Nuevo Observatorio Virtual Argentino

Astroinformática y NOVA

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Coordinadora Informática NOVA

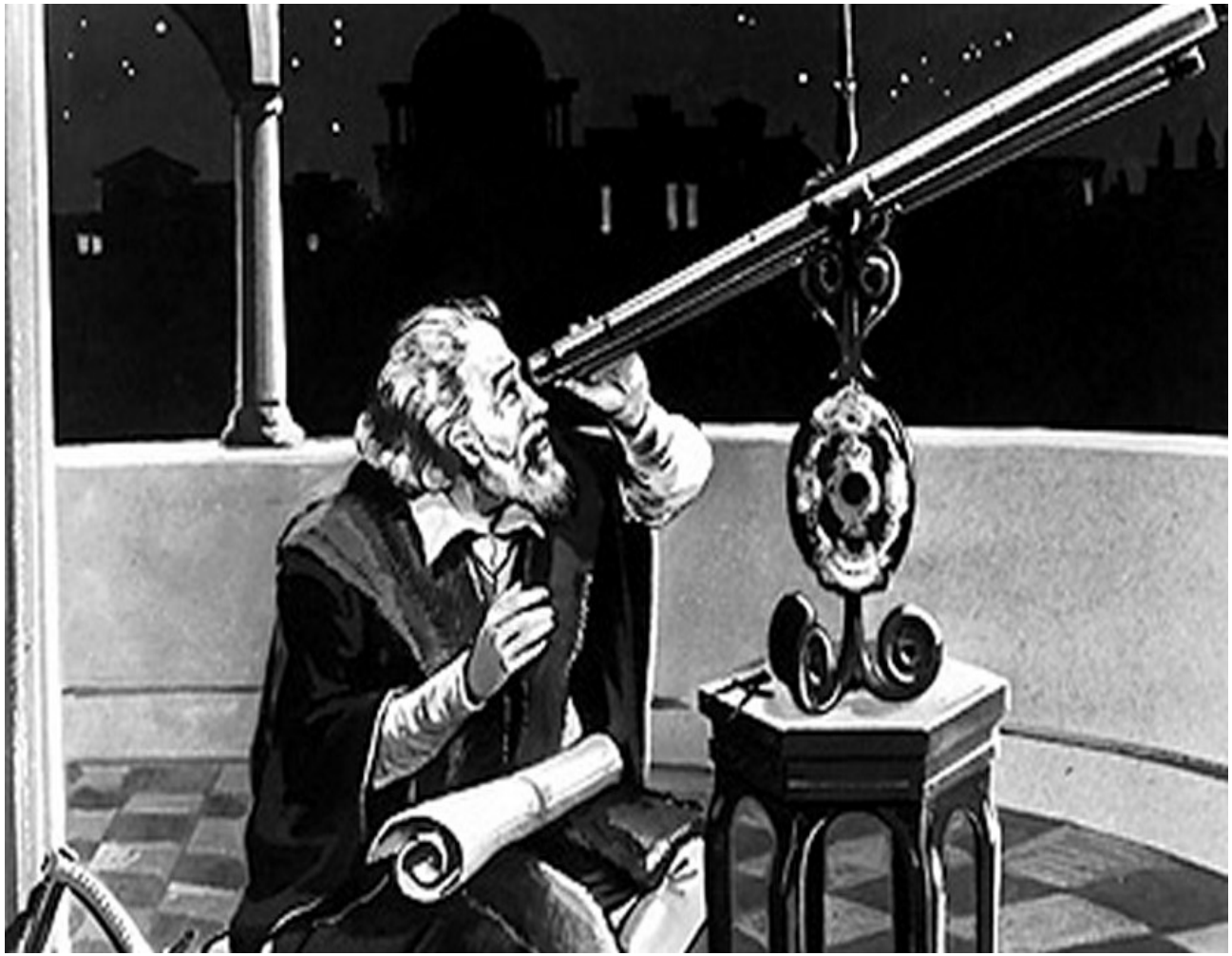
2do Taller de Herramientas para Observatorios Virtuales
Argentina - 20 de Noviembre del 2013

