2008.4.21(月) Compatible Optics Beam Study

PF-A1 ビーム ①

- ビームロスを改善する ΔΦSB_A.B = -4.0
- 軌道フィードバック 止める
- ターゲットでのロスを改善する BX_17_41 = 0.0 → +0.501 → 0.0
  BX_21_K5 = 0.0 → -3.999 → 0.0

Pulse ST1 = 9.2 A → 10.3 (10.5)
ST2 = 1.424 A
ST3 = 6.20 A → 4.8
ST4 = 0.40 A → 0.4

ターゲットでのロス、あまたはスーシーセット以降の軌道ずれは改善した → ②

大西 Optics (Energy Normalization Debug後) をSetした。 → ③

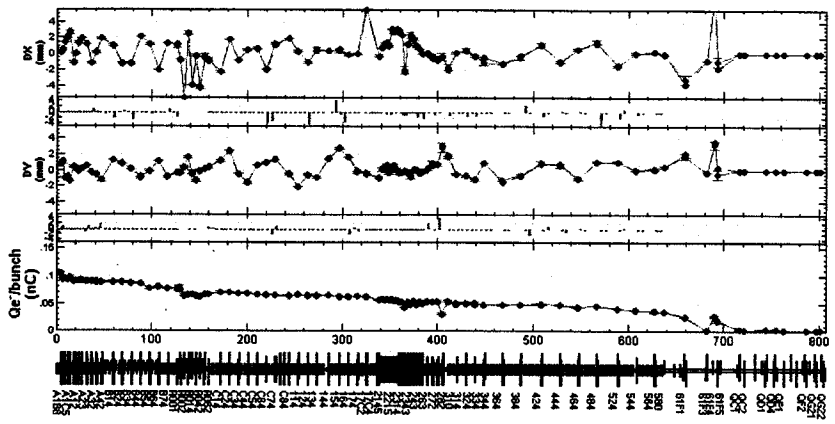
ターゲット OUT
Bump Off
軌道を補正

QM強さが変ったので、ターゲットバンプの config も変った

(1)

File Edit Measurement Correction Steering Orbit Window 04/21/2006 15:41:55 Help

measuring at intervals of 1 sec
measured 04/21/2006 15:41:57



r.m.s =1.88 mm
max. =7.955 mm
@ SP61F4
min. =-5.468 mm
@ SPR014
[illegible]
@ SP544
[illegible]

r.m.s =1.004 mm
max. =3.512 mm
@ SP61F4
min. =-2.013 mm
@ SP114
[illegible]
@ SP580
[illegible]

.036 nC
@ SP580
[illegible]

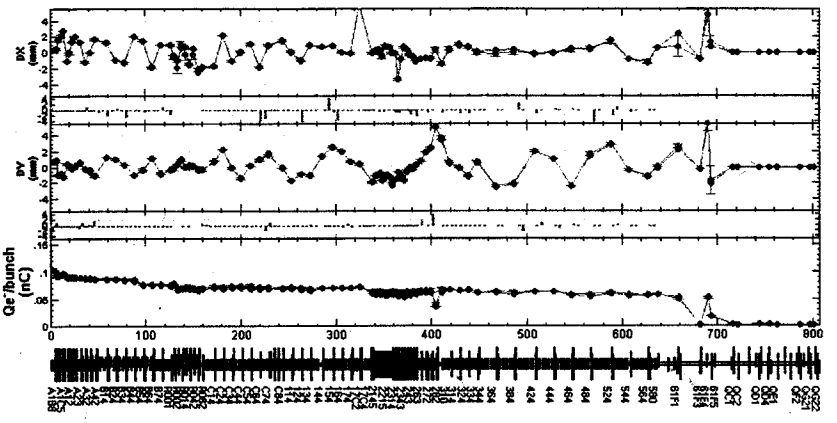
mode e⁺ e⁻ range DX Auto Fix (5) DY Auto Fix (5) Q Auto Fix (.2) e⁻/e⁺ 4 Replot
a b r c 1 2 3 4 5 6 p1 p2 Clear Statistics
meas stat ref meas-ref stat-ref meas -> ref stat -> ref

{DX,DY} = {-.85, -.38 } mm, Q/bunch =3E-3 nC @ SP61F3 statistics {-1.46?.18, -.23?.14 } mm, 2.93E-3?2.54E-4 nC

(2)

File Edit Measurement Correction Steering Orbit Window 04/21/2006 16:15:05 Help

measuring at intervals of 1 sec
measured 04/21/2006 16:15:03



r.m.s =1.363 mm
max. =6.033 mm
@ SP17C4
min. =-3.345 mm
@ SP242
[illegible]
@ SP544
[illegible]

r.m.s =1.495 mm
max. =6.76 mm
@ SP61F4
min. =-2.598 mm
@ SP364
[illegible]
@ SP580
[illegible]

.058 nC
@ SP580
[illegible]

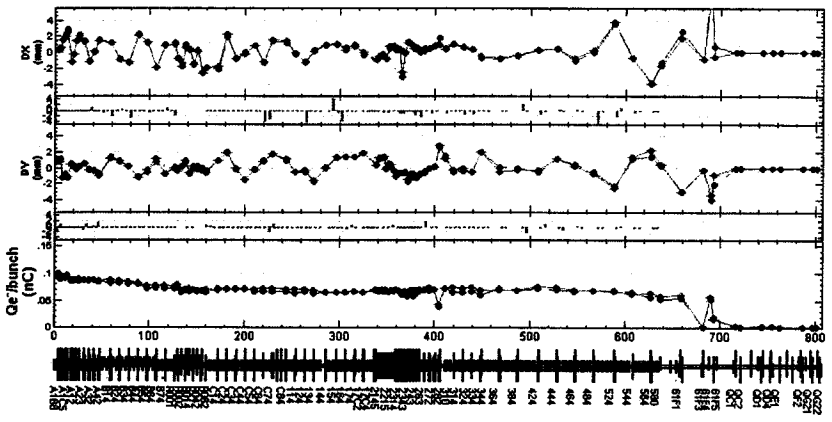
mode e⁺ e⁻ range DX Auto Fix (5) DY Auto Fix (5) Q Auto Fix (.2) e⁻/e⁺ 4 Replot
a b r c 1 2 3 4 5 6 p1 p2 Clear Statistics
meas stat ref meas-ref stat-ref meas -> ref stat -> ref

{DX,DY} = {.79, -1.11 } mm, Q/bunch =.06 nC @ SP22I5 statistics {.72?.6, -1.14?.26 } mm, .05?.02 nC

(3)

