

Long-Range Wakefield due to Electron Cloud

Old routine doubtful

uses momentum balance

implement new routine

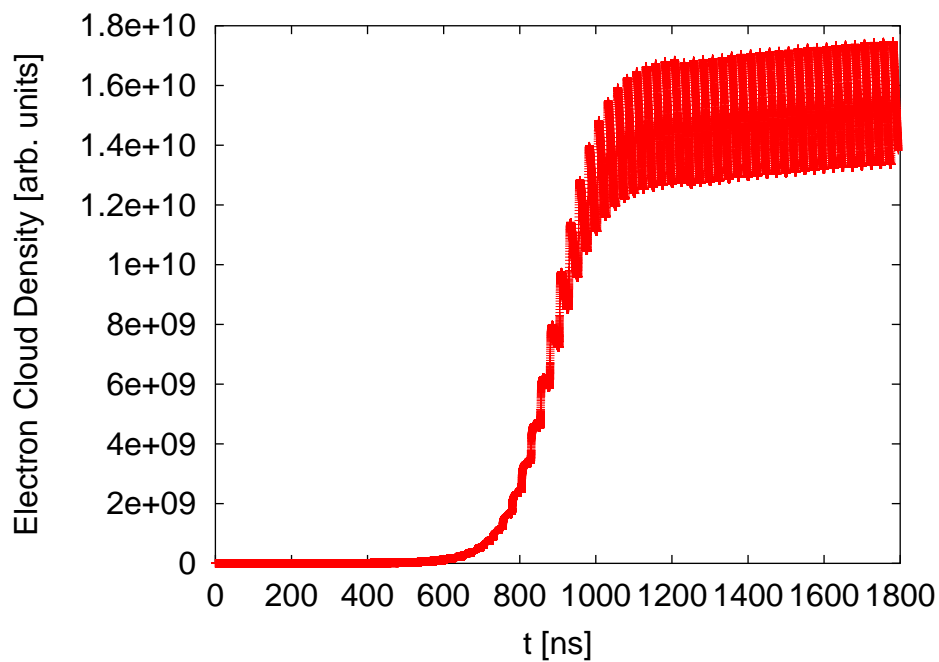
uses electron cloud field in centre cell (including boundary conditions)

statistical error is large

large offset

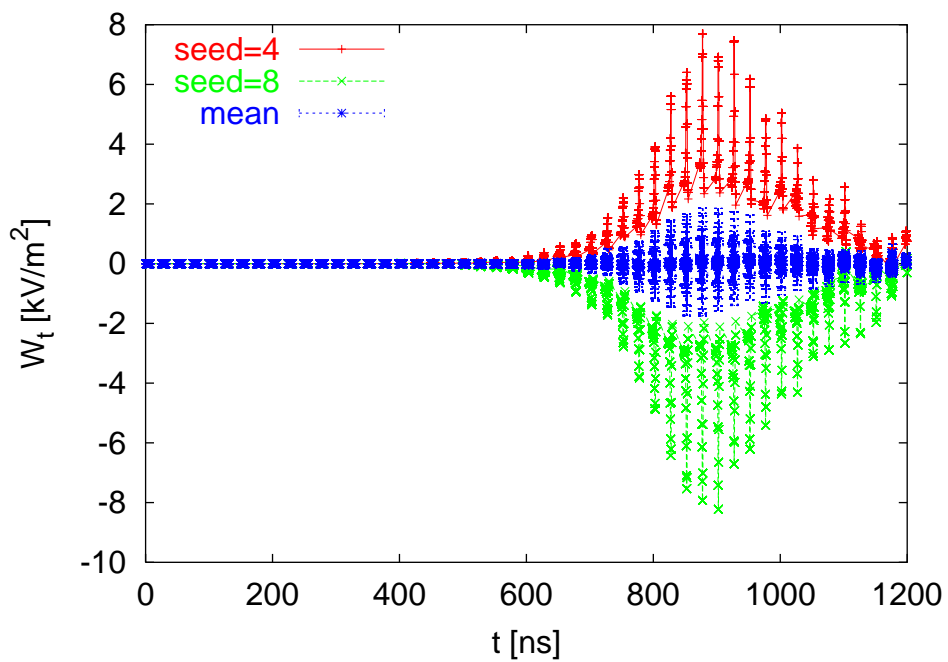
large number of macro particles required

