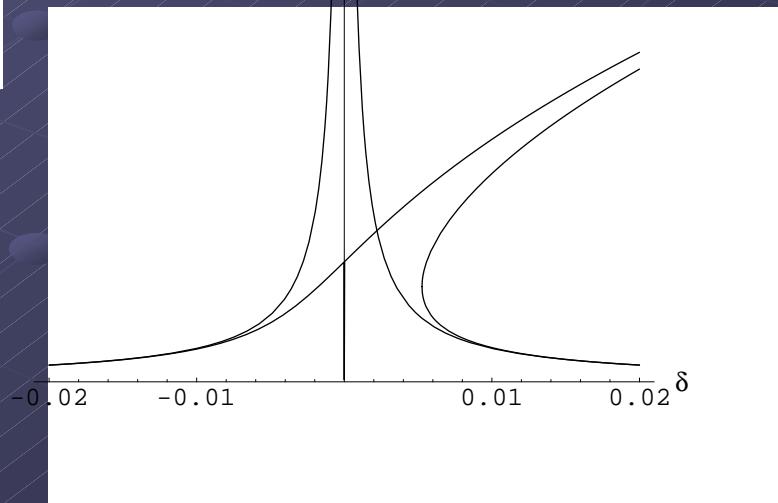
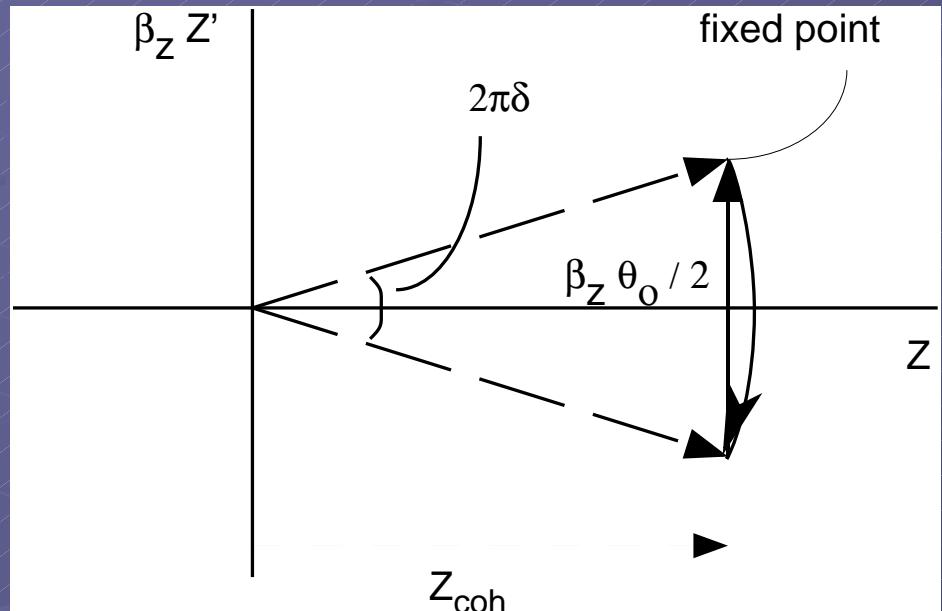