CONICET

Primer Charla NOVA

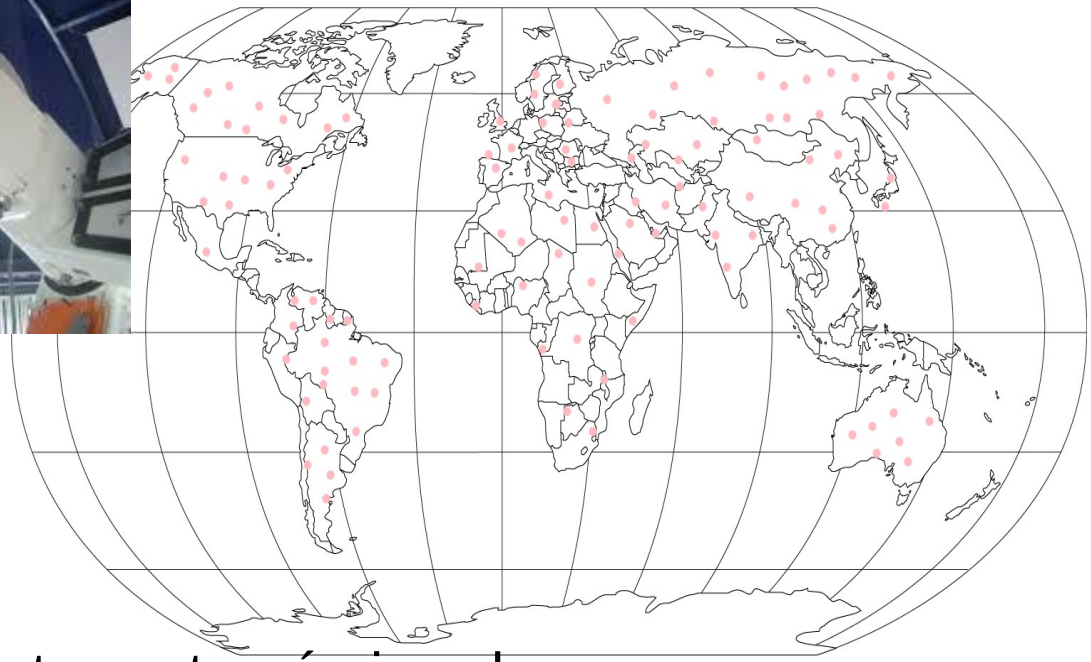
- Astroinformática y Observatorios Virtuales
- Rol IVOA
- ¿Qué es NOVA?
- ¿Quién es quién en NOVA?: Dueños, técnicos y usuarios de datos.
- Ejemplo básico del uso de NOVA con Aladin

Investigación Astronómica en el Siglo XV




Taurus
M34
M76
WEST
4h
Aries
Hamal
M33
Mirach
Andromeda
Menkar
Jupiter
M77
M74
Moon
Alpheratz
Pisces
2h
Algenib

Investigación Astronómica en el Siglo XXI



El volumen de datos astronómicos ha ido creciendo, y crecerá aún más en los próximos años.

Investigación Astronómica en el Siglo XXI

Astroinformática

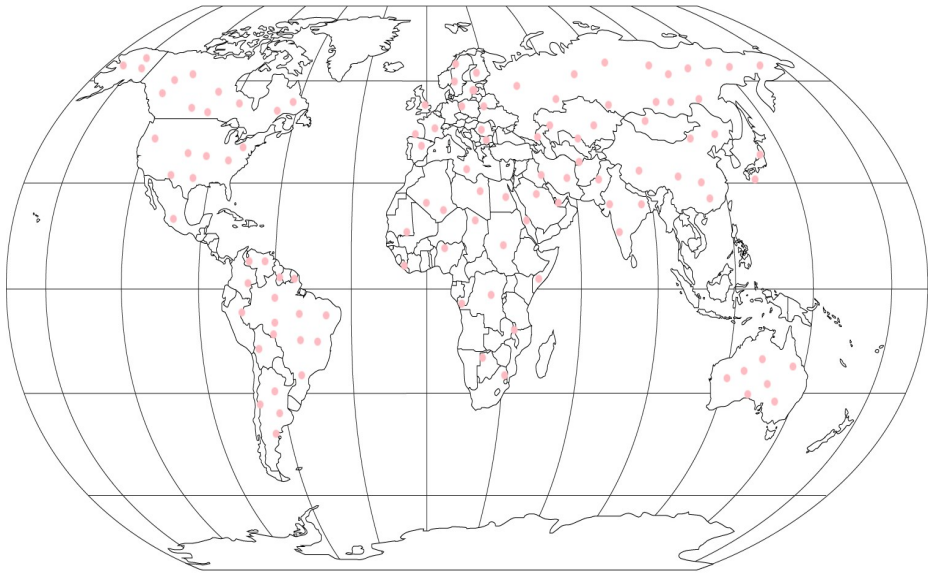
Crecimiento exponencial de nuevos datos disponibles desafía la investigación astronómica eficaz.

Se podría aprovechar aún más la información a nivel mundial.

