

A CDS database & Interface for ASTRODEEP

Ricardo Amorín
(INAF-OAR)



A CDS database & Interface for ASTRODEEP

Outline

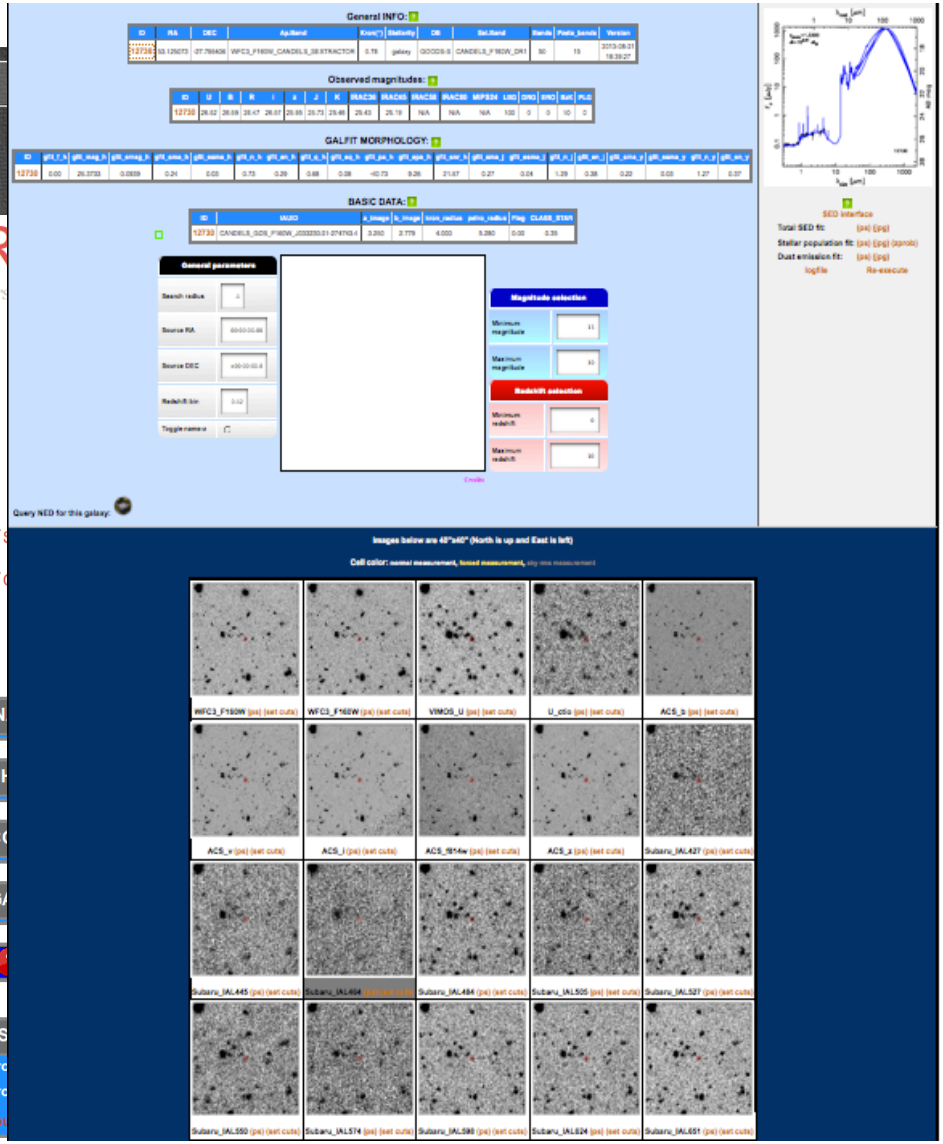
- The goal
- Examples from other projects
- A possible web interface
  - Structure and requirements
  - Example of a typical session
  - Available tools from CDS and VO

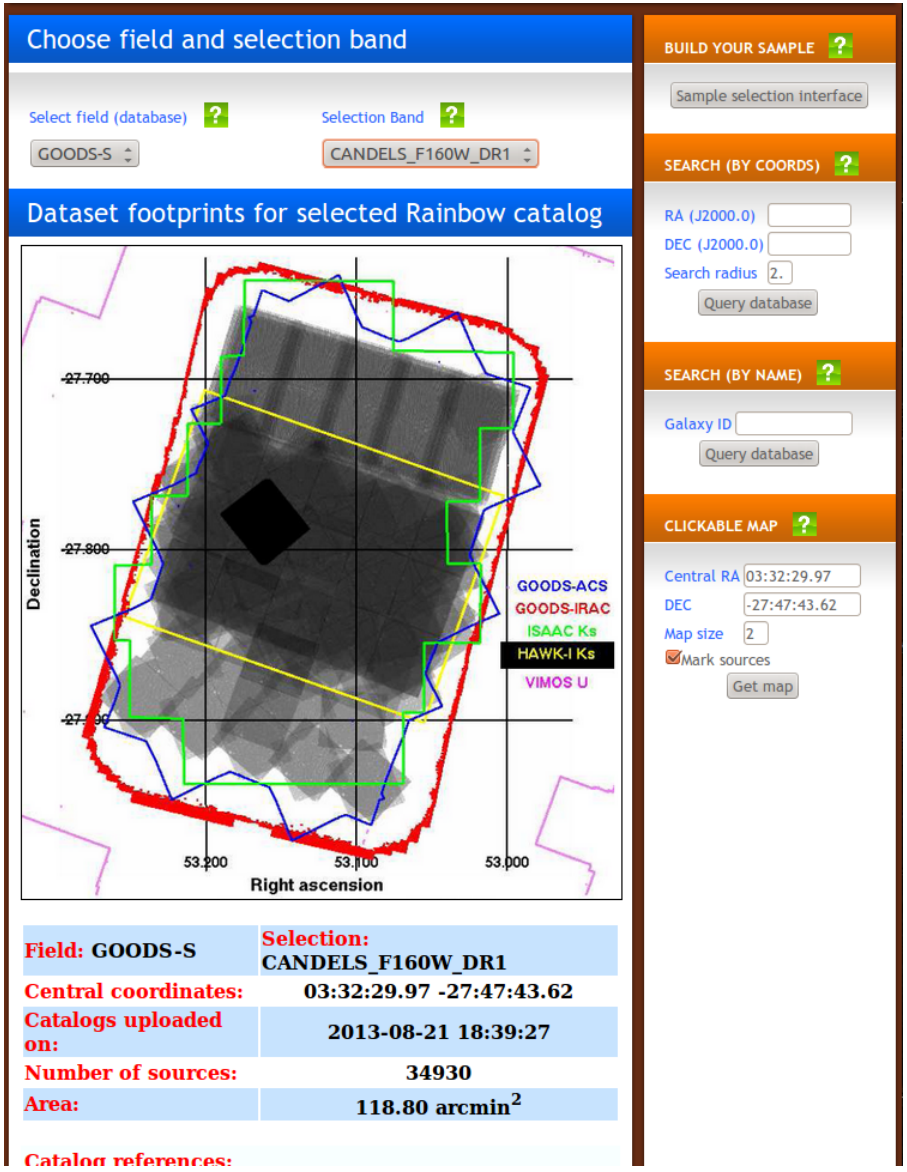
A CDS database & Interface for ASTRODEEP

