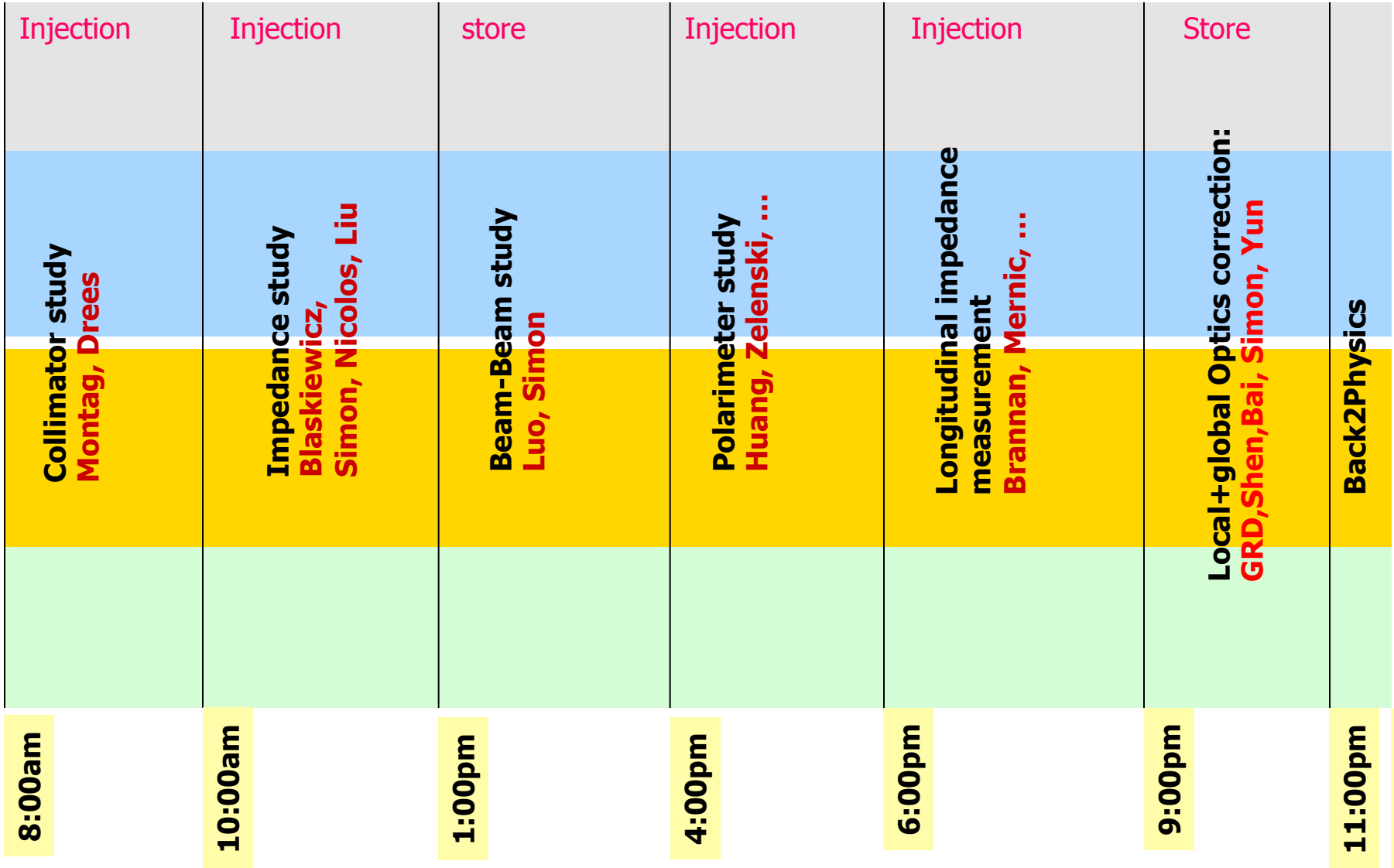
