# GTTP Bringing Real Science to Classrooms

GALILEO
Teacher Training Program

# I believe I contribute to GTTP Movement → 2012


www.site.galileoteachers.org/announcements/209-global-gttp-ghou-community-map

# Teacher Training and Network !!!

Train Teachers

Build Teachers/Schools Network

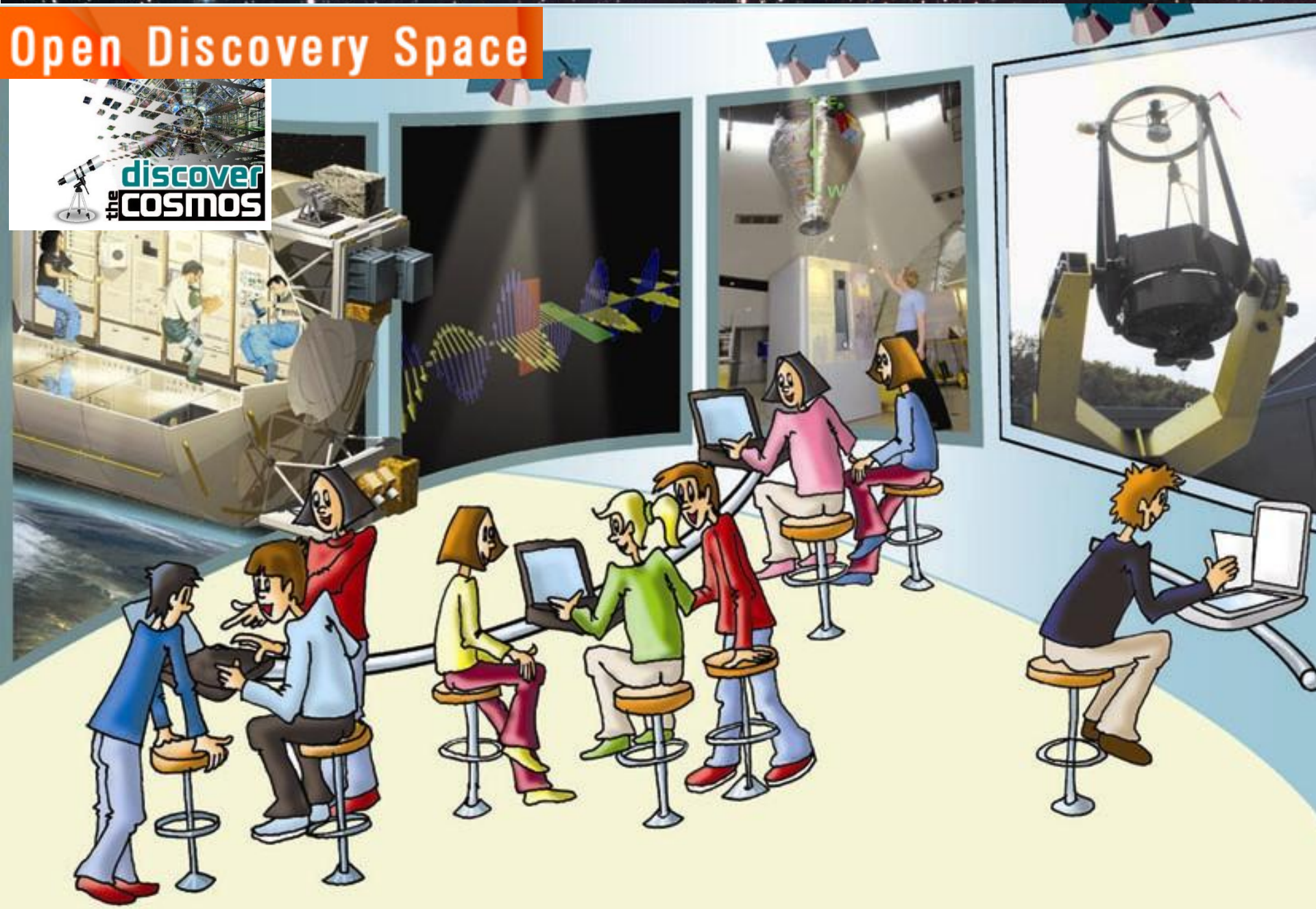
Help change curricula across the world

Promote Campaigns

Gather and rate good tools and resources

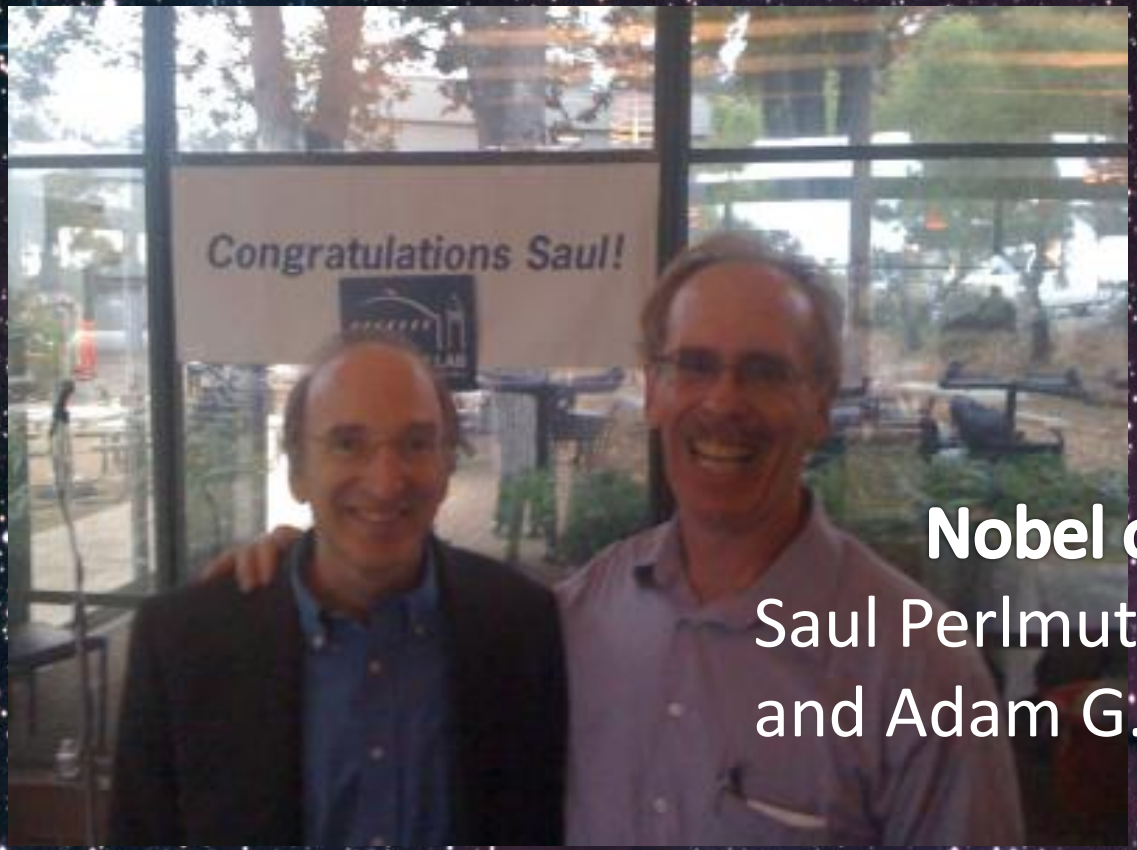


Open Discovery Space




# Towards the classroom of tomorrow

# Supernova Cosmology Project in the genesis of the Global Hands-on Universe Association -> GTTP model




Carl Pennypacker

**Nobel of Physics 2011**

Saul Perlmutter, Brian P. Schmidt and Adam G. Riess

discover the cosmos

