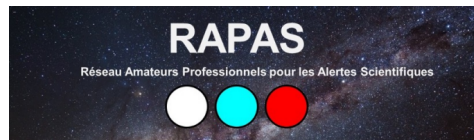




# The RAPAS Data Processing and Archival System

**Pier-Francesco Rocci – SAF, TJMS Buthiers**  
**Renaud Savalle – SAF, PADC/Observatoire de Paris-PSL**



# 1 - RPP: RAPAS Photometry Pipeline

**Pier-Francesco Rocci – SAF, TJMS Buthiers**

**Renaud Savalle – SAF, PADC/Observatoire de Paris-PSL**

# Summary

- Architecture and libraries
- The Pipeline in detail
- Typical Results
- Future developments

+

Live Demo

# Introduction

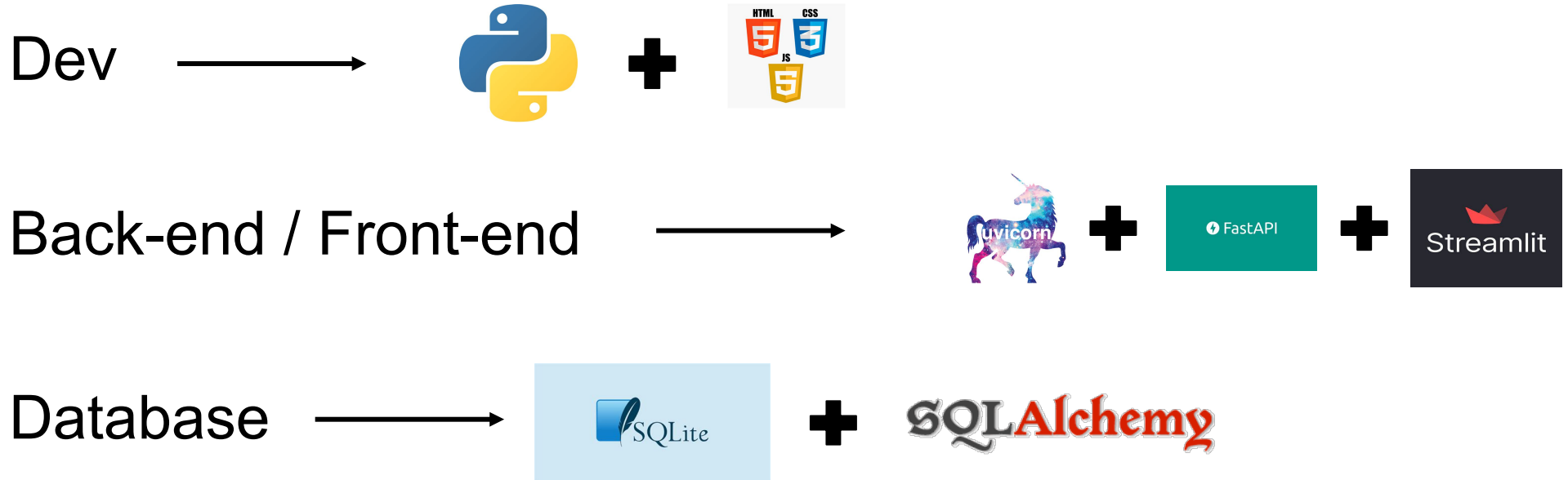
## RAPAS Photometry Pipeline



*RAPAS Photometry Pipeline (RPP), is a Streamlit / FastAPI web application for homogeneous reduction of RAPAS fits image observations project. Everything you need is in the application, no need to install anything. All you need is your fits image and some minutes on patience :-)*

**Main Goal : Photometry of Transients Source using RAPAS filters from GAIA Bands**

# RPP Architecture



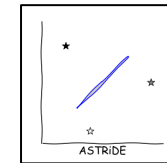
# RPP libraries choice



<https://www.astropy.org/>



<https://photutils.readthedocs.io/en/stable/index.html>



<https://github.com/dwkim78/ASTRiDE>



<https://astrometrynet.readthedocs.io/en/latest/>

**STDPipe Library**

<https://github.com/karpov-sv/stdpipe>

**SEP** *Python library for Source Extraction and photometry*

<https://sep.readthedocs.io/en/stable/index.html>

# RPP Analysis steps

1. Plate solving via **Astrometry.net**, as well as astrometric refinement using the **stdpipe library**.
2. RAPAS filters (Gp, GBp, GRp), Sloan filters (ugriz) and Johnson-Cousins filters (UVBRI).
3. Cosmic Ray with **Astrocrappy** and Satellites trails with **Astride** (beta).
4. Background extraction and Source detection with **Sep** and **Photutils**.
5. Aperture and PSF photometry with **Photutils** : aperture in  $1.1 \times \text{FWHM}$ ,  $1.3 \times \text{FWHM}$ , <User Defined>  $\times \text{FWHM}$ .
6. Zero-point calibration based on **Gaia DR3**, **Pan-STARRS DR1**, and **SkyMapper DR4**.
7. Catalog enrichment using **Gaia**, **SIMBAD**, **SkyBoT**, **VSX**, **Milliquas**, and **Astro-Colibri**.
8. Search for transient candidates using the **stdpipe library** (beta).
9. Final catalogs saved in CSV and VOT format plus downloadable zip.

# The Pipeline front pages

## Login / Sign Up

The screenshot shows the login and sign up interface for the RAPAS Photometry Pipeline. At the top, there is a logo and the title "RAPAS Photometry Pipeline". Below this is a link for "First time here?". There are three links: "Login", "Sign Up", and "Password Recovery". The main section is titled "Login to your account" and contains two input fields: "Username" and "Password". The "Password" field has a toggle for visibility. At the bottom, there is a "Login" button.

