

# Building the ASTRODEEP data portal



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## Abstract

ASTRODEEP is a European project aiming at exploiting the deepest multi-frequency astronomical survey data. The data validation, analysis and sharing involves heterogeneous data: multi-frequency deep mosaic images, spectra, and additional data products such as spectral energy distributions or fits of photometric redshifts.

We present the dedicated data portal being developed for ASTRODEEP, using HiPS for image access through AladinLite or Aladin Desktop, SAADA for linking heterogeneous datasets, and a combination of simple widgets to build custom data analysis portals.

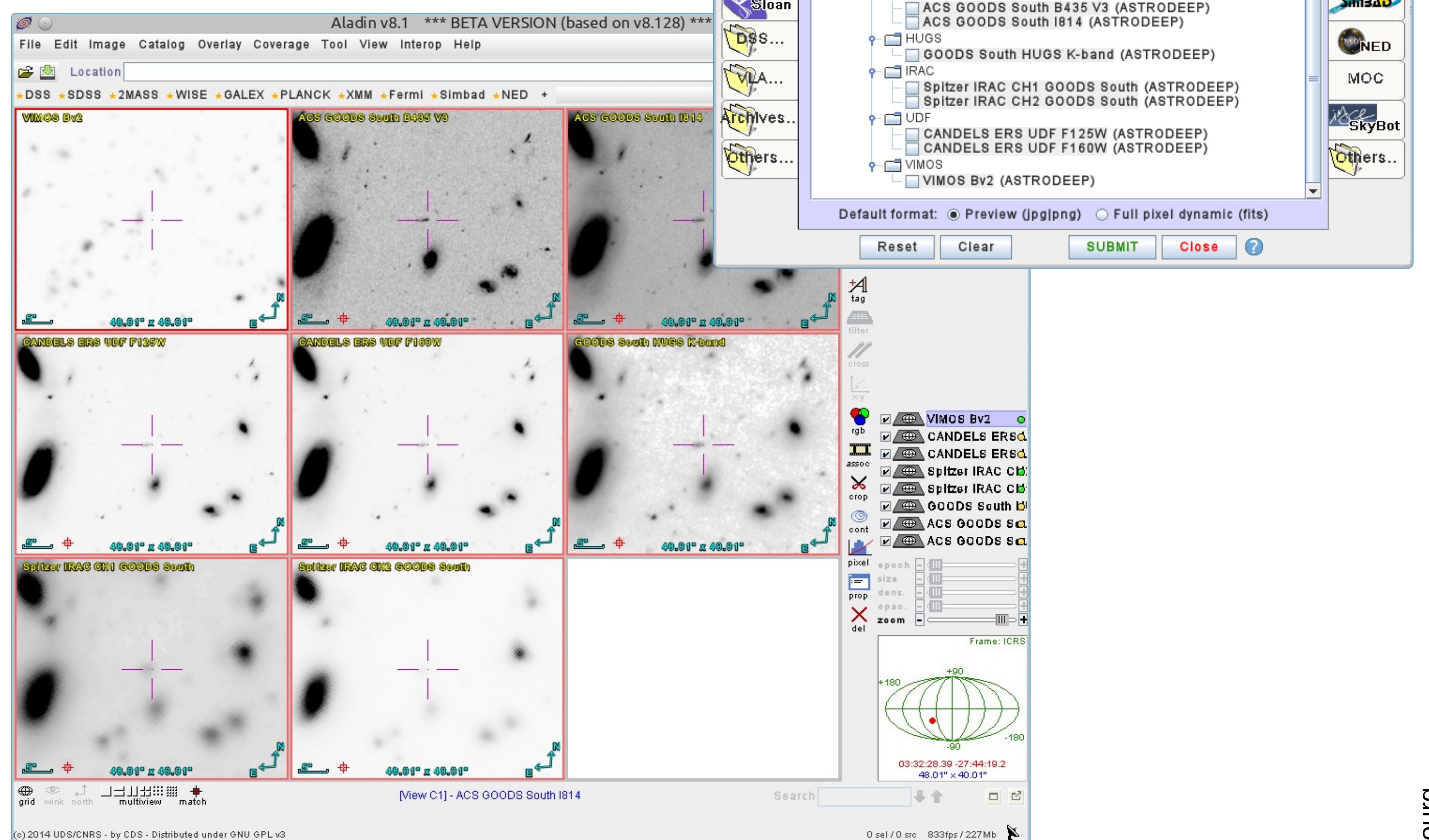
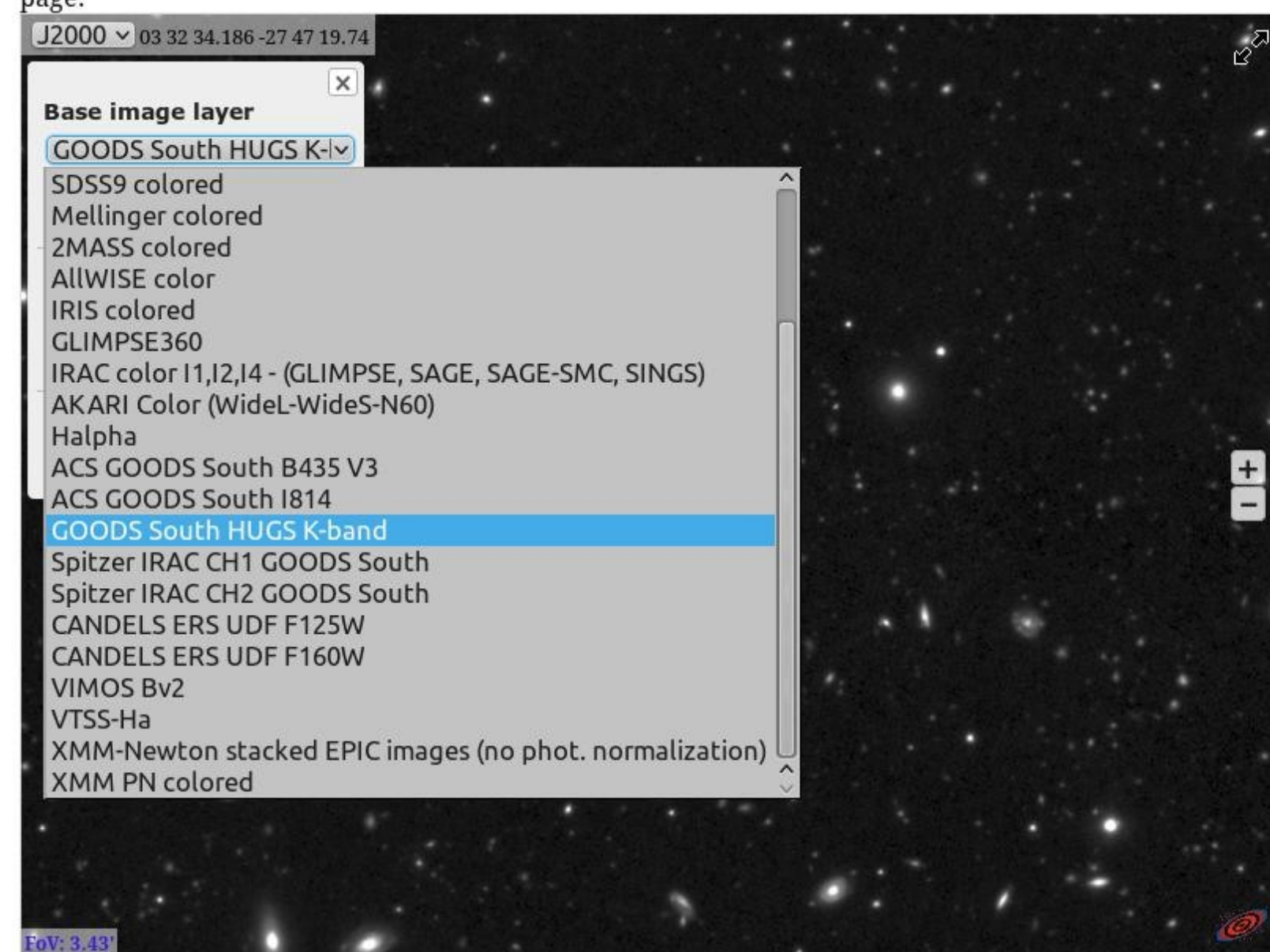
## Aladin Lite and Aladin Desktop

AladinLite allows to embed image data in a web page. Several instances, displaying different bands, can be integrated and synchronized side-by-side for data analysis.

