

Development of GEANT4 based water Cherenkov detector simulation, WCSim

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WCSim is a Geant4 based water Cherenkov detector simulation originally developed to test the physics potential of a 1 kton water detector located 2 km away from the T2K beam target. Recently, its code has been updated to accommodate the needs of the LBNE water Cherenkov detector option by allowing the simulation of large cylindrical tank configurations with an adjustable number of PMTs. Moreover, the optical properties have been tuned at about the 3% level to the Geant3 based Super-Kamiokande simulation that is finely tuned to data. I will describe WCSim and its interface to the Super-K tool suite.

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