

# **IVOA November 2020 Interoperability Meeting**



## **Report of Abstracts**

Abstract ID : 2

## Simple Cone Search - status

### Content

Status of development of the ConeSearch-1.1 specification: open issues, priorities, implementation feedback requests.

### Preferred talk time

13:30 UTC

**Primary author:** MOLINARO, Marco (Istituto Nazionale di Astrofisica (INAF))

**Presenter:** MOLINARO, Marco (Istituto Nazionale di Astrofisica (INAF))

**Track Classification:** Data Access Layer; Time Domain

**Status:** SUBMITTED

Submitted by **MOLINARO, Marco** on **Thursday 01 October 2020**

Abstract ID : 3

## Applications of Vocabularies 2

### Content

With a view to the RFC of Vocabularies 2, since the last interop several applications of the underlying technologies have been implemented. This talk will discuss them, ranging from datalink term expansion in pyvo to stilts' valiation code to a UAT-based registry browser. The talk will also look at experiences with the application of the UAT in the Registry.

### Preferred talk time

Daytime CET

**Primary author:** DEMLEITNER, Markus (GAVO)

**Presenter:** DEMLEITNER, Markus (GAVO)

**Track Classification:** Semantics

**Status:** SUBMITTED

Submitted by **DEMLEITNER, Markus** on **Tuesday 13 October 2020**

Abstract ID : 4

## Data Model Posture Review

### Content

The thread <http://mail.ivoa.net/pipermail/dm/2020-September/006096.html> on the data models mailing list has brought to light again a fairly fundamental dissent in the community on what the “grand design” of our data model effort ought to be: Small, ideally isolated models tailored to solving specific problems, or a hierarchy of entangled models of increasing complexity.

This should ideally be a full session with two introductory talks presenting the two views. I’m adding myself as a speaker of the small and isolated faction. I suspect Mark C-D, François or Laurent might volunteer for the large and complex faction.

### Preferred talk time

Not between 22 and 6 CET.

**Primary author:** DEMLEITNER, Markus (GAVO)

**Presenter:** DEMLEITNER, Markus (GAVO)

**Track Classification:** Data Model

**Status:** SUBMITTED

Submitted by **DEMLEITNER, Markus** on **Tuesday 13 October 2020**

Abstract ID : 6

## pgSphere: MOCs and Maintenance

### Content

The pgSphere package currently available in Debian testing now has comprehensive support for MOCs, which, together with TOPCAT's recent plotting improvements, makes for several interesting use cases. We will discuss some of them, together with the implications for ADQL we have implemented in DaCHS.

However, pgSphere maintenance currently is a bit in shambles, which is why the corresponding PR to the mainstream pgSphere package has not been merged so far. After the (brief) contribution, I would like to discuss the options for ensuring the maintenance of the package that, after all, ought to count as critical infrastructure of the VO.

### Preferred talk time

10+as much as I can get

**Primary author:** DEMLEITNER, Markus (GAVO)

**Presenter:** DEMLEITNER, Markus (GAVO)

**Track Classification:** Applications; Data Access Layer

**Status:** SUBMITTED

Submitted by **DEMLEITNER, Markus** on **Tuesday 27 October 2020**

Abstract ID : 7

## EEnriched Query-Server Response: DataLinks and Column Groups

### Content

The Caltech/IPAC-IRSA TAP service reads database tables at start-up which define VOTable-style column groups and DataLink service descriptors along with the sets of columns associated to them. At run time, the TAP service adds a GROUP element (or a RESOURCE element of type “meta”) to VOTable-format responses for any column group (or service descriptor) the set of whose columns is contained in the expanded SELECT clause of the user query. This presentation will indicate how this functionality is supported.

### Preferred talk time

Wednesday, 18 Nov. Zoom Link 11 or 12 (20:30 - 23:00 UTC -8)

**Primary author:** SILVERMAN, Judith (California Institute of Technology)

**Presenter:** SILVERMAN, Judith (California Institute of Technology)

**Track Classification:** Applications; Data Access Layer; Knowledge Discovery in Databases

**Status:** SUBMITTED

Submitted by **SILVERMAN, Judith** on **Tuesday 27 October 2020**

Abstract ID : 8

## Monitoring VO service performance in NAVO

### Content

NAVO has started monitoring the response times of VO service queries to establish baseline performance numbers and to identify areas for improvement. In this talk, I will discuss

- the goals of the monitoring
- the software we're using and the nature of the queries
- initial results and our plans moving forward

I'll be interested to hear whether this might be useful for other service providers, and under what constraints such queries should be run.

