

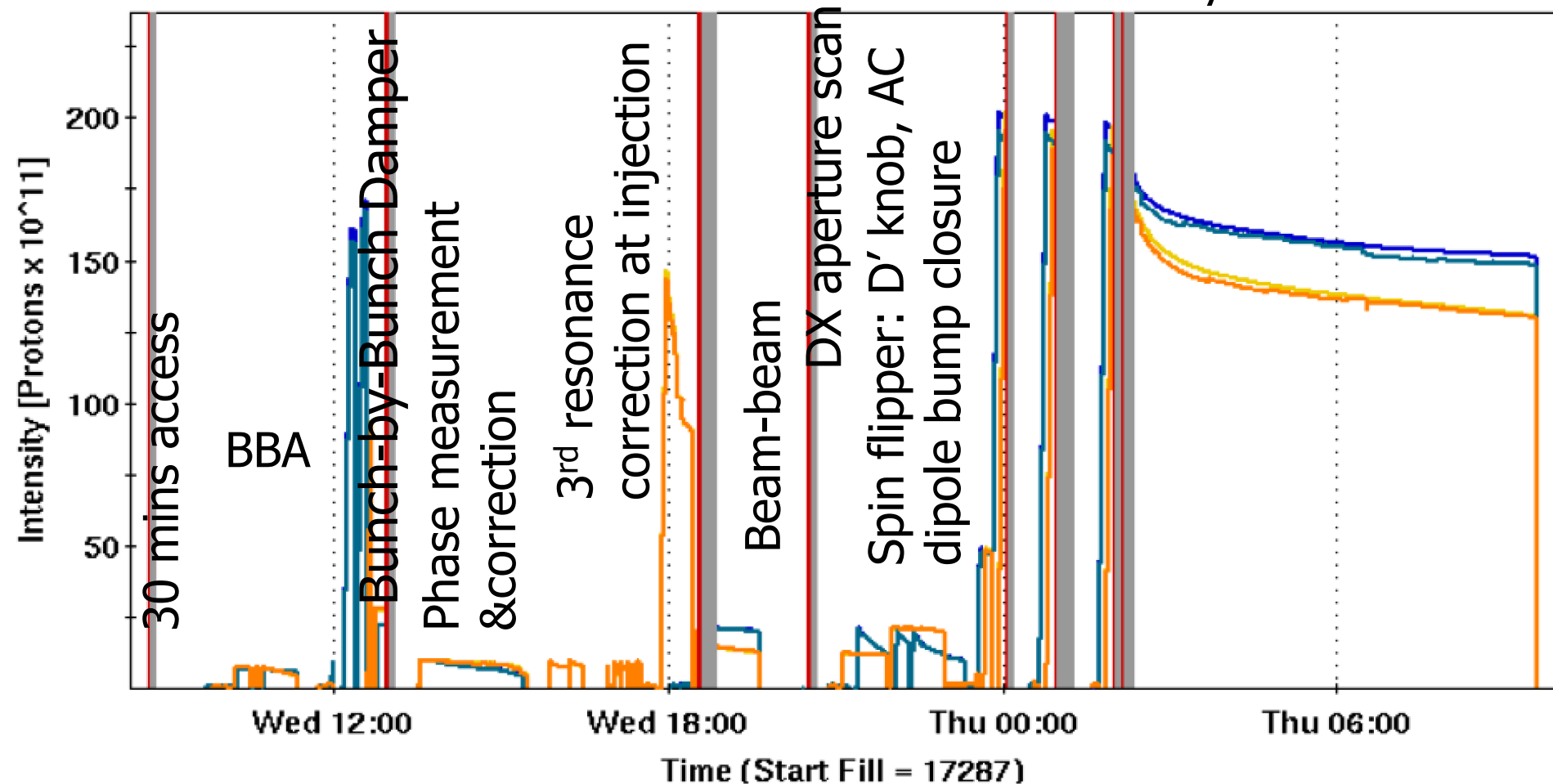
APEX Schedule

March 27, 2013

8:00am	Spin tune measurement Bai, ...	End of Physics store
9:00am	BBA • Blue and Yellow Joanne	Injection
11:00am	Ramp with only Bunch by bunch damper K. Mernick, KSS, ...	Ramp
1:00pm	BBQ crhomaticity Vahid	Injection
3:00pm	3Qy measurement + correction Luo, Bai, ...	Injection
5:00pm	DX aperture scan Luo	
6:00pm	Beam-Beam study Luo, Simon	store
9:00pm	BBQ crhomaticity Vahid	Injection
11:00pm	Back2Physics	Spin flipper setup Bai, Jorg, Oddo, ...
12:00am		