multiple runs with different seeds

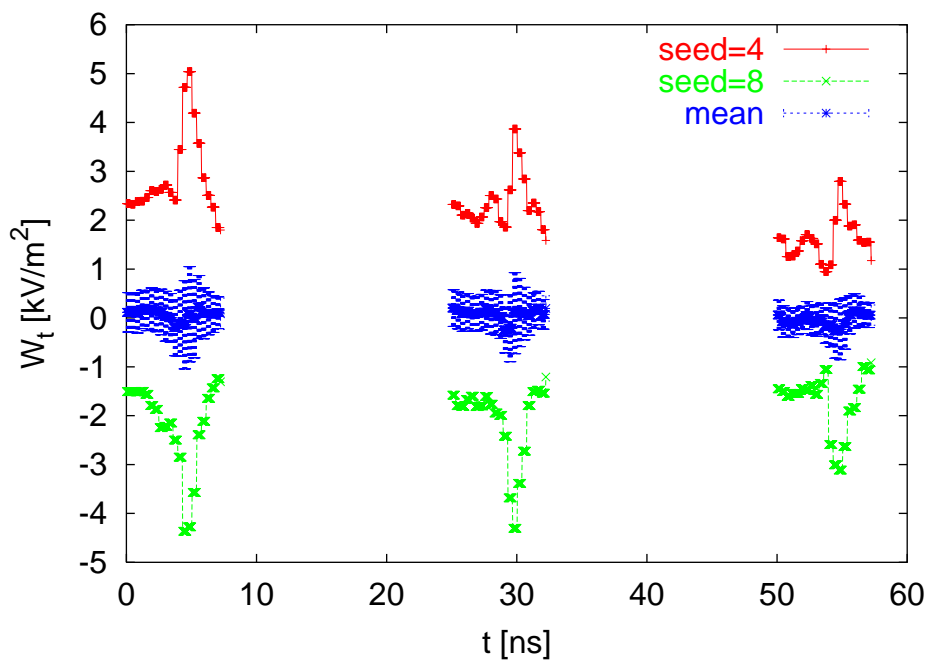


⇒ offset bunch 50

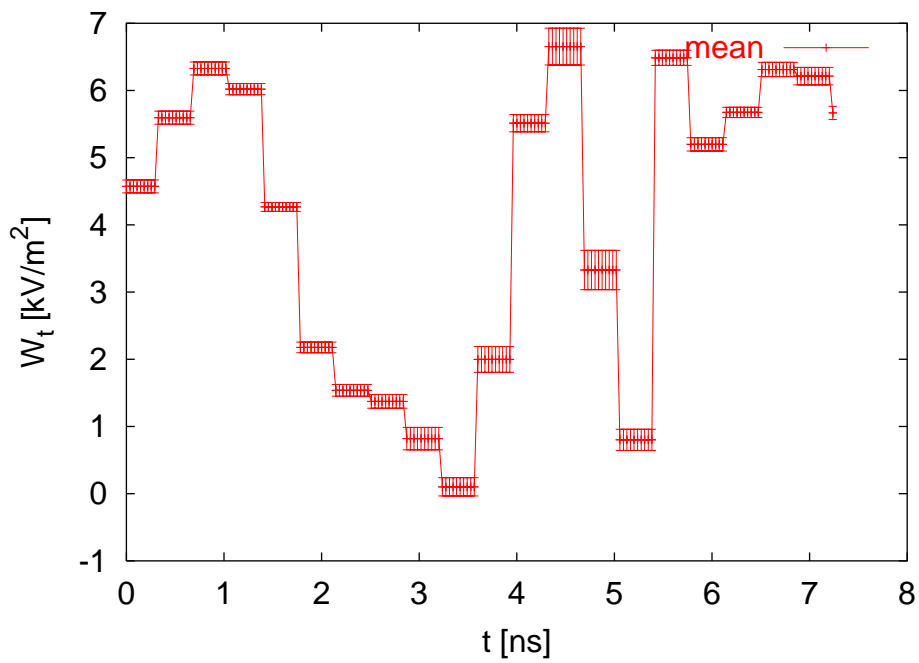
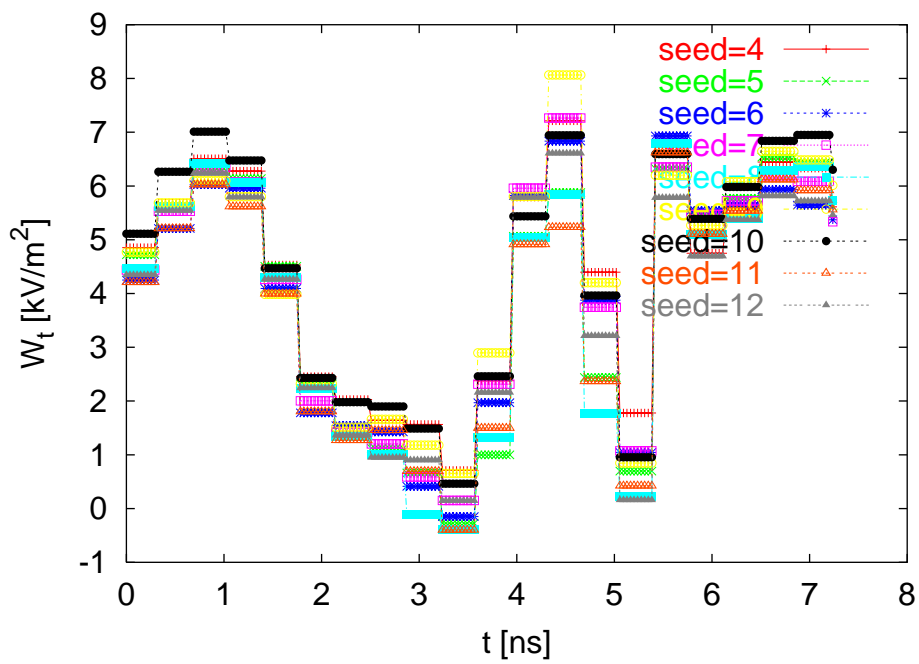
Bunches 1–49