Cuestiones para:

- Acceso a la Información
  - Distribuida entre los paises
  - No se encuentra en formato digital
  - Distribuida en diferentes Bases de Datos o Software

- Análisis de la Información
  - Demasiada cantidad de datos
  - Datos no estandarizados
  - Herramientas no unificadas



Investigación Astronómica en el Siglo XXI

Astroinformática

Observatorios Virtuales

SVO (España)

CHIVO (Chile)

GAVO (Alemania)

Aus-VO (Australia)

USVO (USA)

AstroGrid (UK)

FranceVO (Francia)

+17 paises

Argentina

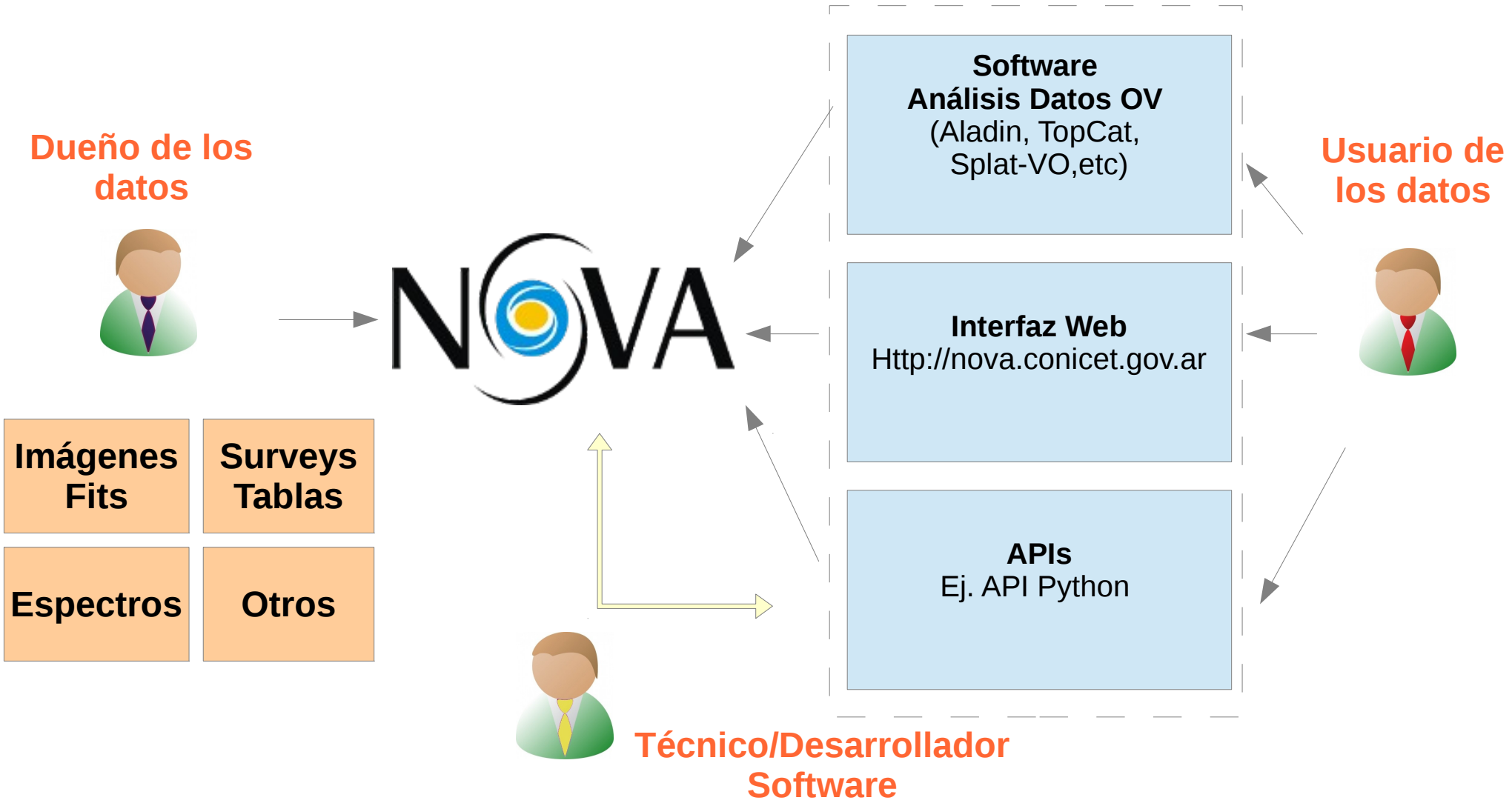
Estándares sobre los datos / Herramientas

¿Qué es NOVA?

