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Water phase results and 0νββ prospects of the SNO+ experiment

Friday, 12 July 2019 18:00 (15 minutes)

SNO+ is a multipurpose neutrino detector located in 2km underground in Sudbury, Canada. The experiment is taking data and the first results from water phase on invisible nucleon decay search and solar neutrino analysis will be presented. The ultra-pure water inside the detector is currently being replaced by liquid scintillator, which will then be loaded with tellurium-130 to provide high sensitivity for neutrinoless double beta decay search starting next year. Further substantial improvements to the sensitivity could be achieved in an economical and straightforward manner by increasing the loading. The nature of the tellurium loading technique, projected $0\nu\beta\beta$ sensitivities and future prospects will also be presented.

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