

Status of the SNO+ Experiment

Friday, 23 June 2017 12:50 (15 minutes)

The SNO+ experiment is located at SNOLAB in Sudbury, Ontario, Canada. It will employ 780 tons of liquid scintillator loaded, in its initial phase, with 1.3 tons of ^{130}Te (0.5% by mass) for a low-background and high-isotope-mass search for neutrino-less double beta decay. SNO+ uses the acrylic vessel and PMT array of the SNO detector with several experimental upgrades and necessary adaptations to fill with liquid scintillator. The SNO+ technique can be scaled up with a future high loading Phase II, able to probe to the bottom of the inverted hierarchy parameter space for effective Majorana mass. Low backgrounds and a low energy threshold allow SNO+ to also have other physics topics in its program, including geo- and reactor neutrinos, Supernova and solar neutrinos. This talk will describe the SNO+ approach for the double-beta decay program, the current status of the experiment and its sensitivity prospects.

Primary author: BONVENTRE, Richard (Lawrence Berkeley National Lab)

Presenter: BONVENTRE, Richard (Lawrence Berkeley National Lab)

Session Classification: Working Group: Neutrino Physics

Track Classification: Neutrino Physics Working Group