An escape room pilot test about multi-wavelength astronomy, EDI and Open Science

Marcos Villaverde Aparicio (1,2) Alba Fernández-Barral (3); Julio Gallardo Jimenéz (1, 2); Sara Cazzoli (1).

Emilio García Gómez-Caro; Enrique Pérez Montero; Ixaka Labadie García; Pablo Martín Fernández; Sol Natalia Molina ; Susana Sánchez Expósito ; Teresa Toscano Domingo.

- (1) Instituto de Astrofísica de Andalucía CSIC (IAA-CSIC)
- (2) SKA-Spain Team
- (3) Cherenkov Telescope Array Observatory (CTAO)

PAERI24 Communication Across Borders 27-29 Nov 2024 CUBE in Morges, Switzerland

mva@iaa.es

Imagen de jcomp en Freepik

RESEARCH

Imagen de jcomp en Freepik

RESEARCH

conmunication

Imagen de jcomp en Freepik

RESEARCH

CILLING CONTRACTOR

communication

Imagen de jcomp en Freepik

ESCAPE ROOM !! RESEARCH COMMUNICA

Imagen de jcomp en Freepik

Escape rooms

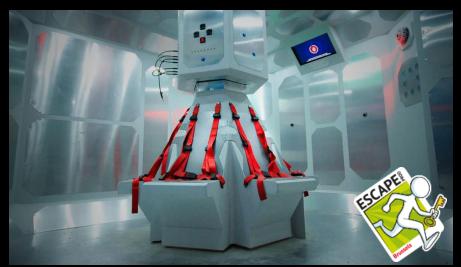
Physical or mental game, in which a group of players must solve riddles and puzzles of all kinds, to unravel a story and escape from a closed room/situation, where they before time runs out

- Fun (attracts other audiences)
- Can cover almost any topic
- Foster teamwork
- Multiple formats (on-line, indoors, outdoors, kits)
- Adjustable level

Just another space escape room?









Just another space escape room?



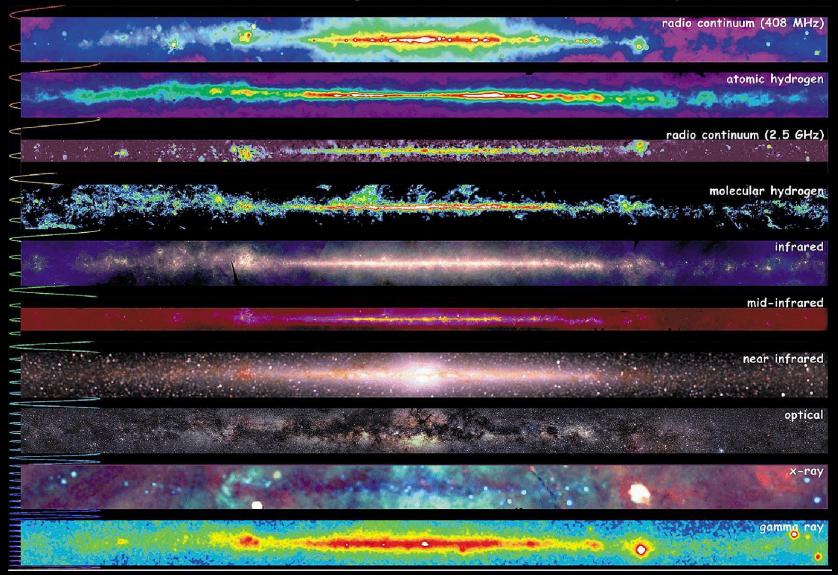
Just another space escape room? NO!

Because our goals:

