

Near Detectors for the Hyper-K Neutrino Experiment

Wednesday, 29 July 2020 19:00 (15 minutes)

The neutrino oscillation measurement program of Hyper-K requires unprecedented accuracy for the modeling of neutrino fluxes and neutrino-nucleus interaction cross sections. The Hyper-K experiment will include a suite of near detectors to control systematic uncertainties on neutrino flux and interaction models. In this talk we will describe the baseline Hyper-K near detector suite, which includes beam direction measurement detectors, a magnetized tracking detector, and a kilo-ton scale water Cherenkov detector. We will discuss the measurements these detectors will make to control systematic errors for the accelerator-based neutrino oscillation program, as well as the atmospheric neutrino and nucleon decay programs of Hyper-K.

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Secondary track (number)

13

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Session Classification: Neutrino Physics

Track Classification: 02. Neutrino Physics