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NUCLIO

Nucleo Interactivo de Astronomia

Open Discovery Space

GALILEO

UNESCO

United Nations Educational, Scientific and Cultural Organization

IAU

International Astronomical Union

THE UNIVERSE

BEYOND

ASTRONOMY

# International Astronomical Search Collaboration


45 Countries
Over 500
Schools

Haus der Astronomie
Centre for Astronomy Education and Outreach

# International Astronomical Search Collaboration
# Work in Progress

Supernova Search

Extrasolar Planets

Universe Notebook (Observing with Robotic Telescopes



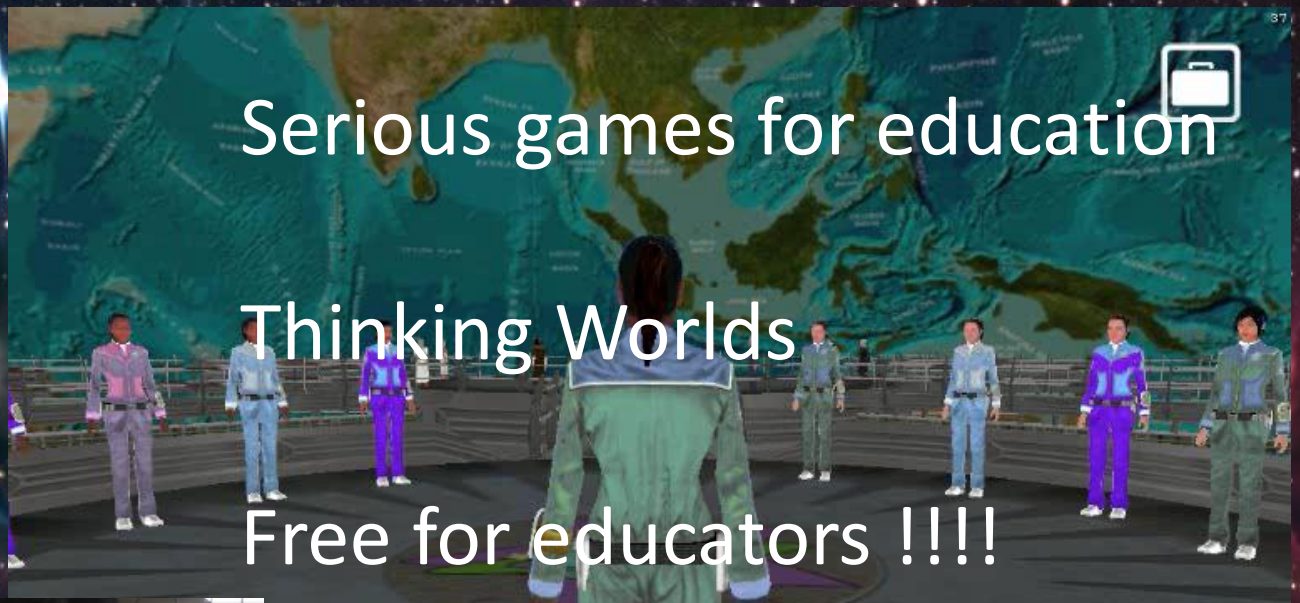


*Galileo Teacher Training Program &*

*Dark Skies Awareness Campaign*

# DARK SKIES RANGERS

# Universe Quest



Serious games for education

Thinking Worlds

Free for educators !!!!