## Main Page of RPP

The screenshot shows the main page of the RAPAS Photometry Pipeline. It features a sidebar on the left with the following items: "Version: 1.7.5", "Observatory Data", "Analysis Parameters", "Save Settings", "Reset Analysis", and "Archived Analysis". Below the sidebar, it says "Logged in as: admin" and includes a "View Pipeline Logs" button and a "Logout" button. At the bottom of the sidebar, there is a link for "Need help? Contact: rpp\_support" and "MIT LICENSE". The main content area on the right has the title "RAPAS Photometry Pipeline" and links for "RAPAS Home" and "GitHub". There is a "Quick Start Tutorial" link and a note: "Before uploading the image, check all the parameters on the sidebar." Below this is an "Upload" button with a file size limit of "200MB per file" and supported formats: "FITS, FIT, FTS, FITS.GZ".

# The Pipeline parameters

Observatory Data

Observatory Name

Latitude (deg)  
43.99972222

Longitude (deg)  
5.646388888

Elevation (m)  
100.0

Analysis Parameters

Save Settings

Reset Analysis

Archived Analysis



Observatory Data

Analysis Parameters

Estimated FWHM (arcsec)  
3.00

FWHM Radius Factor  
1.50

Detection Threshold (sigma)  
4.50

Border Mask (pixels)  
20

Filter Band  
r

Astrometry check

Astro-Colibri UID Key

Enable Transient Finder

Reference Filter  
r



Observatory Data

Analysis Parameters

Save Settings

Reset Analysis

Archived Analysis

Logged in as: admin

View Pipeline Logs

Logout

# The Pipeline Input




## RAPAS Photometry Pipeline

[RAPAS Home](#) | [GitHub](#)

>  Quick Start Tutorial

Before uploading the image, check all the parameters on the sidebar.



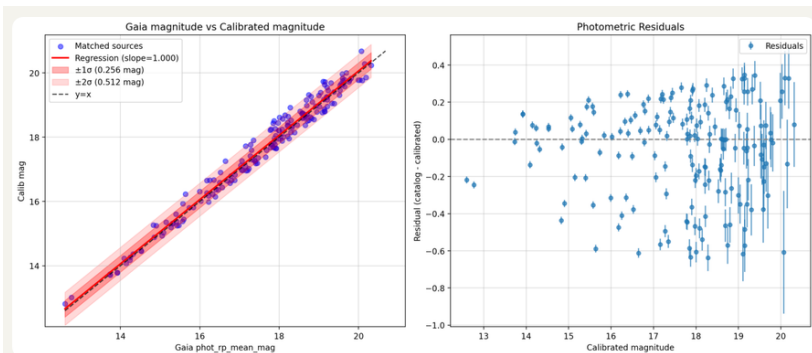
MED\_20...0s\_c\_a.fits   
99.6MB



File 'MED\_20251103 AT2025aarm-L-180s\_c\_a.fits' is ready.

 Start Analysis

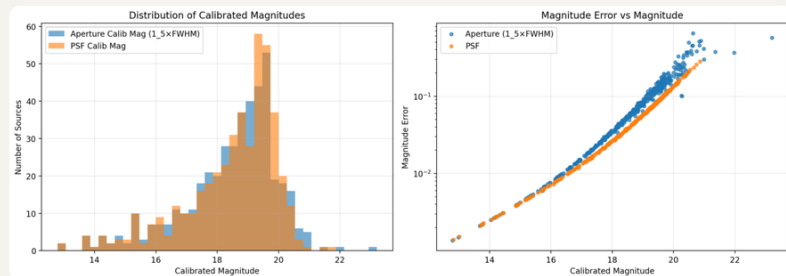
# The Pipeline Output



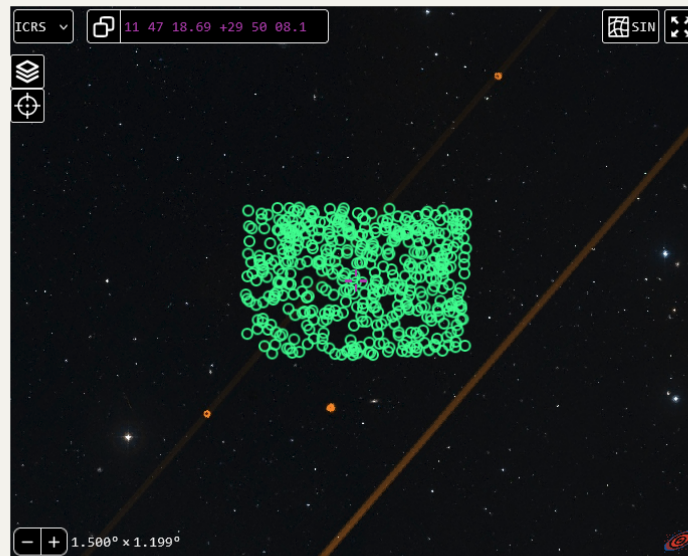
Calculated Zero Point:  $17.32 \pm 0.019$  (formal uncertainty,  $N=181$ ), calibrator scatter = 0.257 mag

Catalog includes 445 sources.

## Magnitude Distribution (Aperture & PSF)



## Aladin Catalog Viewer



ESA Sky Viewer










SIMBAD

XMatch

Archive contains 10 files

Download Results (ZIP)

# What's in the ZIP file

Name	Size
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA.csv	179 417
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA.log	9 261
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA.vot	421 407
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA_astrocolibri_01_TDE_2025aarm.png	27 484
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA_header.txt	2 099
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA_histogram_mag.png	87 038
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA_image.png	344 878
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA_transients.csv	701
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA_wcs_header.txt	2 099
 20251101T080341_AT2025aarm-MED5x180s_Sdssr_B2x2MedT°-10_HGMG56Of10_RHellot-AITP_CA_zero_point_plot.png	122 118

