

SIKV2 : which kind of problem it is addressing...

F.Bonnarel on behalf of
the SIKV2 author group

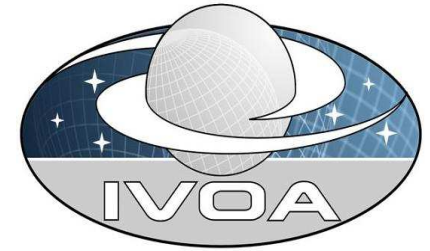
D.Tody A.Richards A.Micol
J.Salgado D.Durand



Comparison with ObsTAP/GDS

- ObsTAP allows for generic queries in ADQL
- ObsTAP has less metadata
- ObsTAP is not specialized for images
- ObsTAP has no peculiar method for Data Access
 - but GDS will have linkage for complex data and S*AP services
- Conclusion: ObsTAP comes first, SIAV2 may be second time query/acces





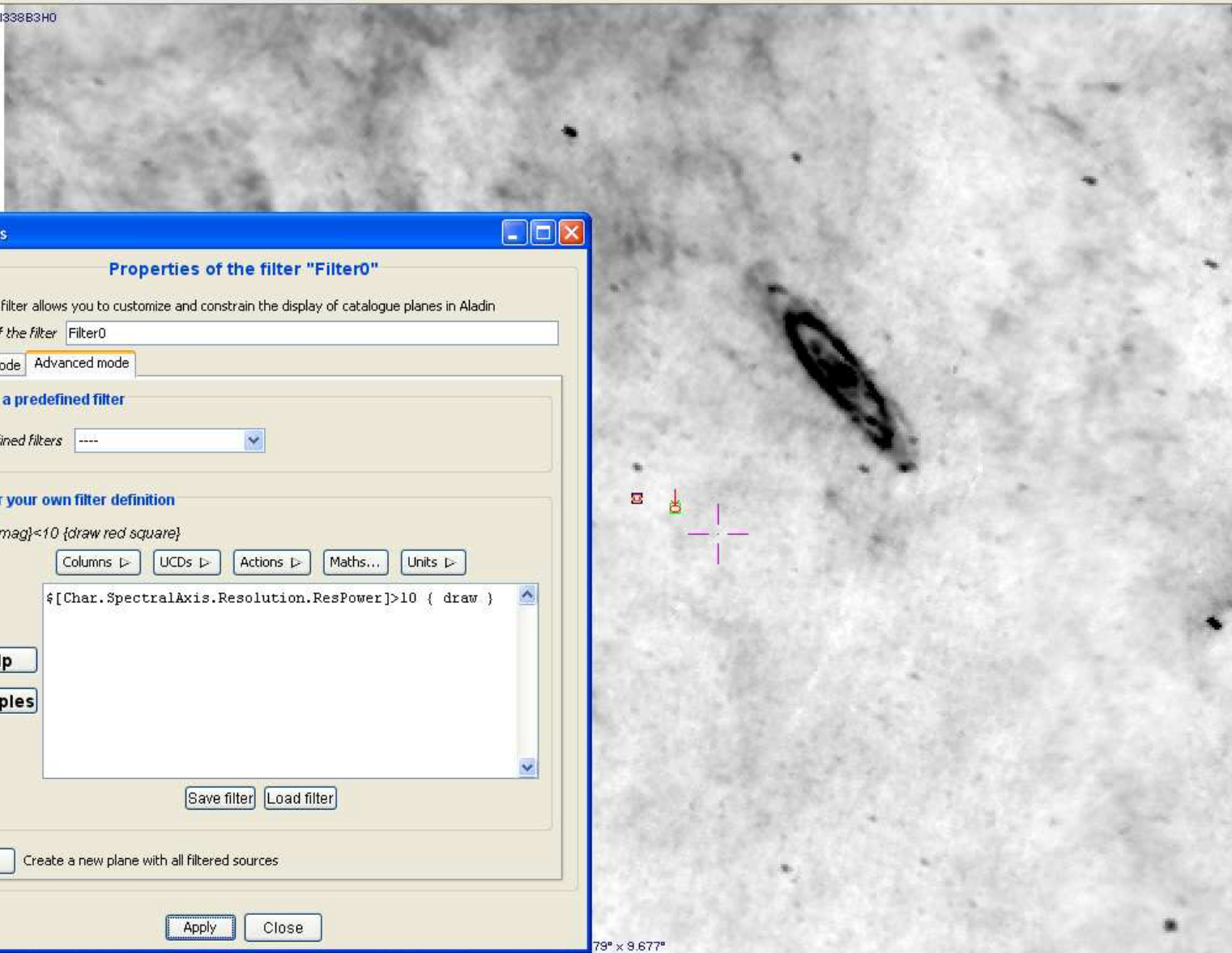
Doing more than SIA1

- Image description (data discovery)
 - Wavelength, Time can be sampled (= cubes).
 - Polarization being described
 - Curation and Creator available
 - Interoperable FIELDS (ucds, utypes)
- More Filtering (BAND, POL, TIME, intervals etc ...)



