

Improvement of Beam Stability due to Sorting of Dipoles in the CERN-LHC, R. BARTOLINI, W. SCANDALE, CERN; E. TODESCO, University of Bologna - Sorting strategies are investigated in view of improving the long-term beam stability of the CERN-LHC. The dipoles are paired and located in appropriate positions along the ring to obtain a local compensation of the random field-shape imperfections. The dipole pairs are then permuted to maximise the size of the stable area in the phase space. The robustness of the improvement is finally checked through extensive tracking of realistic models of the LHC lattice.