# Typical Results

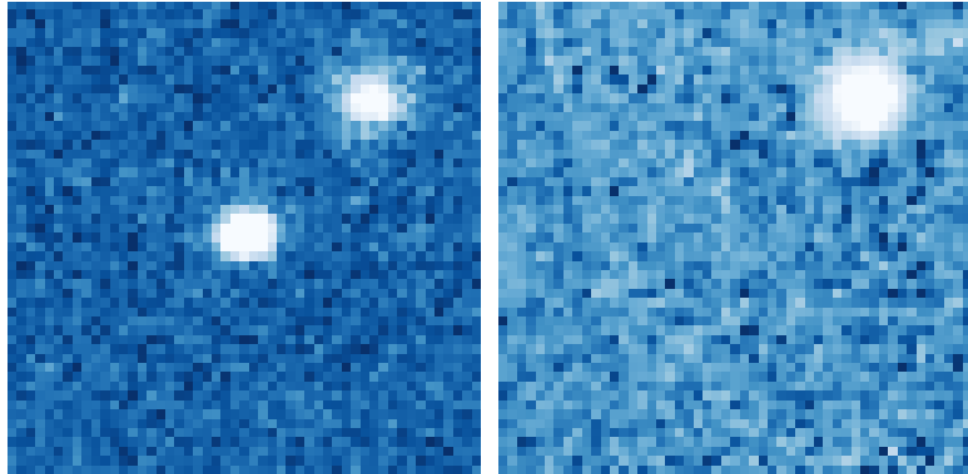
AT 2025gcz - psf\_mag = 17.41 +- 0.02

TDE 2025aarm - psf\_mag = 14.68 +- 0.01

AT 2025gcz | ot | unclassified

IMAGE

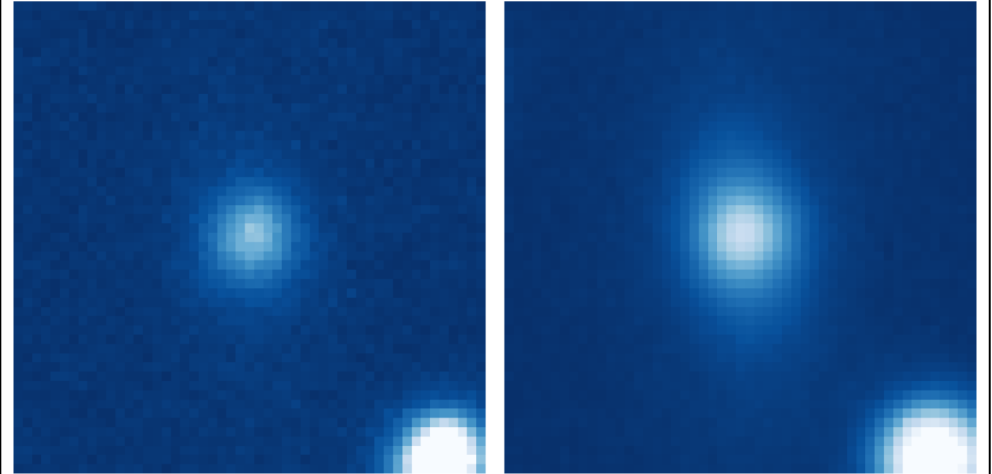
TEMPLATE



TDE 2025aarm | ot\_other | TDE

IMAGE

TEMPLATE



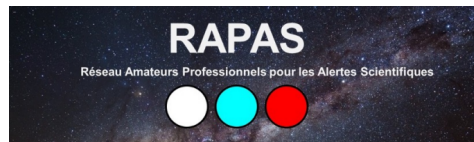
# Future Developments

***Pipeline Robustness and small bugs to fix (ex: SkyBot Failures).***

*Fine-tuned the stdpipe transient function to be more reliable.*

*Try out the subtraction pipeline using HotPants.*

***Compare the results with others pipeline (ex: stdpipeWeb).***



## 2 – The RAPAS Archive

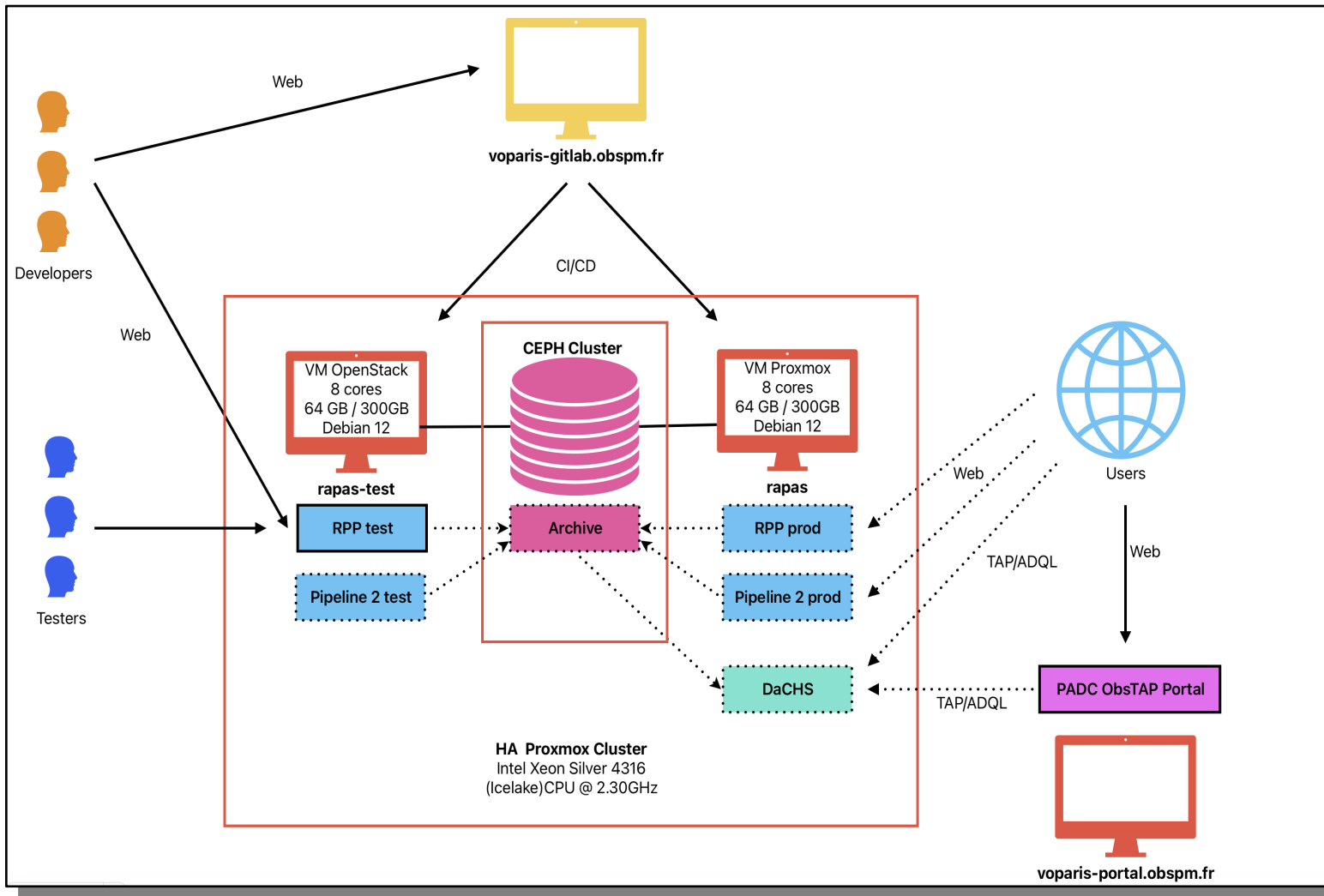
**Renaud Savalle – SAF, PADDC/Observatoire de Paris-PSL**