Location **00:54:00.00 +40:06:00.0** ICRS Pixel **0.9606** full

1MU.1338B3H0



Properties of the filter "Filter0"

A filter allows you to customize and constrain the display of catalogue planes in Aladin

Filter name:

Filter mode: Basic mode Advanced mode

Use a predefined filter

Predefined filters:

Enter your own filter definition

Filter definition: `$(Bmag)<10 {draw red square}`

Filter expression: `!([Char.SpectralAxis.Resolution.ResPower]>10 { draw`

Buttons: Columns, UCDS, Actions, Maths..., Units

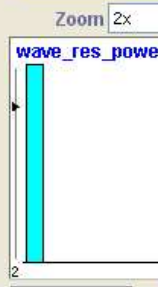
Buttons: Save filter, Load filter

Buttons: Apply, Close

Port: Create a new plane with all filtered sources

- select
- pan
- zoom
- dist
- draw
- tag
- text
- filter
- cross
- rgb
- assoc
- cont
- mglss
- pixel
- prop
- del

- Dobstapl
- Filter0
- IRAS-IRIS



DobstapMan1.xml - wave_res_power - Spectral resolution FWHM

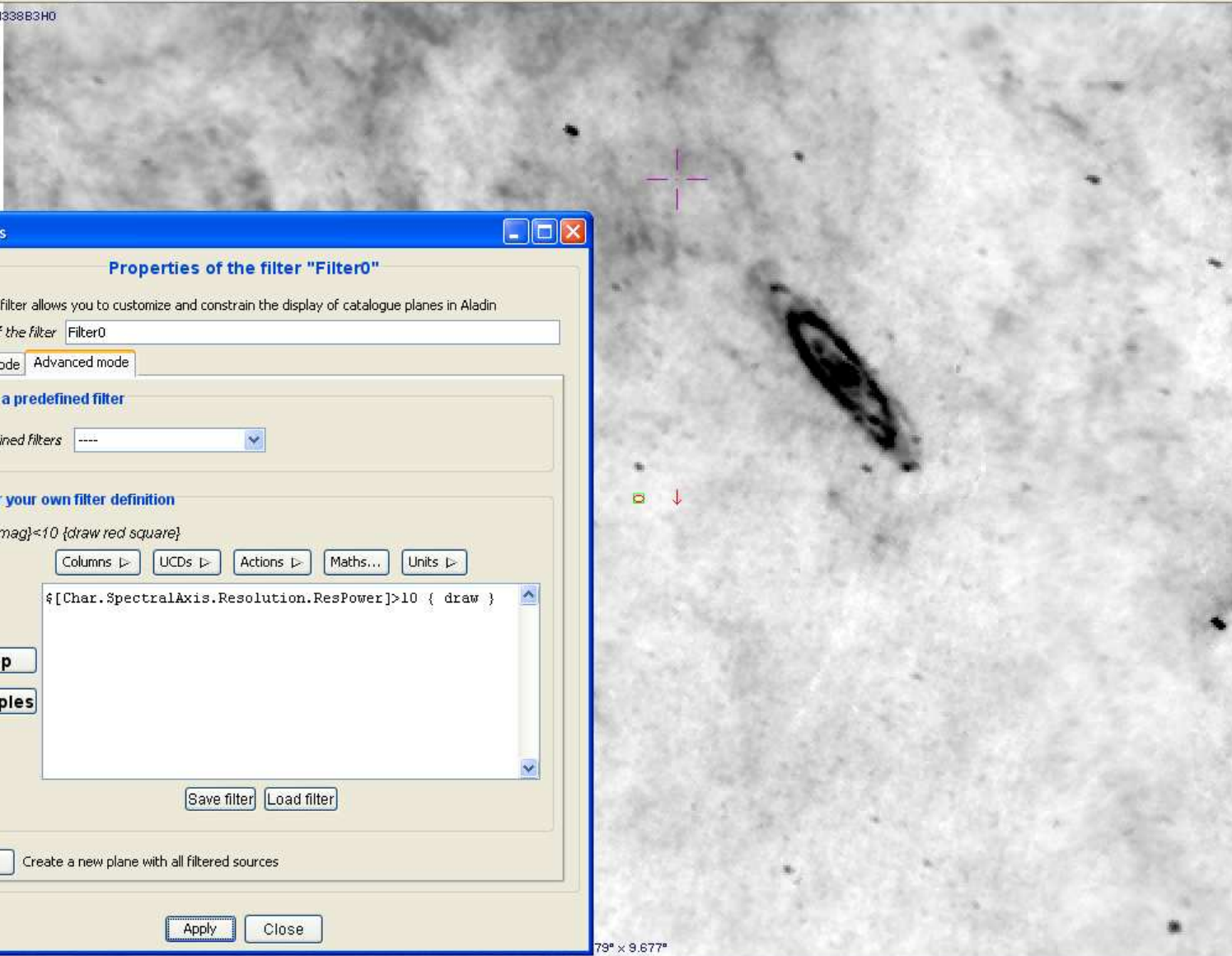
target n...	ra	dec	s area	s name	wave min	wave max	wave res...	total ex...	time span	time start	time stop	time res...	FluxCali...	Instrument
M 31	13.0	40.0	100	0.05	19	30	2	0.07	0.7	1983-01-25	1983-11-25	1	CALIBRATED	IRAS Cam...
M 31	13.5	40.1	100	0.05	19	30	1000	0.09	0.9	1983-01-26	1983-11-25	1	CALIBRATED	IRAS Cam...