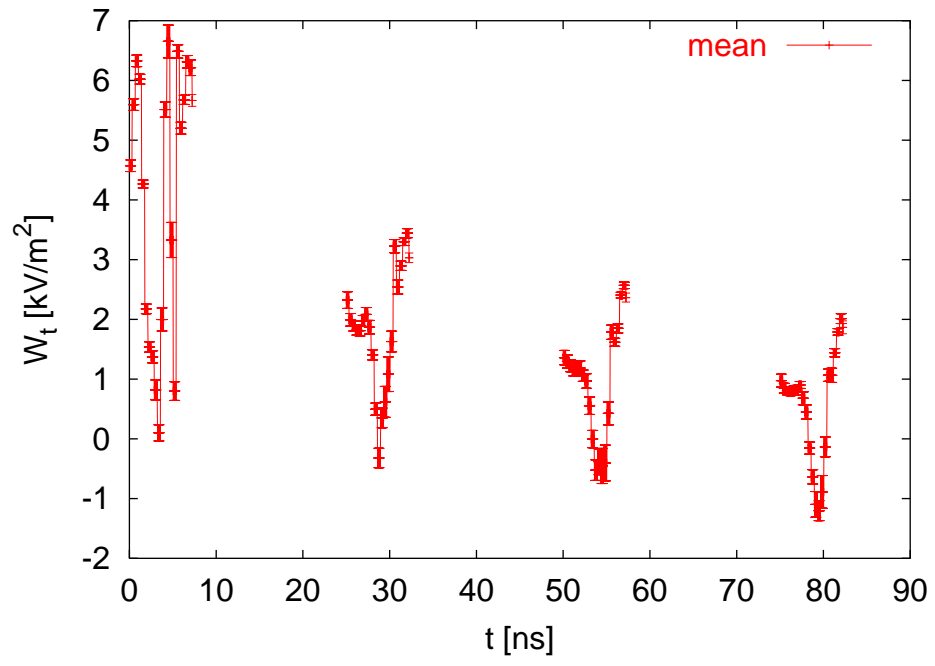
Bunches 41–43



