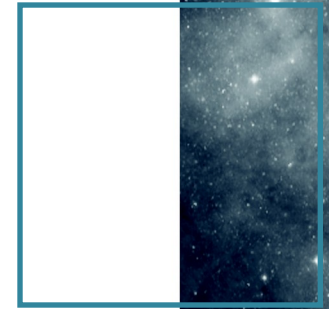


ObsCore Radio extension CDS Proto demo



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CDS prototype demo (Dachs implementation) : 16 datasets from the SRCnetwork ObsCore service

The screenshot displays the Aladin v12.0 software interface, which is a BETA VERSION based on v12.033. The main window shows a star field with a central galaxy. The interface includes a menu bar (File, Edit, Image, Catalog, Overlay, Coverage, Tool, View, Interop, Help) and a toolbar at the bottom with icons for various functions like 'select', 'from', 'exp', 'sort', 'view', 'scan', 'filter', 'grid', 'study', 'wink', 'redo', 'north', 'hdr', 'multiview', and 'match'. A search bar is located at the bottom right.

In the top left, the 'Available data' section shows 35210 items, with a list of collections including Image (621), Data base (4), Catalog (33146), Cube (24), Ancillary (82), Outreach (52), Others (1261), and Deprecated (20). The 'Command' field contains '04:48:26.62 +30:29:11.4'. Below this, the 'DSS2 color' panel is visible.

The 'Aladin Java measurements frame' window is open, displaying a table of observations:

	obs collection	obs id
3	MKT-MGCLS	Abell 194 I
3	MKT-MGCLS	Abell 194 Q
3	MKT-MGCM	Galactic Centre 1284MHz-StokesI
3	MKT-MGCM	Galactic Centre alpha
3	MKT-FORNAX-S...	MKT-FORNAX-SURV t06 1km NGC1436 image mos
3	ASK-RACS-DR1	RACS-DR1 0126+00A
3	ASK-WALLABY	Eridanus cutout NGC1436
3	LOF-LoTSS-DR2	P39Hetdex19
3	Ape-DR1	200426041 AP B021
3	Ape-DR1	200426041 AP B021
3	VLA-VLASS	T10t02.i005000-023000.06.2048
3	VLA-VLASS	T10t02.i005000-023000.06.2048
6	SDC01	SDC01 SKAMid B2 1000h
6	SDC02	SDC02 SKAMid sky ldev v2
6	SDC03	SDC03 ZW3.msn

The 'Server selector' window is open, showing a query builder interface. The table is set to 'rucio.obscore'. The 'Select' field contains 'All', 'dataprod..._ty...', 'dataprod..._su...', and 'calib_level'. The 'Constraints' field contains 'Target: 6024000 -02 15 16.848000' and 'Radius: 180°'. The 'Max rows' field is empty. The 'Refresh query' button is highlighted. The query text at the bottom reads 'SELECT TOP 9999 * FROM rucio.obscore'. The 'SUBMIT' button is highlighted.

The bottom right corner shows a 'select' dropdown menu with 'all collections' selected, and a 'from' dropdown menu with 'all collections' selected. A search bar is also present at the bottom right.

CDS prototype demo (Dachs implementation) :

frequency between 1 and 2 Ghz (upper left - 3 results)

freq. between 1 and 2 Ghz and spectral resolution better than 100 Mhz (lower right - 2 results)

The screenshot shows the Aladin v12.0 interface. A 'Server selector' window is open, displaying a query for 'vo-proto-debian.cds.unistra.fr'. The query is: `SELECT obs_publisher_did, target_name, s_ra, s_dec, s_fov, s_resolution, em_min, em_max, s_fov_min, s_fov_max, s_resolution_min, s_resolution_max, f_resolution, f_min, f_max, instrument_ant_max_dist, instrument_ant_diameter FROM rucio.obscore where f_min > 1e9 and f_max < 2e9`. Below the query, a table of results is visible:

s_resolution	em_min	em_max	s_fov_min...	s_fov_max...	s_resolution_min	s_resolution_max	f_resolution	f_min	f_max
2,4	0.212056988	0.212333965	0.119900003075	0.120099999010	2.398000001907	2.4019999990408	6484	1412888608	1414713984
1,1	0.22438	0.2321	1.080000042915	1.120000004768	17.700000076293	18.299999923706	3567	192549304	1337017800
0,6	0.106	0.252	0.850000023841	1.149999976158	0.509999990483	0.88999997615	411370272	1190467290	1612903168

