Abstract Submitted
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Testing New Liquid Scintillators[1] JACOB GLASBY, Student, COLORADO STATE UNIVERSITY COLLABORATION — At Colorado State University, we are developing neutrino detectors using water soluble liquid scintillators. These liquids are contained in an acrylic test cell containing a wavelength shifting fiber that captures scintillation light to a Multi-Pixel-Photon-Counter (MPPC). We have cosmic ray sensors on top and bottom of the plastic scintillator test cell, which triggers when a cosmic ray passes through both sensors and through the cell. The sensors and MPPC are connected to a Tektronix Oscilloscope that reads out the MPPC signal. Using software from National Instruments called Signal Express we are able to analyze the data by each individual waveform, determine each peak-to-peak value, and form a histogram of the peak-to-peak values. After we have calibrated the software and equipment for our plastic scintillator, we will swap in a conventional liquid scintillator with other types of scintillator. Using the test cell, we plan to study a new water-soluble liquid scintillator Linear Alkylbenzene from Brookhaven National Laboratory.

[1]Testing New Liquid Scintillators

Jacob Glasby
Student

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