Main goal:

To Provide ASTRODEEP users and the general community a Web interface not only to visualize, but to manipulate and analyze data and data products from an ASTRODEEP CDS-based database easily (intuitively) and remotely

Familiar examples





Vimos Ultra Deep Survey

VUDS Team | The Survey | The Team | Data Products | Observations handling | VUDS WIKI

Welcome to VUDS

IAU Name: VUDS J100029.49+014546.3	Alpha (J2000)	Delta (J2000)
VUDS identification : 510028255	+10:00:29.49	+01:45:46.3

Retrieve All Stamps

ACS-i



SUBARU-B



SUBARU-V



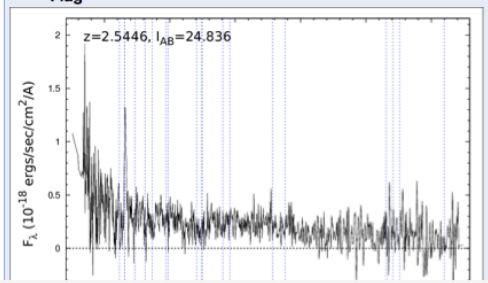
Photometric Data

mag_fuv:	-99.00	+/- -99.00
mag_nuv:	25.00	+/- -1.00
aper Mag CFHT u*:	25.78	+/- 0.06
aper Mag Subaru B:	24.85	+/- 0.05
aper Mag Subaru V:	25.17	+/- 0.07
aper Mag Subaru g+:	25.04	+/- 0.06
aper Mag Subaru r+:	25.17	+/- 0.06
aper Mag Subaru i+:	25.45	+/- 0.10
aper Mag Subaru	25.17	+/- 0.09

Spectroscopic Data

Retrieve Spectra

Spectroscopic Redshift	2.5446
Redshift Quality Flag	3



Objects Found 525

Download Data

ction Planned | Fraction Observed | Fraction Reduced | Fraction Mesured

2 - Enter the criteria

Criteria by default | Additional criteria

Spectroscopic Redshift min 2 max 3

all primary objects wi

min 17.5 max 25

Add Filters

Display 10 records

Retrieve your datatable result:

ident	alpha	delta	id_iau	spec1dnoise	z	zflags	pointing	quad	slit
510028255	150.122882	1.762887	VUDS J100029.49+014546.3	sc_510028255_F51P002_join_A_88_1_noise.fits	2.5446	3	F51P002	4	88
510032240	149.947494	1.770754	VUDS J095947.39+014614.7	sc_510032240_F51P002_join_A_74_1_noise.fits	2.3613	3	F51P002	3	74
5100327372	150.15508	1.785876	VUDS J100037.21+014709.1	sc_5100327372_F51P003_join_A_17_1_noise.fits	2.0000	3	F51P003	3	17
5100330540	150.21153	1.764034	VUDS J100050.76+014550.5	sc_5100330540_F51P003_join_A_87_1_noise.fits	2.2321	3	F51P003	3	87
510036339	149.723574	1.778389	VUDS J095853.65+014642.2	sc_510036339_F51P001_join_A_97_1_noise.fits	2.994	4	F51P001	3	97
5100521147	150.30578	1.947399	VUDS J100113.38+015650.6	sc_5100521147_F51P003_join_A_20_1_noise.fits	2.9708	4	F51P003	1	20

Photometry

i Selection Magnitude

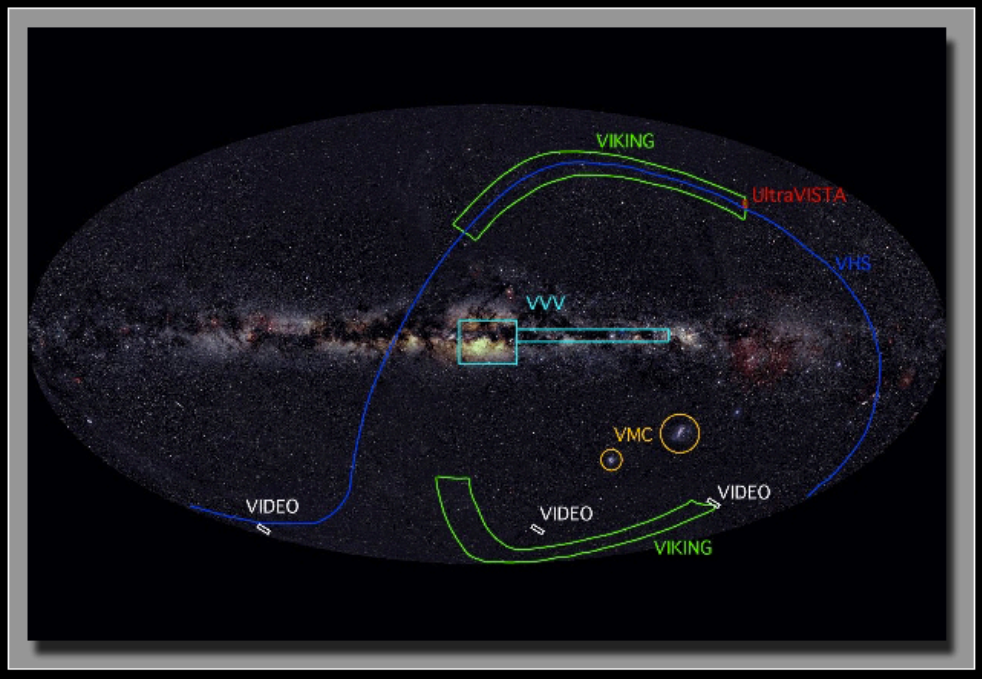
4 - Submit your request | Reset

Home | Overview | Browser | Access | Login | Cookbook VSA

VSA - VISTA Science Archive

The VISTA Science Archive (VSA) holds the image and catalogue data products generated by VIRCAM on the Visible and Infrared Survey Telescope for Astronomy (VISTA) . The primary contents of the archive originate from the VISTA Public Surveys. Survey science-ready catalogue data will be released in phases, while standard flat-file data products (both images and derived single passband catalogues) become available continually after routine observation and processing operations. Information on the various archive releases can be found on the surveys page

The history of archive releases, updates and bug fixes is recorded under the release history page. Users wishing to receive email announcements of such entries should subscribe to the VSA_Announcelist (contact vsa-support@roe.ac.uk).



