Pierre Fernique

CDS council – nov 2013
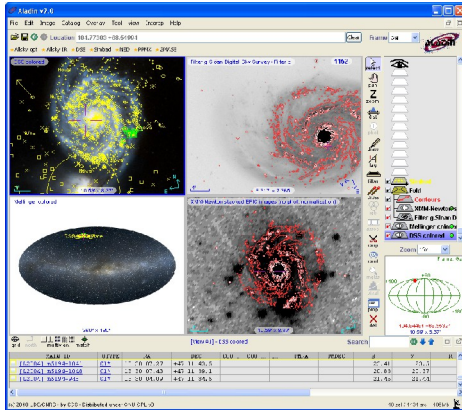
Aladin 2013 milestones

1) **Aladin Lite** first release

2) « Hierarchical Progressive Surveys » (**HiPS**) extensive usage
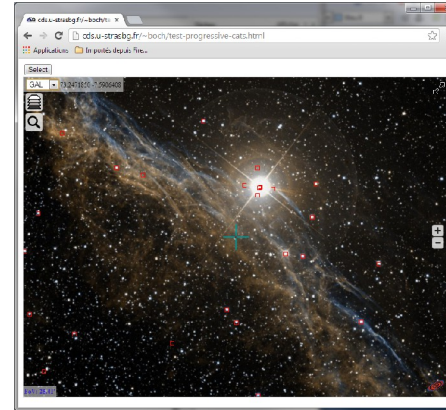
3) Strong & productive **R&D** efforts

Aladin tool:
Two approaches, Two usages

Aladin

- Java
- Classic installation
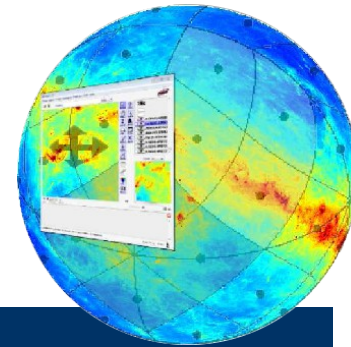- All features

Aladin Lite

- Javascript
- Inside browser (no installation)
- Display & Selection functionalities
- Alternative to applet

Demo in 10mn

HiPS
Remind me what it is ?

The CDS promotes a method for visualizing surveys based on the HEALPix sky tessellation. This method, called "Hierarchical Progressive Survey" or HiPS, allows one to display a survey progressively, based on the principle that "the more you zoom in on a particular area the more details show up".
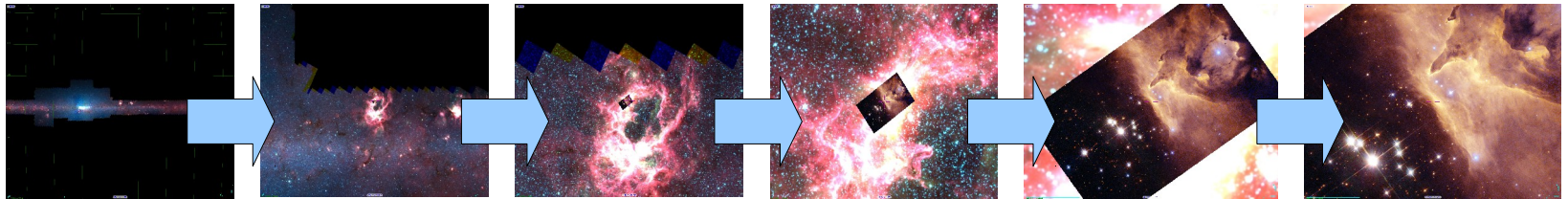
HiPS generation
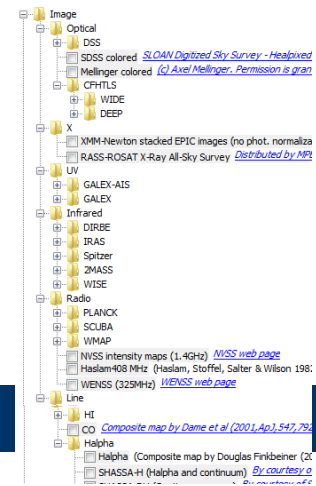
- 2012 : 76 surveys/19To => 2013 : 130/30To

