

CSP Science Impact Assessment

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Priority areas

- CSP has a small number of science priority projects
- Integrated part of IVOA work
- 3 current projects
 - ObsTAP
 - SED building
 - Search by classes/lists

- Final plenary as a regular place to report on progress from science view point:
 - Here is what was asked for ...
 - What can we do now?
- Follow projects though
 - standards development / data providers publishing / consumed in applications

ObsTAP

Objective:

- Create a simple, “good-enough” data discovery and access tool
- Define and follow Science Use Cases
- Use a minimal (ObsCore) data model plus TAP
- One year to project completion

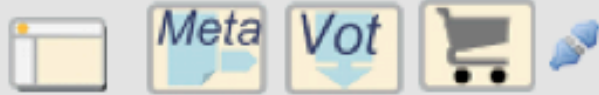
- Project start: May 2009 Strasbourg

ObsTAP



TAPHandle

Node Selector



Tap Nodes

- simtestu-strasbgfr_
- xcatdb
- gavot
- cadc

Tap Handle

Give the TAP services you want to connect with in the **Node Selector** above. You can give a URL or a service nickname (the selector will help you).

Table by dropping any table node on one active area:

Display the content of the table

Click on the **area below** to setup a query on that table

Click on the **icon** to display a description of the columns of the table.

Plain Text Query

Job Control

<http://saada.u-strasbg.fr/taphandle/#>

ObsTAP at XMM SSC

The screenshot shows the TAPHandle web interface. At the top, there is a logo with two lightbulbs and the text "TAPHandle". To the right of the logo is a "Node Selector" input field containing the text "xcatdb". Below the logo are several icons, including "Meta" and "Vote".

On the left side, there is a "Tap Nodes" tree view. The tree is expanded to show the "xcatdb" node, which is highlighted with a red box. Under "xcatdb", there are several sub-nodes: "public", "TAP_SCHEMA", "RGS_FLUXED", "EPIC_INSTIMG", "EPIC", "CATALOGUE", "ivoa", "ObsCore", and "TAP_SCHEMA". The "ivoa" and "ObsCore" nodes are also highlighted with a red box.

On the right side, there is a "Node Selector" section. It contains the following text:

*...TAP services you want to connect with in the **Node Selector** above.
...ve a URL or a service nickname (the selector will help you).*

*...by dropping any table node on one active area:
...the content of the table
...area **below** to setup a query on that table
...n to display a description of the columns of the table.*

At the bottom of the interface, there are two buttons: "Text Query" and "Job Control".

<http://saada.u-strasbg.fr/taphandle/#>

ObsTAP at GAVO

The screenshot shows the TAPHandle web interface. At the top, there is a logo with two lightbulbs and the text "TAPHandle". To the right of the logo is a text input field containing "xcatdb" and a "Node Selector" button. Below the logo is a "Tap Nodes" section with a tree view of nodes. The nodes are: gavot, danish, lspm, ucac3, arigh, potsdam, hipparcos, obscode, cars, basti, twomass, apo, arigh, and ivoa. The ivoa node is highlighted with a red box, and its sub-node ivoa.obscode is also highlighted. The main content area contains the following text:

andle

*TAP services you want to connect with in the **Node Selector** above. Give a URL or a service nickname (the selector will help you).*

by dropping any table node on one active area:

the content of the table

area below to setup a query on that table

on to display a description of the columns of the table.

At the bottom of the interface, there are two tabs: "Text Query" and "Job Control".

sbg.fr/taphandle/#

ObsTAP at CADC

The screenshot shows the TAPHandle web interface. At the top, the title is "TAPHandle" and the "Node Selector" field contains "xcatdb". Below the title, there are several icons, including "Meta" and "Vot". On the left side, there is a "Tap Nodes" tree view. The tree is expanded to show the "ivoa" node, which is highlighted with a red box. Under "ivoa", the "ivoa.ObsCore" node is also visible. The main content area on the right contains the following text:

Handle

TAP services you want to connect with in the **Node Selector** above. Give a URL or a service nickname (the selector will help you).

by dropping any table node on one active area:

the content of the table
area below to setup a query on that table
on to display a description of the columns of the table.