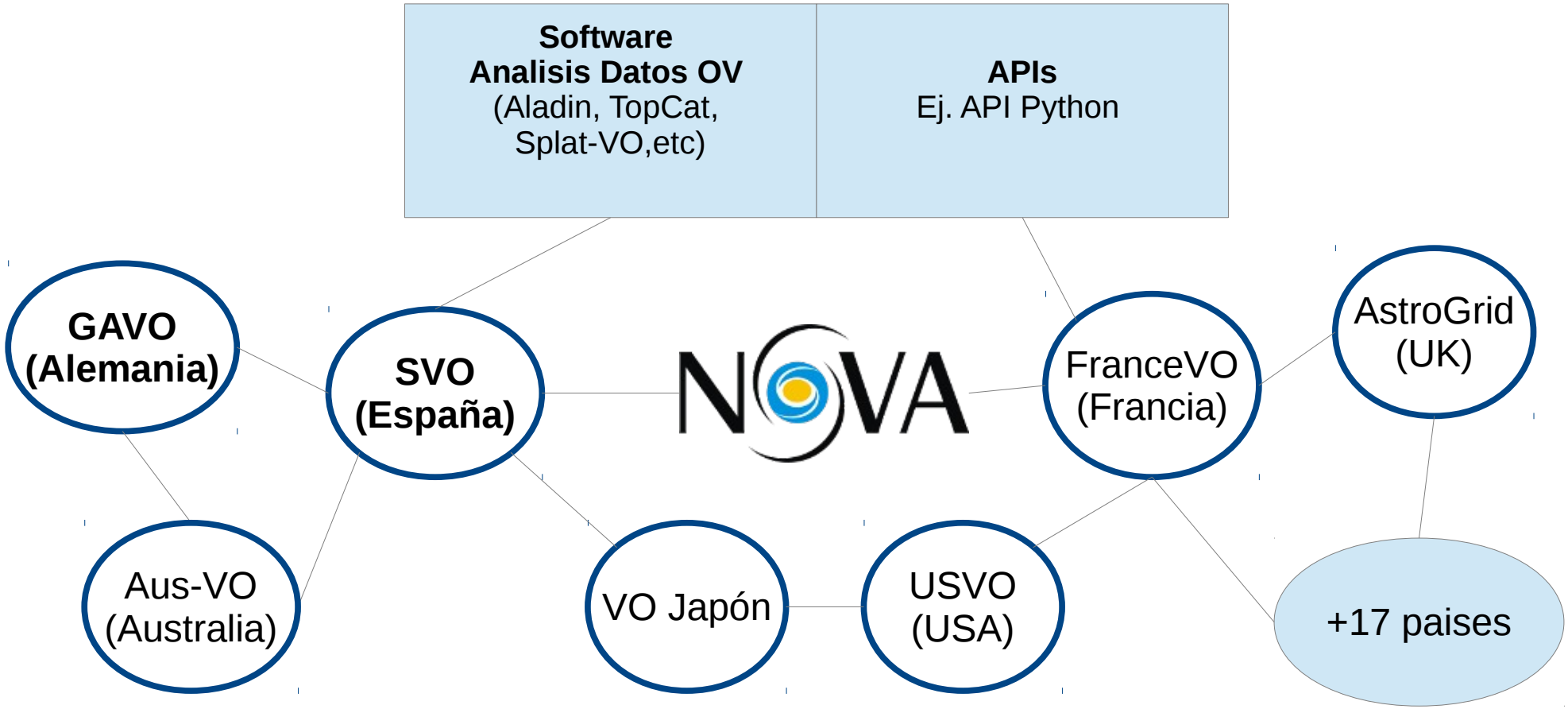
- Nuevo Observatorio Virtual Argentino
- Es un Servicio para la comunidad astronómica
- Es una página Web: http://nova.conicet.gov.ar
- Es un Centro de Datos de datos astronómicos (base de datos)
- Es una herramienta unificada para los interesados en publicar, consultar e investigar datos astronómicos argentinos
- Está implementado usando Tecnología GAVO DACHs
  Software: DB Postgres, Python,
- Tiene conjunto de software para el análisis de la información
- Es un Observatorio Virtual


