



# Combining virtual and remote observing for kids

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## Overview

Collaboration between the VO and the remote telescope of the project *stars go to school* (SVAS)

Esploracospo laboratory: schools can do VO and SVAS at our institute

Synergy with other educational projects, e.g. HOU-EU: remote radio observations at 21cm (Onsala)

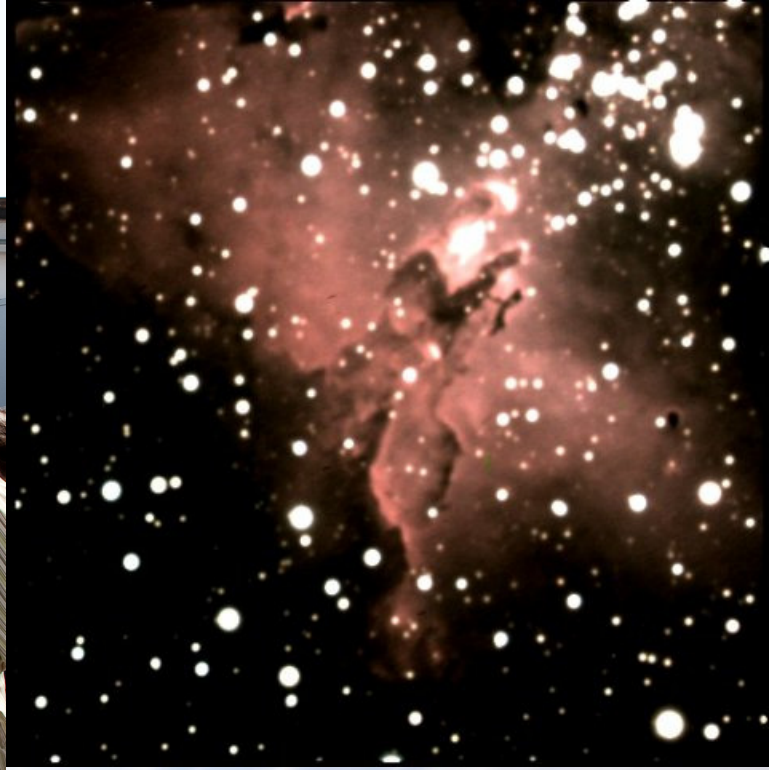
Agreement with the University of Trieste: VO and SVAS part of the course of astrophysics of the master degree in Physics



## Stars go to school (SVAS)

Two educational telescopes, for night observations (stars, nebulae, galaxies) and solar observations

SVAS telescopes can be managed remotely by students from school or from the Esploracosmo laboratory at our institute



# Esploracosmo

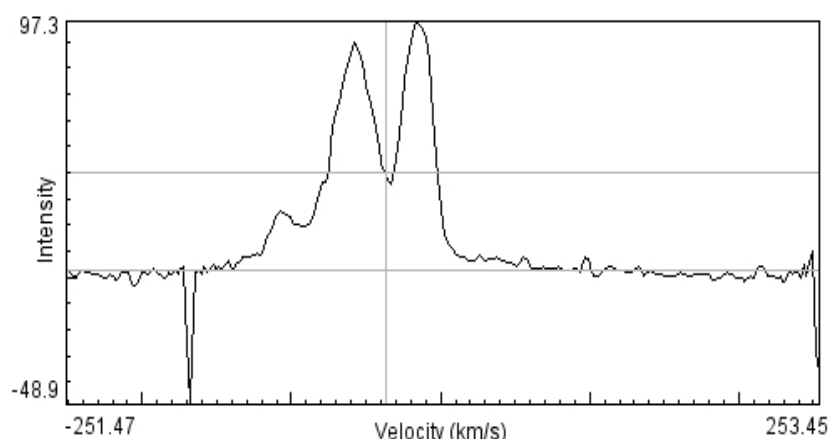
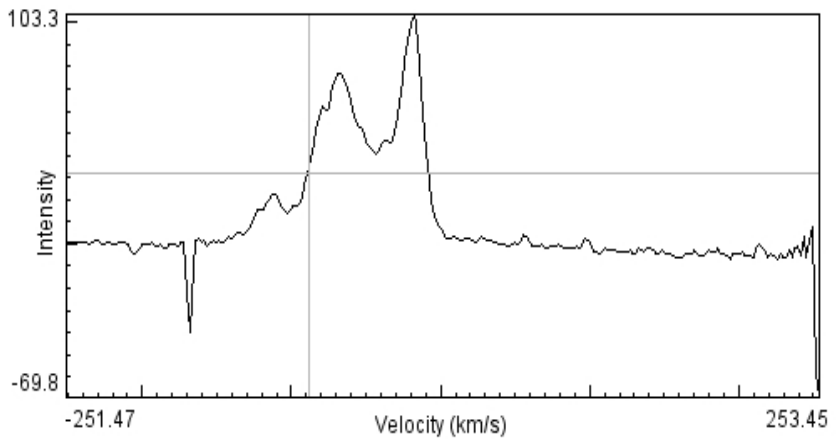
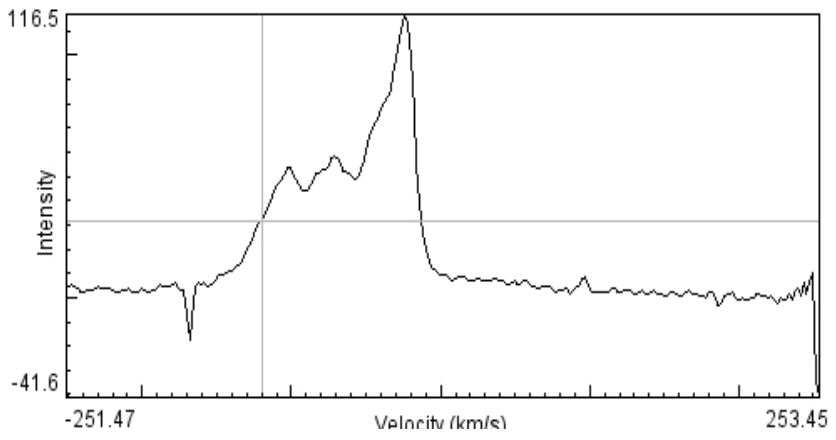


