

Datalink and TAP in Aladin

Chaitra [CDS]

Interop IVOA meeting – Shanghai – May 2017



Contents

SIASV2/SODA/Datalink handling in Aladin

1. Demo for CADC
2. CFHT Vizier
3. Conclusions

Aladin's TAP clients

4. Generic tap client
5. Glu tap client
6. TAP Asynchronous queries
7. Loading TAP from directory tree
8. Conclusions

SIAV2/SODA/Datalink in Aladin

The screenshot displays the Aladin astronomical software interface. The main window shows a star field with a coordinate range of $6.021^\circ \times 4.882^\circ$. The interface includes a toolbar on the right with icons for zoom, dist, phot, draw, tag, filter, cross, crop, cont, pixel, prop, and del. A data table at the bottom lists object information, and a search bar is located at the bottom right.

ID	access url	service def	error message	semantics	description	content type	content length	readable
caom:CFHT/1.021	v2icske69a6u...			#this		application/fits	289776960	true
caom:CFHT/1.021		soda-0420a3e4...		#cutout		application/fits		true
caom:CFHT/1.021		soda-7ba83967...		#cutout		application/fits		true

Search

epoch - +
size - +
dens. - +
opac. - +
zoom - +

Frame: ICRS
-198 +180
6.021° x 4.882°

3 sel / 3 src 30fps / 406Mb

Contents

SIASV2/SODA/Datalink handling in Aladin

1. Demo for CADC
2. CFHT Vizier
3. Conclusions

Aladin's TAP clients

4. Generic tap client
5. Glu tap client
6. TAP Asynchronous queries
7. Loading TAP from directory tree
8. Conclusions

SIAV2/SODA/Datalink in Aladin

The screenshot displays the Aladin software interface. The main window shows a star field with a coordinate range of $6.021^{\circ} \times 4.882^{\circ}$. The interface includes a toolbar on the right with various tools like zoom, dist, phot, draw, tag, spect, filter, cross, xxyy, rgb, assoc, crop, cont, pixel, prop, and del. A search bar is located at the bottom right. A data table is visible at the bottom, listing search results with columns for ID, access url, service def, error message, semantics, description, content type, content length, and readable. The table contains three rows of data.

ID	access url	service def	error message	semantics	description	content type	content length	readable
caom:CFHT/1.021	v2icske69a6u..			#this		application/fits	289776960	true
caom:CFHT/1.021		soda-0420a3e4		#cutout		application/fits		true
caom:CFHT/1.021		soda-7ba83967		#cutout		application/fits		true

2017 Université de Strasbourg/CNRS - by CDS - Distributed under GNU GPL v3

SIAV2/SODA/Datalink in Aladin

File Edit Image Catalog Overlay Coverage Tool View Interop Help

Data access → 2 / 19454

Location Frame Projection

DSS
 SDSS
 2MASS
 WISE
 GALEX
 PLANCK
 AKARI
 XMM
 Fermi
 Gaia
 Simbad
 NED
 +

DSS colored

Collections → 2 / 19454
 Unsupervised → 2 / 2035
 Image by SIA → 1 / 233
 cadc.nrc.ca → 1
 CADC Image Search (SIA)
 Catalog by CS, TAP → 1 / 1680
 cadc.nrc.ca → 1
 CADC Table Query (TAP) Service

5°

35.04° x 22.46°

grid
 study
 wink
 north
 hor
 multiview
 match

CADC SIav2 - access_url - URL to download the data

Search

id	em ucd	pol states	pol xel	o ucd	access url	access format	access estsize	core id	lastModified
1				phot.count	http://www.cadl...	application/x-vot		00000000-0000+	2013-08-21T17:4
1				phot.count	http://www.cadl...	application/x-vot		00000000-0000+	2013-08-21T17:4
1				phot.count	http://www.cadl...	application/x-vot		00000000-0000+	2015-07-01T19:4
1				phot.count	http://www.cadl...	application/x-vot		00000000-0000+	2015-07-01T20:0
1				phot.count	http://www.cadl...	application/x-vot		00000000-0000+	2016-01-07T10:2
1				phot.count	http://www.cadl...	application/x-vot		00000000-0000+	2015-07-01T19:3
1				phot.count	http://www.cadl...	application/x-vot		00000000-0000+	2016-01-07T10:2
1				phot.count	http://www.cadl...	application/x-vot		00000000-0000+	2016-01-07T10:4

select from

filter
 coll
 inside
 scan

select
 pan
 zoom
 dist
 phot
 draw
 tag
 spect
 filter
 cross
 x-y
 rgb
 assoc
 crop
 cont
 pixel
 prop
 del

Mouse controls:
 • Left: source selection.
 • Middle: quick panning.
 • Right: contrast adjustment.
 • Wheel: quick zoom on the reticle.
 • Simple-clip: move the reticle.
 • Double-clip: re-center.
 Let you mouse pointer on an object for discovering associated Simbad data.

CADC SIav2
 cadc.nrc.ca/sia
 DSS colored

epoch -
 size -
 dens. -
 opac. -
 zoom -

Frame: ICRS
 05:22:19.18 -09:56:26.5
 35.04° x 22.46°

This dataset (size 1008000 bytes)
Get cutout

(c) 2017 Université de Strasbourg/CNRS - by CDS - Distributed under GNU GPL v3

22 sel / 1022 arc 577Mb

SIAV2/SODA/Datalink in Aladin

File Edit Image Catalog Overlay Coverage Tool View Interop Help

Data access Location Frame **ICRS** Projection **Sinus** **ALADIN**

★DSS ★SDSS ★2MASS ★WISE ★GALEX ★PLANCK ★AKARI ★XMM ★Fermi ★Gaia ★Simbad ★NED +

CDS/P/DSS2/color

CFHT APASS JCM APASS IRIS

5° 28.03° x 16.05°

[Plane @2] - 1170B4H0?runid=u2wmyfstck06cewi Search

em xel	em ucd	pol states	pol xel	o ucd	access url	access format	access estsize	core id	lastModified
1				phot.count	http://www.cad	application/x-vot		00000000-0000+	2013-08-21T17:4
1				phot.count	http://www.cad	application/x-vot		00000000-0000+	2013-08-21T17:4
1				phot.count	http://www.cad	application/x-vot		00000000-0000+	2013-08-21T17:4
1				phot.count	http://www.cad	application/x-vot		00000000-0000+	2013-08-21T17:4

select
from -- All collectio... +

filter exp inside scan

05:25:23.15 -09:57:11.0
28.03° x 16.05°

4 sel / 23 src 12fps / 372Mb

Mouse controls:

- Left: source selection.
- Middle: quick panning.
- Right: contrast adjustment.
- Wheel: quick zoom on the reticle.
- Simple-clic: move the reticle.

Click to show/hide this plane in the projection of the current view

Frame: ICRS

SI AV2/SODA/Datalink in Aladin

The screenshot displays the Aladin web interface. At the top, the menu bar includes File, Edit, Image, Catalog, Overlay, Coverage, Tool, View, Interop, and Help. The main window shows a star field with a zoomed-in cutout of a specific region. The location is set to 05:32:35.25 -11:09:55.8. The frame is set to ICRS and the projection is Sinus. A 'Server selector' dialog box is open, showing the 'Cutout' tab. The dialog contains the following fields:

- Target (ICRS, name): 05 32 57.25 -11 57 20.5
- Radius: 2.904°
- Time: [empty]
- Band: 8.424999999999999E-5 1.1575E-4
- Pol: I, Q, U
- ID: ad:IRIS/I170B4H0

The dialog also has buttons for Reset, Clear, SUBMIT, Close, and a help icon. The main window also shows a 'Basic controls' panel on the right with various tools and filters. The bottom right corner shows a search bar and a small map of the sky.

