

Detection of 0.1-30MeV cosmic photons with the Zirè instrument onboard the NUSES space mission

Gamma Ray Bursts (GRBs) are mysterious yet powerful explosions in Universe. To understand them, numerous models and theories have been proposed. The Zirè instrument, on board the NUSES space mission, aims not only to measure cosmic electrons, protons, and nuclei (with energies below hundreds of MeV) but also to test new technologies for the detection of gamma rays in an energy range of 0.1 MeV to 30 MeV, using Silicon Photomultipliers (SiPMs) as readout tools. The focus of this work is to simulate GRB induced signals, and the corresponding background, in order to determine the Zirè instrument sensitivity.

Primary author: SIDDIQUE, Iqra (Gran Sasso Science Institute)