

T 73: Hauptvorträge VI

Zeit: Donnerstag 11:00–12:30

Raum: H01

Hauptvortrag

T 73.1 Do 11:00 H01

Timing detectors — ●LUCIA MASETTI — PRISMA+ Cluster of Excellence and Institute for Physics, Johannes Gutenberg University, Mainz, Germany

Traditionally, precise time measurements have been used in particle physics in Time Of Flight (TOF) detectors for particle identification. For the upcoming upgrade of the LHC to high luminosity in 2026, new technologies are being developed to exploit the time information in the assignment of detector signals to the hard scattering process. A very challenging precision of few tenths of picoseconds is needed for this task together with high spatial resolution. On the long term four dimensional tracking and five dimensional calorimetry can be envisaged by adding the time information to each single hit in the detector. In

this talk the newest timing detector developments will be presented focusing mostly on the high luminosity LHC, but including also future colliders, as well as applications in medical and astroparticle physics.

Hauptvortrag

T 73.2 Do 11:45 H01

Getting to know the Higgs boson — ●SARAH HEIM — DESY, Hamburg

The Higgs boson was discovered in 2012 by the ATLAS and CMS experiments at the Large Hadron Collider. In the last years both experiments have measured its properties more and more precisely, in particular the couplings to other particles. The goal is to search for deviations from the Standard Model predictions that could be explained with other theories.