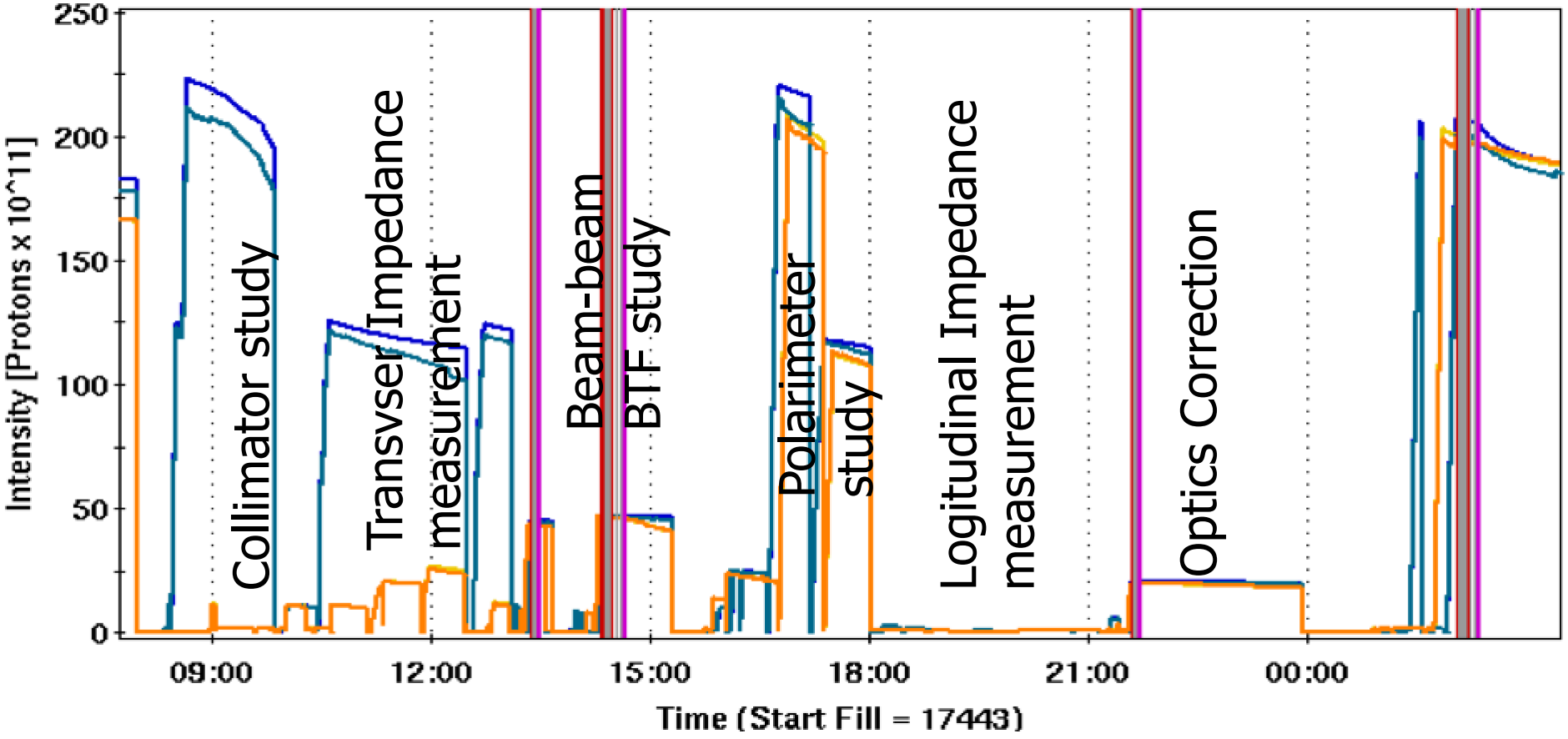
APEX
RUN-13