Universe Notebook (Observing with Robotic Telescopes

CASCAIS
CÂMARA MUNICIPAL

Astronomical Society of the Pacific

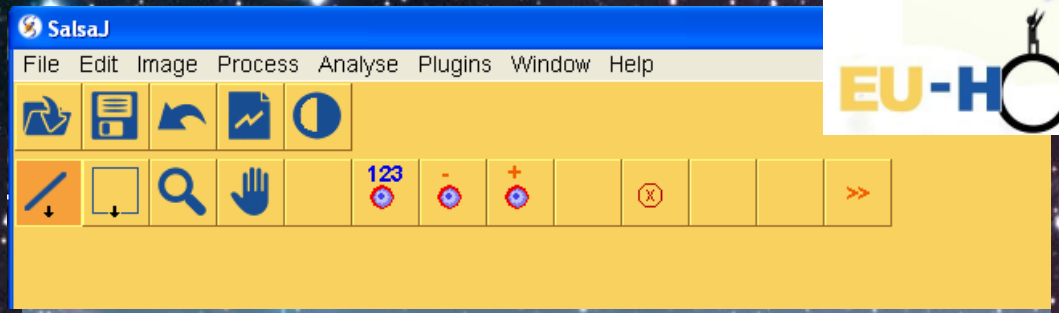
Girl Scouts

G-HOU

NSF

# Training sessions based on digital resources
# Leading to the classroom of tomorrow

## Best practice tools and resouces → IBSE




SalsaJ → Image Processing Software



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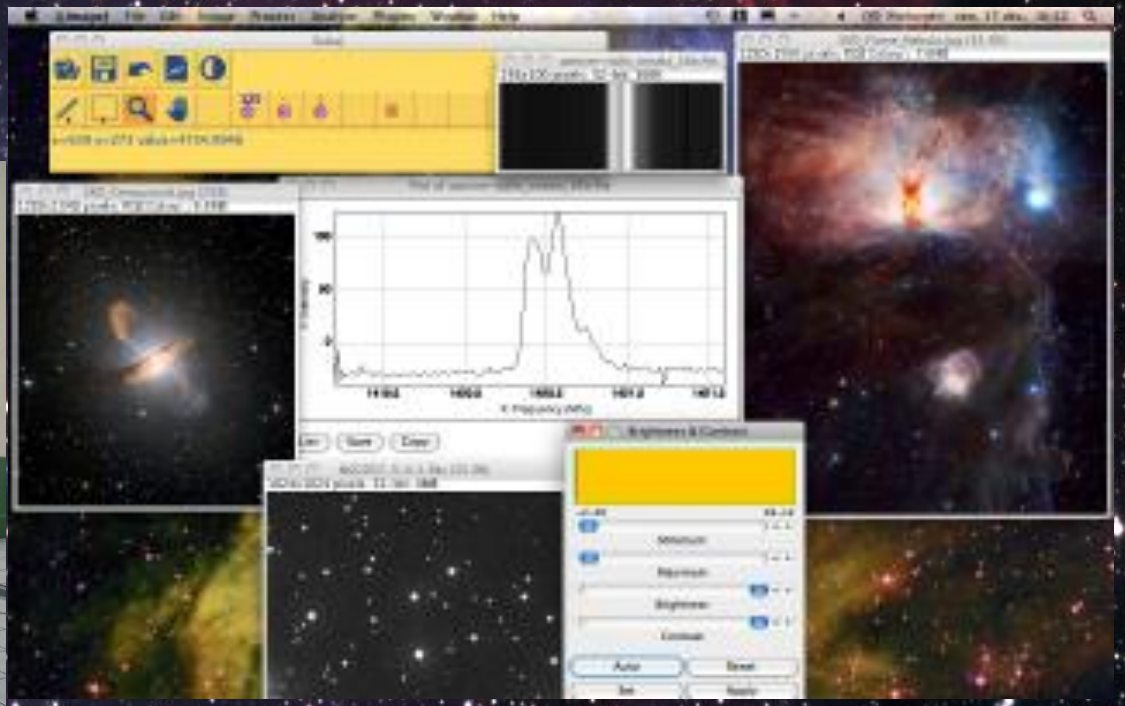
Researchers bringing science to schools:

- Black Hole in the Center of our Galaxy
- Exoplanets
- Radio Astronomy
- Spectra
- Image processing

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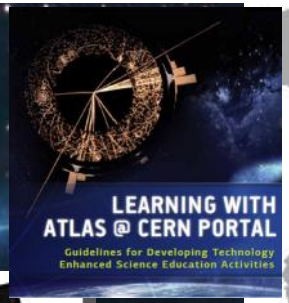
Piloting the implementation of a few examples of Astronomy and Particle Physics in schools around Europe

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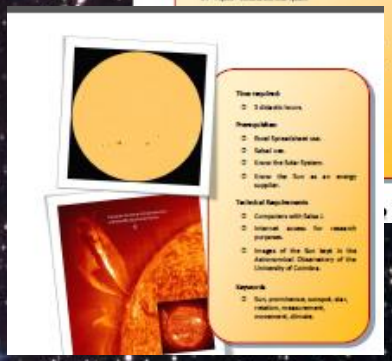
Teacher Training Program

