Physics of fundamental Symmetries and Interactions - PSI2010

October 10, 2010 - October 14, 2010

PSI

Scientific Program

The workshop focuses on the physics at the low energy, high precision frontier without neglecting complementary approaches. It aims at highlighting present activities and future developments. The Paul Scherrer Institut (PSI) itself offers unique opportunities for experiments in this realm: it houses the world's most powerful proton cyclotron and the highest intensity low momentum pion and muon beams. Moreover, in 2010, the high intensity ultracold neutron source will start its operation.

Low energy precision tests of the Standard Model

Searches for symmetry violations

e.g. T, CP, CPT, Lorentz, Lepton flavor, Baryon number

Searches for new forces

e.g. spin dependent interactions, modifications of gravity or weak interaction

Precision measurements of fundamental constants

Fundamental physics with cold and ultracold neutrons

Searches for permanent electric dipole moments

Precision magnetometry

Precision experiments with pions and muons

Exotic atoms and molecules

Advanced muon sources

Advanced ultracold neutron sources

Advanced detector technologies