SIASV2/SODA/Datalink in Aladin

```
<VALUES>
  <MAX value="74.40891177132141 -3.663936776303487 74.10746861021302 -16.038010233095207
86.99090120499388 -16.100350844693992 86.81225899553195 -3.7233925881787684"/>
</VALUES>
</PARAM>
</GROUP>
</RESOURCE>
<RESOURCE type="meta" ID="soda-664f36c1-66c6-4263-866b-6b54156482a1" utype="ad hoc:service">
  <PARAM name="resourceIdentifier" datatype="char" arraysize="20" value="ivo://cauc.mrc.ca/caom2ops/" />
  <PARAM name="standardID" datatype="char" arraysize="33" value="ivo://ivoa.net/std/SODA#async-1.0"/>
  <PARAM name="accessURL" datatype="char" arraysize="50" value="http://www.cauc-ccda.hia-hia.mrc-
cnrc.gc.ca/caom2ops/async"/>
  <GROUP name="inputParams">
    <PARAM name="ID" datatype="char" ucd="" arraysize="" value="ad:IRIS/I170B1H0"/>
    <PARAM name="POS" datatype="char" ucd="obs.field" arraysize="" value="" />
    <PARAM name="CIRCLE" datatype="double" ucd="obs.field" unit="deg" xtype="circle" arraysize="3"
value="">
      <VALUES>
        <MAX value="80.58001555602195 -9.940800624635642 8.7697185954716"/>
      </VALUES>
    </PARAM>
    <PARAM name="POLYGON" datatype="double" ucd="obs.field" unit="deg" xtype="polygon" arraysize=""
value="">
      <VALUES>
        <MAX value="74.40891177132141 -3.663936776303487 74.10746861021302 -16.038010233095207
86.99090120499388 -16.100350844693992 86.81225899553195 -3.7233925881787684"/>
      </VALUES>
    </PARAM>
  </GROUP>
</RESOURCE>
</VOTABLE>
```

Server selector

DataLink Cutout

○ Cutout service ?

Fill in all these fields and press the SUBMIT button

ID

POS

CIRCLE

POLYGON

Reset Clear SUBMIT Close ?

datalink (4)

Show all X

SI/V2/SODA/DataLink in Aladin

```
<VALUES>
  <MAX value="74.40891177132141 -3.663936776303487 74.10746861021302 -16.038010233095207
  86.99090120499388 -16.100350844693992 86.81225899553195 -3.7233925881787684"/>
</VALUES>
</PARAM>
</GROUP>
</RESOURCE>
<RESOURCE type="meta" ID="soda-664f36c1-66c6-4263-866b-6b54156482a1" utype="ad hoc:service">
  <PARAM name="resourceIdentifier" datatype="char" arraysize="26" value="ivo://cad.c.nrc.ca/caom2ops"/>
  <PARAM name="standardID" datatype="char" arraysize="33" value="ivo://ivoa.net/std/SODA#async-1.0"/>
  <PARAM name="accessURL" datatype="char" arraysize="58" value="http://www.cadc-ccda.hia-ih.a.nrc-
  ca/engered/caom2ops/async"/>
  <GROUP name="inputParams">
    <PARAM name="ID" datatype="char" ucd="" arraysize="" value="ad:IRIS/I170B1H0"/>
    <PARAM name="POS" datatype="char" ucd="obs.field" arraysize="" value=""/>
    <PARAM name="CIRCLE" datatype="double" ucd="obs.field" unit="deg" xtype="circle" arraysize="3"
    value="">
      <VALUES>
        <MAX value="80.58001555602195 -9.940800624635642 8.7697185954716"/>
      </VALUES>
    </PARAM>
    <PARAM name="POLYGON" datatype="double" ucd="obs.field" unit="deg" xtype="polygon" arraysize=""
    value="">
      <VALUES>
        <MAX value="74.40891177132141 -3.663936776303487 74.10746861021302 -16.038010233095207
        86.99090120499388 -16.100350844693992 86.81225899553195 -3.7233925881787684"/>
      </VALUES>
    </PARAM>
  </GROUP>
</RESOURCE>
</VOTABLE>
```

Server selector

DataLink Cutout

○ Cutout service ?

Fill in all these fields and press the SUBMIT button

ID	<input type="text" value="ad:IRIS/I170B1H0"/>
POS	<input type="text"/>
CIRCLE	<input type="text"/>
POLYGON	<input type="text"/>

Reset Clear SUBMIT Close ?

Contents

SIASV2/SODA/Datalink handling in Aladin

1. Demo for CADC
2. CFHT Vizier
3. Conclusions

Aladin's TAP clients

4. Generic tap client
5. Glu tap client
6. TAP Asynchronous queries
7. Loading TAP from directory tree
8. Conclusions

SIAV2/SODA/Datalink in Aladin

File Edit Image Catalog Overlay Coverage Tool View Interop Help

Data access → 33 / 1958: Location 05:50:39.94 -12:05:08.7 Frame ICRS Projection Sinus

★DSS ★SDSS ★2MASS ★WISE ★GALEX ★PLANCK ★AKARI ★XMM ★Fermi ★Gaia ★Simbad ★NED +

CDS/P/DSS2/color

5° 28.03° x 16.05°

★	access	estsize	access format	access url	calib level	core id	dataproduc t...	em max	em min
■	application/x-votable+xml; content=datalink			http://www.cad...	2	00000000-0000	spectrum	1.048E-6	3.69986E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	2	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	1	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	2	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	1	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	2	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	1	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	2	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	1	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	2	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	1	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	2	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	1	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	2	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	1	00000000-0000	image	6.955E-7	5.542E-7
■	application/x-votable+xml; content=datalink			http://www.cad...	2	00000000-0000	image	6.955E-7	5.542E-7

select cfht

from My working l...

filter coll inside scan

05:21:07.87 -13:14:03.9
28.03° x 16.05°

SIaV2/SODA/Datalink in Aladin

File Edit Image Catalog Overlay Coverage Tool View Interop Help

Data access → 33 / 1958: Location 23:56:53.03 -05:50:06.3 Frame ICRS Projection Sinus

DSS
 SDSS
 2MASS
 WISE
 GALEX
 PLANCK
 AKARI
 XMM
 Fermi
 Gaia
 Simbad
 NED
 +

CDS/P/DSS2/color

<http://www.cadc-ccda.his-ija>
 CDS/B/cfht/obscure
 SODA sync
 CADC SIaV2
 170B4H0?runid=u2wmyfstck
 CDS/P/DSS2/color

epoch
 size
 dens.
 filter
 zoom

select
 pan
 dist
 phot
 draw
 tag
 moc

x-y
 rgb
 assoc
 crop
 cont
 pixel
 prop
 del

5° 28.03° x 16.05°

Search

ID	access url	service def	error message	semantics	description	content type	content length	readable
caom:CFHT/1287	http://www.cad			#this		application/fits	18998855	true
caom:CFHT/1287		soda-ad3ea2b7		#cutout		application/fits		true
caom:CFHT/1287		soda-6cfd0ca37		#cutout		application/fits		true

select cfht
 from -- My working l...

