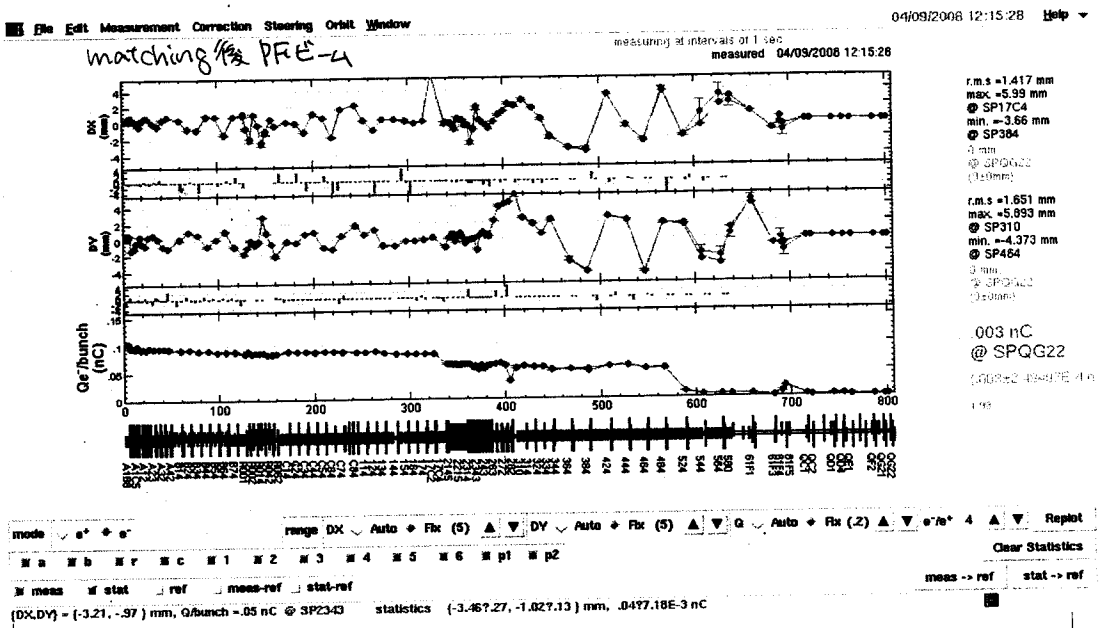
73

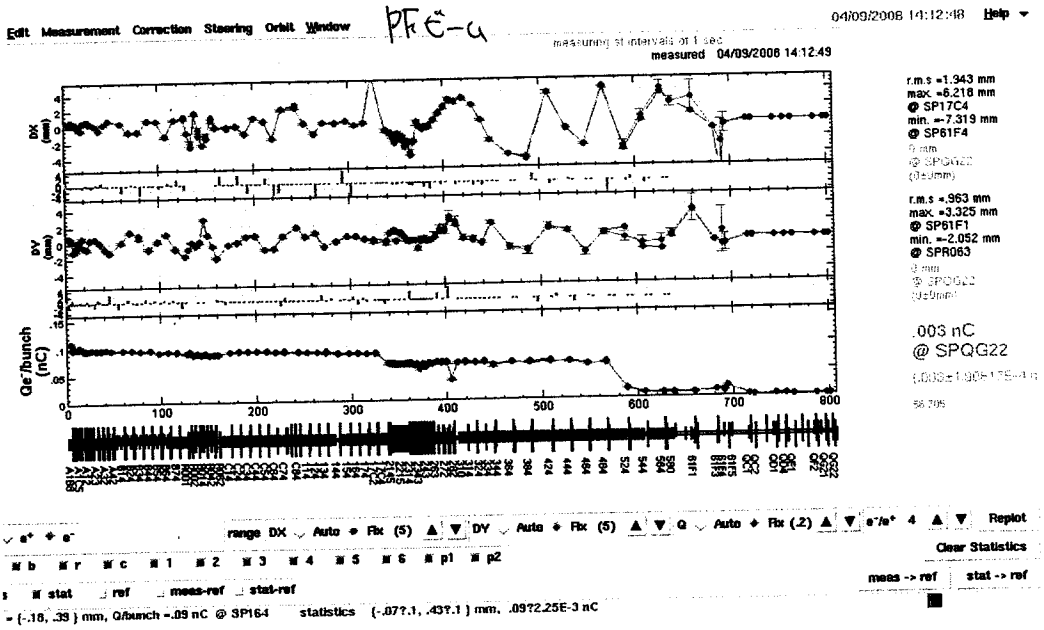
KEKB e^- で optics matching を取った。OK。
同じくPFビームでも測ったが OK Bmag ㊧ 1.1 ㊨ ~1.0) → 前ページに図あり

