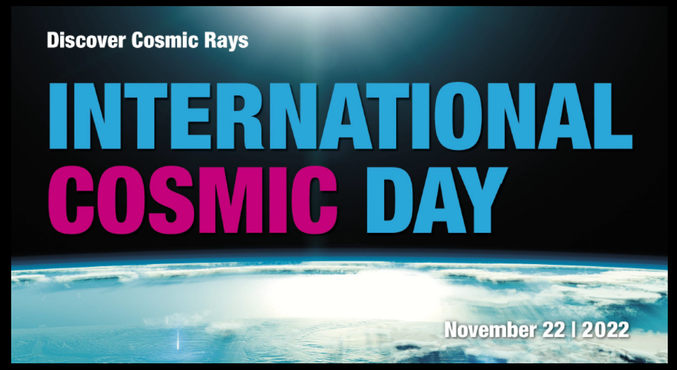

EXPERIMENTAL APPARATUS

INFN Bari's group cosmic ray telescope consists of two scintillators constructed to study the angular distribution of atmospheric muons.

Scintillators are made of an emitting light substance and they are coupled with photomultiplier tubes (PMT).
Atoms of that substance emit photons witch are detected by the PMTs and then converted into an electric signal.
Finally this analog signal is turned into digital signal and then analyzed by a software.

Licei "E. Fermi", "Cafiero", "Einstein - Da Vinci", "Cagnazzi", "Amaldi", "Savlemini", "Scacchi", ISS "Aldo Moro"

DATA ANALYSIS

$$R = A\cos^2\theta + B$$

$$A = (6.72 \pm 0.15) \times 10^{-2} Hz$$
$$B = (6.56 \pm 0.47) \times 10^{-3} Hz$$

$$\chi^2 = \Sigma \frac{(Rm - Rt)^2}{\sigma_{Rm}^2}$$