- VSA Home
- Start Here
- Data Overview
- Known Issues
- the Surveys
- Coverage Maps
- Schema browser
- Data access
  - *Login*
  - *Archive Listing*
  - *GetImage*
  - *MultiGetImage*
  - *Region*
  - *Freeform SQL*
  - *CrossID*
- SQL Cookbook
- Q&A
- Glossary
- Release History

A CDS database & Interface for ASTRODEEP

Structure & requirements:

1- User levels

a) Manager/admin user: Full account with admin. permissions
b) ASTRODEEP team user: Full account without admin. permissions
c) Public user: Limited access account (or no need of account)

2- Data storage and assembling

a) ASTRODEEP-CDS servers: images, catalogs, etc..
b) Public VO databases
c) Possibility of upload local files

3- Interface and web integration

a) Interconnected widgets and VO tools
b) Possibility of opening, saving and restoring a user session
c) No need to download any data or catalog

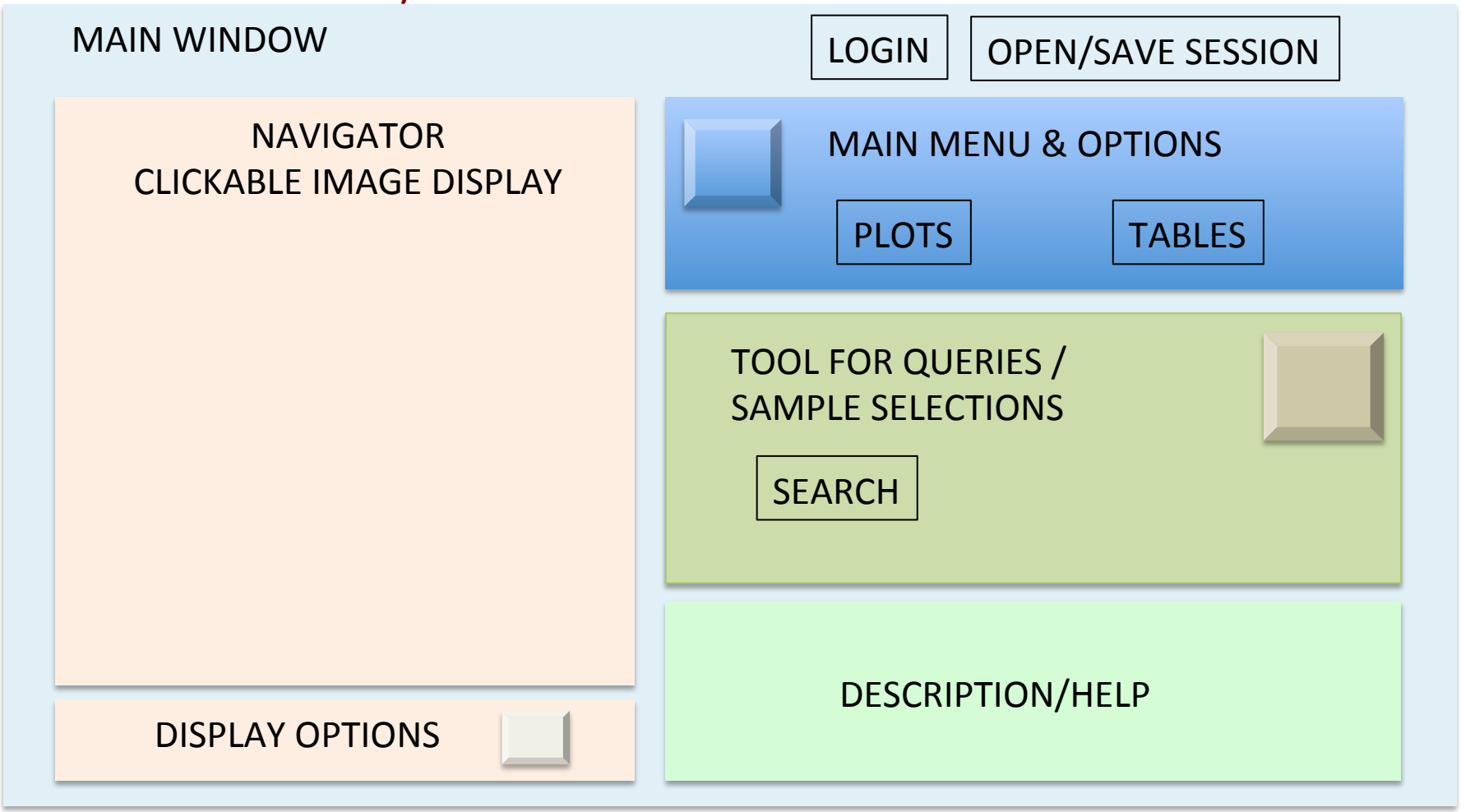
An example session

1- Browse and display one image/mosaic from an ASTRODEEP field in a given band
2- Define a sub-field by coordinates or name and a radius search
3- Load and display two or more catalogs (private or public) associated to the sub-field and identify sources on the image
4- Merge and/or cross-correlate the catalogs, do operations between columns and save results in a new catalog
5- Plot different columns from the catalog (e.g. color-magnitude) with display options
6- Define and save new sub-samples matching to some criteria, e.g.
    i) from the tables
    ii) from a plot
    iii) from a script ?
7- Visualize and manipulate data from selected objects/subsets (from plots?) :
    i) multi-band thumbnails
    ii) SEDs
8- Save and export results in a variety of formats (also queries?). Save session ? History? Possibility of scripting ?

SCHEMATIC REPRESENTATION

1- Browse and display one image/mosaic from an ASTRODEEP field in a given band

2- Define a sub-field by coordinates or name and a radius search



SCHEMATIC REPRESENTATION

3- Load and display two or more catalogs (private or public) associated to the sub-field and identify sources on the image

4- Merge and/or cross-correlate the catalogs, do operations between columns and save results in a new catalog