APEX Schedule May 1, 2013



APEX Overview



APEX

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RHIC polarimeter study: Haixin, Anatoli

Injection Polarization

Scaling factors for RHIC polarimeters (based on 255GeV measurements):

B1: 1.06+-0.02; B2: 1.11+-0.03; Y1: 1.09+-0.02; Y2: 1.08+-0.02

Polarimeter	10^{11}	$2*10^{11}$	Fixed target
AGS (fixed)	72.25+-0.72	67.80+-0.73	67.80+-0.73
AGS(sweep)	68.71+-0.90	65.99+-1.10	
Expected Blue	66.03+-0.86	63.42+-1.06	
Blue1	67.72+-0.70	59.81+-0.79	
Blue2	66.39+-0.92	61.64+-1.03	63.8+-1.15
Expected Yellow	68.09+-0.89	65.40+-1.09	
Yellow1	68.51+-1.38	63.20+-1.18	
Yellow2	64.88+-1.51	58.96+-0.84	61.28+-0.98

Note: 1. The fixed target and sweep measurement ratio for polarimeter2 suggest R=0.07-0.08, consistent with measured 0.08 value. There is no difference between the 12X12 and 111X111 fill pattern.

2. Yellow2 was measured with different target between the two intensities.

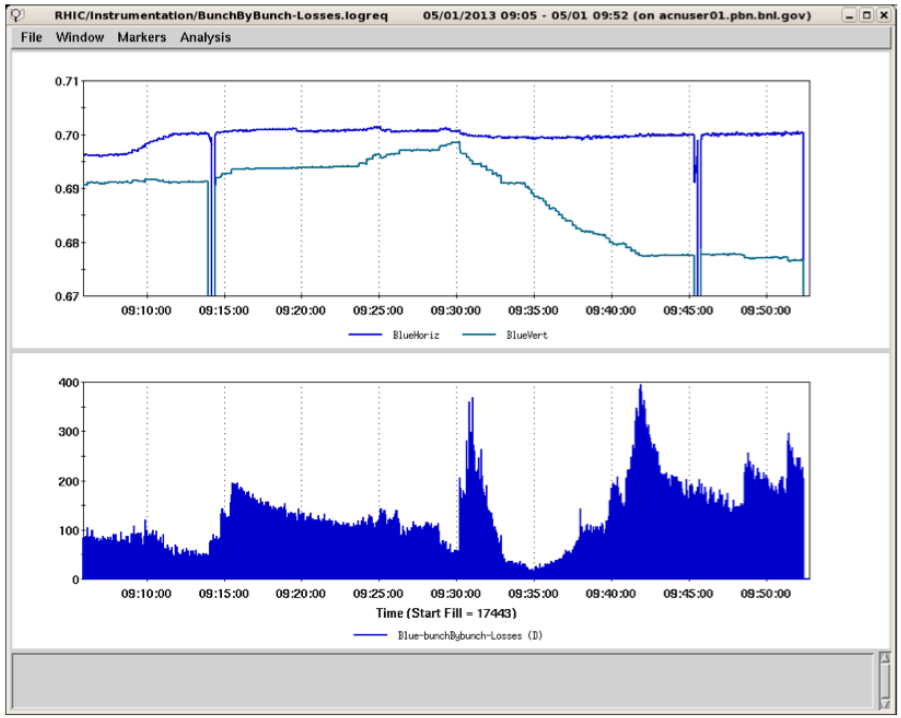
3. Error for R values are too large, so not worth to list them here.

1. 12X12 fill with fixed target measurements.
2. 2. 111X111 fills with two bunch intensities: $2*10^{11}$ and $1*10^{11}$.

Total of 81 measurements were taken. We lost two yellow targets in the process.

Collimator Study: Montag, Drees

Rate control using tune adjustments



Could not achieve a stable rate, but loss rate decay is rather slow.

Rates can be controlled well by moving verical tune towards 2/3.