v6.0

Image Catalog Overlay Tool View Interop Help

Location 00:51:50.15 +36:28:30.0 ICRS Pixel 0.99 full

60MU.I338B3HD



Properties

Properties of the filter "Filter0"

A filter allows you to customize and constrain the display of catalogue planes in Aladin

Properties of the filter: Filter0

Filter mode: **Advanced mode**

Choose a predefined filter

Predefined filters: ----

Enter your own filter definition

Example: $\{Bmag\} < 10$ {draw red square}

Click: Columns > UCDS > Actions > Maths... > Units >

`{[Char.SpectralAxis.Resolution.ResPower]>10 { draw }`

Buttons: Help, Examples, Save filter, Load filter

Export: Create a new plane with all filtered sources

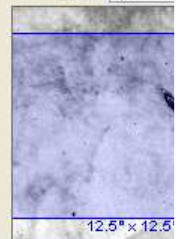
Buttons: Apply, Close

Toolbar icons: select, pan, zoom, dist, draw, tag, text, filter, cross, rgb, assoc, cont, mgls, pixel, prop, del

Filter selection area:

- Filter0
- DobstapM
- IRAS-IRIS

Zoom 2x



Querying Simbad...

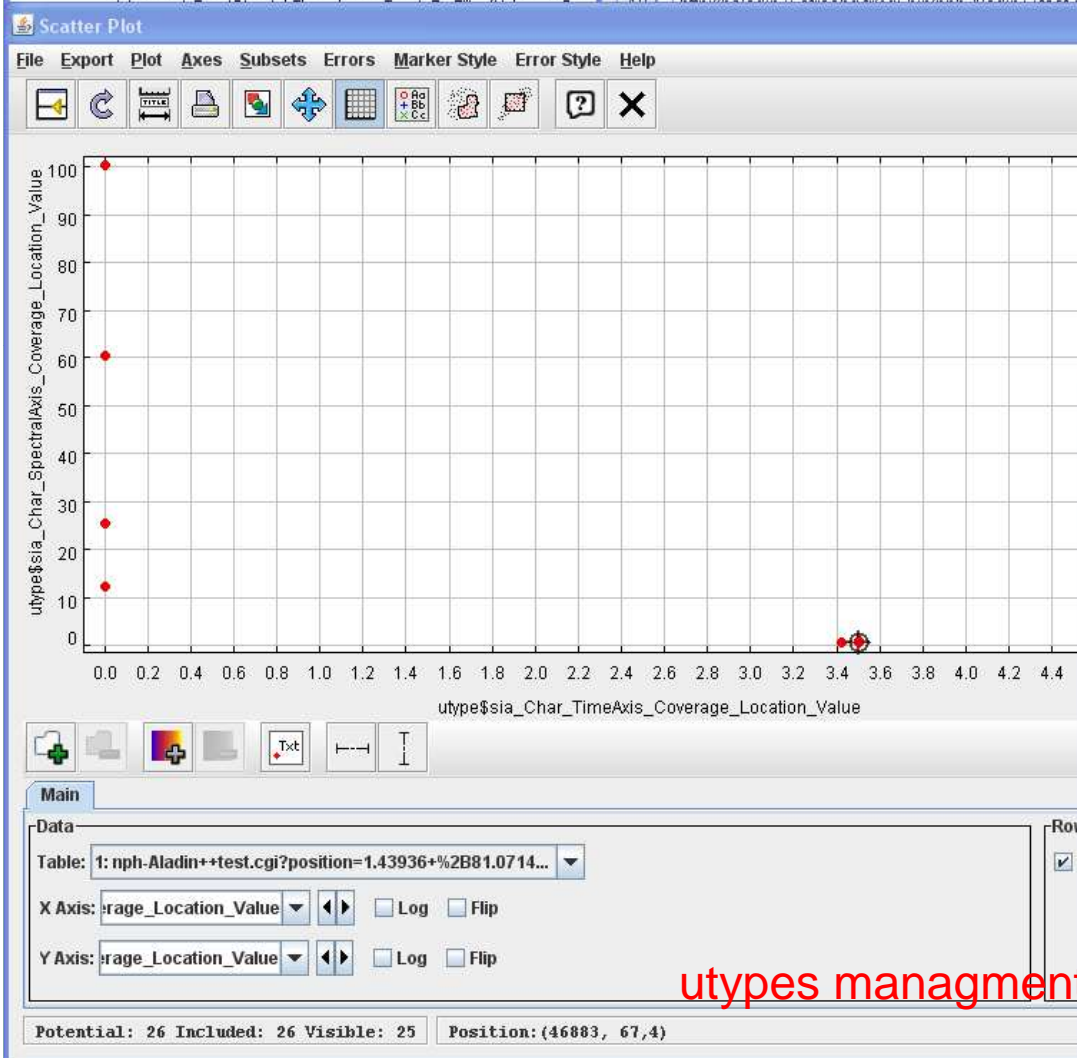
id	target n...	ra	dec	s area	s name	wave min	wave max	wave res...	total ex...	time span	time start	time stop	time res...	FluxCali...	Instrument
60MU.I338B3HD	M 31	13.5	40.1	100	0.05	19	30	1000	0.09	0.9	1983-01-26	1983-11-25	1	CALIBRATED	IRAS Cam...