NEW TAB/WINDOW

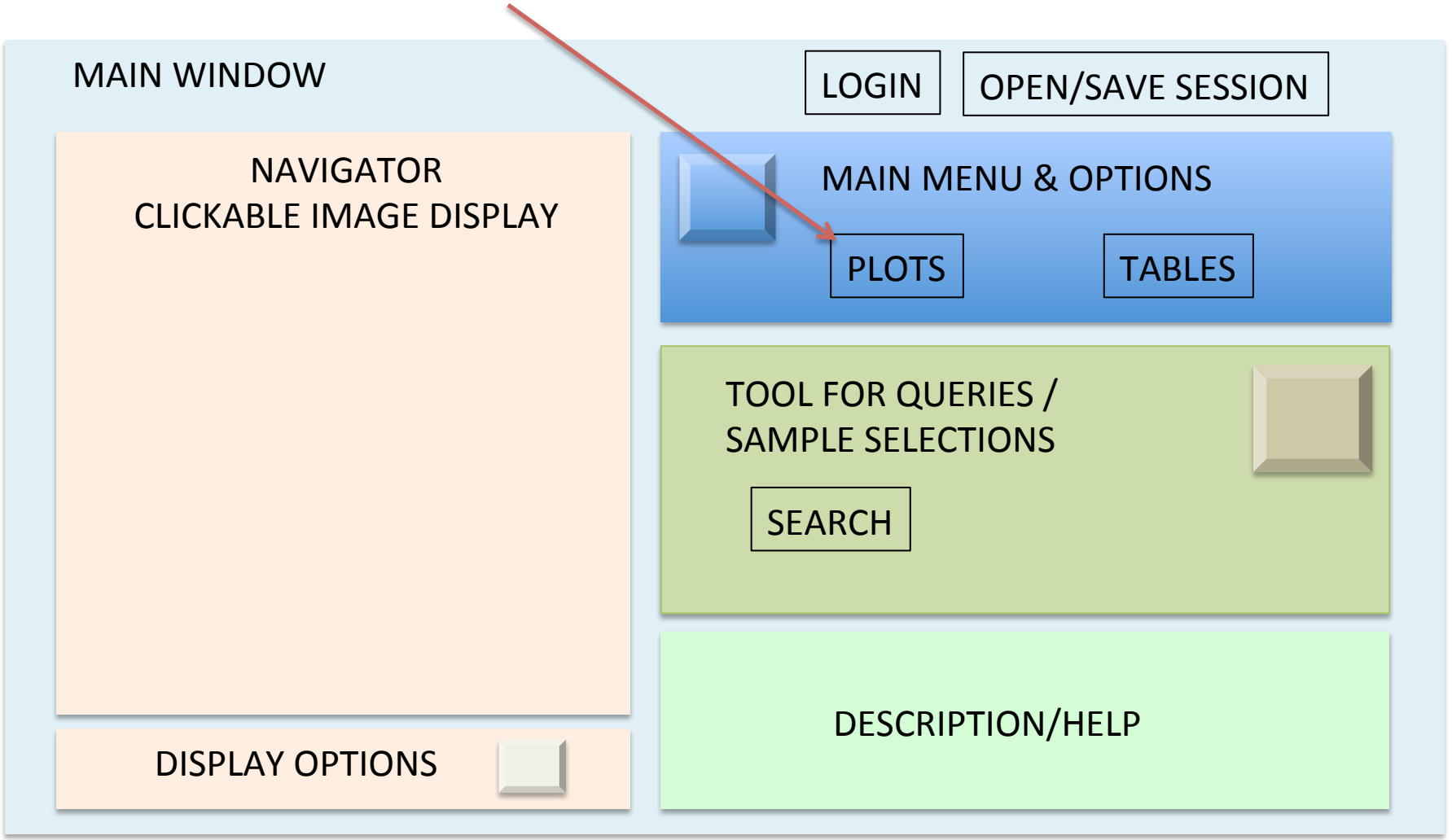
CLICKABLE/LINKABLE CATALOGS/TABLES

MENU OPTIONS/NAVIGATOR

ID	COL 1	COL 2	COL 3	COL 4	COL 5	COL 6	COL 7
1	…	…	…	…	…	…	…
2	…	…	…	…	…	…	…
3	…	…	…	…	…	…	…

SCHEMATIC REPRESENTATION

5- Plot different columns from the catalog (e.g. color-magnitude) with options



SCHEMATIC REPRESENTATION

6- Define and save new sub-samples matching to some criteria, e.g.

i) from the tables

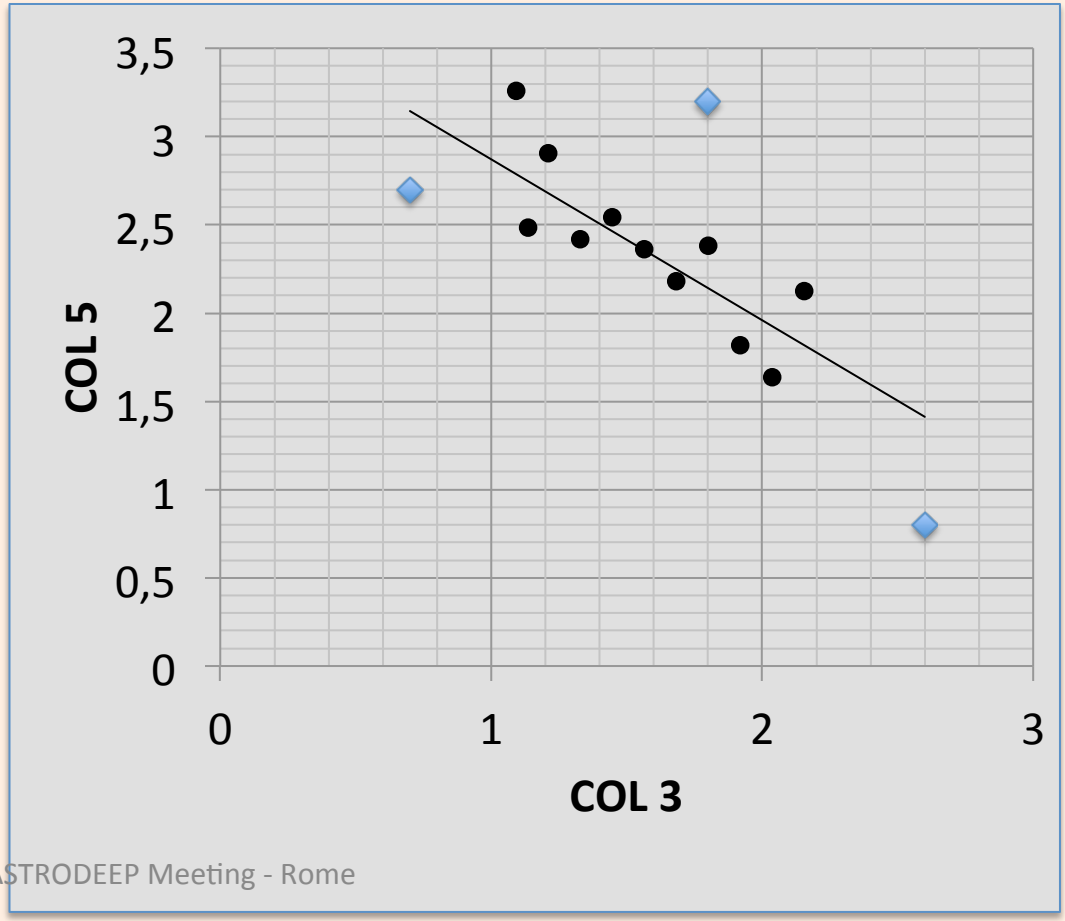
ii) from a plot

iii) from a script ?

