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$0\nu\beta\beta$ Target Out Analysis for the SNO+ Experiment

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The SNO+ Experiment is a versatile multipurpose neutrino detector situated at SNOLAB, with the primary goal of searching for neutrinoless double beta decay ($0\nu\beta\beta$). After a successful operating phase as a water Cherenkov detector, the SNO+ target medium was switched to liquid scintillator to increase the light yield of the detector, thereby enabling a much richer physics programme.

In addition to ongoing measurements of reactor antineutrinos, solar neutrinos, geoneutrinos, supernova neutrinos, and other exotic phenomena, the SNO+ experiment is preparing for the deployment of tellurium within the scintillator, thereby enabling a $0\nu\beta\beta$ search. A major advantage of the experiment is the capability for backgrounds within the $0\nu\beta\beta$ region of interest to be well-understood prior to the addition of the tellurium (i.e. target out). This poster will discuss the target out analysis to be used for the upcoming $0\nu\beta\beta$ search phase of the SNO+ experiment.

Submitted on behalf of a Collaboration?

Yes

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