Advanced Aladin

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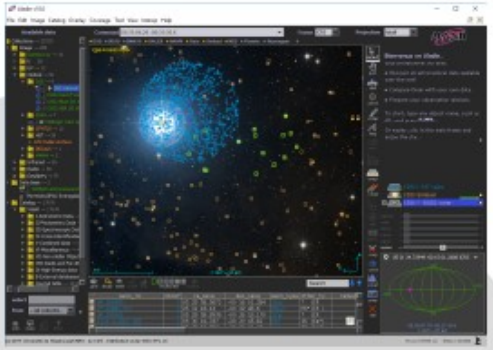
Astronomy ESFRI & Research Infrastructure Cluster
ASTERICS - 653477

What's new in release V10 ?

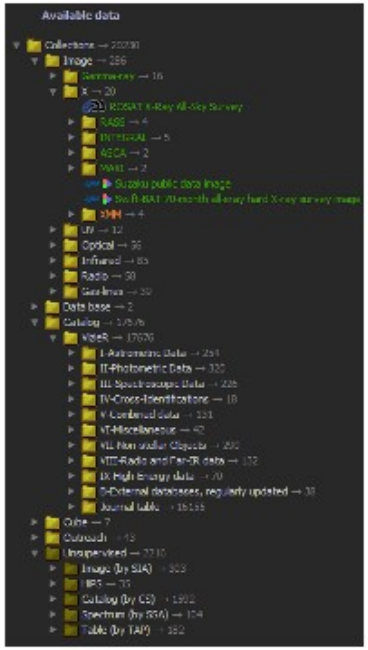


New look & feel

Modern and compact layout...

Discovery data tree

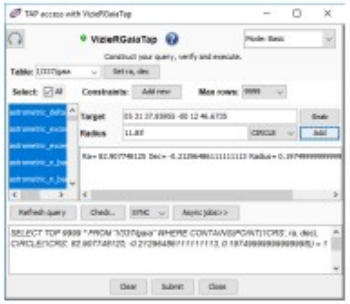
Integrated access to all CDS and other VO collections (>20,000 data sets)...



ALADIN

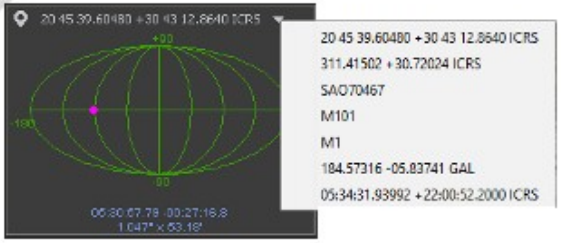
Multi-protocol support

HiPS, MOC, CS, SIA, SSA, TAP...



Target history controler

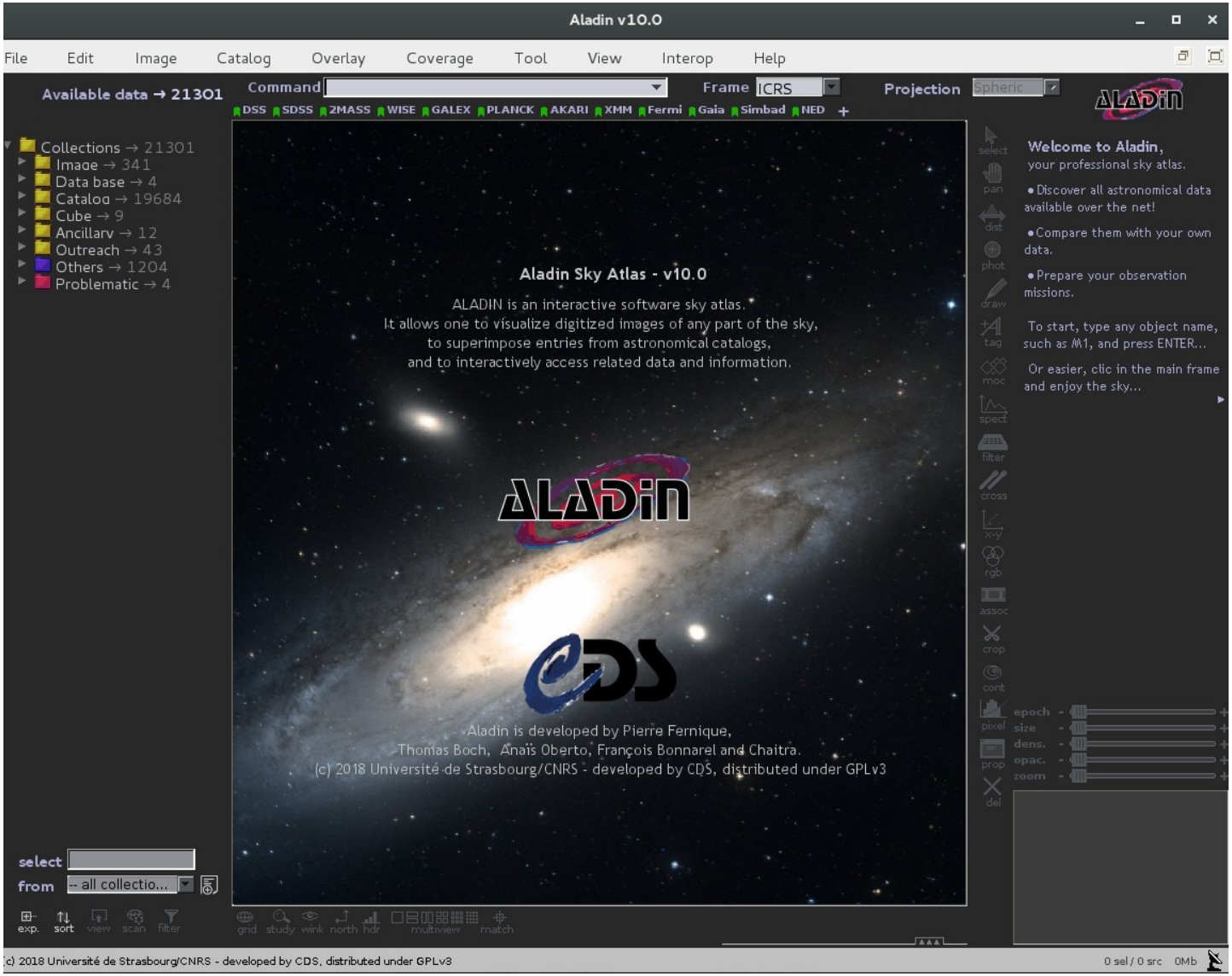
Come back to a previous target, command...



