New VO access to 500+ LEDAS high energy catalogues in one go!

Jonathan Tedds

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EuroVO DCA science team
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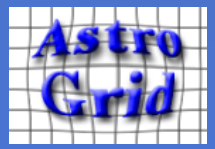
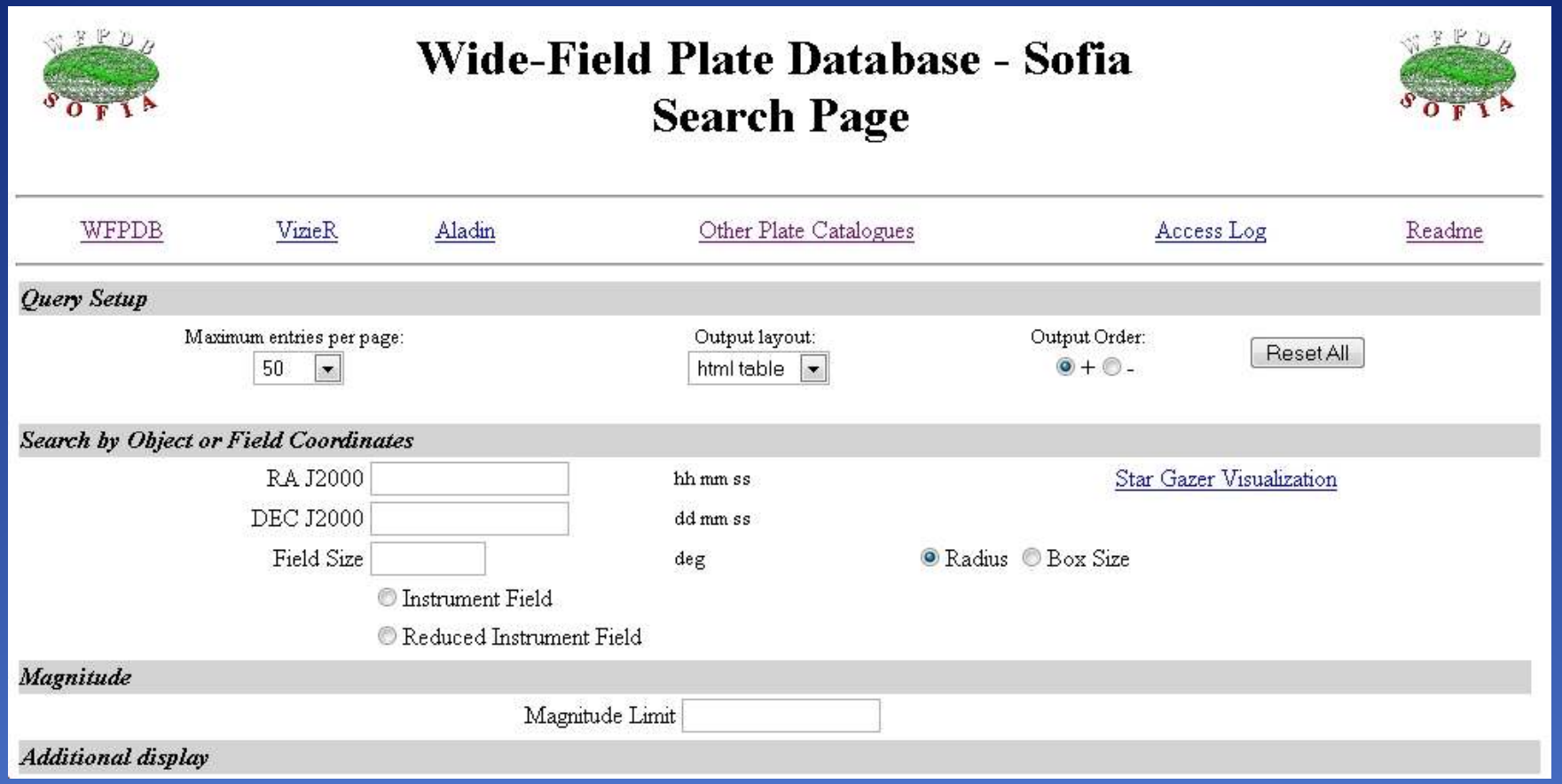


Data Archives



Wide-Field Plate Database - Sofia
Search Page

WFPDB | VizieR | Aladin | Other Plate Catalogues | Access Log | Readme

Query Setup

Maximum entries per page: 50 | Output layout: html table | Output Order: + / - | Reset All

Search by Object or Field Coordinates

RA J2000 (hh mm ss) — Star Gazer Visualization
DEC J2000 (dd mm ss)
Field Size (deg) — Radius / Box Size
Instrument Field
Reduced Instrument Field

Magnitude

Magnitude Limit

Additional display

ESO Archive Query Form

ESO Archive Overview | Help Page | FAQ | Archive Facility HOME | ESO HOME

If you would like to query the Archive for instrument specific parameters, please use the dedicated query forms.
To search for HARPS GTO programmes, please use the dedicated HARPS GTO query form.
To search for reduced data products, please have a look at the ESO Data Products page and the Spectral Advanced Data Products query form.

The checkboxes on the right of the parameters define whether or not they will be displayed on the query result page.

SEARCH | ShowAll | ShowNone | Reset | query Help | Status of Requests

Target, Program and Scheduling Information

Target Name [ ] Resolved by SIMBAD
RA DEC J2000
Search Box 00 10 00 Input RA(h) DEC(deg)
Output [ ] Sexagesimal (h, deg)
List of Targets Browse...

Night [ ] (DD MM YYYY)
OR give a query range using the following start/end dates:
Start 12 hrs [UT] End 12 hrs [UT]
Program ID [ ] Program Type [ ] Any
PI CoI [ ] SV [ ] Any
Title [ ]

Observing Information

Imaging	Spectroscopy	Interferometry	Other
ALL NONE	ALL NONE	ALL NONE	ALL NONE
VLT/FORS1	VLT/CRIRES	VLTI/VINCI	APEX/HET
VLT/FORS2	VLT/FORS1	VLTI/MIDI	APEX/BOL

Data Product Info
Type [ ] Any
User defined input:

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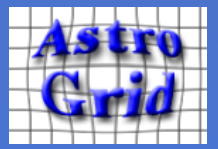

University of Leicester

EURO VO DATA CENTRE ALLIANCE

Jonathan Tedds
X-ray Universe 2008

Astro Grid

LEDAS

Leicester Database and Archive Service

Archives ... | Software ... | Services ...

- What's New
- LEDAS Overview
- Contact Details
- Subscribe to LEDAS Newsletter
- Acknowledgement Request

For comments or help, e-mail: ledas-help@star.le.ac.uk

Welcome to LEDAS (LEicester Database and Archive Service)

LEDAS provides an on-line astronomical database service and access to archive data from high energy astrophysics missions. In particular, **LEDAS** provides the primary means of access for the UK astronomical community to the ROSAT Public Data Archive, the *ASCA* Public Data Archive, the *Ginga* Products Archive and now to the Chandra Science Archive.

NEW USERS: For an overview of the services provided by **LEDAS**, user guides, contact details and further help, please see the INFO section of the **LEDAS** site. To go directly to any of our mission archives, software distribution sites or other services, click on the relevant link in the navigation bar.

LEDAS News: MORE

04/08: Presentation on LEDAS, AstroGrid and the Virtual Observatory, National Astronomy Meeting 2008 [more>]

04/08: PIMMS and WebPIMMS updated to v3.9f. Multiple updated effective area curves [more>]

04/08: Chandra data analysis software CIAO updated to version 4.02.

LEDAS Services: MORE

LEDAS hosts mirrors of the Chandra Data Archive and the XMM Serendipitous Source Catalogues 1XMM & 2XMM

- **X-RAY DATA ARCHIVES:** Online data archives for ROSAT, Ginga

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X-ray Universe 2008

AstroGrid

What are Virtual Observatories (VOs)?

"The VO vision can be summed up as the desire to make all archives speak the same language – all searchable and analyzable by the same tools, all data sources accessible through a common interface, all data held in distributed databases that appear as one."

September 2003

Andy Lawrence (PI AstroGrid)

University of Leicester

EURO VO DATA CENTRE ALLIANCE

AstroGrid

Creating a Virtual Observatory - An International Effort

The International Virtual Observatory Alliance

Agree international standards for any dataset or astronomical resource published to the VO

- *Allow simultaneous multi archive, multi parameter correlations*

As a result of the IVOA we have

- A common Resource Metadata
- A common data querying language
  - Astronomical Data Query Language (ADQL)
  - Based on Structured Query Language (SQL)
- Common table format
  - Virtual Observatory Table (.vot)
- …and much more in the pipeline

Advantages of VO data access

- Accessing multiwavelength data easier:
  - Do not need to access different interfaces, register once only

Advantages of VO data access

- Accessing multiwavelength data easier:
  - Do not need to access different interfaces, register once only
  - Data access from one single entry point
  - Able to build *workflows* i.e. pieces of code which run on the server and are reusable

http://www.astrogrid.org (April 2008 1st public release)

search

HOME | INSTALL | HELP | SUPPORT

Welcome to AstroGrid

AstroGrid is the doorway to the Virtual Observatory (VO). We provide a suite of desktop applications to enable astronomers to explore and bookmark resources from around the world, find data, store and share files in VOSpace, query databases, plot and manipulate tables, cross-match catalogues, and build and run scripts to automate sequences of tasks. Tools from other Euro-VO projects inter-operate with AstroGrid software, so you can also view and analyse images and spectra located in the VO.

These web pages hold our software for downloading, as well as links to other people's software. They also provide the help documentation, and other support material such as FAQs and the Helpdesk ticket system.

Our new software (V2008.1) is released on April 1st 2008. Previous releases will still available for some time : see previous releases.

