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SNO+ Neutrinoless Double Beta Decay with an Organic Scintillator

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SNO+ will be an organic liquid scintillator experiment, a successor of the Sudbury Neutrino Observatory (SNO). It has been designed and optimized to maximize sensitivity to neutrinoless double beta decay when the organic scintillator, a mineral oil, will be loaded with the isotope of tellurium-130. The first phase of this competitive search is anticipated to begin as early as 2018.

In this presentation, I will cover some of the fundamentals of the unique metal loading technique developed by the SNO+ collaboration, characteristics and long term stability and compatibility properties of the scintillator cocktail.

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