APEX Overview

Back2Physics

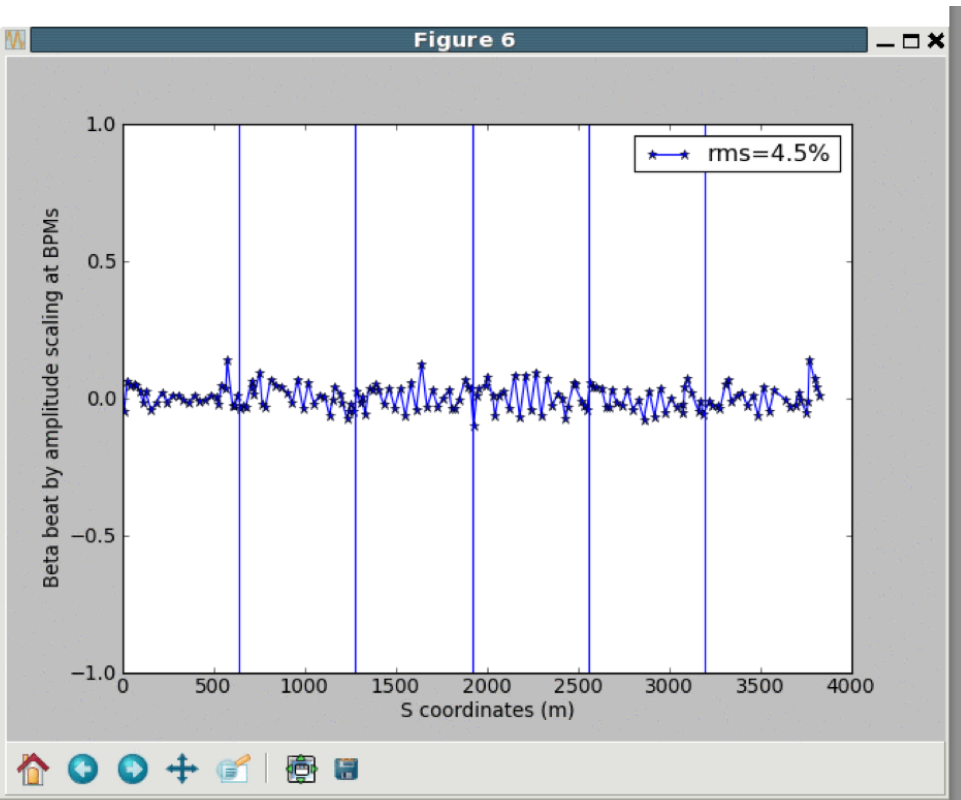
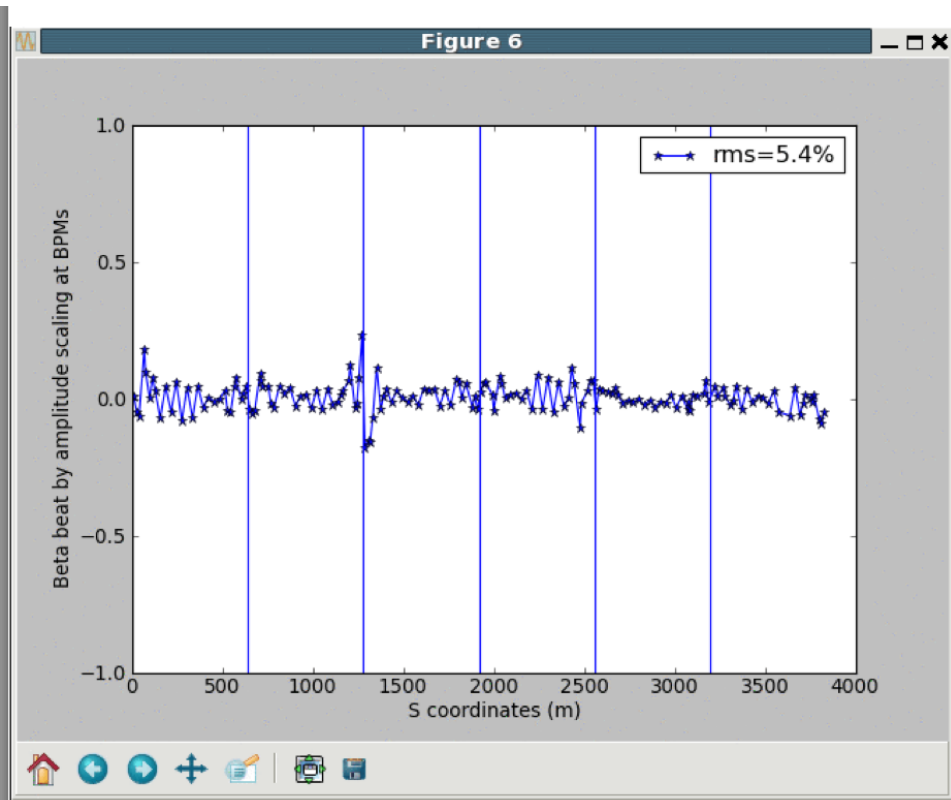