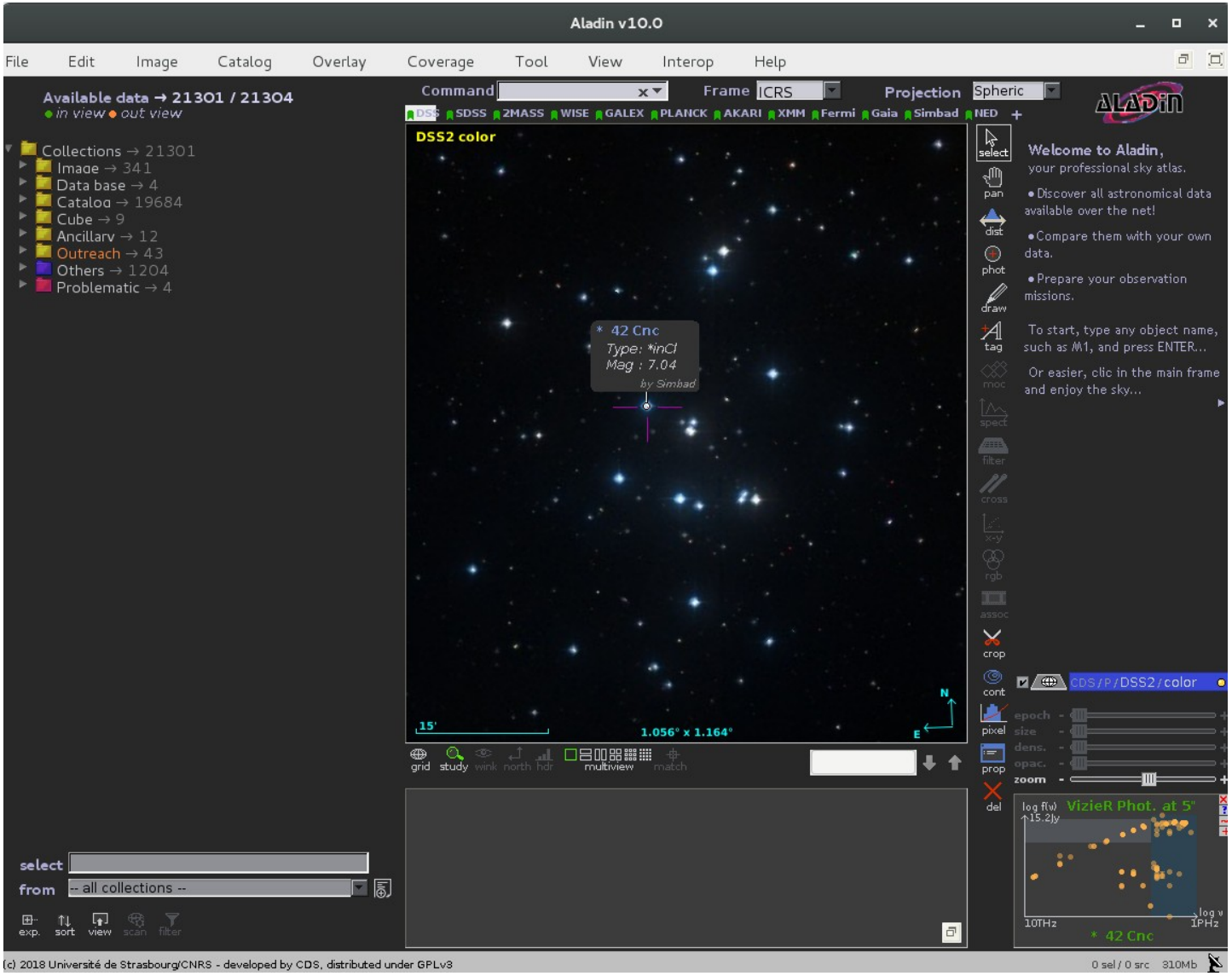
Access selector

Choose among all available access modes and derived products ...

