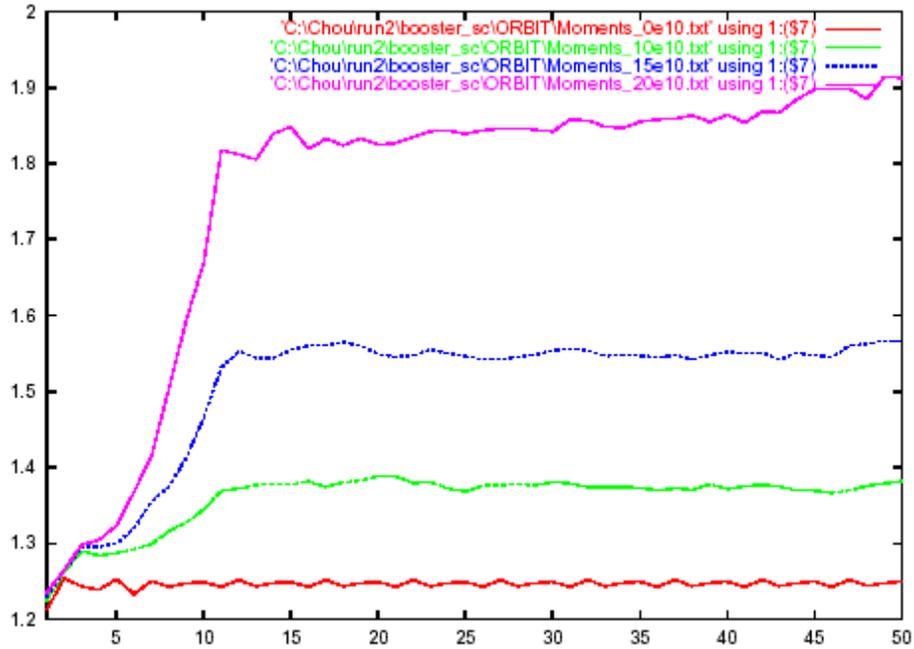
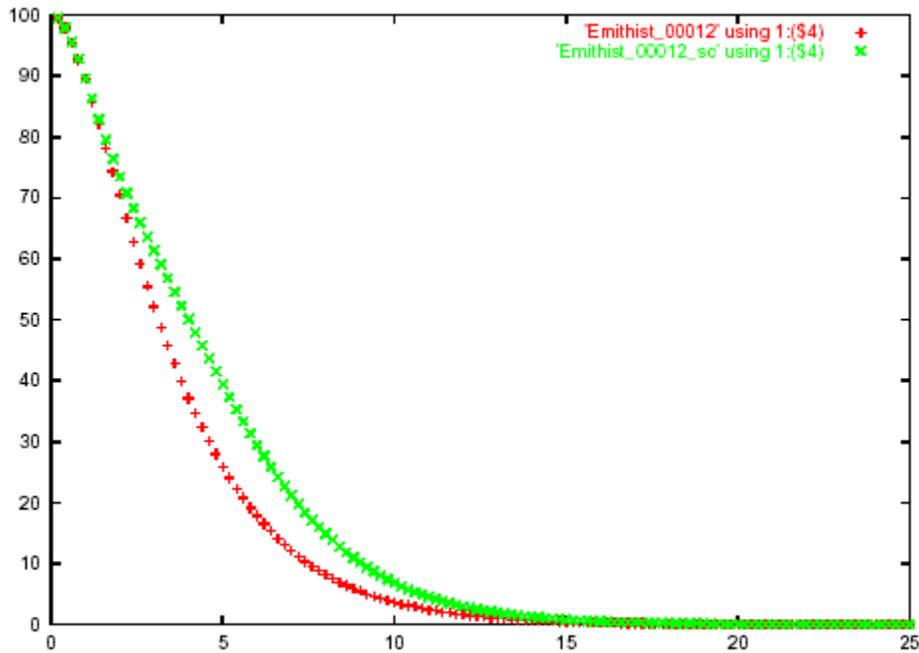


