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# Identification of Cosmic Rays in the ICARUS Experiment Using Precision Timing

After operating for 3-years in the Gran Sasso underground laboratory and receiving significant upgrades at CERN, the ICARUS detector was transported to Fermilab to serve as the Far Detector in the Short Baseline Neutrino (SBN) program. The SBN program is composed of three Liquid Argon Time Projection Chambers (LArTPCs) with a central goal of testing the sterile neutrino hypothesis. At Fermilab this detector will operate at shallow depth where it is exposed to a high flux of cosmic rays that can fake neutrino interactions. To mitigate this effect a Cosmic Ray Tagger (CRT) and a 3-meter-thick concrete overburden were installed. Precise timing information from the CRT and an upgraded photomultiplier tube (PMT) subsystems can help to identify whether an interaction originated from inside or outside of the ICARUS cryostat. In this poster I will discuss methods for cosmogenic background reduction and timing calibration of the CRT and PMT subsystems.

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