filter coll inside scan

00:00:00.00 - 00:00:00.00
 28.03° x 16.05°

SIASV2/SODA/Datalink in Aladin

```
<TD>  
http://www.cadc-ccda.hia-ihp.nrc-cnrc.gc.ca/caom2ops/datalink?runid=ox66cf6nd5wsfxx6&ID=caom%3AIRIS%2Ff170h000%2FIRAS-100um  
</TD>  
<TD>application/x-votable+xml;content=datalink</TD>  
</TD>  
<TD>f170h000</TD>
```

Value = application/x-votable+xml;content=datalink

	Visible	Coo	Name	Description	Unit	Datatype	UCD	Utype	Wi...	Arr...	Pr...
26	<input checked="" type="checkbox"/>		em_max	stop spectral coordinate v...	m	double	em.wl;stat.max	obscure:Char.SpectralAxis....			
27	<input checked="" type="checkbox"/>		Spectral co...	stop spectral coordinate v...	m	double	em.wl;stat.max	obscure:Char.SpectralAxis....			
28	<input checked="" type="checkbox"/>		em_res_power	typical spectral resolution		double	spect.resolution	obscure:Char.SpectralAxis....			
29	<input checked="" type="checkbox"/>		em_xel	dimensions (number of pix...		long	meta.number	obscure:Char.SpectralAxis....			
30	<input checked="" type="checkbox"/>		em_ucd	UCD describing the spectr...		char	meta.ucd	obscure:Char.SpectralAxis....			32*
31	<input checked="" type="checkbox"/>		pol_states	polarization states presen...		char	meta.code;ph...	obscure:Char.PolarizationA...			32*
32	<input checked="" type="checkbox"/>		pol_xel	dimensions (number of pix...		long	meta.number	obscure:Char.PolarizationA...			
33	<input checked="" type="checkbox"/>		o ucd	UCD describing the obser...		char	meta.ucd	obscure:Char.ObservableA...			32*
34	<input checked="" type="checkbox"/>		access_url	URL to download the data		char	meta.ref.url	obscure:Access.Reference			*
35	<input checked="" type="checkbox"/>		access_format	Format of the data file(s)		char	meta.code.mi...	obscure:Access.Format			128*
36	<input checked="" type="checkbox"/>		access_estsi...	estimated size of the dow...	kbyte	long	phys.size;meta...	obscure:Access.Size			
37	<input checked="" type="checkbox"/>		core_id	primary key		char					36
38	<input checked="" type="checkbox"/>		lastModified	timestamp of last modifica...		char					*

Select all Unselect all - Parsing report Coord. columns - Close

SI/V2/SODA/Datalink in Aladin

```
<TD>  
http://www.cadc-ccda.hia-ihp.nrc-cnrc.gc.ca/caom2ops/datalink?runid=ox66cf6nd5wsfx6&ID=caom%3AIRIS%2Ff170h000%2FIRAS-100um  
</TD>  
<TD>application/x-votable+xml;content=datalink</TD>  
</TD>  
<TD>f170h000</TD>
```

Value = application/x-votable+xml;content=datalink

	Visible	Coo	Name	Description	Unit	Datatype	UCD	Utype	Width	Arrays...	Precis...
1	<input checked="" type="checkbox"/>		access_estsize	? estimated size of the do...		int	meta.number			1	
2	<input checked="" type="checkbox"/>		access_format	Format of the data file (\o...		char	meta.note			*	
3	<input checked="" type="checkbox"/>		access_url	? URL to download the da...		char	meta.ref.url			*	
4	<input checked="" type="checkbox"/>		calib_level	[1,2] calibration level (\ori...		short	phot.calib;ant...			1	
5	<input checked="" type="checkbox"/>		core_id	primary key (\original{cor...		char	meta.id.part;...			36	
6	<input checked="" type="checkbox"/>		dataprodut_type	type of product (\original{...		char	meta.note			*	
7	<input checked="" type="checkbox"/>		em_max	? stop spectral coordinat...	m	float	instr.bandpass			1	
8	<input checked="" type="checkbox"/>		Spectral coordinate ...	? stop spectral coordinat...	m	float	instr.bandpass			1	
9	<input checked="" type="checkbox"/>		em_min	? start spectral coordinat...	m	float	instr.bandpass			1	
10	<input checked="" type="checkbox"/>		Spectral coordinate s...	? start spectral coordinat...	m	float	instr.bandpass			1	
11	<input checked="" type="checkbox"/>		em_res_power	? typical spectral resoluti...		float	spect.resoluti...			1	
12	<input checked="" type="checkbox"/>		em_ucd	? UCD describing the spec...		char	meta.number			*	
13	<input checked="" type="checkbox"/>		em_xel	? dimensions (number of ...		int	phys.size			1	
14	<input checked="" type="checkbox"/>		em_xel	? dimensions (number of ...		int	phys.size			1	

Select all Unselect all - Parsing report Coord. columns - Close

Conclusions

1. Need to resolve issues with Aladin and implement handling of more usecases
2. Need a distinctive way to identify a datalink
 - Addition of UCD to access format(Asterics Tech Forum March 2017)
 - appropriate obscure utypes for access url and format columns
3. Better description of services

Contents

SIASV2/SODA/Datalink handling in Aladin

1. Demo for CADC
2. CFHT Vizier
3. Conclusions

Aladin's TAP clients

4. Generic tap client
5. Glu tap client
6. TAP Asynchronous queries
7. Loading TAP from directory tree
8. Conclusions

Aladin's TAP clients

The screenshot displays the Aladin web interface. At the top, there is a menu bar with 'File', 'Edit', 'Image', 'Catalog', 'Overlay', 'Coverage', 'Tool', 'View', 'Interop', and 'Help'. Below the menu, the 'Data access' section shows a 'Location' field and a list of data sources including DSS, SDSS, 2MASS, WISE, GALEX, PLANCK, AKARI, XMM, Fermi, Gaia, Simbad, and NED. The main view shows a color image of a galaxy with a white crosshair. A 'Server selector' window is open, allowing users to construct queries. The window includes a 'Table' dropdown set to 'flux', 'Set ra, dec', 'Join', and 'Upload' buttons. The 'Select' section is set to 'All' with 'Constraints: Add new' and 'Max rows: 100'. A list of fields includes 'oidref', 'filter', 'flux', and 'flux_prec'. Below this, there are buttons for 'Refresh query', 'Check..', 'SYNC', and 'Async jobs>>'. A SQL query is shown: 'SELECT TOP 100 * FROM flux'. At the bottom of the window are 'Reset', 'Clear', 'SUBMIT', 'Close', and a help icon. On the right side, there is a toolbar with icons for 'select', 'pan', 'dist', 'phot', 'draw', 'tag', 'moc', 'epoch', 'size', 'dens.', 'opac.', 'zoom', 'cross', 'xy', 'rgb', 'assoc', 'crop', 'cont', 'pixel', 'prop', and 'del'. A legend explains the 'select' tool: 'Imagine your eye looking through a stack of planes. Each plane contains its own data set: Image, catalog, graphical overlays... You see the combination of them. Use File->Open for discovering all other data.' At the bottom right, there is a coordinate grid showing RA and DEC values: 16.65° x 13.28° and 19:29:53.70 +47:11:42.9. The Aladin logo is in the top right corner.