## Emittance Dilution during First 50 Turns

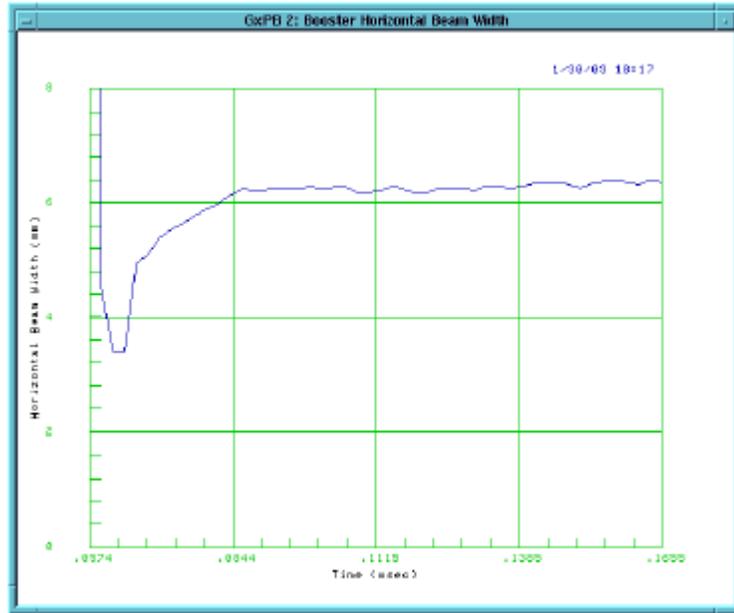
ORBIT simulation:  
different bunch intensity, same number of injection turns (11)



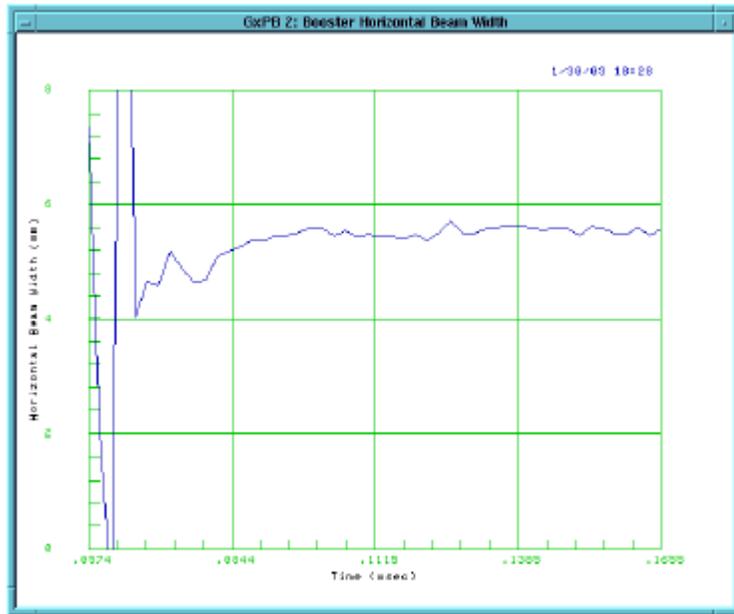
ORBIT simulation:  
emittance histogram at 12th turn, with and without space charge