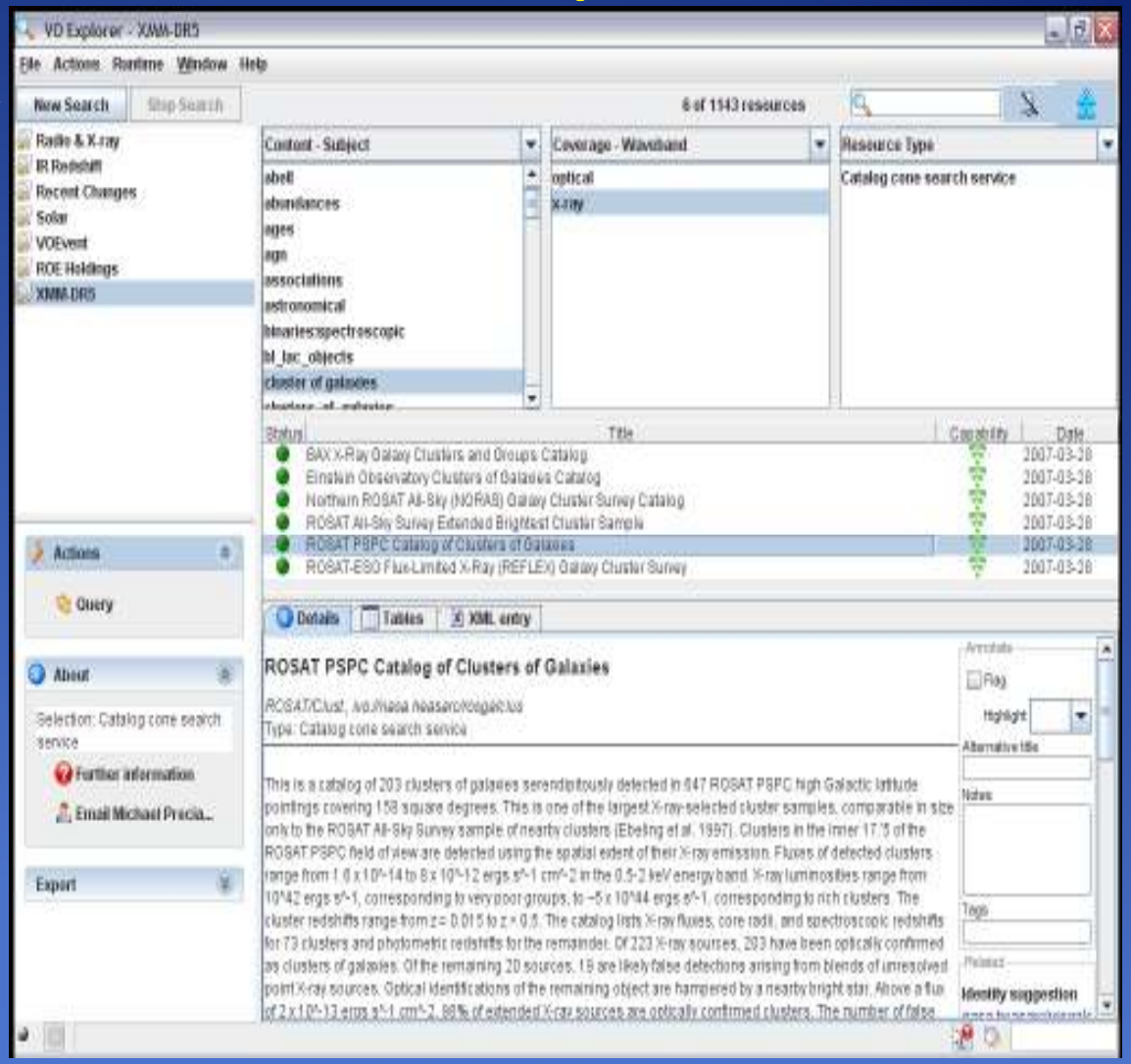
GETTING STARTED

Read a little about the Virtual Observatory
Read a little about the AstroGrid Desktop suite.
Go to the Install area and download the software.
Have a look at the documentation in the Help area.
Start trying it out !

Acknowledging AstroGrid. If you make use of the AstroGrid system or tools, we would be grateful if you could acknowledge this use in any resulting publications. You could use these words: *'This research has made use of data obtained using, or software provided by, the UK's AstroGrid Virtual Observatory Project, which is funded by the Science & Technology Facilities Council and through the EU's Framework 6 programme.'* Use of any data discovered or accessed through AstroGrid should of course be mentioned as noted by the data providers.

VO Explorer: public release April 08

- AstroGrid front end, part of VOdesktop
- *Resource-centric*
- Select a search-space
- Search for resources
- Filter these resources
- View selected resources
- Use the selection
  - Invoke it
  - Save/Bookmark/Tag it
  - Export it



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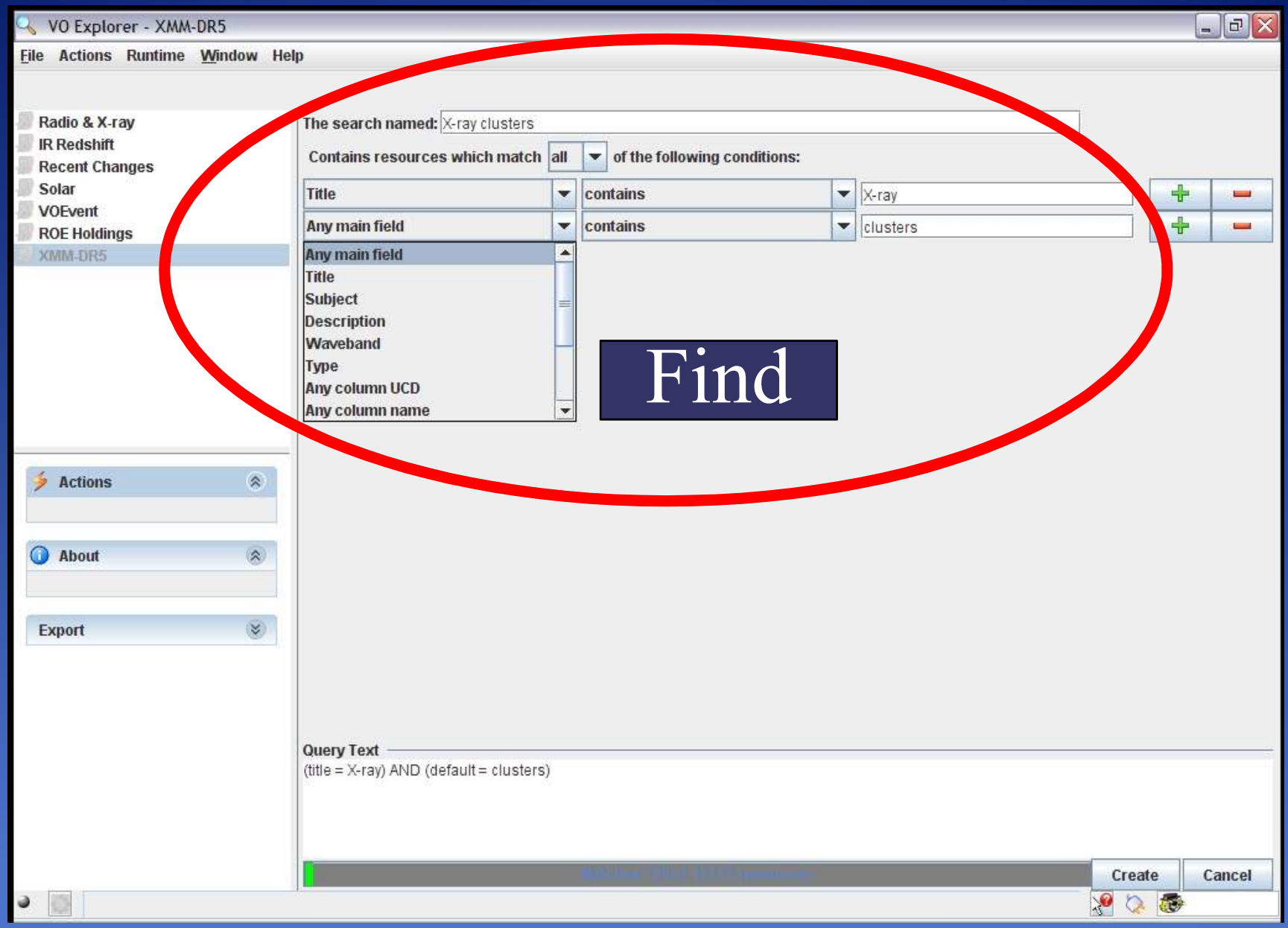
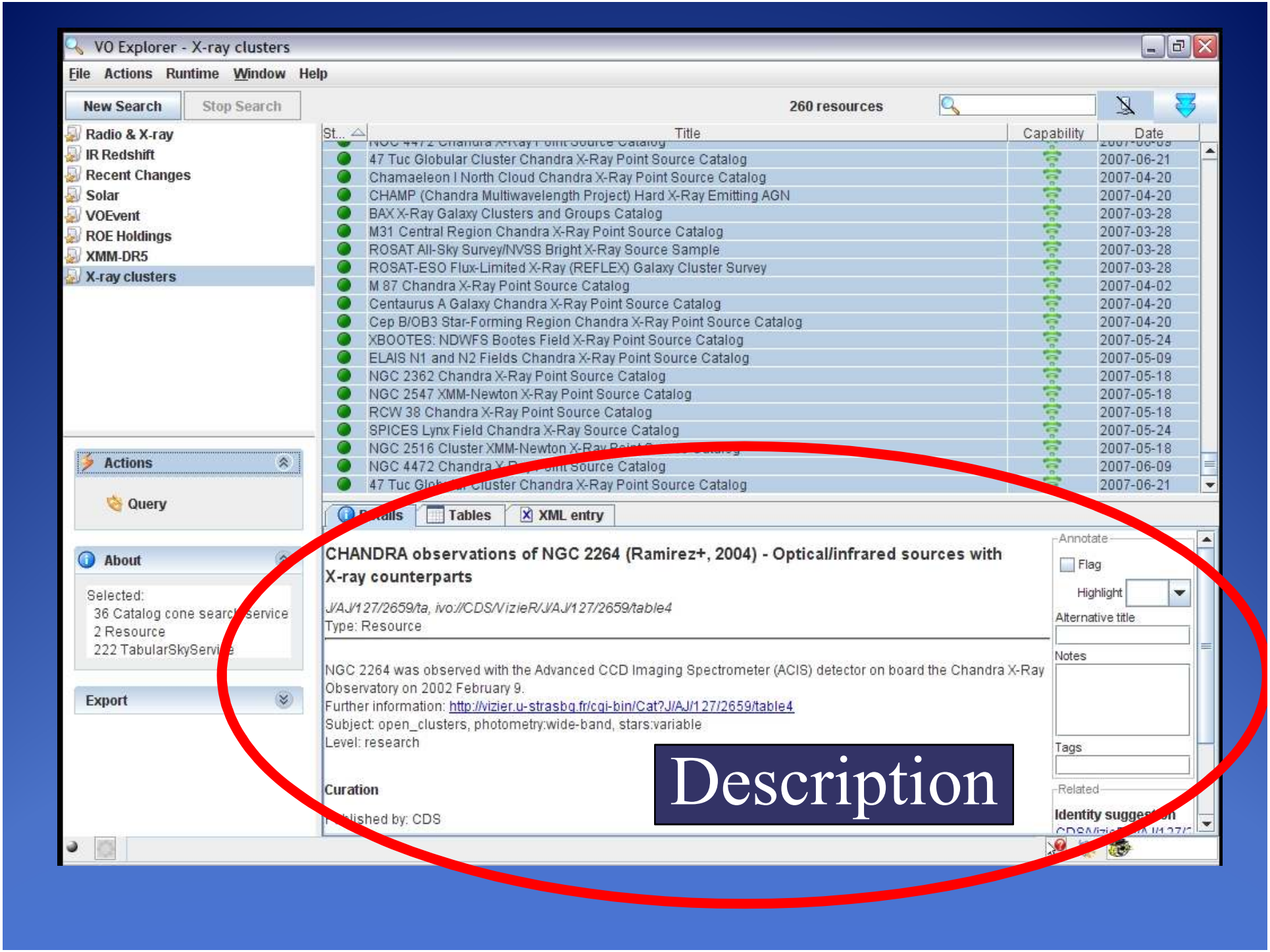
X-ray Universe 2008