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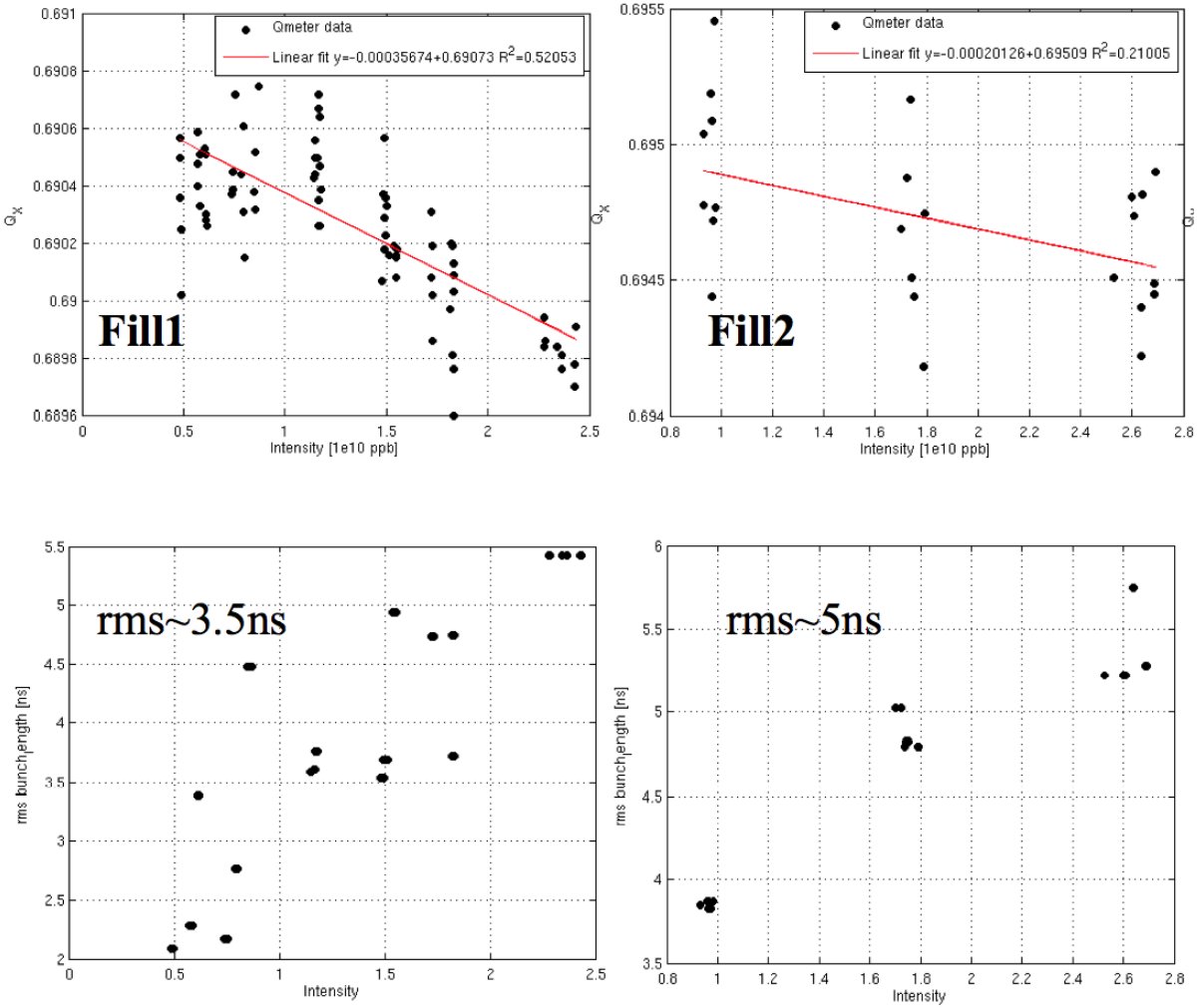
Transverse Impedance: Nicolo, Simon, Mike, Kevin, Montage, Angelika, Chuyu,…