Phase measurement/Correction

PI: C. Liu, M. Minty

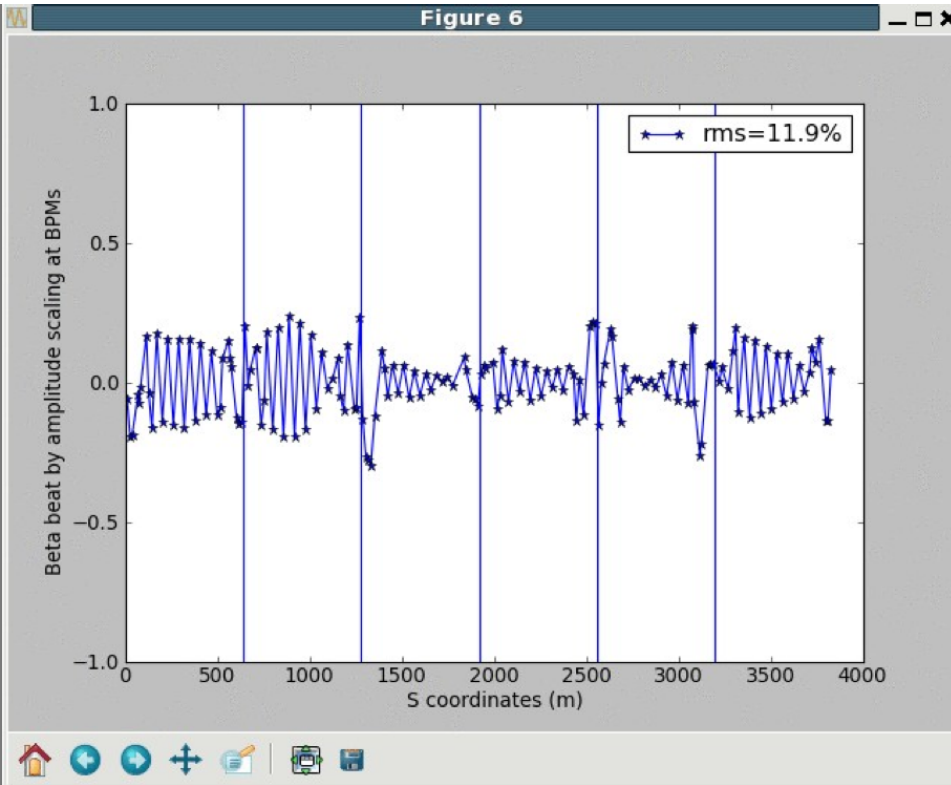
Blue H Before

Blue H after

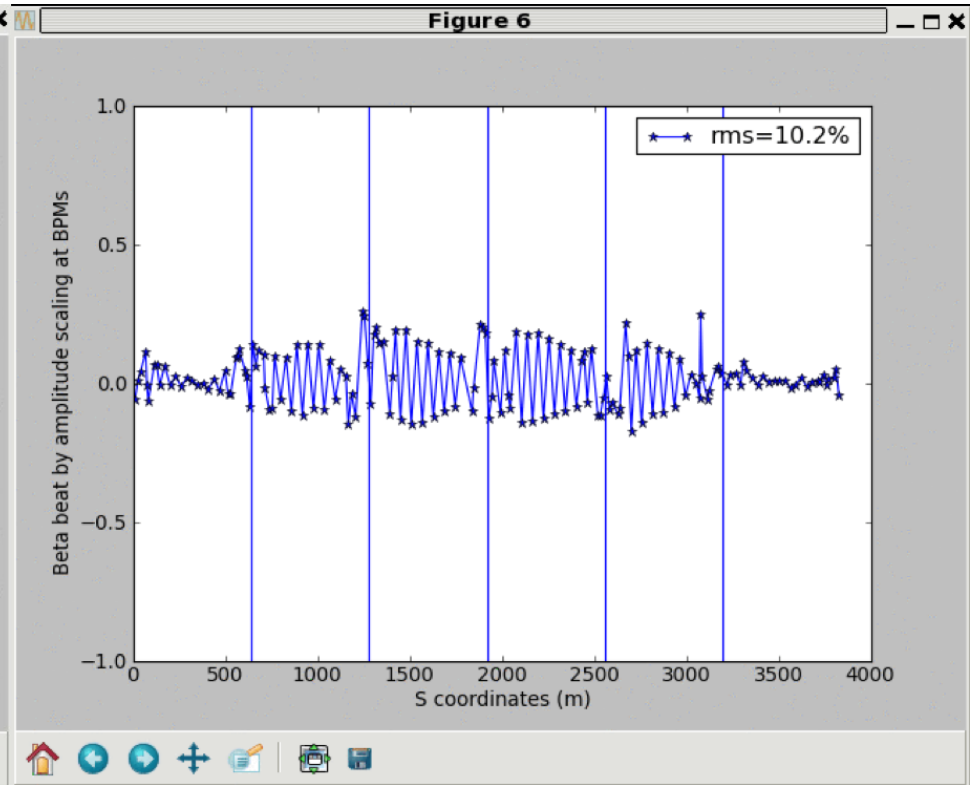


