



Contribution ID: 105

Type: **Contribution Talk**

## Removing optical and radiological contaminants from Water-based Liquid Scintillator

*Thursday, 1 December 2022 09:30 (20 minutes)*

The development of Water-based Liquid Scintillator (WbLS) for use in future particle physics experiments requires that a practical method be found for removing optical and radiological contaminants while not destroying the micelle-encapsulated LS. In addition, loading of some isotopes (e.g. Gd, Li, Te) may be desirable in order to expand the science scope of such detectors into solar physics and neutrinoless double beta decay. Thus, any the required process may also have to not remove some dissolved ions – meaning an atom-specific selective system is needed. In this talk I will describe the progress that has been made to develop just such a practical process using nanofiltration technology. This system will be tested at the BNL 1-ton and 30-ton demonstrators over the next two years.

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**Session Classification:** WG2: Calorimetry

**Track Classification:** WG2: Calorimetry