

# The Scientific Payload of the NUSES space mission

*Saturday 20 July 2024 12:00 (15 minutes)*

The NUSES space mission focuses on advancing observational and technological approaches to investigate various cosmic phenomena.

This includes high-energy astrophysical neutrinos, the study of low-energy cosmic and gamma rays, the Sun-Earth environment, space weather, and the interactions within the Magnetosphere-Ionosphere-Lithosphere Coupling (MILC) system.

NUSES embodies two experiments, Terzina and Zirè. Terzina's primary objective is the detection of ultra-high-energy cosmic rays or neutrino-induced extensive air showers. Zirè, that also includes a low energy module (LEM), is dedicated to measuring electrons, protons, and light nuclei up to a few hundreds of MeVs, and detecting MeV photons. The NUSES light readout system is based on the use of Silicon Photomultipliers (SiPMs).

This work explores the scientific objectives, design, and current status of the project, highlighting the mission's commitment to advancing scientific knowledge through cutting-edge sensing technology.

## Alternate track

1. Detectors for Future Facilities, R&D, Novel Techniques

## I read the instructions above

Yes

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