



Contribution ID: 1652

Type: **CLOSED - Oral (Non-Student) / orale (non-étudiant)**

SNO+ Neutrinoless Double Beta Decay with an Organic Scintillator

Wednesday, 31 May 2017 09:15 (15 minutes)

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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Session Classification: W1-5 Neutrinoless Double Beta Decay (DNP/PPD/DTP) | Double désintégration bêta sans neutrino (DPN/PPD/DPT)

Track Classification: Nuclear Physics / Physique nucléaire (DNP-DPN)