Contribution ID: **66** Type: **Parallel session talk**

Latest result from the BNL 1ton Water-based Liquid Scintillator detector development

Tuesday 7 October 2025 14:15 (15 minutes)

Three years have passed since the start of the 1ton Water-based Liquid Scintillator (WbLS) at Brookhaven National Lab. This detector is by-far the longest running tonne-scale WbLS detector in the world. Since it started, we have completed two phases and a paper has been published showing the initial performance. In the latest phase, phase-III, we initiated a multi-step WbLS injection from 0.3% to 1% with a step size of 0.1%. The environmental conditions and the readout systems have been carefully taken care of and calibrated throughout the phase-III run.
The WbLS material stability and performance is critically important for all other larger-scale WbLS experiments. In this talk, we will review the BNL 1ton detector design, development and current status. The data indicating the detector stability for almost a year will be shown.

Author: YANG, Guang (Brookhaven National Lab)

Presenter: YANG, Guang (Brookhaven National Lab)

Session Classification: RDC 9 Calorimetry

Track Classification: RDC 9 Calorimetry