



HEPscape: an escape room about High Energy Physics

Francesca Cavallari
(INFN Roma)

on behalf of the CMS
Collaboration

What is an escape room ?

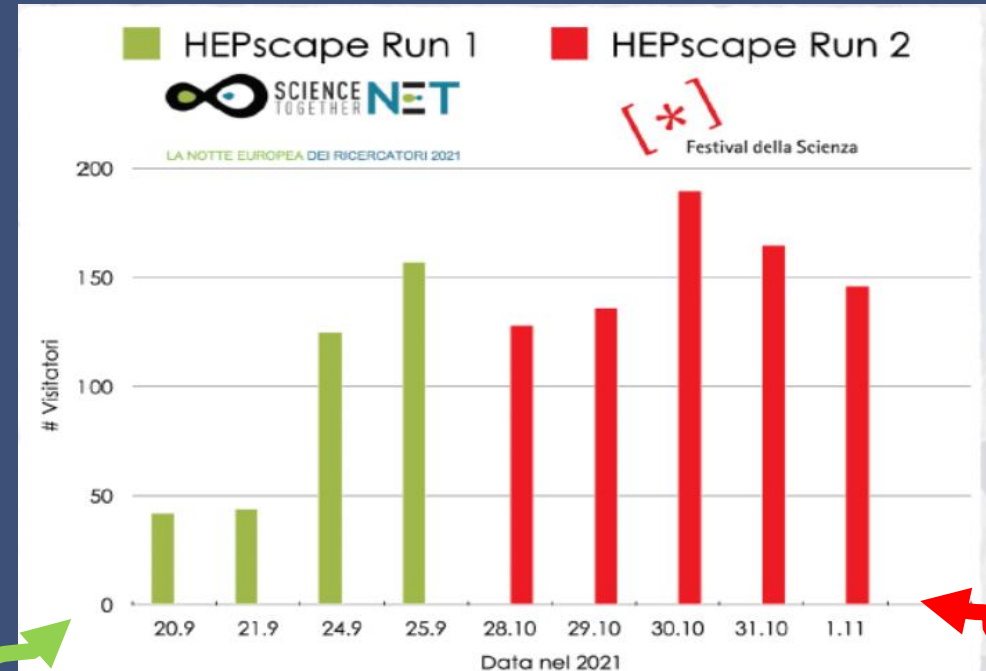
- An escape room is like a treasure hunt, with clues hidden in a room. One by one the clues unblock the next puzzles. A moderator guides the solution of the game.
- It is very popular nowadays among teens because it is **fun**, and also among work teams as **team building** exercise.
- Escape rooms have been adopted also for science outreach, see [here](#), and at the CERN open days in 2019.
- **Science is fun !**



HEPscape

- In 2021 a team from INFN has built an escape room about high energy physics, called HEPscape.
- It was presented as an attraction at the European researchers' night in Rome and at the Science festival in Genova.
- <https://sites.google.com/view/hepscape/home>

Number of visitors



Researchers' night Rome

Science festival Genova

>1000 visitors !!!

The entrance

- It can be installed indoor or outdoor in a gazebo
- The visitors have the impression of entering one of the LHC experimental caverns underground
- They are given an helmet and they are told that they are going underground



The room

- We make use of projectors on 3 sides of the room.
- First we project the movie of the lift going underground in the LHC pit on the 3 sides (courtesy of CERN SM18 visitor point).
- Then we project the CMS control room on the side projectors and we use the middle projector for the game content or explanations.

