FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 27.11.2014, 16^{15} Uhr

Seminarraum 127, TUM, Physik II, Erdgeschoss/Nord
Treffen zum gemeinsamen Kaffee 16 Uhr

Dr. Jennifer Girrbach-Noe

(TU München/ IAS)

Quark Flavour Physics in the Standard Model and Beyond

Flavour physics is a very powerful tool to test the Standard Model of particle physics (SM) and to search for new physics (NP). It can probe very short distance scales that are beyond the direct reach of the LHC without directly producing new heavy particles. In this talk I first give an introduction to flavour physics and then outline a strategy how to find NP with the help of flavour physics. Correlations between certain observables in different NP models play here a key role. With its rich phenomenology the Flavour sector can help us to disentangle different models beyond the SM. This is demonstrated with some concrete examples, like correlations between $B_{s,d} \to \mu^+\mu^-$, $B \to K^{(*)}\ell^+\ell^-$ and $B \to K^{(*)}\nu\bar{\nu}$. The question what is the highest resolution that we can get with flavour physics is also addressed.

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