AC Dipole in Beam Diagnostic

- Long lasting coherent oscillation

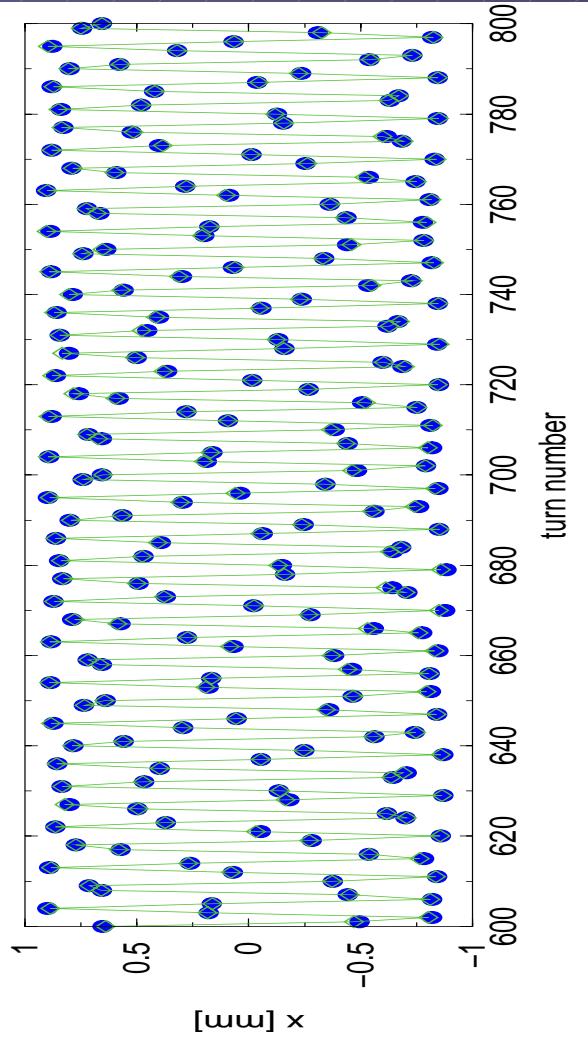
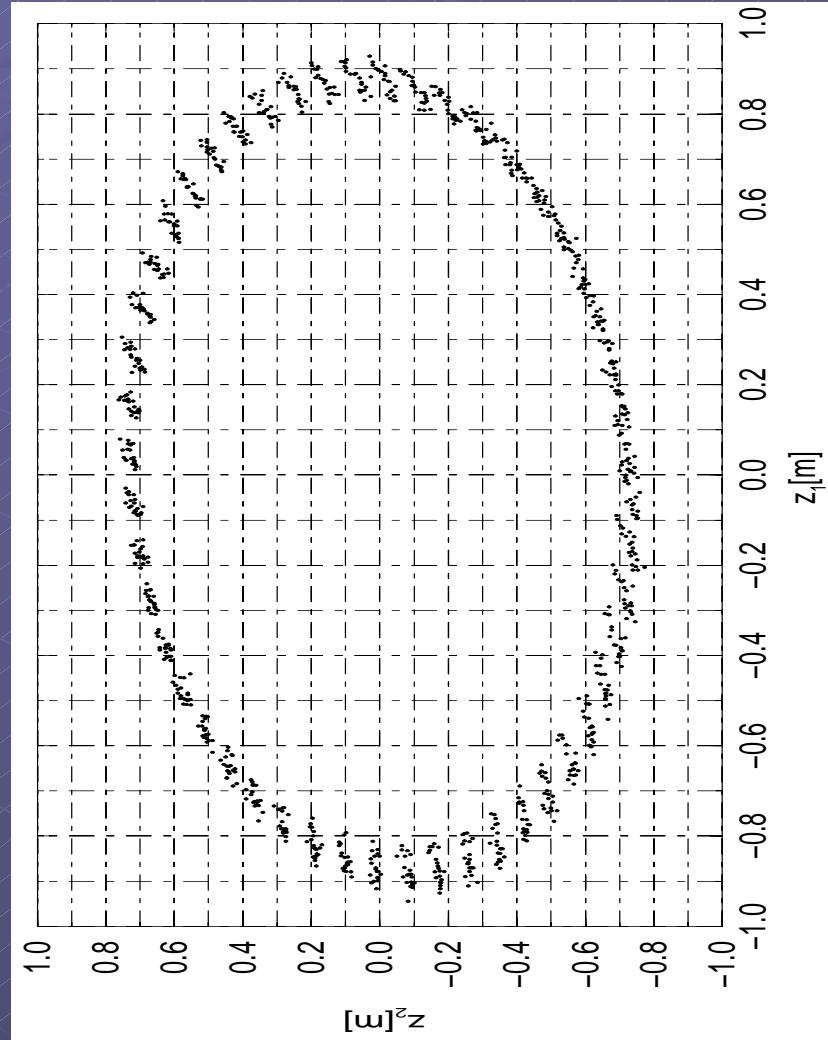


