Conference on Science at the Sanford Underground Research Facility

Contribution ID: 18

Type: Oral

## Searching for 0vbb Decay with High Pressure Xenon Gas Time Projection Chambers

Thursday, May 12, 2022 4:45 PM (25 minutes)

Finding evidence of neutrinoless double beta decay would reveal the Majorana nature of the neutrino and give insight into the origins of the matter-antimatter asymmetry in the universe, the smallness of neutrino mass, and the symmetry structure of the Standard Model. The NEXT collaboration is developing a sequence of high pressure xenon gas time projection chambers with the aim of creating a ton-scale, very low background neutrinoless double beta decay search. In this talk, we will highlight the strengths of this program, including recent results from the NEXT-White demonstrator, status of NEXT-100, and prospects for ton-scale and beyond R&D and experiments.

Primary author: ROGERS, Leslie (argonne national laboratory)Presenter: ROGERS, Leslie (argonne national laboratory)Session Classification: Double Beta Decay - Parallel II

Track Classification: Double Beta Decay