



# In classroom with the VO

Giulia Iafrate and Massimo Ramella  
INAF – Astronomical Observatory of Trieste



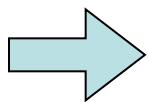
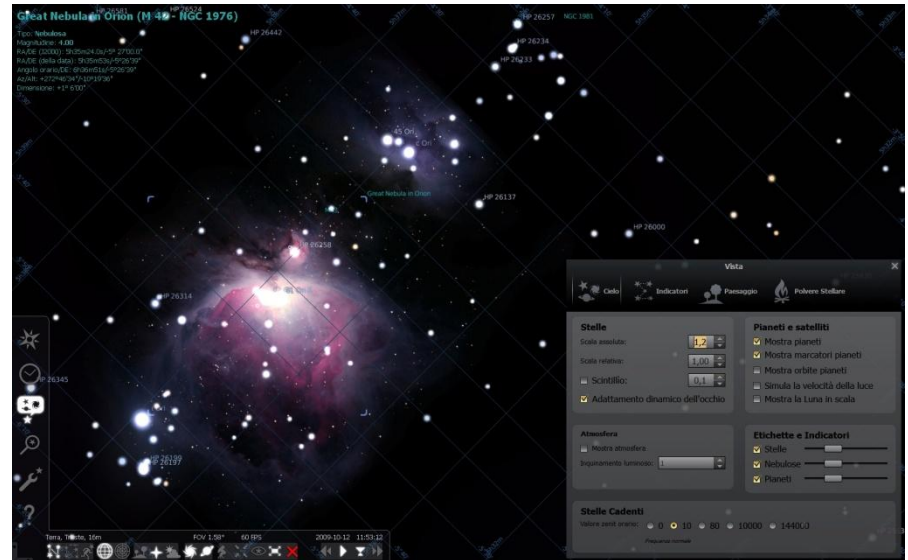
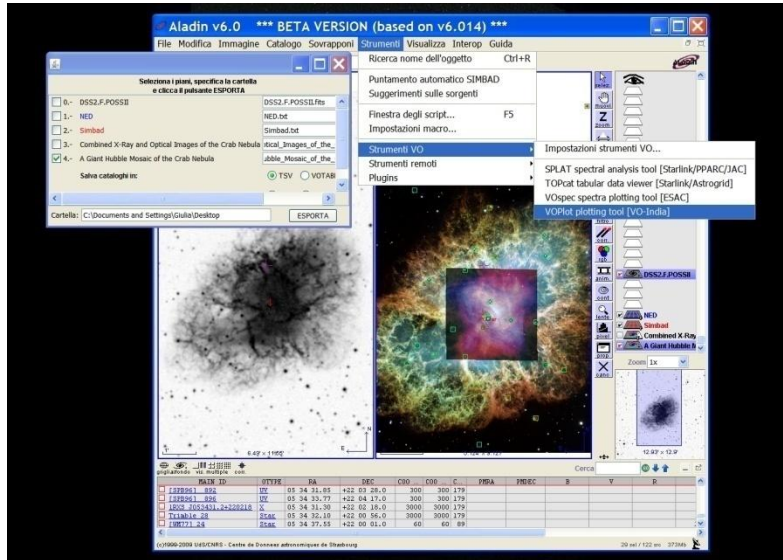


# Overview

- ✓ Software tools and use cases
- ✓ VO and remote telescopes
- ✓ Synergy with other educational projects
- ✓ Requirements

# EuroVO for schools

Professional softwares custom modified:  
**Aladin, Stellarium, Simplay**



Library of Use Cases: [www.as.oats.inaf.it/aidawp5](http://www.as.oats.inaf.it/aidawp5)