Phase measurement/Correction

Blue V Before



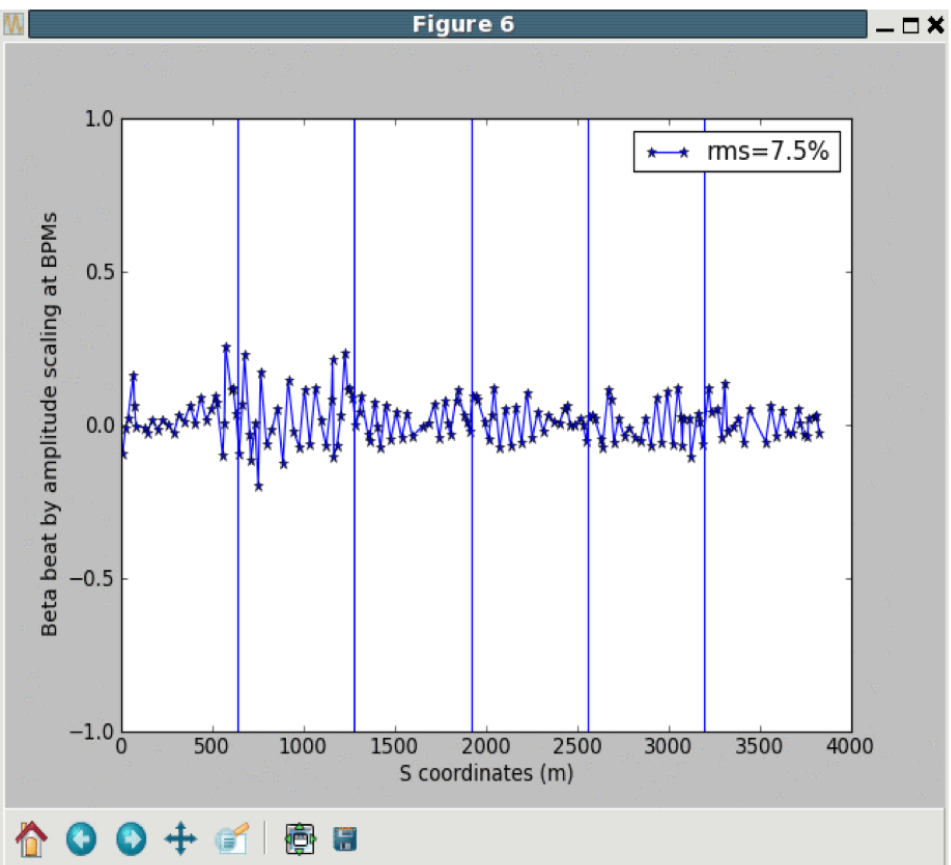
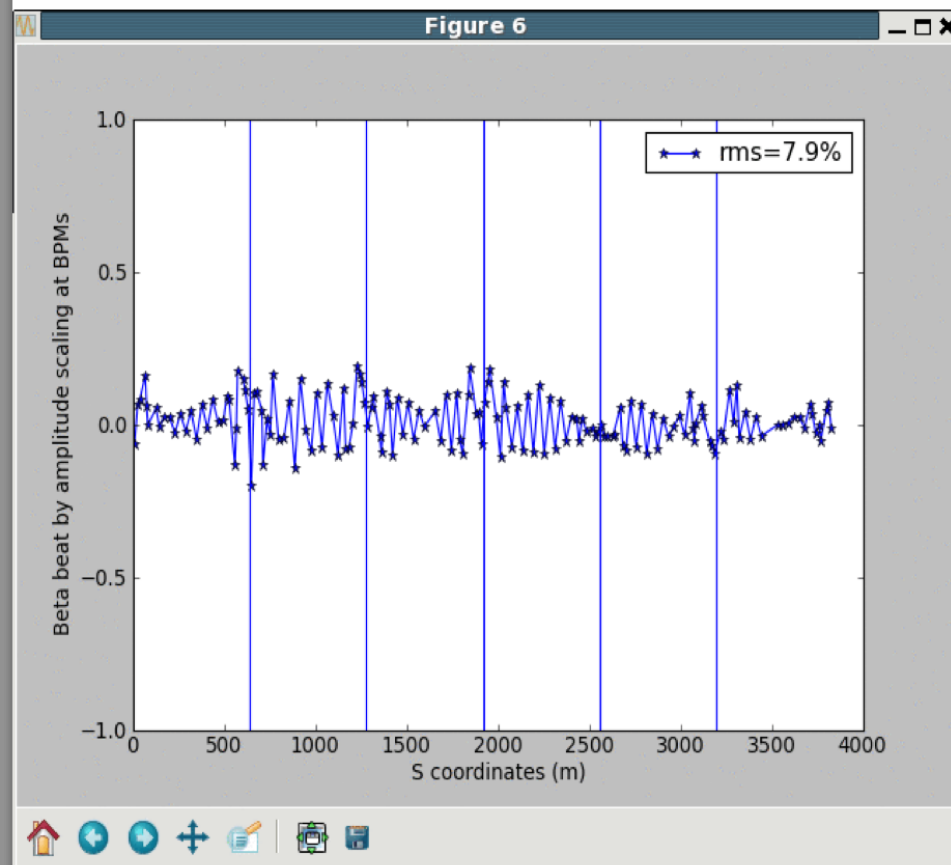
Blue V after



