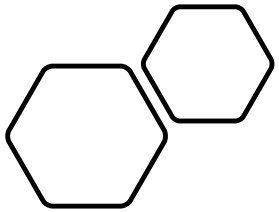
IVOA Closing Address

Virtual IVOA Interoperability Meeting, November 2021.

https://www.ivoa.net/



G. Bruce Berriman

Chair, IVOA Executive Committee

(Caltech/IPAC)

An Excellent Virtual Meeting

- Registrations: 180
- Many thanks to everyone for attending even at ungodly local hours!
- New standards
  - Architecture Document 2.0
  - VO Data Service 1.2
- MOC v.20 in RFC until Dec

  Dec 17 2021.

ZOOM LINK for Wednesday: meeting ended - recordings available below				
7	05:00	60 min	GWS	Giuliano Taffoni/Christine Banek
	06:00	*Break - 30 min*		
8	06:30	60 min	Ops	Mark Taylor/Steve Groom
	07:30	*Break - 6.0 hours*		
9	13:30	60 min	Radio	Mark Lacy/Francois Bonnarel
	14:30	*Break - 30 min*		
10	15:00	60 min	Semantics	Markus Demleitner/Carlo Maria Zwoelf
	16:00	*Break - 4.5 hours*		
11	20:30	60 min	DAL	James Dempsey/Gregory Mantelet
	21:30	*Break - 30 min*		
12	22:00	60 min	KD	Raffaele D'Abrusco
	23:00	End of Session		

Special Thanks for A Successful Meeting!

- The Organizers making it happen!
  - Janet Evans
  - Marco Molinari
  - Giulia Iafrate
  - Giulaino Taffoni
  - Mark Taylor
  - Hedrik Heinl
  - Mark Cresitello-Dittmar

- Italian National Institute for Astrophysics (INAF) for registration/web site
- CANFAR for hosting the recordings.

Renewals and Open Positions

- No renewals to report
- Open positions
  - Vice-chair of CSP
  - Vice-chair of KDD

➔ Please consider nominating yourself if you are interested and able to serve.

IVOA at ADASS

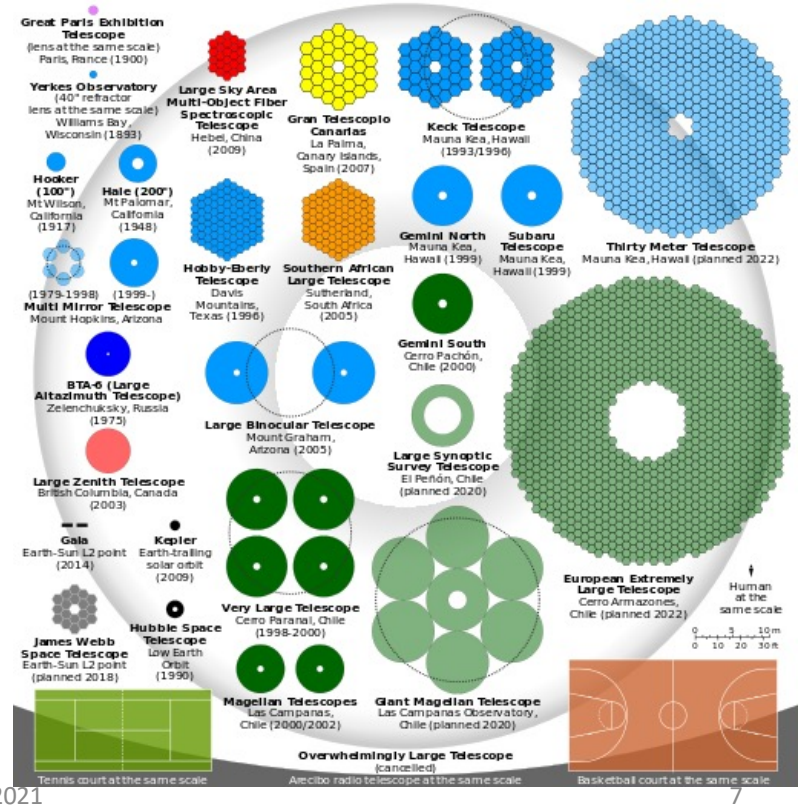
- “FAIR Standards for Astronomical Data.” O’Toole
  - “CEFCA Catalogues Portal towards FAIR principles.” Civera
  - “Build FAIR workflow for astronomical catalogues.” Landais et al.
  - “Supporting FAIR principles in the Astrophysics Community - the European experience.” Molinari
  - “FAIR high level data for Cherenkov astronomy.” Servillat.
- “Teaching Resources for the Virtual Observatory.” Cui
- “European Virtual Observatory Schools.” Jimenez-Esteban
- “A Tool to Explore Astronomical Databases and Transform Data into Planetarium Formats.” Aguilar

IVOA at ADASS

- “Grand opening of the European JWST Archive at the ESAC Science Data Centre.’ Sanchez
- “TAP and the Data Models.” BOF. Laurent et al.
- “CASSIS and Aladin interfaced for a VO-compliant spectral data cube analysis tool.” Glorian et al.
- “Astropy, PyVO and the Radio realm.” Morris, Heinl. Tutorial
- “The IVOA in 2021.” Berriman et al
- … and more!