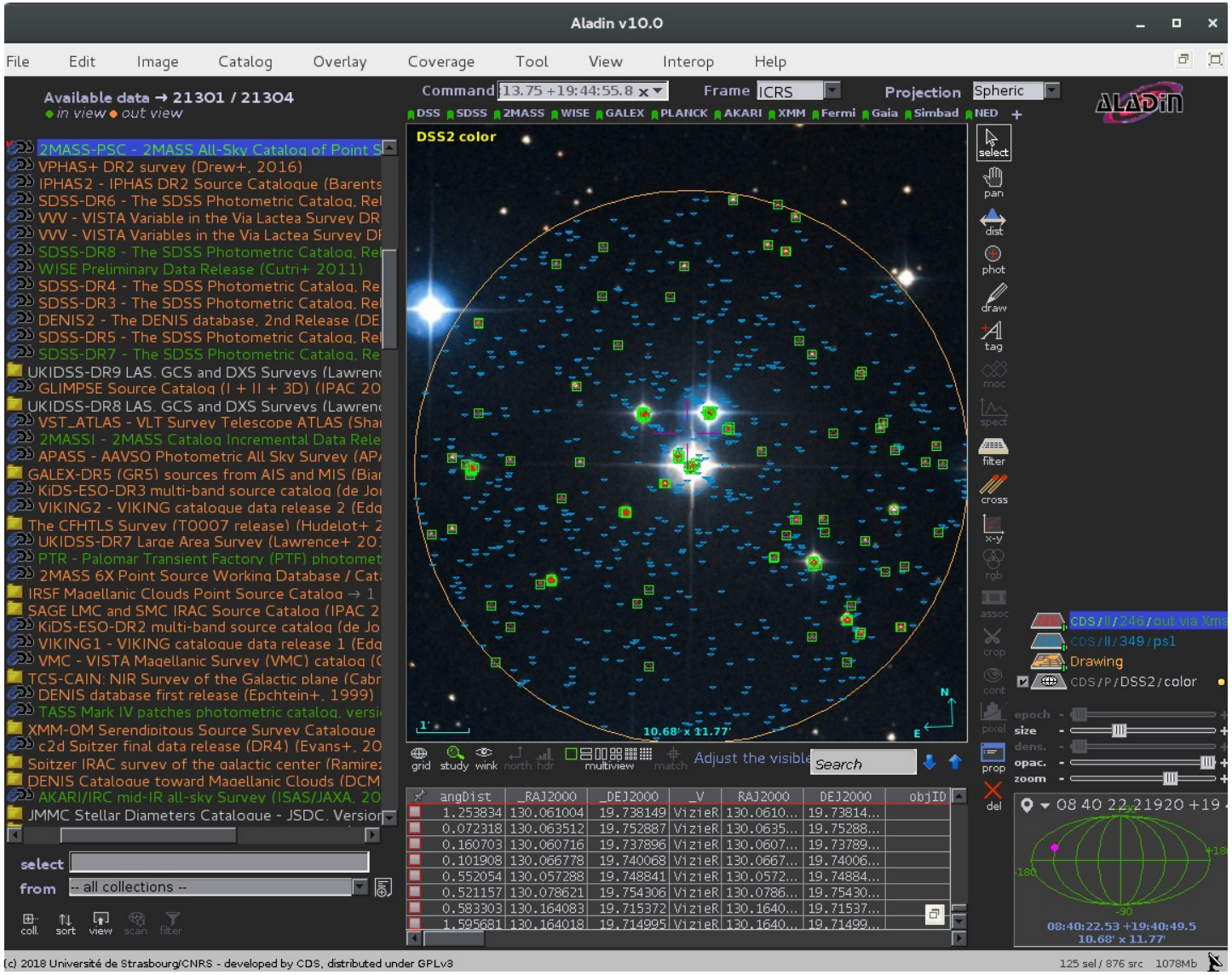
New look & feel



Simbad & Vizier info



CDS X-match


Aladin v10.0
File
Edit
Image
Catalog
Overlay
Coverage
Tool
View
Interop
Help
Available data → 21301 / 21304
in view out view
Command
13.75 +19:44:55.8
Frame
ICRS
Projection
Spheric
DSS SDSS 2MASS WISE GALEX PLANCK AKARI XMM Fermi Gaia Simbad NED
DSS2 color
2MASS-PSC - 2MASS All-Sky Catalog of Point S
VPHAS+ DR2 survey (Drew+, 2016)
IPHAS2 - IPHAS DR2 Source Catalogue (Barents
SDSS-DR6 - The SDSS Photometric Catalog, Rel
VVV - VISTA Variable in the Via Lactea Survey DR
VVV - VISTA Variables in the Via Lactea Survey DF
SDSS-DR8 - The SDSS Photometric Catalog, Rel
WISE Preliminary Data Release (Cutri+ 2011)
SDSS-DR4 - The SDSS Photometric Catalog, Re
SDSS-DR3 - The SDSS Photometric Catalog, Rel
DENIS2 - The DENIS database, 2nd Release (DE
SDSS-DR5 - The SDSS Photometric Catalog, Rel
SDSS-DR7 - The SDSS Photometric Catalog, Re
UKIDSS-DR9 LAS. GCS and DXS Surveys (Lawrenc
GLIMPSE Source Catalog (I + II + 3D) (IPAC 20
UKIDSS-DR8 LAS. GCS and DXS Surveys (Lawrenc
VST_ATLAS - VLT Survey Telescope ATLAS (Shai
2MASSI - 2MASS Catalog Incremental Data Rele
APASS - AAVSO Photometric All Sky Survey (AP
GALEX-DR5 (GR5) sources from AIS and MIS (Bia
KiDS-ESO-DR3 multi-band source catalog (de Jo
VIKING2 - VIKING catalogue data release 2 (Edq
The CFHTLS Survey (T0007 release) (Hudelot+ 2
UKIDSS-DR7 Large Area Survey (Lawrence+ 20
PTR - Palomar Transient Factory (PTF) photomet
2MASS 6X Point Source Working Database / Cat
IRSF Magellanic Clouds Point Source Catalog → 1
SAGE LMC and SMC IRAC Source Catalog (IPAC 2
KiDS-ESO-DR2 multi-band source catalog (de Jo
VIKING1 - VIKING catalogue data release 1 (Edq
VMC - VISTA Magellanic Survey (VMC) catalog (
TCS-CAIN: NIR Survey of the Galactic plane (Cabr
DENIS database first release (Epchtein+, 1999)
TASS Mark IV patches photometric catalog, versi
XMM-OM Serendipitous Source Survey Catalogue
c2d Spitzer final data release (DR4) (Evans+, 20
Spitzer IRAC survey of the galactic center (Ramirez
DENIS Catalogue toward Magellanic Clouds (DCM
AKARI/IRC mid-IR all-sky Survey (ISAS/JAXA, 20
JMMC Stellar Diameters Catalogue - JSDC, Version
select
from
-- all collections --
coll.
sort
view
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filter
grid
study
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objID
1.253834 130.061004 19.738149 VizieR 130.0610... 19.73814...
0.072318 130.063512 19.752887 VizieR 130.0635... 19.75288...
0.160703 130.060716 19.737896 VizieR 130.0607... 19.73789...
0.101908 130.066778 19.740068 VizieR 130.0667... 19.74006...
0.552054 130.057288 19.748841 VizieR 130.0572... 19.74884...
0.521157 130.078621 19.754306 VizieR 130.0786... 19.75430...
0.583303 130.164083 19.715372 VizieR 130.1640... 19.71537...
1.595681 130.164018 19.714995 VizieR 130.1640... 19.71499...
10.68' x 11.77'
CDS/II/246/out via Xm
CDS/II/349/ps1
Drawing
CDS/P/DSS2/color
epoch
size
dens.
opac.
zoom
08:40:22.53 +19:40:49.5
10.68' x 11.77'
(c) 2018 Université de Strasbourg/CNRS - developed by CDS, distributed under GPLv3
125 sel / 876 src
1078Mb

