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**Alpha Backgrounds in the SNO  $^3\text{He}$  Proportional Counter Array<sup>1</sup>**

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— The Sudbury Neutrino Observatory (SNO) has recently deployed an array of proportional counters known as Neutral Current Detectors (NCDs) to detect thermalized neutrons via the  $^3\text{He}(n,p)^3\text{H}$  reaction. The primary physics background to the neutron-capture signal is alpha particle emission from uranium- and thorium-chain decays in the NCD walls. The expected capture rate of neutrons from the neutral-current neutrino reaction on deuterium is three per day and the intrinsic alpha background rate is approximately 250 alphas per day. Fewer than 10% of these alphas fall into the energy range where neutron-capture signals occur, and a substantial number of these can be eliminated by pulse-shape analysis. This talk will focus on measurements of the alpha backgrounds in the NCDs and the extent to which these alphas contaminate the neutron-capture signal region.

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