

FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 18.01.2018, 16¹⁵ Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

Dr. Frank Simon

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Top-Quark and Higgs-Boson Physics with Highly Granular Detectors

A precise exploration of the top-quark and of the Higgs-boson is the core of the physics program of high-energy electron-positron colliders discussed for the next generation of large collider facilities. The detectors enabling these precision measurements make use of the results of global R&D efforts, among them the development of highly granular calorimeters. In this talk, I will outline the physics arguments and merits of future electron-positron colliders, placing particular emphasis on the measurement of Higgs-bosons in hadronic final-states difficult to access at the LHC, and on the measurement of the top-quark mass in theoretically well-defined mass-schemes. I will also discuss highly granular calorimeters which were originally optimised for the event reconstruction at lepton colliders, but now find applications at the Large Hadron Collider and in other experiments as well.

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