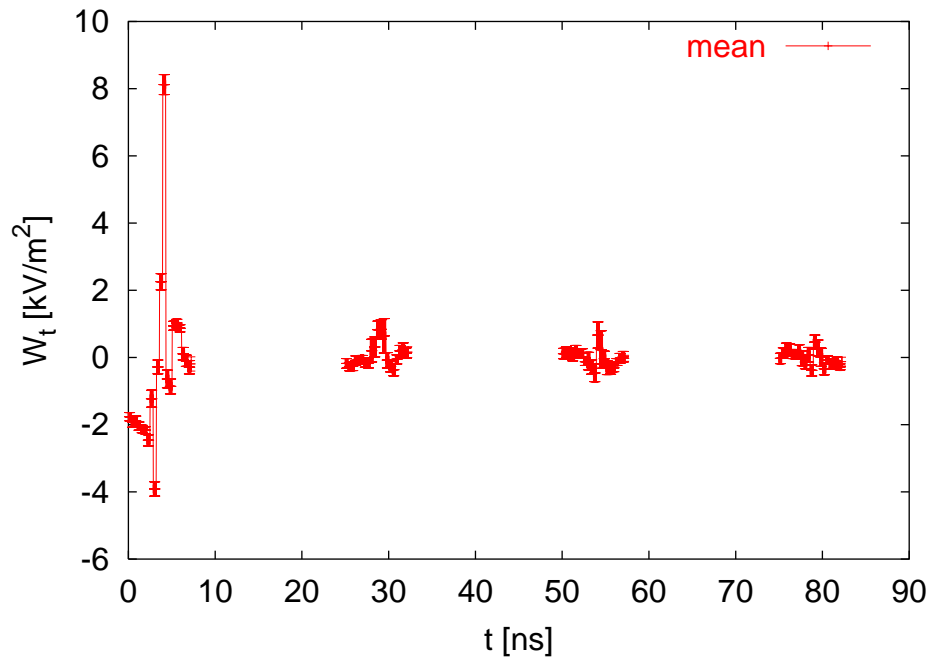
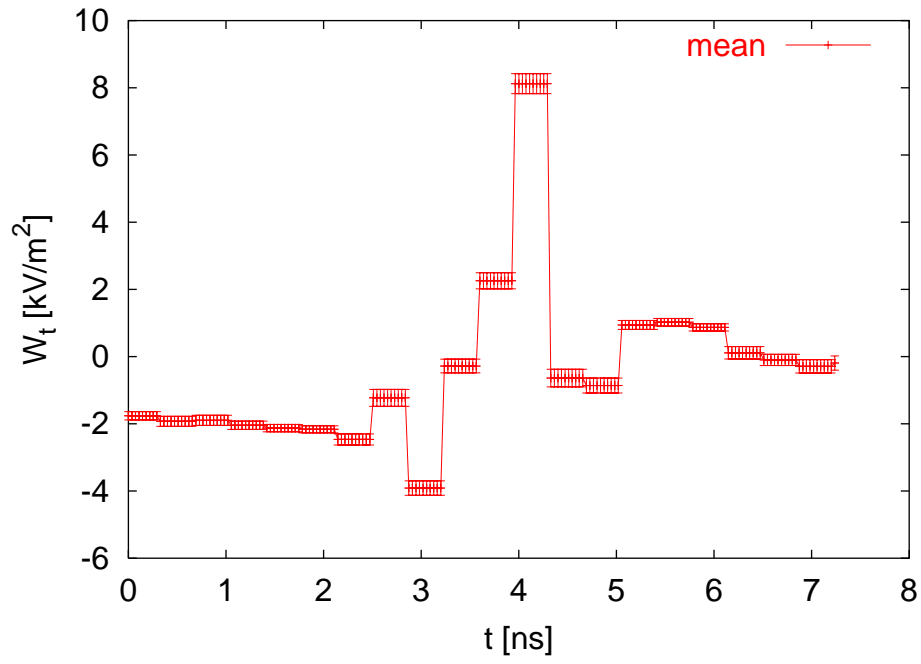
Bunch 51



