

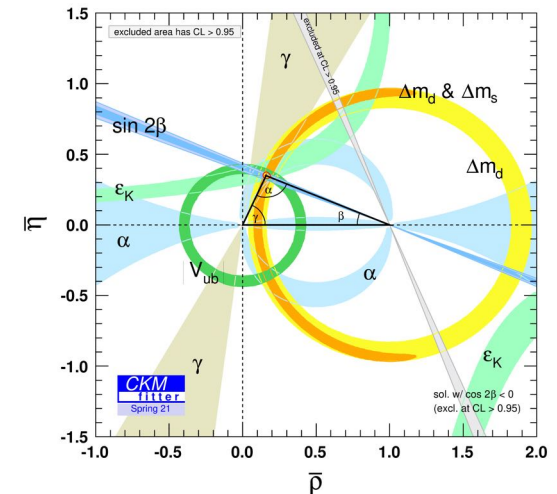
Freitag, 15. Juli 2022, 15 Uhr c.t. im Hörsaal I des Physikalischen Instituts



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**„B mesons as a Telescope for
New Physics“**



B meson decays are important players in the search for physics beyond the Standard Model (SM) of particle physics. Linked to the antimatter-matter asymmetry in the universe, a key interest in this is also improving the understanding of the mechanism of CP violation within the SM. The large amount of data gathered by the B factories and LHCb allows testing the SM with an unprecedented precision, probing scales much higher than the reach of direct searches at the LHC. In this sense, B mesons serve as a Telescope in the search for new interactions and particles. In order to do so, requires precise and reliable theoretical predictions. In this talk, I will present some of the challenges and new ideas to push the theoretical precision up. Specifically, I will focus on the determination of the CKM element V_{cb} , V_{ub} and I will discuss how to treat small QED effects in non-leptonic decays.