

# Study of CeC PoP Equipment Effect on the RHIC Beam

February 19, 2016

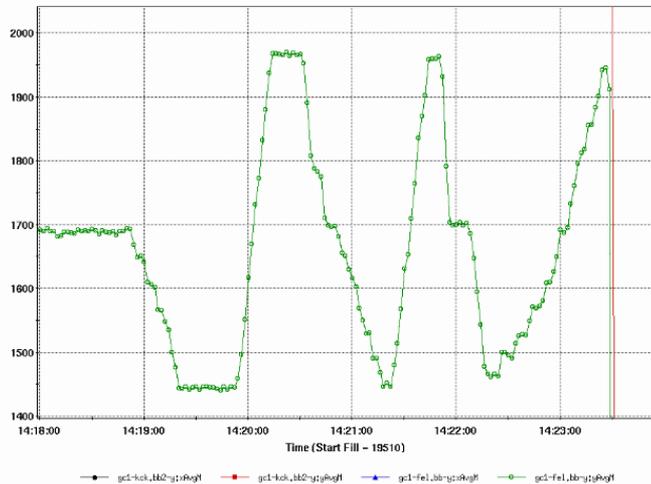
Igor Pinayev

# Experiment Set-up

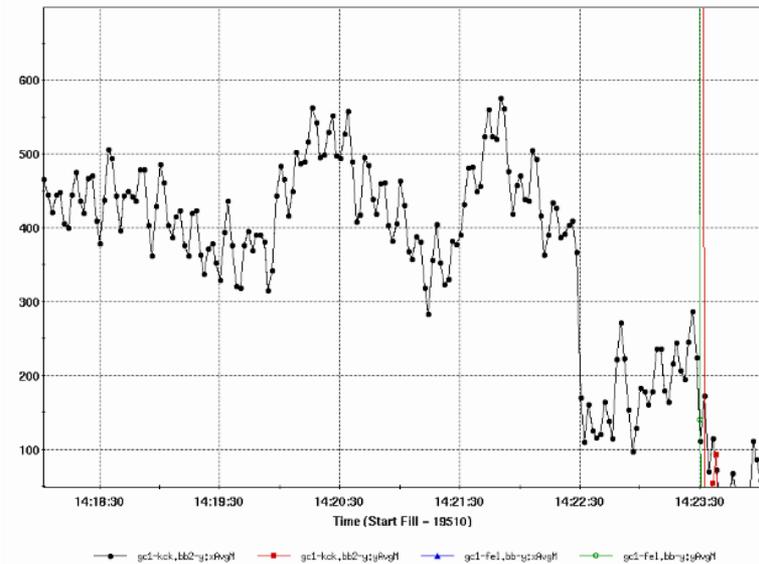
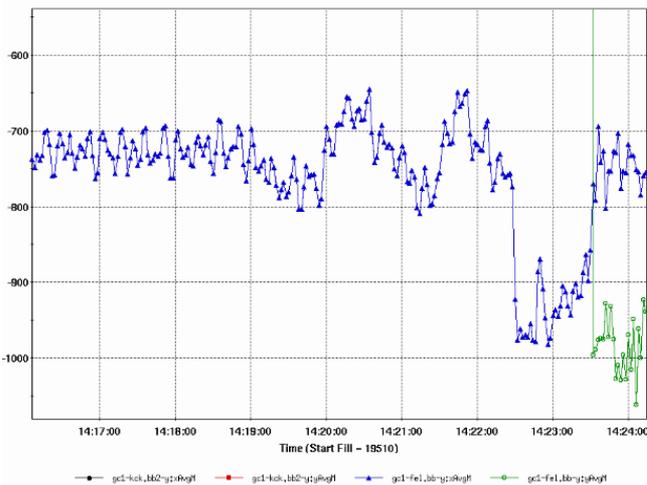
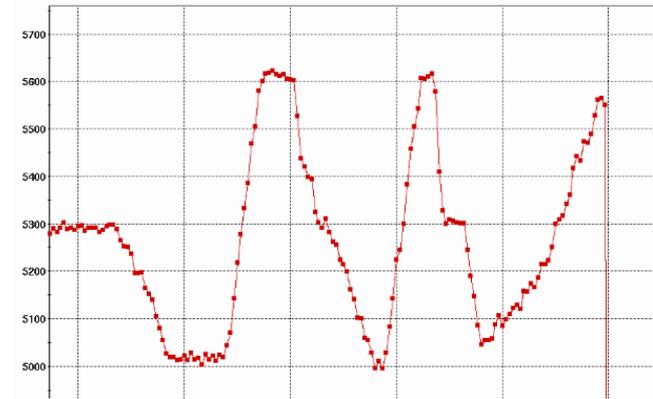
- 12 (13, 14) bunches in the blue ring
- Gold ions at injection energy ( $\gamma=10.52$ ,  $Br=81.13$  T m)
- Eight quadrupoles were energized from -6 to 6 Amperes (gradient integral 0.45 T at 5.8 A)
- Orbit was monitored using two BPMs in the common section with Libera Single Pass