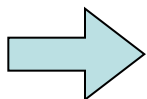
## Use Cases

Developed with the contribution of teachers and students

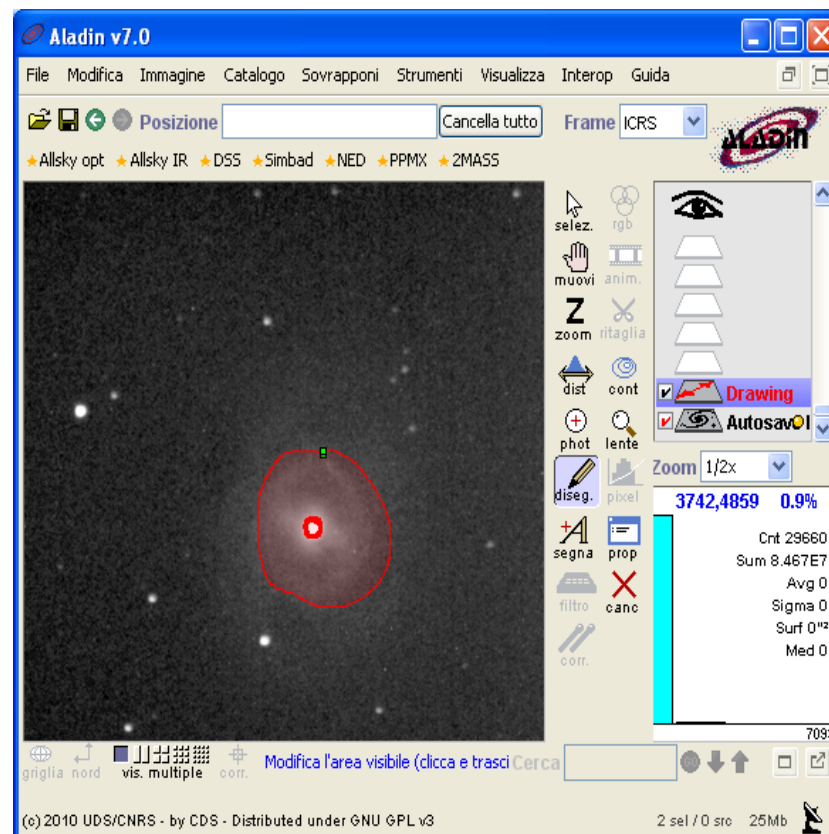
Available in several languages

General presentation of the astronomical problem

**“To measure”** is a key activity in science: exercises



Examples: astrometry, photometry



<input type="checkbox"/>	2MASS	K(IR K)	8.6' x 17.1'	000528N_KI1010209	1.1"/pix	1997-05-28T10:16:50
<input type="checkbox"/>	2MASS	J(IR J)	8.6' x 17.1'	000528N_JI1010209	1.1"/pix	1997-05-28T10:16:50
<input type="checkbox"/>	POSSI	0-DSS2(0.41um)	13.0' x 13.0'	569	1.1"/pix	1950-07-09T07:40:12
<input type="checkbox"/>	POSSII	F-DSS2(0.658um)	13.1' x 13.1'	805	1.1"/pix	1991-06-16T07:48:00
<input type="checkbox"/>	POSSII	J-DSS2(0.491um)	13.1' x 13.1'	805	1.1"/pix	1988-05-12T09:54:00
<input type="checkbox"/>	POSSI	E-DSS1(0.645um)	14.2' x 14.2'	569	1.7"/pix	1950-07-09T06:45:00



## Esploracospo: a manufactory of VO for education

In Esploracospo we combine real (remote) and virtual observing:

- images from SVAS telescopes
- images and catalogs from VO
- VO tools

Students **obtain and analyze data on their own**



## Stars go to school (SVAS)



# Esploracospo



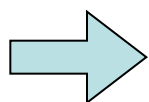


## Collaboration with other projects

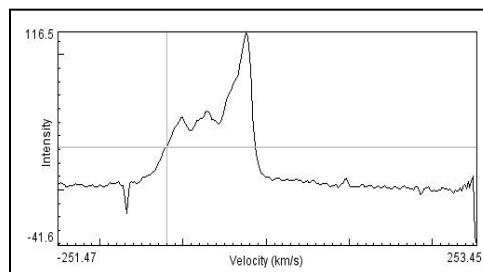
HOU-EU exchange of  
remote observations:

radio 21cm  $\Leftrightarrow$  optical

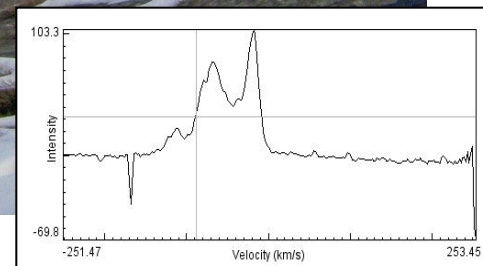
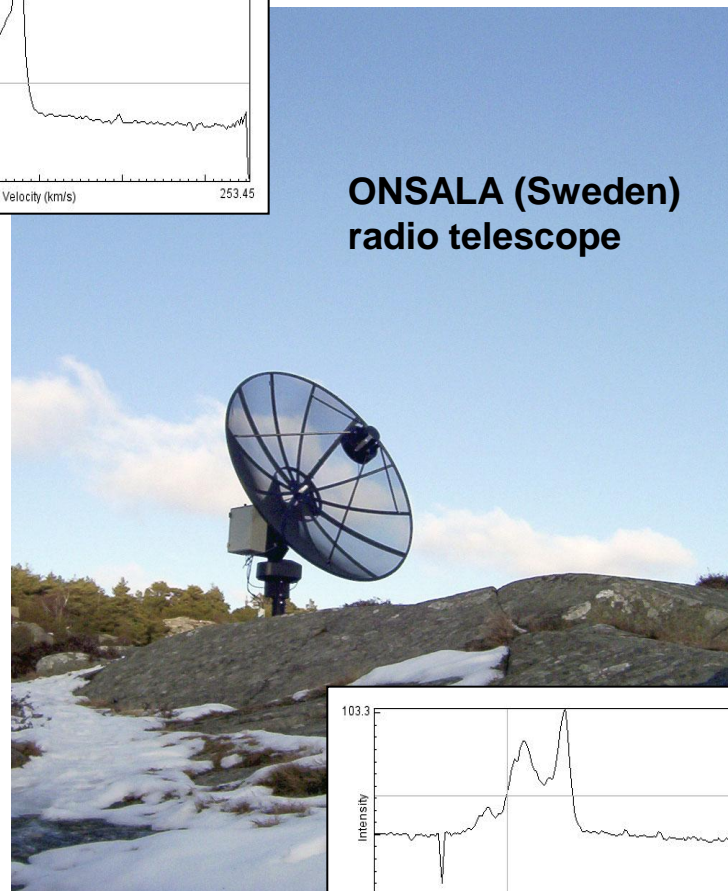
Remote observing and VO  
winning combination for  
astronomy education



Teacher and student  
feedback confirm it



**ONSALA (Sweden)  
radio telescope**





# Requirements

- ✓ Widen the number of VO tools for school
- ✓ Enhance links with other projects
- ✓ Sustainability and localization
- ✓ Diffusion
- ✓ IVOA involvement