Das Kolloquium findet (soweit nicht anders angegeben) jeweils montags um 17:15 Uhr in Präsenz im Röntgen-Hörsaal des Physikalischen Instituts, Hubland Campus Süd, Universität Würzburg und online via Zoom statt.

Link zum Zoom-Raum: https://go.uniwue.de/physkolloqzoom

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Karlsruher Institut für Technologie (KIT)

Rare quark decays: Gate to new physics?

Abstract

Transitions between quarks of different fermion generations are rare processes, because they are governed by small parameters of the Standard Model. Precision studies of rare quark decays may therefore reveal virtual effects from new particles which are too heavy to be produced in current particle colliders. Especially interesting are decays of B mesons which are bound states of a bottom quark and a light antiquark. The colloquium talk addresses goals and methods of this field of research and discusses the very rare decay of a bottom quark into a strange quark, a muon and an anti-muon, whose observed decay pattern does not agree with the Standard-Model prediction. A possible class of new particles capable of mediating this decay comprise so-called leptoquarks, which are predicted in theories of unified gauge interactions.

Für die Dozentinnen bzw. Dozenten der Fakultät

Prof. Dr. Erdmenger, Prof. Dr. Sangiovanni, Dr. Moser und Hr. Frerichs