

# Aladin – Status & New Developments

T. Boch, P. Fernique, F. Bonnarel (CDS)



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# Introduction

Aladin provides an easy access to both images and catalogues (distributed resources)

- Developed in Java (Java 1.1+ compatible)
- Available :
  - As an applet (no installation required), but with limitations (no access to local disk, no access to printer)
  - As a standalone application without limitation
- Relies on GLU registry



# GLU

Aladin uses the GLU to:

- Automatically find data servers
- Automatically build query forms
- Find out nearest mirror site
- Convert requests to suit syntax of distant server



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# Some of the features

- Metadata tree



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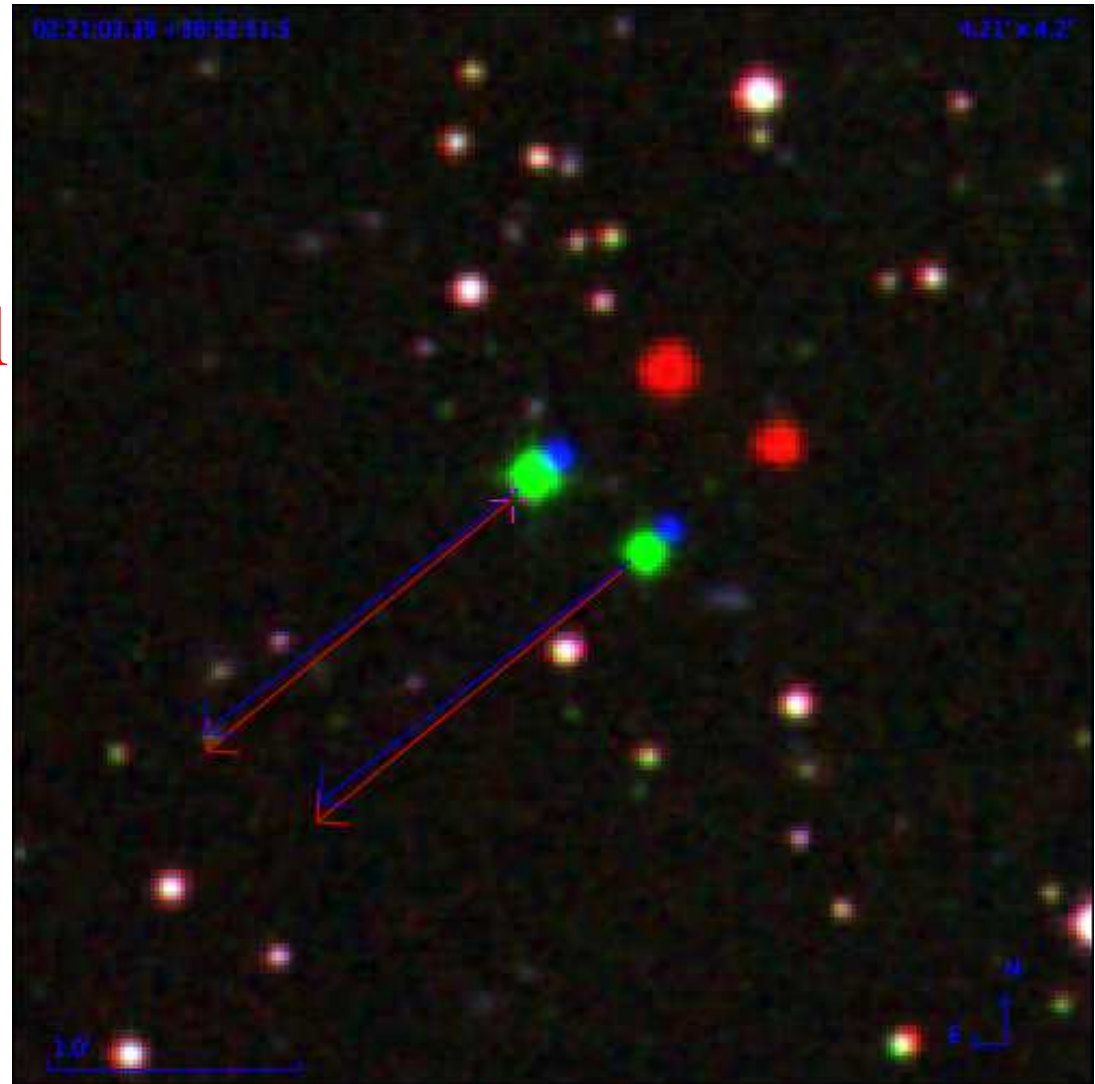
- Metadata tree
- Filtering capabilities, to select a subset of data and modify the visual appearance of sources



