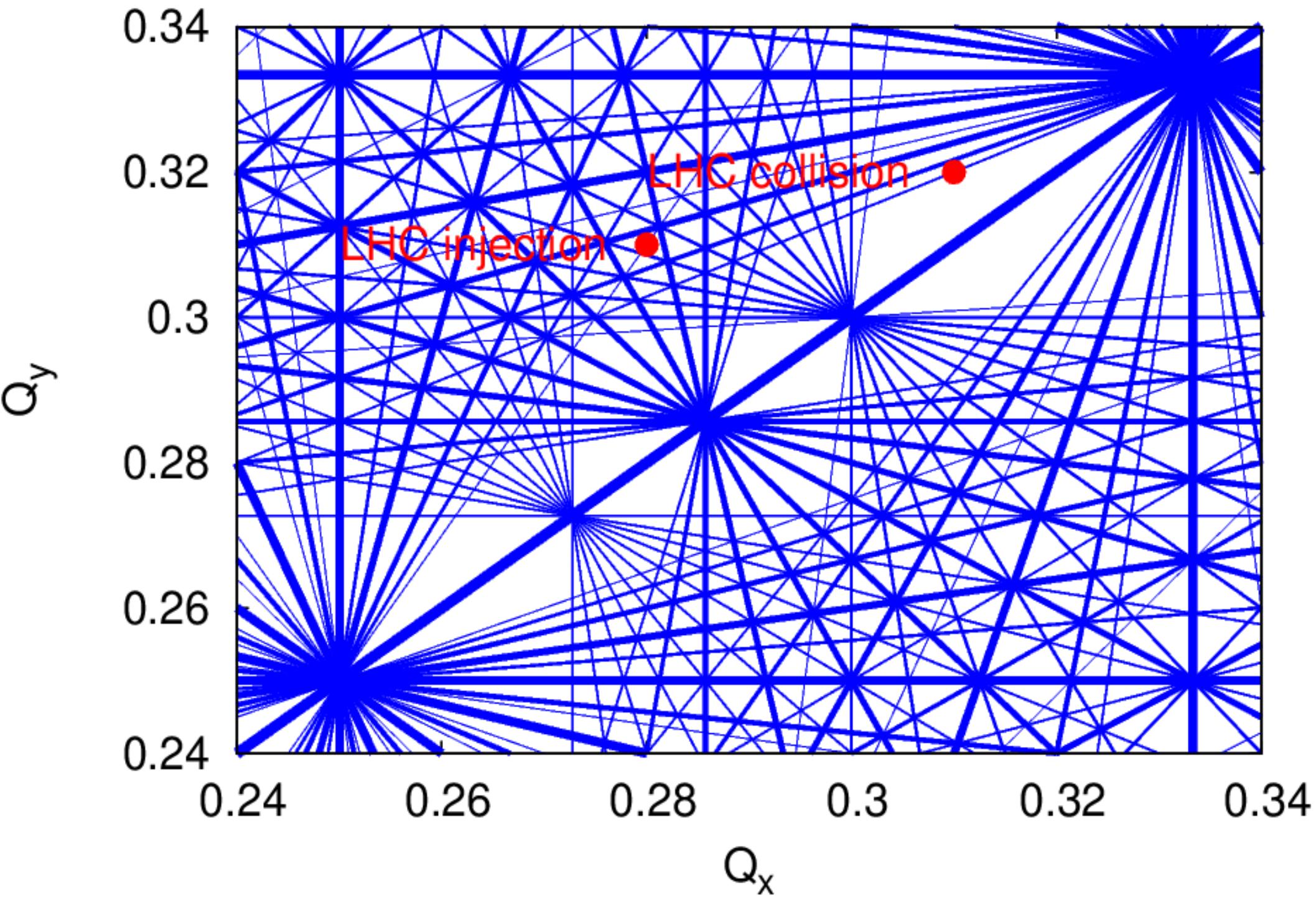