Aladin's TAP clients

File Edit Image Catalog Overlay Coverage Tool View Interop Help

Data access Location Frame **ICRS** Projection **Sinus**

DSS SDSS 2MASS WISE GALEX PLANCK AKARI XMM Fermi Gaia Simbad NED

CDS/P/DSS2/color

16.65' x 10.79'

server selector

Others File Watch FoV... Tools...

SIMBAD_TAP ?

Construct your query, verify and execute.

Table: basic Set ra, dec Join Upload

Select: All Constraints: Add new Max rows: 100

oid
 main_id
 nbref
 otype_txt
 otype

Target: 13 29 52.70+47 11 39.7 Grab

Radius: 5.823' CIRCLE Add

Ra= 202.46958333333333 Dec= 47.19436111111111 Radi

Refresh query Check.. SYNC Async jobs>>

```
SELECT TOP 100 * FROM basic WHERE CONTAINS(POINT('ICRS', ra, dec),
CIRCLE('ICRS', 202.46958333333333, 47.19436111111111,
0.097050000000000001)) = 1
```

Reset Clear **SUBMIT** Close ?

Catalog servers

- All vizierR
- SIMBAD
- NED
- TAP
- SkyBot
- Gaia
- VO
- Others..

Stack controls:

- select
- pan
- dist
- phot
- draw
- tag
- moc
- spec
- size
- dens.
- filter
- opac.
- zoom
- cross
- x-y
- rgb
- assoc
- crop
- cont
- pixel
- prop
- del

SIMBAD_TAP

CDS/P/DSS2/color

j2000
 size
 dens.
 filter
 opac.
 zoom

The view is drawn according to the projection of a reference plane.

Frame: ICRS

16.65' x 10.79'

Search

coo bibcode	coo err angle	coo err maj	coo err maj pr...	coo err min	coo err min pr...	cd	coord	cd	dec	dec prec	qald
2008AJ....135.1...	32767		65535		65535	D	POSITION 202.48101		47.268616	8	
2008AJ....135.1...	32767		65535		65535	D	POSITION 202.50101		47.27734	8	
2008AJ....135.1...	32767		65535		65535	D	POSITION 202.50101		47.276955	8	
2003yCat.2246...	90	60.0	0	60.0	0	B	POSITION 202.49101		47.266167	6	
2008AJ....135.1...	32767		65535		65535	D	POSITION 202.49101		47.256634	8	
2008AJ....135.1...	32767		65535		65535	D	POSITION 202.43101		47.23032	8	
2008AJ....135.1...	32767		65535		65535	D	POSITION 202.45101		47.231064	8	
2008AJ....135.1...	32767		65535		65535	D	POSITION 202.46101		47.234024	8	
2008AJ....135.1...	32767		65535		65535	D	POSITION 202.44101		47.230105	8	

select

from -- All collectio... +

filter exp inside scan

100 sel / 100 src 38fps / 320Mb

(c) 2017 Université de Strasbourg/CNRS - by CDS - Distributed under GNU GPL v3

Contents

SIASV2/SODA/Datalink handling in Aladin

1. Demo for CADC
2. CFHT Vizier
3. Conclusions

Aladin's TAP clients

4. Generic tap client
5. Glu tap client
6. TAP Asynchronous queries
7. Loading TAP from directory tree
8. Conclusions

Aladin's TAP clients

A little about GLU...

The screenshot shows the 'Server selector' window in Aladin. The 'Image servers' sidebar on the left lists various servers, with 'Sloan' selected. The main panel displays the 'SLOAN SDSS DR12 catalog' with a search form containing the following fields:

- Target (ICRS, name): SAO70467
- Radius: 3°

Buttons for 'Reset', 'Clear', 'SUBMIT', and 'Close' are visible at the bottom of the search form. An 'INFO on this serv...' button is also present.

The right-hand panel provides detailed information about the selected catalog:

SLOAN SDSS DR12

Description : SLOAN SDSS DR12 catalog
Type : Catalog
More info : <http://skyserver.sdss.org/dr12/en/tools/search/radial.aspx>
Status :
Identifier : SDSS-DR12.cat

GLU record:
%A SDSS-DR12.cat
%D SLOAN SDSS DR12 catalog
%O CDS*SLOAN
%Z ALADIN
%N 1473775682 2016/09/13 16:08:02
%U http://skyserver.sdss.org/dr12/en/tools/search/x_results.aspx?searchtool=Radial&cool
%P.D 1:Right Ascension
%P.D 2:Declination
%P.D 3:Radius (arcmin)
%P.K 1:Target(RAd)
%P.K 2:Target(DEd)
%P.K 3:Field(RADIUS)
%R Mime(text/xml)

Buttons for 'More info...' and 'Close' are located at the bottom of the information panel.

Aladin's TAP clients

- Glu

%Param.Description 5:Plx [mas](ex: >50)

%Param.DataType 5=char(OP,"I/337/gaia","I/337/tgasptyc")

%ADQL.Where 5=parallax \$5

%ADQL.Where

%ADQL.Select

%ADQL.From

Etc..

Aladin's TAP clients

ALADIN

Data access Location Frame ICRS Projection Sinus

★DSS ★SDSS ★2MASS ★WISE ★GALEX ★PLANCK ★AKARI ★XMM ★Fermi ★Gaia ★Simbad ★NED +

CDS/P/DSS2/color

Server selector

Others File Watch FOV... Tools...

Image servers

- Aladin images
- SkyView
- UKIDSS
- Stoan
- DSS...
- VLA...
- Archives...
- Photo...
- Others...

Catalog servers

- All
- VizieR
- SIMBAD
- NED
- TAP
- SkyBot
- Gaia
- VO
- Others..

Gaia DR1 (Gaia Collaboration, 2116) Mode

Target (ICRS, name) Grab co...

Radius

Table

Plx [mas](ex: >50)

Gmag (ex: 10..11)

pm limit [mas/yr]

Max records

Output columns

Plx uncertainty limit

Check.. SYNC Async jobs>>

```

SELECT TOP 10 *
FROM gaiadr1.gai_source
WHERE 1=CONTAINS(POINT('ICRS', ra, dec), CIRCLE('ICRS', 202.47454166666666,
47.19291666666667, 0.05806666666666667))
    
```

Reset Clear **SUBMIT** Close ?