File Edit Measurement Correction Steering Orbit Window 04/21/2006 16:35:46 Help

measuring at intervals of 1 sec
measured 04/21/2006 16:35:47



r.m.s =1.543 mm
max. =6.857 mm
@ SP61F4
min. =-3.763 mm
@ SP564
[illegible]
@ SP484
[illegible]

r.m.s =1.071 mm
max. =2.576 mm
@ SP284
min. =-4.014 mm
@ SP61F4
[illegible]
@ SP310
[illegible]

.052 nC
@ SP580
[illegible]

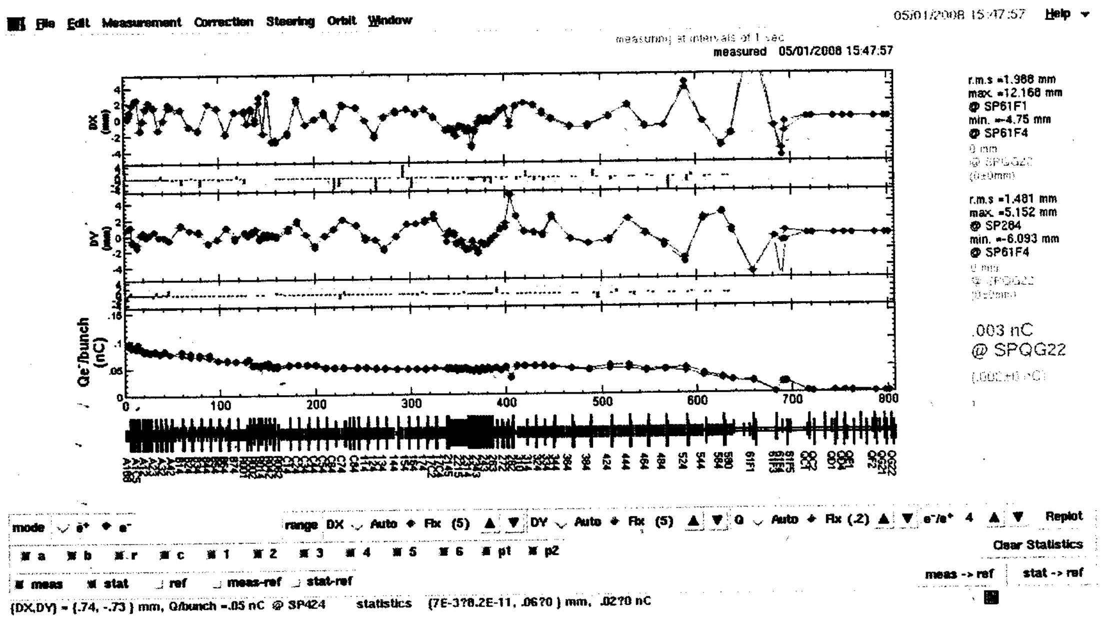
mode e⁺ e⁻ range DX Auto Fix (5) DY Auto Fix (5) Q Auto Fix (.2) e⁻/e⁺ 4 Replot
a b r c 1 2 3 4 5 6 p1 p2 Clear Statistics
meas stat ref meas-ref stat-ref meas -> ref stat -> ref

3X533 0.85 A

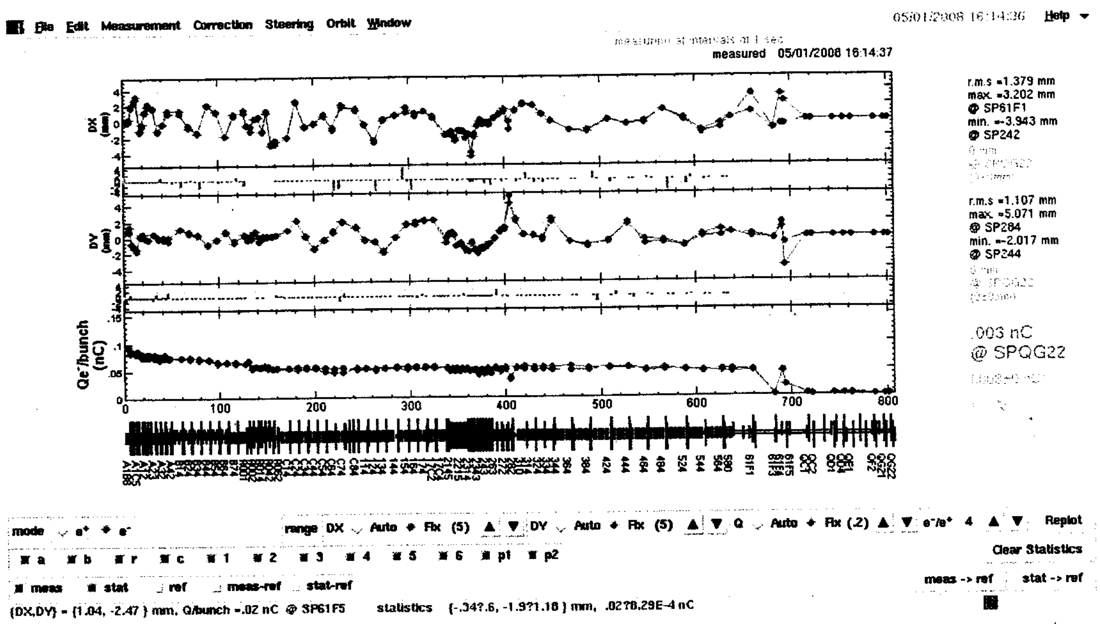
2008.5.1 (木) Compatible Optics Study — 紙谷 大西 | 菊池, 飯田

