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Near Detectors for Hyper-Kamiokande

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The proposed Hyper-Kamiokande experiment (Hyper-K) is a next generation large water Cherenkov (WD) detector with a broad physics program consisting of neutrino beam measurements in search of leptonic CP violation, astrophysical measurements and a search for proton decay. Hyper-K will act as the far detector to measure the oscillated neutrino flux from the long-baseline beam of 0.6 GeV neutrinos/anti-neutrinos produced by a 1.3 MW proton beam at J-PARC in Japan. To minimise systematic uncertainties, particularly due to flux and cross-section uncertainties, detailed measurements of the unoscillated flux are required with a suite of near detectors. This talk will review the challenges, and present the planned components of the near detector measurement suite, including a new intermediate Water Cherenkov Detector.

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