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# Some of the features

- Metadata tree
- Filtering capabilities, and modify the visual



# Some of the features

- Metadata tree
- Filtering capabilities, to select a subset of data and modify the visual appearance of sources
- **RGB (color composition)**



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# Some of the features

- Metadata tree
- Filtering capabilities and modify the view
- RGB (color composition)



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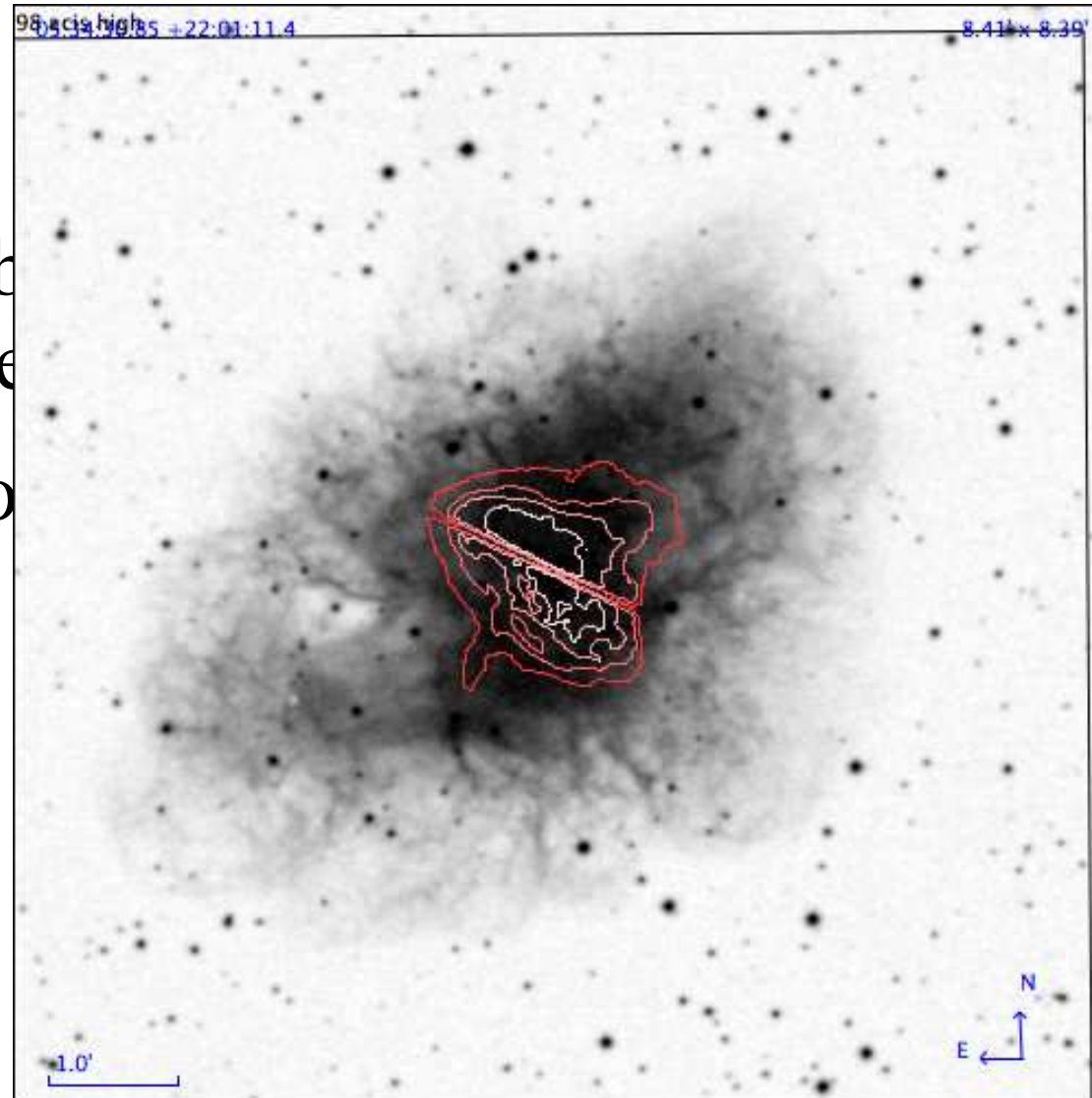
# Some of the features

- Metadata tree
- Filtering capabilities, to select a subset of data and modify the visual appearance of sources
- RGB (color composition)
- **Contours**



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- Metadata tree
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- **Astronomical calibration --> creates/fixes a WCS header for a non/bad-calibrated image**