NOVA
Nuevo Observatorio Virtual Argentino
CONICET
Inicio
Recursos
Eventos
Acerca de
Change to English
NOVA es el Nuevo Observatorio Virtual Argentino.
Provee a la comunidad astronómica de un centro de datos, herramientas de software, estándares de interoperabilidad de datos y coordinación de recursos, a fin de lograr una mayor eficiencia y productividad en el acceso, manejo y análisis de observaciones astronómicas recabadas en múltiples longitudes de onda por las Instituciones Astronómicas de Argentina.
La información es pública y puede ser usada por astrónomos, investigadores de otros campos, estudiantes y el público general.
NOVA es una iniciativa de:
CONICET
Y cuenta la participación de las Instituciones Astronómicas del país.
OAC
iar
Facultad de Ciencias Astronómicas y Geofísicas
Acceder a los Datos Astronómicos en NOVA

Roles en NOVA

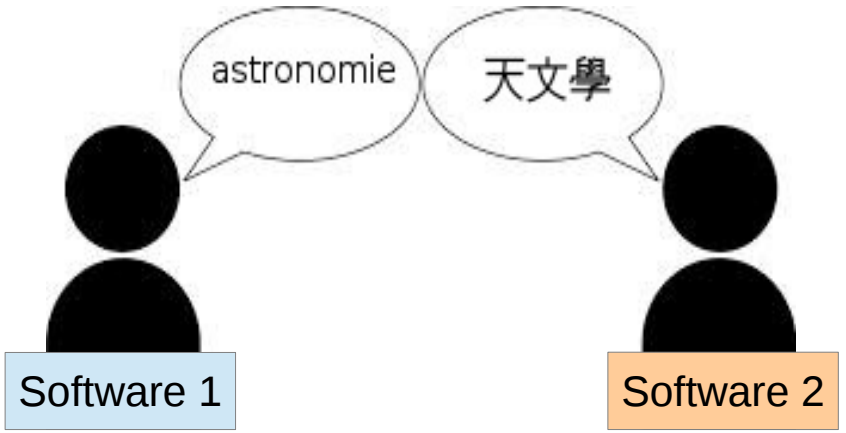


Interacción de NOVA con otros OV



Protocolo

- Se refiere a un conjunto de reglas, estandares que sigue un software.
- En este caso, IVOA establece como deben implementarse en software algunos de los servicios que ofrece un OV.
- Va a permitir que se puedan desarrollar distintas aplicaciones/software que se comuniquen con el VO.
- Se establece una especie de “lenguaje en común” entre las aplicaciones.



- IVOA define varios Protocolos para acceder a los datos de los OV

SCS
Simple Cone Search

Tablas

SSA
Simple Spectral Access

Espectros

SIA
Simple Image Access

Imágenes

SAMP
Simple Application Messaging Protocol

Tablas

Servicios Disponibles en http://nova.conicet.gov.ar

Home | Resources | Events | About

Welcome to NOVA's Data Center

NOVA Argentina's Virtual Observatory: VO Software, Tools and Astronomical Information online.

This is public information and could be used by **astronomy researchers**, **researchers** of other fields, **students** and the **general public**.

Supported Astronomical Software Go to NOVA Data Center

Access to NOVA's Data Center

To access NOVA information online just select the Q or i icon of the Resource of interest or access using an Astronomical Software (recommended). Check out the section: Supported Astronomical Software

- ICATE Multispectral observations Online i Q
- ICATE Multispectral observations SSAP i
  The spectroscopic data available at ICATE, represents 45 years of observations, including photographics plates and digital detectors. This information will be offered to national and international users, very useful for all kind of studies, specially on spectral variations along time. Nowadays the 1987 Data Base is stored in CD`s and DVD`s with a limited lifetime. Before this date the information is stored in photographic plates which endangers its conservation. The preservation of this material is urgently needed, to avoid any possibility of loosing it. The project foresees to give the information to all the national and international astronomic community.
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- Very Large Array (VLA) Observations at IAFE i Q
  These are the VLA observations produced by researchers at the Argentine Institute for Astronomy and Space Physics (IAFE). The Very Large Array (VLA) has been an extraordinarily productive scientific instrument. Astronomers from around the World use it to study a wide variety of objects, from our solar system up to the edges of the known Universe, billions of light-years from the Earth.

Viendo la información recurso

Nuevo Observatorio Virtual Argentino

Resources Home | VO Tools | About Project NOVA

NOVA is the Argentina's Virtual Observatory. It provides astronomical information online.

Astronomical Institutions of Argentina in NOVA

CASLEO
FCAGLP
ICATE
IAFE
IALP
IAR
IATE
OAC

This is public information and it could be used by astronomy researchers, researchers of other fields, students and the general public.

