

Abstract Submitted
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Water Cherenkov Simulation Tuning and Comparison FARZAN

BEROZ, Duke University — This study compared SKdetsim and WCSim, two Monte Carlo simulations of Water Cherenkov detectors used mainly to investigate neutrino oscillation physics. SKdetsim is used for the Super-Kamiokande experiment while WCSim is for the Long Baseline Neutrino Experiment. Using the well-accepted SKdetsim as a standard, parameters of WCSim were adjusted to obtain a stronger agreement between the output of the two programs. Simulations of particles at high and low energies were then examined and compared to further understand the behavior of WCSim at extreme conditions. Although the outputs of the simulations were found to agree closely, additional parameters must be considered to allow for a finer tune.

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