Phase measurement/Correction

Yellow H Before

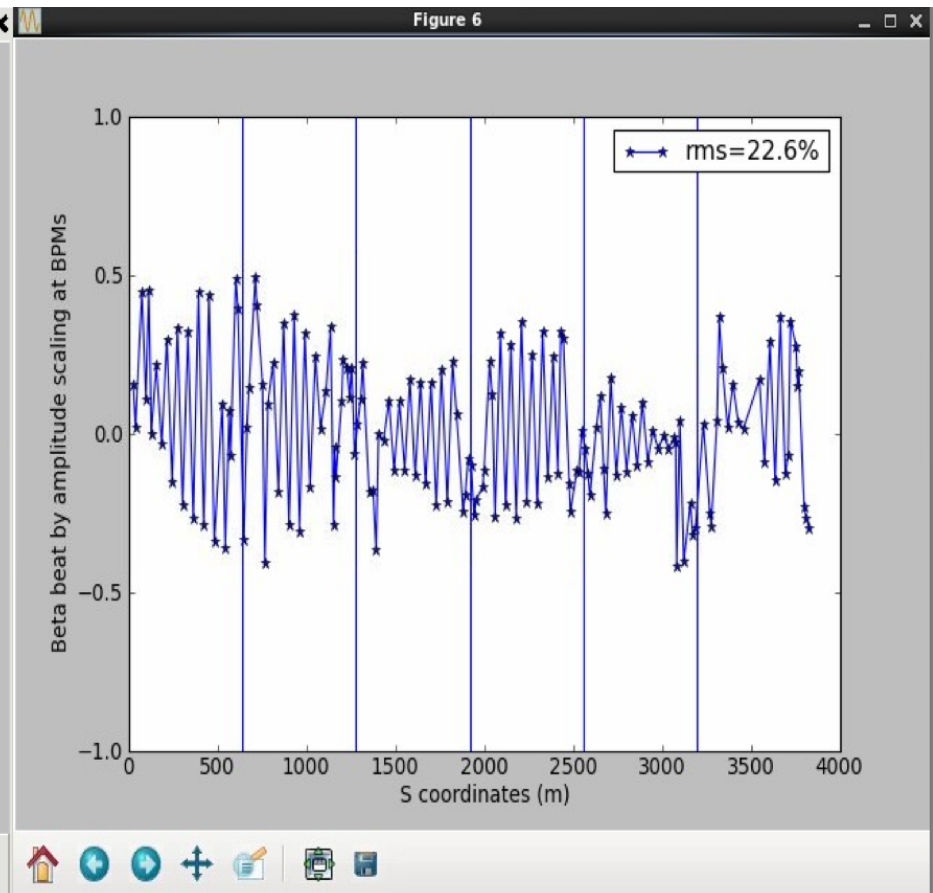
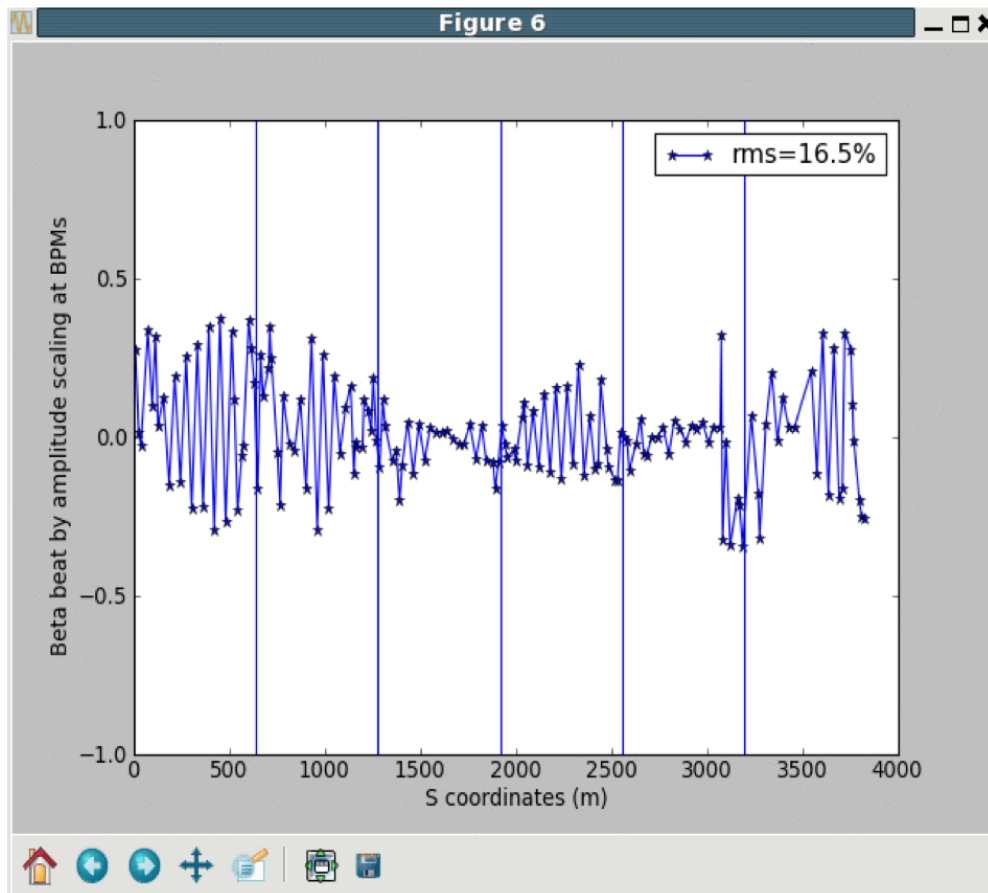
Yellow H after