- RHIC ac dipoles



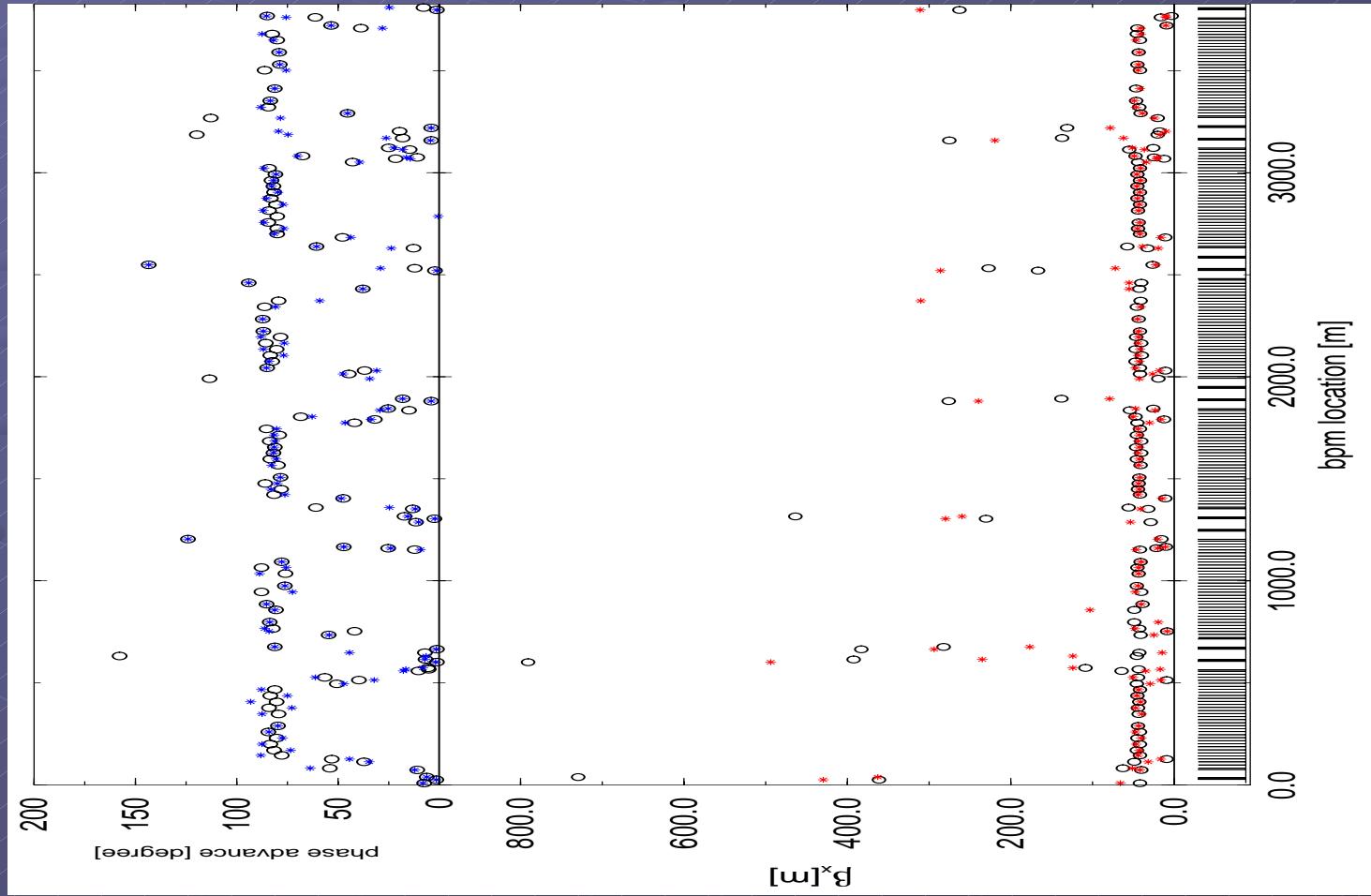
- two air-core ac dipole magnets next to IP4
- each magnet is 1m long
- maximum B field=100 Gauss-m
- operating frequency: H: 61kHz, V: 61kHz in parallel and 37kHz in series