# Orbit Variation with Quadrupoles in Modulator Section

In Wiggler Vacuum Chamber

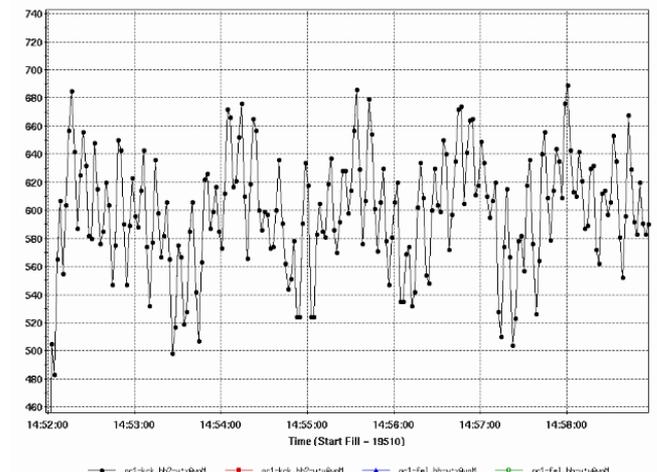
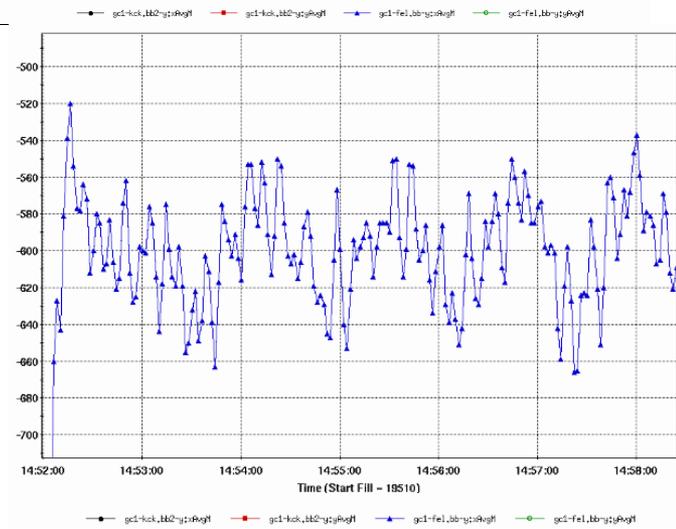
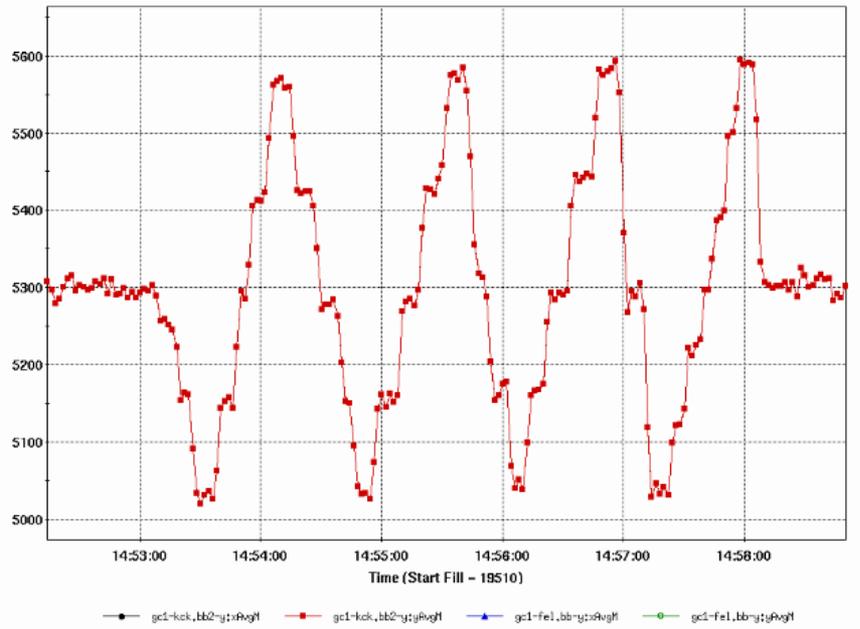
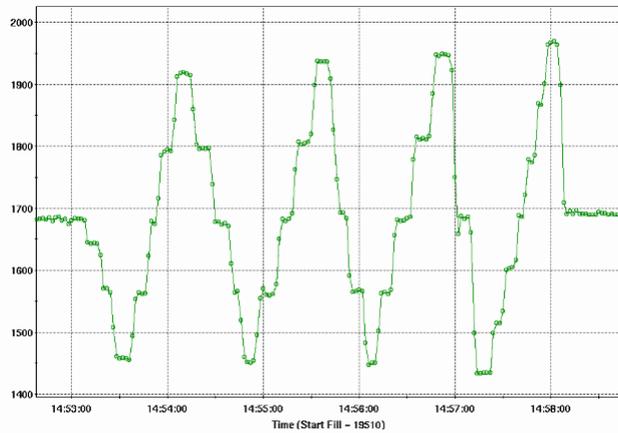


In Round Vacuum Chamber



# Orbit Variation with Quadrupoles in Kicker

In Wiggler Vacuum Chamber



# Observed Results

	W Y	R Y	W X	R X
Mod Quads	+500	+510	+100	+170
Kicker Quads	+500	+550	+80	+90

Assuming 5 mm vertical bump and identical beam optics we can estimate 1 mm offset in the horizontal plane (direction tbd)