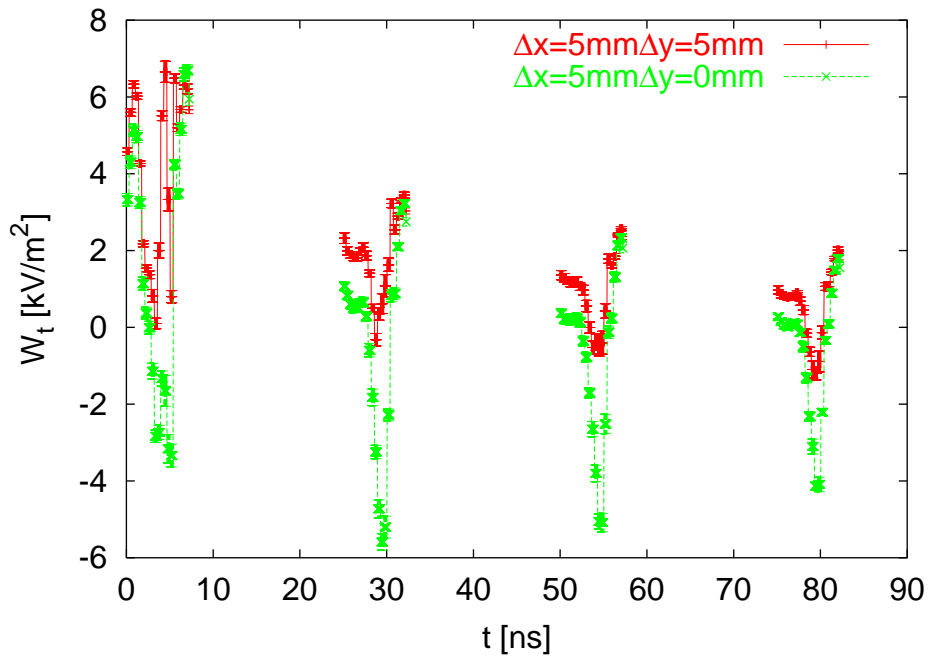
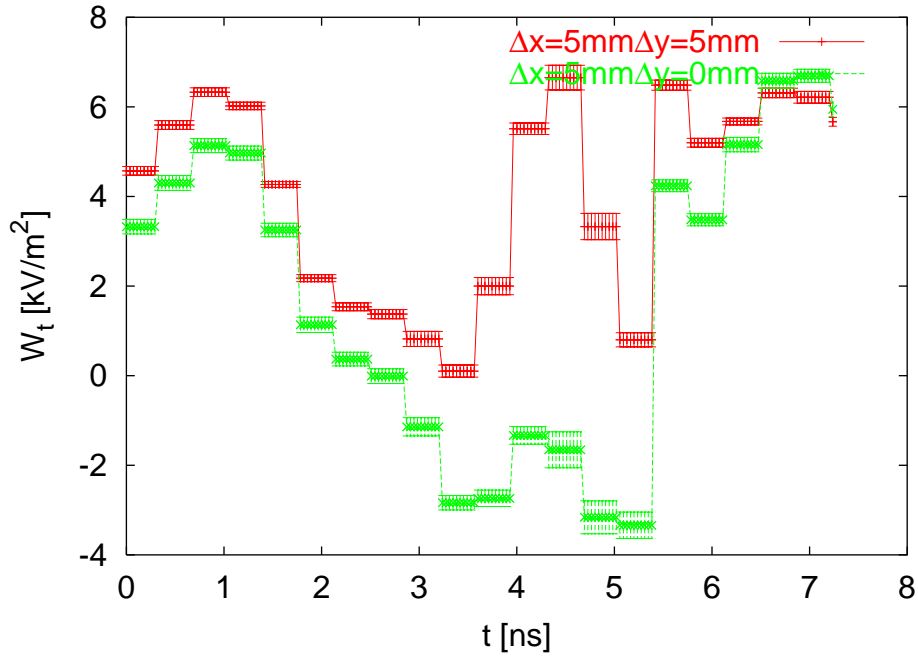
Bunch 51-54