・前回のパラメータ. 大西 New Optics を設定.
ビーム確認. Target OUT. target-Bump OFF

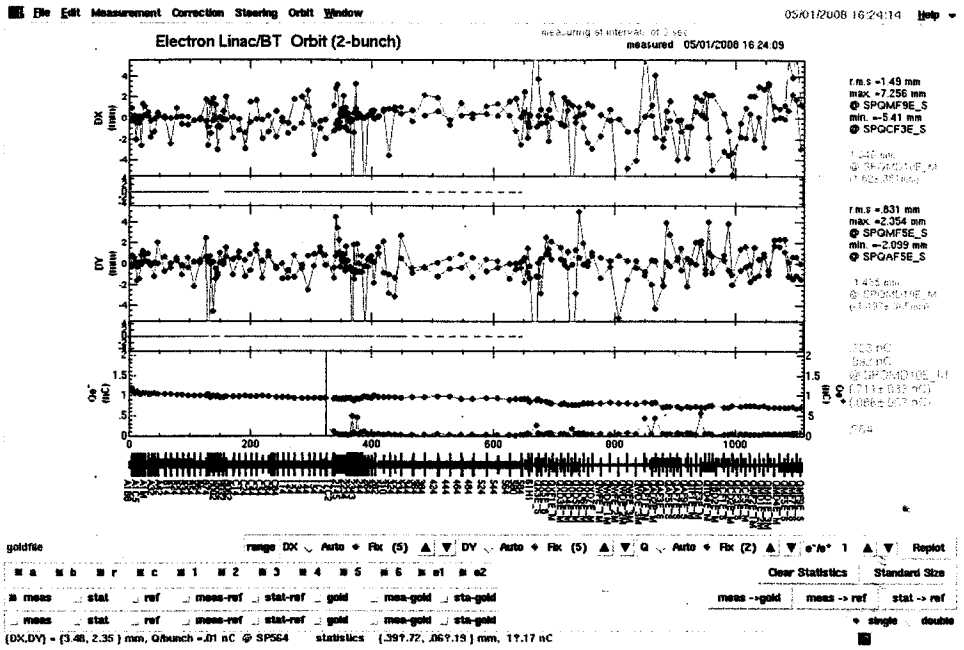
15:47 ビームが上流部からロスしている. $\Delta\phi SB\_A,B$ = ~~-4.0~~ -5.0 調整したが まだ Aセクターより ロス



$\Delta\phi$SHB1 = 389.5 → 391.5°
$\Delta\phi$SHB2 =
Gun timing
軌道補正 4.5-sector

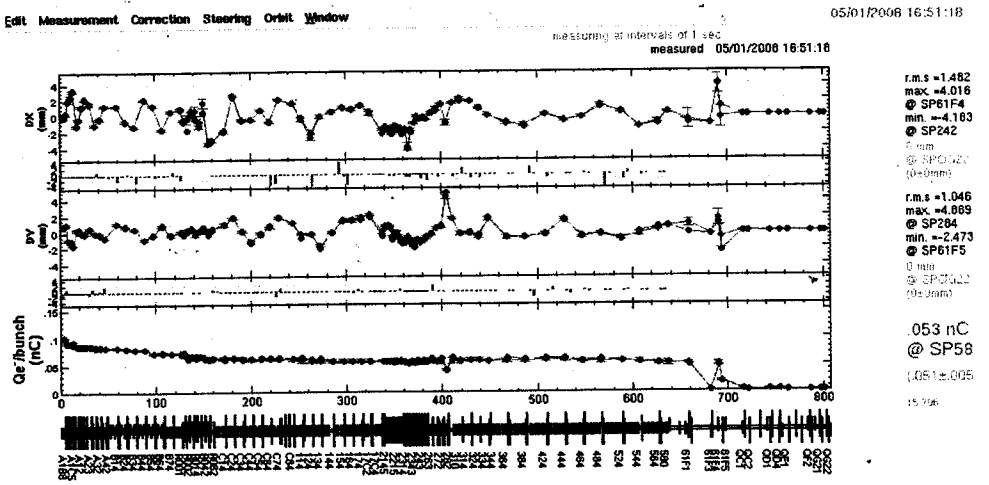


8GeVビーム確認 & SABOT



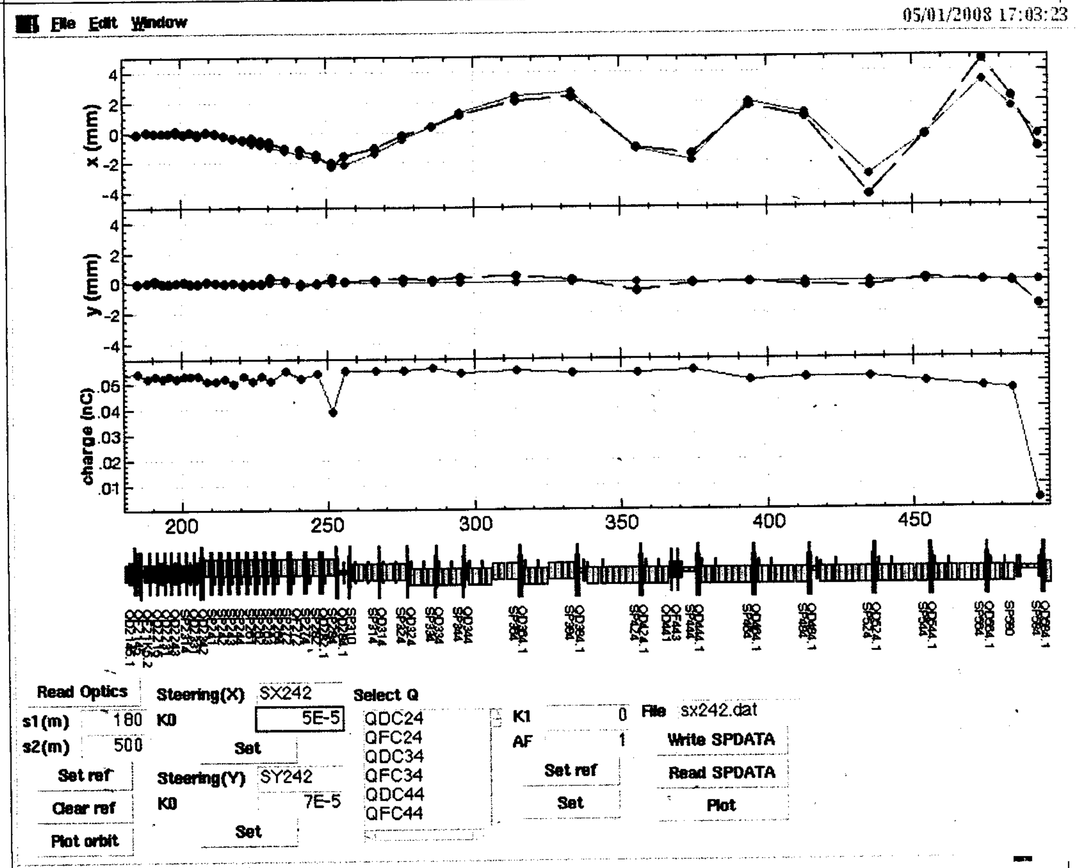
16:45 Single kick データ取り.

☆ FB 止まっている事を確認すること!