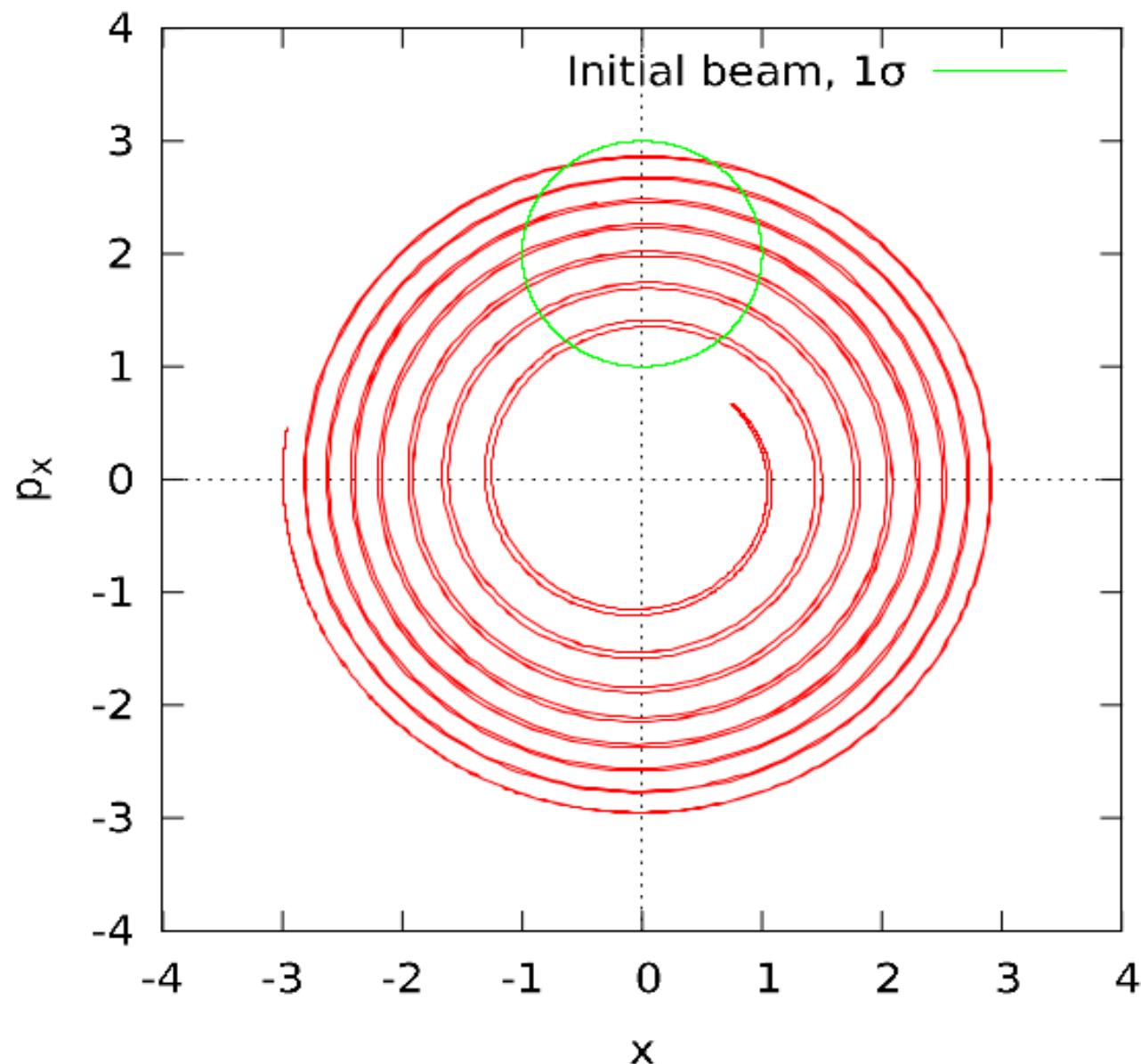


