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Optical Properties of Gd-Loaded Liquid Scintillator and Purified Water JOHNNY GOETT, Rensselaer Polytechnic Institute — The performance of water Cerenkov and scintillation detectors have a critical dependence upon the attenuation of light in the visible and near UV region of the electromagnetic spectrum (370-600 nm). New data has been obtained with a high precision apparatus constructed from simple materials. We will present measurements of the optical properties of liquid water and metal loaded liquid scintillators, with a focus on research and design for forthcoming neutrino experiments. The usefulness of this data will be demonstrated in the design of the Daya Bay experiments muon-veto and antineutrino detectors.

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