### Preferred talk time

No preference

**Primary author:** DONALDSON, Tom (STScI)

**Presenter:** DONALDSON, Tom (STScI)

**Track Classification:** Operations

**Status:** SUBMITTED

Submitted by **DONALDSON, Tom** on **Tuesday 27 October 2020**

Abstract ID : 9

## **Web SAMP from HTTPS update**

### **Content**

Review current status in the long story of getting the SAMP Web Profile working from web pages served over HTTPS.

### **Preferred talk time**

Any time OK

**Primary author:** TAYLOR, Mark (University of Bristol)

**Presenter:** TAYLOR, Mark (University of Bristol)

**Track Classification:** Applications

**Status:** SUBMITTED

Submitted by **TAYLOR, Mark** on **Thursday 29 October 2020**



Abstract ID : 10

## TAP authentication progress

### Content

I will report on progress in implementing the challenge-based authentication ideas outlined by Pat Dowler at the last virtual Interop. Some prototype client-side authentication code using this approach for working with TAP services has been shown to work with a couple of services, but more work on standardising the server-side implementation needs to be done.

### Preferred talk time

I can do any time

**Primary author:** TAYLOR, Mark (University of Bristol)

**Presenter:** TAYLOR, Mark (University of Bristol)

**Track Classification:** Data Access Layer; Grid and Web Services

**Status:** SUBMITTED

Submitted by **TAYLOR, Mark** on **Thursday 29 October 2020**

Abstract ID : 11

## ObsLocTAP status

### Content

ObsLocTAP is in TCG review status. We will expose the status of the standard, the activities related to this standard and plans of dissemination

### Preferred talk time

09:00-20:00 UTC

**Primary author:** Mr SALGADO, Jesus (Quasar for ESA)

**Presenter:** Mr SALGADO, Jesus (Quasar for ESA)

**Track Classification:** Data Model

**Status:** SUBMITTED

Submitted by **Mr SALGADO, Jesus** on **Thursday 29 October 2020**

Abstract ID : 12

## Upgrading the largest VO publishing registry

### Content

The VizieR publishing registry has been online since 2007, and represents with its 20,000+ astronomical catalogues a significant fraction of all VO resources.

The original registry software was written in PERL, and over time a number of issues have surfaced. In order to improve the compliance and maintenance of the service, a new version has been recently developed in Python. We will describe the new architecture, and improvements provided by this new system.

### Preferred talk time

13:30-16:00 UTC

**Primary authors:** DERRIERE, Sébastien (CDS, Observatoire astronomique de Strasbourg); Mr LANDAIS, Gilles (CDS, Observatoire astronomique de Strasbourg)

**Presenter:** DERRIERE, Sébastien (CDS, Observatoire astronomique de Strasbourg)

**Track Classification:** Registry

**Status:** SUBMITTED

Submitted by **DERRIERE, Sébastien** on **Friday 30 October 2020**

Abstract ID : 13

## Interoperability Developments in AAS WorldWide Telescope

### Content

Over the past few years, the AAS WorldWide Telescope software system has undergone significant enhancements, especially in the project infrastructure such as build tools, deployment automation, and documentation. This work has enabled the development of significant new features for both researchers and more casual users. I will demonstrate some of the developments most relevant to the IVOA community, most notably progress towards rendering of HiPS all-sky datasets and the display of very large FITS images.

### Preferred talk time

US Eastern time zone: UTC 13:00 - 22:00

**Primary author:** Dr WILLIAMS, Peter K. G. (Center for Astrophysics | Harvard & Smithsonian)

**Presenter:** Dr WILLIAMS, Peter K. G. (Center for Astrophysics | Harvard & Smithsonian)

**Track Classification:** Applications; Grid and Web Services; Education; Knowledge Discovery in Databases; Operations

**Status:** SUBMITTED

Submitted by **Dr WILLIAMS, Peter K. G.** on **Monday 02 November 2020**

Abstract ID : 14

## The Indra Simulations on the SciServer Science Platform

### Content

Understanding the observations made by large-scale structure surveys requires input from theoretical predictions of structure formation in the form of numerical simulations, which can be hundreds of terabytes in size. How do we make these simulation suites available, either within collaborations or to the public? How do we connect them to observations available on archives or science platforms? I will discuss my experience developing the tools and architecture to make the peta-scale Indra suite of simulations available to the public and computationally accessible on the SciServer science platform.

