

The Q-loop: A Function Driven Feedback System for the Betatron Tunes during the LEP Energy Ramp, O. BERRIG, M. JONKER, D. LOHMANN, G. MORPURGO, CERN - In normal operation LEP is ramped from injection energy, typically 22 GeV, to energies of over 90 GeV where physics data taking takes place. Effective control of the betatron tunes during the ramp is essential to ensure good transmission of stored current. The LEP Q-loop is a feedback system used to control the betatron tunes during the energy ramp. By following a pre-programmed tune function it provides a means of avoiding dangerous resonances and thus beam loss. The basic components of the Q loop will be described, and operational results presented. Emphasis will be given to the problems encountered and the solutions found.