CEVO Task 2 summary

- François Bonnarel

  On behalf ESCAPE CEVO (task 2)

Coordinating ESFRI and VO experts efforts to achieve CEVO goals

- ESFRI :
  - SKA,JIVE,ASTRON, ALMA, EST, ESO, KM3NET, CTA, EGO/VIRGO
- Escape experts :
  - CDS, GAVO,INAF,INTA, Edinburgh
- Partner experts or projects :
  - ObsParis, ObAS, Mark Taylor (Bristol), INAF-Radio
- Schools :
  - INTA, CDS, INAF, Mark Taylor
  - See Enrique presentation

Coordinating ESFRI and VO experts efforts to achieve CEVO goals

- Help for design - CEVO working Meetings
  - EST/CDS, KM3NET/CDS, JIVE/ASTRON/CDS (with ObsParis and INAF-Radio), KM3NET/CTA/CDS, JIVE/CDS/AsSTRON/UHEI, etc...
- CEVO Provenance Workshop
  - ObsParis, CTA, INAF, JIVE, ASTRON, KM3NET, EST, CDS
- Help to implementation for ESFRIs
  - DACHS/GAVO assistance at KM3NET, ASTRON, EST
- Contribution to IVOA meetings :
  - CTA, SKA, JIVE, ASTRON, EST, CDS, INAF, UHEI, Edinburgh, INTA, ObsParis, ESO, HITS

Coordinating ESFRI and VO experts efforts to achieve CEVO goals

- VO standards
  - HIPS : implementation in various contexts and environments
  - TIMESYS in VOTable
  - MOC, STMOC : adding time to MOC. IVOA spec Version 2. → eneregy ?
  - Provenance : completion of the Model + dissemination, implementation (ADASS, ESCAPE,IVOA)
  - Time Discovery + Visibilities Obscore extensions : with TimeDomain and RadioIG extensions

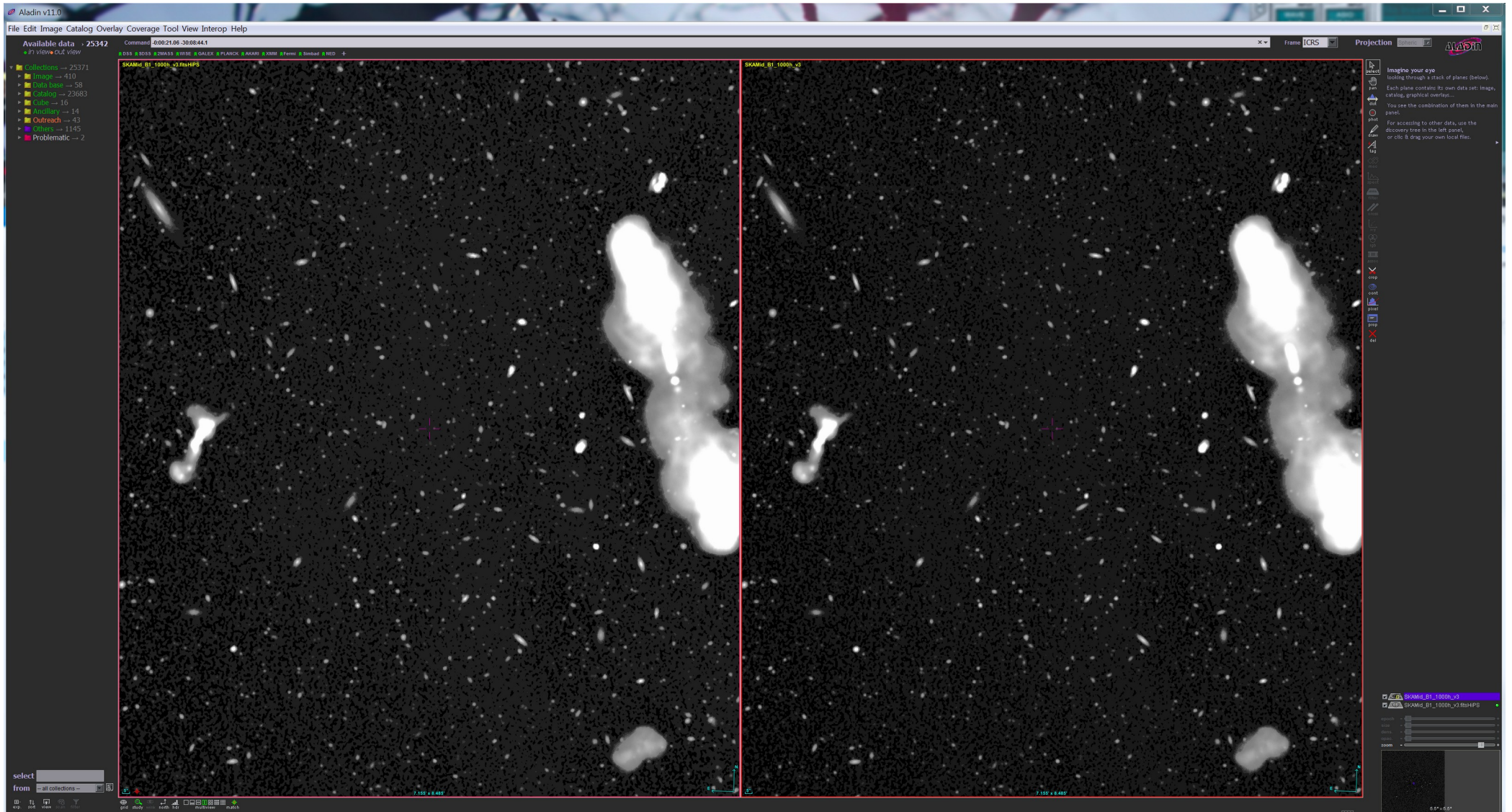
Coordinating ESFRI and VO experts efforts to achieve CEVO goals

