

Cooled Beam Instabilities Driven by a Ring Periodicity Perturbation, A. BUROV, INP; A. PISENT, LNL-INFN; V. VARIALE, INFN Bari - Cooling process of an ion beam from diluted to crystalline state has been simulated in a ring with periodicity 8 and betatron phase advances per period smaller than 90 degrees, as chosen for the design of the CSR project ring. The consequences of a small lattice periodicity perturbation (quadrupole errors, e-cooling solenoid ...) has been studied and interpreted by means of envelope modes theory.