

Large-volume optical detectors are a mainstay of experimental neutrino physics, with several successful implementations in the past decades and larger models on the horizon. Traditionally, detectors made use of either Cherenkov radiation, produced as a superluminal charged particle propagates, or scintillation light, produced from the deexcitation of molecular states populated by energy deposition, but rarely both in tandem. I will describe an R&D campaign to develop technologies suitable for a hybrid detector which will exploit both Cherenkov and scintillation light to implement advanced reconstruction techniques. This campaign has culminated in the Eos demonstrator project, which will be located on the UC Berkeley campus and act as a ton-scale demonstration of the technologies applicable for Theia, a proposed 25+ kiloton hybrid detector.