- VO standards :
  - Datamodel serialization and annotation : in collaboration with ObAS and DM Working group
  - Evolution of SODA, SIA and DataLink : enhancing the scope of the protocols
  - Semantics : New UCD terms, Vo 2.0, DataLink semantics terms, « dataproduct type » terms
  - Registry : caproles proposal (capability roles for resources)
  - VOEvent : towards new version, discovery, etc.
  - ADQL 2.1 : Push to RFC
- Discuss more on Wednesday 2PM

ESFRIs achievments (more details in presentations)

- SKA : HiPS for simulated data
  - Hack a thon Wednesday 2 PM and next slide
- JIVE : Visibility ObsTAP service / integration in ESAP
  - Mark K’s and Aaard’s presentations.
- LOFAR/ASTRON : ConeSearch, TAP/ObsTAP service / integration in ESAP
  - See Yan Grange’s presentation on Thursday
- ALMA : ObsTAP service, SIA, DataLink service
  - Next slides

SKAO simulated images
HiPS on the left / original FITS on the right



ALMA : 3 DAL interfaces

ObsCore TAP (Table Access Protocol) web service

The ObsCore (TAP) web service. IVOA TAP Specification

The synchronous and asynchronous service endpoints conform the the IVOA UWS (Universal Worker Service) Framework. IVOA UWS Specification

This service implements the ObsCore data model. The main tables are:

- ivoa.ObsCore: supports ObsCore-1.1 physical model from the ObsTAP project

Downloading Data

The planeURI column in the caom2.Plane table can be used to query the related DataLink service to get details about files that can be downloaded and related services that can operate on a product. The obs_publisher_did column in the ivoa.ObsCore table contains the same identifiers for use with a DataLink service.

Unsupported ADQL Constructs

The following ADQL Functions are not currently supported: ALL and DISTINCT within an aggregate function (AVG, COUNT, MIN, MAX, COUNT) PI RAND TRUNCATE

Support Interfaces — Show/Hide | List Operations | Expand Operations

GET	/availability	VOSI Availability
GET	/capabilities	VOSI Capabilities
GET	/tables	VOSI Tables

TAP — Show/Hide | List Operati

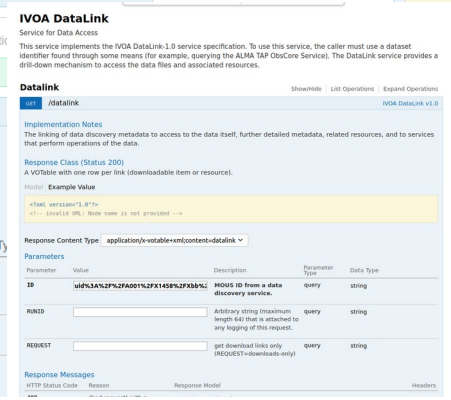
POST	/async
GET	/sync

Implementation Notes

TAP synchonous query endpoint

Parameters

Parameter	Value	Description	Parameter Type	Data Ty
LANG	(required)	specify the query language used in the QUERY parameter	query	string
QUERY	SELECT T OP 100 * FROM ivoa.obscore	specify the query	query	string
FORMAT		supported for backwards compatibility to 1.0 (see:	query	string



SIA (Simple Image Access) web service

The SIA (Simple Image Access) web service.

SIA services for the Common Archive Observation Model (CAOM).

IVOA SIA v1

IVOA SIA v2

The SIA-2.0 query endpoint implements all the query parameters described in the latest SIA-2.0 specification: POS, BAND, TIME, POL, FOV, SPATRES, EXPTIME, ID, COLLECTION, FACILITY, INSTRUMENT, DPTYPE, CALIB, TARGET, TIMERES, SPECRP, FORMAT.

Simple Image Access 2.0 — Show/Hide | List Operations | Expand Operations

GET /query

Implementation Notes

SIA-2.0 query of all collections. | The SIA-2.0 implements all the query parameters described in the latest SIA-2.0 specification: POS, BAND, TIME, POL, FOV, SPATRES, EXPTIME, ID, COLLECTION, FACILITY, INSTRUMENT, DPTYPE, CALIB, TARGET, TIMERES, SPECRP, FORMAT.