Open Discovery Space

ICTPSP

# Creating the needed online infrastructrue for the construction of the Classroom of Tomorrow digital repositories

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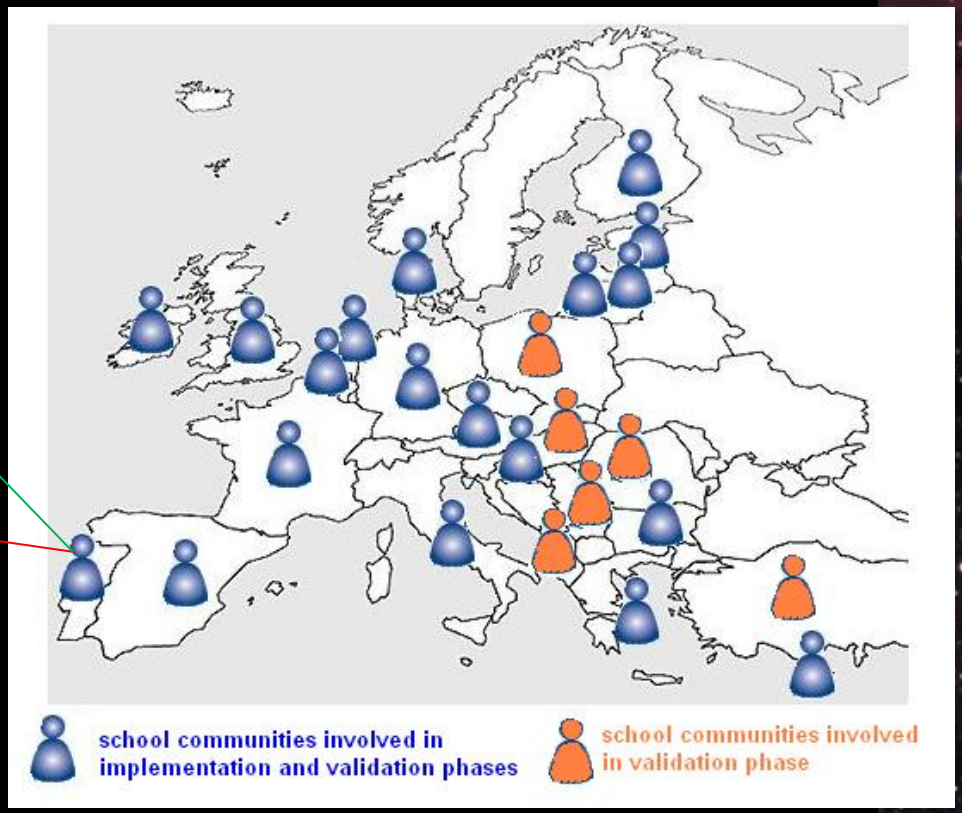
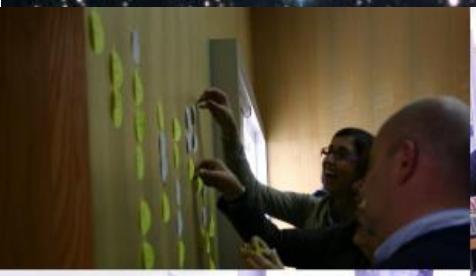