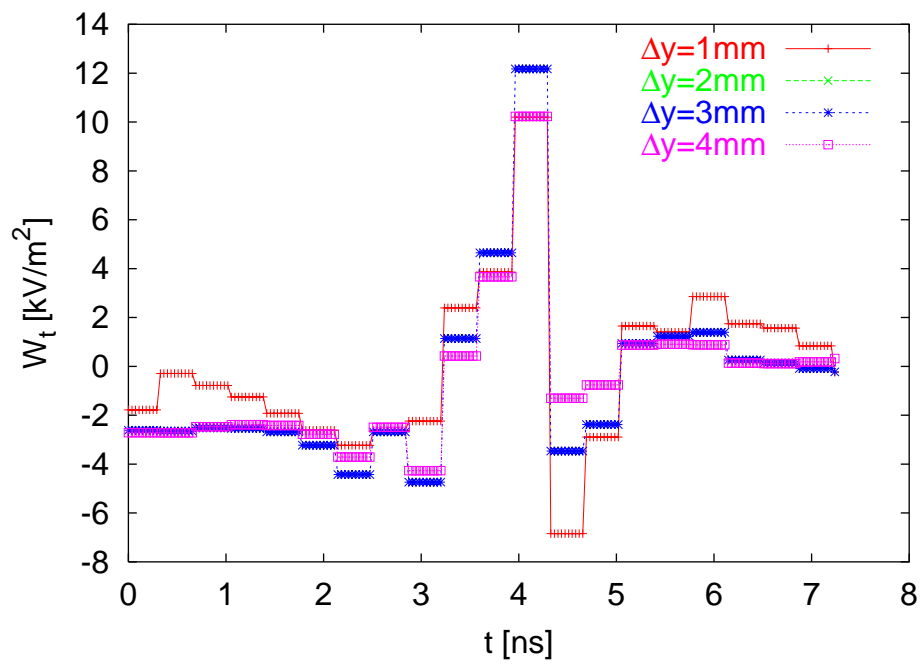
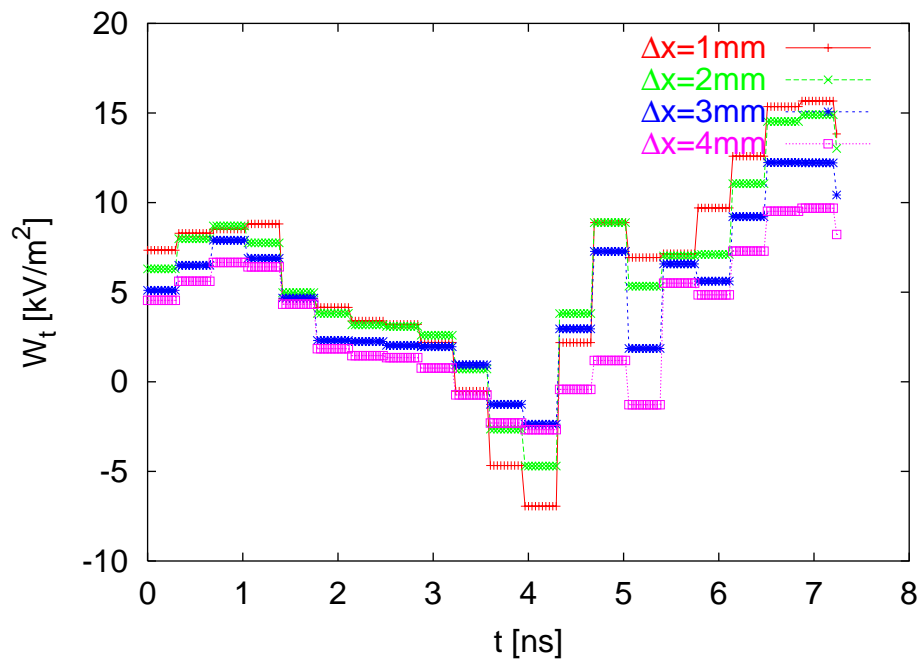
Vertical Plane



Cross talk between Vertical and Horizontal Plane



Linearity



Linearity, cont.