Search

```
at javax.swing.JComponent.paint(Unknown Source)
at javax.swing.JComponent.paintChildren(Unknown Source)
at javax.swing.JComponent.paintToOffscreen(Unknown Source)
at javax.swing.BufferStrategyPaintManager.paint(Unknown Source)
at javax.swing.RepaintManager.paint(Unknown Source)
at javax.swing.JComponent.paint(Unknown Source)
at java.awt.GraphicsCallback$PaintCallback.run(Unknown Source)
at sun.awt.SunGraphicsCallback.runOneComponent(Unknown Source)
at sun.awt.SunGraphicsCallback.runComponents(Unknown Source)
at java.awt.Container.paint(Unknown Source)
at javax.swing.RepaintManager.paintDirtyRegions(Unknown Source)
at javax.swing.RepaintManager.paintDirtyRegions(Unknown Source)
at javax.swing.RepaintManager.seqPaintDirtyRegions(Unknown Source)
at javax.swing.SystemEventQueueUtilities$ComponentWorkRequest.run(Unknown Source)
at java.awt.event.InvocationEvent.dispatch(Unknown Source)
at java.awt.EventQueue.dispatchEvent(Unknown Source)
at java.awt.EventDispatchThread.pumpOneEventForFilters(Unknown Source)
```

Table Browser for 1: nph-Aladin++test.cgi?position=1.43936+%2B81.0714...

	AcRef
1	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=012&survey=POSSI&color=E-DSS1&mode=view
2	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=012&survey=POSSI&color=E-LOW-DSS1&mode=view
3	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=002&survey=POSSI&color=E-PLATE-DSS1&mode=view
4	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=012&survey=POSSII&color=F-DSS2&mode=view
5	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=012&survey=POSSII&color=J-DSS2&mode=view
6	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=012&survey=POSSII&color=N-DSS2&mode=view
7	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=012&survey=POSSI&color=O-DSS2&mode=view
8	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=012&survey=POSSII&color=N-PLATE-DSS2&mode=view
9	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=012&survey=POSSII&color=N-PLATE-DSS2&mode=view
10	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=012&survey=POSSI&color=O-PLATE-DSS2&mode=view
11	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0970138&survey=2MASS&color=J&mode=view
12	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0970138&survey=2MASS&color=K&mode=view
13	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0980138&survey=2MASS&color=J&mode=view
14	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0980138&survey=2MASS&color=H&mode=view
15	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0980138&survey=2MASS&color=K&mode=view
16	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0980138&survey=2MASS&color=H&mode=view
17	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0980138&survey=2MASS&color=H&mode=view
18	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0980138&survey=2MASS&color=H&mode=view
19	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0980138&survey=2MASS&color=H&mode=view
20	http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?out=image&position=1.439360+81.071471&field=000704N_KI0980138&survey=2MASS&color=H&mode=view