Image / Mosaic builder

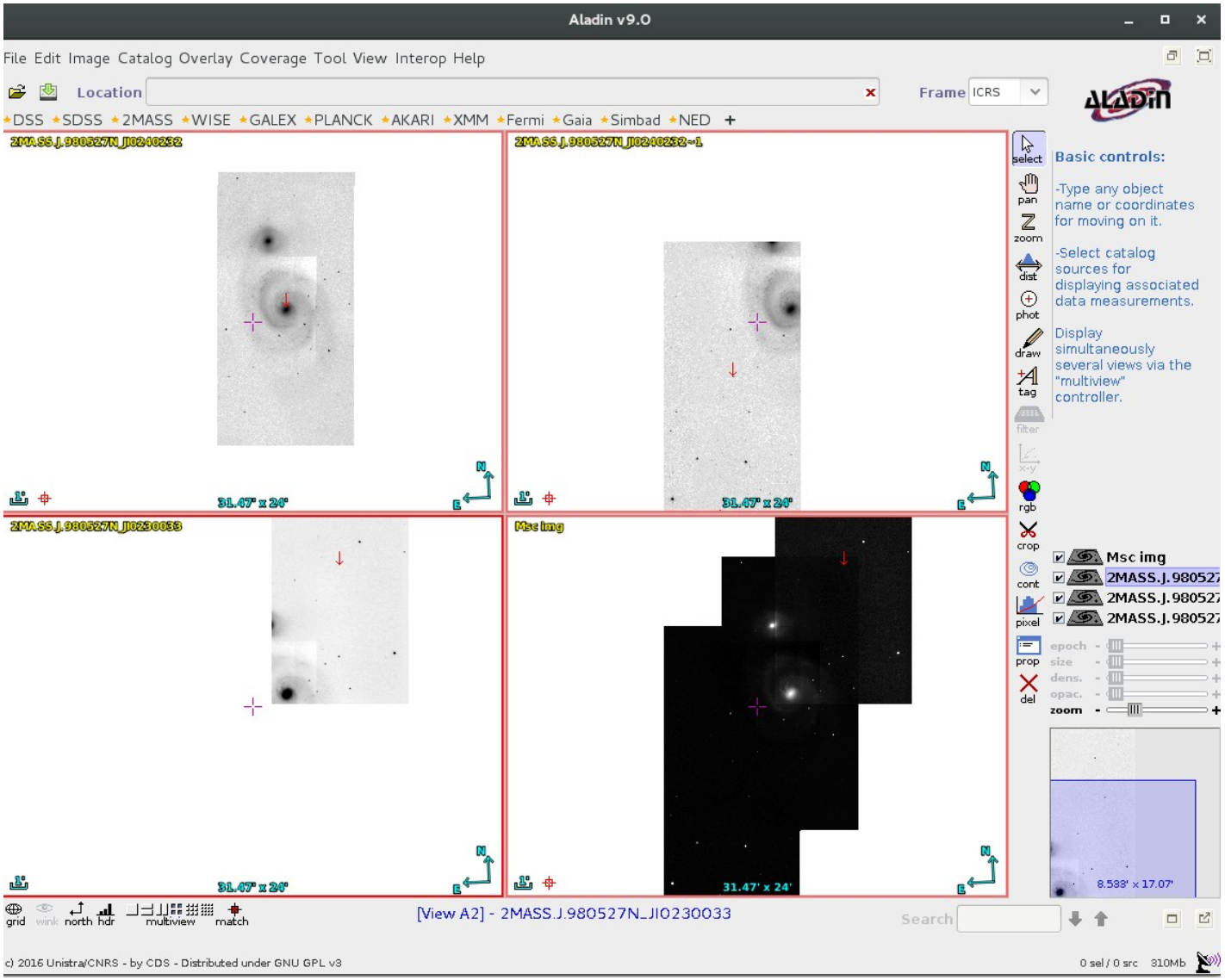


Image / Arithmetic operation