At the bottom of the interface, there are two tabs: "in Text Query" and "Job Control".

sbg.fr/taphandle/#



TAPHandle

cadc

Node Selector



cadc>ivoa>ivoa.ObsCore>ge4qt1csw13lqd6a

Tap Nodes

- cadc
 - TAP_SCHEMA
 - cfht
 - ivoa
 - ivoa.ObsCore
 - caom

Show 10 entries

dataprodect_type	calib_level	obs_collection	facility_name	instrument_name	obs_id	obs_publisher_did	obs_rel
image	1	CFHT	CFHT 3.6m	MegaPrime	1184039	ivo://cadc.nrc.ca/collections#CFHT/1184039/-9223370755457937589	2011-08-31
image	2	CFHT	CFHT 3.6m	MegaPrime	1184039	ivo://cadc.nrc.ca/collections#CFHT/1184039/-569422594904710792	2011-08-31
cube	2	CFHT	CFHT 3.6m	WIRCam	1107519	ivo://cadc.nrc.ca/collections#CFHT/1107519/7796858138394869023	2010-08-31
cube	1	CFHT	CFHT 3.6m	WIRCam	1107519	ivo://cadc.nrc.ca/collections#CFHT/1107519/-9223370753345119354	2010-08-31
cube	1	CFHT	CFHT 3.6m	WIRCam	1234392	ivo://cadc.nrc.ca/collections#CFHT/1234392/-9223370752796583991	2012-02-28
image	1	CFHT	CFHT 3.6m	MegaPrime	1250728	ivo://cadc.nrc.ca/collections#CFHT/1250728/-9223370749805052258	2012-02-28
image	2	CFHT	CFHT 3.6m	MegaPrime	1250728	ivo://cadc.nrc.ca/collections#CFHT/1250728/-5433310183059059850	2012-02-28
cube	1	CFHT	CFHT 3.6m	WIRCam	1279736	ivo://cadc.nrc.ca/collections#CFHT/1279736/-5780087339164094900	2012-08-31
image	1	CFHT	CFHT 3.6m	WIRCam	1279736	ivo://cadc.nrc.ca/collections#CFHT/1279736/-9223370739424055783	2012-08-31
image	3	HST	HST	WFC3	IB2Y04JPQ	ivo://cadc.nrc.ca/collections#HST/IB2Y04JPQ/6015684506981600833	2011-05-04

Showing 1 to 10 of 200 entries

Successful ObsTAP query on CADC collections via TAPHandle

- Pat Dowler and Daniel Durand produced an ObsTAP query for each of the Science Use Cases
- <http://cadcwww.dao.nrc.ca/cvo/ObsCore/>

Missing:

There do not yet exist sufficient ObsTAP services on the types of collections that will allow the Science Use Cases to be satisfied.

	Parent Directory	
	README	16-M
[]	UseCase-1.1.sh	17-M
[]	UseCase-1.1.sql	16-M
	UseCase-1.2-input.xml	16-M
[]	UseCase-1.2-reverse.sh	17-M
[]	UseCase-1.2.sh	17-M
[]	UseCase-1.2a.sql	16-M
[]	UseCase-1.2b.sql	16-M
[]	UseCase-1.3.sh	17-M
	UseCase-1.3.sql	16-M
[]	UseCase-1.4.sh	17-M
	UseCase-1.4.sql	16-M
[]	UseCase-1.5.sh	17-M
[]	UseCase-1.5.sql	16-M
	UseCase-1.6-input.xml	16-M
[]	UseCase-1.6.sh	17-M
[]	UseCase-1.6.sql	16-M
[]	UseCase-2.1.sh	17-M
	UseCase-2.1.sql	16-M



Searching on classes of sources/lists of objects

- Astronomers need to search not only on a single source but on many at the same time; and, very often, many studies are done on *populations* of sources
- For example:
 - ✓ “tell me which of my sources have been detected in the radio band”
 - ✓ “find me all the quasars at redshift > 4 with X-ray and optical images”
- This requires two things:
 1. the capability of searching on a list of targets
 2. access to source classification
- *We have been saying for quite a few years that the VO will allow exactly this kind of searches!*

Two aspects

- Capability to search using a list
 - ➔ TAP services on important resources
- Access to classifications
 - ➔ improved VO type access to SIMBAD/
NED

*** emphasis on IMPLEMENTATION ***

TAP services

Some very good signs

- Fast growth in TAP services
- Client applications for making TAP queries
- TAP upload not so difficult after all !!

for example, now you can...