TOPCAT

File Views Graphics Joins Windows Interop Help

Table List

1: nph-Aladin++test.cgi?position

Current Table Properties

Label: nph-Aladin++test.cgi?position=1.43936+%2B81.071471

Location: http://baladin.u-strasbg.fr/cgi-bin/nph-Aladin++test.cgi?position=1.43936+%2B81.071471

Name: nph-Aladin++test.cgi?position=1.43936+%2B81.071471

Rows: 26

Columns: 41

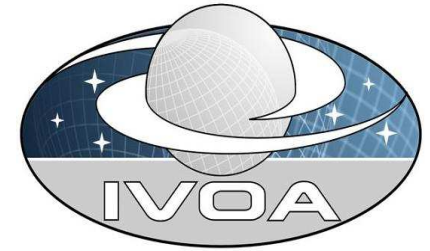
Sort Order: [Dropdown]

Row Subset: All

Activation Action: (no action) Broadcast Row

Messages: Clients:

utypes management in TOPCAT (Mark Taylor)



Standardized access to fov description

- Have observation field of views displayed on quickviews
- Fully interoperable with footprint services.
(manipulate regions, see Tamas Talk)





Overlay of a WFI observation footprint on top of a Preview within Aladin

Aladin images

SkyView

Sloan

MAST

CADC

DMSaadaSI

DSS...

VLA...

NewServ

Others...

Target..... 30 dor

Radius..... 14.0'

Servers Images Catalogs Spectra

- ESO Science Archive Image Service
 - + BandPass: BB#B/123
 - + BandPass: BB#B/99
 - + BandPass: BB#I/203
 - BandPass: BB#Rc/162
 - WFI.2004-11-21T01:36:46.665
 - WFI.2004-11-21T01:10:09.531
 - WFI.2004-11-21T01:34:54.942
 - WFI.2004-11-21T01:40:19.450
 - WFI.2004-11-21T01:26:00.030
 - WFI.2004-11-21T01:13:46.085
 - WFI.2004-11-21T01:15:30.237
 - WFI.2004-11-21T01:29:36.835
 - WFI.2004-11-21T01:43:58.685
 - WFI.2004-11-21T01:31:28.088
 - WFI.2004-11-21T01:33:30.443
 - WFI.2004-11-21T01:38:35.618
 - WFI.2004-11-21T01:27:46.063
 - WFI.2004-11-21T01:42:10.563
 - WFI.2004-11-21T01:22:26.066
 - WFI.2004-11-21T01:24:15.038
 - WFI.2004-11-21T01:21:00.626
 - + BandPass: BB#V/89
 - + BandPass: BB#Z+/61
 - + BandPass: RGB
- SIAP Service Hubble Space Telescope preview image
 - + bandpass_id: F110W - NICMOS