Response Class (Status 200)

Successful response

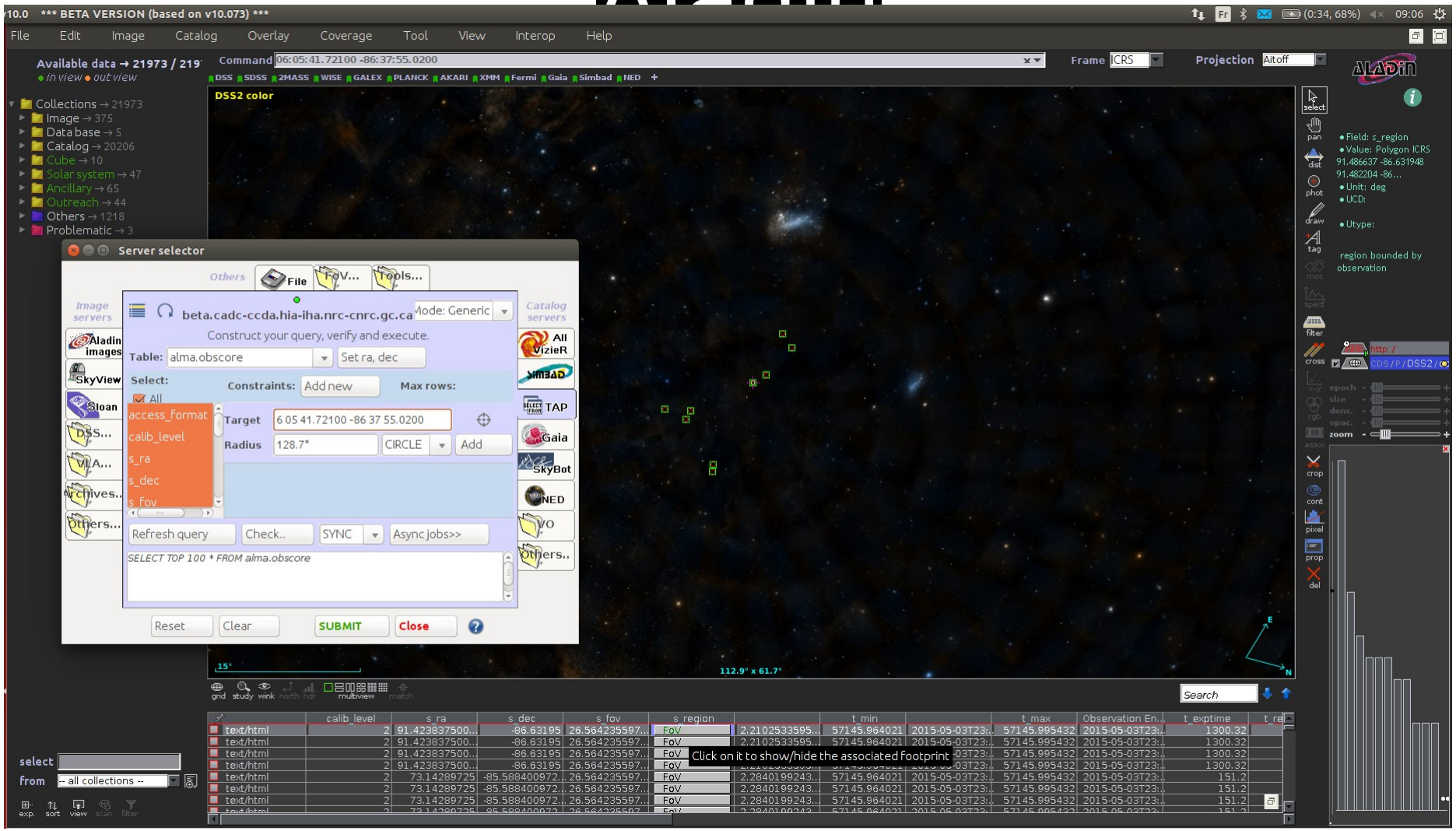
Model | Example Value

```
version="1.0"?>
Invalid XML: Node name is not provided -->
```

Content Type text/xml

Value	Description	Parameter Type	Data Type
CIRCLE 30.0 25.0 2.0	The POS parameter specifies the target coodinates (RA,DEC in degrees, ICRS) to search.	query	string
		query	string
		query	string
		query	string
		query	string
		query	string

ALMA science archive ObsTAP service within Aladin



ESFRIs achievments (more details in presentations)

- ESO : ObsTAP, SSA, HiPS, TAP, DataLink services since April 2020
  - See Alberto’s presentation
- EST : UCD implementation and upgrade. TAP and EPN-TAP serice in development
  - See Véronique’s presentation.
- KM3NET : TAP service, provenance, probability estimates
  - See Jutta’s presentation
- CTA : Provenance inside, need for dataset DataModel (for interoperability) implementation and upgrade
  - See Mathias’ presentation
- EGO/VIRGO : Using MOCS for MM observation preparation
  - See Giuseppe’s presentation

To come next

- RadioIG : implementation note + workshop + radio extension to Obscore
- DM : workshop in May
- TimeDomain : STMOC + new extension of ObsCore specification + DAL protocols upgrade for Time
- DAL protocols upgrade (images and cubes, spectra)

- DataProvider « Hand On » in June (21-25)
- 2nd VO school (next year)

- More implementations and feedback from ESFRI partners