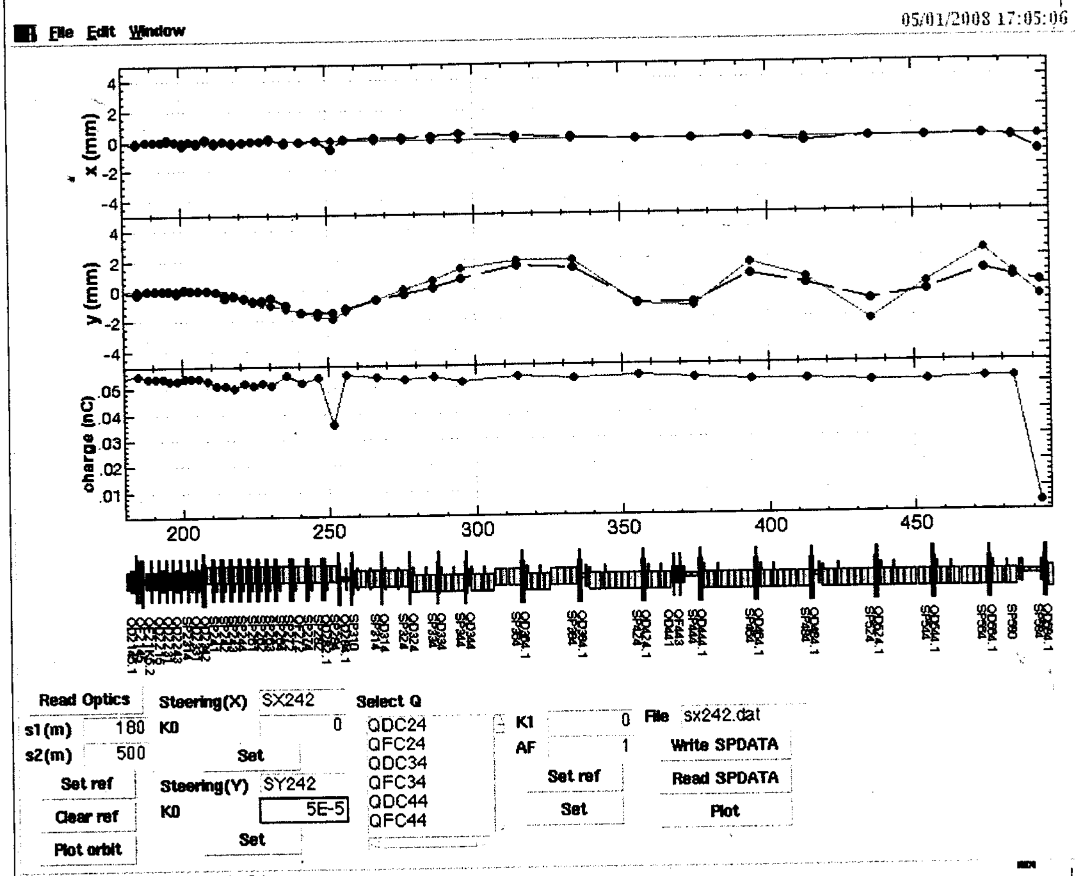
97

5セクター Energy FBが入っていた!