Press it to stop the processing =>



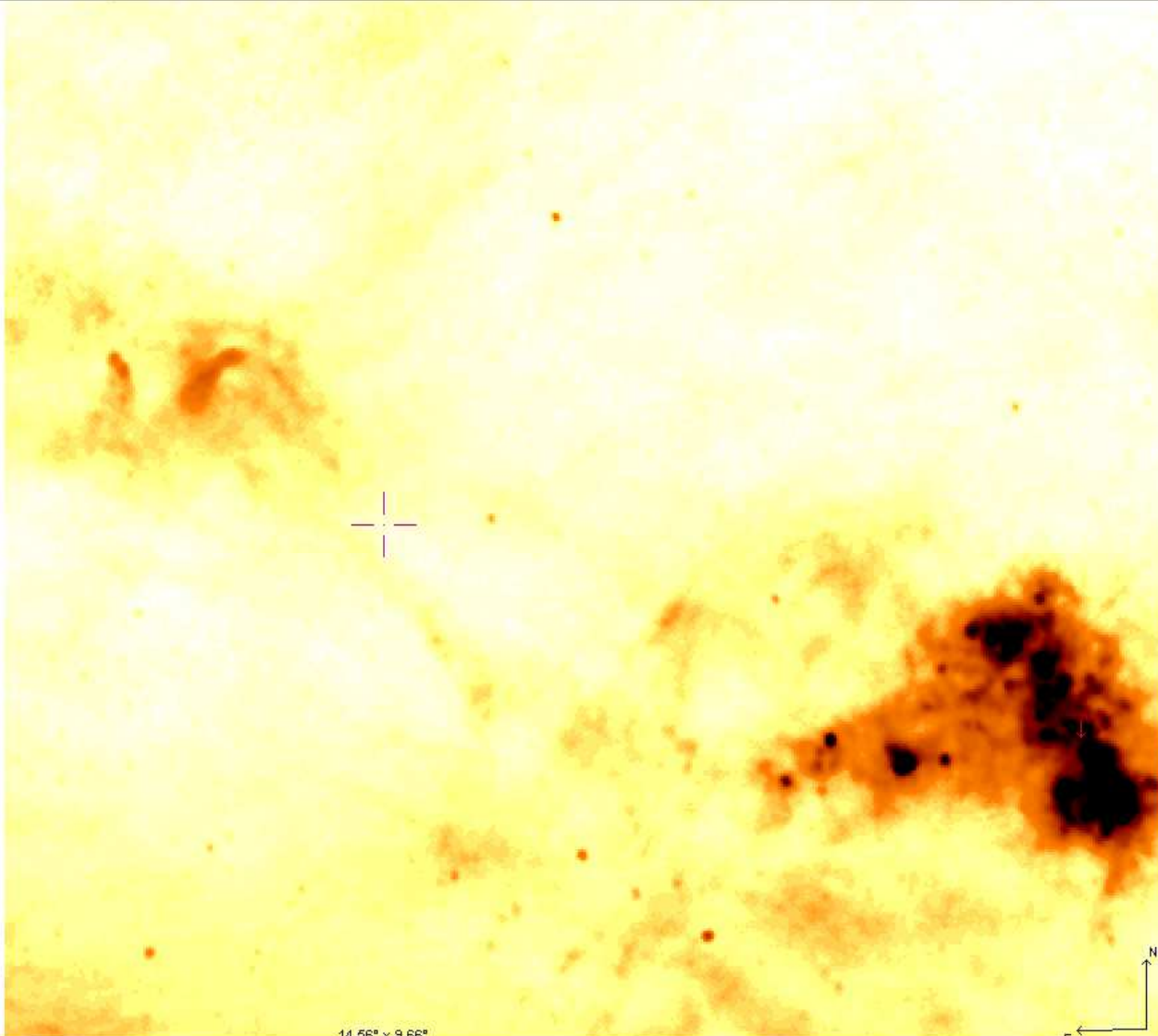
Accessing data

- Retrieving compressed data (ask for HCOMP or « rice » compression)
- Resampling data (eg IR or MW backgrounds)
- « snapshots » or massive small image services (asynchronous)
- Accessing full metadata for images and cubes:
 - (Observation DM metadata, proprietary Model metadata)



Location 01:20:46.20 -71:09:46.0 ICRS Pixel 3.073 full

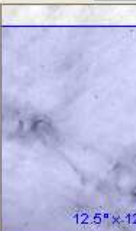
IRAS-IRIS.100MU.011B4H0



- select
- pan
- zoom
- dist
- draw
- tag
- text
- filter
- cross
- rgb
- asso c
- cont
- mgls
- pixel
- prop
- del

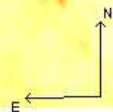
- IRAS-IRI
- IRAS-IRI

Zoom 2x



1"

14.56" x 9.66"