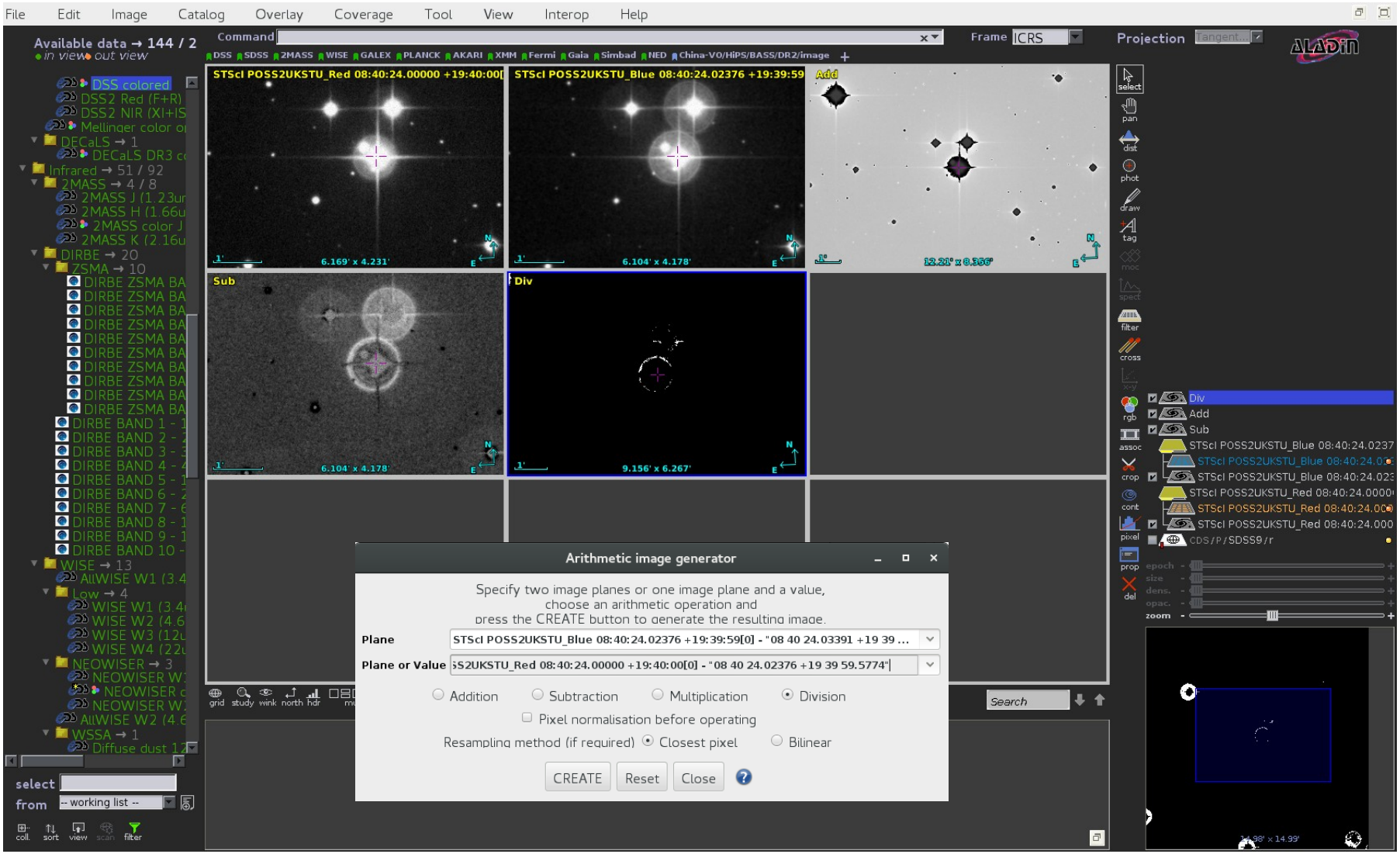
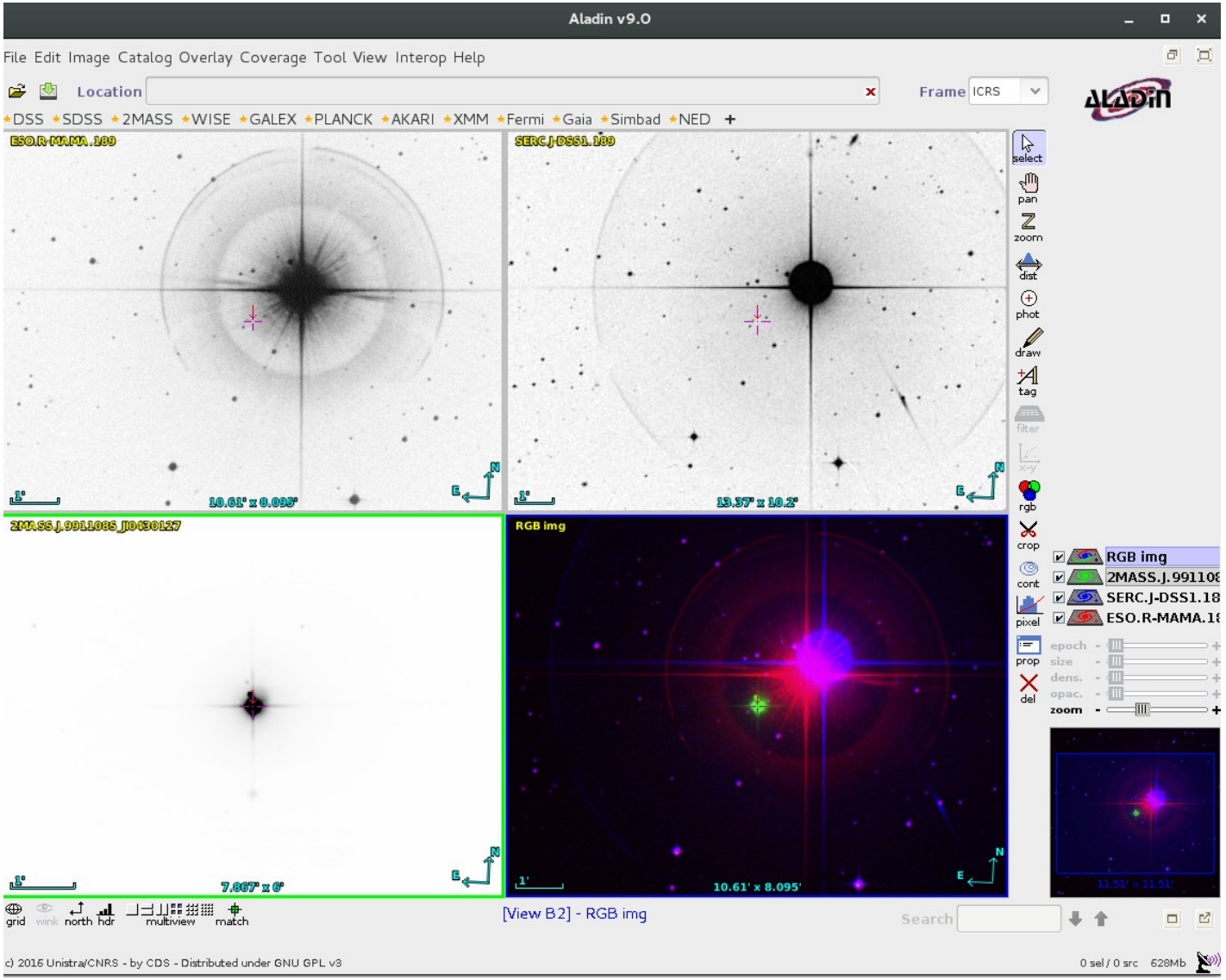
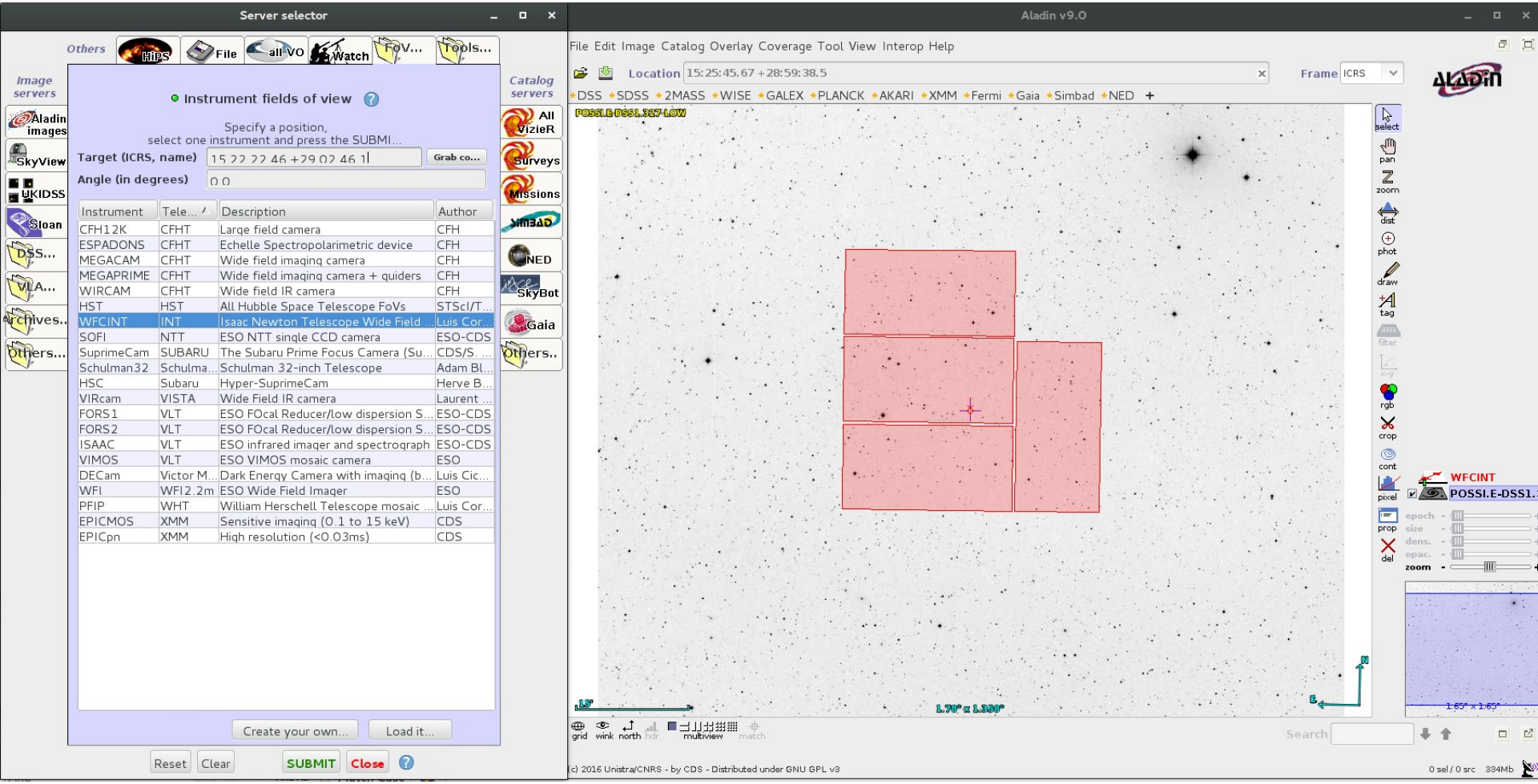