16.65' x 10.79'

Adjust the visible area (click & drag + mouse wheel)

Search

source id	ra	dec	i	b	ecl lon	ecl lat	parallax	pmra	pmdec
155199062430...	202.484144	47.248132	104.885587	68.508368	175.087673	50.984074			
155199045679...	202.507075	47.241816	104.839758	68.507808	175.113608	50.988034			
155199042243...	202.498545	47.231777	104.843044	68.519335	175.115447	50.976502			
155199042243...	202.506651	47.230933	104.828377	68.517864	175.123328	50.97903			
155199042243...	202.509741	47.234572	104.827192	68.513687	175.122661	50.983209			
155199042243...	202.489942	47.234041	104.860133	68.519642	175.105815	50.974931			
155199042243...	202.503346	47.225037	104.827418	68.524164	175.125899	50.972932			
155199042243...	202.503065	47.225467	104.828372	68.523848	175.125254	50.97317			
155199042243...	202.4895	47.234743	104.854994	68.519918	175.10939	50.976811			

select from -- All collectio... +

filter exp inside scan

epoch - dens. - filter - zoom -

13 30 15.43 +47 11 36.0
16.65' x 10.79'

Aladin's TAP clients

Data access Location: 13:30:04.74 +47:13:58.6 Frame: ICRS Projection: Sinus

➤ DSS ➤ SDSS ➤ 2MASS ➤ WISE ➤ GALEX ➤ PLANCK ➤ AKARI ➤ XMM ➤ Fermi ➤ Gaia ➤ Simbad ➤ NED

CDSP/DSS2/color

Server selector

Others File Watch FoV... Tools...

Gaia DR1 (Gaia Collaboration, 2016) Mode

Target (ICRS, name): 05 41 12.60 -02 15 16.8

Radius: 14'

Table: gaiadr1.gaia_source - Gaia Source data

Plx [mas](ex: >50):

Gmag (ex: 10..11):

pm limit [mas/yr]:

Max records: TOP 10 - A few

Output columns: *- Default columns

Plx uncertainty limit:

`SELECT TOP 10 *
FROM gaiadr1.gaia_source
WHERE 1=CONTAINS(POINT('ICRS', ra, dec), CIRCLE('ICRS', 85.3025,
-2.2546666666666666, 0.23333333333333334))`

?

Server status report TAP

Description : Gaia DR1 (Gaia Collaboration, 2016)
Type : Catalog
Status :
Identifier : GaiaGluTAPARI

GLU record:
%ActionName GaiaGluTAPARI
%Description Gaia DR1 (Gaia Collaboration, 2016)
%Owner CDS:aladin
%DistribDomain ALADIN
%Aladin.Protocol TAPv1
%VersionNumber 1475571165 2016/10/04 10:52:35
%Url http://gaia.ari.uni-heidelberg.de/tap
%Param.Description \$1=Target
%Param.DataType \$1=Target(RAD,gaiadr1.gaia_source,gaiadr1.tgas_source)
%Param.Description \$2=Declination
%Param.DataType \$2=Target(DED,gaiadr1.gaia_source,gaiadr1.tgas_source)
%Param.Description \$3=Radius
%Param.DataType \$3=Field(RADIUSd,gaiadr1.gaia_source,gaiadr1.tgas_source)
%ADQL.Where \$1=1=CONTAINS(POINT('ICRS', ra, dec), CIRCLE('ICRS', \$1, \$2, \$3))
%Param.Value \$3=0.17
%Param.Description \$4=Table
%Param.DataType \$4=Tables(gaiadr1.gaia_source,gaiadr1.tgas_source)
%Param.Value \$4=gaiadr1.gaia_source - Gaia Source data
%Param.Value \$4=gaiadr1.tgas_source - TGAS supplemented with BT and VT magnitudes
%ADQL.TAPTables gaiadr1.gaia_source gaiadr1.tgas_source
%ADQL.From \$4=\$4
%Param.Description \$5=Plx [mas](ex: >50)
%Param.DataType \$5=char(OP,gaiadr1.gaia_source,gaiadr1.tgas_source)
%ADQL.Where \$5=parallax \$5
%Param.Description \$6=Gmag (ex: 10..11)
%Param.DataType \$6=char(OP,gaiadr1.gaia_source,gaiadr1.tgas_source)
%ADQL.Where \$6=phot_g_mean_mag \$6
%Param.Description \$7=pm limit [mas/yr]
%Param.DataType \$7=char(gaiadr1.gaia_source,gaiadr1.tgas_source)
%ADQL.Where \$7= SQRT(POWER(pmRA,2)+POWER(pmdec,2))>\$7
%Param.Description \$8=Max records
%Param.Value \$8=TOP 10 - A few

source id	ra	dec	parallax	...
155199062430...	202.484144	47.248132	104.885587	68
155199045679...	202.507075	47.241816	104.839758	68
155199042243...	202.498545	47.231777	104.843044	68
155199042243...	202.506651	47.230933	104.828377	68
155199042243...	202.509741	47.234572	104.827192	68
155199042243...	202.489942	47.234041	104.860133	68
155199042243...	202.503346	47.225037	104.827418	68
155199042243...	202.503065	47.225467	104.828372	68
155199042243...	202.492555	47.234742	104.854994	68

select:
from: -- All collectio... +

filter exp inside scan

13:30:15.43 +47:11:56.0
16.65' x 10.79'

Aladin's TAP clients

Or choose an already submitted job:

Job URL

Delete on closing Aladin

Job details:

Job created to execute query: **null**
Job ID: 1487864353616
Run ID: null
URL: **http://simbad.u-strasbg.fr:80/simbad/sim-tap/async/1487864353616**
Owner ID: anonymous
Phase: COMPLETED
Quote: null
Creation time: null
Start time: 2017-02-23T15:39:13Z
End time: 2017-02-23T15:39:13Z
Execution duration: 360000
Destruction time: 2017-04-14T21:44:17Z
Parameters: {tapexecreport={"formattingduration":2,"uploadduration":-1,"executionduration":2,"success":true,"
Results: {result=http://simbad.u-strasbg.fr:80/simbad/sim-tap/async/1487864353616/results/result}

Load on Aladin:

Contents

SIASV2/SODA/Datalink handling in Aladin

1. Demo for CADC
2. CFHT Vizier
3. Conclusions

Aladin's TAP clients

4. Generic tap client
5. Glu tap client
6. TAP Asynchronous queries
7. Loading TAP from directory tree
8. Conclusions

Data access

Location

Frame

Projection



★DSS ★SDSS ★2MASS ★WISE ★GALEX ★PLANCK ★AKARI ★XMM ★Fermi ★Gaia ★Simbad ★NED +

- ▶ Collections → 12154
- ▶ Image → 300
- ▶ Data base → 2
- ▶ Catalog → 17110
- ▶ Cube → 6
- ▶ Outreach → 1
- ▶ Unsupervised → 2035

Aladin's TAP clients

- Loading TAP from directory tree...



select Imagine your eye looking through a stack of planes.

pan Each plane contains its own data set: image, catalog, graphical overlays...

zoom You see the combination of them.

dist Use File->Open for discovering all other data, or clic & drag your own files.