**Pier-Francesco Rocci – SAF, TJMS Buthiers**

# The RAPAS Archive

- Design and Architecture
- Implementation with DaCHS
- VO Services: SIAPv2 and TAP/ObsCore
- Accessing the archive with Aladin/TOPCAT
- The PADC ObsCore Portal

# RAPAS@PADC: Architecture



# DaCHS - Data Centre Help Suite



- DaCHS = software framework developed by the German Astrophysical Virtual Observatory (GAVO) for publishing astronomical data and services
- The resource descriptor (an XML file) defines the services' metadata, data model, and access methods

# Virtual Observatory Services



RAPAS data and metadata are available through 2 IVOA (International Virtual Observatory Alliance) – compatible web services:

## 1) SIAPv2 = Simple Image Access Protocol v2

- HTTP GET request (example query: ConeSearch and Gaia BP filter)

```
http://rapas.../rapastest/q/i/siap2.xml?POS=CIRCLE 67.7 -68.5 1.0
&BAND=3.25e-7 6.80e-7
&RESPONSEFORMAT=text/xml | text/csv ...
```

- Output=VOTable or CSV... with standard SIAPv2 FIELDS

## 2) TAP = Table Access Protocol / Astronomical Data Query Language

- POST request to web service: `http://rapas.../tap` with ADQL query:

```
SELECT * FROM ivoa.obscore WHERE 1=CONTAINS(POINT('ICRS',67.7,-
68.5),s_region) AND em_min >= 3.25e-7 AND em_max <= 6.80e-7
```

- Output=VOTable or CSV... with standard ObsCore FIELDS (and others)

# SIA Access with TOPCAT



TOPCAT

Table List  
1: m27-SIA-60m

Current Table Properties  
Label: m27-SIA-60m  
Location: m27-SIA-60m  
Name: result  
Rows: 5  
Columns: 36  
Sort Order:   
Row Subset: All

Messages: Clients:

349 / 8192 M

SIA Parameters

SIA URL: <http://rapas-test.obspm.fr/rapastest/q/i/siap2.xml> SIA Version: **2.0**

Object Name: m27

RA: 067145016 degrees (J2000)  Accept Sky Positions

Dec: 077157533 degrees (J2000)

Angular Size: 1 degrees

Image Format: ALL

OK

TOPCAT(1): Table Browser

Table Browser for 1: m27-SIA-60m

	s_region	s_resolution	t_min	t_max
1	Polygon ICRS 299.8174346164 22.7442249556...	0.215149	60846.96972	60846.96972
2	Polygon ICRS 299.8174346164 22.7442249556...	0.215149	60846.96972	60846.96972
3	Polygon ICRS 299.8174346164 22.7442249556...	0.215149	60846.96972	60846.96972
4	Polygon ICRS 300.1544504834 22.9749304953...	0.214247	60846.96972	60846.96972
5	Polygon ICRS 299.9511271312 22.8359228014...	0.215042	60846.96972	60846.96972