- Hardware upgrade 40T => 100To

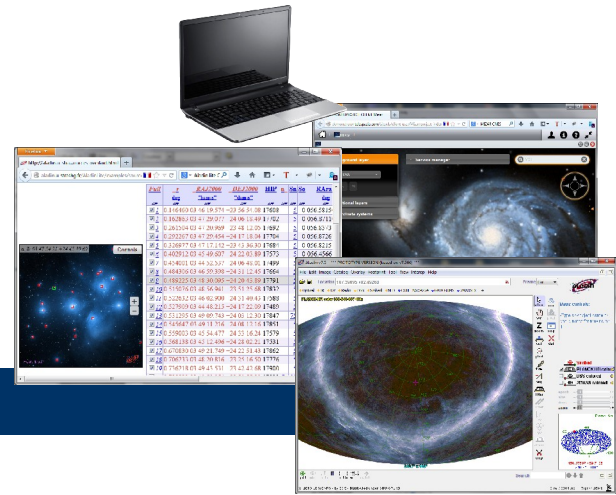- Software Skygen HiPS generator (available in GUI mode and batch mode)

- CDS :CFHTLS, PLANCK, Fermi, DSS F+R, SDSSDR9 color, ULTRAVISTA, ...

  In preparation : SDSSDR9 bands

- IRAP collaboration: DIRBE, IRIS, BOLOCAM, DWINGELOO, VGPS, GASS, LAB, ...

- CADC collaboration: HST bands

- In test :
  ROE => VISTA
  MAST =>GALEX

HiPS usages

- New HiPS compatible clients

Tool	Technology	First release date	Origin[1]
Aladin	Java	2009	CDS
Mizar	HTML5/WebGL	2012	CNES
Aladin Lite	HTML5/Canvas	2013	CDS
Imaging Toolbox	Aladin Lite extension	2013	Blackwaterskies
MAST portal	Flash	in test	VAO
Asterope	Java	in progress	Kotek

- GAIA CU9 usage of HiPS for catalog browsing
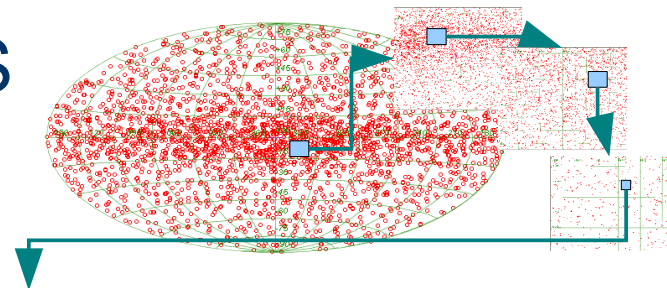
☐	*194352279-000007+	11.264	16.803	18.104	15.613	15.064	266.5686...	-58.92849...	196.7	6.594	-35.929
☐	*194352279-000007A	11.600	17.179	18.440	16.006	15.465	266.5686...	-58.92849...	196.7	6.594	-35.929
☐	*194352279-000007B	12.700	18.136	19.535	16.909	16.341	266.5685...	-58.92849...	196.7	6.594	-35.929
☐	*194352279-000002	8.200	15.355	16.169	14.421	14.001	266.5812...	-58.92159...	324.6	-37.630	-31.244

Aladin 2013 R&D actions

- ## HiPS adaptation for catalogs

- ## Progenitor facility
  (allow to retrieve original images from HiPS)