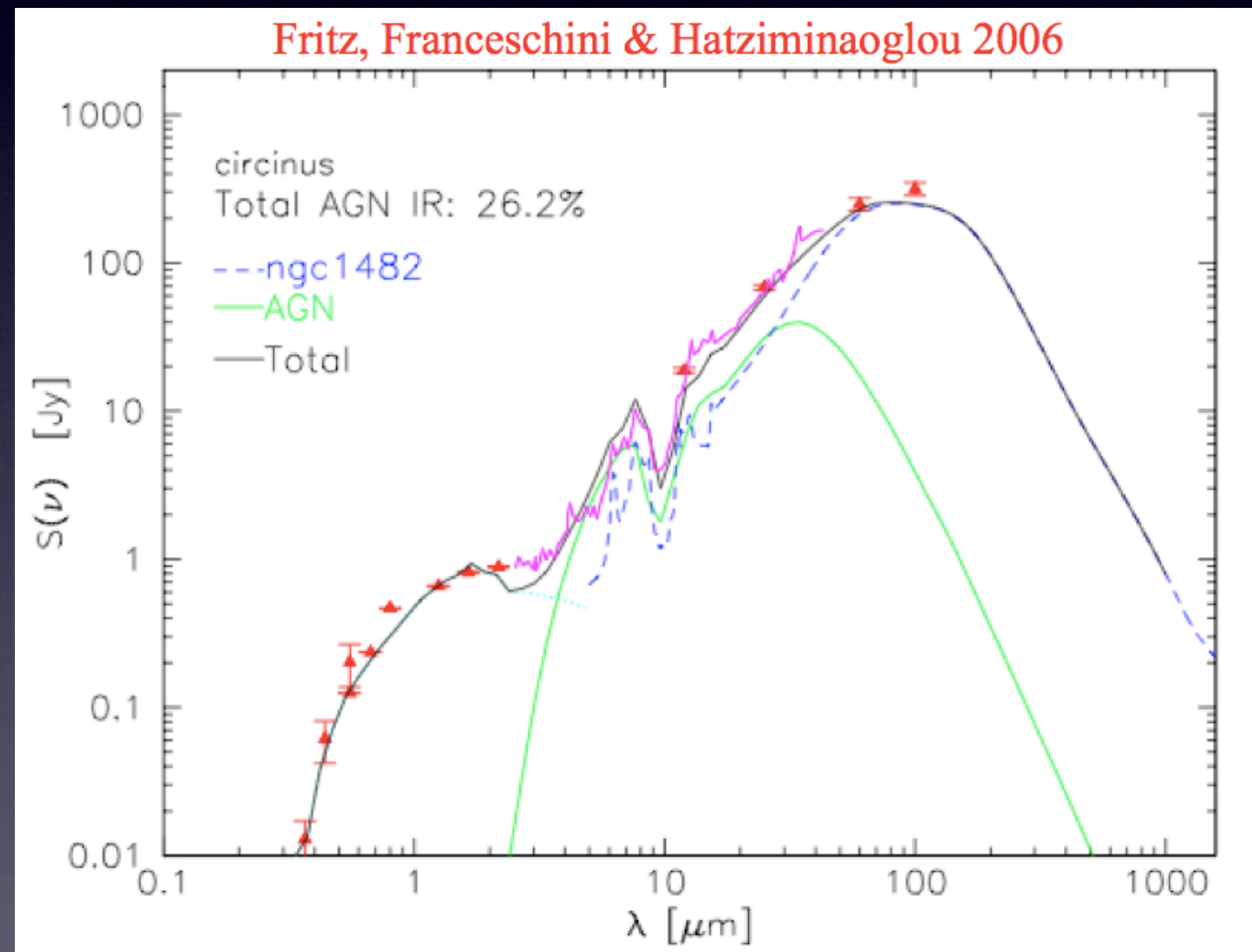
- use at least 3 different clients for making TAP queries + web interfaces +
- make a TAP query on SIMBAD by identifier (test)
- upload tables for queries that include joins on GAVO TAP tables

Missing

- Ability to easily find TAP services
 - Registration of TAP services, way to find ALL TAP services
- Wider uptake - e.g. TAP implementation from outside immediate IVOA members

