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Commissioning the SNO+ detector FREIJA DESCAMPS, University of California, Berkeley, SNO+ COLLABORATION — The SNO+ experiment is the successor to the Sudbury Neutrino Observatory (SNO), in which SNO's heavy water is replaced by approximately 780T of liquid scintillator (LAB). The combination of the 2km underground location, the use of ultra-clean materials and the high light-yield of the liquid scintillator means that a low background level and a low energy threshold can be achieved. This creates a new multipurpose neutrino detector with the potential to address a diverse set of physics goals, including the detection of reactor, solar, geo- and supernova neutrinos. A main physics goal of SNO+ is the search for neutrinoless double beta decay. By loading the liquid scintillator with 0.5% of natural Tellurium, resulting in about 1300kg of ^{130}Te (isotopic abundance is slightly over 34%), a competitive sensitivity to the effective neutrino mass can be reached. This talk will present the status of the SNO+ detector, specifically the results and status of the detector commissioning with water.

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