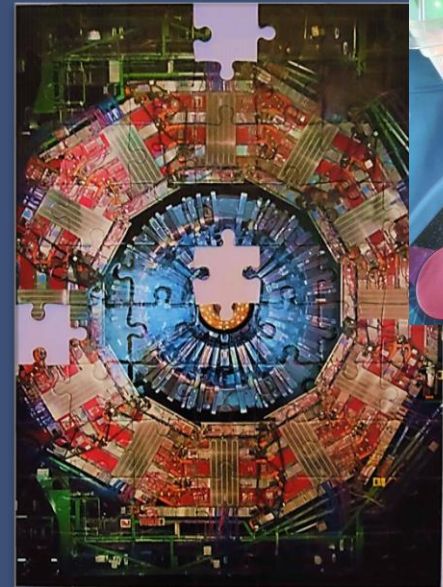
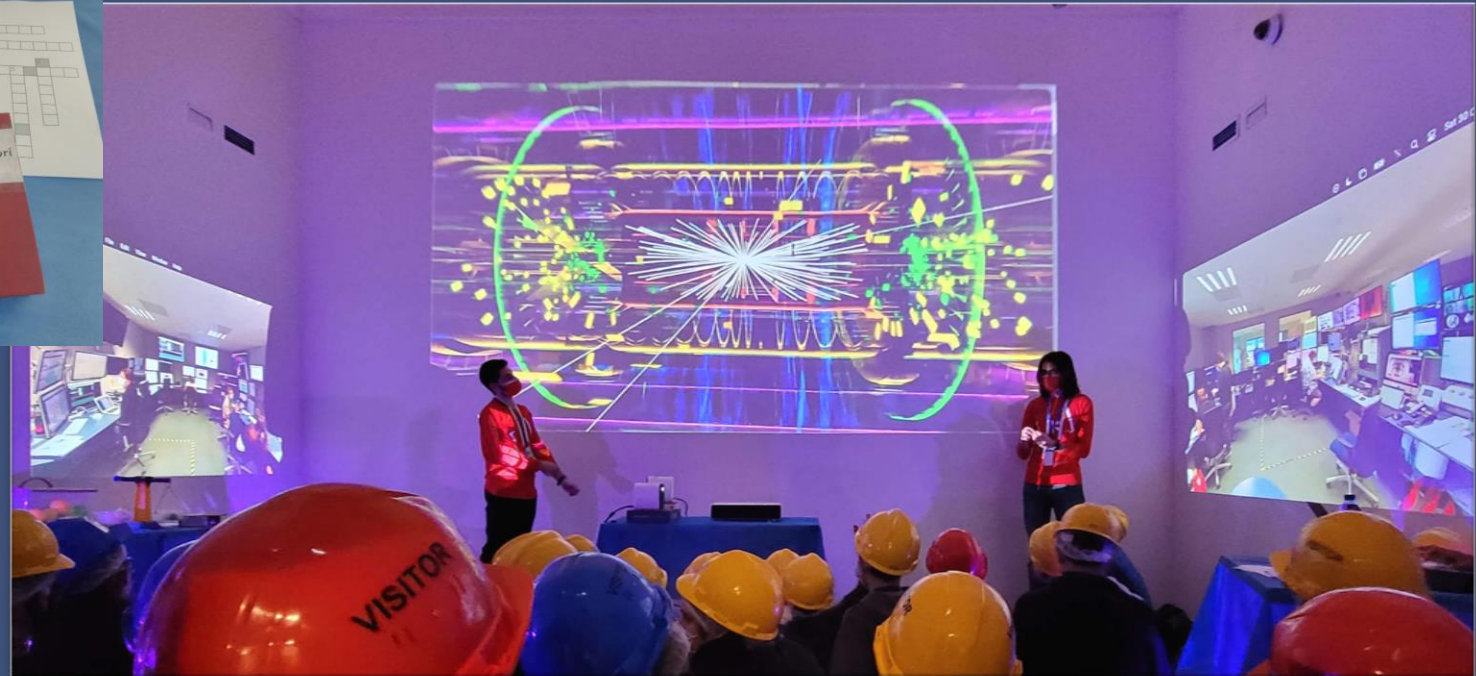
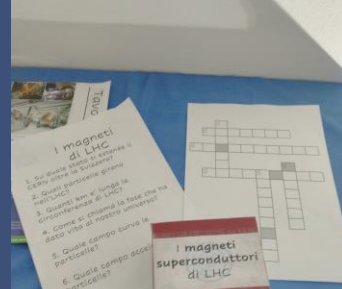
- We play some games and quizzes. The clues are hidden in the room.
- We use light projectors to direct the attention of the visitors to the clues.
- The room has posters with all ingredients needed to solve the puzzles.



The games

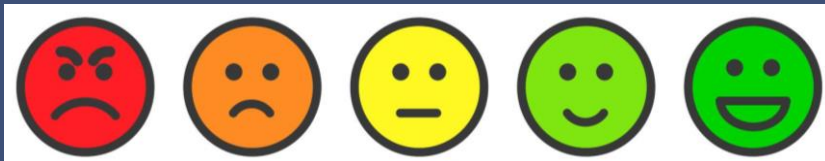
Through some clues, the visitors discover the working principles of particle accelerators and high energy physics experiments.

The games are tuned to the age group, resulting in a fun experience for all. During the games we give a badge that the visitors can keep.



The exit

- At the exit there is an Instagram photo booth @hepscape
- We also ask to complete a satisfaction test (2 questions: age group and vote)



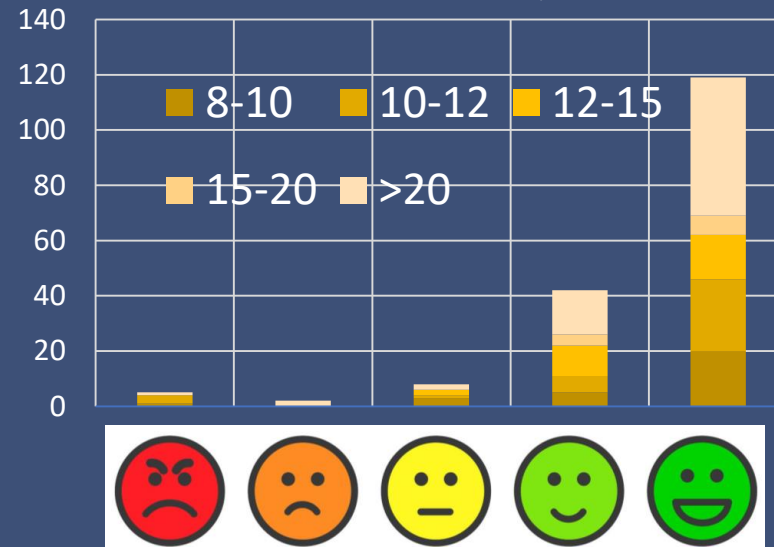
Satisfaction test

4,4

school groups



mixed groups



total



Conclusions



HEPscape exploits the escape room concept for science outreach in a fun way



It can be built in one hour and transported to different sites



The games can be adapted to the age group



It can be duplicated, the content can be adapted to other experiments, and it can be translated into different languages

