Contribution ID: **127** Type: **Flash Plenary Talk**

High Intensity Muon Beams (HIMB) project

Tuesday 27 May 2025 16:00 (30 minutes)

Currently PSI delivers the most intense continuous muon beam in the world with up to a few 10^8 μ+/s and aims at upgrading its beamlines within the HIMB project to reach intensities of 10^10 μ+/s, with a huge impact for low-energy, high-precision muon experiments.

The use of hyperparameter search algorithms in the simulation of the new HIMB beamline layouts has shown that not only the stringent rate requirements can be met, but that higher phase space quality can be achieved.

Muon dipole moments (magnetic and electric): theory, experiments and future perspectives

Charged lepton flavor violation: theory, experiment and future perspectives

New Physics opportunities with low and high energy muon beams

Neutrino physics with muon beams: theory, experiments and future perspectives

Muons beams technologies: production, cooling and acceleration at different energy

none

Advancements in Muon-based Facilities and Broader Applications

Muons in other fields: muography, muon spin spectroscopy, muon-catalyzed fusion

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