SELECT obs_publisher_did,
target_name, s_ra, s_dec, s_fov,
s_resolution, em_min, em_max,
s_fov_min, s_fov_max, s_resolution_min,
s_resolution_max, f_resolution, f_min,
f_max, instrument_ant_max_dist,
instrument_ant_diameter
FROM rucio.obscore
where f_min > 1e9 and f_max < 2e9

SELECT obs_publisher_did, target_name, s_ra,
s_dec, s_fov, s_resolution, em_min, em_max,
s_fov_min, s_fov_max, s_resolution_min,
s_resolution_max, f_resolution, f_min, f_max,
instrument_ant_max_dist, instrument_ant_diameter
FROM rucio.obscore
where f_min > 1e9 and f_max < 2e9
and f_resolution < 1e8

The screenshot shows the Aladin v12.0 interface with a 'Server selector' window. The query is: `SELECT obs_publisher_did, target_name, s_ra, s_dec, s_fov, s_resolution, em_min, em_max, s_fov_min, s_fov_max, s_resolution_min, s_resolution_max, f_resolution, f_min, f_max, instrument_ant_max_dist, instrument_ant_diameter FROM rucio.obscore where f_min > 1e9 and f_max < 2e9 and f_resolution < 1e8`. Below the query, a table of results is visible:

obs_publisher_did	target_name	s_ra	s_dec	s_fov	s_resolution	em_min	em_max	s_fov_min...	s_fov_max...	s_resolution_min	s_resolution_max	f_resolution	f_min	f_max
no/rest.skae/~? NGC1436	NGC1436	59.9045	-39.853028	0,12	2,4	0.212056988	0.212333965	0.119900003075	0.120099999010	2.398000001907	2.4019999990408	6484	1412888608	1414713984
no/rest.skae/~? 11123+5550	168.447269	56.014556	56.014556	1,1	18	0.22438	0.2321	1.080000042915	1.120000004768	17.700000076293	18.299999923706	3567	192549304	1337017800

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obs_publisher_did	target_name	s_ra	s_dec	s_fov	s_resolution	em_min	em_max	s_fov_min...	s_fov_max...	s_resolution_min	s_resolution_max	f_resolution	f_min	f_max
no/rest.skae/~? NGC1436	NGC1436	59.9045	-39.853028	0,12	2,4	0.212056988	0.212333965	0.119900003075	0.120099999010	2.398000001907	2.4019999990408	6484	1412888608	1414713984
no/rest.skae/~? 11123+5550	168.447269	56.014556	56.014556	1,1	18	0.22438	0.2321	1.080000042915	1.120000004768	17.700000076293	18.299999923706	3567	192549304	1337017800

The screenshot shows the Aladin v12.0 interface with a 'Server selector' window. The query is: `SELECT obs_publisher_did, target_name, s_ra, s_dec, s_fov, s_resolution, em_min, em_max, s_fov_min, s_fov_max, s_resolution_min, s_resolution_max, f_resolution, f_min, f_max, instrument_ant_max_dist, instrument_ant_diameter FROM rucio.obscore where f_min > 1e9 and f_max < 2e9 and f_resolution < 1e8`. Below the query, a table of results is visible:

obs_publisher_did	target_name	s_ra	s_dec	s_fov	s_resolution	em_min	em_max	s_fov_min...	s_fov_max...	s_resolution_min	s_resolution_max	f_resolution	f_min	f_max
no/rest.skae/~? NGC1436	NGC1436	59.9045	-39.853028	0,12	2,4	0.212056988	0.212333965	0.119900003075	0.120099999010	2.398000001907	2.4019999990408	6484	1412888608	1414713984
no/rest.skae/~? 11123+5550	168.447269	56.014556	56.014556	1,1	18	0.22438	0.2321	1.080000042915	1.120000004768	17.700000076293	18.299999923706	3567	192549304	1337017800

CDS prototype demo (Dachs implementation) :

s_resolution better than 0.6 arcsec (upper left - no result)

s_resolution_min better than 0.6 arcsec (lower right - 1 result)

The screenshot shows the 'Server selector' window with a query: `s_resolution_min, s_resolution_max, f_resolution, f_min, f_max, instrument_ant_max_dist, instrument_ant_diameter FROM rucio.obscure WHERE s_resolution < 0.6`. The 'Table' dropdown is set to 'rucio.obscure'. The 'Select' field contains 'All'. The 'Constraints' field is empty. The 'Max rows' field is set to 'All'. The 'Refresh query' button is visible. The main window shows a dark sky view with a red crosshair. A blue arrow points from the text above to the 'Submit' button.

```
SELECT obs_publisher_did,
target_name, s_ra, s_dec, s_fov,
s_resolution, em_min, em_max,
s_fov_min, s_fov_max, s_resolution_min,
s_resolution_max, f_resolution, f_min,
f_max, instrument_ant_max_dist,
instrument_ant_diameter
FROM rucio.obscure
where s_resolution < 0.6
```

```
SELECT obs_publisher_did, target_name, s_ra,
s_dec, s_fov, s_resolution, em_min, em_max,
s_fov_min, s_fov_max, s_resolution_min,
s_resolution_max, f_resolution, f_min, f_max,
instrument_ant_max_dist, instrument_ant_diameter
FROM rucio.obscure
where s_resolution_min < 0.6
```

