



Contribution ID: 1647
compétition)

Type: **Poster (Student, In Competition) / Affiche (Étudiant(e), inscrit à la**

POS-26 - Internal Backgrounds in Water Phase of SNO+

Wednesday, 31 May 2017 18:00 (2 minutes)

The SNO+ experiment is a rare event search for neutrinoless double beta decay ($0\nu\beta\beta$) and is located 2km underground at SNOLAB in Sudbury. Discovering $0\nu\beta\beta$ would give us deeper insight into the properties of neutrinos, specifically if neutrinos are Majorana particles or Dirac particles. Current half-life estimates of the $0\nu\beta\beta$ process are around 10^{24} years. Due to the rarity of the process, the backgrounds of the SNO+ experiment have to be well-understood. SNO+ is currently entering the water phase, where the detector is filled with water. During this phase, we will be ascertaining the cleanliness of the water used in the process systems as well as the acrylic vessel. This presentation will focus on work done on in situ analysis of ^{214}Bi and ^{208}Tl (daughters of ^{238}U and ^{232}Th) in water. Results based on large scale internal background Monte Carlo simulations will be presented.

Primary author: LAM, Ian (Queens University)

Presenter: LAM, Ian (Queens University)

Session Classification: DIMP Poster Session | Session d'affiches DPIM (1)

Track Classification: Instrumentation and Measurement Physics / Physique des instruments et mesures (DIMP-DPIM)