

Status of Korean Neutrino Observatory

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The Korean Neutrino Observatory(KNO) is proposed as a next generation underground neutrino observatory in Korea consisting of 260 ton water Cherenkov detector and can serve as the second detector of Hyper-Kamiokande experiment.

By detecting J-PARC neutrino beam in these two detectors at the same time, neutrino oscillation parameters such as leptonic CP violation phase and the neutrino mass ordering can be definitively measured and the sensitivities are expected to be better than locating the two detectors in Japan. Measuring these oscillation parameters are very important questions to be answered in neutrino physics.

In this work we present such sensitivity studies for various detector configurations as a function of beam exposure time and study of geological candidate sites.

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