Follow

Resources > Very Large Array (VLA) Observations at IAFE

Service Name:

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Access using:

- *siap.xml* a standard SIAP interface as defined by the IVOA to access collections of celestial images; SIAP clients use http://nova.iafe.uba.ar/iafevla/q/im/siap.xml? to access the service
- *form* allows access via an HTML form

Viendo la información recurso

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Position [deg]

ICRS Position, RA,DEC, or Simbad object (e.g., 234.234,-32.45)

Field size [deg] 0.5

Size in decimal degrees (e.g., 0.2 or 1,0.1)

Intersection type: Image overlaps RoI

Relation of image and specified Region of Interest.

Table: Sort by [ ] Limit to 100 items.

Output format: HTML

Go

[Result link]

Viendo Archivos Fits Online

Very Large Array (VLA) Observations at IAFE

Parameters

- Field size: 0.5
- Output format: image/fits

Result

Matched: 1

Send via SAMP | Quick Plot | Open in VOPlot

Product key	Owner	Embargo ends	Type	File size [byte]	Ctr. RA [deg]	Ctr. Dec [deg]	Title	Instrument	Obs. date	#axes	Axes Lengths [pix]	Scales [deg/pix]	Ref. Frame	Equinox [yr]	Proj.	Ref. pixel [pix]	Ref. values [deg]	CD matri [deg/pix
w44_b_330_ap.fits	N/A	N/A	image/fits	46.9MiB	284.03	1.29	N/A	VLA	N/A	4	[3494, 3515, 1, 1]	[0.00125032, 0.00125]	ICRS	N/A	SIN	[1748.0, 1763.0]	[284.026466667, 1.29929638889]	[-0.0012 0.0, 0.0, 0.00125]