### Preferred talk time

The 15:00, 20:30, or 22:00 UTC slots

**Primary author:** FALCK, Bridget (Johns Hopkins University)

**Presenter:** FALCK, Bridget (Johns Hopkins University)

**Track Classification:** Grid and Web Services; Theory

**Status:** SUBMITTED

Submitted by **FALCK, Bridget** on **Tuesday 03 November 2020**

Abstract ID : 15

## **Non-browser client authentication with OAuth2 tokens**

### **Content**

The CADC recently implemented the authorization server aspects of OpenID Connect. This work allows authentication/login with CADC credentials from external sites using a web browser. During this exercise we kept in mind the need for authentication integration with non-browser clients. Using existing OAuth2/OpenID Connect patterns, and building off the ideas of the working group in the last interop, we will illustrate an approach to end-to-end login for non-browser clients.

### **Preferred talk time**

One of the 20:30 or 22:00 UTC slots would be best

**Primary author:** MAJOR, Brian (CADC)

**Presenter:** MAJOR, Brian (CADC)

**Track Classification:** Grid and Web Services

**Status:** SUBMITTED

Submitted by **MAJOR, Brian** on **Tuesday 03 November 2020**

Abstract ID : 16

## Implementation of the IVOA Spectral Data Model at IPAC

### Content

IPAC is home to several data centers that serve spectroscopic data: The NASA/IPAC InfraRed Science Archive (IRSA), the NASA/IPAC Extragalactic Database (NED) and the Keck Observatory Archive (KOA). Together, these archives curate spectra from many observatories and projects, including Spitzer and SOFIA. We present our experiences in beginning to adapt metadata for these existing data sets into the IVOA Spectral Data Model. We also strongly advocate for the prioritization of work on the Spectral Data Model in light of large and important spectroscopic data sets to be produced by SPHEREx, Euclid, Roman, JWST, and Gaia.

### Preferred talk time

speaker TZ is UTC-8. preferences order 2030-2300UT, 0430-0700-UT, 0530-0800UT

**Primary author:** Dr DESAI, Vandana (Caltech / IPAC)

**Co-author:** GROOM, Steve (Caltech / IPAC)

**Presenter:** Dr DESAI, Vandana (Caltech / IPAC)

**Track Classification:** Data Access Layer; Data Model

**Status:** SUBMITTED

Submitted by **GROOM, Steve** on **Tuesday 03 November 2020**

Abstract ID : 17

## The EPN-TAP access protocol

### Content

The EPN-TAP protocol to access Solar System data has recently been submitted as a Working Draft. EPN-TAP is the association of TAP with a specific vocabulary, EPNCore, describing data in a field encompassing Solar System studies, heliophysics, extrasolar planets, and laboratory experiments such as spectroscopy in solid phase. The standard also includes a set of rules to design EPN-TAP services and tables.

EPNCore results from design of 50+ data services published in the recent years within the Europlanet H2020 EU programme, and accessible via the VESPA portal (<http://vespa.obspm.fr>). Version 2.0 has been in use since 2015, and is the first version submitted to IVOA.

### Preferred talk time

avoid Wednesday 18

**Primary author:** ERARD, Stéphane (LESIA / Observatoire de Paris)

**Co-authors:** CECCONI, Baptiste (Observatoire de Paris); DEMLEITNER, Markus (GAVO); LE SIDANER, Pierre (Observatoire de Paris)

**Presenter:** ERARD, Stéphane (LESIA / Observatoire de Paris)

**Track Classification:** Data Access Layer; Solar System

**Status:** SUBMITTED

Submitted by **ERARD, Stéphane** on **Friday 06 November 2020**



Abstract ID : 18

## VO Education in Covid Times

### Content

The pandemic disrupted the regular flow of classes. Undergraduate and Postgraduate students were losing out on precious time. We were funded by a special call by IAU-OAD for Covid times. We started a project to train students to use astronomy archival data to do targeted research projects.

I shall describe the essential VO Tools that were taught and a few of the projects taken up by students. Education through VO is a very powerful tool and can be used very effectively.

### Preferred talk time

15 min, GMT+5.5

**Primary authors:** Dr HASAN, Priya (Maulana Azad National Urdu University, Hyderabad, India); Prof. HASAN, Syed Najamul (Maulana Azad National Urdu University)

**Presenter:** Dr HASAN, Priya (Maulana Azad National Urdu University, Hyderabad, India)

**Track Classification:** Education

**Status:** SUBMITTED

Submitted by **Dr HASAN, Priya** on **Sunday 08 November 2020**