Tune shifts all fill X plane

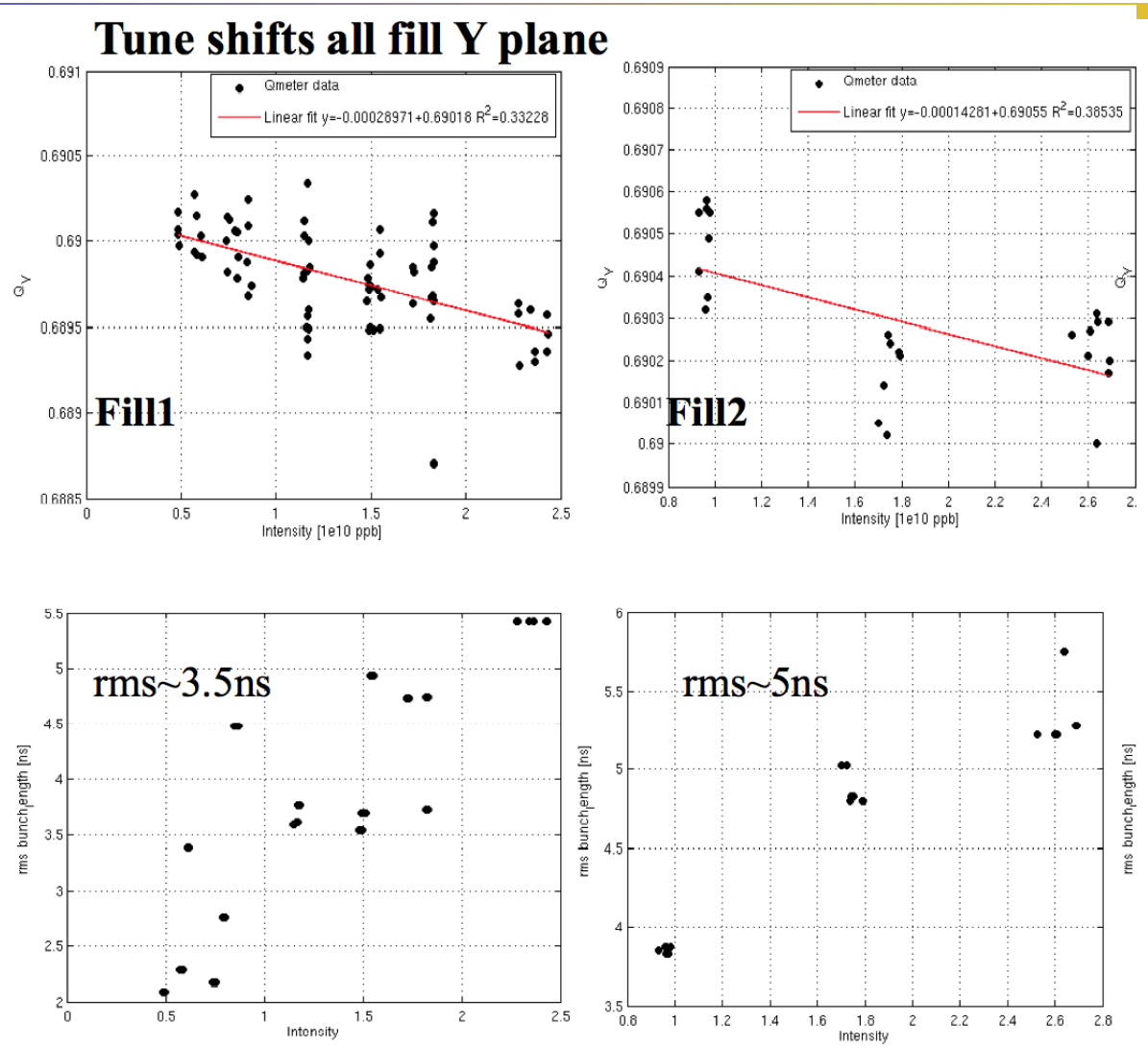


ZeffX: (4.32+/-0.46) MOhm/m
dQX/dN: (-3.56+/-0.38).1e-4

ZeffX: (3.03+/-1.25) MOhm/m
dQX/dN: (-2.01+/-0.83).1e-4

APEX RUN-13

Transverse Impedance: Nicolo, Simon, Mike, Kevin, Montage, Angelika, Chuyu,…



ZeffY: (3.68+/-0.61) MOhm/m
dQY/dN: (-2.89+/-0.48).1e-4

ZeffY: (2.22+/-0.60) MOhm/m
dQY/dN: (-1.42+/-0.38).1e-4

APEX

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Optics correction: Xiaozhe, Simon, Mei, Guillaume, Rogelio, Al, Yun, Steve, …