51 Partners from 23 countries

# Visionary Workshops

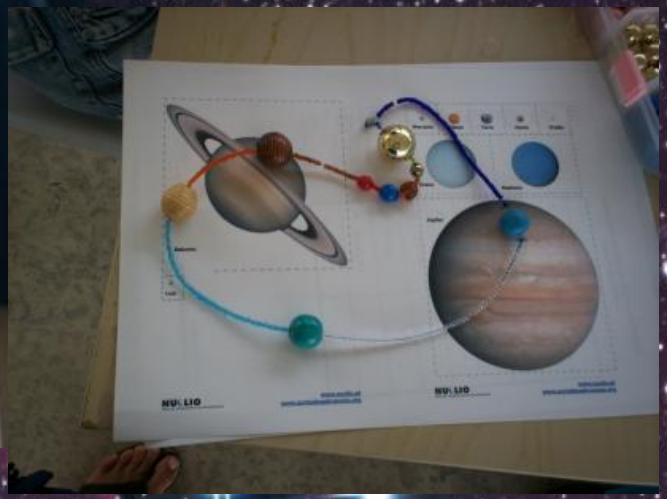




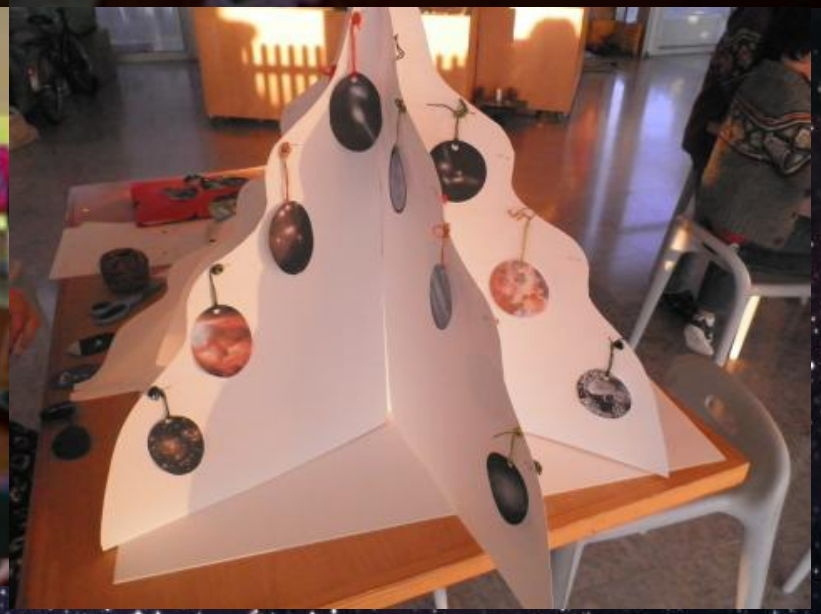




**Astronomy@mybackpack** – Astronomy with daily material



UNIVERSE AWARENESS