# Some of the features

- Metadata tree
- Filtering capabilities, to select a subset of data and modify the visual appearance of sources
- RGB (color composition)
- Contours
- Astronomical calibration --> creates/fixes a WCS header for a non/bad-calibrated image
- ... Full user manual on <http://aladin.u-strasbg.fr/java/aladin.pdf>



# VO Compliance

- Supports **FITS** images (FITS extensions not yet supported)
- Loads **VOTable** catalogues (*Tab Separated Value* format also supported)
- Access to **SIAP** servers (and *IDHA*)
- Use of **UCDs** (to localize RA/DEC columns, and in filters)
- (soon) Access to **SSAP** servers
- (soon) Save and export catalogue planes as **VOTable** files



# Data hub

Aladin enables access to a large variety of astronomical data:

- Image servers: Aladin image server (all Schmidt Plates Surveys, 2MASS, DENIS and Sloan), ESO server for DSS images, SuperCOSMOS, SkyView, HST previews and associations ...
- Catalogue servers: VizieR, NED, Simbad, HyperLEDA, ...



# Access YOUR data

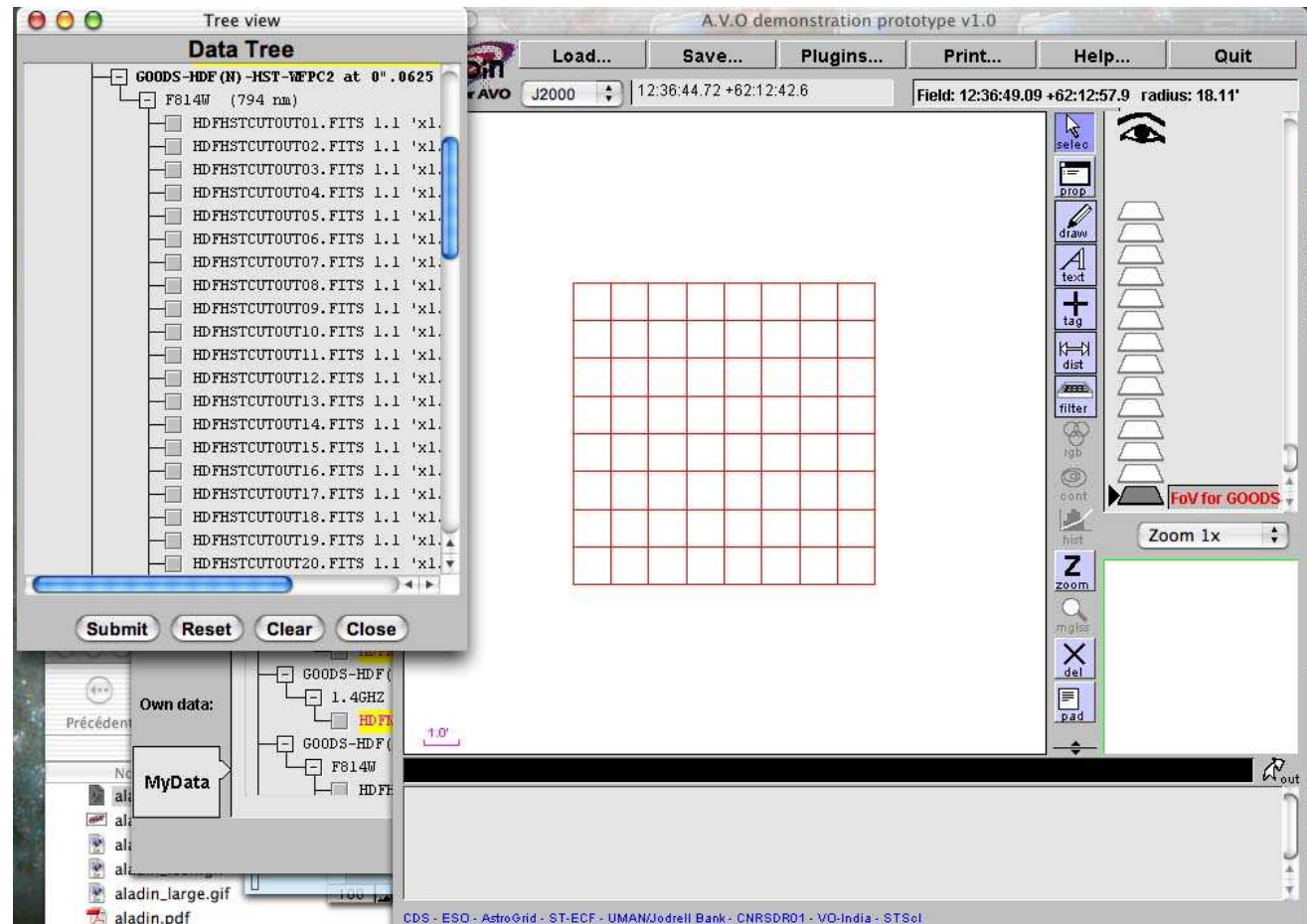
- **Access to local data** : load any supported file, ability to build a *Metadata Tree* from a given directory



