

Flavour matters – highlights from the LHCb experiment

Prof. Dr. Stephanie Hansmann-Menzemer

Physikalisches Institut, Universität Heidelberg

The Large Hadron Collider (LHC) close to Geneva holds many records. Amongst others, it is the world largest flavour factory. More than 10^{12} particles containing bottom quarks and even more containing charm quarks have been recorded by the LHCb experiment, in recent years. Exploiting these huge data-sets the LHCb experiment is an ideal laboratory to search for new particles and interactions in precision measurements. The talk will give an introduction to the key ideas of flavour physics, present a selected overview of recent physics highlights and report on the challenges for the currently ongoing upgrade of the LHCb experiment.