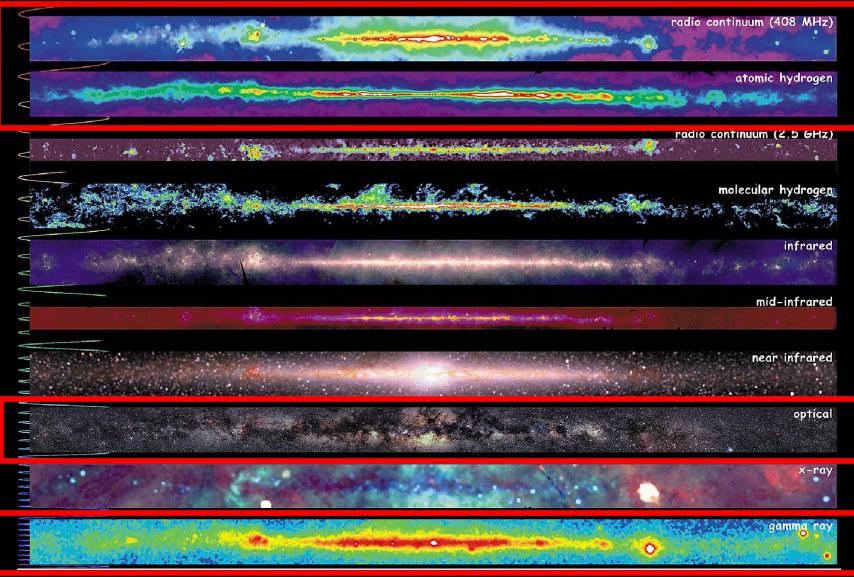
- Engage public with science through a fun activity (target audience: students).
- > Topics:
- multiwavelength astronomy
- astronomical infrastructures (SKAO, CTAO,...)
- Open Science
- International collaboration



Multiwavelength astronomy



Multiwavelength astronomy



Multiwavelength astronomy Skalo CTAO







1 Idea

3 Types of Light

3(4) infrastructures / missions

1 Idea

3 Types of Light

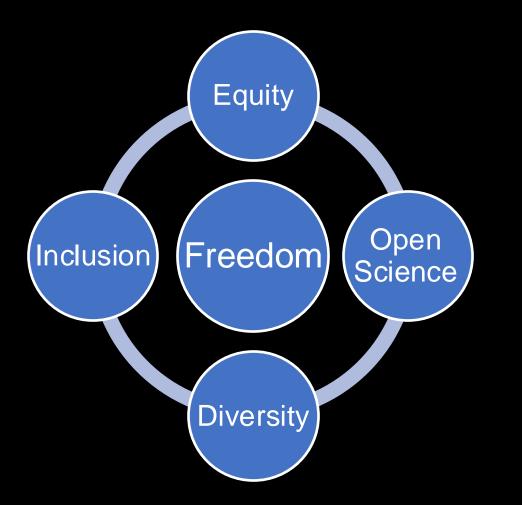
TO-DO LIST: 2. EVERYTHING

3(4) infrastructures / missions

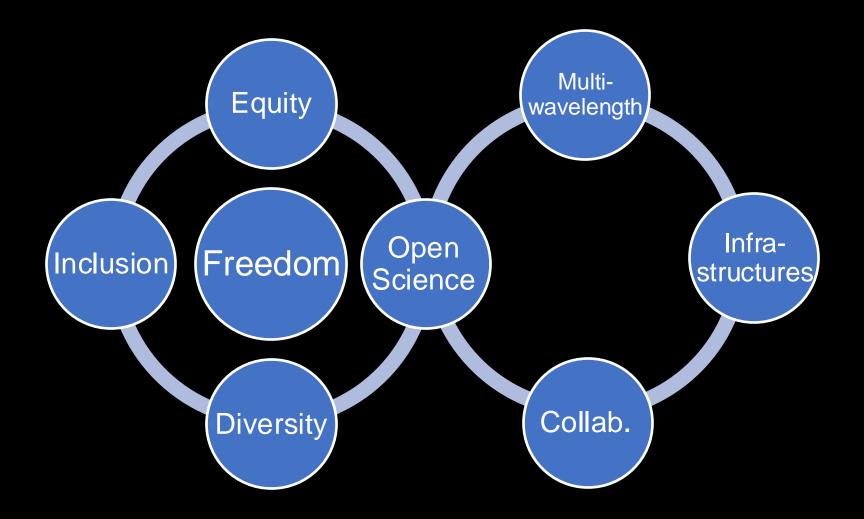
ESPACIO_3 <u>Science, Theater, Improv...And more</u>



