

Measurement of the Magnetic Field Ripple Experienced by a Stored Beam, F. CASPERS, D. MÖHL, F. PEDERSEN, L. SØBY, D. WILLIAMS, CERN; A. FESCHENKO, INR, Russia - By analysing beam transfer functions, i.e. the beam response to an RF excitation signal at a harmonic of the revolution frequency or at a betatron sideband, the low frequency ripple of the bending and focusing fields can be deduced. The underlying theory as well as experimental results of ripple measurements for three of CERN's machines (Booster, Antiproton Collector, Antiproton Accumulator) are presented. In the Antiproton Collector ring for example, fluctuations smaller than 10^{-5} have been observed using this technique.