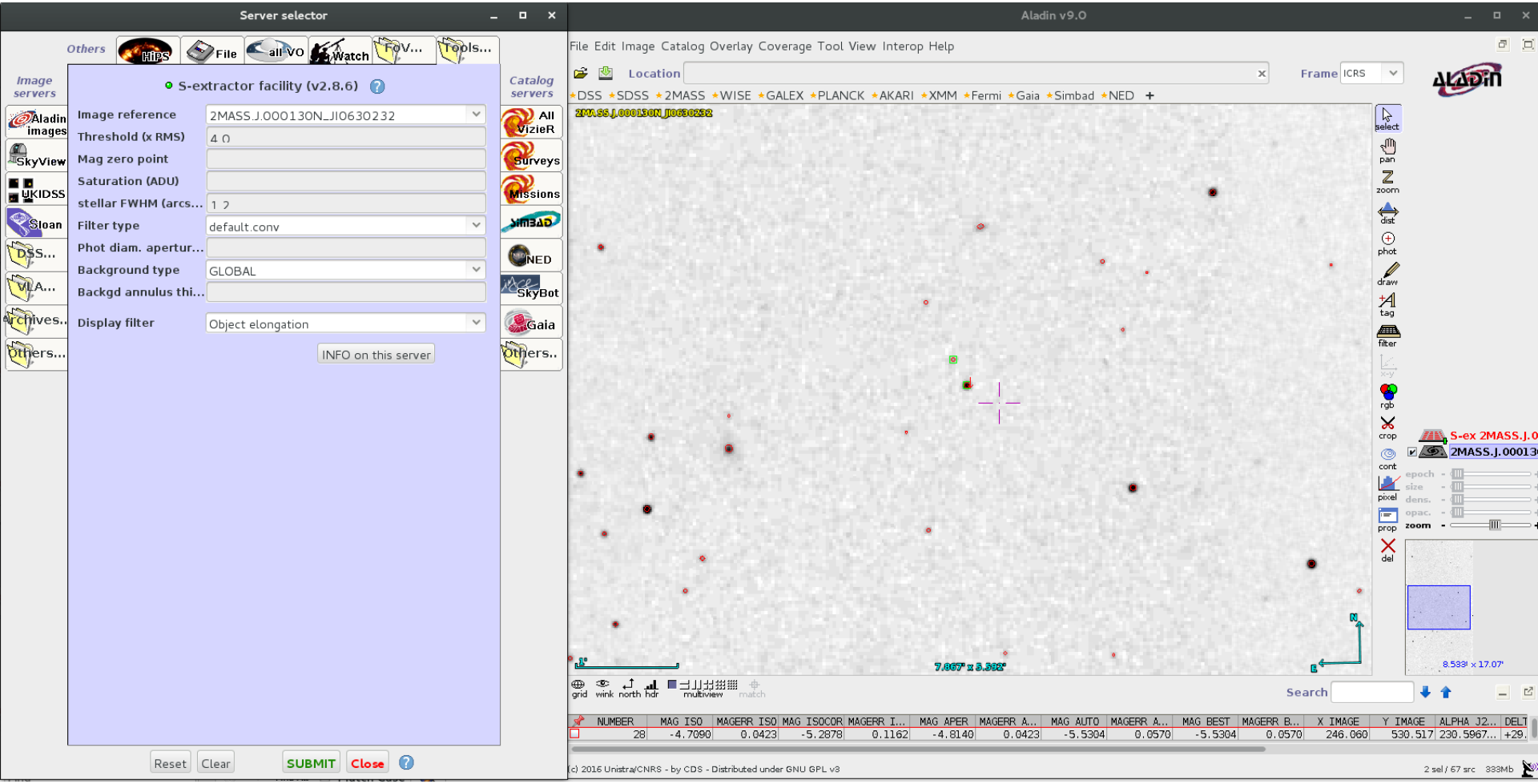
Image / RGB builder



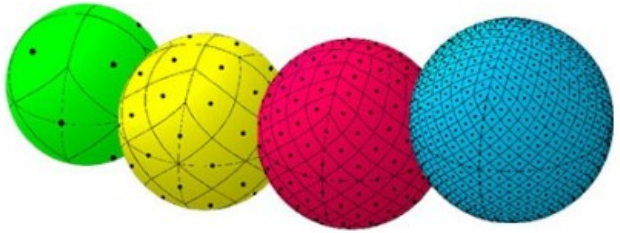
File / Load instrument FoV

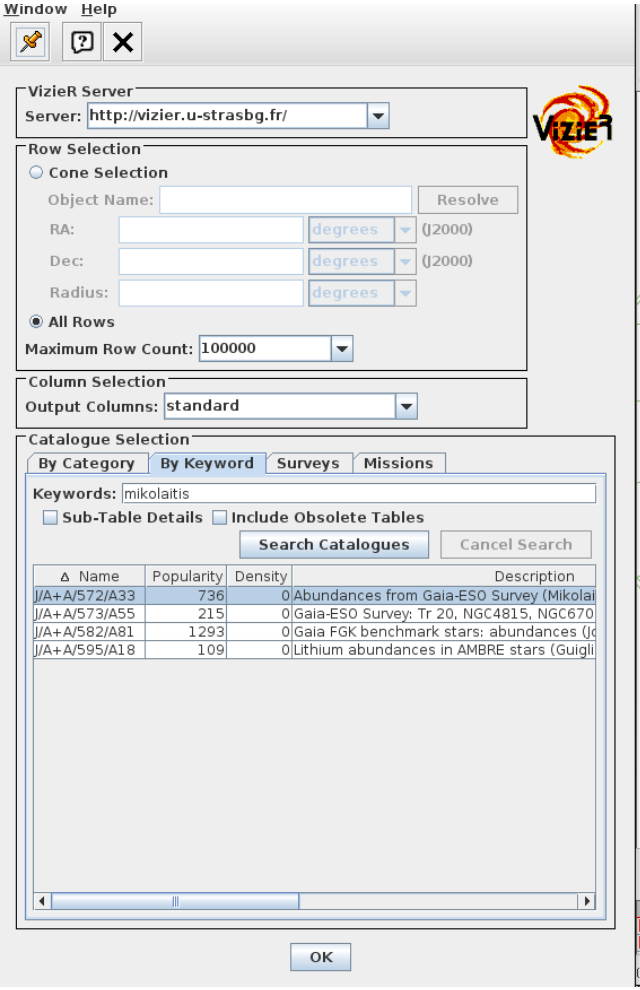


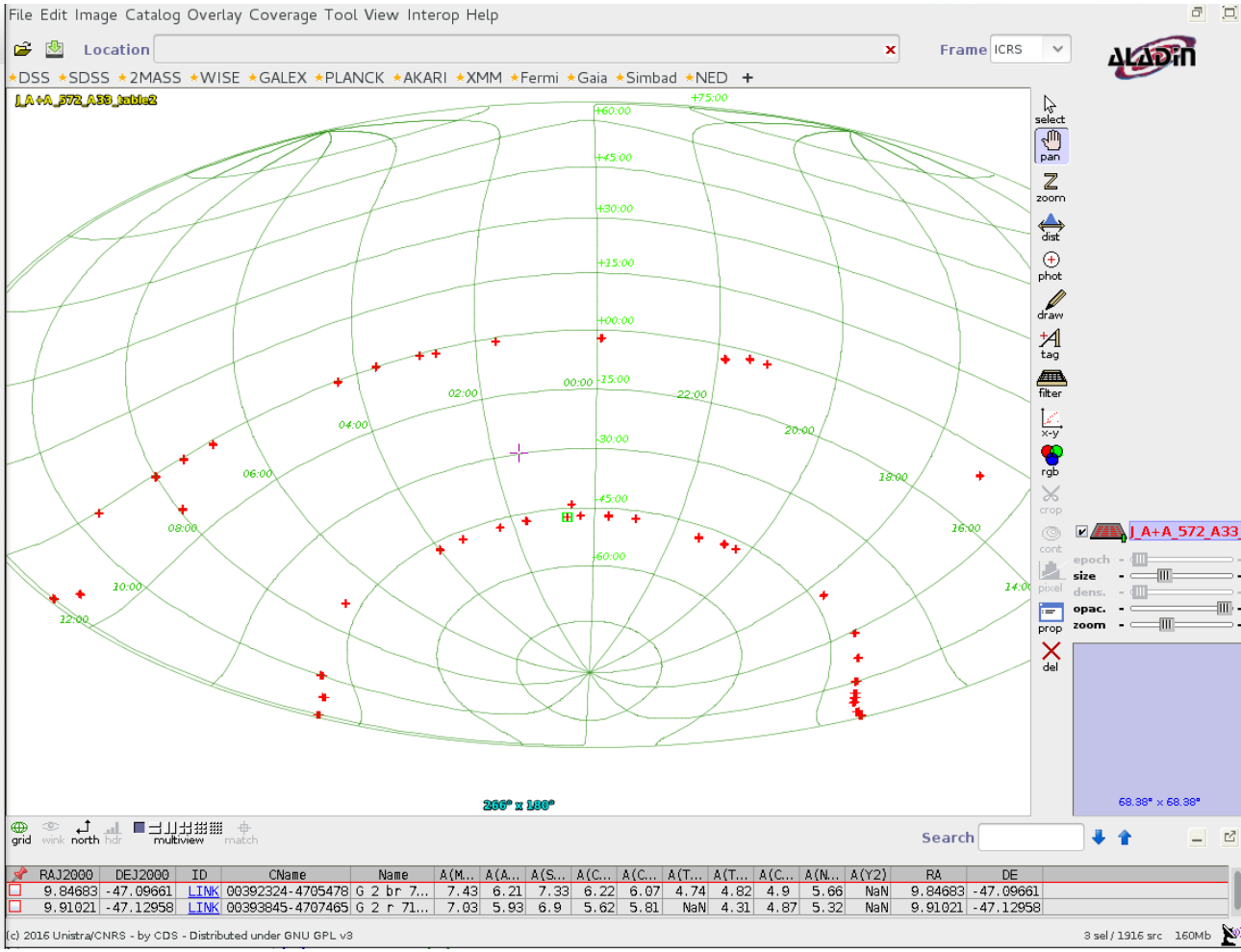
Tools / Remote tools/Tools / Sextractor



- Multi-object coverage (MOC): Method for describing sky regions
- Based on Healpix (list of HEALPIX cells stored in a FITS binary table)
  - Equal-area cells & isolatitude → Speed.