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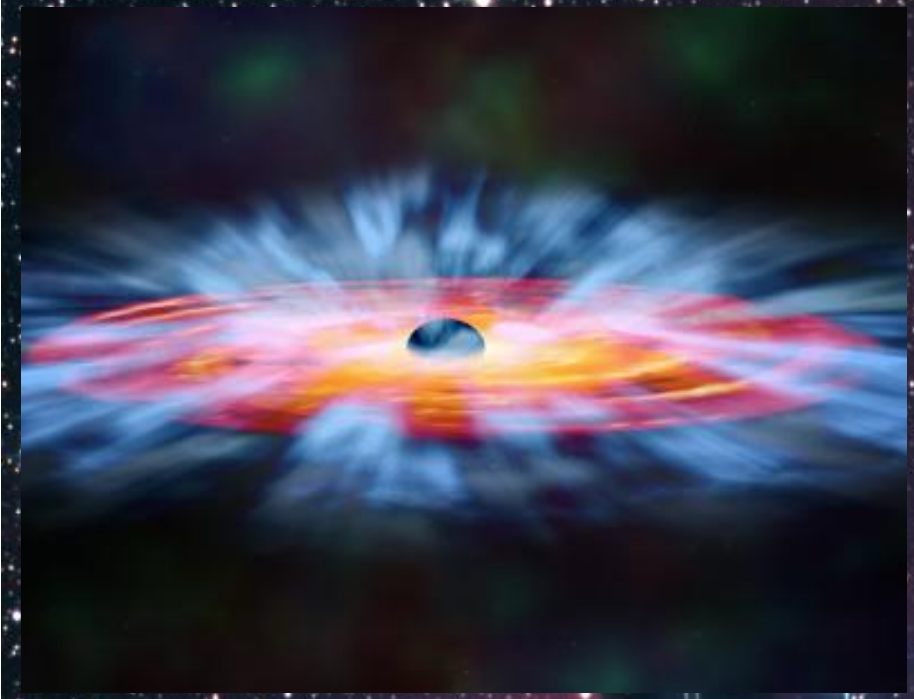
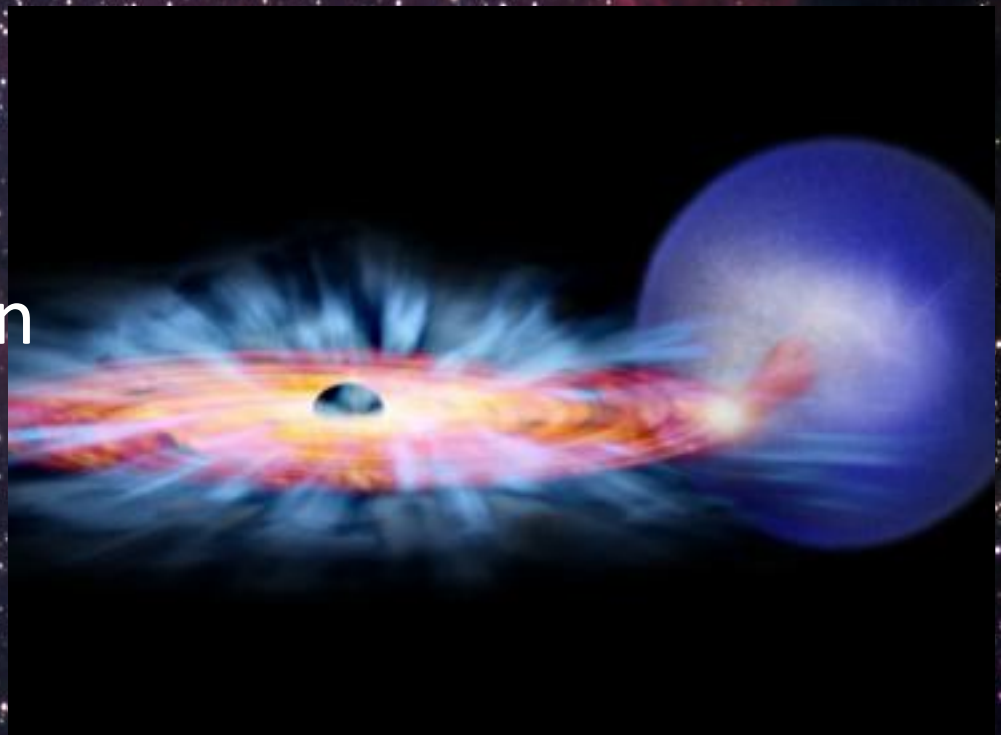
- GHOU Black Hole Observers