phot

draw

tag

spect

filter

cross

x-y

rgb

assoc

crop

cont

pixel

prop **DSS colored**

del

epoch -

size -

dens. -

opac. -

zoom -

Frame: ICRS

28

20 45 38 64 +30 45 25 4

4.153° x 3.429°

select

from

Data access

Location 20:52:28.84 +30:31:50.0

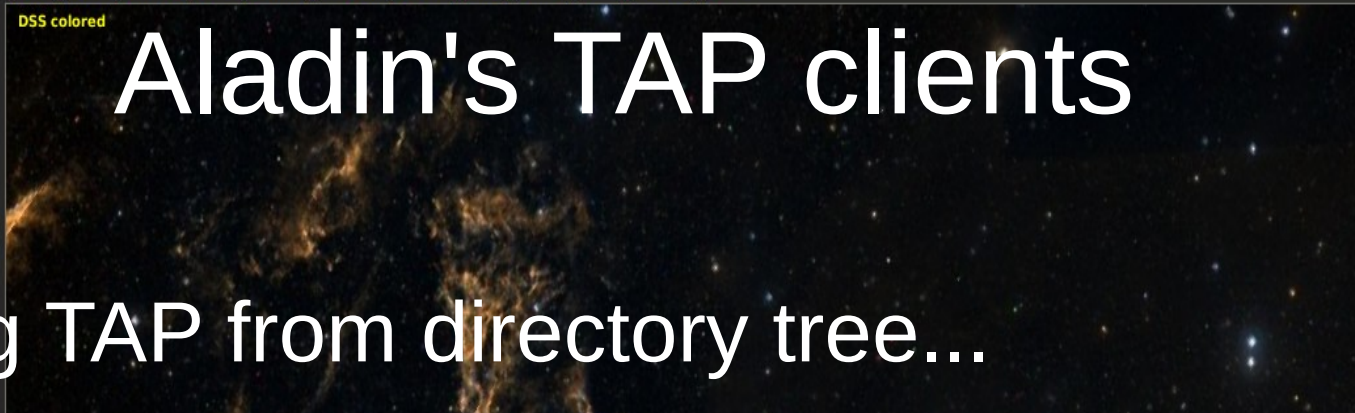
Frame ICRS

Projection Sinus



DSS SDSS 2MASS WISE GALEX PLANCK AKARI XMM Fermi Gaia Simbad NED +

- Collections → 19454
 - Image → 300
 - Data base → 2
 - Catalog → 17110
 - Cube → 6
 - Outreach → 1**
 - Unsupervised → 2035



- select
 - pan
 - zoom
 - dist
 - phot
 - draw
 - tag
- Imagine your eye looking through a stack of planes.
Each plane contains its own data set: image, catalog, graphical overlays...
You see the combination of them.
Use File->Open for discovering all other data, or clic & drag your own files.

- Loading TAP from directory tree...

Directory tree

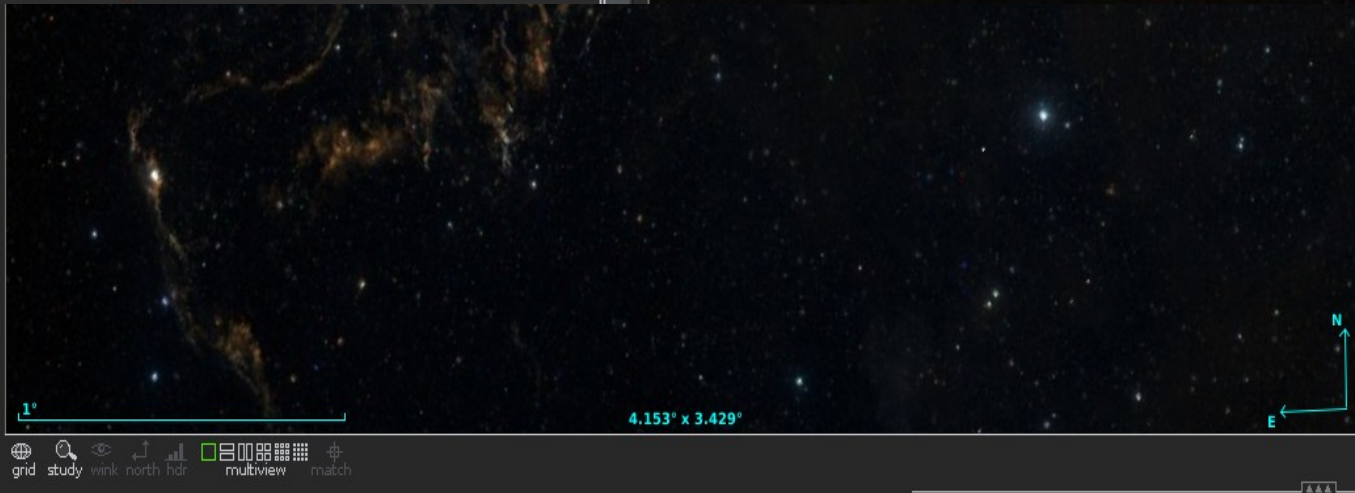
Location 10:18:26.54 -27:01:20.3

- Data collections → 159 / 19449
 - Data base → 1 / 2
 - SIMBAD Astronomical Database**
 - Catalog → 132 / 17091
 - CDS VizieR → 132 / 17091
 - II-Photometric Data
 - Photoelectric observations
 - III-Spectroscopic Data
 - Spectrophotometry
 - Radial Velocities of Cepheids
 - Catalogue of neutral He lines of B-stars
 - Catalogue of H line profiles of 235 B-F stars

★New HiPS **SIMBAD Astronomical Database (more...)**
 Provenance: CNRS/Unistra
 Sky coverage: 19.06% Pub.year: 2000