Phase measurement/Correction

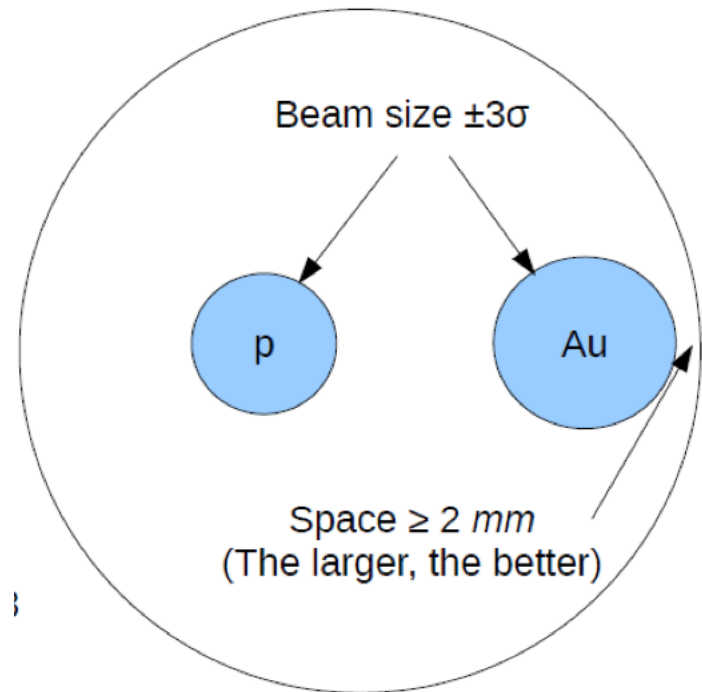
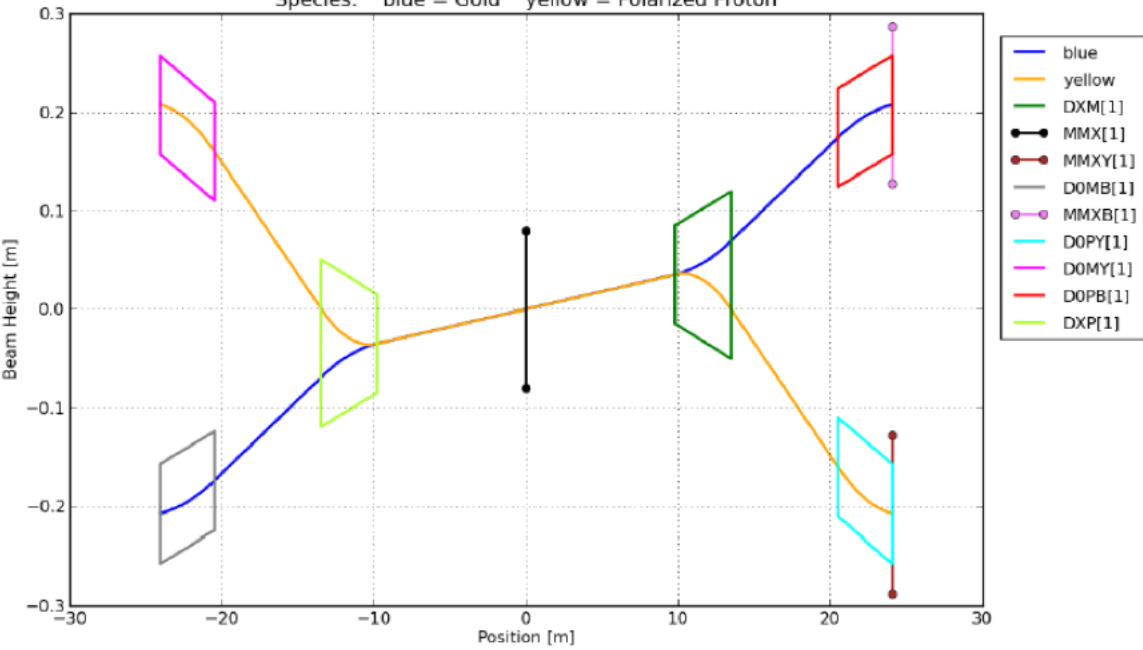
Yellow V Before