Aladin Desktop can access the same HiPS data thanks to a dedicated dictionary entry.

### Aladin Lite view

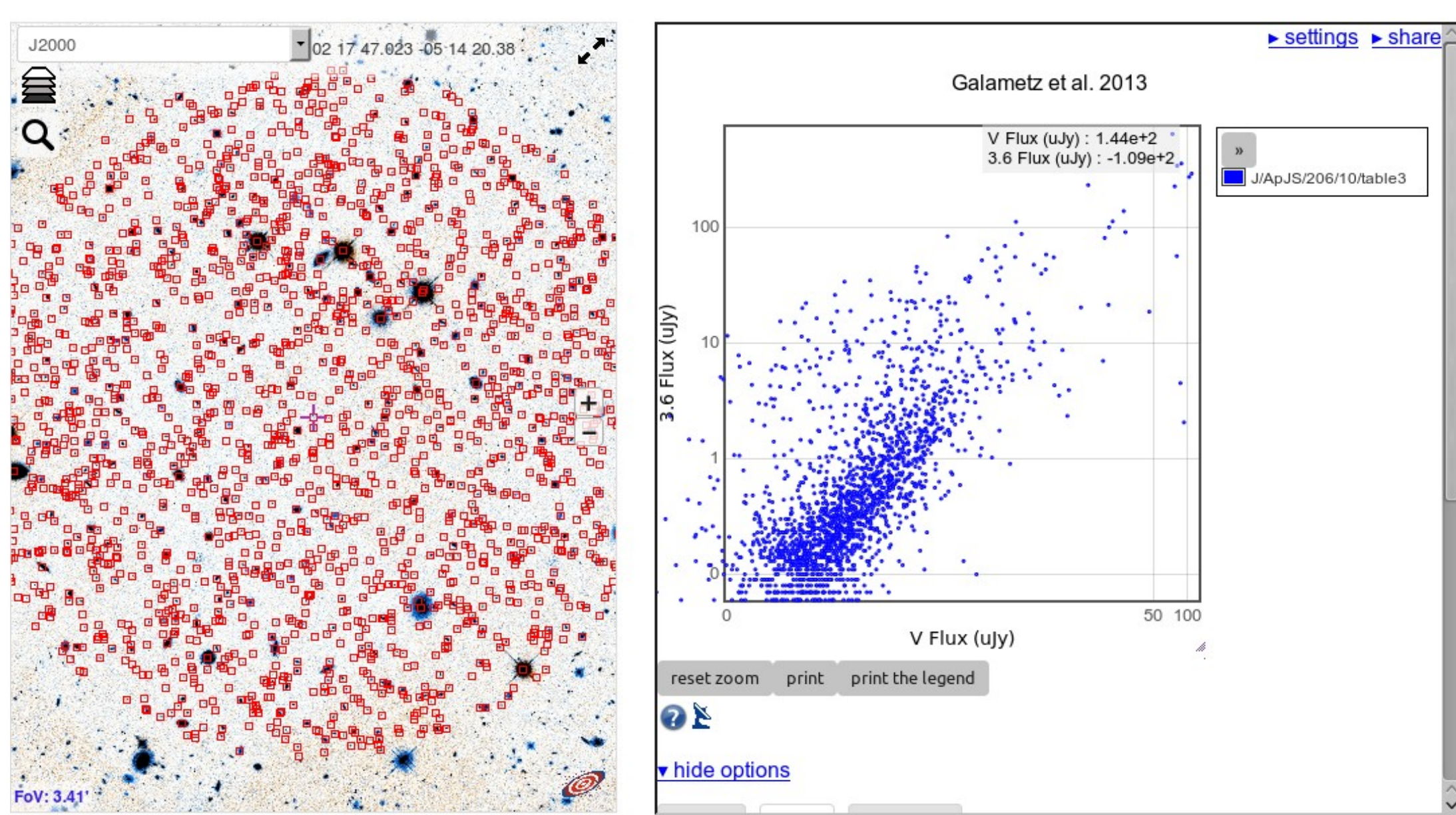
Images of the GOODS South field in 8 different bands have been computed in HiPS, you can click the stack icon in the upper left to change the image base layer. Other surveys are also available for comparison. Higher resolution images are retrieved as you zoom in. Such AladinLite view can be easily embedded in any web page.