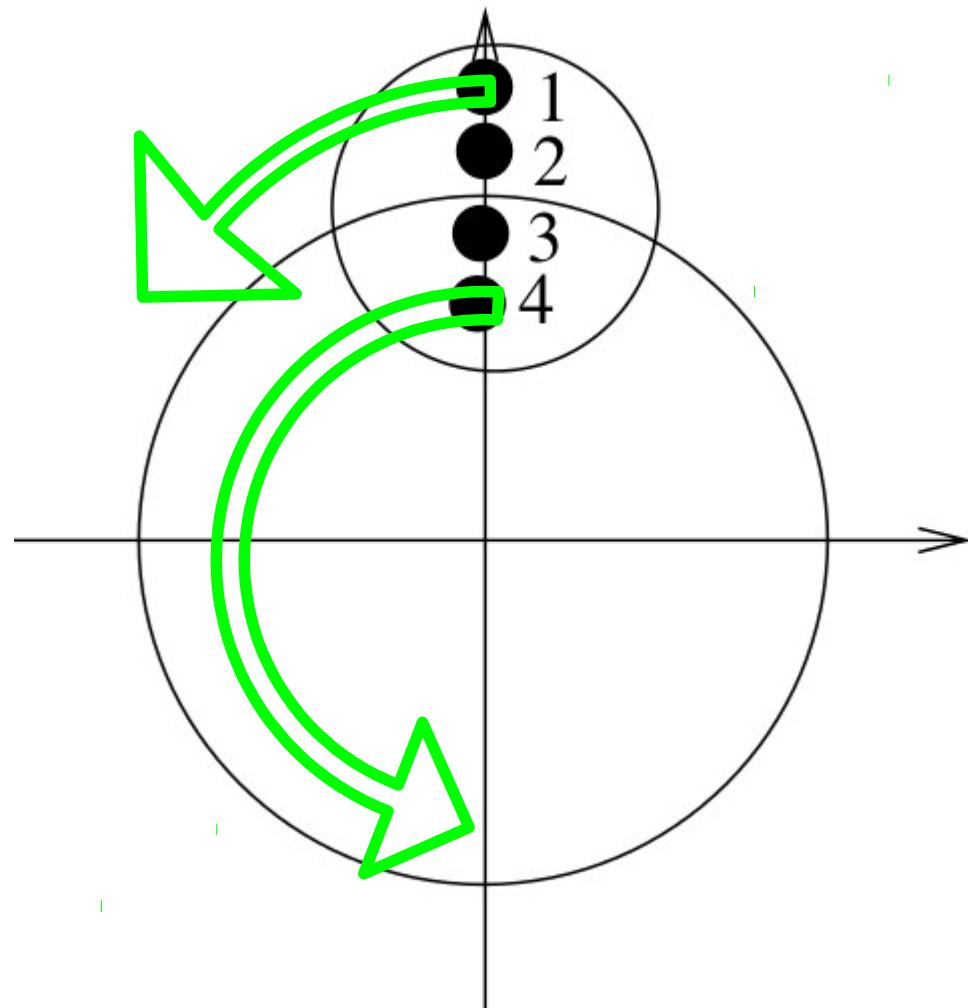
LHC tunes



Can we restore coherence?



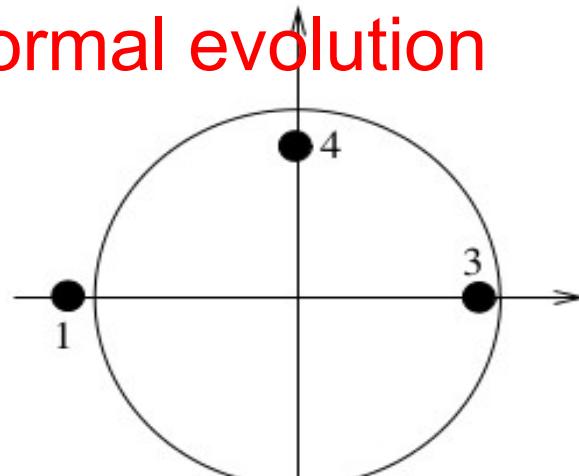
Can we restore coherence?



