

FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING

PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING

MLL-KOLLOQUIUM

Donnerstag, 12.07.2012, 16¹⁵ Uhr

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

Dr. Sebastian Neubert

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The Hadron Program at COMPASS

The physics of strongly interacting particles is studied in the COMPASS experiment at CERN by using high-energy pion, kaon and proton beams that scatter off liquid hydrogen as well as other nuclear targets. At small energies the hadron spectrum is governed by the spontaneously broken chiral symmetry of QCD and the dynamics of the resulting Goldstone bosons, the pions and kaons. Recently, a study at COMPASS has shown for the first time that the production of multi-body final states like $\pi^- \pi^+ \pi^-$ at low pion-momenta is indeed determined by chiral dynamics. Diffractive hadron scattering provides a source for producing excited meson states, which are still poorly understood from the theoretical side. The topics that are being studied with the large data sets collected by COMPASS range from the search for glueballs and hybrid mesons, the study of diffractive production mechanisms to the exploration of extended symmetries in the meson spectrum. This talk will give an overview of the hadron program at COMPASS and present recent results.

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