International Conference on Exotic Atoms and Related Topics and conference on Low Energy Antiprotons (EXA/LEAP 2024)



Contribution ID: 112

Type: not specified

PSI - future plans, extensions

Friday, 30 August 2024 12:00 (30 minutes)

At the Paul Scherrer Institut (PSI) muon rates of up to 4x10⁸ mu/s are available, produced by its 1.4 MW proton accelerator complex HIPA. While these are currently the highest muon rates available worldwide, projects in the US and Japan are underway that will be able to surpass these intensities by several orders of magnitude.

In order to maintain PSI's position at the intensity frontier in muon physics and to utilize the unique DC machine structure, a project is under way of creating a next-generation high-intensity muon beam (HIMB) by modifying the existing Target M station. Surface muon rates of the order of 10¹⁰ mu+/s can be achieved by placing two normal-conducting capture solenoids close to a slanted slab target and transporting the muons to the experimental areas with a beamline consisting of large aperture solenoids and dipoles. This contribution will present the current status of the project.

Primary author: KNECHT, Andreas Presenter: KNECHT, Andreas