AuthVO; `sso#token` declared in VOSI capabilities; X.509 proxies on a retirement path.

DAL TAP compliance

Production TAP services (Argus, YouCat) hardened against `taplint` for TAP 1.1, DALI 1.1 and VOTable: `tap_schema` types, VOUnits and UCDs cleaned up; storage URIs now resolve to download URLs in results.

DM CAOM2 for new surveys and radio

`lsst2caom2` maps Rubin Butler tracts, patches and footprints into CAOM2, for multi-artifact products that flat ObsCore tables cannot hold. CAOM 2.5 extensions for radio (visibilities, spectral setups) feed the Radio and ObsCore drafts.

Apps pyVO and the Python ecosystem

Interoperability tested with pyVO, astropy and astroquery; CANFAR Python SDK 1.5 adds headless OIDC login, token renewal and `fsspec` data access: a reference for VO token passing in notebooks.

Science platforms CANFAR as an interoperable platform

VO discovery (TAP, CAOM2) paired with containerised compute for SRCNet, Rubin and Euclid-scale analysis.

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CVO / CADC: services delivered

2.65 PB	1.96 PB	7.19 PB	5.35 B	9 750+
delivered in 2025	delivered in 2026 so far	under management	requests, FY2025–26	user accounts

2025: 87M files to 205k client IPs. 2026: 39M files to 237k client IPs. 453M files archived. >99% of requests succeed. 438 new accounts in FY2025–26.

Flagship facilities and surveys

- **Rubin**: DP1 and DP2 in the Canadian IDAC through TAP, DataLink and Butler S3, with token-based data rights
- **Euclid**: DR1 served to Canadian science teams; storage and indexing ready for DR2
- **UNIONS**: 6 250 $\deg^2$ of multi-band imaging with CFHT and the Euclid Consortium
- **CFHT** and **NEOSSat** primary archives; **JWST** and **HST** mirrors with MAST and CSA

Community releases (DOIs, VOSpace)

- **Radio**: CHIME-FRB catalogs and baseband data; WALLABY HI cubes and models (ASKAP)
- **Spectroscopy**: MAUVE-MUSE IFU cubes (VLT); VERTICO molecular gas cubes (ALMA)
- **Imaging**: CANUCS and JWST in Technicolor; New Horizons precursor survey (Subaru)
- **DOI service**: DataCite DOIs on VOSpace snapshots and CAOM2 collections; 812 848 resolutions in FY2025–26

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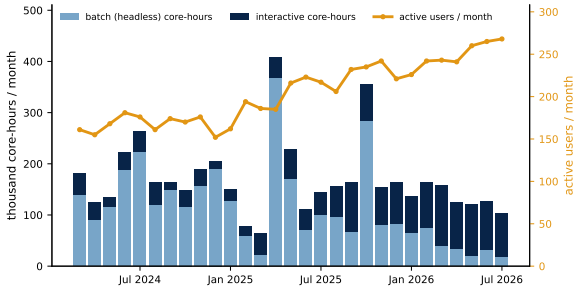
CVO / CADC: the CANFAR Science Platform



Hourly snapshots of running containers, March 2024 – July 2026.

CanfarSP 2026.3

+40% CPU, +60% RAM and multi-slice GPUs on Arbutus, with CephFS storage; portal and services split into Helm-deployable parts; the session API adds fair-share scheduling, community job views and Prometheus metrics.

628 users
268 active in July 2026, up 65% on 2024

369 000
containers: 330k batch jobs, 24k notebooks, plus desktops, CARTA, Firefly

4.9 M
core-hours; interactive use tripled to 93k a month

1 243
containers at once at peak, for 174 users

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