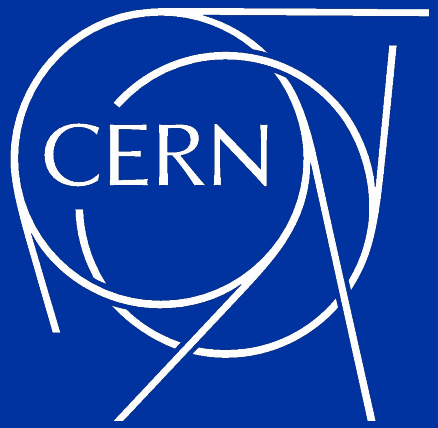


Cosmic SOS workshop development

Anastasia Tezari & Yiota Chatzidaki

28th IPPOG meeting, 26/11/2024

Workshop motivation

- **Development of a workshop about radiation set in the context of space**
- **Target group 13-15 y.o. (we already have many offers for 16+)**
- **In the form of an adventure game**

Why radiation?

1. Students are interested (Häußler, Hoffman, et al., 1998)
2. Omnipresent in our daily life (medical, industrial, energy, and entertainment sectors)
3. Many reported misconceptions (e.g., Libarkin et al., 2011; Morales & Tuzon, 2022; Neumann, 2014)
4. Experiments usually not available in schools

Why space and space travel?

1. Students are interested (OECD, 2016; Holstermann & Bögeholz, 2007; Zoechling et al., 2022)
2. Growing importance in our daily life and the future of humankind

The storyline/experiments will be the basis for the design of a new Digital Learning Module

https://digital-learning-modules.web.cern.ch/

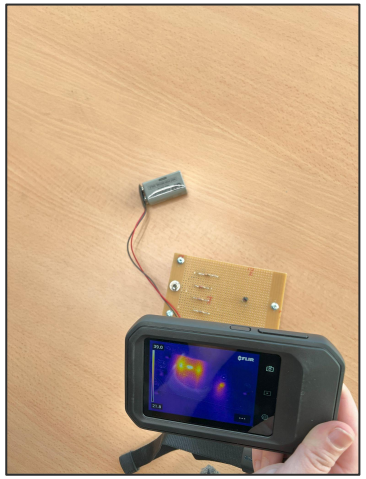
Storyline

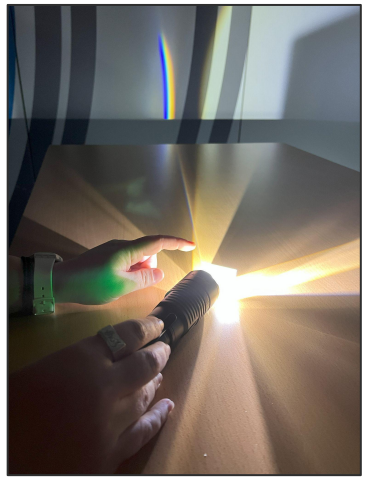
“You and your fellow crew members are on a critical mission to save Earth. An unknown signal from deep space has caused malfunctions in our spaceship's systems, and it's up to you to troubleshoot and repair the damage. Each activity you complete will bring you one step closer to deciphering the signal and ensuring the safety of our planet.”

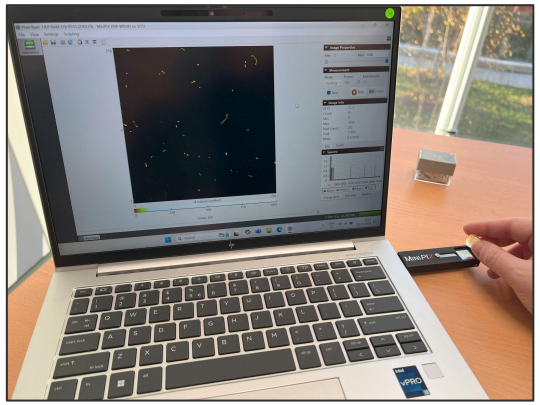
Participants use various detectors (IR cameras, Geiger counters, MiniPIX) to solve puzzles

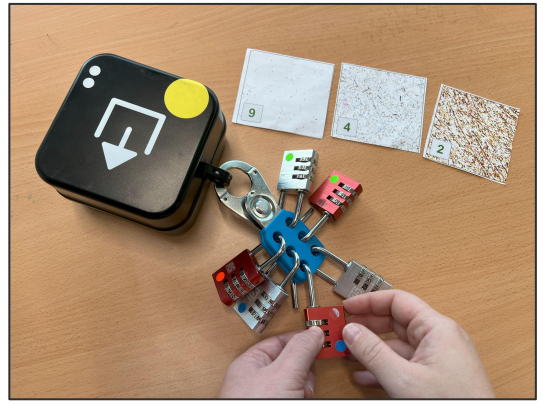
Links to CERN’s contribution to aerospace research – from the AMS, MiniPIX on ISS, to CERN’s aerospace facilities