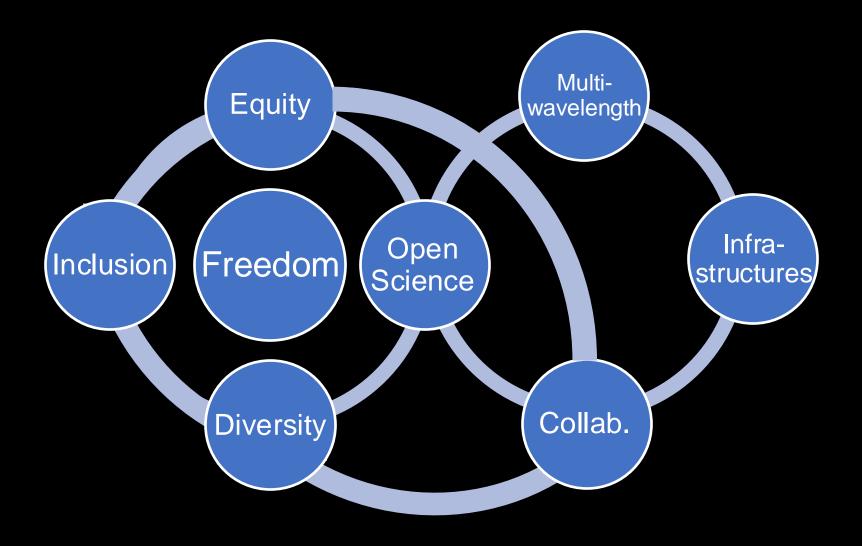
ESPACIO_3 ESCAPE ROOM



ESPACIO_3 ESCAPE ROOM

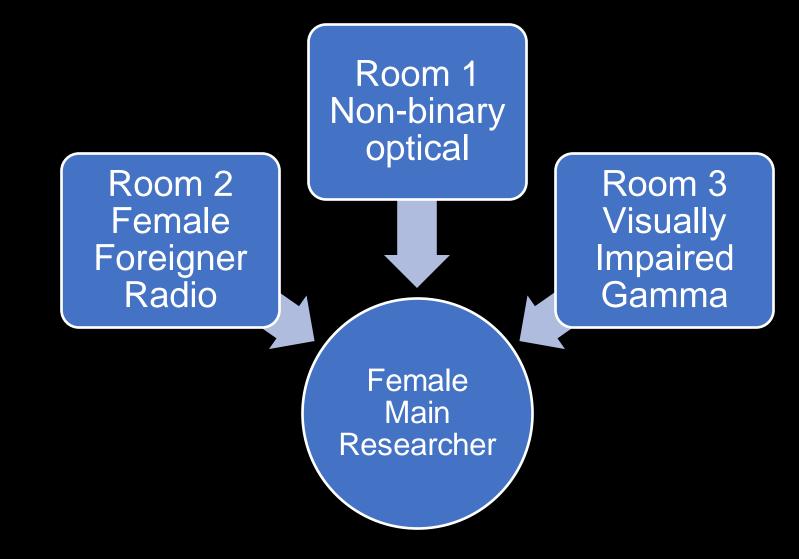


ESPACIO_3 ESCAPE ROOM



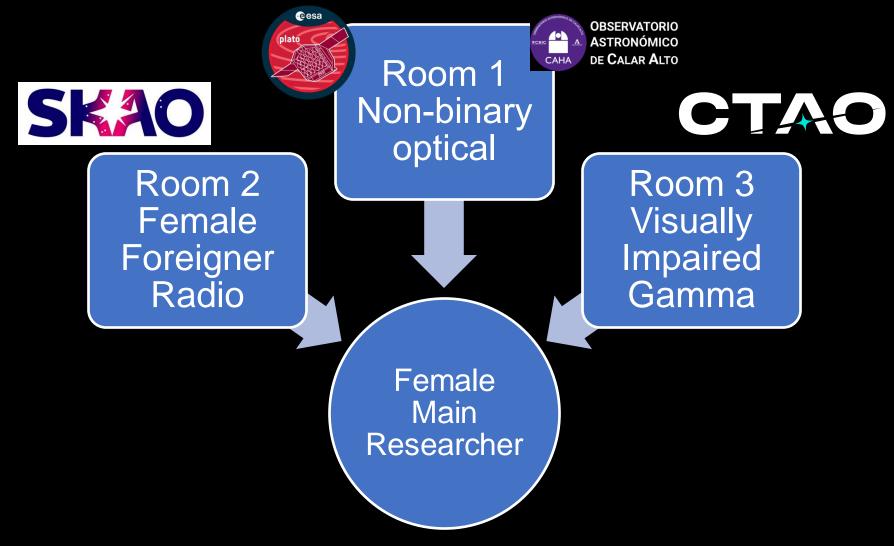
Design

INTERNATIONAL MULTIWAVELENGTH PROJECT



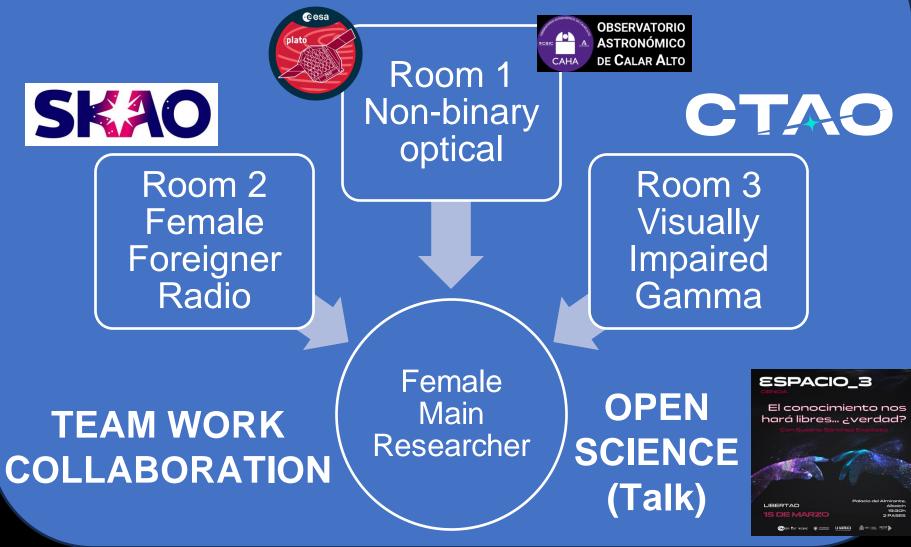
Design

INTERNATIONAL MULTIWAVELENGTH PROJECT



Design

INTERNATIONAL MULTIWAVELENGTH PROJECT







Planning

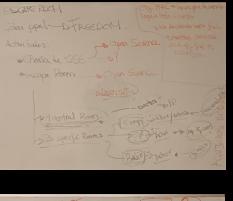


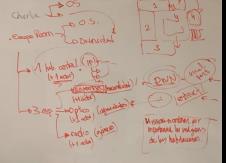


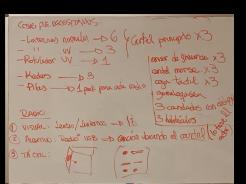


1. Look for rooms

Planning



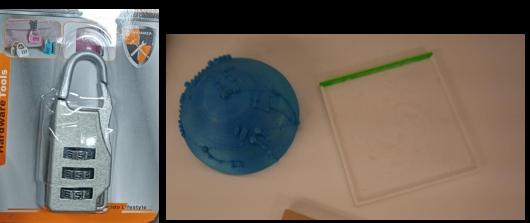




- 1. Look for rooms
- 2. Meetings
 - Define story
 - Logistic and timing
 - Design games based in different senses
 - Define the characters in order to be respectful.
- 3. Write documents including scripts



























Lights, camera public, action!



Lights, camera public, action!



Lights, camera public, action!

















Evaluation



Evaluation or something like that

Evaluation or something like that

- 🙂 "Scientific ambush"
- 🙂 3 teams links directly with multiwavelength astronomy.
- 🙂 They liked the story used for contextualisation.
- 🙂 Typical Escape room situations. Not very easy but not impossible.
- 😕 They would like a more detective-like plot.
- 🥲 Problems: timing, groups of people unknown to each other.
- 🨕 Final message about Open Science was not totally clear.
- 🨕 Some people expected a Grand Finale.



Take away tips

- Involve actors/actresses & escape room designers/players.
- Avoid scientific or technical games
 (except for students, researchers or technicians groups)
- Make the rules clear at the starting
- Think of solutions to fit the time
- Try to control kids & parents
- Find a good place and repeat it.

To be continued...

- Version for high-schools.
- More games related to the infrastructures.
- Co-creation of new challenges and games.
- Involve teachers & students in all the phases.
- Offer the activity to other groups.
- Look for funding.

To be continued...

- Version for high-schools.
- More games related to the infrastructures.
- Co-creation of new challenges and games.
- Involve teachers & students in all the phases.
- Offer the activity to other groups.
- Look for funding.

Acknowledgments

Espacio3 is funded by by the Instituto de Astrofísica de Andalucía, with the collaboration of the University of Granada and the Spanish Foundation for Science and Technology (FECYT) through grant FCT-22-18345.



CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFIC

Summary

- Escape rooms can bring science through gamification to a wider public than other activities.
- But they need to be adapted to a specific target audience.
- Need a lot of time for planning (story, games, scripts), production (places, materials, decoration), testing (actors, groups) and setting up. (€€)
- Include: actors, a stress factor, surprises and a "Grand Finale"
- Test it as much as posible

Contact: mva@iaa.es