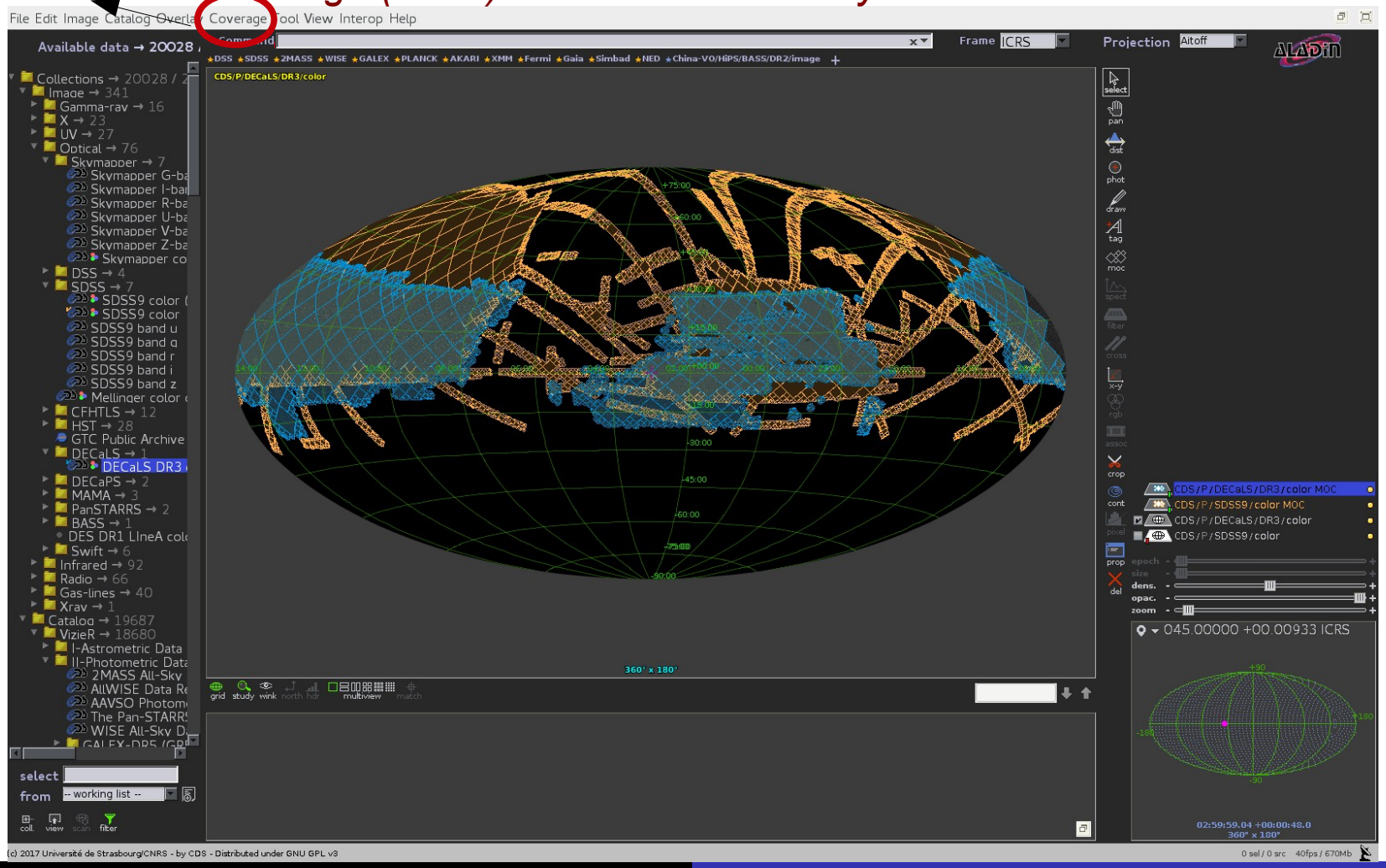




MOC

How to know the area in common between two surveys?

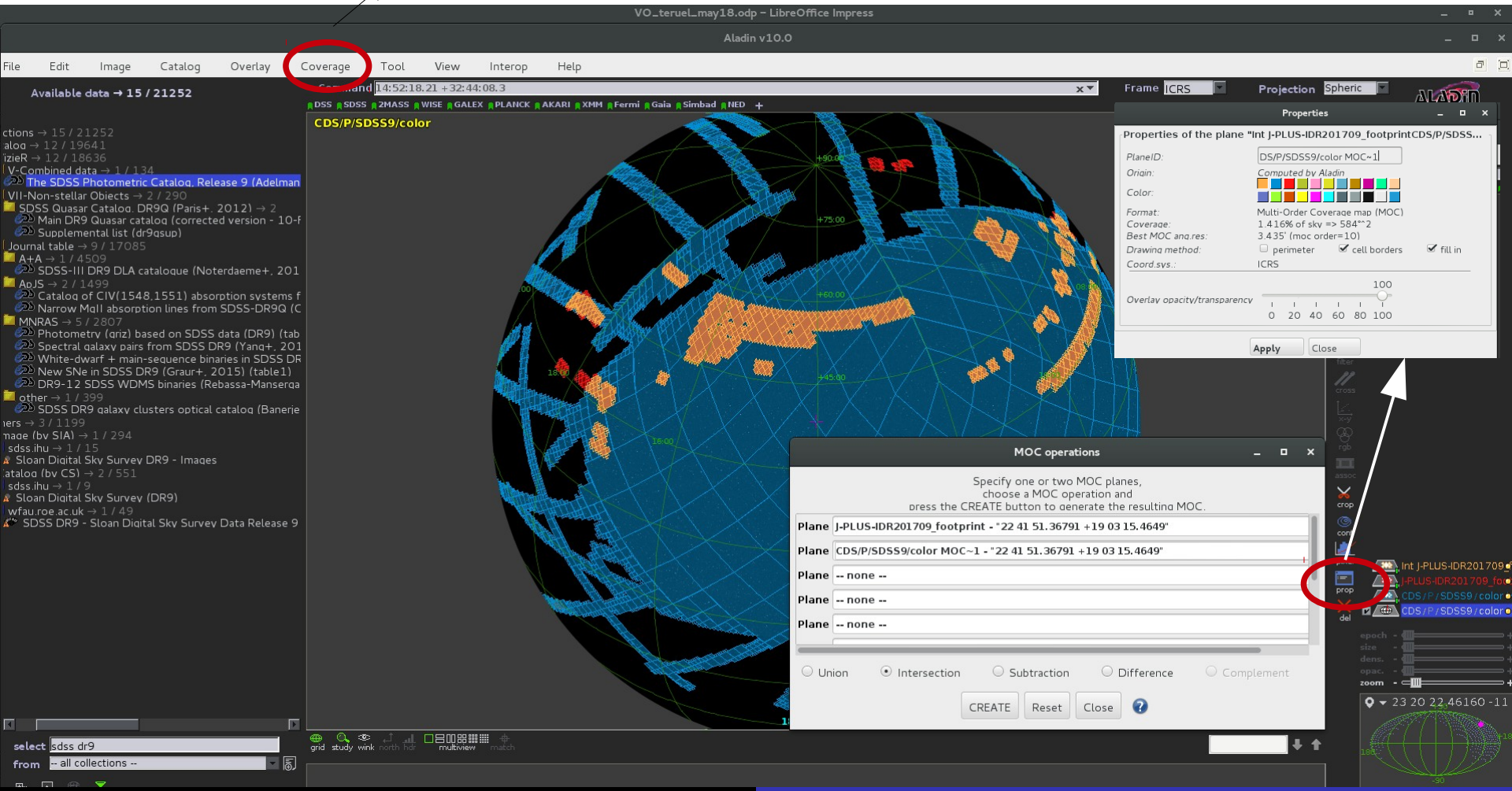
Load the coverage (MOC) of the current survey



Case #4: Aladin

How to know the area in common between two surveys?