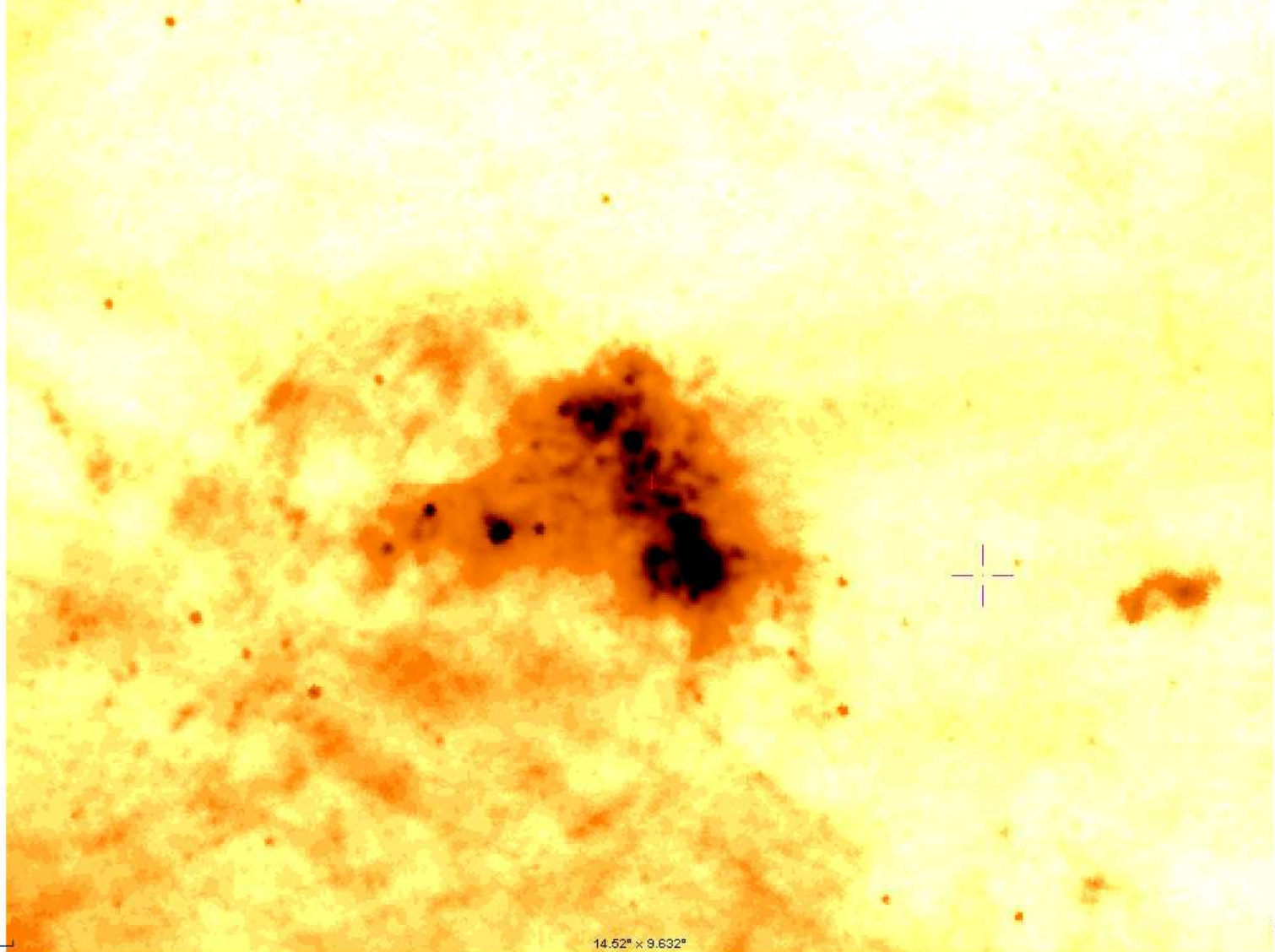


grid multiview match

Search

Location **00:11:13.25 -72:26:05.8** ICRS Pixel **2.228** full

100MU.ID11B4H0~1



- select
- pan
- zoom
- dist
- draw
- tag
- text
- filter
- cross
- rgb
- assoc
- cont
- mgls
- pixel
- prop
- del

Eye icon

IRAS-IRIS.

IRAS-IRIS.

IRAS-IRIS.

Zoom 2x



More complex access cases

- Accessing auxiliary data :
 - (confidence maps, use case Richard McMahon)
 - Calibration data
 - Raw data
 - Elements of a mosaic
- Cutting out in Cubes



The Canadian Galactic Plane Survey Archive

Navigation for Mosaic MEV1

Info Frame

Slices at 1420 MHz (HI line)

Parameter name	Value
ObservationName	cgps_mev1
CentralPoint_longitude	172.755005
CentralPoint_latitude	-1.004
CentralPoint_RA	05:23:01.19
CentralPoint_DEC	+34:28:31.2
Channels	3
Channels	1024 1024 272
ChannelPixelSize	18.0" 18.0"
ChannelCoding	image/fits
URL	http://www3.cadc.hia.nrc.gc.ca/cadcbn/cgps/aladin_cgps/MEV1
URL	cds.aladin.MyLink[0,0,99x...
Observation Angle	56.0093931181328
ReferenceFrame	FK5
Resolution	2000.0
ObservationReference	cgps_mev1_1420_MHZ_HI...

Choose slice by velocity (km/s)

55 -163.88

or by subimage number (from 1 to 272):

Stick FoV in stack **LOAD** Load in... Close

File Edit Image Catalog Overlay Tool View Interop Help Install

Location ICRS Pixel full

1420 MHz (HI line) Slices at 1420 MHz (HI line) 60_10

30' 2.475" x 2.415"

grid multiview match

Server selector

Others File all VO FOV

Image servers

- Aladin images
- DSS...

