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SNO neutral current reaction detector array: sensitivity of the neutrons and alphas signal reconstruction to the electronics calibration
GERSENDE PRIOR, Lawrence Berkeley National Laboratory, SNO COLLABORATION — At the Sudbury Neutrino Observatory (SNO), in Ontario, Canada, an array of neutron detectors has been deployed recently to observe the neutral current reaction on deuterium. It consists of 36 ${}^3\text{He}-\text{CF}_4$ and 4 ${}^4\text{He}-\text{CF}_4$ vertical counters arranged symmetrically relative to the center of the heavy water target. With two years of data taking, enough statistics would provide an improved measurement of the total solar neutrino flux. In order to best understand data provided by this new set of detectors, electronics calibration are performed on a regular basis. Dedicated calibration campaigns were also performed to measure different electronics constants in the neutron detector electronics system. In this talk, a study of the impact of the electronics parameters on the signal reconstruction and pulse shape determination for neutrons and alphas will be presented.

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