

Abstract Submitted
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SNO Neutral Current Detectors: Electronic Calibration

GERSENDE PRIOR, Lawrence Berkeley National Laboratory, SNO COLLABORATION — The Sudbury Neutrino Observatory (SNO), in Ontario, Canada, has provided in the last few years results favoring neutrino oscillations as an explanation for the deficit observed in measuring the solar neutrino flux. The Neutral Current Detector array, which consists of 36 ${}^3\text{He} - \text{CF}_4$ and 4 ${}^4\text{He} - \text{CF}_4$ vertical counters arranged symmetrically around the center of the heavy water target, has been deployed recently. Two years of data taking would accumulate enough statistics for an improved measurement of the total solar neutrino flux. In order to best understand data provided by this new set of detectors, electronic calibration are performed on a regular basis. The electronic calibration program consists both of a dedicated calibration campaign, where the electronic circuitry from the analogic to the digital conversion is probed by sending a pulse signal, and regular calibration data taking for electronic and detector performance monitoring. In this talk, electronic calibrations will be discussed with specific attention to the determination of the ballistic deficit, which produces correlations between pulse amplitude and duration in shaping amplifiers.

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