Yellow V after



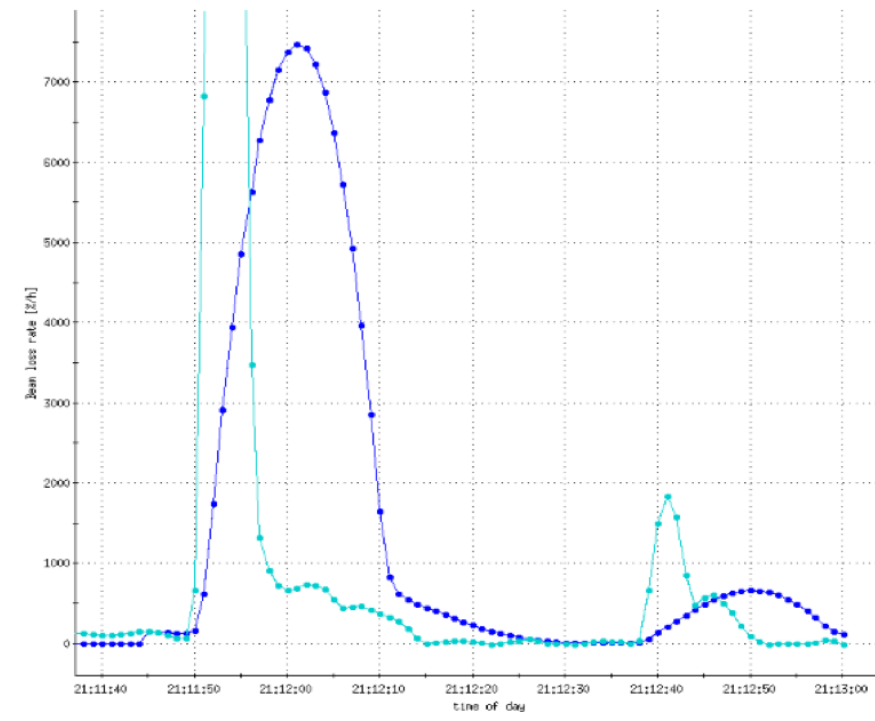
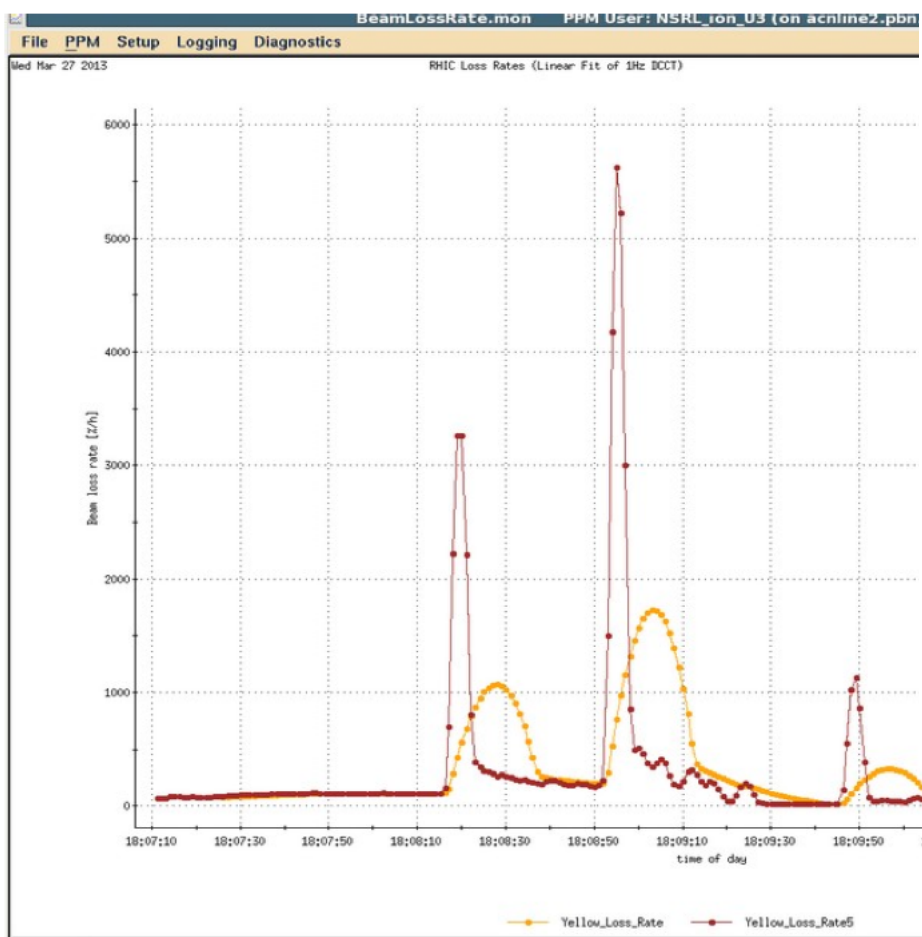
DX Aperture: Y. Luo, S. Tepikian

Beam trajectory through Crossing Dipoles for IP6
Species: blue = Gold yellow = Polarized Proton



DX magnet (radius = 68.326 mm)