NEW TAB/WINDOW

CLICKABLE/LINKABLE PLOTTER

MENU OPTIONS/NAVIGATOR

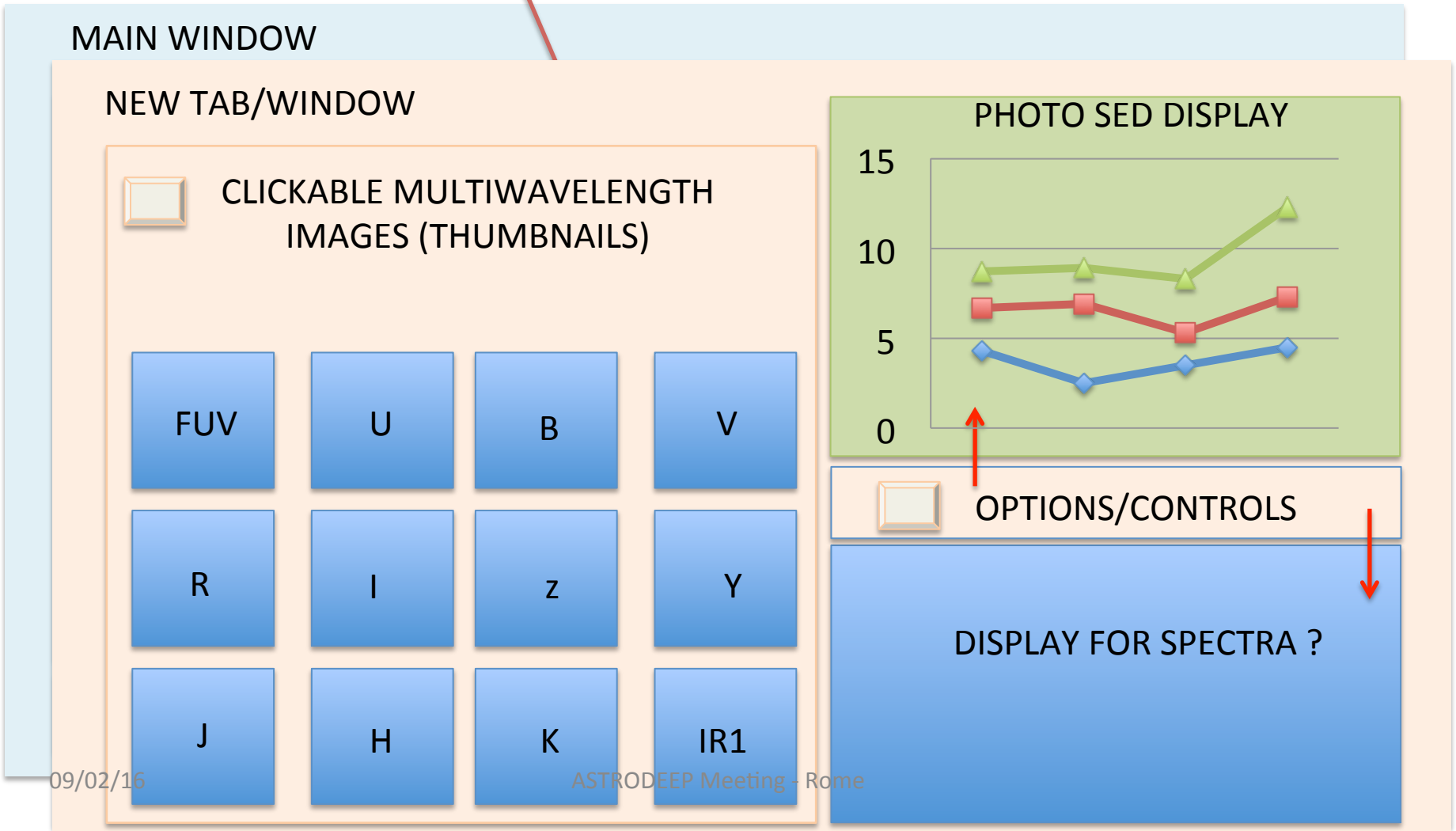


SCHEMATIC REPRESENTATION

7- Visualize and manipulate data from selected objects/subsets (from plots?) :