- Coherent oscillation excited by the RHIC ac dipole



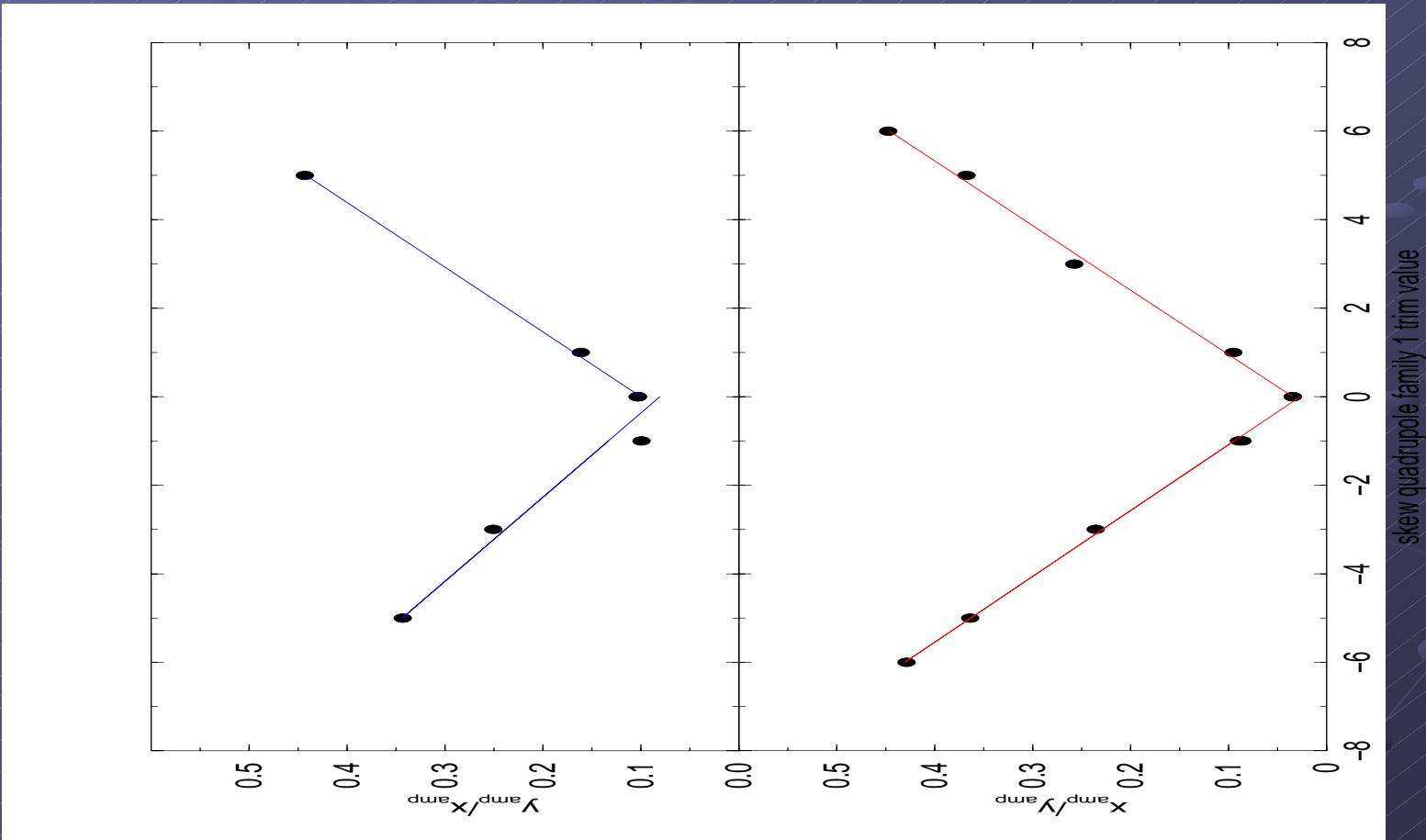
relativistic heavy ion collider

- beta function and phase advance measurement using the RHIC ac dipole

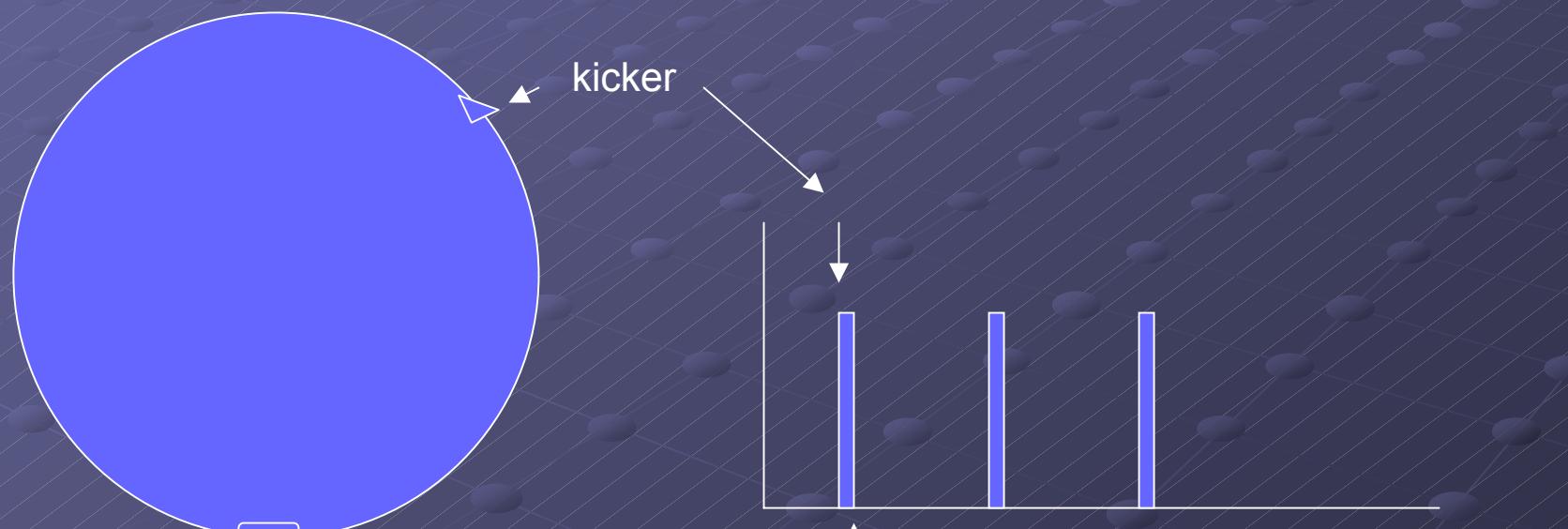


relativistic heavy ion collider

- linear coupling measurement using RHIC ac dipole



- other applications
 - spin manipulation
 - cleaning up particles between bunches (“gap” cleaning)



- halo diagnostics?