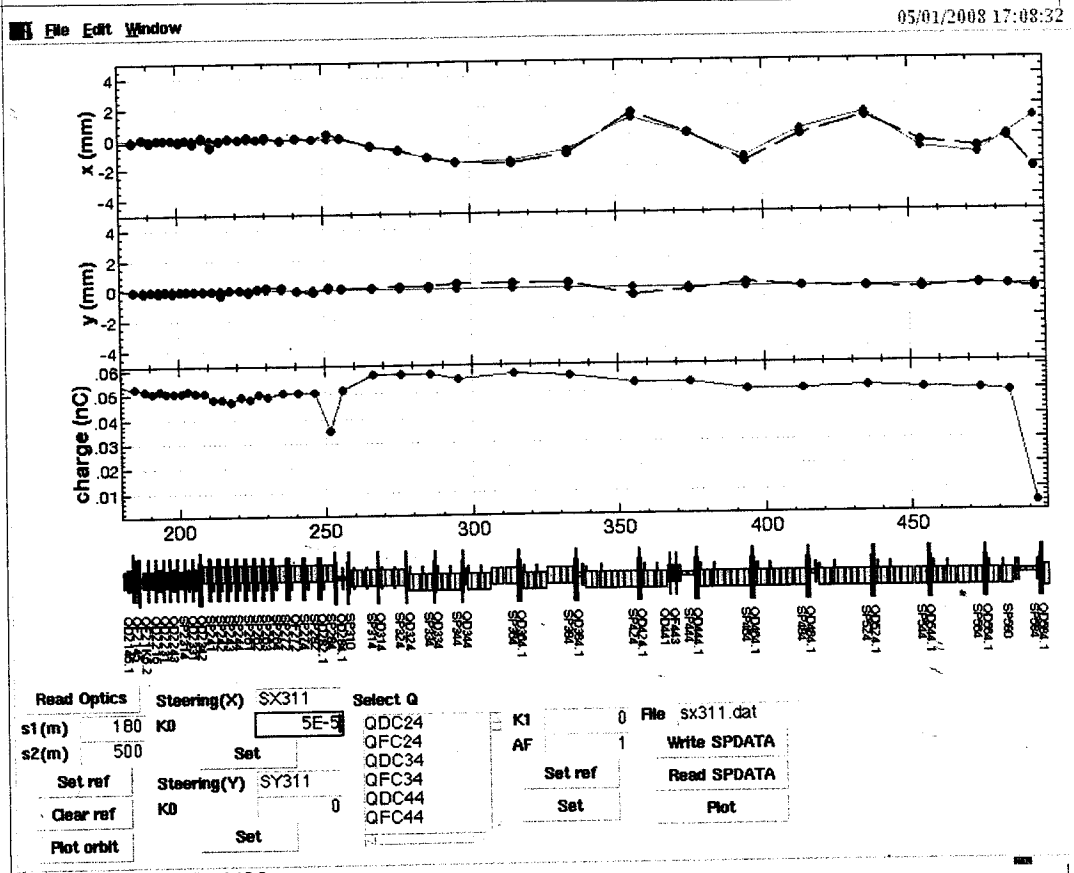


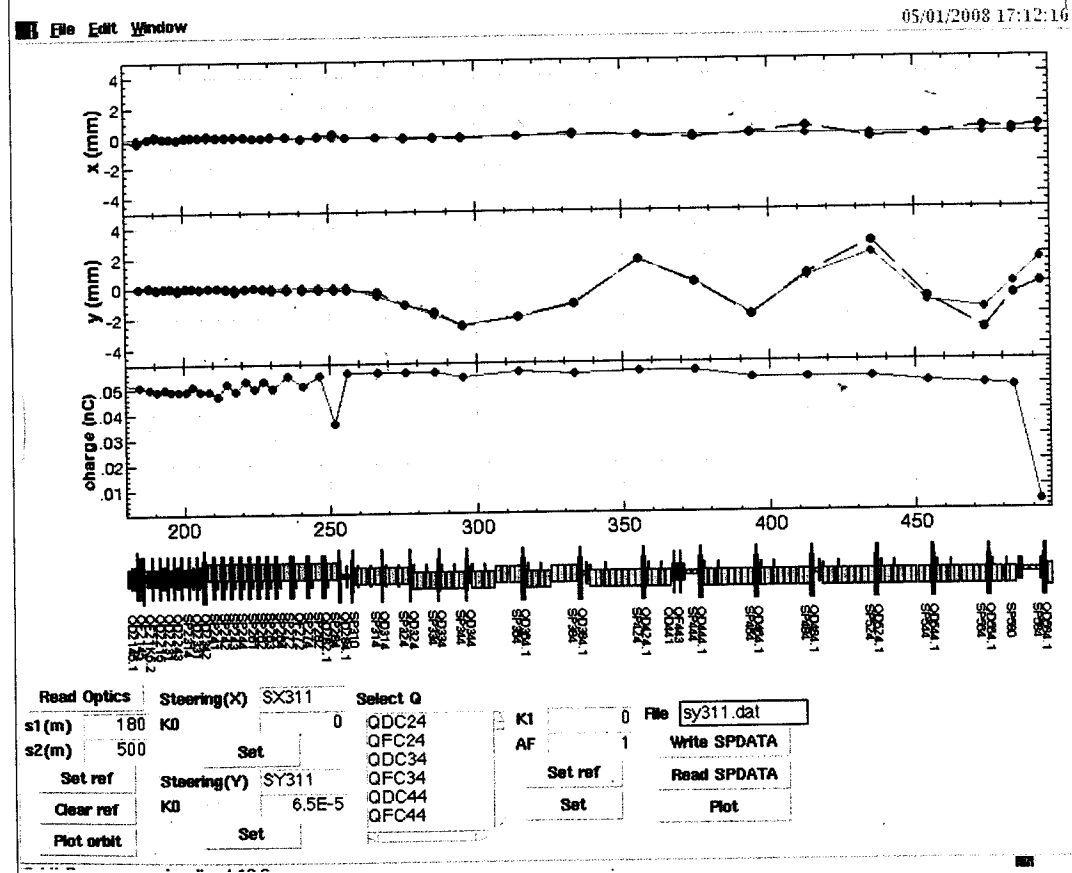
測定値 —●—

計算値 —●—



5セクター以外は、既に合っている。





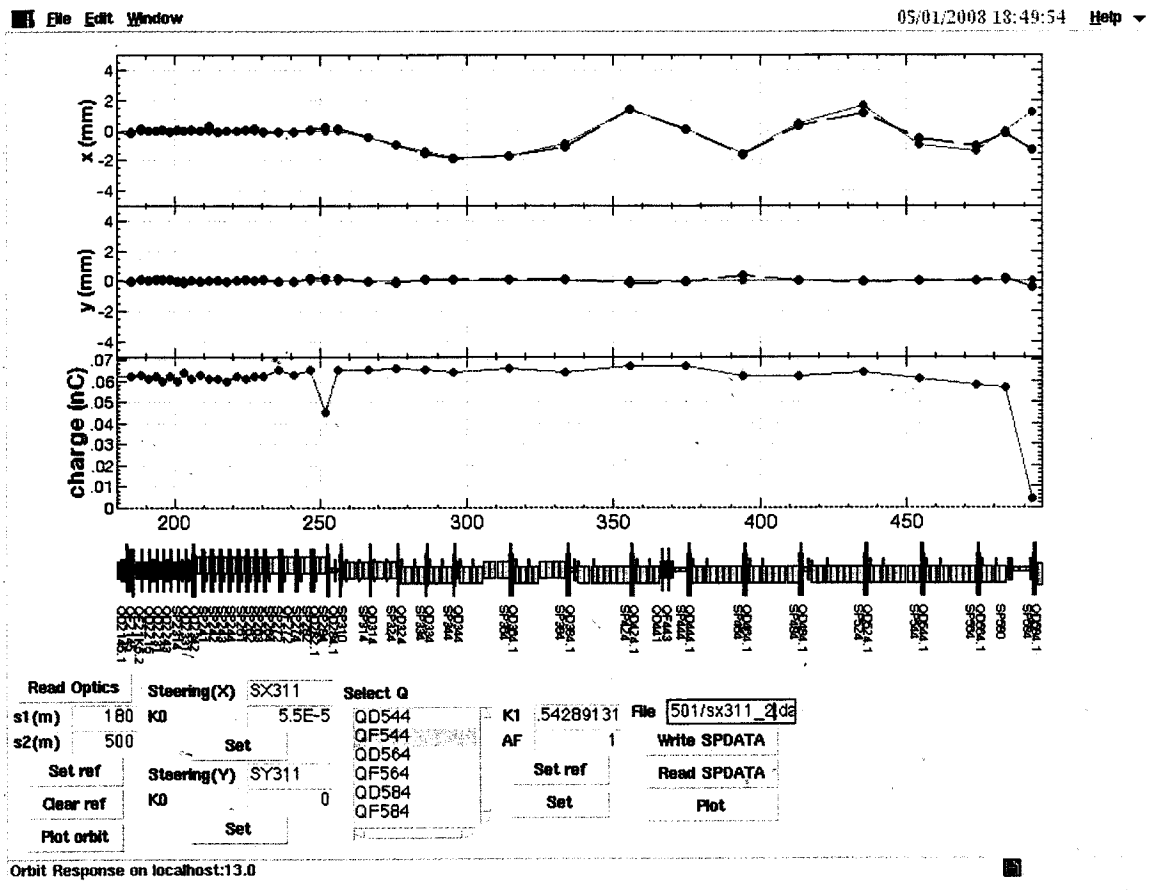
99

'18.4.8

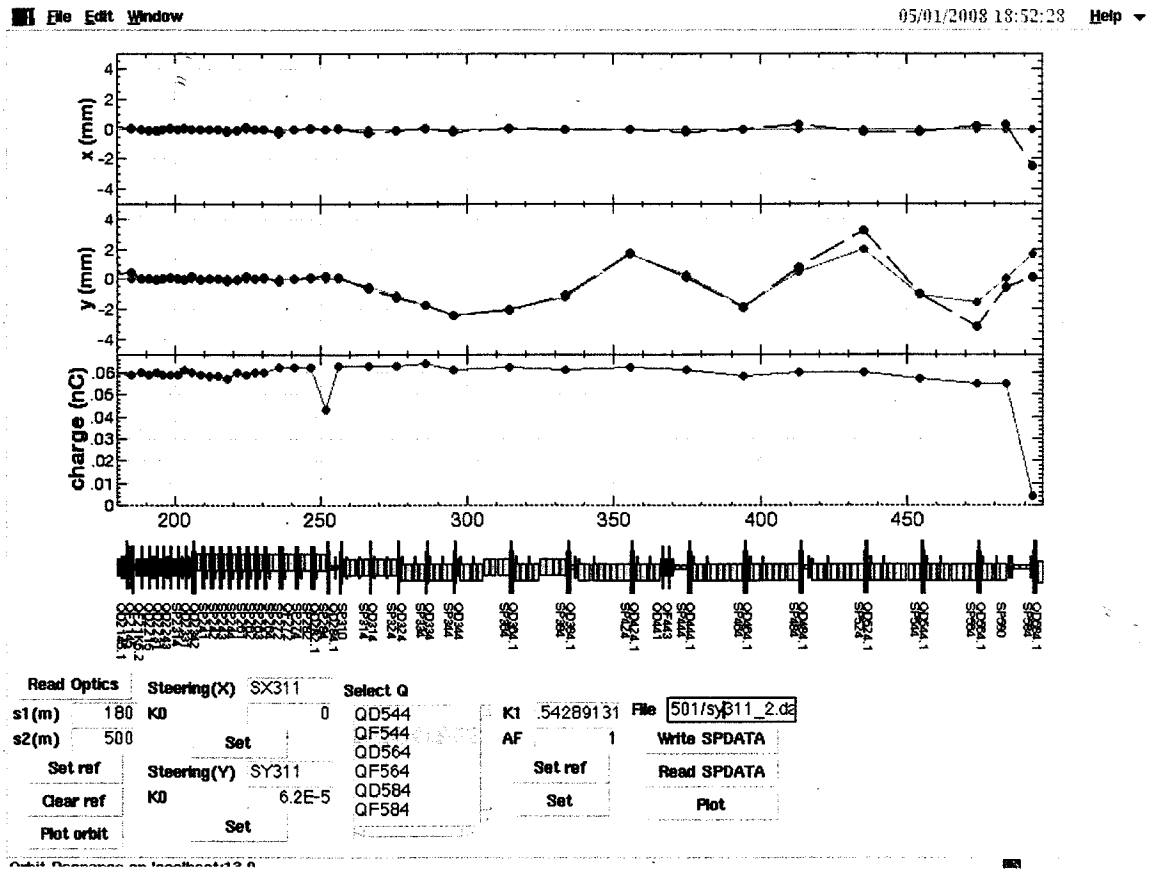
20080501/ 生軌道2.

Raw.data.dat 1= write

SX_31_1



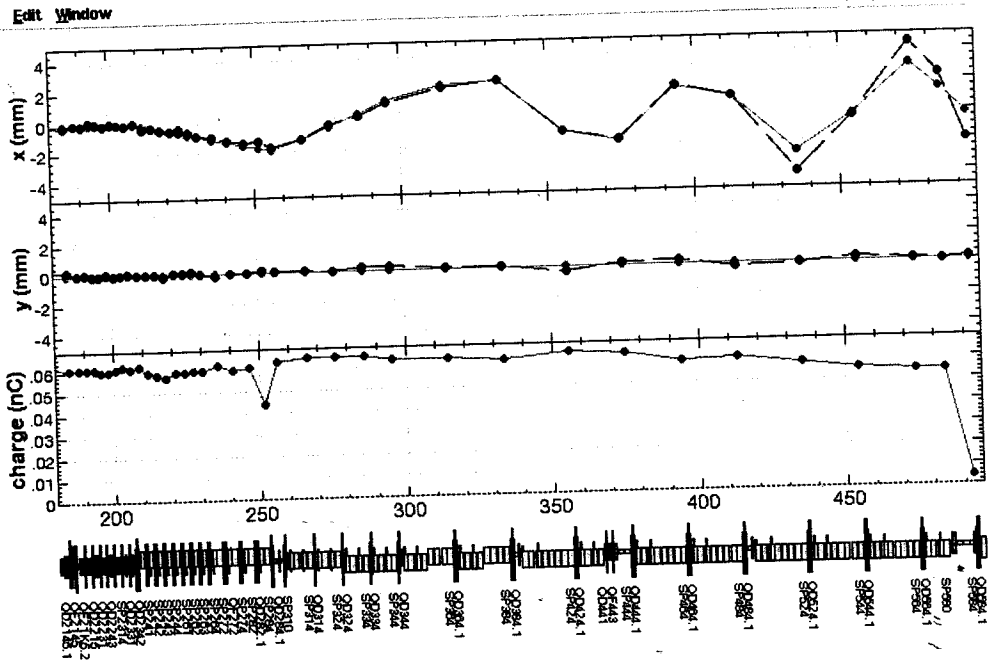
SY_31_1



SX_24_2

05/01/2008 18:57:11 Help