HiPS Cone search MOC search TAP + MOC

CDS/Simbad (more...) (B) Load Close



DSS colored

prop

del

epoch -

size -

dens. -

opac. -

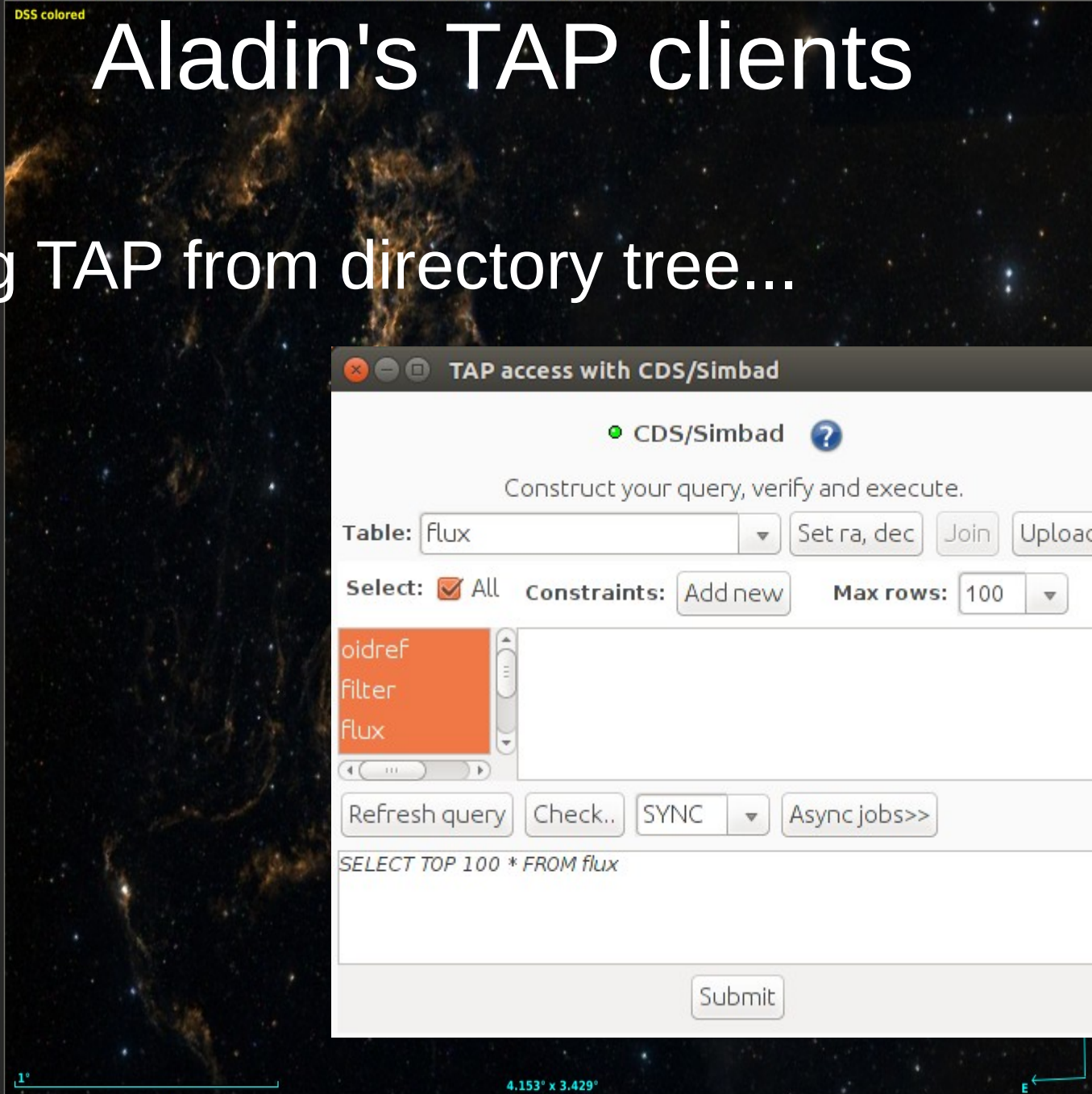
zoom -

Frame: ICRS

20 45 38 64 +30 45 25 4

4.153° x 3.429°

- Collections → 19454
 - Image → 300
 - Data base → 2
 - Catalog → 17110
 - Cube → 6
 - Outreach → 1**
 - Unsupervised → 2035



- Loading TAP from directory tree...

- select
- pan
- zoom
- dist
- phot
- draw
- tag

Imagine your eye looking through a stack of planes.
 Each plane contains its own data set: image, catalog, graphical overlays...
 You see the combination of them.
 Use File->Open for discovering all other data, or clic & drag your own files.

TAP access with CDS/Simbad

CDS/Simbad ?

Construct your query, verify and execute.

Table: flux Set ra, dec Join Upload

Select: All Constraints: Add new Max rows: 100

oidref
filter
flux

Refresh query Check.. SYNC Async jobs>>

SELECT TOP 100 * FROM flux

Submit

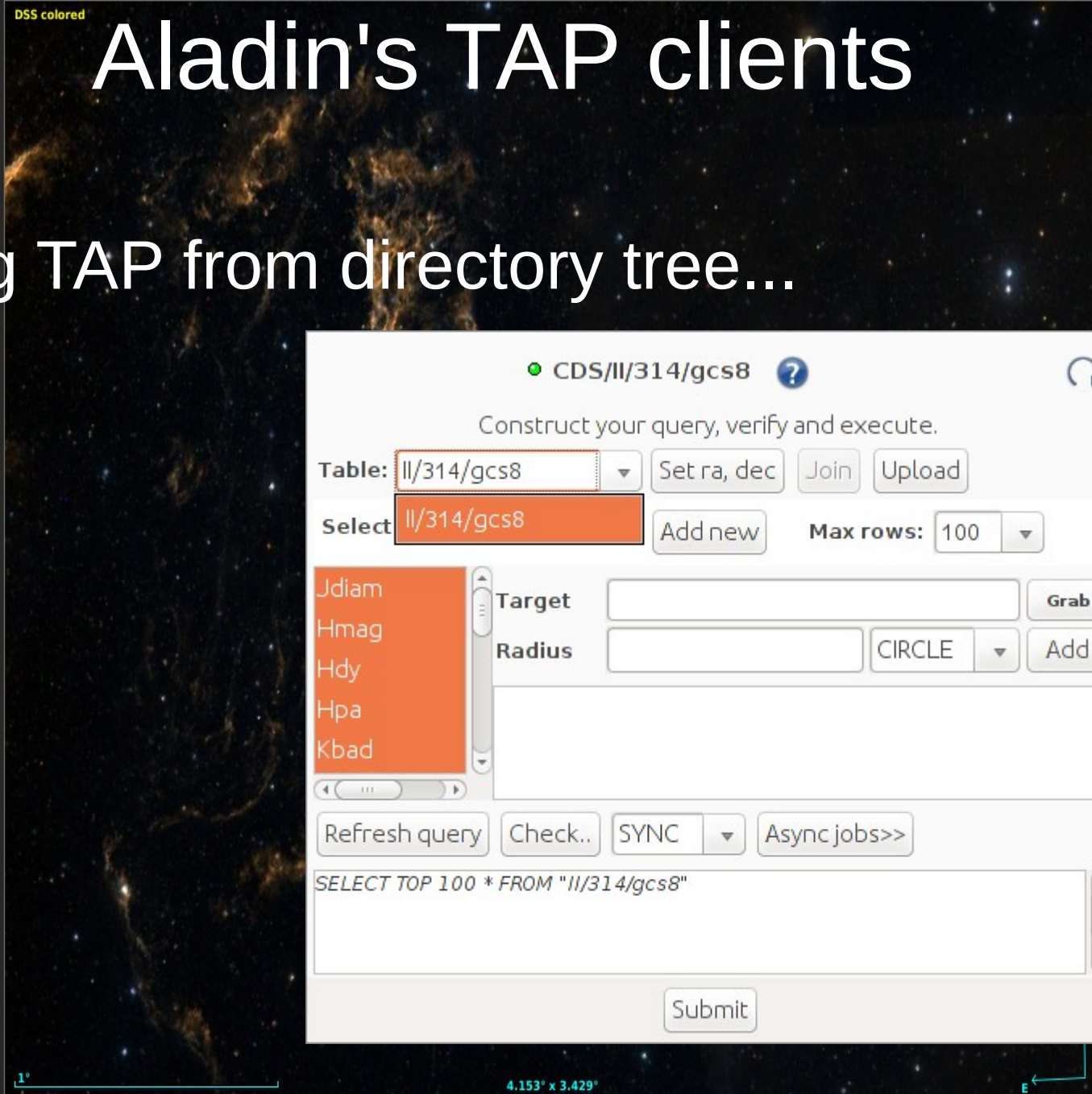
DSS colored

epoch -
size -
dens. -
opac. -
zoom -

Frame: ICRS

20 45 30 64 +30 45 25 4
4.153° x 3.429°

- Collections → 19454
 - Image → 300
 - Data base → 2
 - Catalog → 17110
 - Cube → 6
 - Outreach → 1**
 - Unsupervised → 2035



- Loading TAP from directory tree...

- select
 - pan
 - zoom
 - dist
 - phot
 - draw
 - tag
- Imagine your eye looking through a stack of planes.
Each plane contains its own data set: image, catalog, graphical overlays...
You see the combination of them.
Use File->Open for discovering all other data, or clic & drag your own files.