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# Access YOUR data

- Access to local data : load any supported file, ability to build a *Metadata Tree* from a given directory
- **Access to an HTTP server:**
  - Needs to be a CGI interface (Web Services not supported yet) able to respond to a query with a *target parameter*
  - Ability to describe your server to make it appear within the Aladin interface



# Access YOUR data

- Access to local data : load any supported file, ability to build a *Metadata Tree* from a given directory
- Access to an HTTP server:
  - Needs to be a CGI interface (Web Services not supported yet) able to respond to a query with a *target parameter*
  - Ability to describe your server to make it appear within the Aladin interface
- **Launch the applet with a script loading data**  
(URL parameter)



# Collaboration with other applications

Aladin provides a script mode which allows external applications to control it via the standard input

--> nice, but not sufficient for tight collaboration between applications

ExtApp has been built for that purpose:

- Java interface which defines possible interactions between Aladin and another Java tool
- VOTable exchange oriented
- Symmetrical interface: Aladin implements it, the external application also has to implement it
- Fully described in Aladin FAQ



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# ExtApp in action

**ExtApp** has been successfully used for collaboration between Aladin and VOPlot (VO-India)

Usage example:

- Aladin launches the “ext app” voplot:

```
ExtApp voplot = com.jvt.applets.PlotVOApplet.launch();
```

- Aladin sends VOTable to VOPlot:

```
voplot.loadVOTable(this, new InputStream(...));
```

- VOPlot asks Aladin (seen as an ExtApp) to select some of the sources which have been previously transmitted via VOTable to voplot:

```
extApp.selectVOTableObject(new String[]{"32", "87"});
```



# Features in development

(some of them developed in the AVO framework)

In test phase – available in June 2004:

- **Access to real pixels**



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- Access to real pixels
- Positional cross-match



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# Features in development

(some of them developed in the AVO framework)

In test phase – available in June 2004:

- Access to real pixels
- Positional cross-match (shown in AVO demo)
- Adjustment of image dynamic --> new transfer functions



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# Features in development

Soon:

- *SSA (Simple Spectrum Access)* compatibility as soon as in recommendation status (Specview – developed at STScI - will be used to visualize spectra)



