



Invitation

LMU-Seminar

Title: Development of a novel low-energy, high-brightness μ^+ beam line
Speaker: Dr. Andreas Eggenberger - Institute for Particle Physics, ETH Zurich)

Time: Monday, September 19th 2016, 10:00-11:00

Place: WBGB/019

Abstract:

The muCool collaboration is developing a device delivering a novel muon beam with significantly increased brilliance for next generation low-energy particle physics experiments with both μ^+ and muonium ($\text{Mu}=\mu^+e^-$). This device will decrease the phase space of a standard μ^+ beam by a factor of 10^{10} with an efficiency of 10^{-3} . The concept involves stopping MeV μ^+ in a cryogenic target with a gas density gradient, and compressing the stopped distribution by means of strong electric and magnetic fields in several successive stages. Finally, the beam will be extracted into vacuum, re-accelerated and sent to experiments. After introducing the general idea of the muCool beam, the focus will be put on the achievements and the current status of the muCool project.