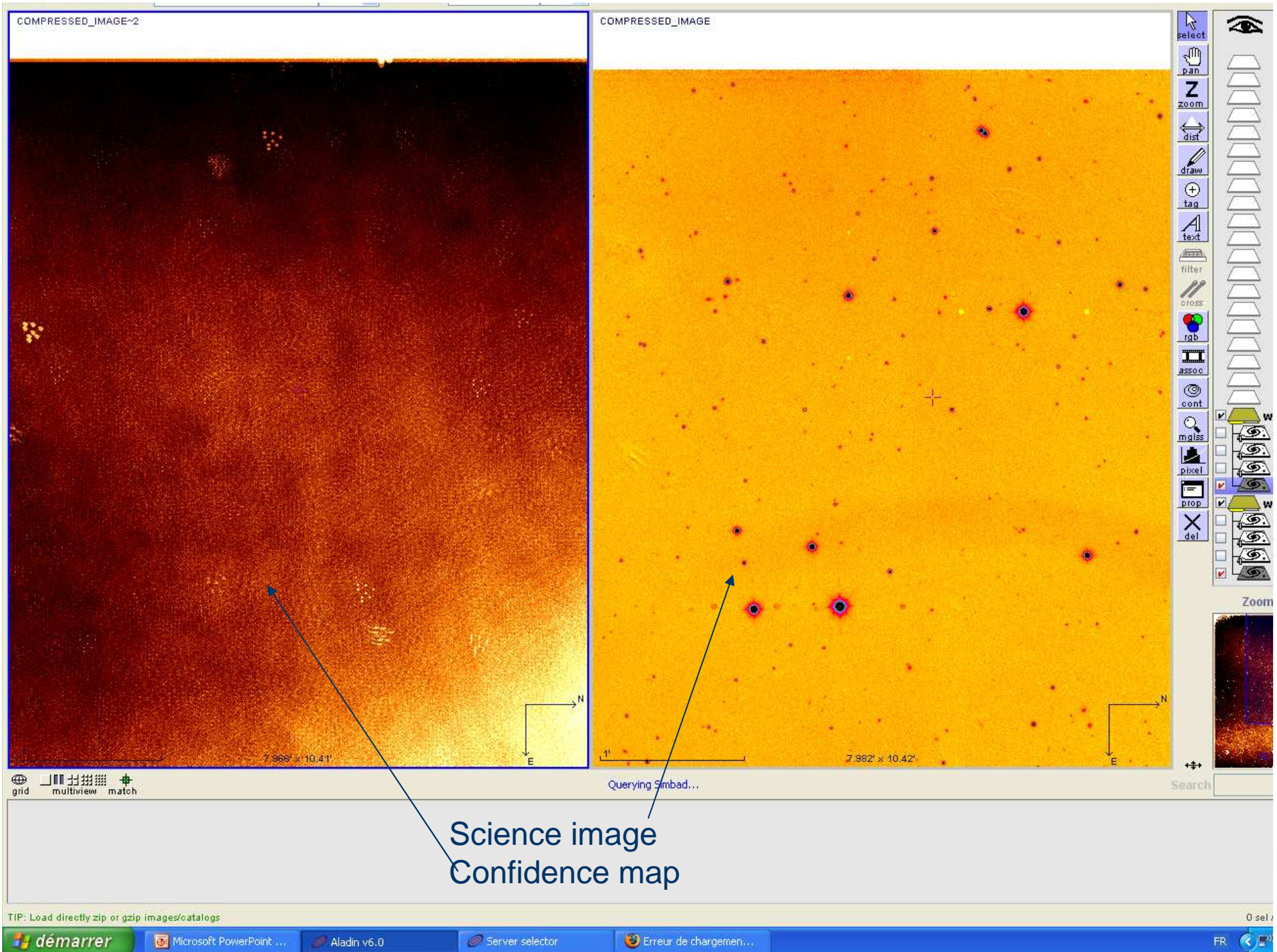
User data access (image/table/script/dir) ?

Specify a filename or a URL and press the SUBMIT button

Browse...

- 1420 MHz (HI line)
 - cgps_mev1
 - Data Access
 - Data Retrieval at 1420 MHz (HI line) 5.2° x 5.2°
 - Subsampling Cube at 1420 MHz (HI line) 5.2° x 5.2°
 - Middle channel Preview at 1420 MHz (HI line) 5.2° x 5.2°
 - Slices at 1420 MHz (HI line) 5.2° x 5.2°**
 - Canadian Galactic Plane Survey
 - 1420 MHz (Stokes I Continuum)
 - cgps_mev1
 - Data Access
 - Data Retrieval at 1420 MHz (Stokes I Continuum)
 - Image at 1420 MHz (Stokes I Continuum) 5.2° x 5.2°

Reset Clear Help **SUBMIT** Close



Science image
Confidence map