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The nuPRISM Near Detector: Constraining Neutrino Energy Using Multiple Off-Axis Angles

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At the previous Hyper-K meeting, the idea for a long water Cherenkov detector that spans multiple off-axis angles was presented. Using this configuration, it is possible to constrain the relationship between lepton kinematics and neutrino energy from the neutrino beam information, rather than relying solely on model-dependent neutrino generator extrapolations. Several details of this detector concept will be presented, such as potential near detector sites and event pileup considerations.

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