File Edit Window



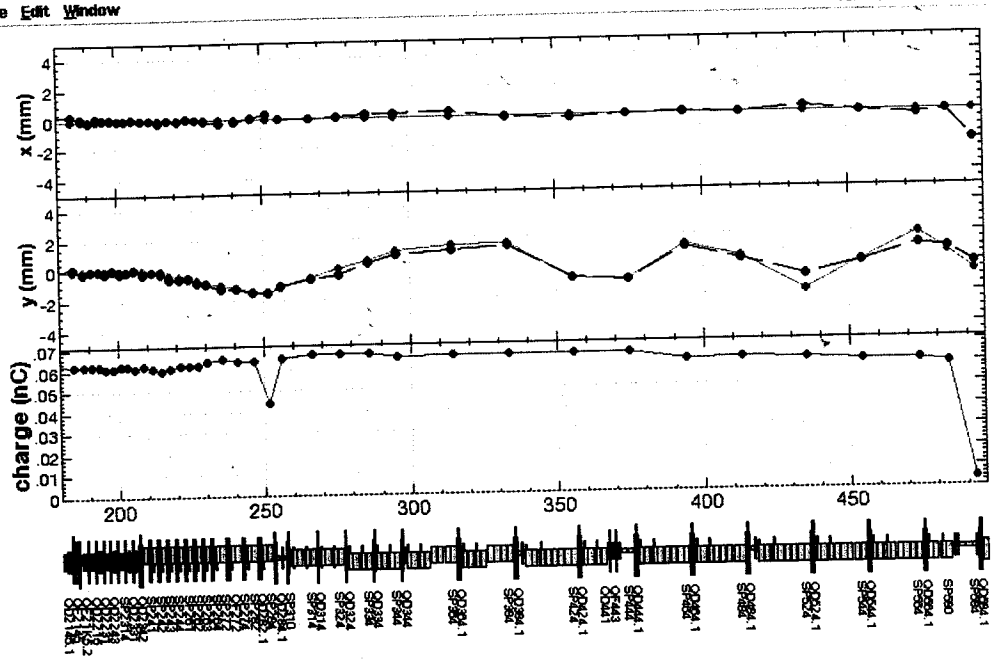
Read Optics | Steering(X) SX242 | Select Q
s1(m) 180 | K0 4.5E-5 | QD544 QF544 QD564 QF564 QD584 QF584
s2(m) 500 | Set | K1 .54289131 | File 0501/sx242_2.0
Set ref | Steering(Y) SY242 | AF 1 | Write SPDATA
Clear ref | K0 0 | Set ref | Read SPDATA
Plot orbit | Set | Set | Plot

