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## Design of the Hyper-Kamiokande Outer Detector

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Hyper-Kamiokande is a large-scale water Cherenkov neutrino detector with a broad physics programme that is currently under construction in Japan. The detector will comprise of two concentric cylindrical detectors referred to as the inner and outer detectors, ID and OD. The ID will be instrumented with 20" PMTs and mPMTs, and used to detect neutrino interactions. The OD serves a different purpose: as a veto for cosmic muons and other backgrounds. Thanks to the cosmic muon shielding from the rock overburden, it is anticipated the rate of cosmic muons within the Hyper-Kamiokande detector will be  $\sim 45$  Hz. Therefore, a robust veto system, the OD, is designed to tag these cosmic muon background events to ensure a well-understood signal can be detected within the ID. The OD design consists of 3" PMTs mounted within a wavelength shifting plate. The inner and outer walls of the OD volume will be covered in highly-reflective Tyvek material to ensure maximum reflectivity of the photons and improve detection rates in the PMTs. The detector must maintain a high level of efficiency for the duration of the experiment without intervention and so component failure has also been considered in the design process. This talk will discuss the Hyper-Kamiokande OD design.

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