

# INTERNATIONAL COSMIC DAY

**LNGS**  
**November 13th 2025**  
**International Cosmic Day**



In cooperation with  
many networks and partners



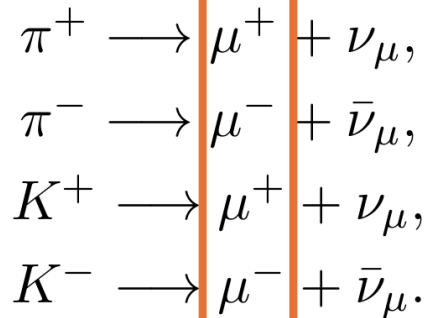
# Outline

- Students from Italian high schools
- What are Cosmic Rays
- How do we measure Cosmic Rays
- Cosmic Rays Cube
- Results

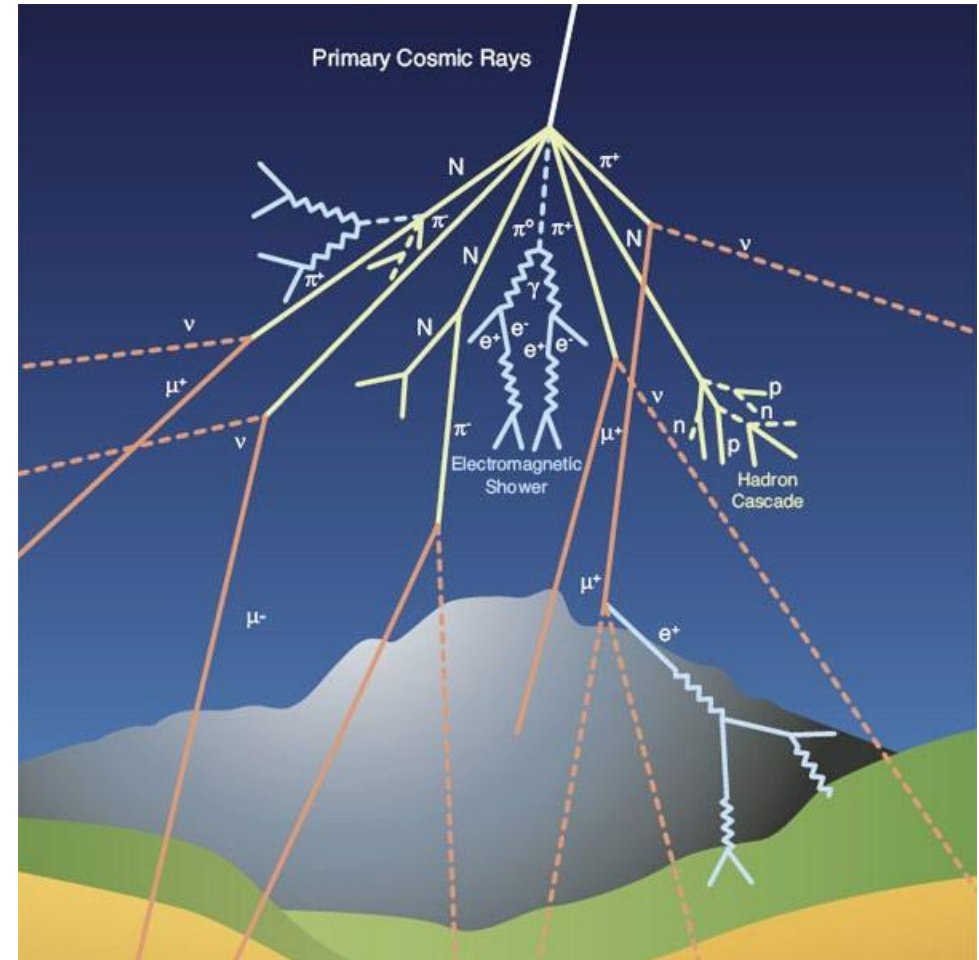
# What are Cosmic Rays?

Cosmic rays are high-energy particles produced both within and beyond our Galaxy.