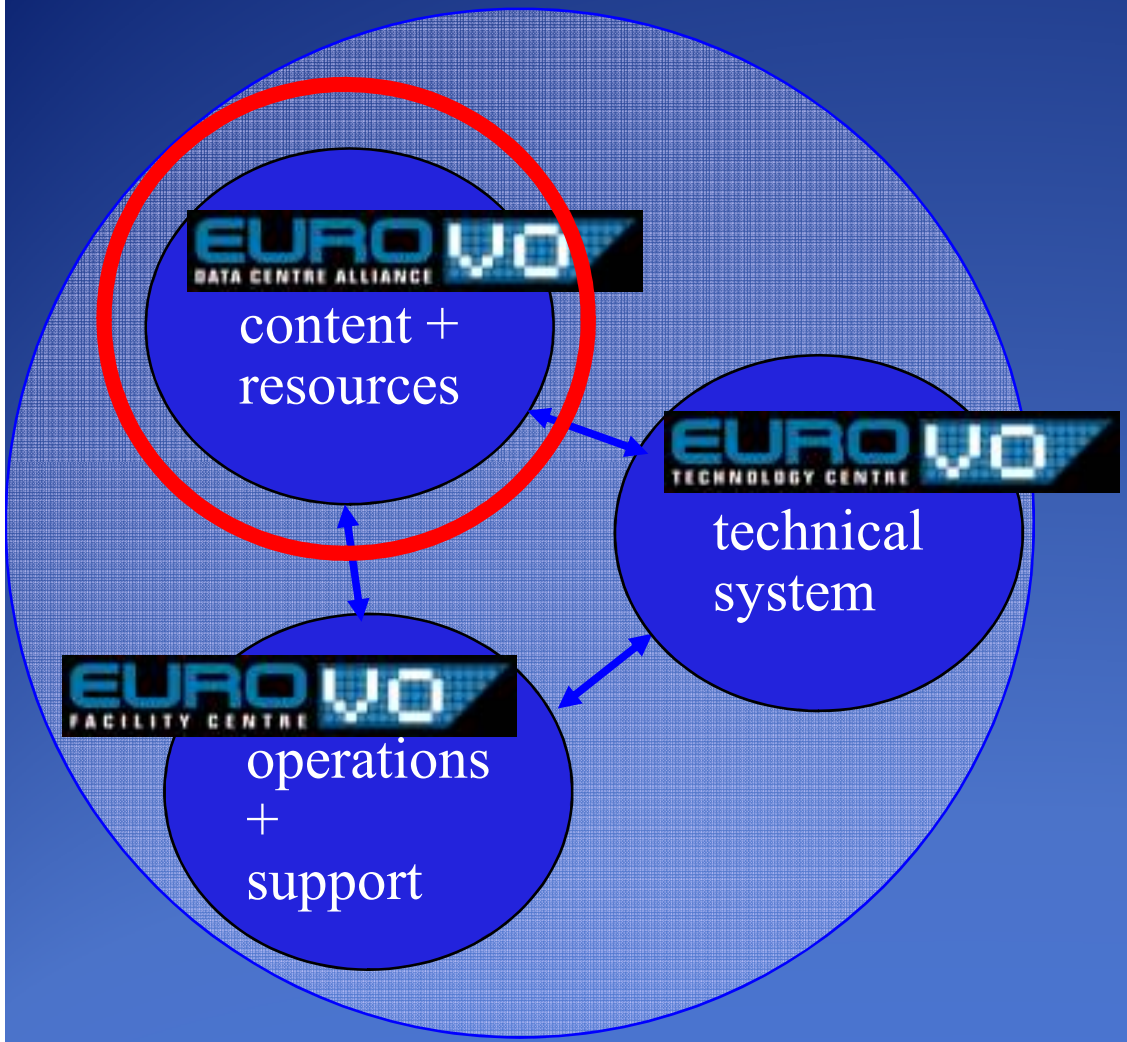
AstroGrid

Access existing X-ray cluster catalogues

- Browse through keyword metadata

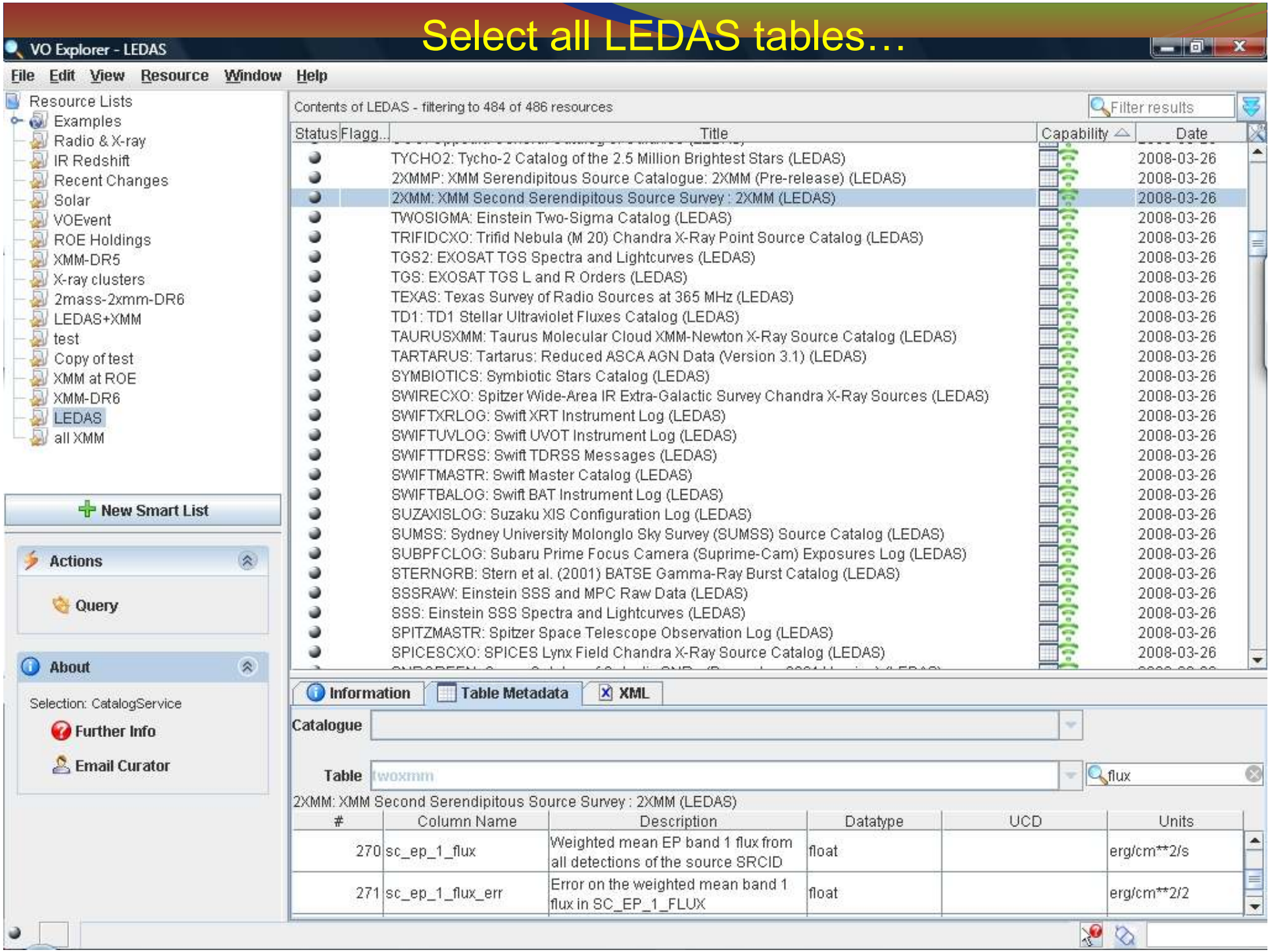

VO Explorer - XMM-DR5
File Actions Runtime Window Help
Radio & X-ray
IR Redshift
Recent Changes
Solar
VOEvent
ROE Holdings
XMM-DR5
The search named: X-ray clusters
Contains resources which match all of the following conditions:
Title
contains
X-ray
Any main field
contains
clusters
Any main field
Title
Subject
Description
Waveband
Type
Any column UCD
Any column name
Find
Actions
About
Export
Query Text
(title = X-ray) AND (default = clusters)
Create
Cancel


VO Explorer - X-ray clusters
File Actions Runtime Window Help
New Search
Stop Search
260 resources
Radio & X-ray
IR Redshift
Recent Changes
Solar
VOEvent
ROE Holdings
XMM-DR5
X-ray clusters
St...
Title
Capability
Date
47 Tuc Globular Cluster Chandra X-Ray Point Source Catalog 2007-06-21
Chamaeleon I North Cloud Chandra X-Ray Point Source Catalog 2007-04-20
CHAMP (Chandra Multiwavelength Project) Hard X-Ray Emitting AGN 2007-04-20
BAX X-Ray Galaxy Clusters and Groups Catalog 2007-03-28
M31 Central Region Chandra X-Ray Point Source Catalog 2007-03-28
ROSAT All-Sky Survey/NVSS Bright X-Ray Source Sample 2007-03-28
ROSAT-ESO Flux-Limited X-Ray (REFLEX) Galaxy Cluster Survey 2007-03-28
M 87 Chandra X-Ray Point Source Catalog 2007-04-02
Centaurus A Galaxy Chandra X-Ray Point Source Catalog 2007-04-20
Cep B/OB3 Star-Forming Region Chandra X-Ray Point Source Catalog 2007-04-20
XBOOTES: NDWFS Bootes Field X-Ray Point Source Catalog 2007-05-24
ELAIS N1 and N2 Fields Chandra X-Ray Point Source Catalog 2007-05-09
NGC 2362 Chandra X-Ray Point Source Catalog 2007-05-18
NGC 2547 XMM-Newton X-Ray Point Source Catalog 2007-05-18
RCW 38 Chandra X-Ray Point Source Catalog 2007-05-18
SPICES Lynx Field Chandra X-Ray Source Catalog 2007-05-24
2007-05-18
2007-06-09
2007-06-21
Actions
Query
About
Selected:
36 Catalog cone search service
2 Resource
222 TabularSkyService
Export
Tables
XML entry
CHANDRA observations of NGC 2264 (Ramirez+, 2004) - Optical/infrared sources with X-ray counterparts
J/AJ/127/2659/ta, ivo://CDS/VizieR/J/AJ/127/2659/table4
Type: Resource
NGC 2264 was observed with the Advanced CCD Imaging Spectrometer (ACIS) detector on board the Chandra X-Ray Observatory on 2002 February 9.
Further information: http://vizier.u-strasbg.fr/cgi-bin/Cat?J/AJ/127/2659/table4
Subject: open_clusters, photometry:wide-band, stars:variable
Level: research
Curation
Annotate
Flag
Highlight
Alternative title
Notes
Tags
Related
Description

