

Update on the CHIPS Detector

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The CHIPS detector (10 kt) will be deployed in a flooded mine pit in the path of the NuMI beam in 2018. The detector design has been informed from two years of prototype work where a small detector was deployed in the Wentworth 2E pit, N. Minnesota. Detector plane and readout design has largely been fixed. The goal of the experiment is to demonstrate a low cost solution for very large water Cherenkov detectors, sensitive enough to identify electron neutrinos appearing from oscillations in a muon neutrino beam. Reconstruction and simulation indicate a significant reduction in detector density is possible without loss of efficiency.

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