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TITUS selection with Gd

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The TITUS detector is an original multi-purpose new detector for the Hyper-K experiment, located 2 km from the J-PARC neutrino beam. TITUS consists of a gadolinium-doped water Cherenkov detector, partially enclosed by a muon range detector (MRD)
The detector will be exposed to a neutrino flux similar to the Hyper-K far detector, minimising the uncertainty on the near-to-far extrapolation. The addition of Gadolinium allows neutron tagging which will provide discrimination between neutrino and anti-neutrino, and measurement of multi-nucleon interactions. Recent developments in the design of the TITUS water tank as well as software and physics analysis will be presented.

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