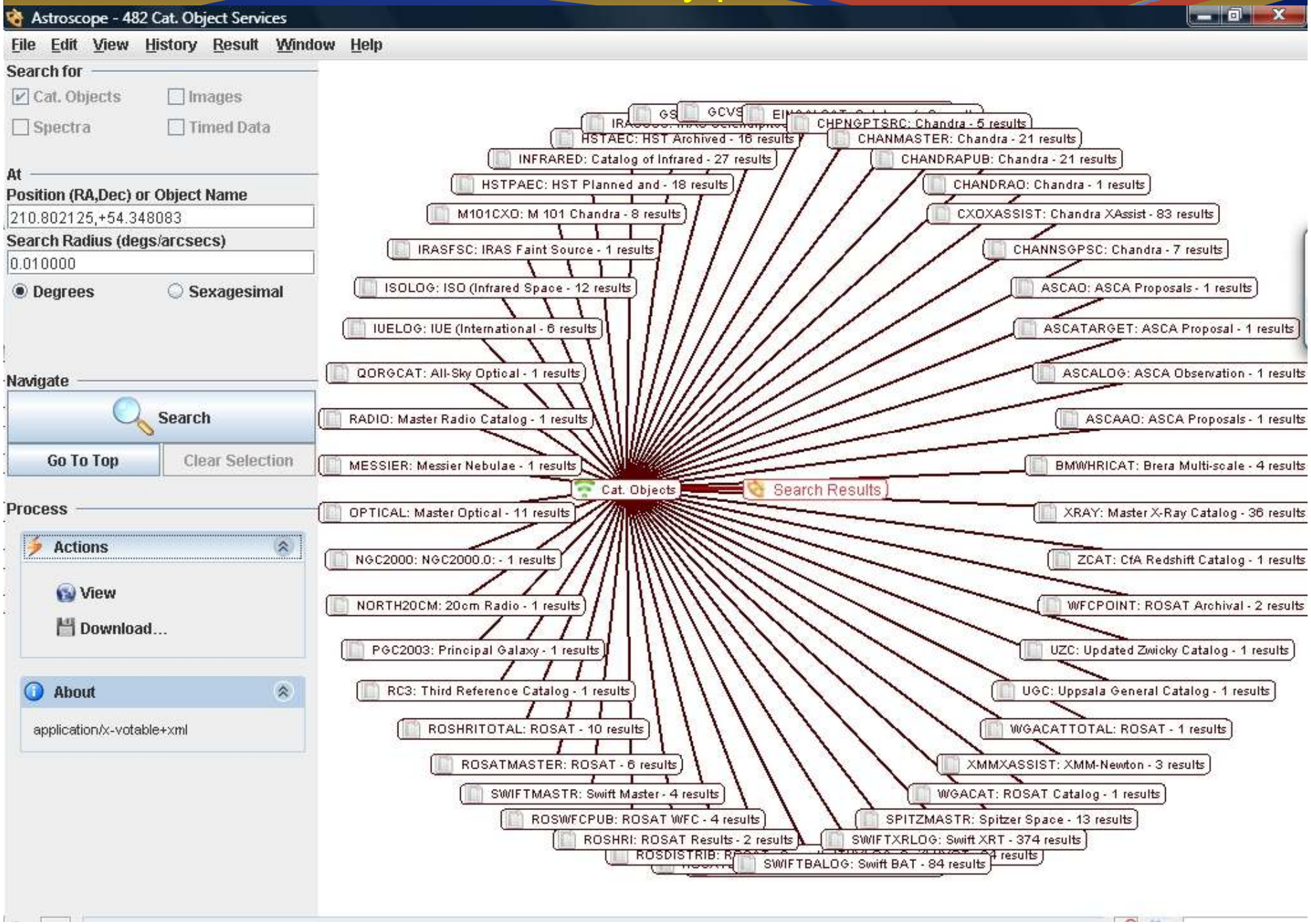


- If data in a simple DB can publish to VO in ~day!
- We can help you: June 23-27, 2008 data publishing workshop at ESO, Garching
- For catalogues, images, spectra, transient & theoretical archives
- Census of European Data Centres & Archives
- UK contact: *jat@star.le.ac.uk*
- *See Tedds et al. poster J16!*

Select all LEDAS tables…

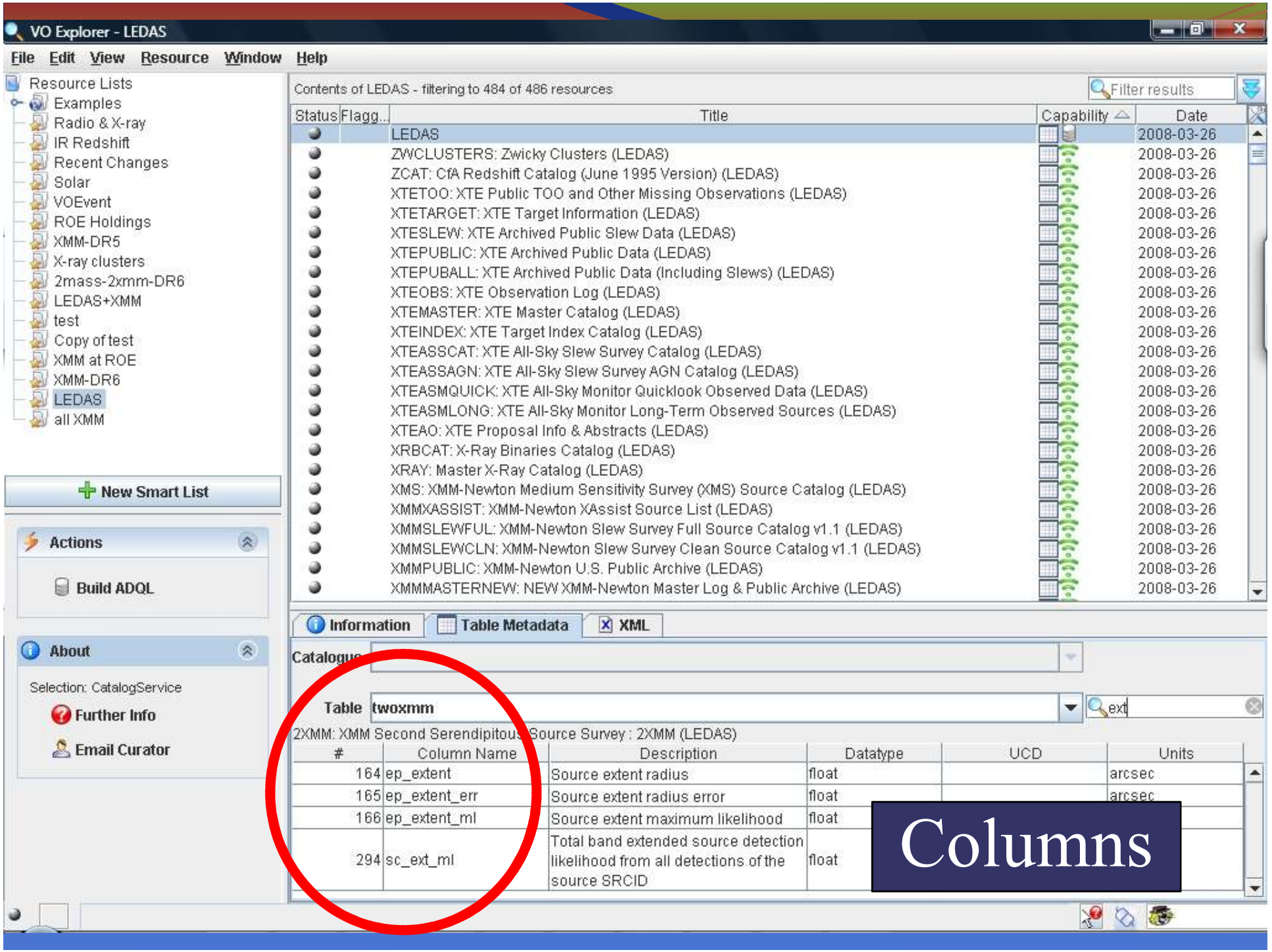


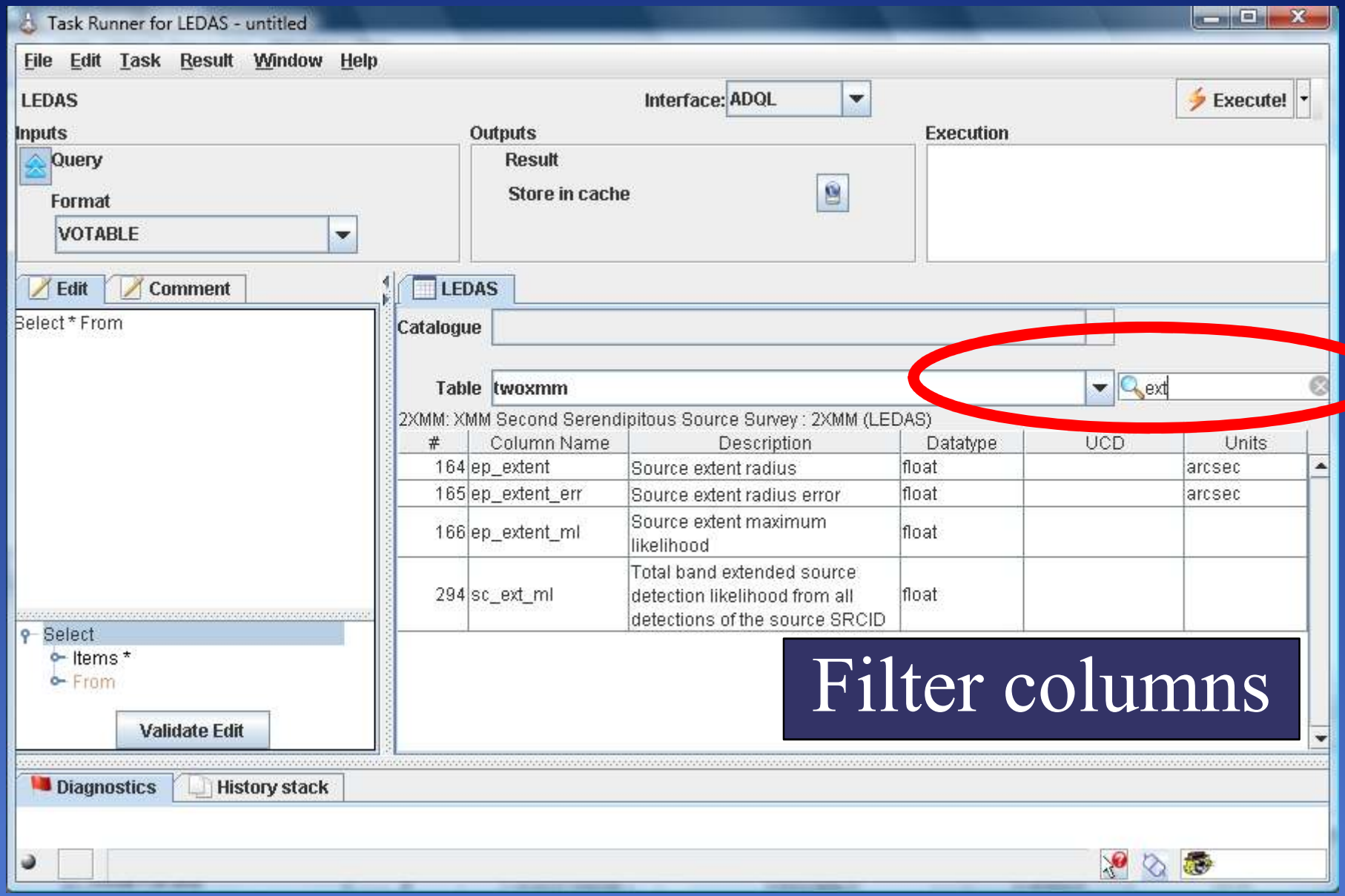
Search all LEDAS tables by position for CV: WW Cet

