

**Transverse Emittance Blow-Up from Dipole Errors in Proton Machines, L. VOS, CERN** - A set of emittance blow-up formulae for proton beams is derived. The starting point is the classical problem of the emittance increase provoked by a single transverse kick, p.e. an injection error. The degree of complication gradually increases by treating sequentially the case of a series of random kicks, a single kick with active damping and finally the case of coherent excitation. In all cases the phenomenon of decoherence is assumed. Illustrative experimental results will also be presented.