→ At least some part of the dataset has a resolution better than 0.6 arcsec

The screenshot shows the 'Server selector' window with a query: `s_resolution_min, s_resolution_max, f_resolution, f_min, f_max, instrument_ant_max_dist, instrument_ant_diameter FROM rucio.obscure WHERE s_resolution_min < 0.6`. The 'Table' dropdown is set to 'rucio.obscure'. The 'Select' field contains 'All'. The 'Constraints' field is empty. The 'Max rows' field is set to 'All'. The 'Refresh query' button is visible. The main window shows a dark sky view with a red crosshair. A blue arrow points from the text above to the 'Submit' button. Below the sky view, a table with one row is visible:

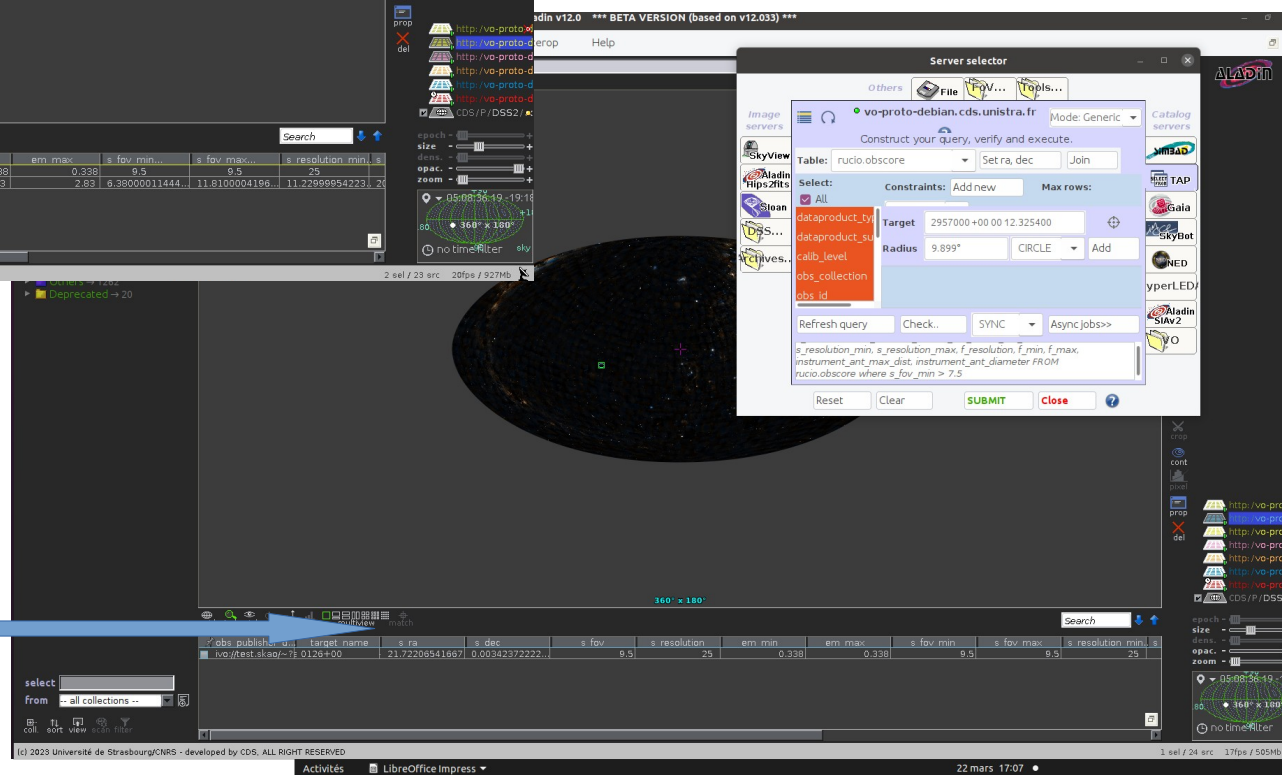
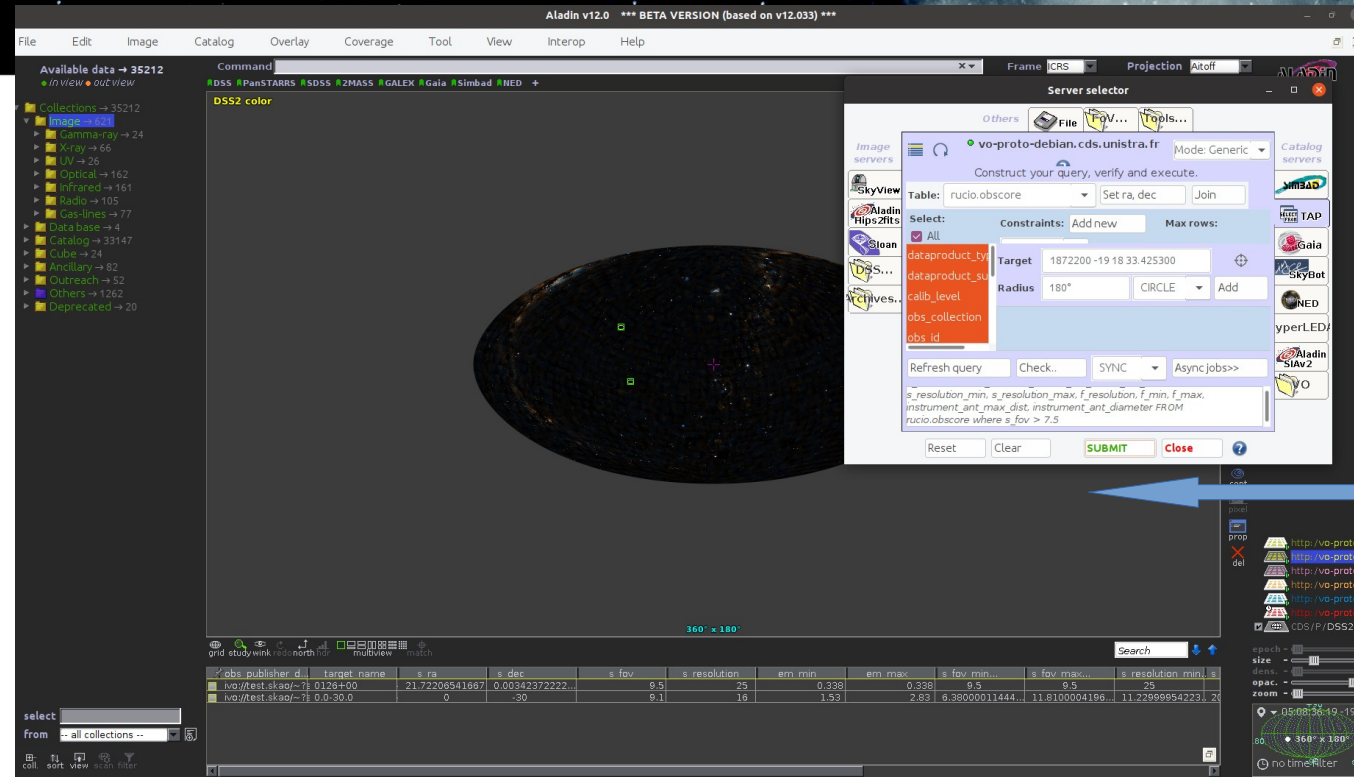
min	em_max	s_fov_min	s_fov_max	s_resolution_min	s_resolution_max	f_resolution	f_min	f_max	instrument_ant_max_dist	instrument_ant_diameter
0.188	0.252	0.552000923841	1.14999997915	0.3099999804632568	0.689999976158142	4.11370272	1169467200	1012903188	75266	12.53699994

CDS prototype demo (Dachs implementation) :

s_fov larger than 7.5 deg (upper left – two results)

s_fov_min larger than 7.5 deg (lower right – 1 result)

```
SELECT obs_publisher_did,
target_name, s_ra, s_dec, s_fov,
s_resolution, em_min, em_max,
s_fov_min, s_fov_max, s_resolution_min,
s_resolution_max, f_resolution, f_min,
f_max, instrument_ant_max_dist,
instrument_ant_diameter
FROM rucio.obscure
where s_fov > 7.5 deg
```



```
SELECT obs_publisher_did, target_name, s_ra,
s_dec, s_fov, s_resolution, em_min, em_max,
s_fov_min, s_fov_max, s_resolution_min,
s_resolution_max, f_resolution, f_min, f_max,
instrument_ant_max_dist, instrument_ant_diameter
FROM rucio.obscure
where s_fov_min > 7.5
```

→ all channels of the dataset have a field of view larger than 7.5