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JOHANNES GUTENBERG UNIVERSITÄT MAINZ

PRISMA+ Colloquium

Nov. 22, 2017 at 1 p.m.
Lorentz-Raum 05-127, Staudingerweg 7

Dr. Sebastian Jäger
University of Sussex, England

A pretaste of new physics: Lessons and puzzles in flavour physics

After the discovery and intensive study of the Higgs boson at the LHC, the Standard Model of particle physics provides an economical and empirically quite comprehensive description of fundamental physics, as long as gravity is ignored.

However, over the last few years a number of deviations from this picture have emerged within flavour physics experiments - both in decays of B-mesons and K-mesons. If true, these anomalies may point to new physics anywhere in the sub-TeV to 30 TeV range.

In my talk I review the theoretical case for the search for new physics with flavour, a strategy which played a significant part in constructing the Standard Model itself. I will introduce and discuss the anomalies and what they may already be telling us about the successor of the Standard Model, and comment on prospects including possible connections with direct LHC searches.

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