URL SIAP

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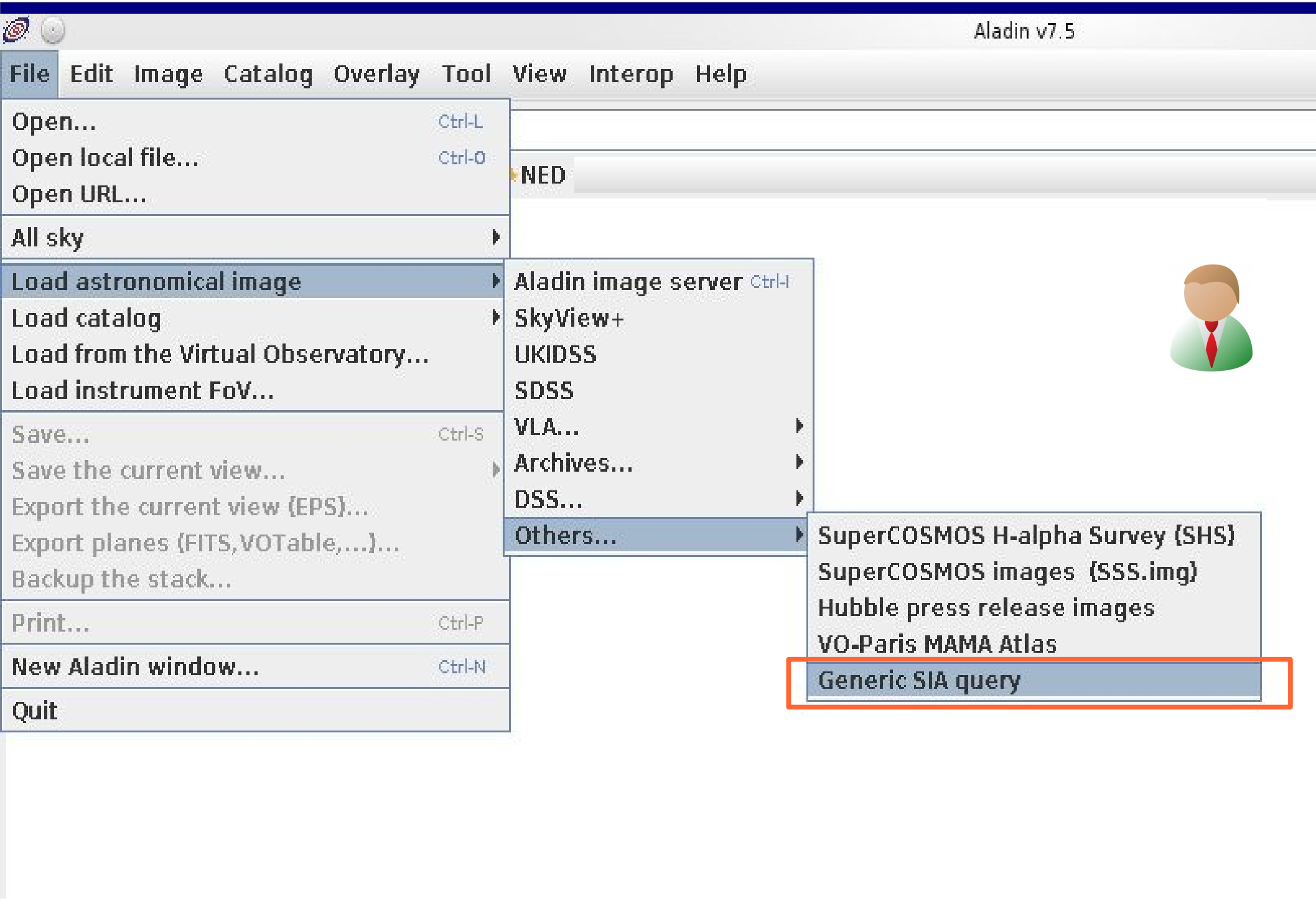
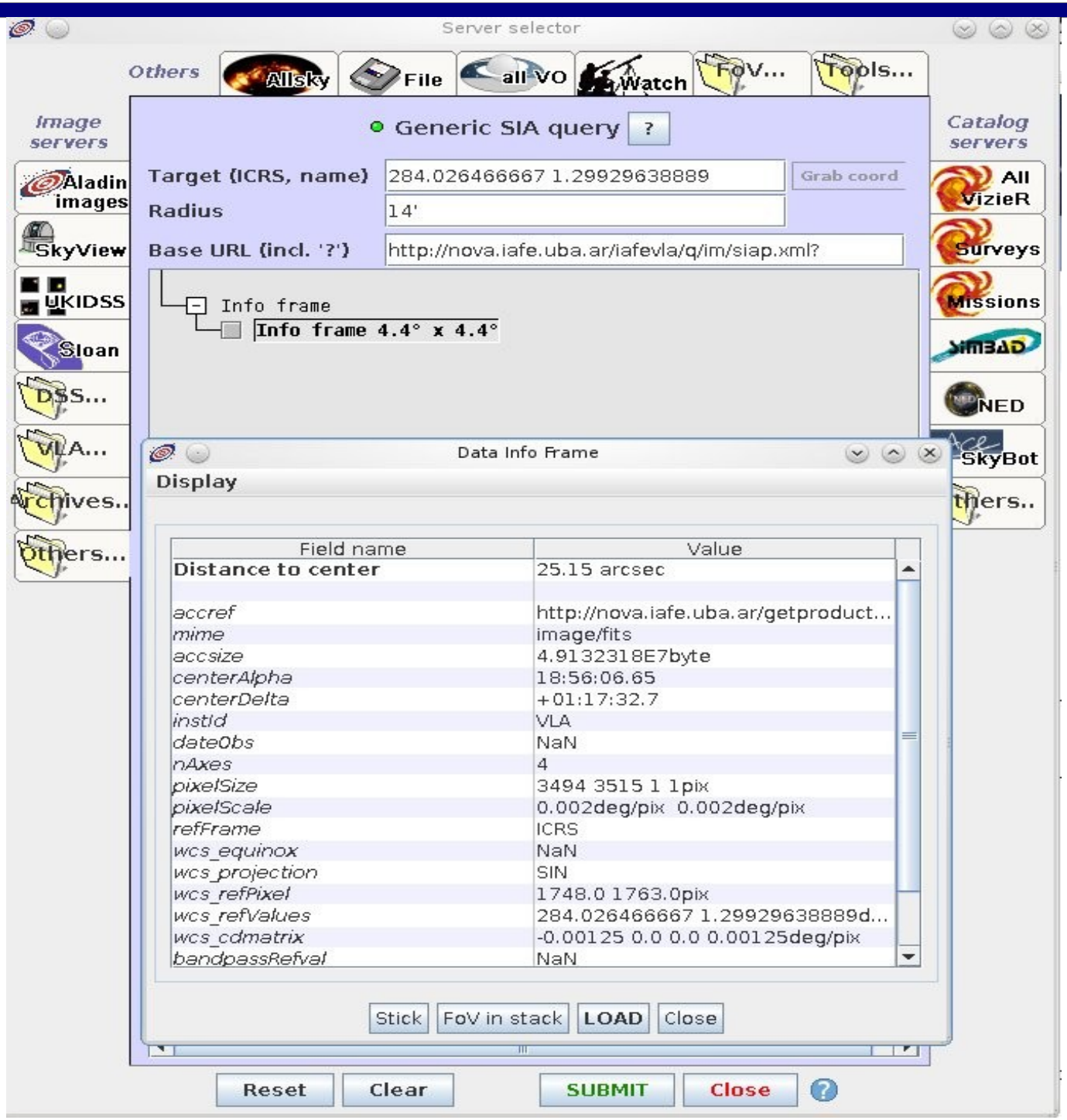
Cargando Imagen de NOVA a Aladin