Total: 5 Visible: 5 Selected: 1

TOPCAT(1): Table Columns

Table Columns for 1: m27-SIA-60m

Δ	Index	Visible	Name	\$ID	Class	Units	Domain	Description
0		<input type="checkbox"/>	Index	\$0	Long			Table row index
1	1	<input checked="" type="checkbox"/>	dataprodukt_type	\$1	String			High level scientific classification of the data product, taken from an enumeration
2	2	<input checked="" type="checkbox"/>	calib_level	\$2	Short			Amount of data processing that has been applied to the data
3	3	<input checked="" type="checkbox"/>	obs_collection	\$3	String			Name of a data collection (e.g., project name) this data belongs to
4	4	<input checked="" type="checkbox"/>	obs_id	\$4	String			Unique identifier for an observation
5	5	<input checked="" type="checkbox"/>	obs_title	\$5	String			Free-form title of the data set
6	6	<input checked="" type="checkbox"/>	obs_publisher_did	\$6	String			Dataset identifier assigned by the publisher.
7	7	<input checked="" type="checkbox"/>	obs_creator_did	\$7	String			Dataset identifier assigned by the creator.
8	8	<input checked="" type="checkbox"/>	access_url	\$8	String			The URL at which to obtain the data set.
9	9	<input checked="" type="checkbox"/>	access_format	\$9	String			MIME type of the resource at access_url
10	10	<input checked="" type="checkbox"/>	access_estsize	\$10	Long	kbyte		Estimated size of data product
11	11	<input checked="" type="checkbox"/>	target_name	\$11	String			Object a targeted observation targeted
12	12	<input checked="" type="checkbox"/>	target_class	\$12	String			Class of the target object (star, QSO, ...)
13	13	<input checked="" type="checkbox"/>	s_ra	\$13	Double	deg		RA of (center of) observation, ICRS
14	14	<input checked="" type="checkbox"/>	s_dec	\$14	Double	deg		Dec of (center of) observation, ICRS
15	15	<input checked="" type="checkbox"/>	s_fov	\$15	Float	deg		Approximate spatial extent for the region covered by the observation
16	16	<input checked="" type="checkbox"/>	s_region	\$16	String			Region covered by the observation, as a polygon
17	17	<input checked="" type="checkbox"/>	s_resolution	\$17	Float	arcsec		Best spatial resolution within the data set
18	18	<input checked="" type="checkbox"/>	t_min	\$18	Double	d	MJD->Time	Lower bound of times represented in the data set
19	19	<input checked="" type="checkbox"/>	t_max	\$19	Double	d	MJD->Time	Upper bound of times represented in the data set
20	20	<input checked="" type="checkbox"/>	t_exptime	\$20	Float	s		Total exposure time
21	21	<input checked="" type="checkbox"/>	t_resolution	\$21	Float	s		Minimal significant time interval along the time axis
22	22	<input checked="" type="checkbox"/>	em_min	\$22	Float	m		Minimal wavelength represented within the data set
23	23	<input checked="" type="checkbox"/>	em_max	\$23	Float	m		Maximal wavelength represented within the data set
24	24	<input checked="" type="checkbox"/>	em_res_power	\$24	Float			Spectral resolving power lambda/delta lambda
25	25	<input checked="" type="checkbox"/>	o_ucd	\$25	String			UCD for the product's observable
26	26	<input checked="" type="checkbox"/>	pol_states	\$26	String			List of polarization states in the data set
27	27	<input checked="" type="checkbox"/>	facility_name	\$27	String			Name of the facility at which data was taken
28	28	<input checked="" type="checkbox"/>	instrument_name	\$28	String			Name of the instrument that produced the data
29	29	<input checked="" type="checkbox"/>	s_xel1	\$29	Integer			Number of elements (typically pixels) along the first spatial axis.
30	30	<input checked="" type="checkbox"/>	s_xel2	\$30	Integer			Number of elements (typically pixels) along the second spatial axis.
31	31	<input checked="" type="checkbox"/>	t_xel	\$31	Integer			Number of elements (typically pixels) along the time axis.
32	32	<input checked="" type="checkbox"/>	em_xel	\$32	Integer			Number of elements (typically pixels) along the spectral axis.
33	33	<input checked="" type="checkbox"/>	pol_xel	\$33	Integer			Number of elements (typically pixels) along the polarization axis.
34	34	<input checked="" type="checkbox"/>	s_pixel_scale	\$34	Float	arcsec		Sampling period in world coordinate units along the spatial axis
35	35	<input checked="" type="checkbox"/>	em_ucd	\$35	String			Nature of the product's spectral axis (typically, em.freq, em.wl, or em.energy)
36	36	<input checked="" type="checkbox"/>	bandpass_id	\$36	String			Free-form name of the bandpass (filter, detector, whatever else defines the spectral axis)

SIA v2 Columns

# TAP Access with TOPCAT



**Table List**

4: TAP\_3\_ivoa.Obsolete

**Current Table Properties**

Label: TAP\_3\_ivoa.Obsolete  
 Location: TAP\_3\_ivoa.Obsolete  
 Name: ObsCore  
 Rows: 4  
 Columns: 39  
 Sort Order:   
 Row Subset: All

-SAMP  
 Messages: Clients:

409 / 8192 M

**Table Browser for 4: TAP\_3\_ivoa.Obsolete**

dataprod_type	dataprod_subtype	calib_level	obs_collection	obs_id	obs_title	obs_publisher
1	image	2	RAPAS Observations	ivo://padc.obspm.rapas/~rapastest/data/Chris...	Image dated 2025-12-28T19:34:24.309000	ivo://padc
2	image	2	RAPAS Observations	ivo://padc.obspm.rapas/~rapastest/data/Fred_...	Image dated 2025-12-28T19:39:24.872000	ivo://padc
3	image	2	RAPAS Observations	ivo://padc.obspm.rapas/~rapastest/data/Fred_...	Image dated 2025-12-28T19:34:24.309000	ivo://padc
4	image	2	RAPAS Observations	ivo://padc.obspm.rapas/~rapastest/data/Fred_...	Image dated 2025-12-28T19:34:24.309000	ivo://padc