Orbit Response on localhost:13.0

SY_24_2

05/01/2008 18:59:21 Help

File Edit Window

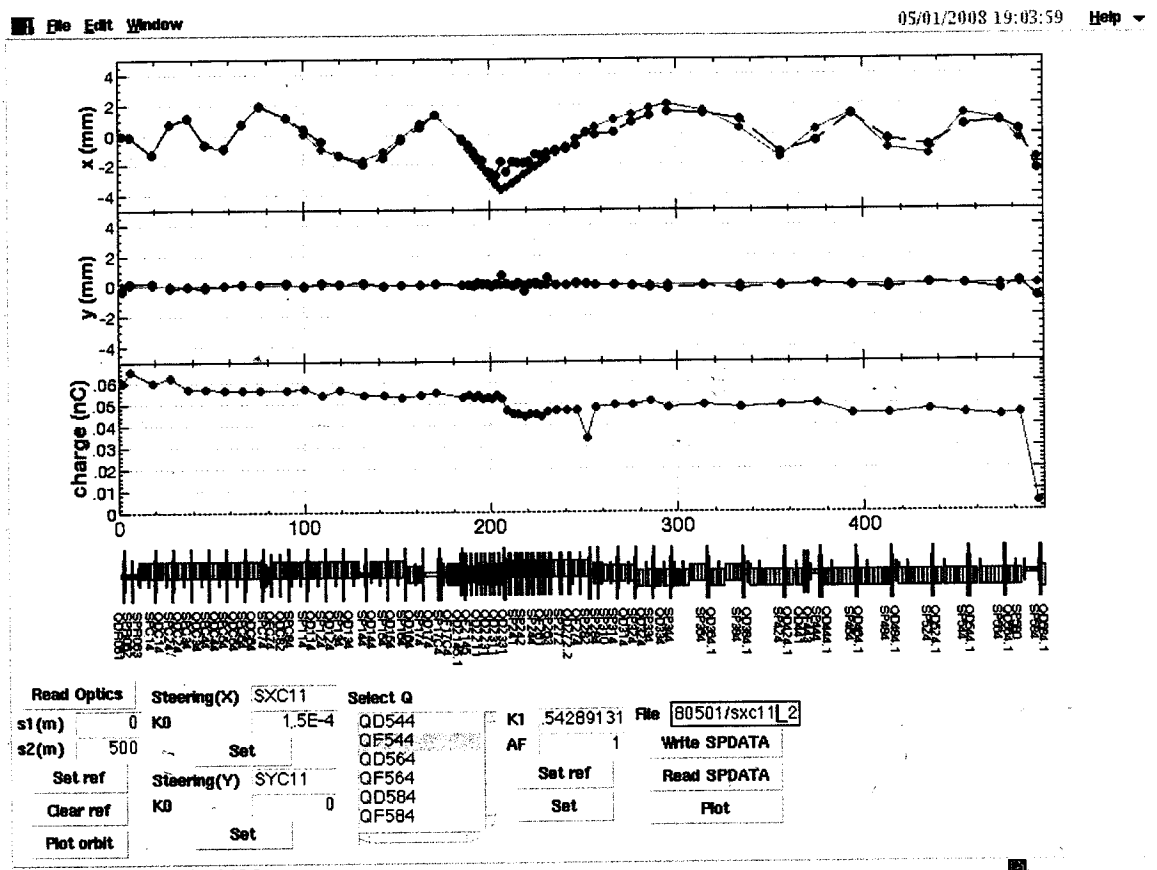


Read Optics | Steering(X) SX242 | Select Q
s1(m) 180 | K0 0 | QD544 QF544 QD564 QF564 QD584 QF584
s2(m) 500 | Set | K1 .54289131 | File 0501/sy242_2.0
Set ref | Steering(Y) SY242 | AF 1 | Write SPDATA
Clear ref | K0 4E-5 | Set ref | Read SPDATA
Plot orbit | Set | Set | Plot