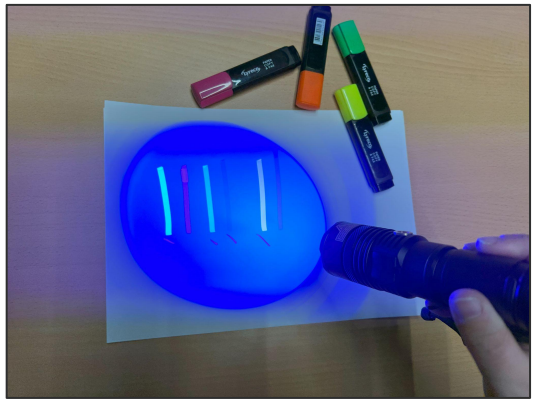
Challenges

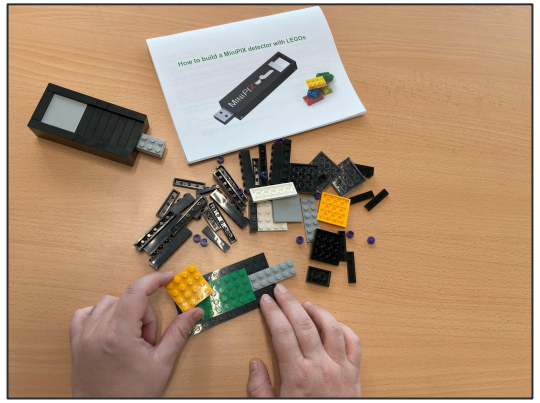




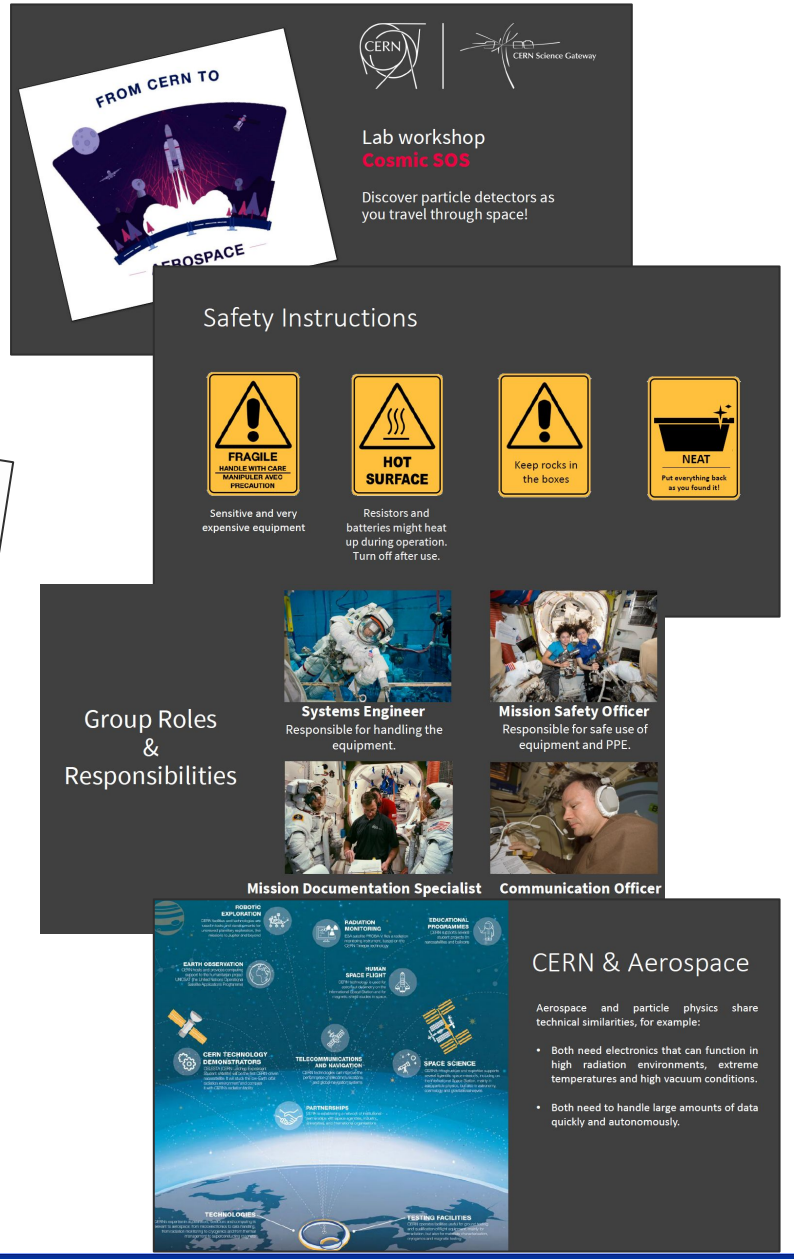








Support material



Status and next steps

- Tested for the first time at *“Elargis tes horizons”* on 16/11/2024
- Testing with school groups during the next months at CERN Science Gateway
- Still adapting the worksheets
- To be uploaded in zenodo at a later stage
- Already uploaded in the educational resources webpage

https://educational-resources.web.cern.ch/cosmic-sos

Thanks for your attention!

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