

FROM SNO TO SNO+ AND THE SEARCH FOR NEUTRINO MASSES

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ABSTRACT

Neutrino oscillation experiments can observe mixing between the different neutrino flavors, and measure differences between the different masses, but cannot measure the absolute mass scale, and cannot say if neutrinos are their own antiparticle or not. The search for a very rare nuclear decay can address these important questions in neutrino physics, and this is the main goal of the SNO+ experiment, a follow up of the Sudbury Neutrino Observatory. SNO+ will re-use the SNO detector, replacing the target material and employing several new systems.

This talk will address the Physics goals of SNO+, describe the main experimental changes from SNO, and show the current status of the project.