- Muons are produced by the interaction of primary Cosmic Rays with the atmosphere
- Muon livetime:  $\sim 2.2 \mu\text{s}$

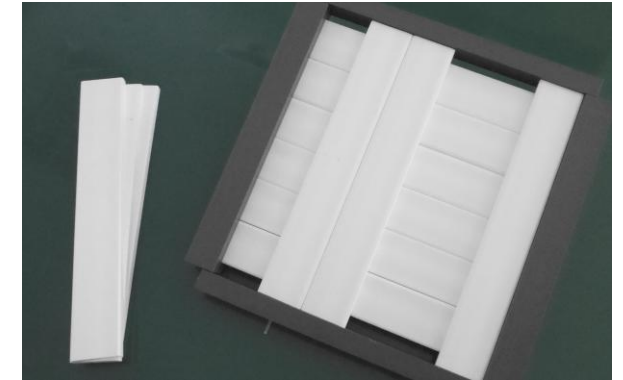
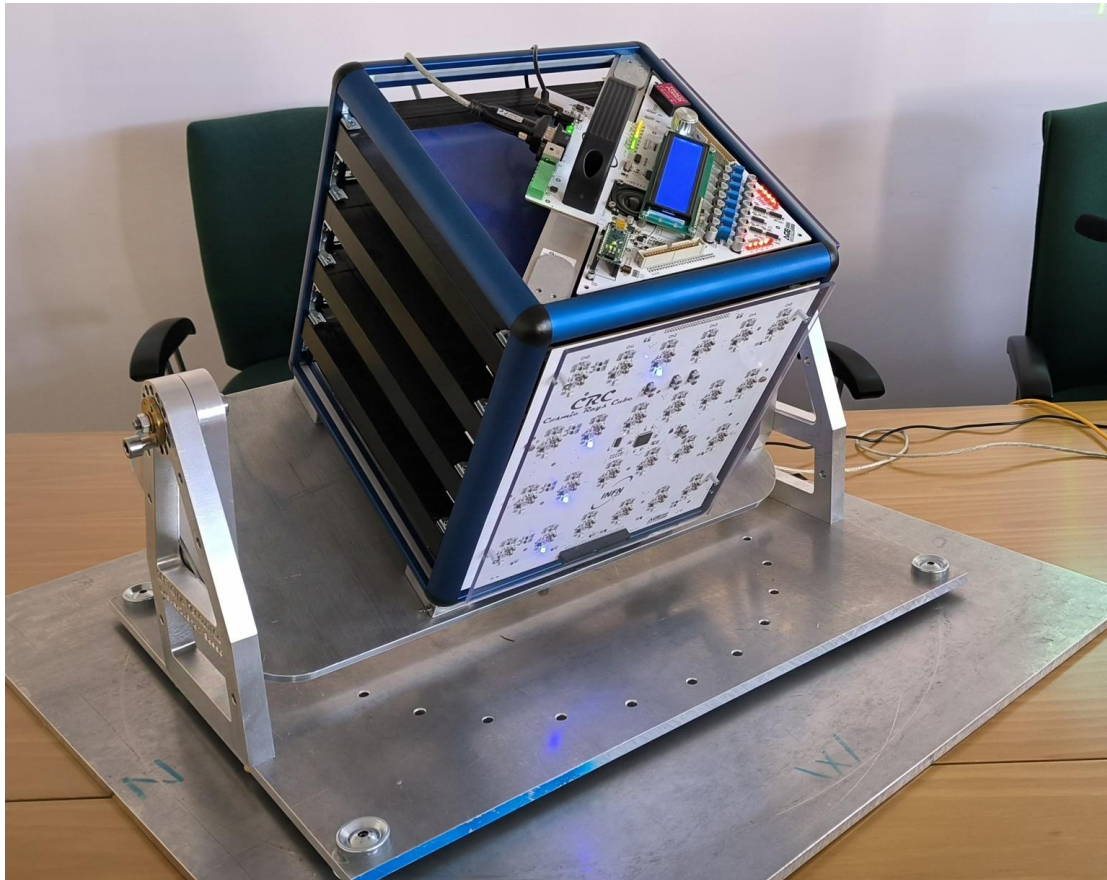