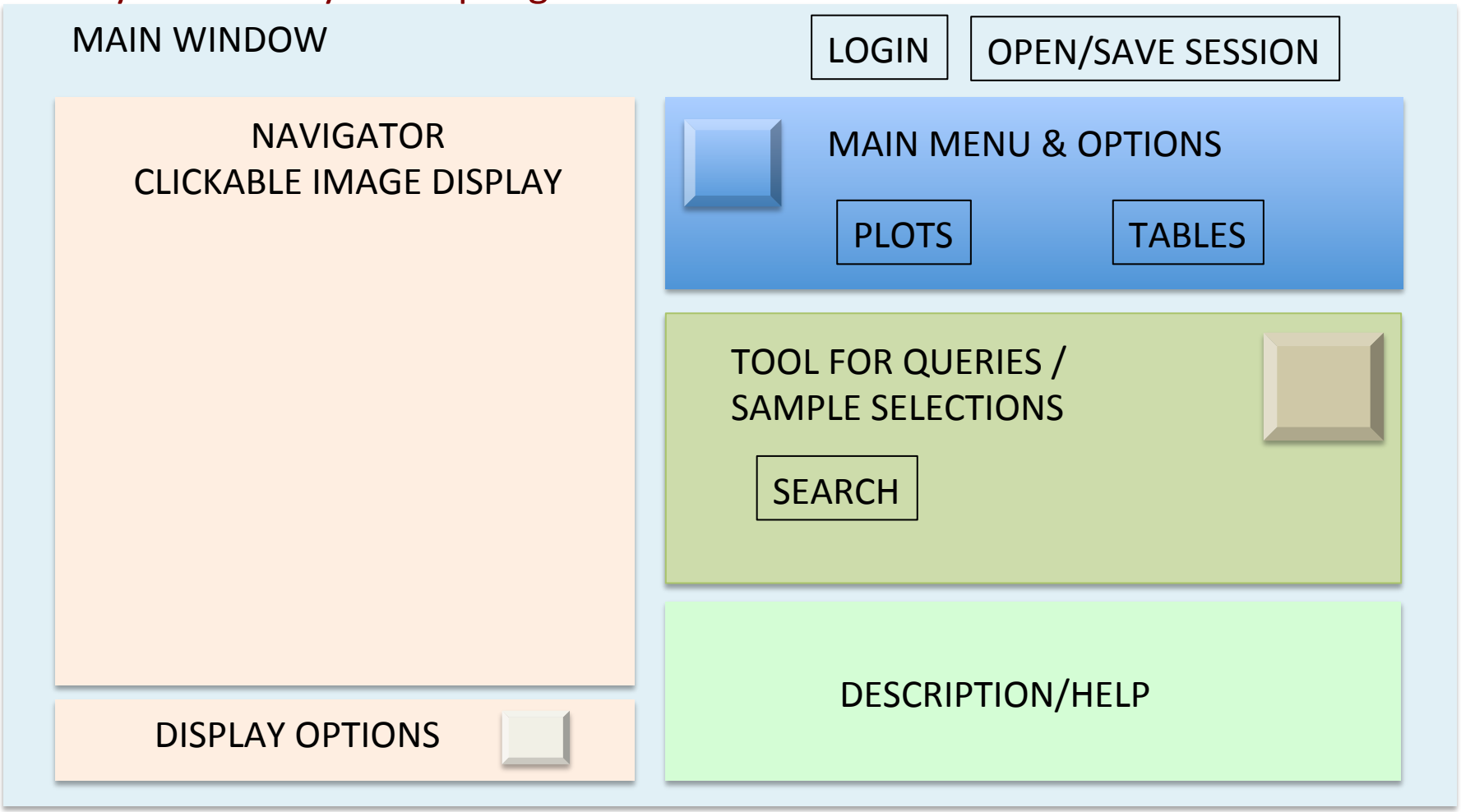
i) multi-band thumbnails

ii) SEDs



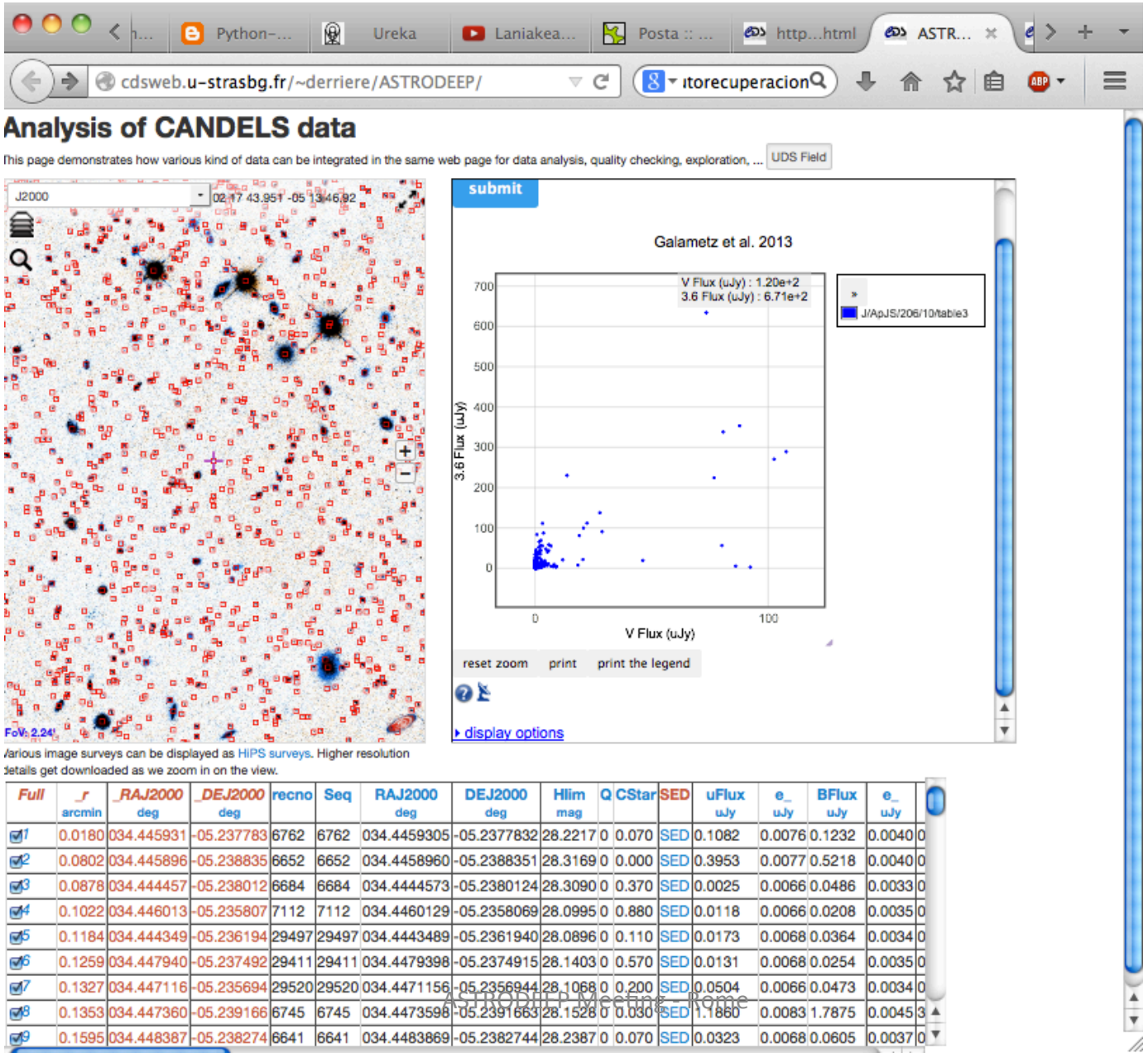
SCHEMATIC REPRESENTATION

8- Save and export results in a variety of formats (also queries?). Save session ? History? Possibility of scripting ?