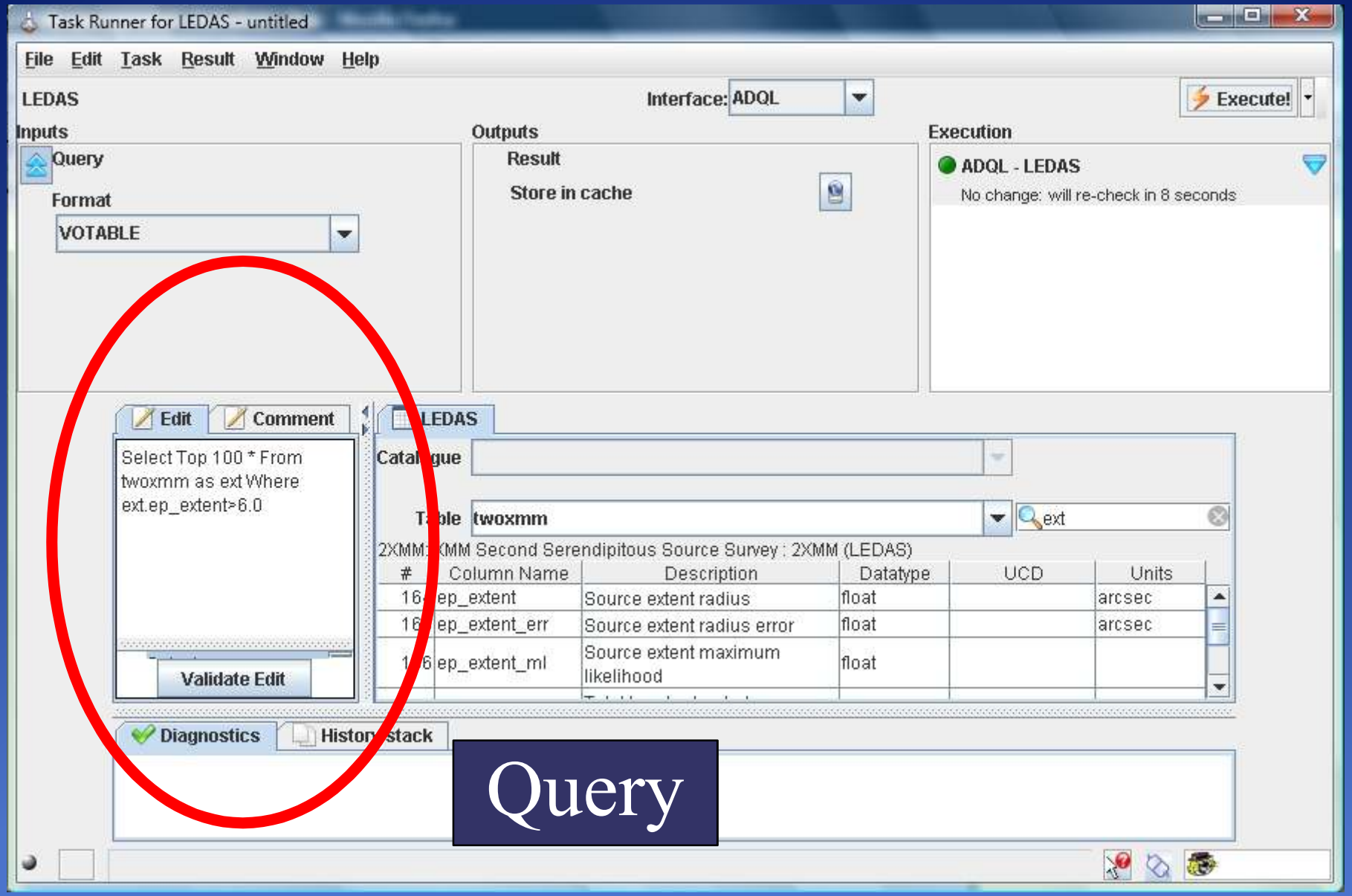


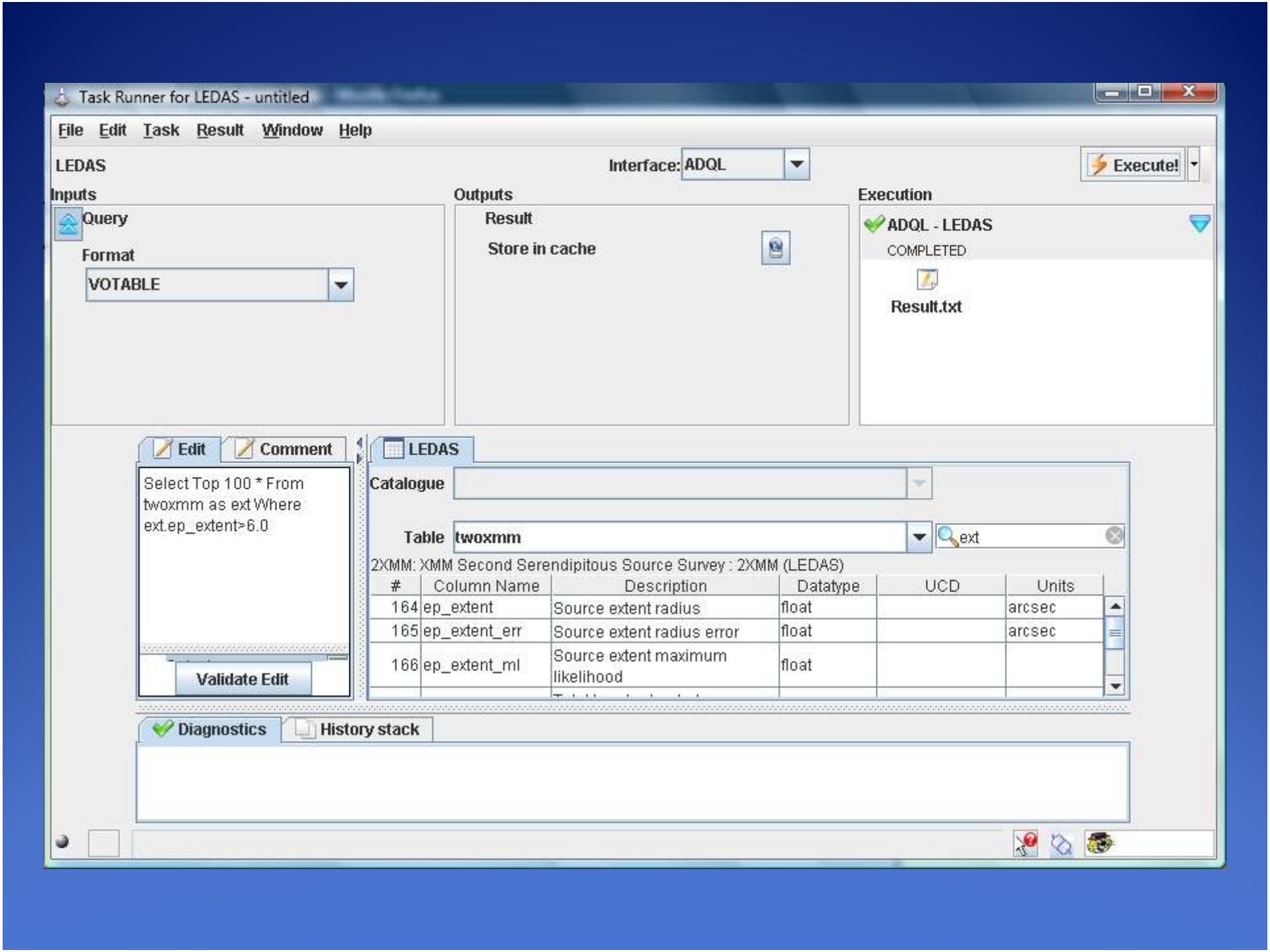
More advanced query: Access all extended 2XMM X-ray sources

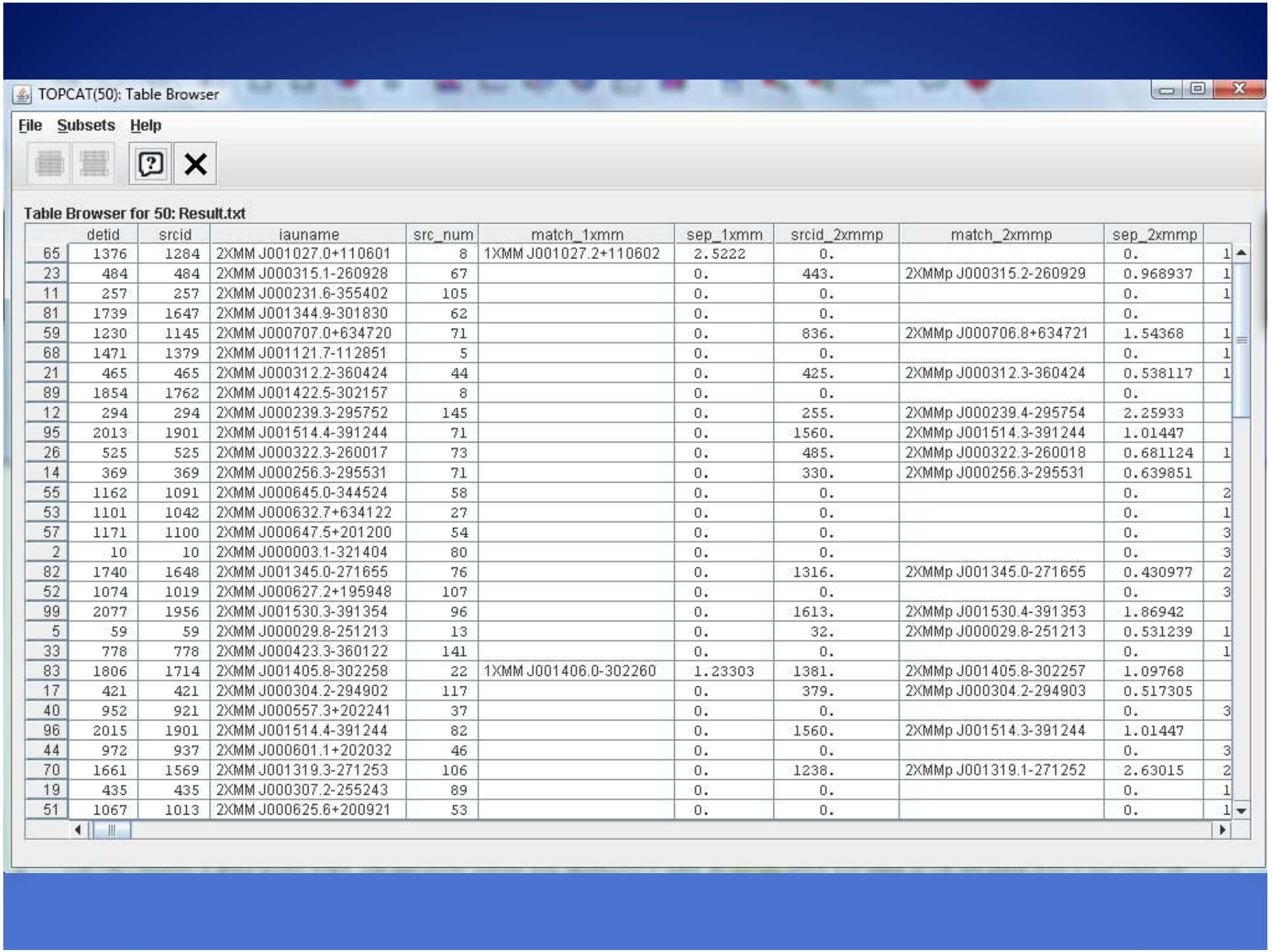
- Make own X-ray cluster candidate catalogue
- Filter large multiwavelength archives remotely:
  - Create manageable science subsets


