

T 48: Hauptvorträge (Invited Talks) II

Time: Wednesday 9:45–12:30

Location: Tb

Invited Talk T 48.1 Wed 9:45 Tb
Moving ahead with flavor — ●GUDRUN HILLER — Fakultät
 Physik, TU Dortmund, Germany

The standard model has passed an enormous amount of tests. We report on present challenges posed by flavor for physics in and beyond the Standard model, and discuss directions to go ahead: Improving the precision frontier and understanding of the standard model background, multi-observables methods and fits, new directions in model building, and joint efforts from theory, phenomenology and experimental communities. We highlight the progress and persistent puzzles from the flavor sector.

Coffee Break 30 min

Invited Talk T 48.2 Wed 11:00 Tb
Highlights from the LHCb experiment — ●MICHEL DE CIAN —
 EPFL, Lausanne, Switzerland

In the last years, the LHCb experiment observed intriguing deviations from Standard Model predictions in charged-current and neutral-current b -hadron decays, commonly known as "flavour anomalies". They might hint to physics beyond the Standard Model. In this talk I

will review the state of these anomalies, present the latest results and also highlight other key results by the LHCb collaboration of the last months.

Invited Talk T 48.3 Wed 11:45 Tb
Neutrino Oscillations: Status and Prospects — ●ALFONS WE-
 BER — University of Oxford, Oxford, UK — UKRI/STFC Rutherford
 Appellton Laboratory, Didcot, UK

The Nobel Prize in Physics 2015 was awarded to Kajita and McDonald "for the discovery of neutrino oscillations, which shows that neutrinos have mass." It was the recognition of important work and the solution to the so-call atmospheric and solar neutrino anomalies, which puzzled physicists for a decade. We have now moved on and start to develop a good understanding of the neutrino flavour sector. Diverse experiments studying neutrinos from the sun, reactors, cosmic rays and accelerators have given us insight of the mass and flavour structure of neutrinos. This presentation will summarise the current state of the field and highlight what we still do not know and future experiments that will lead the area of precision neutrino physics and shed light on the question, whether the CP symmetry is violated in the neutrino sector.