Details in R&D talk
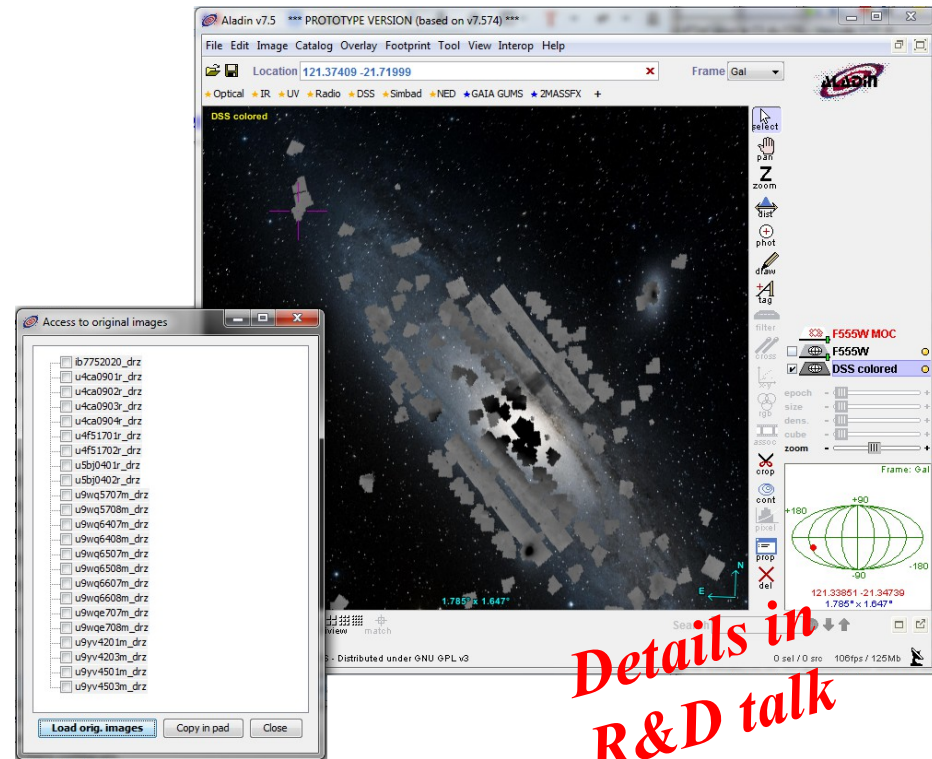
Aladin statistics

Oct 2013

- 1 500 sessions/day ↓

- 30 0000 queries/day ↑

- 120 software installations/day ↓

- 176 citations ↑ (2000A&AS..143...33B)

- 130 HiPS surveys ↑↑

- ~100 Aladin Lite/day ↑

- ~2 FTE ↓ (P.Fernique, T.Boch, F.Bonnarel)

Citations/Publication Year for 2000A&AS..143...33B
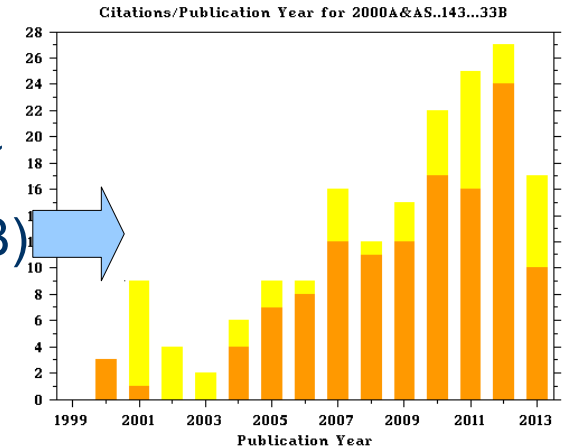
Evolution

Since 3 years
More astronomers
Less visitors

Audience

Hosts

Install

Usage

CADC batch usage

All-sky display
& conventional access
(images + catalogs)

