

Water-based Liquid Scintillator

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The newly developed, water-based liquid scintillator (WbLS) is an advanced scintillation liquid for future massive detectors with the unique capability of exploring physics below the Cherenkov threshold and has the ability of loading any (hydrophilic) metallic ions of interest for neutron tagging or other physics enhancements. The same water-based detector could also be used as a near detector for long baseline neutrino flux monitoring and an active water target for neutrino cross section measurement. In this presentation, the application of WbLS to a variety of physics topics will be discussed.

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