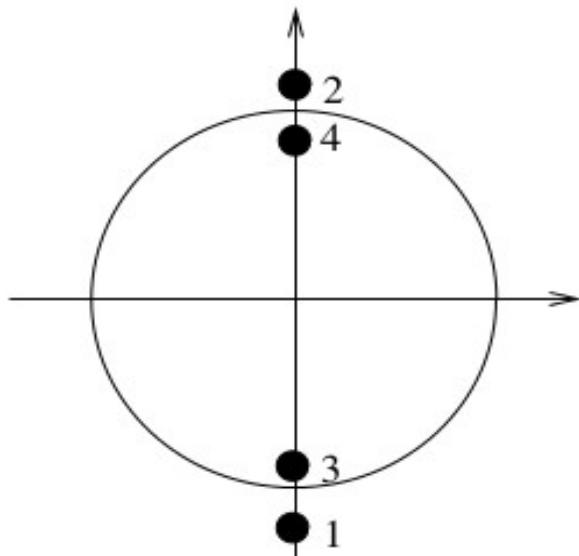
a) After dipole kick

Partly yes, with a quadrupolar kick

Normal evolution

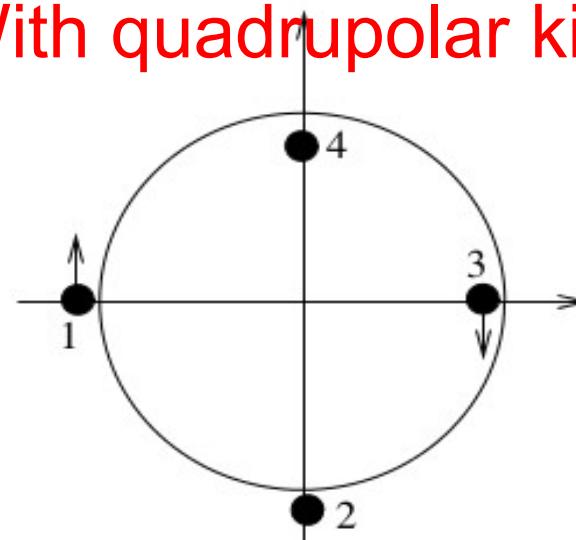


b) After time t

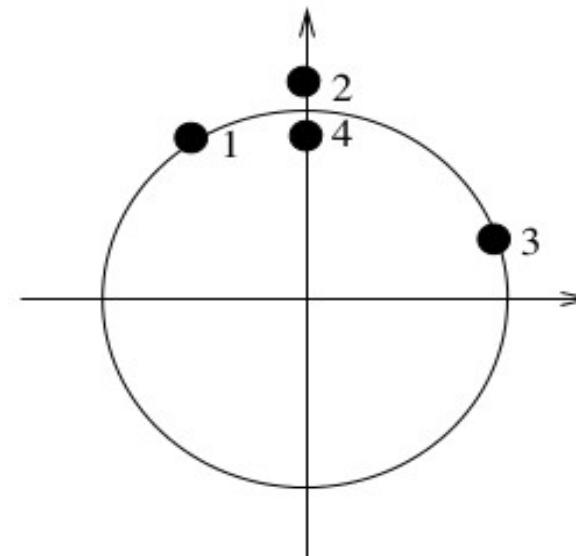


c) After time $2t$ without quadrupole kick

With quadrupolar kick

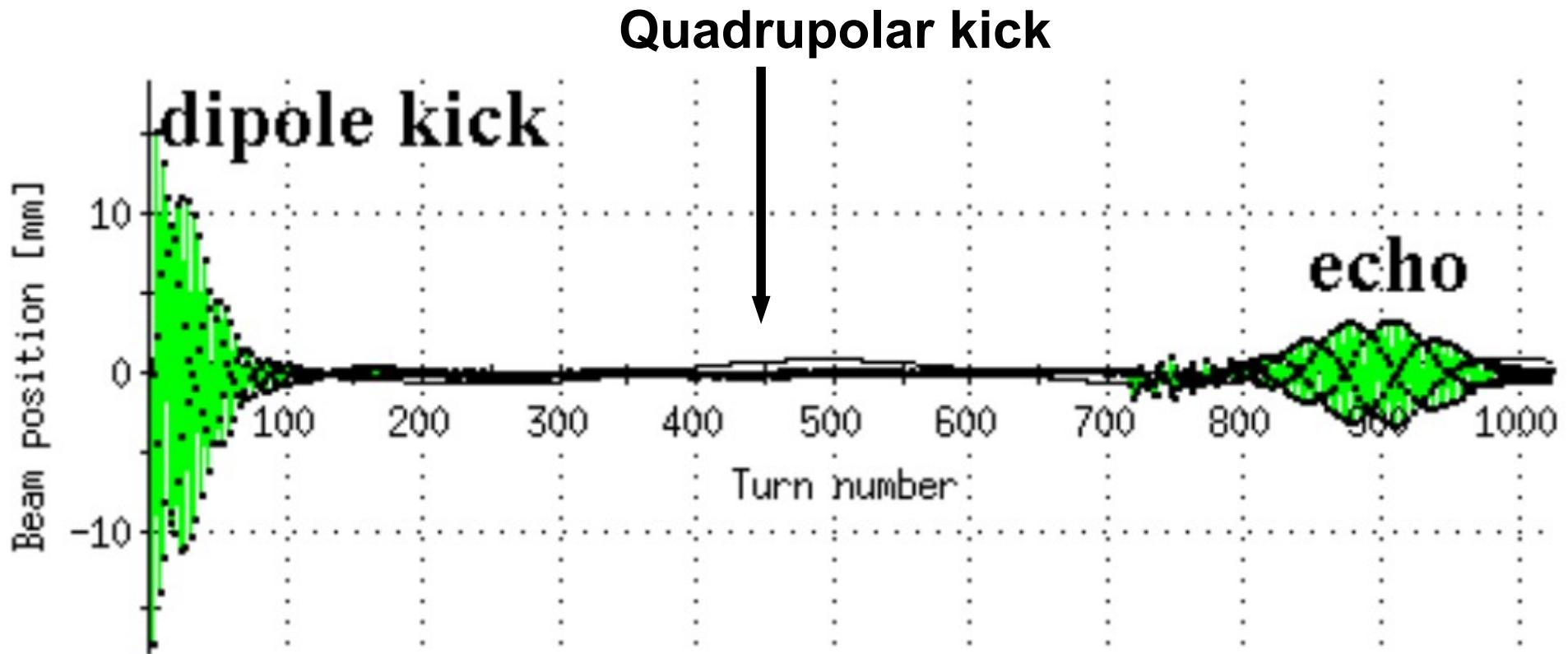


d) After quadrupole kick