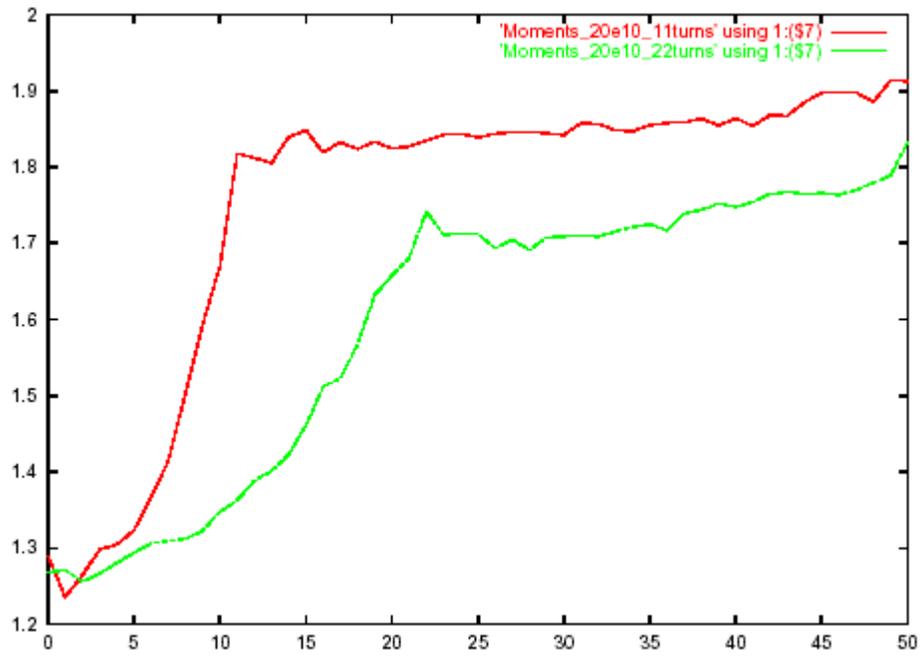
### Measurement at 43 mA, 10 turns



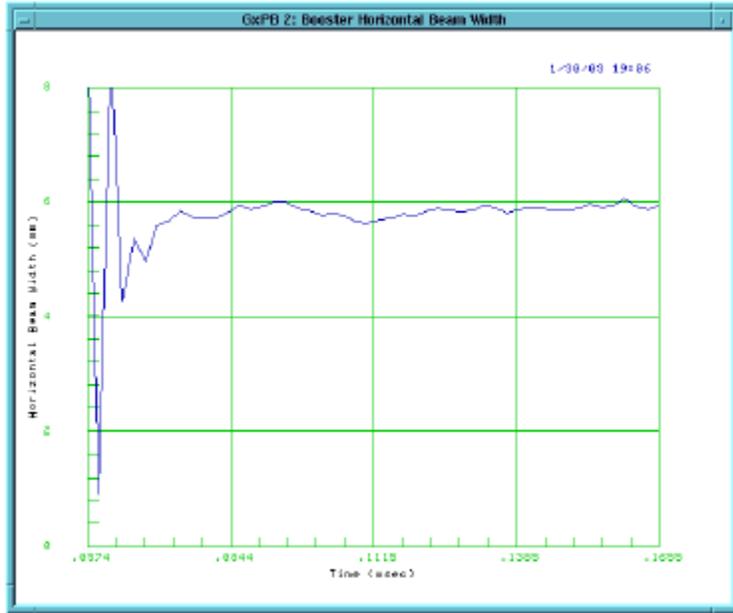
### Measurement at 20 mA, 10 turns



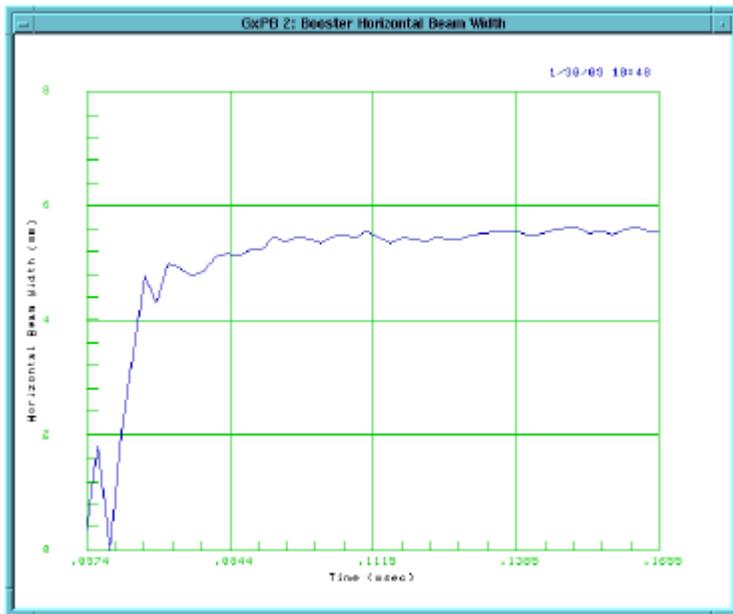
ORBIT simulation:  
same bunch intensity, different number of injection turns  
(tracking 50 turns)