Challenges for the IVOA In 2021 And Beyond

- **PB scale missions will be commissioned!**
- **Big new telescopes!**
- **Support "science platforms" with analysis close to data.**
- Support new data-type adoption, driven by the growth in size and complexity of data sets.
- Time-domain astronomy and multi-messenger astronomy
- New radio projects.
- Machine learning.

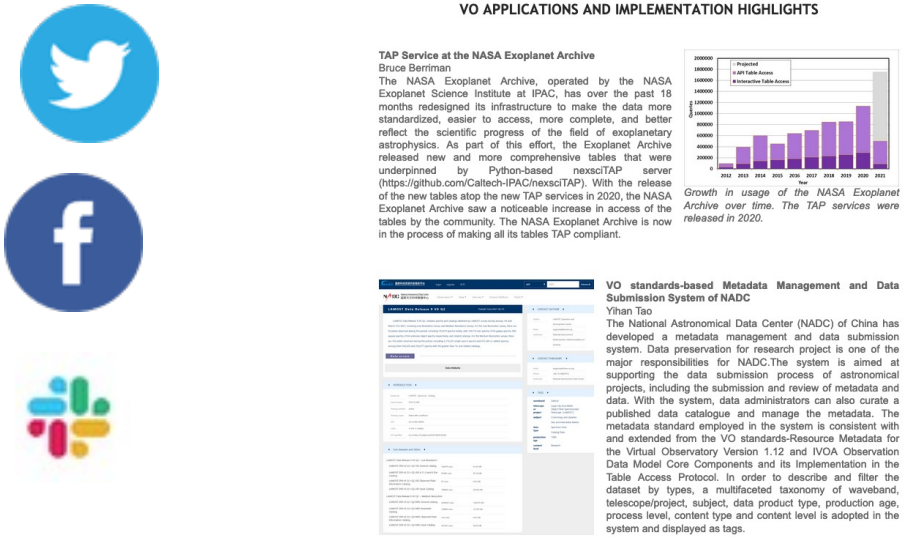


Challenges and Opportunities

- VO and FAIR principles
  - IVOA well positioned to support implementation of FAIR standards
- IAU
  - Opportunities for still broader engagement
  - Topic at May Interop?

Stay In Touch! Please Stay Safe

- IVOA Newsletter. https://www.ivoa.net/newsletter/index.html



VO APPLICATIONS AND IMPLEMENTATION HIGHLIGHTS

TAP Service at the NASA Exoplanet Archive
Bruce Berriman
The NASA Exoplanet Archive, operated by the NASA Exoplanet Science Institute at IPAC, has over the past 18 months redesigned its infrastructure to make the data more standardized, easier to access, more complete, and better reflect the scientific progress of the field of exoplanetary astrophysics. As part of this effort, the Exoplanet Archive released new and more comprehensive tables that were underpinned by Python-based nexsciTAP server (https://github.com/Caltech-IPAC/nexsciTAP). With the release of the new tables atop the new TAP services in 2020, the NASA Exoplanet Archive saw a noticeable increase in access of the tables by the community. The NASA Exoplanet Archive is now in the process of making all its tables TAP compliant.

Growth in usage of the NASA Exoplanet Archive over time. The TAP services were released in 2020.

VO standards-based Metadata Management and Data Submission System of NADC
Yihan Tao
The National Astronomical Data Center (NADC) of China has developed a metadata management and data submission system. Data preservation for research project is one of the major responsibilities for NADC.The system is aimed at supporting the data submission process of astronomical projects, including the submission and review of metadata and data. With the system, data administrators can also curate a published data catalogue and manage the metadata. The metadata standard employed in the system is consistent with and extended from the VO standards-Resource Metadata for the Virtual Observatory Version 1.12 and IVOA Observation Data Model Core Components and its Implementation in the Table Access Protocol. In order to describe and filter the dataset by types, a multifaceted taxonomy of waveband, telescope/project, subject, data product type, production age, process level, content type and content level is adopted in the system and displayed as tags.