Total: 4 Visible: 4 Selected: 0

**Table Columns for 4: TAP\_3\_ivoa.Obsolete**

A	Index	Visible	Name	IID	Class	Units	Domain	Description
0			Table row index	\$0	Long			Table row index
1	1		dataprod_type	\$1	String			High level scientific classification of the data product, taken from an enumeration
2	2		dataprod_subtype	\$2	String			Data product specific type
3	3		calib_level	\$3	Short			Amount of data processing that has been applied to the data
4	4		obs_collection	\$4	String			Name of a data collection (e.g., project name) this data belongs to
5	5		obs_id	\$5	String			Unique identifier for an observation
6	6		obs_title	\$6	String			Free-form title of the data set
7	7		obs_publisher_id	\$7	String			Dataset identifier assigned by the publisher.
8	8		obs_creator_id	\$8	String			Dataset identifier assigned by the creator.
9	9		access_url	\$9	String			The URL at which to obtain the data set.
10	10		access_format	\$10	String			MIME type of the resource at access_url
11	11		access_estsize	\$11	Long	kbyte		Estimated size of data product
12	12		target_name	\$12	String			Object a targeted observation targeted
13	13		target_class	\$13	String			Class of the target object (star, QSO, ...)
14	14		s_ra	\$14	Double	deg		RA of (center of) observation, ICRS
15	15		s_dec	\$15	Double	deg		Dec of (center of) observation, ICRS
16	16		s_fov	\$16	Float	deg		Approximate spatial extent for the region covered by the observation
17	17		s_region	\$17	String			Region covered by the observation, as a polygon
18	18		s_resolution	\$18	Float	arcsec		Best spatial resolution within the data set
19	19		t_min	\$19	Double	d	MJD->Time	Lower bound of times represented in the data set
20	20		t_max	\$20	Double	d	MJD->Time	Upper bound of times represented in the data set
21	21		t_exptime	\$21	Float	s		Total exposure time
22	22		t_resolution	\$22	Float	s		Minimal significant time interval along the time axis
23	23		em_min	\$23	Float	m		Minimal wavelength represented within the data set
24	24		em_max	\$24	Float	m		Maximal wavelength represented within the data set
25	25		em_res_power	\$25	Float			Spectral resolving power lambda/delta lambda
26	26		o_ucd	\$26	String			UCD for the product's observable
27	27		pol_states	\$27	String			List of polarization states in the data set
28	28		facility_name	\$28	String			Name of the facility at which data was taken
29	29		instrument_name	\$29	String			Name of the instrument that produced the data
30	30		s_xel1	\$30	Integer			Number of elements (typically pixels) along the first spatial axis.
31	31		s_xel2	\$31	Integer			Number of elements (typically pixels) along the second spatial axis.
32	32		t_xel	\$32	Integer			Number of elements (typically pixels) along the time axis.
33	33		em_xel	\$33	Integer			Number of elements (typically pixels) along the spectral axis.
34	34		pol_xel	\$34	Integer			Number of elements (typically pixels) along the polarization axis.
35	35		s_pixel_scale	\$35	Float	arcsec		Sampling period in world coordinate units along the spatial axis
36	36		em_ucd	\$36	String			Nature of the product's spectral axis (typically, em.freq, em.wl, or em.energy)
37	37		preview	\$37	String			URL of a preview (low-resolution, quick-to-retrieve representation) of the data.
38	38		source_table	\$38	String			Name of a TAP-queriable table this data originates from. This source table usually provides more info
39	39		filter_name	\$39	String			name of the filter in FITS file header

**Table Access Protocol (TAP) Query**

Select Service Use Service Resume Job Running Jobs

**Metadata**

Find:  Or

Sort:  Service  Alphabetic

**Service Capabilities**

Query Language: ADQL-2.1 Max Rows: 20000 (default) Uplo

**ADQL Text**

Query Mode: Synchronous

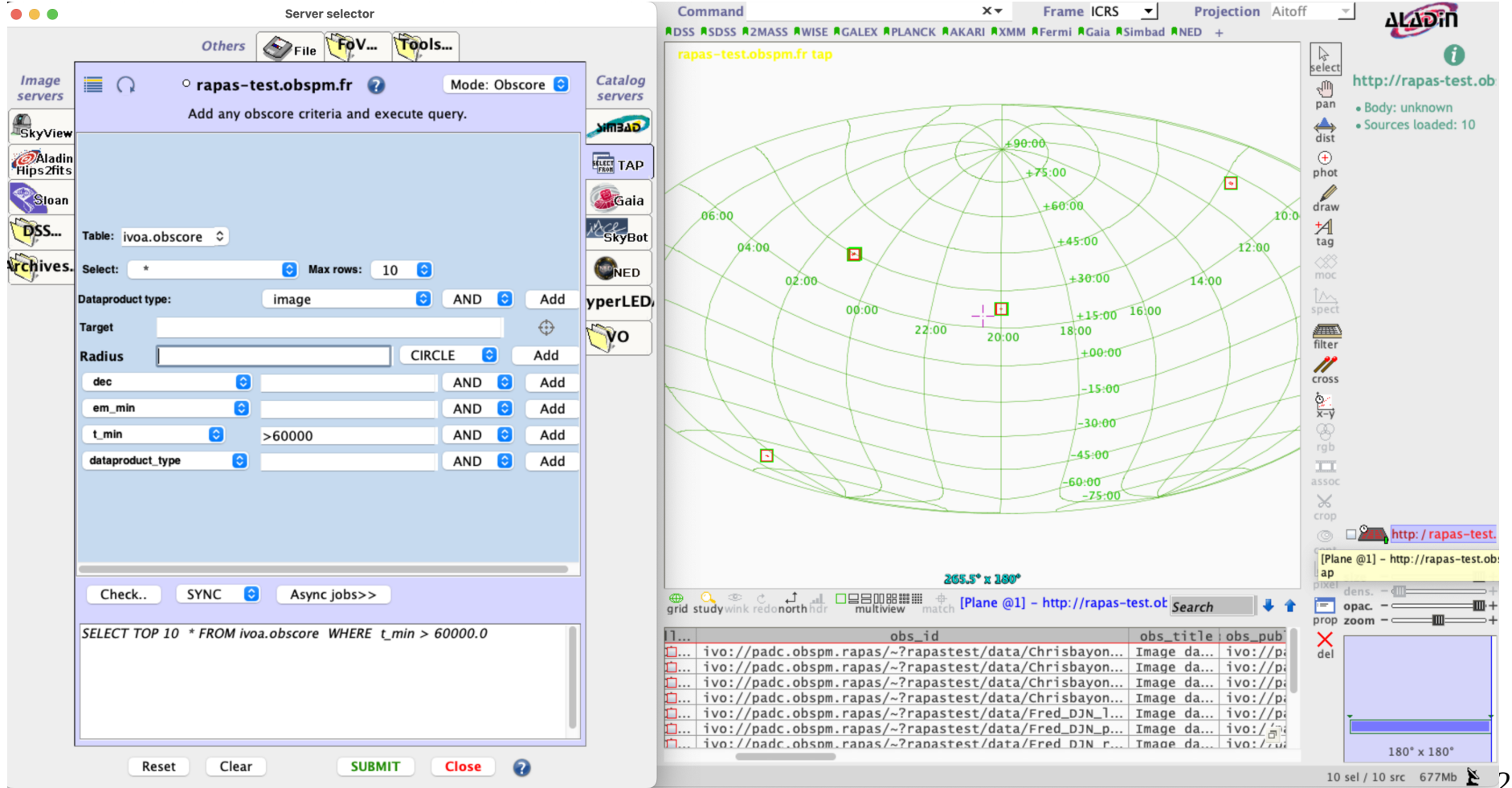
```

SELECT * FROM ivoa.Obsolete
WHERE dataprod_type='image'
AND s_resolution < 0.3
AND s_ra BETWEEN 12 AND 13
AND s_dec BETWEEN 29 AND 130
    
```