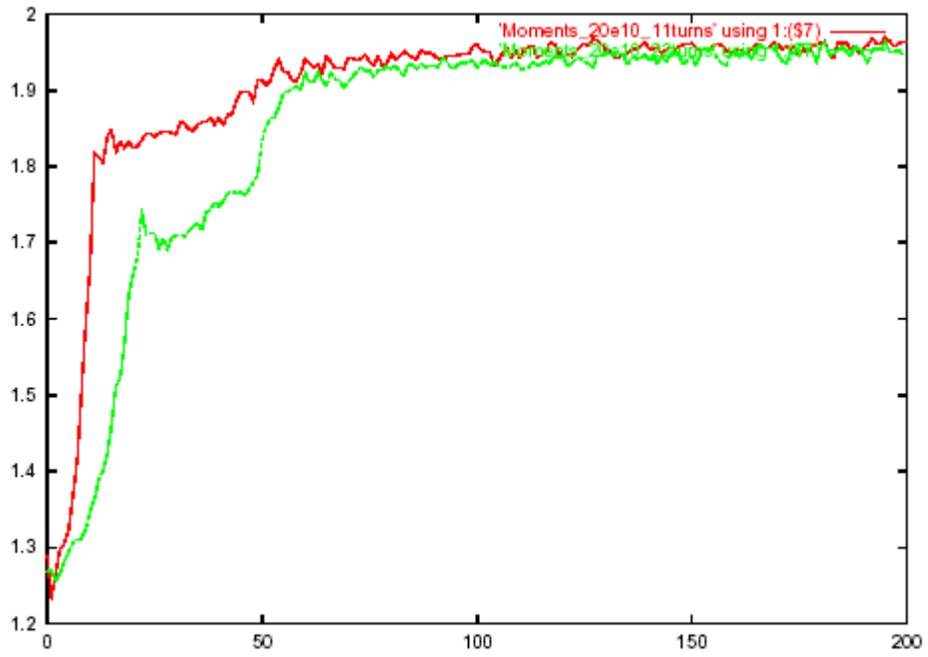
### Measurement at 43 mA, 6 turns



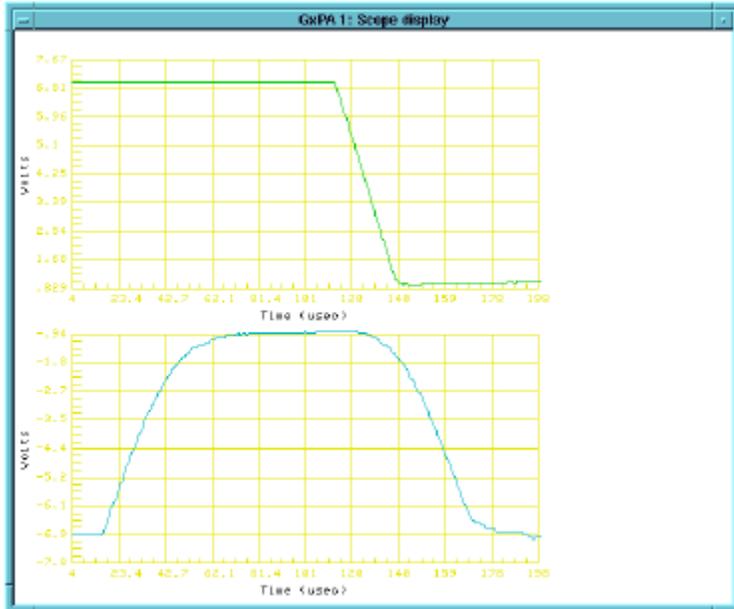
### Measurement at 20 mA, 12 turns



ORBIT simulation:  
same bunch intensity, different number of injection turns  
(tracking 200 turns)



# Painting study: injection timing



# Measurement at 43 mA, 12 turns, with painting

