



Contribution ID: 80

Type: **Poster**

Testing the PMTs Underwater Units with a new pressure vessel for the Hyper-K experiment

Tuesday, September 30, 2025 7:00 PM (1 hour)

The Hyper-Kamiokande (HK) neutrino experiment is currently under construction in Japan, with data taking scheduled to begin in early 2028. The detector will be a huge tank filled with 258 kton of ultrapure water divided into Inner Detector (ID) and Outer Detector (OD). More than 20000 50-cm PMTs and 800 multi-PMTs will face the inside of the ID, while the OD will be equipped with approximately 3600 8-cm PMTs to provide the veto for the ID. Next year, an intense assembly phase will be carried out at CERN, where the Underwater Units (UU) housing the electronics of PMTs will be assembled, tested and validated for shipment to Japan. A newly developed test vessel will evaluate both ID and OD UUs under the same pressure and thermal conditions as the final detector. The fully automated tests will verify the tightness of new feed-throughs and mechanical components, and will monitor internal pressure, temperature, and humidity, with all data stored in the HK database.

Neutrino Properties

Neutrino Telescopes & Multi-messenger

Neutrino Theory & Cosmology

Data Science and Detector R&D

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Session Classification: Poster Session (with cocktail)