
T 2: Hauptvorträge II

Zeit: Mittwoch 8:30–10:00

Raum: KGII-Audimax

Hauptvortrag T 2.1 Mi 8:30 KGII-Audimax
Electroweak Physics at HERA and at the Tevatron and Searches for Higgs Bosons — •RAINER WALLNY — UCLA

Recent data from HERA and the Tevatron are presented which probe the electroweak sector of the Standard Model. The polarized deep inelastic scattering cross sections measured at HERA are sensitive to the weak neutral current couplings of light quarks and to the weak propagator mass. The most precise direct measurement of the mass and width of the W boson is performed at the Tevatron. In conjunction with precision measurements of the top quark mass, the mass of the W boson constrains the mass of the as yet unobserved Higgs boson. Electroweak processes such as di-boson pair production allow the extraction of (possibly anomalous) triple gauge couplings, while single top quark production probes the weak coupling of W bosons to top and bottom quarks. The talk will also present the status of searches at

the Tevatron for Higgs boson production as is predicted in the Standard Model and in its supersymmetric extensions, concluding with a brief outlook for such searches at the LHC.

Hauptvortrag T 2.2 Mi 9:15 KGII-Audimax
QCD and Jets — •UTA KLEIN — University of Liverpool

Recent results are presented, as obtained at HERA and the Tevatron, on the production of high energy jets and the understanding of parton dynamics in QCD. The talk deals with inclusive, multi- and associated jet production, with emphasis on new data based on increased luminosity and an improved understanding of the detectors. The importance of jet data on the determination of parton distribution functions of the proton, on a precise measurement of the coupling constant of the strong interaction and further stringent tests of QCD is discussed.