SED building

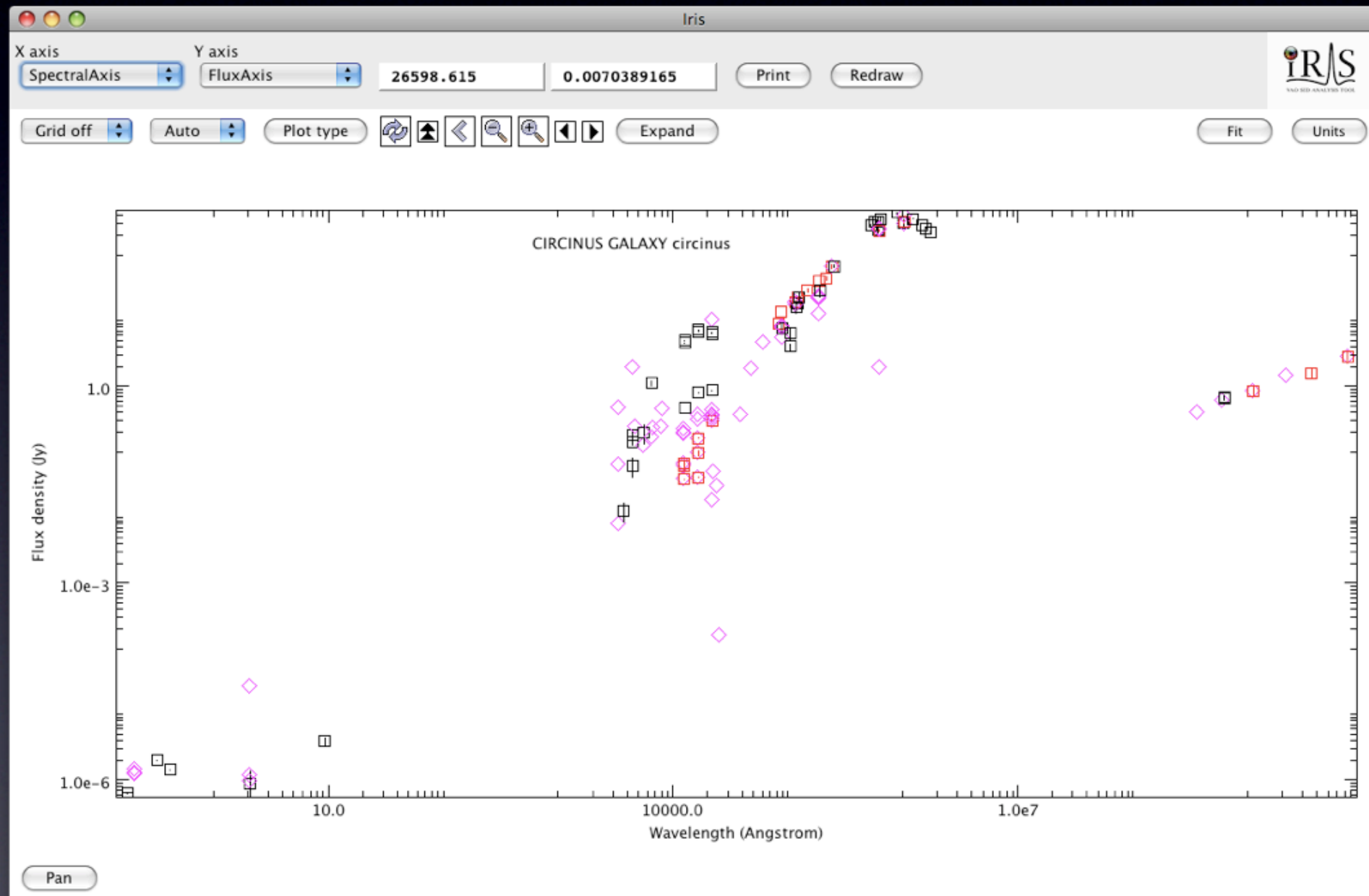
- Build SEDs from measurements published in the VO