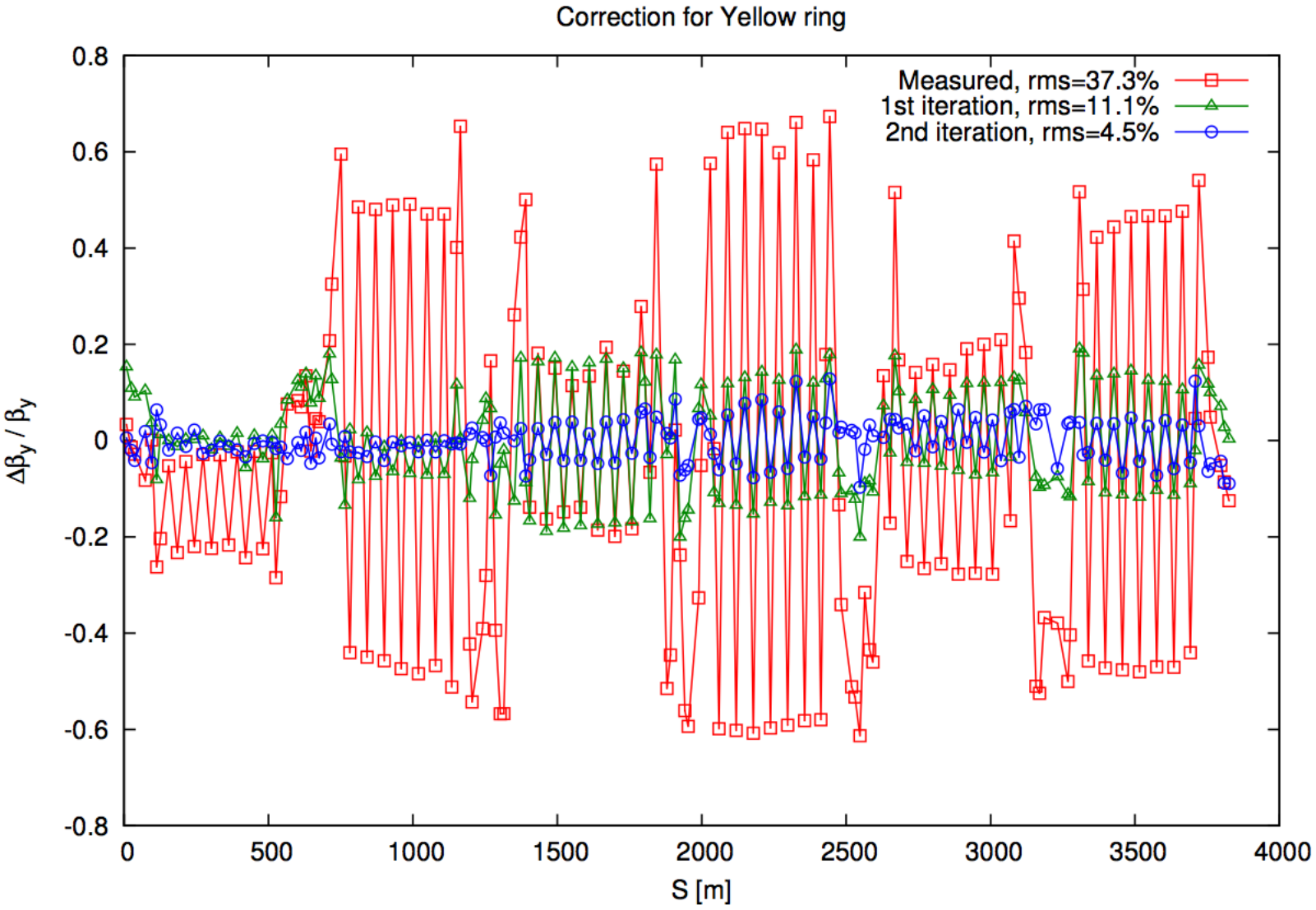

Figure 4: Yellow vertical beta-beat correction.