Run Query

**ObsCore Columns**

# Accessing the TAP service with



The screenshot displays the ALADIN interface, which is used for accessing TAP services. The interface is divided into several panels:

- Server selector:** Shows the selected server as `rapas-test.obspm.fr` in `Mode: Obscure`. It includes a search bar for adding obscure criteria and a list of image servers (SkyView, Aladin, Hip2fits, Sloan, DSS..., Archives).
- Query Panel:** Contains a table selection dropdown set to `ivoa.obscure`. The `Select` field is set to `*` and `Max rows` is set to `10`. The `Dataproduct type` is set to `image`. The `Target` field is empty. The `Radius` is set to `CIRCLE`. Filter criteria include `dec`, `em_min`, `t_min > 60000`, and `dataproduct_type`.
- Query Execution:** Buttons for `Check..`, `SYNC`, and `Async jobs>>` are present. The SQL query is displayed as `SELECT TOP 10 * FROM ivoa.obscure WHERE t_min > 60000.0`.
- Map Panel:** Shows a sky map in the `Frame ICRS` and `Projection Aitoff`. The map displays a grid of right ascension and declination coordinates. A search bar at the bottom of the map shows `[Plane @1] - http://rapas-test.ob`.
- Table View:** A table of results is shown below the map, with columns `obs_id`, `obs_title`, and `obs_pub`. The results list several observation records from the `ivo://padc.obspm.rapas/~?rapastest/data/Chrisbayon...` and `ivo://padc.obspm.rapas/~?rapastest/data/Fred_DJN...` series.
- Right Panel:** Contains a toolbar with various interaction tools (select, pan, dist, phot, draw, tag, moc, spect, filter, cross, x-y, rgb, assoc, crop) and a status bar showing `180° x 180°`.

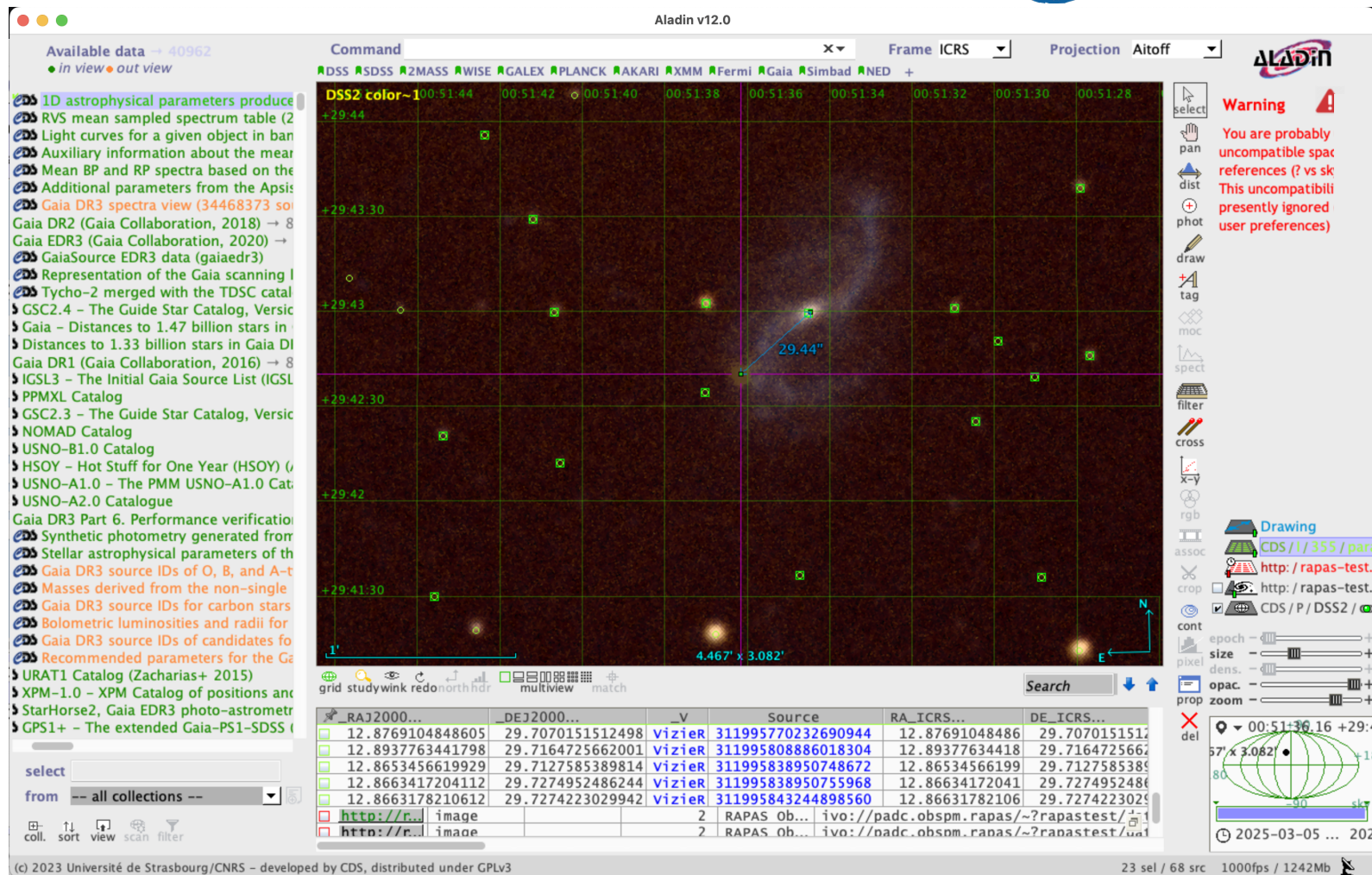
# Image analysis with

SN2025ahxd

Images:

- DSS2 color
- Fred Danjean

Sources from Gaia DR3



The screenshot displays the ALADIN v12.0 interface. The main window shows a multi-panel astronomical image of SN2025ahxd. The image is overlaid with a grid and various data points. A blue line indicates a distance of 29.44" between two points. A scale bar at the bottom indicates 4.467" x 3.082". The interface includes a sidebar with a list of available data collections, a command line, and a search bar. A table at the bottom lists sources with their RA and DE coordinates and names.