VO Explorer - LEDAS
File Edit View Resource Window Help
Resource Lists
Examples
Radio & X-ray
IR Redshift
Recent Changes
Solar
VOEvent
ROE Holdings
XMM-DR5
X-ray clusters
2mass-2xmm-DR6
LEDAS+XMM
test
Copy of test
XMM at ROE
XMM-DR6
LEDAS
all XMM
New Smart List
Actions
Build ADQL
About
Selection: CatalogService
Further Info
Email Curator
Contents of LEDAS - filtering to 484 of 486 resources
Filter results
Status Flagg... Title Capability Date
LEDAS 2008-03-26
ZWCLUSTERS: Zwicky Clusters (LEDAS) 2008-03-26
ZCAT: CfA Redshift Catalog (June 1995 Version) (LEDAS) 2008-03-26
XTETOO: XTE Public TOO and Other Missing Observations (LEDAS) 2008-03-26
XTETARGET: XTE Target Information (LEDAS) 2008-03-26
XTESLEW: XTE Archived Public Slew Data (LEDAS) 2008-03-26
XTEPUBLIC: XTE Archived Public Data (LEDAS) 2008-03-26
XTEPUBALL: XTE Archived Public Data (Including Slews) (LEDAS) 2008-03-26
XTEOBS: XTE Observation Log (LEDAS) 2008-03-26
XTEMASTER: XTE Master Catalog (LEDAS) 2008-03-26
XTEINDEX: XTE Target Index Catalog (LEDAS) 2008-03-26
XTEASSCAT: XTE All-Sky Slew Survey Catalog (LEDAS) 2008-03-26
XTEASSAGN: XTE All-Sky Slew Survey AGN Catalog (LEDAS) 2008-03-26
XTEASMQUICK: XTE All-Sky Monitor Quicklook Observed Data (LEDAS) 2008-03-26
XTEASMLONG: XTE All-Sky Monitor Long-Term Observed Sources (LEDAS) 2008-03-26
XTEAO: XTE Proposal Info & Abstracts (LEDAS) 2008-03-26
XRBCAT: X-Ray Binaries Catalog (LEDAS) 2008-03-26
XRAY: Master X-Ray Catalog (LEDAS) 2008-03-26
XMS: XMM-Newton Medium Sensitivity Survey (XMS) Source Catalog (LEDAS) 2008-03-26
XMMXASSIST: XMM-Newton XAssist Source List (LEDAS) 2008-03-26
XMMSLEWFUL: XMM-Newton Slew Survey Full Source Catalog v1.1 (LEDAS) 2008-03-26
XMMSLEWCLN: XMM-Newton Slew Survey Clean Source Catalog v1.1 (LEDAS) 2008-03-26
XMMPUBLIC: XMM-Newton U.S. Public Archive (LEDAS) 2008-03-26
XMMMASTERNEW: NEW XMM-Newton Master Log & Public Archive (LEDAS) 2008-03-26
Information
Table Metadata
XML
Catalogue
Table twoxmm
ext
2XMM: XMM Second Serendipitous Source Survey : 2XMM (LEDAS)
Column Name Description Datatype UCD Units
164 ep_extent Source extent radius float arcsec
165 ep_extent_err Source extent radius error float arcsec
166 ep_extent_ml Source extent maximum likelihood float
294 sc_ext_ml Total band extended source detection likelihood from all detections of the source SRCID float
Columns


Task Runner for LEDAS - untitled
File Edit Task Result Window Help
LEDAS
Interface: ADQL
Execute!
Inputs
Query
Format
VOTABLE
Outputs
Result
Store in cache
Execution
Edit
Comment
Select * From
Select
Items *
From
Validate Edit
LEDAS
Catalogue
Table twoxmm
ext
2XMM: XMM Second Serendipitous Source Survey : 2XMM (LEDAS)
Column Name Description Datatype UCD Units
164 ep_extent Source extent radius float arcsec
165 ep_extent_err Source extent radius error float arcsec
166 ep_extent_ml Source extent maximum likelihood float
294 sc_ext_ml Total band extended source detection likelihood from all detections of the source SRCID float
Filter columns
Diagnostics
History stack


Task Runner for LEDAS - untitled
File Edit Task Result Window Help
LEDAS
Interface: ADQL
Execute!
Inputs
Query
Format
VOTABLE
Outputs
Result
Store in cache
Execution
ADQL - LEDAS
No change: will re-check in 8 seconds
Edit
Comment
Select Top 100 * From twoxmm as ext Where ext.ep_extent>6.0
Validate Edit
LEDAS
Catalogue
Table twoxmm
ext
2XMM: XMM Second Serendipitous Source Survey : 2XMM (LEDAS)
Column Name Description Datatype UCD Units
16 ep_extent Source extent radius float arcsec
16 ep_extent_err Source extent radius error float arcsec
16 ep_extent_ml Source extent maximum likelihood float
Diagnostics
History stack
Query


Task Runner for LEDAS - untitled
File Edit Task Result Window Help
LEDAS
Interface: ADQL
Execute!
Inputs
Query
Format
VOTABLE
Outputs
Result
Store in cache
Execution
ADQL - LEDAS
COMPLETED
Result.txt
Edit
Comment
Select Top 100 * From twoxmm as ext Where ext.ep_extent>6.0
Validate Edit
LEDAS
Catalogue
Table twoxmm
ext
2XMM: XMM Second Serendipitous Source Survey : 2XMM (LEDAS)
Column Name Description Datatype UCD Units
164 ep_extent Source extent radius float arcsec
165 ep_extent_err Source extent radius error float arcsec
166 ep_extent_ml Source extent maximum likelihood float
Diagnostics
History stack



	detid	srcid	iauname	src_num	match_1xmm	sep_1xmm	srcid_2xmmp	match_2xmmp	sep_2xmmp	
65	1376	1284	2XMM J001027.0+110601	8	1XMM J001027.2+110602	2.5222	0.		0.	1
23	484	484	2XMM J000315.1-260928	67		0.	443.	2XMMp J000315.2-260929	0.968937	1
11	257	257	2XMM J000231.6-355402	105		0.	0.		0.	1
81	1739	1647	2XMM J001344.9-301830	62		0.	0.		0.	
59	1230	1145	2XMM J000707.0+634720	71		0.	836.	2XMMp J000706.8+634721	1.54368	1
68	1471	1379	2XMM J001121.7-112851	5		0.	0.		0.	1
21	465	465	2XMM J000312.2-360424	44		0.	425.	2XMMp J000312.3-360424	0.538117	1
89	1854	1762	2XMM J001422.5-302157	8		0.	0.		0.	
12	294	294	2XMM J000239.3-295752	145		0.	255.	2XMMp J000239.4-295754	2.25933	
95	2013	1901	2XMM J001514.4-391244	71		0.	1560.	2XMMp J001514.3-391244	1.01447	
26	525	525	2XMM J000322.3-260017	73		0.	485.	2XMMp J000322.3-260018	0.681124	1
14	369	369	2XMM J000256.3-295531	71		0.	330.	2XMMp J000256.3-295531	0.639851	
55	1162	1091	2XMM J000645.0-344524	58		0.	0.		0.	2
53	1101	1042	2XMM J000632.7+634122	27		0.	0.		0.	1
57	1171	1100	2XMM J000647.5+201200	54		0.	0.		0.	3
2	10	10	2XMM J000003.1-321404	80		0.	0.		0.	3
82	1740	1648	2XMM J001345.0-271655	76		0.	1316.	2XMMp J001345.0-271655	0.430977	2
52	1074	1019	2XMM J000627.2+195948	107		0.	0.		0.	3
99	2077	1956	2XMM J001530.3-391354	96		0.	1613.	2XMMp J001530.4-391353	1.86942	
5	59	59	2XMM J000029.8-251213	13		0.	32.	2XMMp J000029.8-251213	0.531239	1
33	778	778	2XMM J000423.3-360122	141		0.	0.		0.	1
83	1806	1714	2XMM J001405.8-302258	22	1XMM J001406.0-302260	1.23303	1381.	2XMMp J001405.8-302257	1.09768	
17	421	421	2XMM J000304.2-294902	117		0.	379.	2XMMp J000304.2-294903	0.517305	
40	952	921	2XMM J000557.3+202241	37		0.	0.		0.	3
96	2015	1901	2XMM J001514.4-391244	82		0.	1560.	2XMMp J001514.3-391244	1.01447	
44	972	937	2XMM J000601.1+202032	46		0.	0.		0.	3
70	1661	1569	2XMM J001319.3-271253	106		0.	1238.	2XMMp J001319.1-271252	2.63015	2
19	435	435	2XMM J000307.2-255243	89		0.	0.		0.	1
51	1067	1013	2XMM J000625.6+200921	53		0.	0.		0.	1

Workflows

- **Python + Perl, IDL scripts…**
  - Single archive image search
  - Cone search for multiple, user defined archives
  - Sextractor script – generate catalogue from images
  - Montage - mosaic tool
- Taverna
  - Graphical interface
  - Embed existing code (any language)

AstroGrid

HOME | INSTALL | HELP | SUPPORT | COMMUNITY

Introduction to Scripting and Workflows

A **workflow** is simply a sequence of VO-related tasks, possibly including loops, which can be saved in some format and then re-run. An example might be querying a specific "SIAP" image service to find an image at a particular RA and Dec; sending the image found to an invokeable copy of SExtractor, putting in suitable parameters, and deriving an object catalogue; saving the resulting table to your VOSpace, and then also loading the catalog into Topcat. Before re-running the workflow, one can then change the parameters used, or otherwise alter some of the tasks, for example running against a different SIAP service, or using a different RA and Dec. There are two ways of building a workflow.

Graphical workflow editors

The first way is with an application that uses a graphical interface that puts together standard building blocks visually. The workflow is saved as a workflow document in a standard XML format; the application can also load such a workflow document and alter the visual flow diagram. This approach has become common in the world of Bio-informatics. A well known tool is Taverna, constructed by the MyGrid project. AstroGrid has been developing a version of Taverna with VO plugins; this will be made available in the next AstroGrid release.

Workflow with scripting

The second way to automate sequences of VO tasks is by writing a script that includes calls that correspond to VO tasks. An example (using AstroGrid Python) is

```
img = m.readfile('#sdss/image.fits')
```

which reads a file called "image.fits" from a folder in the user's VOSpace called "sdss" and puts it into an object called "img"

Command Line Scripting

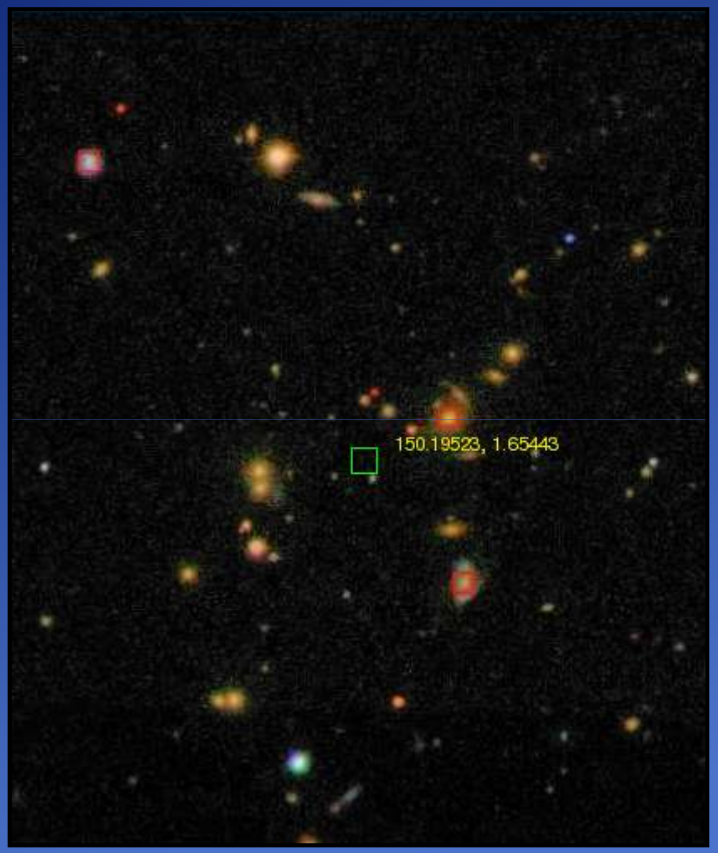
- Connect to the AstroGrid system from command line
- Write your own Python scripts *(IDL, perl…to come)*

