

## **Characterisation of the Plastic Scintillator Detector for HERD**

The Plastic Scintillator Detector (PSD) plays a crucial role in the High Energy Cosmic Radiation Detection facility (HERD). HERD is an international space mission slated to launch aboard China's Space Station (CSS) in late 2027. The PSD is specifically designed for measuring the charge of impacting particles and identifying gamma rays.

To achieve these objectives, the PSD utilizes scintillator bars coupled with silicon photomultipliers (SiPMs). Currently, in collaboration with the IFAE team in Spain, we are actively calibrating the SiPMs and characterizing the entire readout chain and the trigger system of the PSD setup. This optimized setup will be used in an upcoming test-beam at CERN. Our poster presentation will showcase some preliminary results from this optimization process.

**Primary author:** GHOSE, Essna (University of Trento, INFN-Lecce)