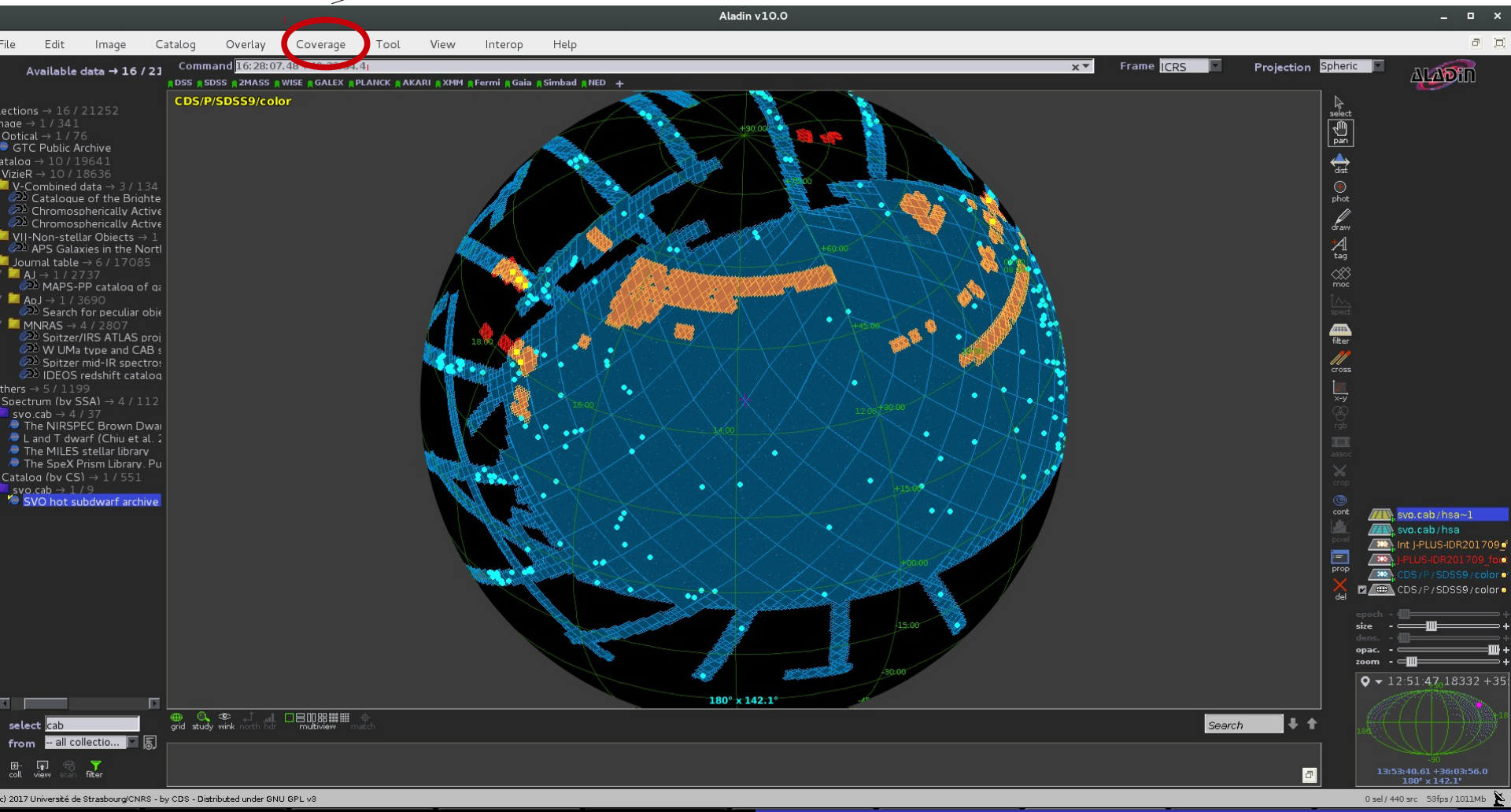
Logical operations



Case #4: Aladin

How to know the area in common between two surveys?

Filter a table by MOC



HIPS

- Hierarchical Progressive Survey
- Visualize a survey *"a la Google maps"*.
- Multi-scale view of images with capability to zoom and pan on any region.

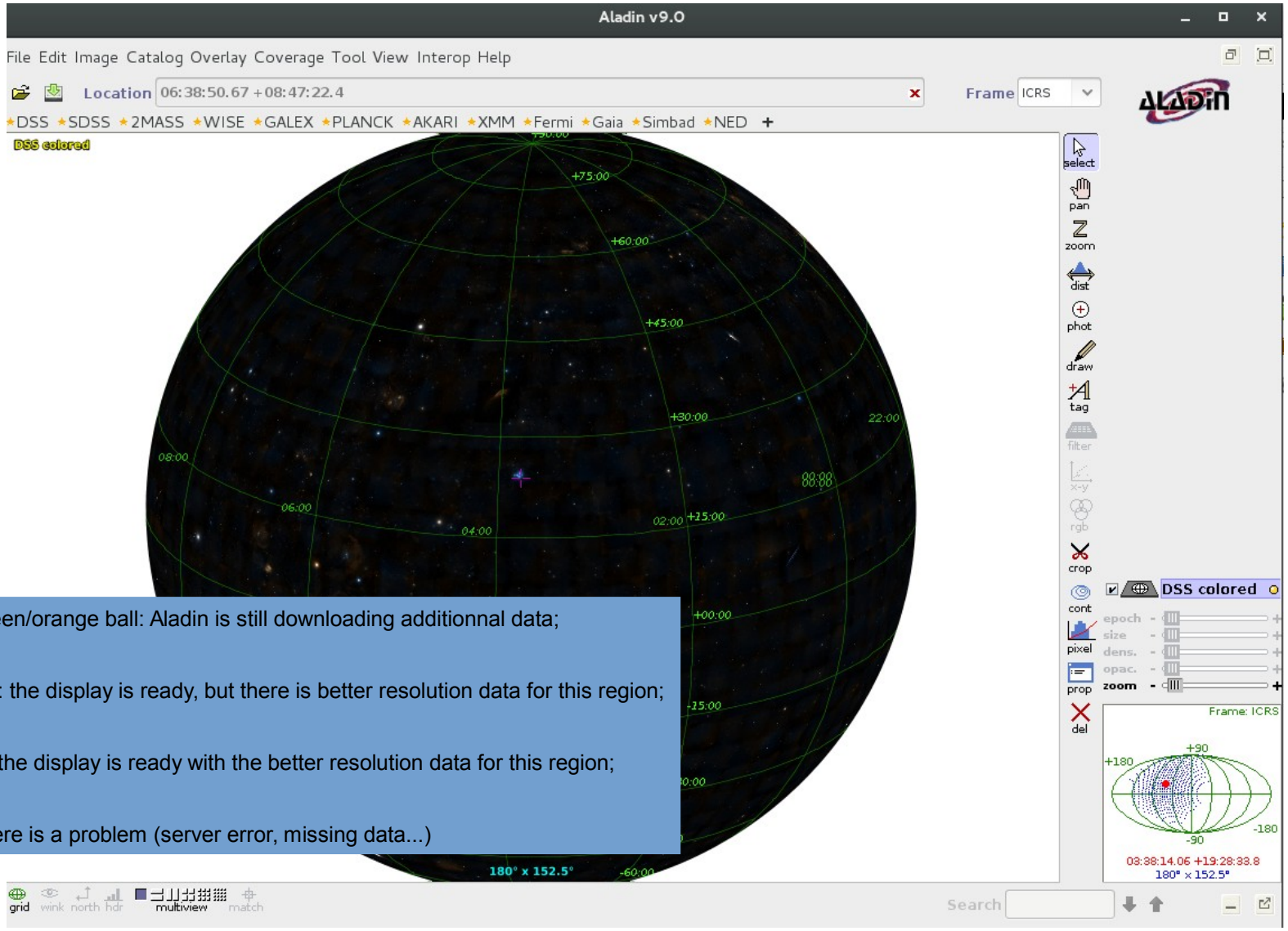
Astronomy & Astrophysics manuscript no. Fernique_Allen_04May2015
May 12, 2015

Hierarchical progressive surveys

Multi-resolution HEALPix data structures for astronomical images, catalogues, and 3-dimensional data cubes

P. Fernique[1], M. G. Allen[1], T. Boch[1], A. Oberto[1], F-X. Pineau[1], D. Durand[2], C. Bot[1], L. Cambrésy[1], S. Derriere[1], F. Genova[1], and F. Bonnarel[1]

HIPS



- blinking green/orange ball: Aladin is still downloading additionnal data;

- orange ball: the display is ready, but there is better resolution data for this region;

- green ball: the display is ready with the better resolution data for this region;

- red ball: there is a problem (server error, missing data...)