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Event Reconstruction in the SNO+ Experiment

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SNO+ is a kilo-tonne scale neutrino detector with the primary goal of searching for neutrinoless double beta decay in tellurium-130. The inner vessel of the SNO+ detector is currently filled with an organic liquid scintillator, which will be doped with the double beta isotope. While liquid scintillator detectors are ideal tools for neutrinoless double beta decay searches due to their exceptional mass scalability, good signal efficiency and low cost, their capability of reliable particle identification for active background rejection is often questioned. This poster will focus on new event reconstruction and particle identification techniques, their performance, and their use in SNO+ for enhancing the sensitivity to neutrinoless double beta decay as well as other physics searches.

Submitted on behalf of a Collaboration?

Yes

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