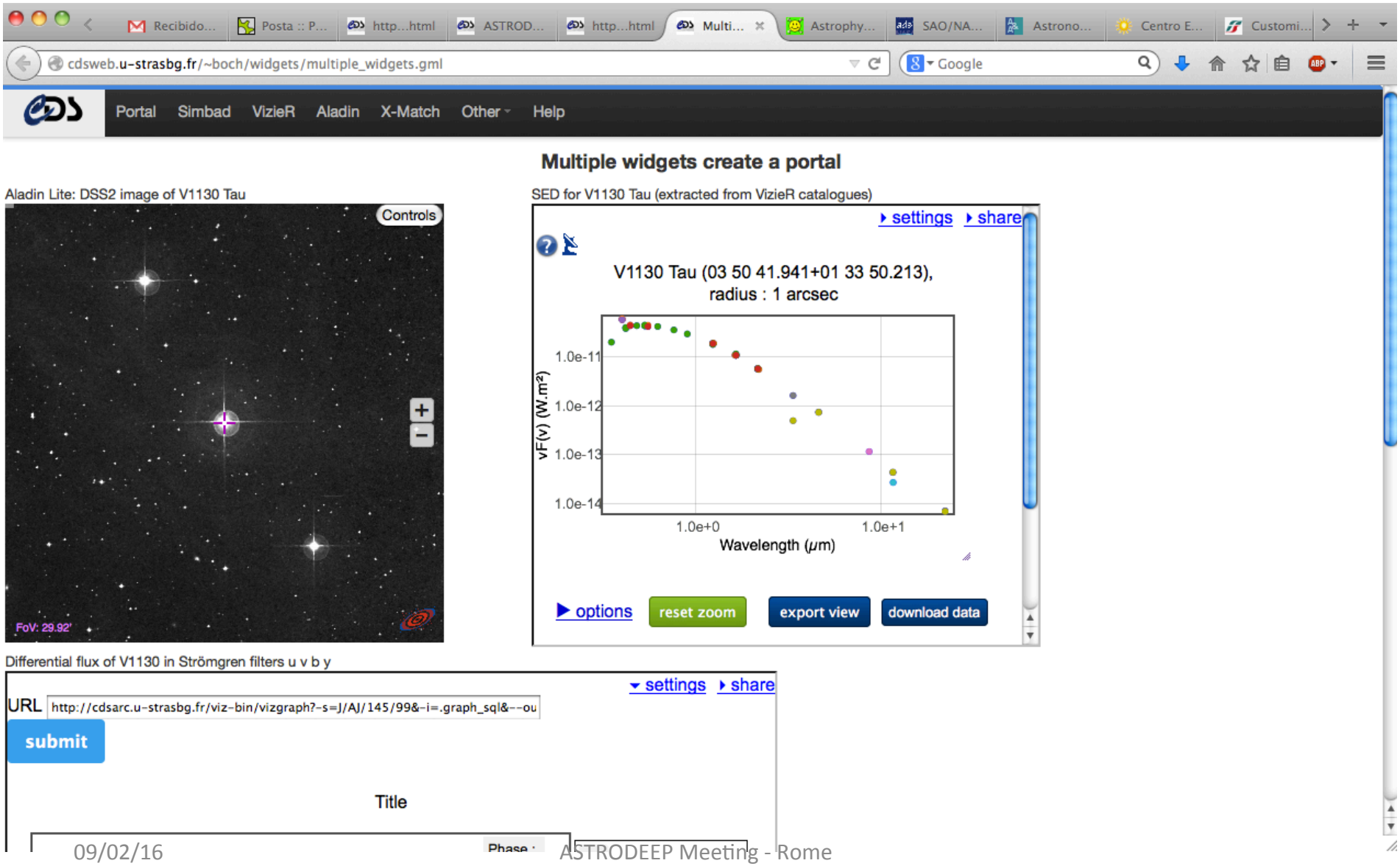
Available CDS widgets and VO tools

Aladin Lite

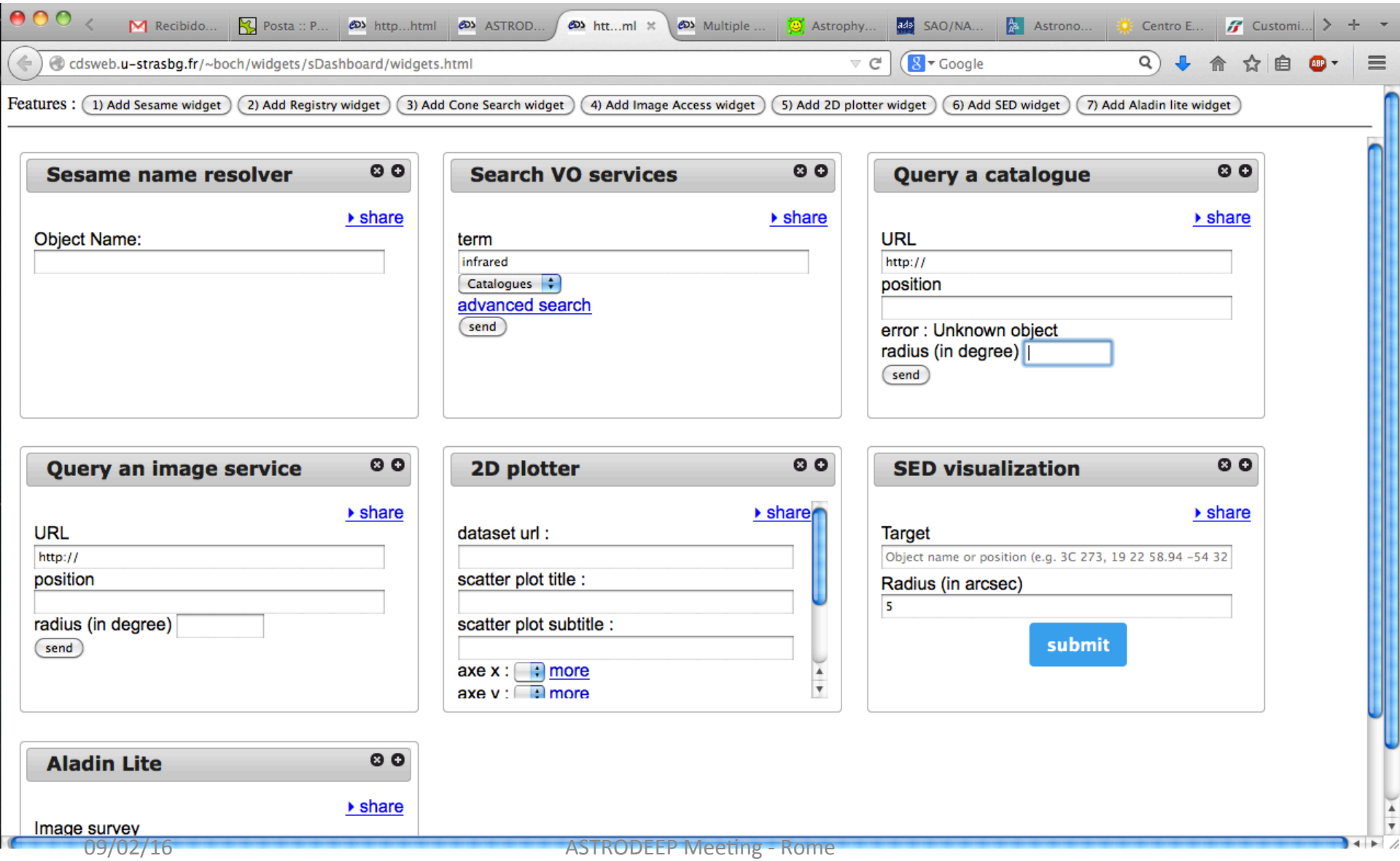


Full	_r arcmin	_RAJ2000 deg	_DEJ2000 deg	recno	Seq	RAJ2000 deg	DEJ2000 deg	Hlim mag	Q	CStar	SED	uFlux uJy	e_ uJy	BFlux uJy	e_ uJy	
1	0.0180	034.445931	-05.237783	6762	6762	034.4459305	-05.2377832	28.2217	0	0.070	SED	0.1082	0.0076	0.1232	0.0040	0
2	0.0802	034.445896	-05.238835	6652	6652	034.4458960	-05.2388351	28.3169	0	0.000	SED	0.3953	0.0077	0.5218	0.0040	0
3	0.0878	034.444457	-05.238012	6684	6684	034.4444573	-05.2380124	28.3090	0	0.370	SED	0.0025	0.0066	0.0486	0.0033	0
4	0.1022	034.446013	-05.235807	7112	7112	034.4460129	-05.2358069	28.0995	0	0.880	SED	0.0118	0.0066	0.0208	0.0035	0
5	0.1184	034.444349	-05.236194	29497	29497	034.4443489	-05.2361940	28.0896	0	0.110	SED	0.0173	0.0068	0.0364	0.0034	0
6	0.1259	034.447940	-05.237492	29411	29411	034.4479398	-05.2374915	28.1403	0	0.570	SED	0.0131	0.0068	0.0254	0.0035	0
7	0.1327	034.447116	-05.235694	29520	29520	034.4471156	-05.2356944	28.1068	0	0.200	SED	0.0504	0.0066	0.0473	0.0034	0
8	0.1353	034.447360	-05.239166	6745	6745	034.4473598	-05.2391663	28.1528	0	0.030	SED	1.1860	0.0083	1.7875	0.0045	3
9	0.1595	034.448387	-05.238274	6641	6641	034.4483869	-05.2382744	28.2387	0	0.070	SED	0.0323	0.0068	0.0605	0.0037	0