Cargando Imagen de NOVA a Aladin



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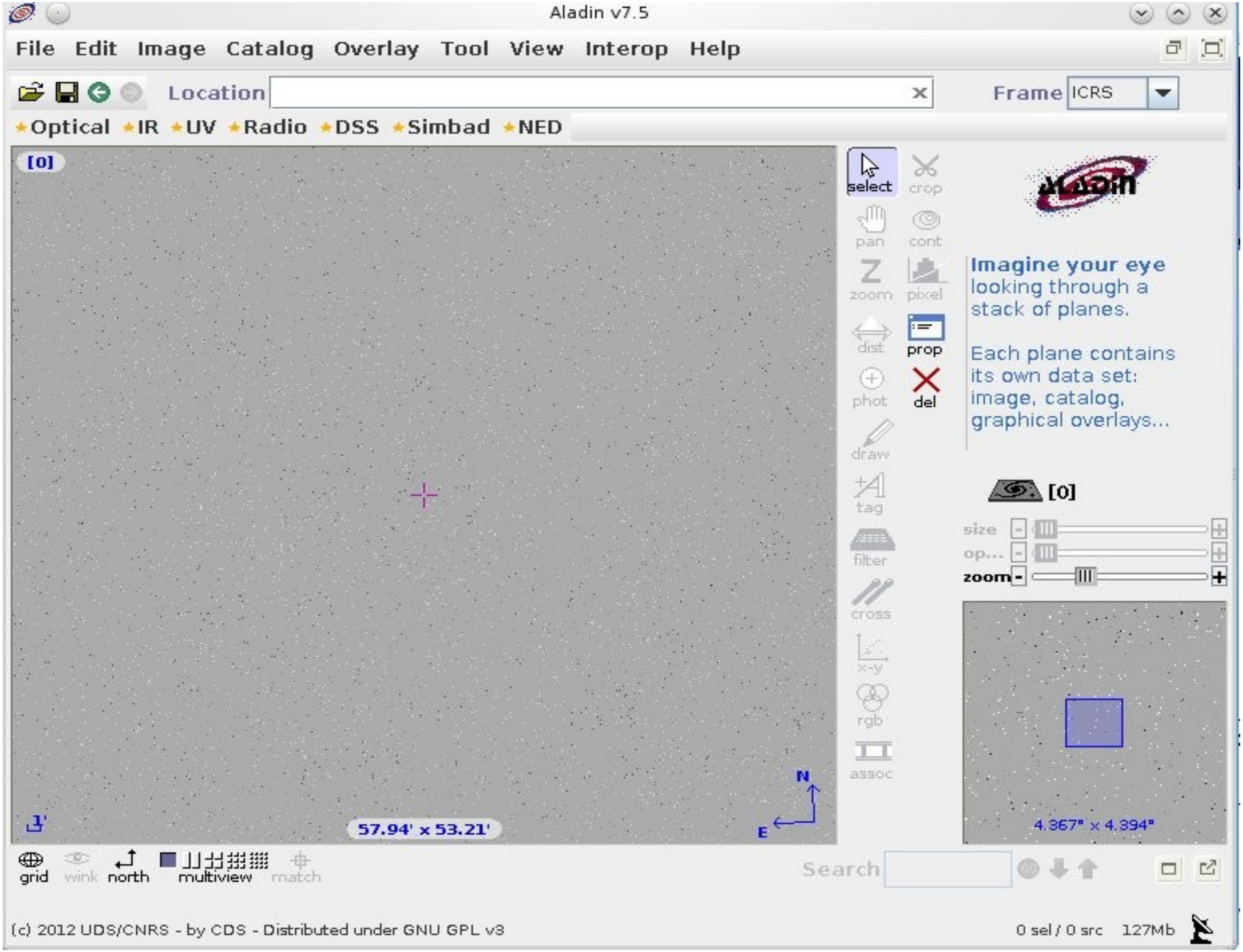

Comunidad Astronómica Internacional

Comunidad Astronómica Argentina

OAC · IALP CONICET UNLP · Facultad de Ciencias Astronómicas y Geofísicas · IAFE CONICET UBA · IATE CONICET UNC · ICATE CONICET UNSJ · iar · CASLEO

Por la tarde:

- Herramientas para visualizar y analizar los datos de NOVA:

  Top-cat, SPLAT-VO, ADQL

- Cómo subir información a NOVA