# Esploracosmo

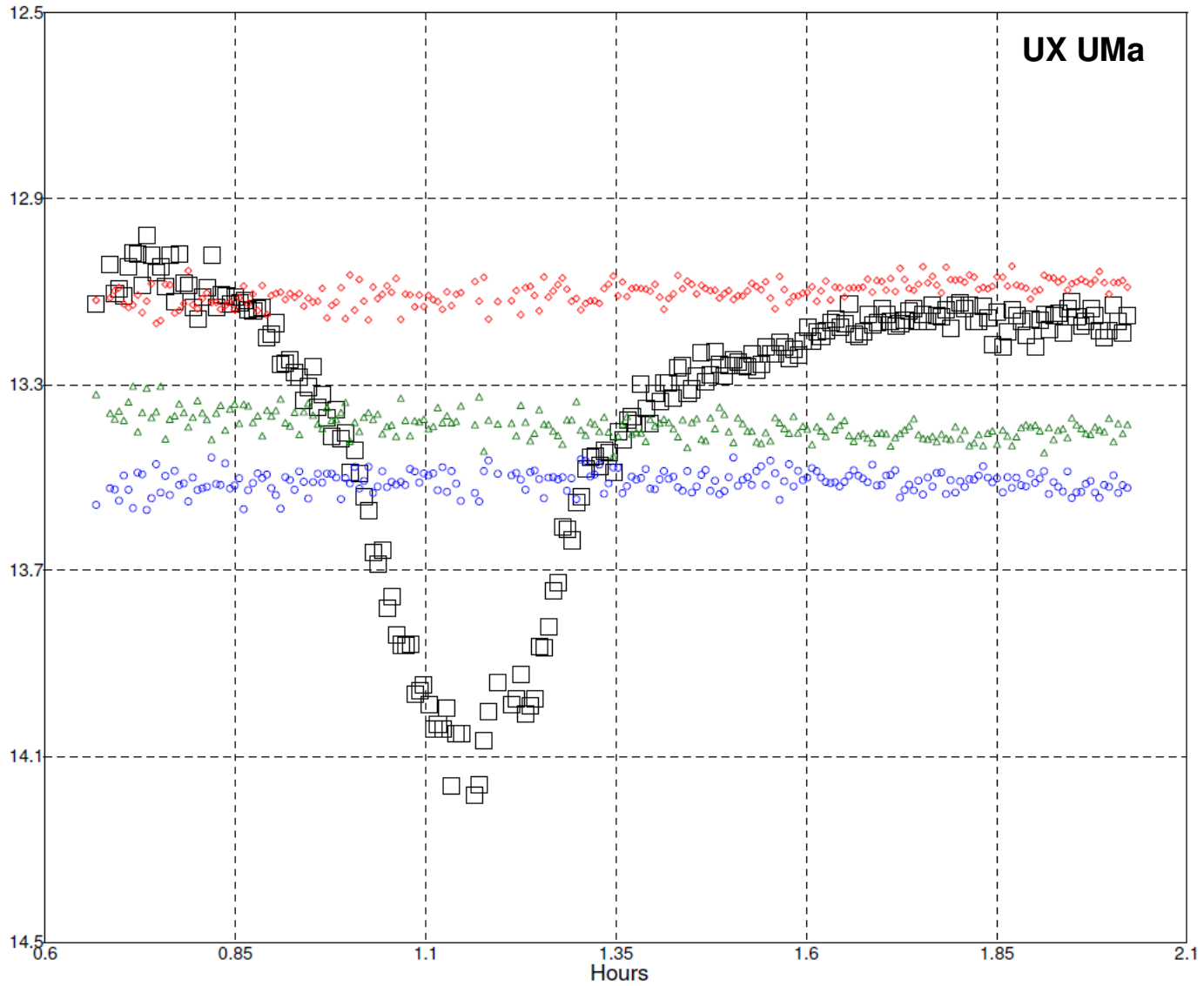
In Esploracosmo we combine real (remote) and virtual observing:

- images from SVAS telescopes
- tools and data from the VO
- images from our local archives

Students can not only take images by themselves but, most importantly, they can [analyze data](#) using VO tools



**ONSALA (Sweden)  
radio telescope**





# Targets

During the current school year: 500 students from 20 schools, ages 13-18 years

University students of the astrophysics course

“GAG” group of young (high school level) amateur astronomers from Trieste

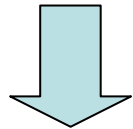
- VO use cases
- SVAS observations
- Radio observations at 21cm

# Conclusions

Many remote educational telescopes are now available around the world

We think remote observing and VO is the winning combination for astronomy education

Teacher and student feedbacks confirm it



We aim to a wide diffusion

**Cyber Telescopes**  
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**Cyber Telescopes (in Education)**  
Educational Science Astronomy programs for Schools via the internet.  
Membership is required to access our "robotic" site.  
Schools: \$250 per year (Individual \$100 per year)  
New Solar Cycle 24 (began 2008) is in progress 2010  
Come with us to study the intriguing Sun in 2010.

**Faulkes Telescope Project**  
an official partner of LCOGT

Welcome  
The Faulkes Telescope Project, part of LCOGT, provides access to a global network of remote telescopes and equips the resources for science education.

Important Notices  
British Summer Time  
Find visible objects  
Data archive search

**SKYLIVE**  
OSSERVAZIONI ASTRONOMICHE IN DIRETTA

INTRODUZIONE	ITRAX	AUSIM2-2A
Skylive è un'associazione di astronomi dilettanti che si dedica alla didattica Astronomica per le Scuole e appassionati di Astronomia. Costituisce un sistema innovativo e tecnologico, mette a disposizione di chi in Sicilia ha bisogno i propri telescopi professionali ed è un servizio a pagamento. Skylive organizza dei corsi di astronomia e di osservazione in IBCF e in istituzioni scolastiche e universitarie per la Sicilia e in Italia. Astronomia e Astrofotografia	<b>16.50000P 0</b> Paese: Italia Latitudine: 37.0° E Longitudine: 14.6° E Stazione: Sic. S. Agata Superficie: 200.000000 m² Altitudine: 2000 m P.O.V.: 2000° Fondo: 00.000000	<b>16.50000P 0</b> Paese: Italia Latitudine: 37.0° E Longitudine: 14.6° E Stazione: Sic. S. Agata Superficie: 200.000000 m² Altitudine: 2000 m P.O.V.: 2000° Fondo: 00.000000


<http://scuole.oats.inaf.it>

**INAF**  
ISTITUTO NAZIONALE DI ASTROFISICA  
NATIONAL INSTITUTE FOR ASTROPHYSICS

Osservatorio Astronomico di Trieste

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### INAF-OATs activities for schools



**Le Stelle Vanno a Scuola**

Observing the Sun and the stars from one's own school through the internet with the remotely controlled telescopes of our Observing Branch in Basovizza. The observations are managed in the classroom under the teacher's supervision while an astronomer, in the observatory dome, controls the observations and provides scientific support via Skype. Activity for 13-18 yr old students.

**Virtual Observatory**

Software and use cases freely downloadable from our web site as a support to teaching astronomy in schools, or just as a tool to enjoy a fascinating exploration of the sky from your home PC. Our software tools are developed in the framework of the european project EuroVO AIDA and access the data of the biggest archives of professional images of the world. Activities for teachers and 13-18 yr old students

**Esploracomo**

Esploracomo is the interactive laboratory of the Observational Branch of Basovizza of INAF-OATs. Esploracomo is connected with the telescopes of the project Le Stelle Vanno a Scuola (SVAS) and also allows access to the professional data of the Virtual Observatory, with dedicated software developed in the framework of the european project EuroVO-AIDA. Activity for 13-18 yr old students.