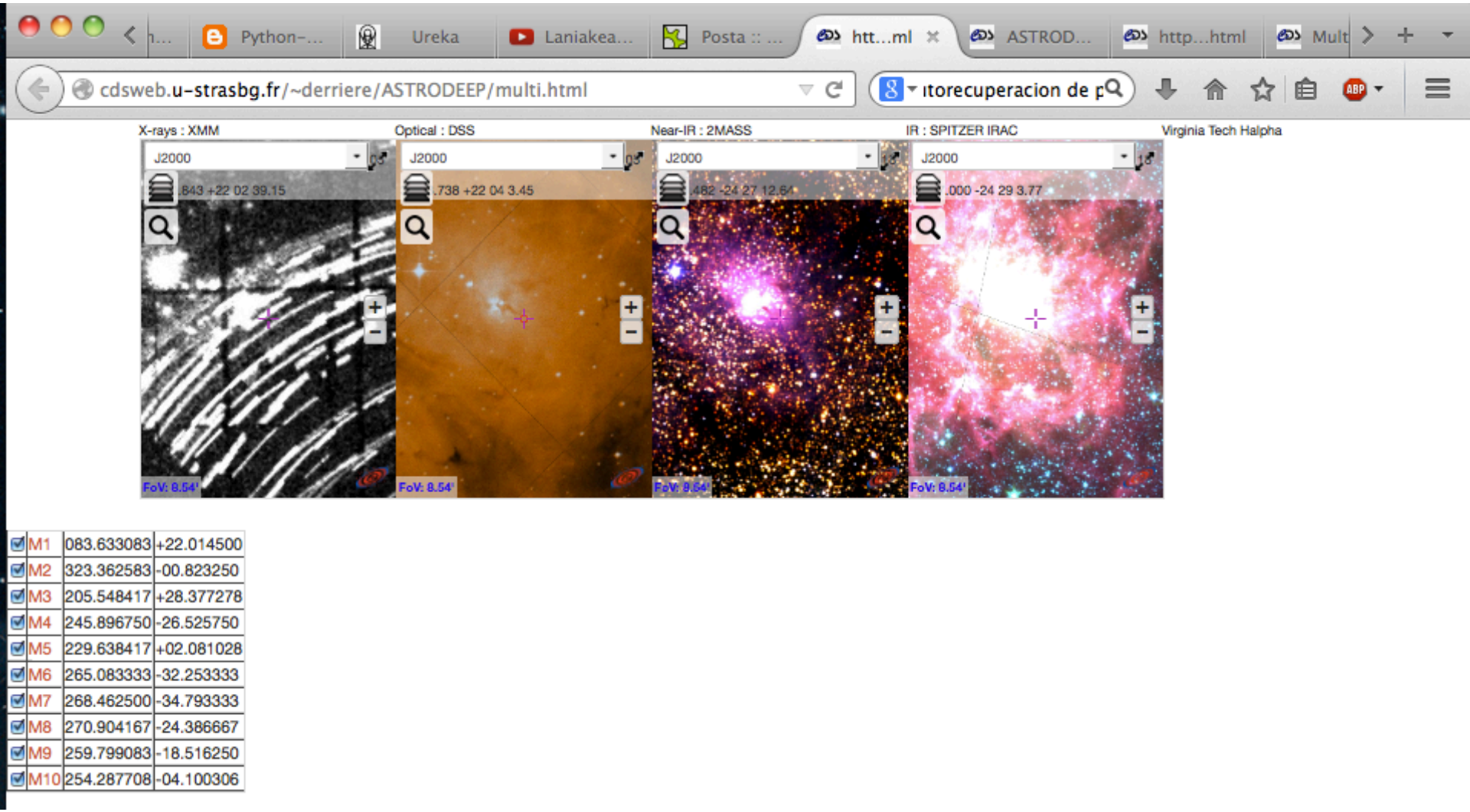
Aladin Lite + SED viewer



Making a portal with a collection of widgets

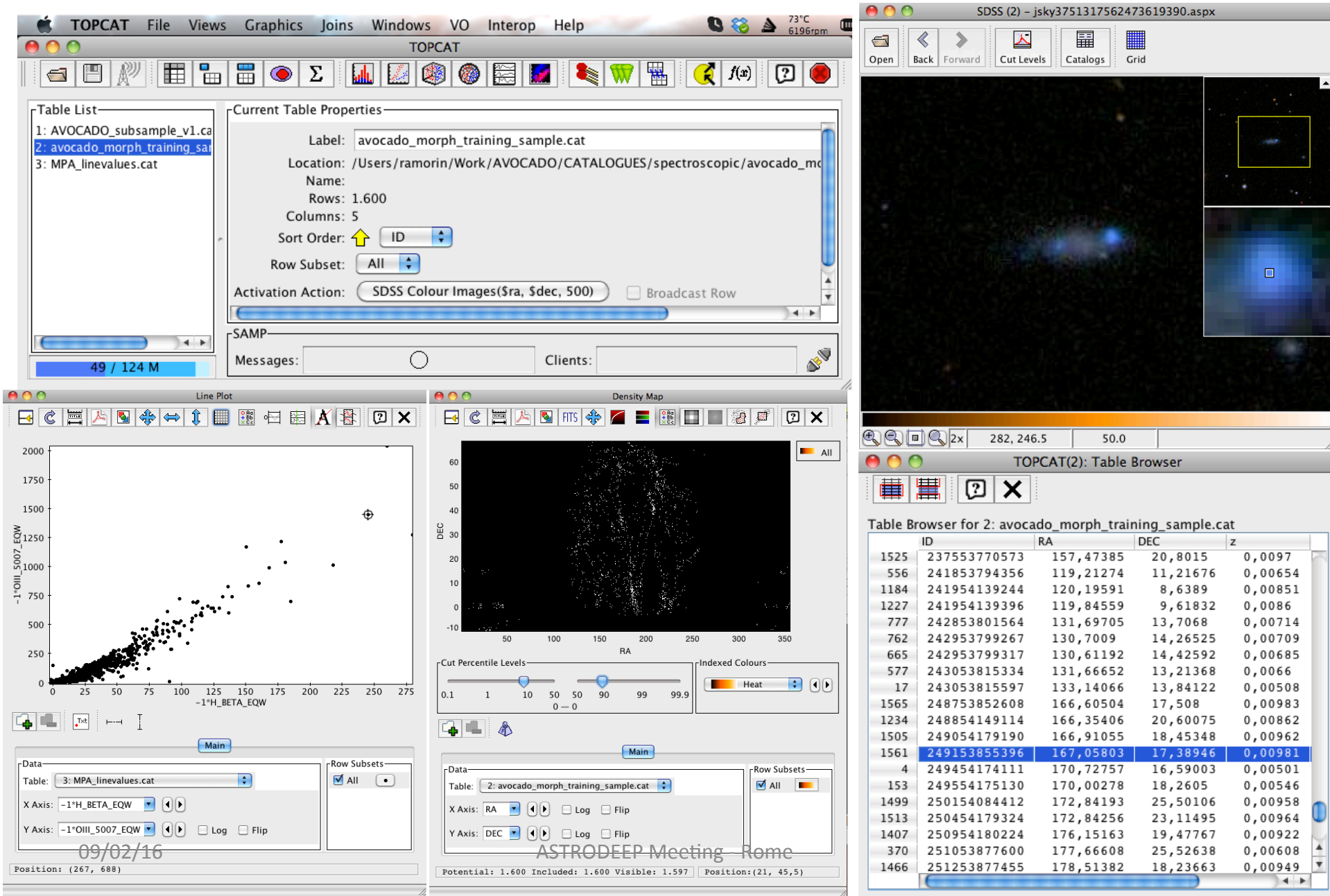


Making a portal with a collection of widgets



☑	M1	083.633083	+22.014500
☑	M2	323.362583	-00.823250
☑	M3	205.548417	+28.377278
☑	M4	245.896750	-26.525750
☑	M5	229.638417	+02.081028
☑	M6	265.083333	-32.253333
☑	M7	268.462500	-34.793333
☑	M8	270.904167	-24.386667
☑	M9	259.799083	-18.516250
☑	M10	254.287708	-04.100306

TOPCAT meets most of these features… TOPCAT Lite ?



Other Software

GLUE (http://www.glueviz.org/en/latest/)