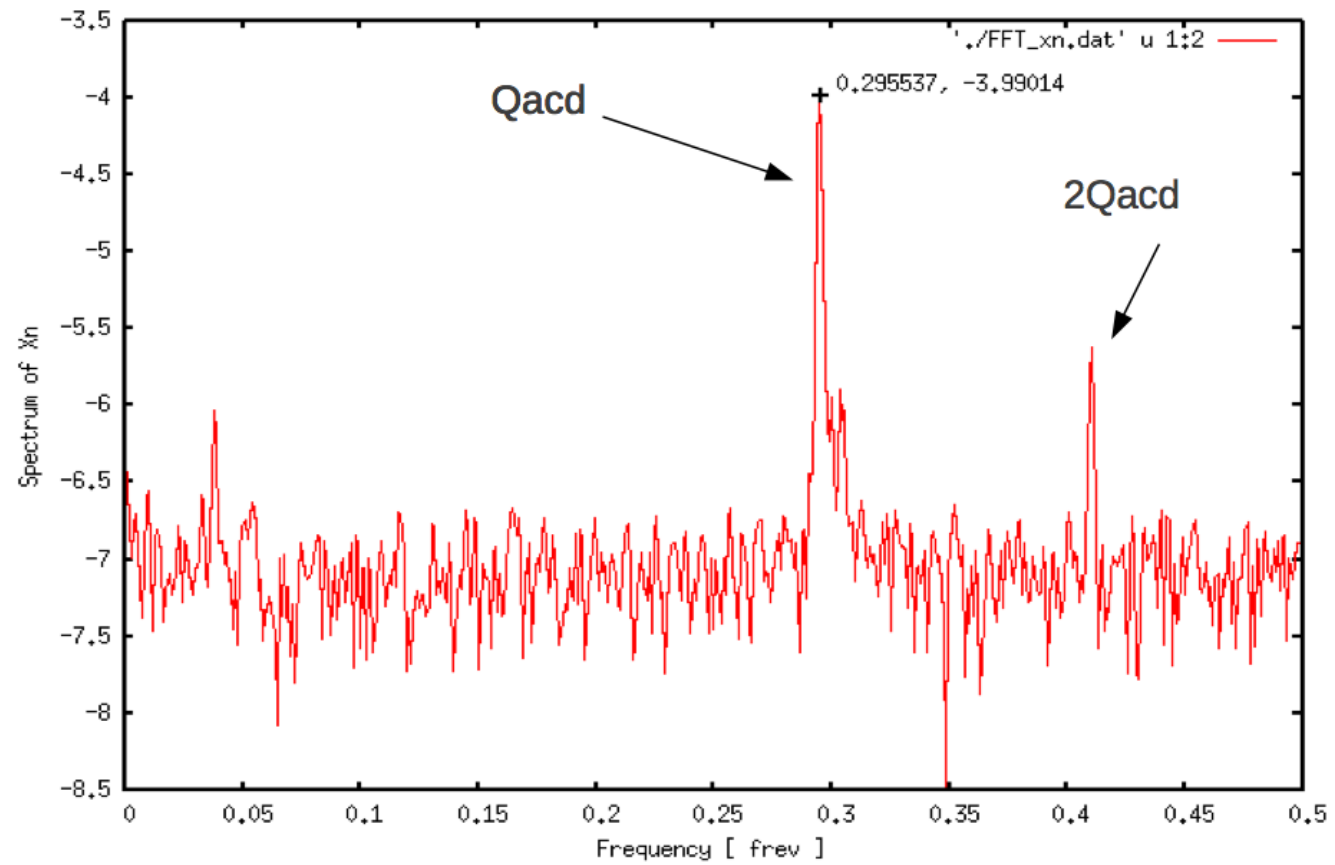
DX Aperture: Y. Luo, S. Tepikian



Bump Blue at IR6 with horizontal position bump:
 1) big loss seen at -15mm
 2) beam lost at 17 mm

Yellow horizontal IR position bump at IR8: those spikes in yellow beam decay corresponding to 5mm, 10mm, -5mm, -10mm at IR8. We having 109*109 bunches.

3Qx,y RDT measurement



Spectrum of xn: 3Qx peak should appear at 2Qd
Clearly 3Qx resonance is present in the machine.

3Q_{x,y} correction: M. Bai, Y. Luo, S. White

New findings:

After Before

Pebble	Blue	Yellow	Green		
QUAD	Magnet	Design	Trim	BDesign	BTrim
SEXTUPOLE	bo6-sx3	0.00000	0.00000	0.00000	0.00000
H_STEER	yi6-sx3	0.00000	0.01000	0.00000	0.00000
V_STEER	bo7-sx3	0.00000	0.00000	0.00000	0.00000
GAMMA	yi7-sx3	0.00000	0.01000	0.00000	0.00000
SKEW_QUAD	bi8-sx3	0.00000	0.00000	0.00000	0.00000
SKEW_SEXT	yo8-sx3	0.00000	0.01000	0.00000	0.00000
NONLINEAR	bi5-sx3	0.00000	0.00000	0.00000	0.00000
ABORT	yo5-sx3	0.00000	-0.01000	0.00000	0.00000
RFND					

Pebble	Blue	Yellow	Green		
QUAD	Magnet	Design	Trim	BDesign	BTrim
SEXTUPOLE	bo6-sxs3	0.00000	-0.00300	0.00000	-0.00300
H_STEER	yi6-sxs3	0.00000	0.01000	0.00000	-0.00200
V_STEER	bo7-sxs3	0.00000	0.00000	0.00000	0.00000
GAMMA	yi7-sxs3	0.00000	-0.01000	0.00000	-0.01200
SKEW_QUAD	bi8-sxs3	0.00000	0.00000	0.00000	0.00000
SKEW_SEXT	yo8-sxs3	0.00000	0.01000	0.00000	0.01200
NONLINEAR	bi5-sxs3	0.00000	0.00300	0.00000	0.00300
ABORT	yo5-sxs3	0.00000	0.01000	0.00000	0.00200
BEND					

APEX Schedule

Next APEX is now scheduled at April 10