**Available data → 40962**  
 ● in view ● out view

**Command** x Frame ICRS Projection Aitoff

**Warning**  
 You are probably incompatible spar references (? vs sk This incompatibili presently ignored user preferences)

**DSS2 color~100:51:44** 00:51:42 00:51:40 00:51:38 00:51:36 00:51:34 00:51:32 00:51:30 00:51:28

**Available data:**

- 1D astrophysical parameters produced
- RVS mean sampled spectrum table (2
- Light curves for a given object in ban
- Auxiliary information about the mear
- Mean BP and RP spectra based on the
- Additional parameters from the Apsis
- Gaia DR3 spectra view (34468373 soi
- Gaia DR2 (Gaia Collaboration, 2018) → 8
- Gaia EDR3 (Gaia Collaboration, 2020) →
- GaiaSource EDR3 data (gaiaedr3)
- Representation of the Gaia scanning l
- Tycho-2 merged with the TDSC catal
- GSC2.4 - The Guide Star Catalog, Versi
- Gaia - Distances to 1.47 billion stars in
- Distances to 1.33 billion stars in Gaia DI
- Gaia DR1 (Gaia Collaboration, 2016) → 8
- IGSL3 - The Initial Gaia Source List (IGSL
- PPMXL Catalog
- GSC2.3 - The Guide Star Catalog, Versi
- NOMAD Catalog
- USNO-B1.0 Catalog
- HSOY - Hot Stuff for One Year (HSOY) (
- USNO-A1.0 - The PMM USNO-A1.0 Cat
- USNO-A2.0 Catalogue
- Gaia DR3 Part 6. Performance verificatio
- Synthetic photometry generated from
- Stellar astrophysical parameters of th
- Gaia DR3 source IDs of O, B, and A-t
- Masses derived from the non-single
- Gaia DR3 source IDs for carbon stars
- Bolometric luminosities and radii for
- Gaia DR3 source IDs of candidates fo
- Recommended parameters for the Ga
- URAT1 Catalog (Zacharias+ 2015)
- XPM-1.0 - XPM Catalog of positions and
- StarHorse2, Gaia EDR3 photo-astrometr
- GPS1+ - The extended Gaia-PS1-SDSS (

**Table:**

RA_2000...	DE_J2000...	_V	Source	RA_ICRS...	DE_ICRS...
12.8769104848605	29.7070151512498	VizieR	311995770232690944	12.87691048486	29.7070151512
12.8937763441798	29.7164725662001	VizieR	311995808886018304	12.89377634418	29.7164725662
12.8653456619929	29.7127585389814	VizieR	311995838950748672	12.86534566199	29.7127585389
12.8663417204112	29.7274952486244	VizieR	311995838950755968	12.86634172041	29.7274952486
12.8663178210612	29.7274223029942	VizieR	311995843244898560	12.86631782106	29.7274223029
http://r...	image	2	RAPAS Ob...	ivo://padc.obspm.rapas/~?rapastest/	
http://r...	image	2	RAPAS Ob...	ivo://padc.obspm.rapas/~?rapastest/	

**Search** ↓ ↑

**epoch** 00:51:36.16 +29:41:30.80

**size** 57 x 3.082

**dens.** 80

**opac.** 100

**zoom** 2025-03-05 ... 2025-03-05

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23 sel / 68 src 1000fps / 1242Mb

# The PADC ObsTAP Portal

Form OK: query generated

Form Query

**Service**

Source: PADC Registry

IVOID: Service IVOID

URL: http://rapas-test.obspm.fr/tap

Timeout (secs): 20

**Local**

Product\_Type: Choose Value

ObsCore\_Target: SN 2025ahxd

Data\_Collection: Choose Value

Filter\_Name: Choose Value

**Position**

Target Name: Name of target

Target\_RA (deg): Right Ascension of target in deg (J2000)

Target\_DEC (deg): Declination of target in deg (J2000)

Cone Search Radius (deg): Cone Search radius in deg. If non-empty, a cone

Cone Search Strategy: Region (s\_region)

**ObsTAP Results**

N/A - N/A : 4 rows found.

Show 10 entries

Export rows - Column visibility - Show all columns Hide all columns Rows Selection -

DL	facility_name	instrument_name	obs_id	dataprodtype_type
N/A	C8	ZWO ASI2600MM Pro	ivo://padc.obspm.rapas/~?rapastest/data/Fred_DJN_r_SN2025ahxd-lights_00006_wcs.fits	image
N/A	C8	ZWO ASI2600MM Pro	ivo://padc.obspm.rapas/~?rapastest/data/Fred_DJN_pp_light_00004_wcs.fits	image
N/A	C8	ZWO ASI2600MM Pro	ivo://padc.obspm.rapas/~?rapastest/data/Fred_DJN_light_00005_wcs.fits	image
N/A	C8	ZWO ASI2600MM Pro	ivo://padc.obspm.rapas/~?rapastest/data/Chrisbayonne_20260225T185505_631_Occultation_wcs.fits	image

Showing 1 to 4 of 4 entries 1 row selected

Selected Data - All Metadata -

1 service(s) queried in 0.26 secs.

**Time**

Time Min (UTC): 2025-07-01T12:00:00

Time Max (UTC): Maximum UTC time of observation MJD or I

**Energy**

Spectral Range Min (m): Minimum wavelength of observation in m

Spectral Range Max (m): Maximum wavelength of observation in m

```
ADQL Where Clause

target_name='SN 2025ahxd' AND t_min
>= 60857.5
```