**Detected today!**

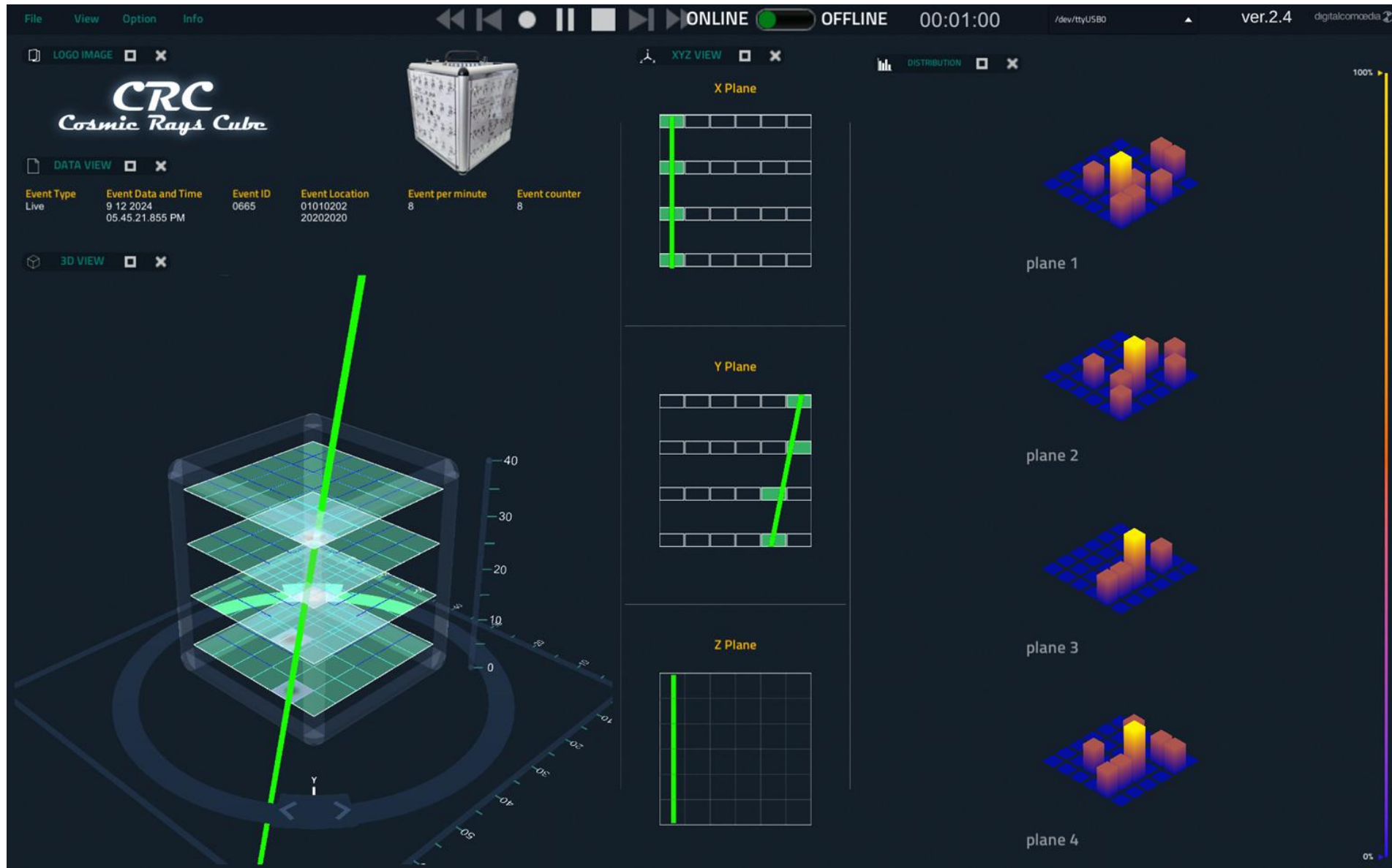


# Cosmic Rays Cube (CRC)

CRC consists of **4 double scintillator layers** containing **6+6 bars in X/Y** setup, readout by **6 SiPMs per sub-layer**.



# Cosmic Ray measurements with CRC



# Results

- Plots of the average muon count rates with respect to the angle of incidence.