CDS/II/314/gcs8 ?

Construct your query, verify and execute.

Table: II/314/gcs8 [Set ra, dec] [Join] [Upload]

Select: II/314/gcs8 [Add new] Max rows: 100

Jdiam
Hmag
Hdy
Hpa
Kbad

Target [] [Grab]
Radius [] [CIRCLE] [Add]

[Refresh query] [Check..] [SYNC] [Async jobs>>]

SELECT TOP 100 * FROM "II/314/gcs8"

[Submit]

DSS colored

epoch - []
size - []
dens. - []
opac. - []
zoom - []

Frame: ICRS

31

20 45 38.84 +30 31 50.0
4.153° x 3.429°

Contents

SIASV2/SODA/Datalink handling in Aladin

1. Demo for CADC
2. CFHT Vizier
3. Conclusions

Aladin's TAP clients

4. Generic tap client
5. Glu tap client
6. TAP Asynchronous queries
7. Loading TAP from directory tree
8. Conclusions

Conclusions

- Improve usability
 - Using of interface and/or writing GLU records
 - Swapping between GLU and generic TAP forms
 - Different modes coming up
- Features to be added
 - Join, Glu upload
 - TAP Async query job saving
- MultiTAP

Aladin's TAP clients

The screenshot shows the GaiaGluTAPARI web interface. At the top, there are navigation tabs: "Others", "File", "Watch", "FOV...", and "Tools...". The main window title is "GaiaGluTAPARI" with a help icon. Below the title, it says "Construct your query, verify and execute." and "Mode" is set to "GLU".

The interface includes a search bar with "gaiadr1.tgas_source" and a "Set ra,..." button. Below this, there are controls for "Select: All", "Constraints: Add new", and "Max rows: 100".

A list of table names is shown on the left, with "hip" selected. To the right of the list are input fields for "Target" and "Radius", and buttons for "Grab" and "Add". The "Radius" dropdown is set to "CIRCLE".

At the bottom of the main window, there are buttons for "Refresh query", "Check..", "SYNC", and "Async jobs>>". Below these is a text area containing the SQL query: `SELECT TOP 100 * FROM gaiadr1.tgas_source`.

On the right side, there is a "Catalog servers" panel with icons for "All VizieR", "SIMBAD", "NED", "TAP", "Ace SkyBot", "Gaia", "VO", and "Others..".

At the very bottom of the page, there are buttons for "Reset", "Clear", "SUBMIT", "Close", and a help icon.

Conclusions

- Improve usability
 - Using of interface and/or writing GLU records
 - Swapping between GLU and generic TAP forms
 - Different modes coming up
- Features to be added
 - Join, Glu upload
 - TAP Async query job saving
- MultiTAP

Data access

Location 20:52:28.84 +30:31:50.0

Frame ICRS

Projection Sinus



★DSS ★SDSS ★2MASS ★WISE ★GALEX ★PLANCK ★AKARI ★XMM ★Fermi ★Gaia ★Simbad ★NED +



Imagine your eye looking through a stack of planes. Each plane contains its own data set: image, catalog, graphical overlays... You see the combination of

Aladin v9.6 *** PROTOTYPE VERSION (based on v9.620) ***
File Edit Image Catalog Overlay Coverage Tool View Interop Help

open for all other data, drag your own files.

Data access → 51 / 19589

- Collections → 51 / 19589
 - Catalog → 28 / 17184
 - II-Photometric Data → 8 / 308
 - UKIDSS-DR9 LAS, GCS and DXS Surveys (Lawrence+ 2012) → 3
 - UKIDSS-DR9 Deep Extragalactic Survey (on a total of 3,003,190 sources)
 - UKIDSS-DR9 Galactic Clusters Survey (on a total of 54,467,123 sources)
 - UKIDSS-DR9 Large Area Survey (on a total of 1,000,000 sources)
 - UKIDSS-DR8 LAS, GCS and DXS Surveys (Lawrence+ 2012) → 3
 - UKIDSS-DR8 Deep Extragalactic Survey (on a total of 3,003,190 sources)
 - UKIDSS-DR8 Galactic Clusters Survey (on a total of 54,467,123 sources)
 - UKIDSS-DR8 Large Area Survey (total of 1,000,000 sources)
 - UKIDSS-DR6 Galactic Plane Survey (Lucas+ 2011)
 - UKIDSS-DR7 Large Area Survey (Lawrence+ 2011)
 - Journal table → 20 / 15697
 - A+A → 1 / 4144
 - Stellar clusters from UKIDSS Galactic Plane Survey (Solin+, 2012) (clusters)

Location 03:06:34.20 +17:39:37.0

★DSS ★SDSS ★2MASS ★WISE ★GALEX ★PLANCK ★AKARI ★XMM ★Fermi ★Gaia ★Simbad ★NED +

CDS/P/DSS2/color

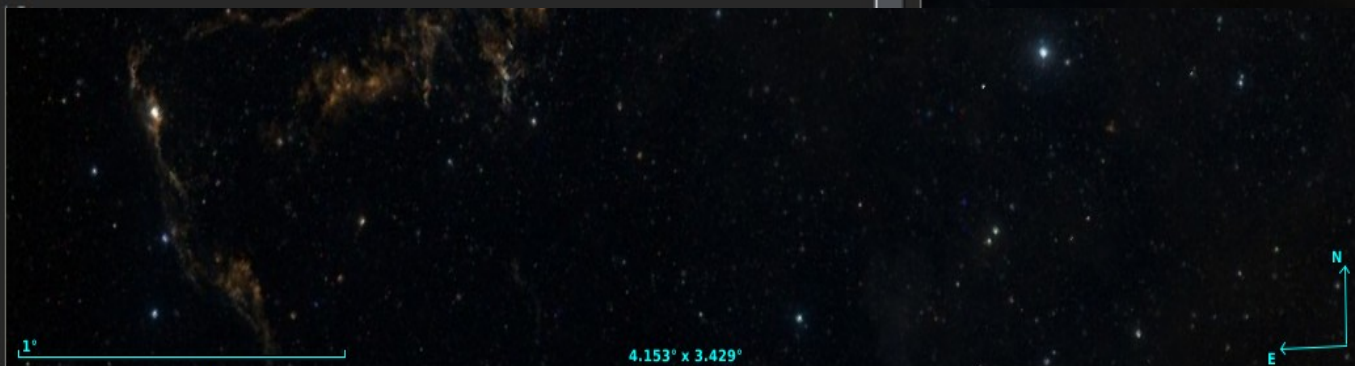
3 data sets selected

Multiple cone search + multi MOCs MOC union MOC intersection

CDS//I/314/dxs8, CDS//I/314/gcs8, CDS//I/314/las8

Load Close

colored



size del dens. opac. zoom

Frame: ICRS

36

20 45 30 64 +30 45 25 4
4.153° x 3.429°

select from -- All collections --

filter exp inside scan grid study wink north hdr multiview match

Conclusions

- Improve usability
 - Using of interface and/or writing GLU records
 - Swapping between GLU and generic TAP forms
 - Different modes coming up
- Features to be added
 - Join, Glu upload
 - UWS job saving
- MultiTAP

Thank you!

<http://aladin.u-strasbg.fr/java/AladinProto.jar>