## Linking data products

We have used SAADA to integrate additional heterogeneous data (catalogues, image thumbnails, spectra, SED, photometric redshift fits, ...), and build links between the data products.

Using simple widgets (2D-plots, catalogue display), one can also build custom web pages, for in-depth data analysis.



Full	_f	_RAJ2000	_DEJ2000	recno	Seq	RAJ2000	DEJ2000	Hlim	QCStar	SED	uFlux	e_ujy	BFlux	e_ujy	V
✓1	0.0180	034.445931	-05.237783	6762	6762	034.4459305	-05.2377832	28.2217	0.070	SED	0.1082	0.0076	0.1232	0.0040	0.11
✓2	0.0802	034.445896	-05.238835	6652	6652	034.4458960	-05.2388351	28.3169	0.000	SED	0.3953	0.0077	0.5218	0.0040	0.56
✓3	0.0878	034.444457	-05.238012	6684	6684	034.4444573	-05.2380124	28.3090	0.370	SED	0.0025	0.0066	0.0486	0.0033	0.01
✓4	0.1022	034.446013	-05.235807	7112	7112	034.4460129	-05.2358069	28.0995	0.880	SED	0.0118	0.0060	0.0208	0.0035	0.03
✓5	0.1184	034.444349	-05.236194	29497	29497	034.4443489	-05.2361940	28.0896	0.110	SED	0.0173	0.0068	0.0364	0.0034	0.04
✓6	0.1259	034.447940	-05.237492	29411	29411	034.4479398	-05.2374915	28.1403	0.570	SED	0.0131	0.0068	0.0254	0.0035	0.02
✓7	0.1327	034.447116	-05.235694	29520	29520	034.4471156	-05.2356944	28.1068	0.200	SED	0.0504	0.0066	0.0473	0.0034	0.05
✓8	0.1353	034.447360	-05.239166	6745	6745	034.4473598	-05.2391663	28.1528	0.030	SED	1.1860	0.0083	1.7875	0.0045	3.14
✓9	0.1595	034.448387	-05.238274	6641	6641	034.4483869	-05.2382744	28.2387	0.070	SED	0.0323	0.0068	0.0605	0.0037	0.05

workingDB GOODS\_South>ENTRY>candels\_3dhtEntry

Position	Error (arcsec)	Name	Rel : ToThumbnail	Rel : ToSED	Rel : ToTPZ	Rel : ToSpect
03:32:24.41-27:57:30.4 (s)	Not Set	GOODS_South-candels_3dhtEntry03 32 24.4-27 57 30		1 links	No index!!	4 links
03:32:19.70-27:57:13.2 (s)	Not Set	GOODS_South-candels_3dhtEntry03 32 19.7-27 57 13		1 links	No index!!	4 links
03:32:17.87-27:56:58.3 (s)	Not Set	GOODS_South-candels_3dhtEntry03 32 17.9-27 56 58		1 links	No index!!	4 links
03:32:20.57-27:56:56.3 (s)	Not Set	GOODS_South-candels_3dhtEntry03 32 20.6-27 56 56		No link	No index!!	4 links
03:32:29.28-27:56:19.4 (s)	Not Set	GOODS_South-candels_3dhtEntry03 32 29.3-27 56 19		No link	No index!!	4 links

## Outreach

Interestingly, the availability of HiPS for very deep surveys allows to create very easily high resolution image posters, such as the one displayed here (HUGS – GOODS-South K-band) during the « Fête de la Science », in October 2015. This can be used to introduce the public to the deepest images obtained to date.