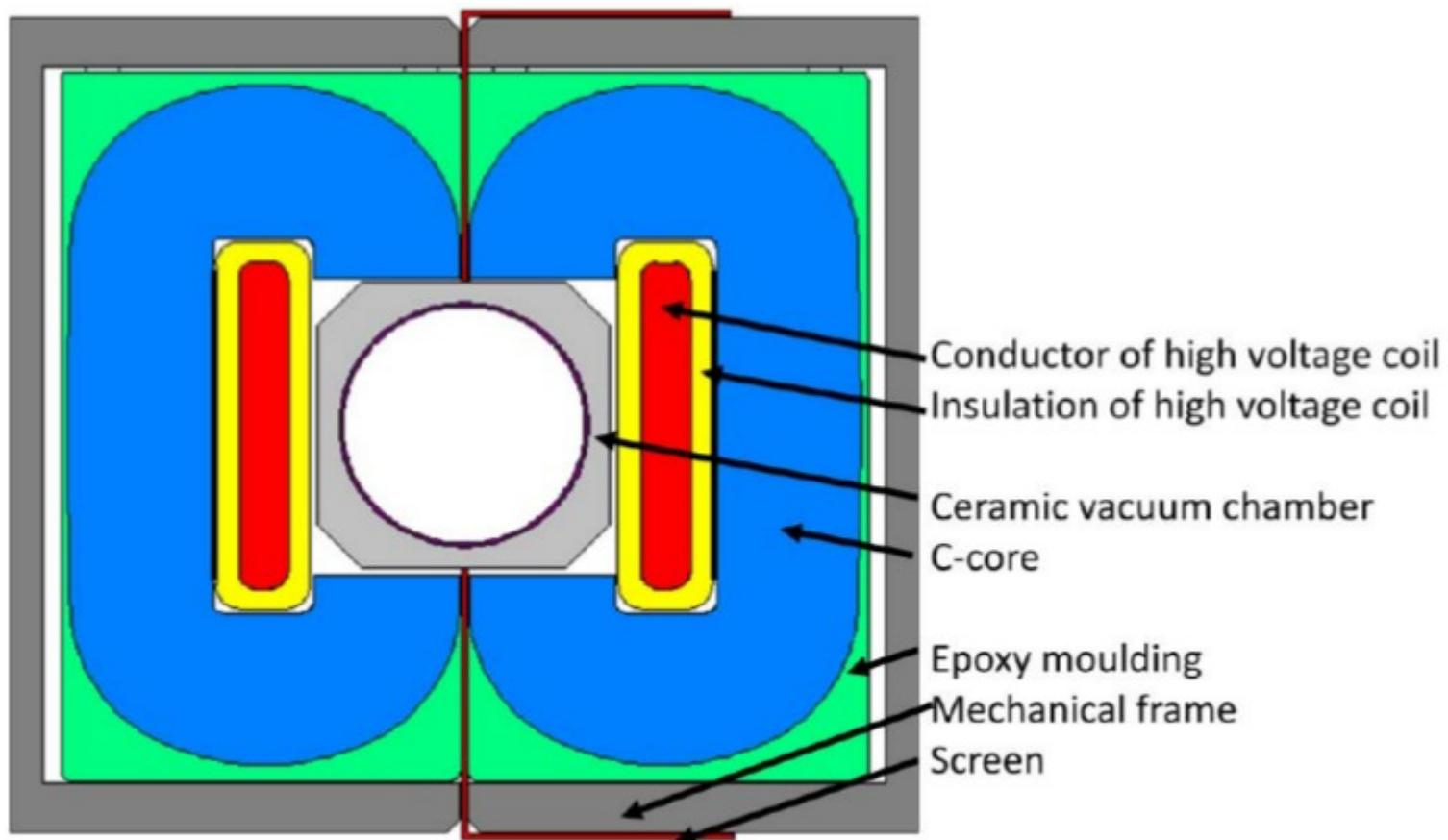
e) After time $2t$ with quadrupole kick

The resulting re-cohered motion *(ok, only shortly re-cohered)*



Ref: W. Fischer et al, Measurement of transverse echoes in RHIC, PAC 2005

What magnet is an AC dipole and what is the field?



- In LHC: a kicker magnet (dipole) powered with audio amplifiers (freq ~ 3 kHz)
- Maximum field ~ 0.01 T