HiPS queries

Queries

Sessions

(*) per month

All figures

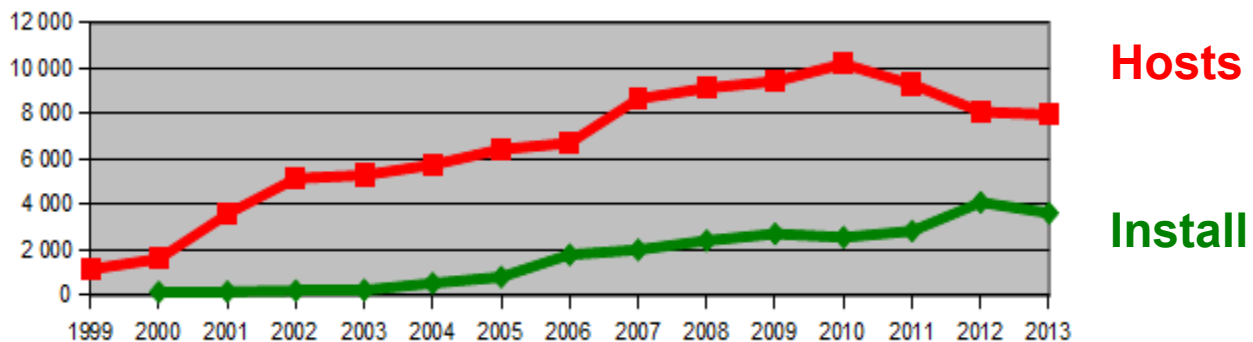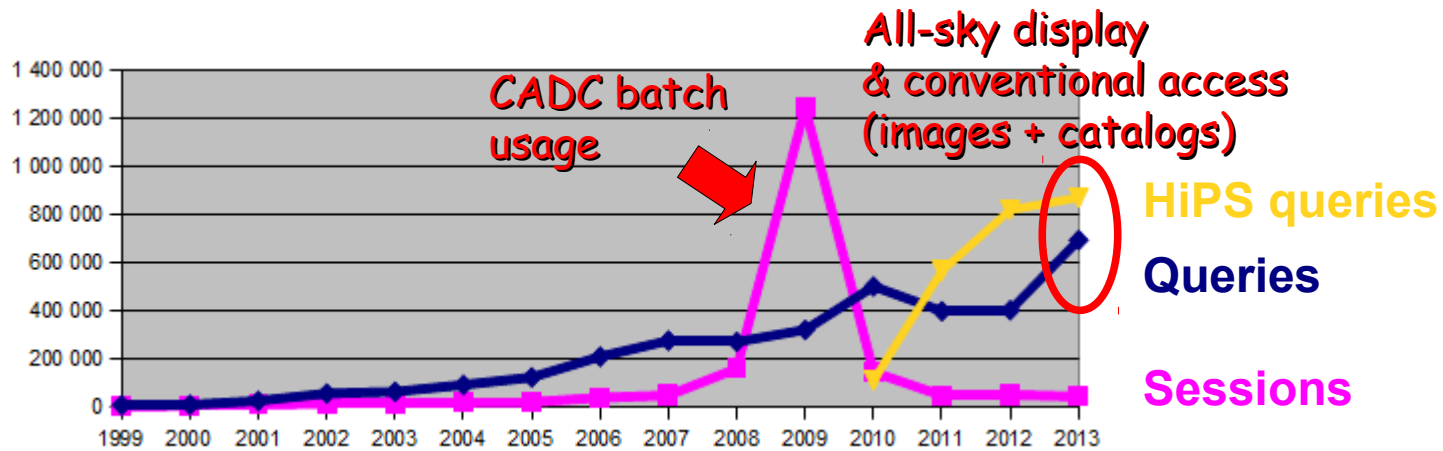| Pe month	Hosts		Queries		Sessions		Install		Healpix queries	
1999	1 158		8 599		2 327					
2000	1 619	40%	10 074	17%	5 017	116%	158			
2001	3 595	122%	26 323	161%	10 228	104%	172	9%		
2002	5 163	44%	56 870	116%	14 497	42%	215	25%		
2003	5 311	3%	63 969	12%	15 231	5%	244	13%		
2004	5 769	9%	92 425	44%	18 431	21%	545	123%		
2005	6 449	12%	123 775	34%	20 979	14%	823	51%		
2006	6 726	4%	209 841	70%	39 328	87%	1 807	120%		
2007	8 677	29%	276 301	32%	49 127	25%	2 021	12%		
2008	9 146	5%	271 435	-2%	160 437	227%	2 422	20%		
2009	9 444	3%	320 963	18%	1 244 584	676%	2 722	12%		
2010	10 215	8%	501 842	56%	145 250	-88%	2 572	-6%	111 473	
2011	9 319	-9%	398 752	-21%	48 089	-67%	2 847	11%	566 314	408%
2012	8 100	-13%	402 840	1%	51 241	7%	4 111	44%	820 147	45%
2013	7 976	-2%	694 514	72%	43 645	-15%	3 641	-11%	870 966	6%

Next steps...

- Promote Aladin Lite (replace applet,...)
- Stabilize HiPS catalog production
   (related to large catalog ingestion pipe-line)
- Unify metadata (catalogs, images, MOCs)
- Finalize HiPS progenitor R&D task
- Start R&D task for HiPS cube

- Aladin V8 release (for Christmas) : MOC tool, PM tool, SED tool, HiPS support improvement, VO standard update (VOTable 1.3, STC, SAMP ...)

Aladin Lite demo

By Thomas Boch