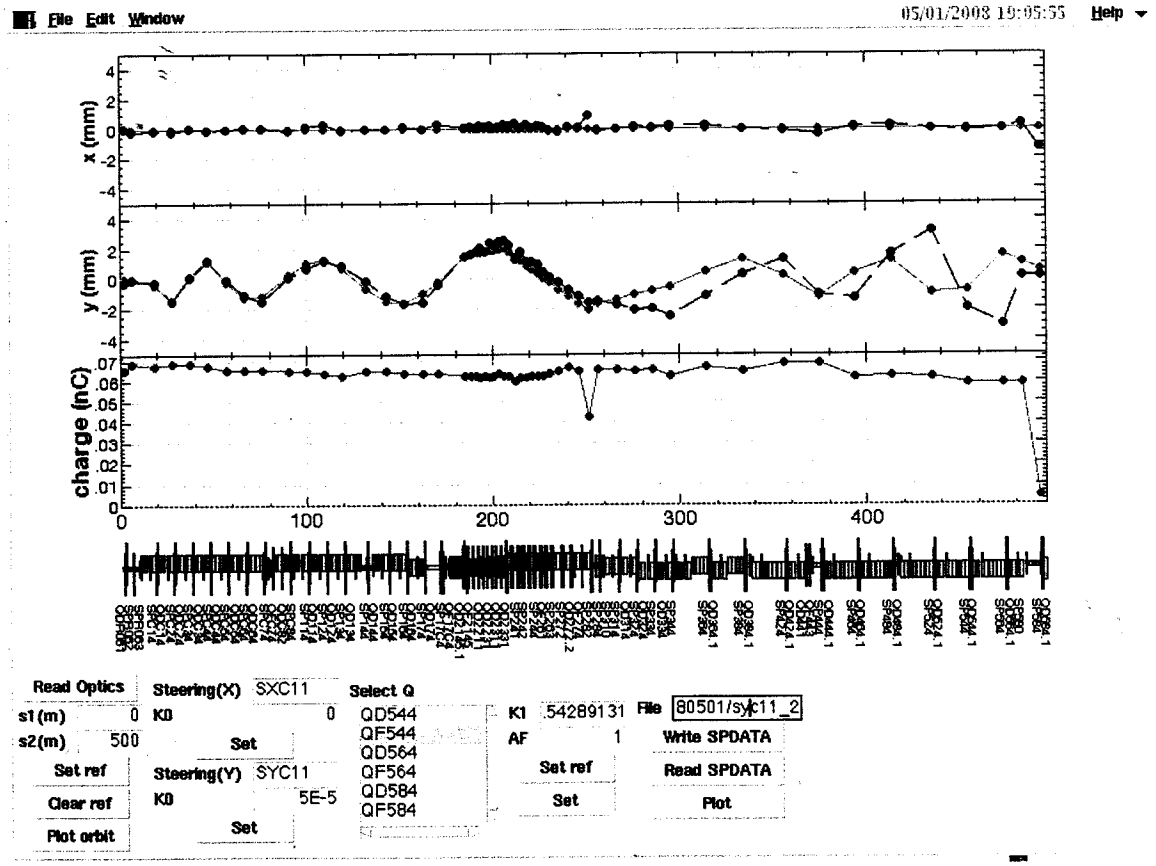
Orbit Response on localhost:13.0

101

SX_C1_1

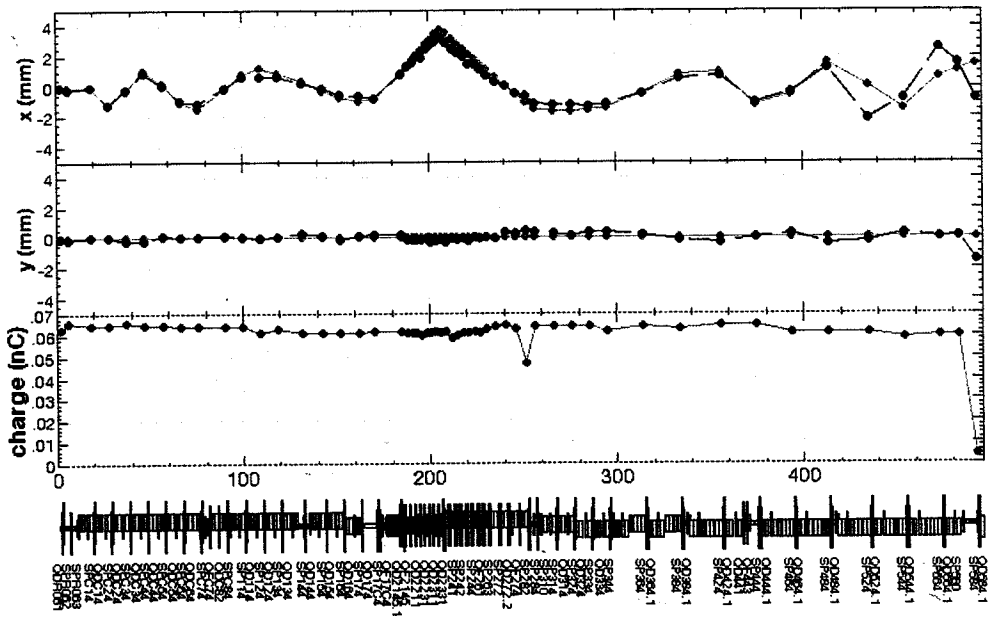


SY_C1_1



SX_C2_1

File Edit Window 05/01/2008 19:11:14 Help

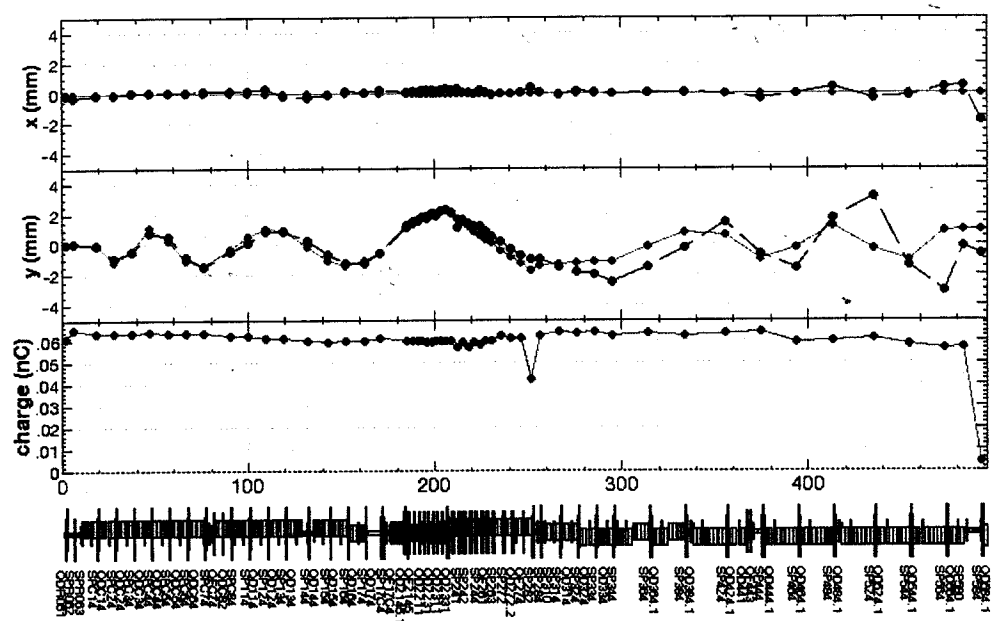


Read Optics | Steering(X) SXC21 | Select Q
s1(m) 0 | K0 1.5E-4 | QD544 | K1 .54289131 | File 80501/sxc21_2
s2(m) 500 | Set | QF544 | AF 1 | Write SPDATA
Set ref | Steering(Y) SYC11 | QD564 | Set ref | Read SPDATA
Clear ref | K0 0 | QF564 | Set | Plot
Plot orbit | Set | QD584 | QF584

Orbit Response on localhost:13.0

SY_C2_1

File Edit Window 05/01/2008 19:13:17 Help



Read Optics | Steering(X) SXC21 | Select Q
s1(m) 0 | K0 0 | QD544 | K1 .54289131 | File 80501/syc21_2
s2(m) 500 | Set | QF544 | AF 1 | Write SPDATA
Set ref | Steering(Y) SYC21 | QD564 | Set ref | Read SPDATA
Clear ref | K0 1.5E-4 | QF564 | Set | Plot
Plot orbit | Set | QD584 | QF584

Orbit Response on localhost:13.0