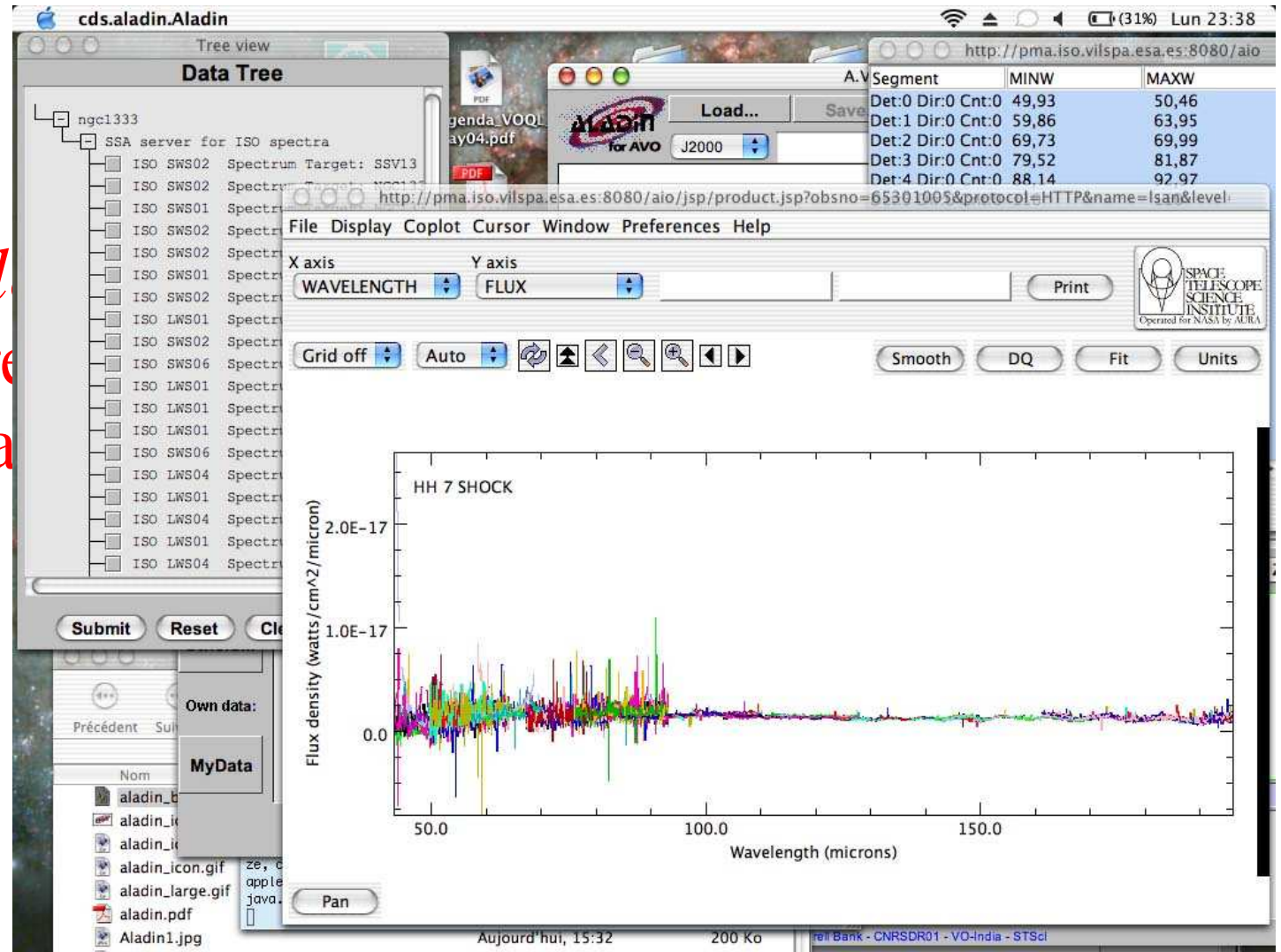
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# Features in development

Soon:

- *SSA (Simple Spectra Analysis)* soon as in redeveloped a spectra



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# Features in development (ct'd)

Available by end 2004:

- Multiview



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# Multiview : screenshot 1

Aladin v2.1

Load... Save... VOPlot... Print... Help... Quit

Position J2000 00:14:46.10 -39:15:00.8

Pixel in file 4580

00:15:04.55 -39:12:54.7  
00:15:20.86 -39:14:46.5  
00:12:26.08 -39:01:07.2

00:14:56.19 -39:16:09.4

00:15:07.34 -39:14:08.1

0028740201  
U63Q0209B  
U63Q0209B  
U63Q0209B

Cont X  
Cont V  
HST  
Chandra  
0028740201  
U29R0201T  
U63Q0209B  
Pl dss  
Lw dss  
dss

0028740201 - provided by the original archive server

Image	PCImage	NGC55-HII1	00 14 46.19	-39 15 00.7	WFPC2	255.3
Image	PCImage	NGC55-HII1	00 14 46.19	-39 15 00.7	WFPC2	794.0
Image	PCImage	NGC55-HII1	00 14 46.19	-39 15 00.7	WFPC2	794.0
Image	PCImage	NGC55-HII1	00 14 46.19	-39 15 00.7	WFPC2	794.0
Association(CADC)	003.6924	-39.2502	2001-01-18T02:29:13	2400.0	NGC55-HII1	
Association(CADC)	003.6924	-39.2502	2001-01-18T04:33:13	2500.0	NGC55-HII1	

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# Multiview : screenshot 2

The screenshot displays the Aladin v2.1 software interface. At the top, there is a menu bar with options: Load..., Save..., VOPlot..., Print..., Help..., and Quit. Below the menu, the current position is set to J2000 with coordinates 10:36:34.21 -27:31:17.8. The main window shows a grid of astronomical images. The top-left image is highlighted with a green border and contains a cluster of colored points. To the right of the grid is a toolbar with various icons for selection, drawing, and zooming. Below the toolbar is a panel for object selection, showing a list of sources with checkboxes and labels for NED, Simbad, ESO.R.MAMA, and SERC.JDSS. At the bottom, a table displays details for 8 superimposed objects, with the first two rows showing data for NGC 3312.

8 superimposed objects - click on them to get details							
▶ NGC 3312		10h37m02.5s	-27d33m54s	G	2886	0.009627	ref (69) Notes (1)
▶ NGC 3312	LINER	10 37 02.6	-27 33 54		5000	5000	7

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