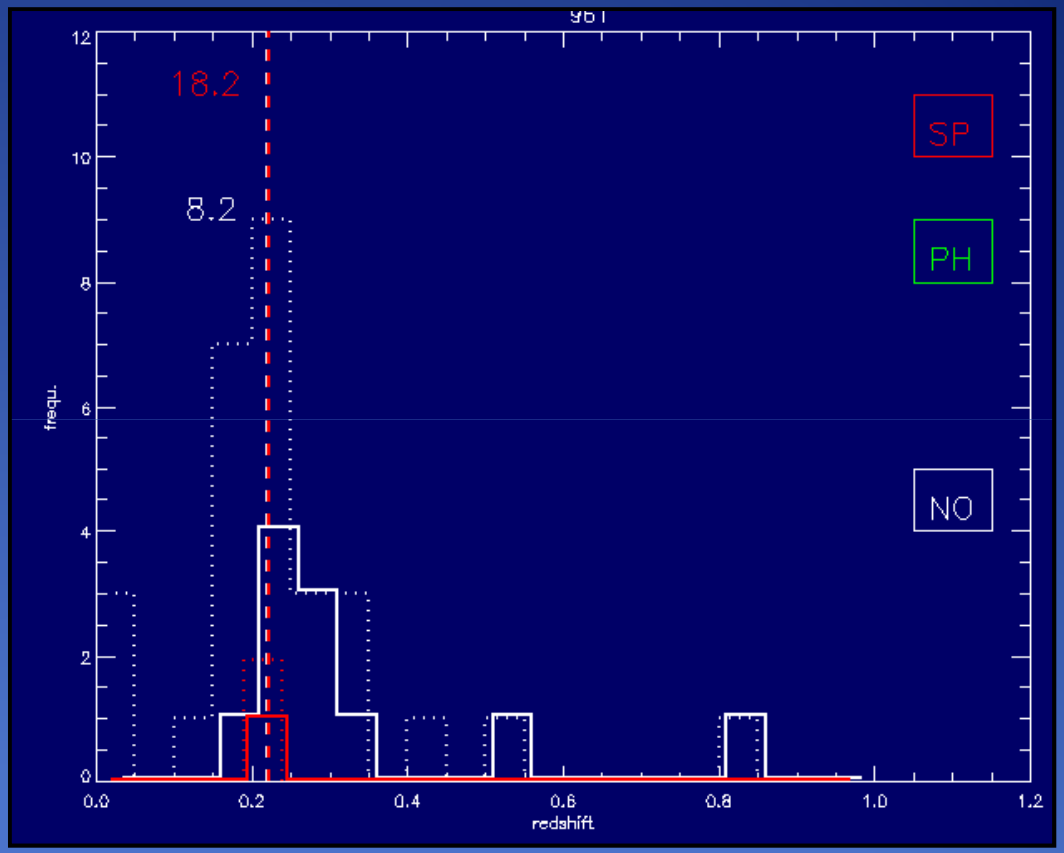
```
#!/usr/bin/python
# Given an input list od objects, queries the 2MASS catalogue returning a
# VOTable for each object.

from astrogrid import ConeSearch
from astrogrid.utils import broadcast, read_votable

# Read input list of ra, decs from VOTable
vot=read_votable('sample.vot')
id = vot['id']
ra = map(float, vot['ra'])
dec = map(float, vot['dec'])

# We are going to query 2MASS at RoE
ivorn = 'ivo://wfau.roe.ac.uk/twomass-dsa/cone'
cone = ConeSearch(ivorn)

nsrc = len(ra) # Number of sources
radius=20./3600.0  # Search radius in degrees

print 'Starting Query: %d objects' % nsrc

for i in range(nsrc):
        res = cone.execute(ra[i], dec[i], radius)
        # Uncomment the following line if you want to send the output to TOPCAT
        # broadcast(res)
        print 'Writing 2mass_%s.vot' % id[i]
        open('2mass_%s.vot' % id[i], 'w').write(res)
```

e.g. correlation with SDSS

- Select SDSS galaxies within 1 arcmin of 411 X-ray positions
  - photometry (ugriz), photometric redshifts
  - spectra, spectroscopic redshifts
  - colour thumbnail images
- Visual inspection of images, spectroscopic and photoscopic redshifts

Correlation with SDSS





Spectroscopic z = 0.223 (Lamer+, in prep)

University of Leicester

EURO DATA CENTRE ALLIANCE

Jonathan Tedds
X-ray Universe 2008

Astro Grid

The VO is already in use…

- Using VO tools to investigate distant radio starburst hosting obscured AGN in the HDF(N) region
  - *Richards et al., A&A, 472, 805 (2007)*
- Albus 1: a very bright White Dwarf candidate
  - *Caballero & Solano, ApJ, 665, L151 (2007)*
- Flare productivity of newly-emerged paired and isolated solar active regions
  - *Dalla et al., A&A, 468, 1103 (2007)*
- Radio-loud Narrow-Line Type 1 Quasars
  - *Komossa et al., AJ, 132, 531 (2006)*
- Luminous AGB stars in nearby galaxies: a study using VO tools
  - *Salmantza et al., A&A, 447, 89 (2006)*

Advantages of VO data access

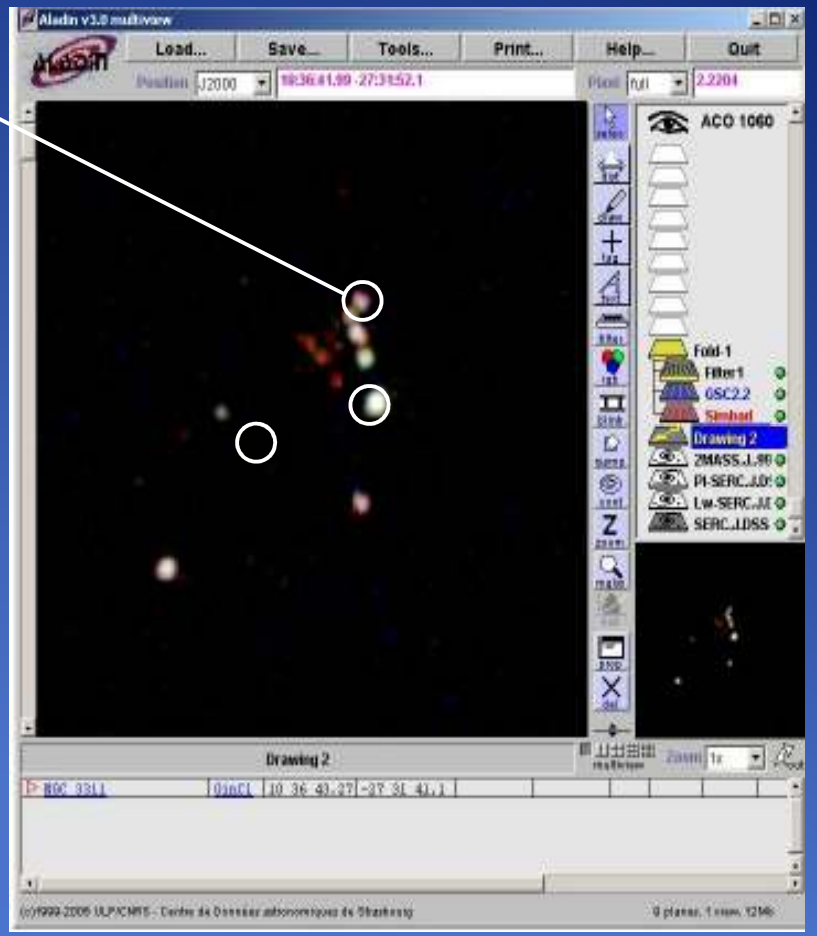
- Accessing multiwavelength data easier:
  - Do not need to access different interfaces, register once only
  - Data access from one single entry point
  - Able to build *workflows* i.e. pieces of code which run on the server and are reusable
- Tools to analyse the returned data
  - Different tools which share standards on how to interoperate

X-Ray Upper Limit Server:

Clive Page/XMM-SSC
+ Duncan Law-Green /LEDAS

Raw & processed archive data

FITS **HDS** **JPG**



Measure counts within circle and fitted Background + set detection LH threshold

⇒ *Empirical upper-limit to flux according to algorithm of Carrera+ 07*

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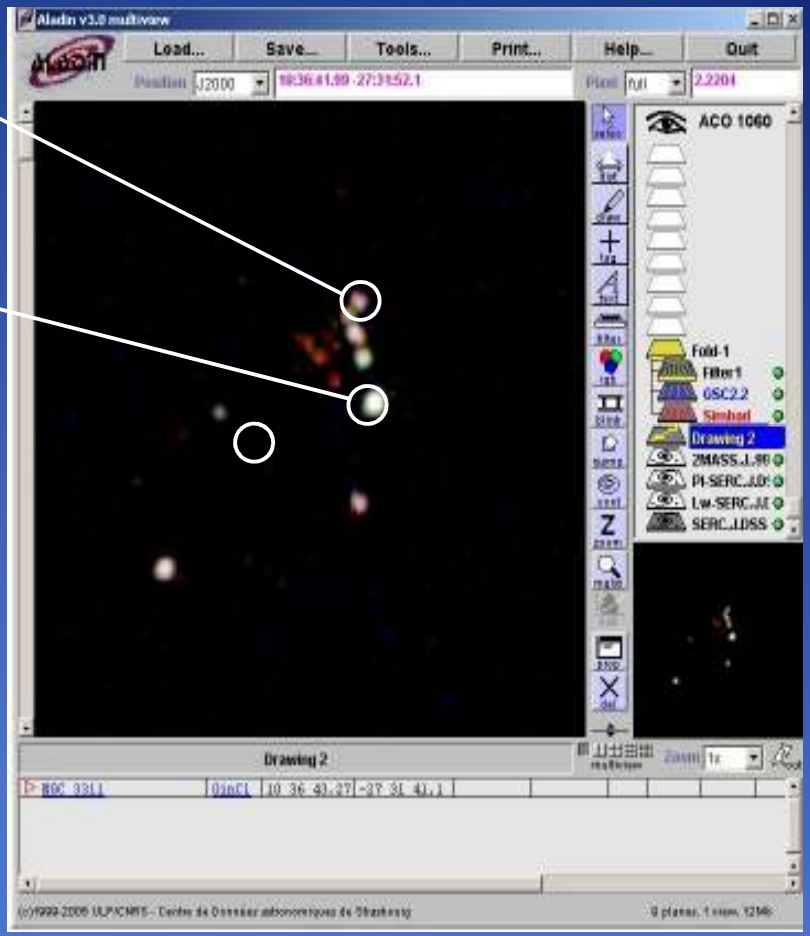
X-Ray Upper Limit Server