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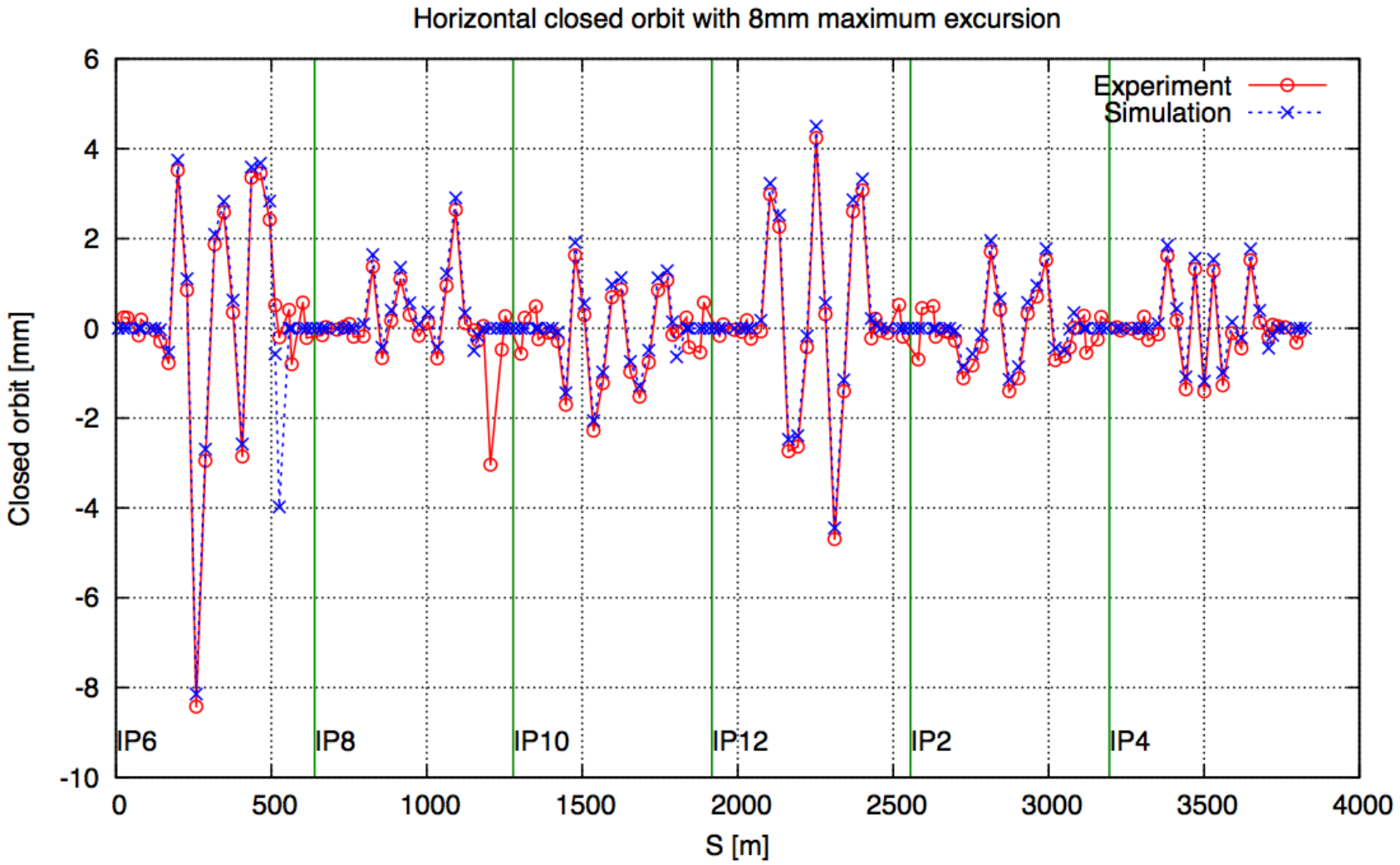
Optics correction: Sam, Simon, Mei, Guillaume, Rogelio, Al, …



Optics correction: Sam, Simon, Mei, Guillaume, Rogelio, Al, …