

HERA: Towards Higher Proton Beam Energies,
R. BACHER, DESY - During the last years physics events have been observed at HERA highlighting a possible deviation from the standard model. Presently an energy upgrade of HERA-p is under discussion in order to increase the corresponding reaction cross sections. Following the last luminosity run period, a series of technical tests have been performed to establish a safe working regime of the main magnets (dipoles and quadrupoles) at higher excitation currents and to explore the actual limits of the magnet chain. Extensive quench tests at currents corresponding to 900 GeV proton energy have demonstrated that the quench protection system can handle quench scenarios much worse than expected from the operation experience gained from HERA at 820 GeV. In addition, the HERA main magnets have been ramped up to about 6200 A corresponding to 1 TeV and an emergency switch-off has been carried out without any problems. A careful synopsis of these tests will be presented.