Raw & processed archive data

FITS **HDS** **JPG**

Catalogue Fluxes



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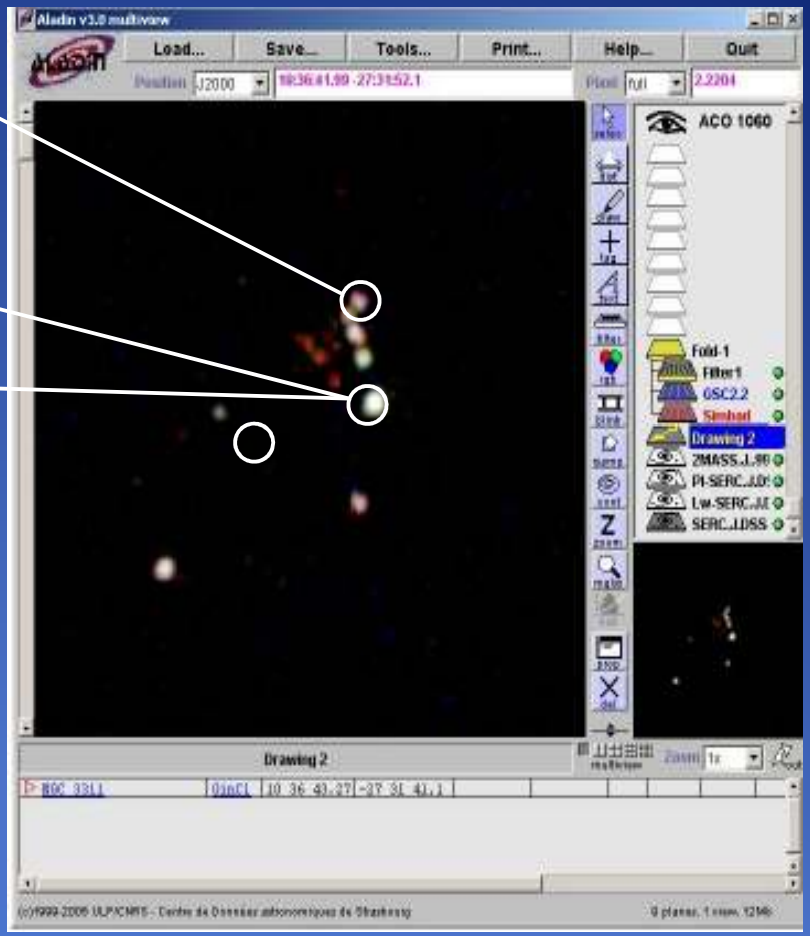
X-Ray Upper Limit Server

Raw & processed archive data

FITS **HDS** **JPG**

Catalogue Fluxes

Generated Fluxes



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X-Ray Upper Limit Server

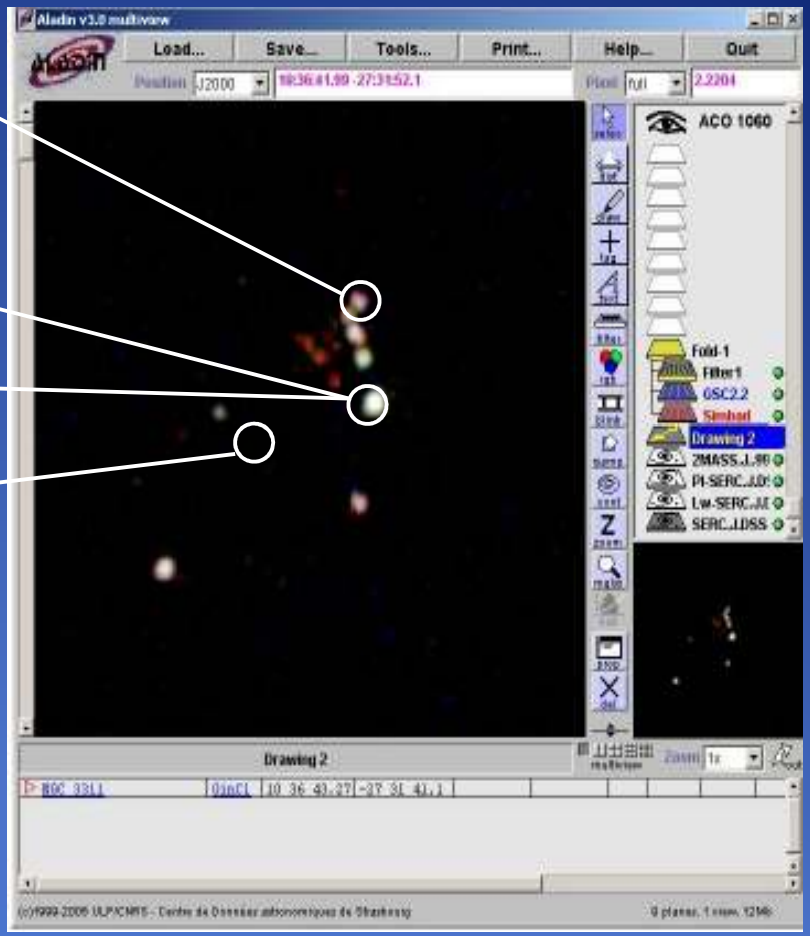
Raw & processed archive data

FITS **HDS** **JPG**

Catalogue Fluxes

Generated Fluxes

Flux limits



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X-Ray Upper Limit Server

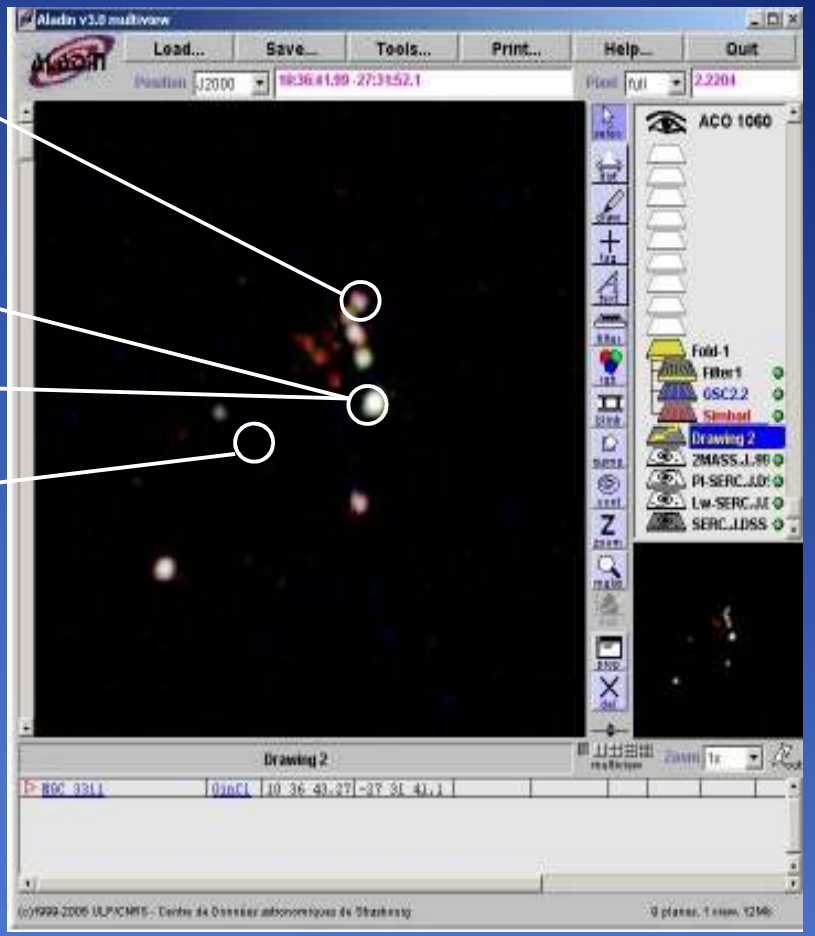
Raw & processed archive data

FITS **HDS** **JPG**

Catalogue Fluxes

Generated Fluxes

Flux limits



Automation (workflow)

Generated spectra/time series, thumbnail images

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X-Ray Upper Limit Server

Raw & processed archive data

FITS **HDS** **JPG**

Catalogue Fluxes

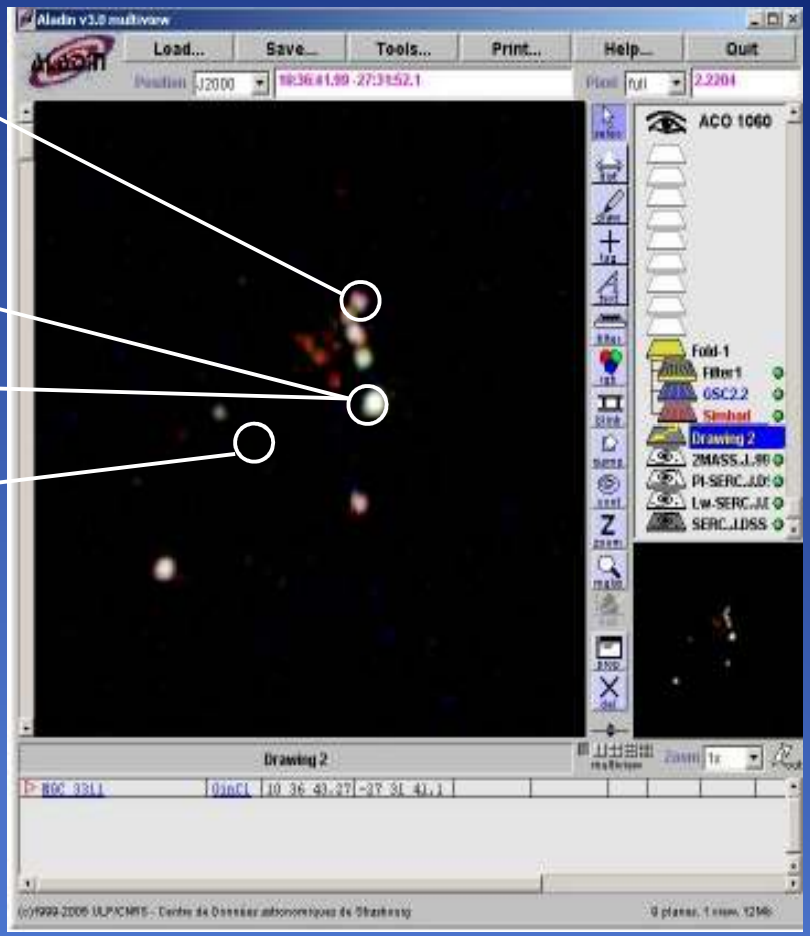
Generated Fluxes

Flux limits

e.g. upper limits for SDSS optically selected BAL QSOs (Cottis, Goad et al)

Automation (workflow)

Generated spectra/time series, thumbnail images



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http://www.astrogrid.org (April 2008 1st public release)

search

HOME | INSTALL | HELP | SUPPORT

Welcome to AstroGrid

AstroGrid is the doorway to the Virtual Observatory (VO). We provide a suite of desktop applications to enable astronomers to explore and bookmark resources from around the world, find data, store and share files in VOSpace, query databases, plot and manipulate tables, cross-match catalogues, and build and run scripts to automate sequences of tasks. Tools from other Euro-VO projects inter-operate with AstroGrid software, so you can also view and analyse images and spectra located in the VO.

These web pages hold our software for downloading, as well as links to other people's software. They also provide the help documentation, and other support material such as FAQs and the Helpdesk ticket system.

Our new software (V2008.1) is released on April 1st 2008. Previous releases will still available for some time : see previous releases.

GETTING STARTED

Read a little about the Virtual Observatory
Read a little about the AstroGrid Desktop suite.
Go to the Install area and download the software.
Have a look at the documentation in the Help area.
Start trying it out !

Acknowledging AstroGrid. If you make use of the AstroGrid system or tools, we would be grateful if you could acknowledge this use in any resulting publications. You could use these words: *'This research has made use of data obtained using, or software provided by, the UK's AstroGrid Virtual Observatory Project, which is funded by the Science & Technology Facilities Council and through the EU's Framework 6 programme.'* Use of any data discovered or accessed through AstroGrid should of course be mentioned as noted by the data providers.