Dominik Elsässer
Lehrstuhl für Astronomie
Universität Würzburg

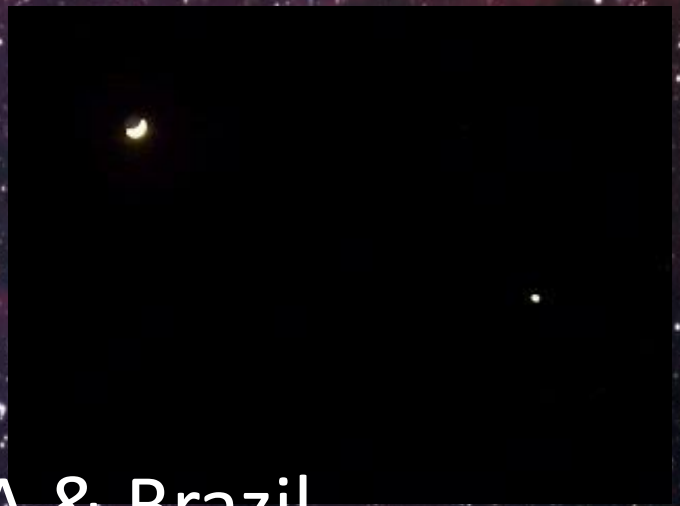
Lewis Fraser
University of Glamorgan
(Faulkes Telescope
Education Team)



## GHOU Moon Researchers

Moon Over Us (China USA Brazil Collaboration in the iCollaboratory )

Moon Researchers (Miths and misconceptions about the moon



April 25: USA & Brazil

- **New exercises**


- Japan HOU – Venus Transit
- Solar and Lunar Eclipses
- Image processing to re-discover units in the Solar System

- Solar System in my town

# • Solar System Walk in your town

JAHOU
Japan Association for Hands-On Universe

街灯フラッグ



マップ・台紙配布スタンド

参加者のスタ


三鷹駅みどりの窓口上に掲げた
13 億分の 1 の太陽像



街中サイエンスカフェの様子（左：西野園／右：喫茶グラナダ）

# GTTP e-training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THE UNIVERSE
ASTRONOMY

# GTTP e-lessons

## Discover the Cosmos
## Demonstrators

## Hands-on Universe

## Global Science System

## EUHOU series

## GTTP Days



# GTTP eScience Café

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THE UNIVERSE
YOURS TO DISCOVER

BEYOND

~~COMPETITION~~

X

COOOPERATION

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Obrigada !!!

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