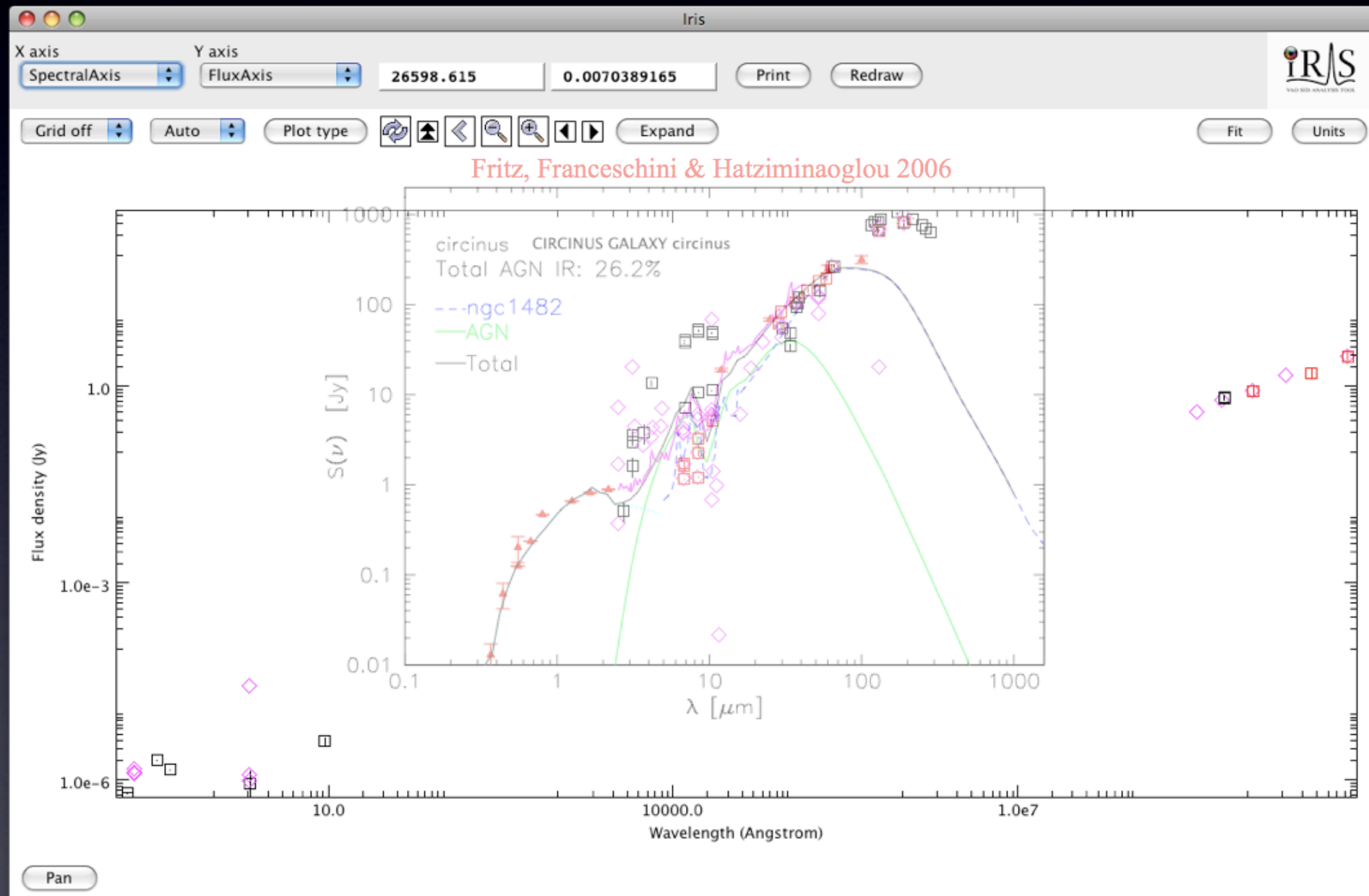
for example, now you can...

- use VAO IRIS - SED tool to find and analyse SEDs from NED, local & remote files
- use VizieR photometry 'cone-search' (test) to obtain cross-catalogue photometry for an object as an SED

e.g. NED + VizieR SEDs of Circinus



e.g. NED + VizieR SEDs of Circinus



Missing

- IVOA standard way to get data into an SED
 - finalizing the SED related standards essential

Overall

- Excellent progress!!
- SED developments - stimulating new ideas on how tools and data can work together
- TAP uptake starting to realize VO vision for tables
- Pressing issue - IMPLEMENTATION