13:24

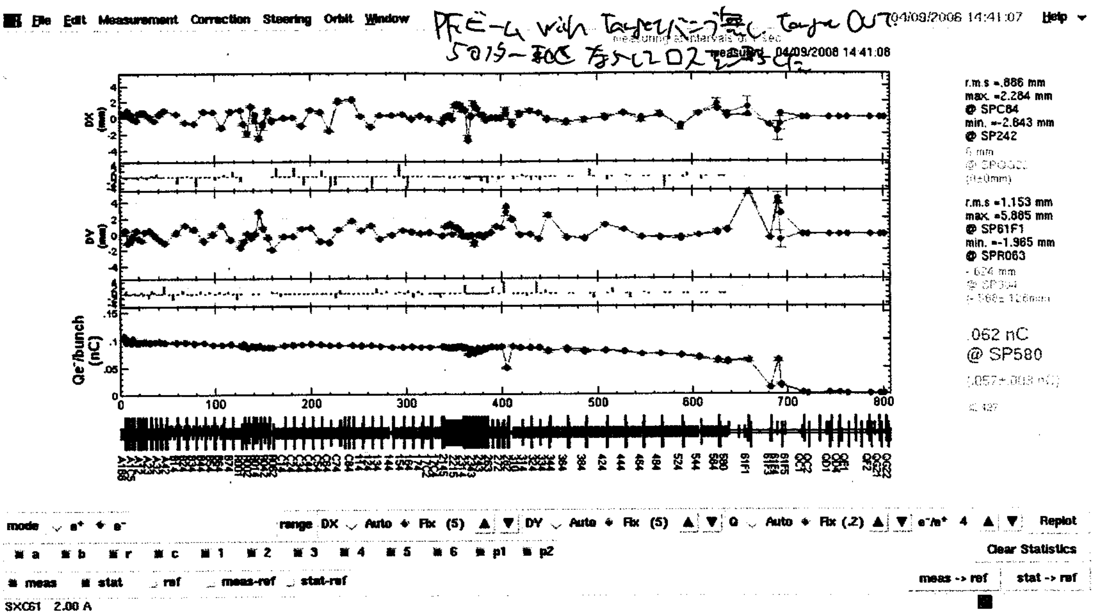


午後ビーム調整再開

KEKB e^- ビーム. ターゲットバンプを defineするために. 2の前後の orbitをならす.
QE② 61h. → $\Delta\delta SB\_C\sim 4 = -3°$



Ohnishi
Optics
をセット.
@14:16

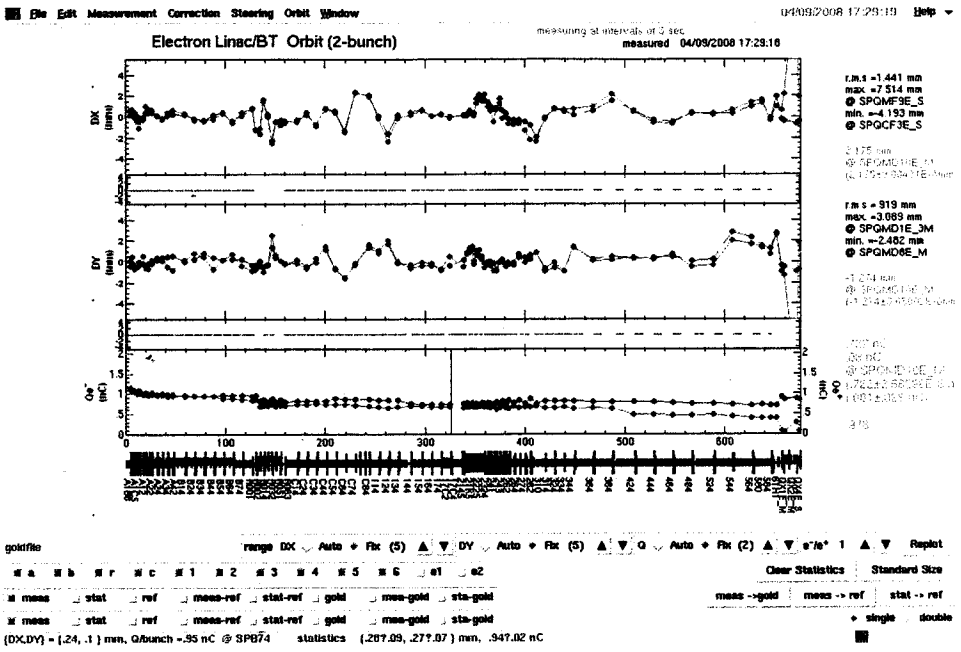


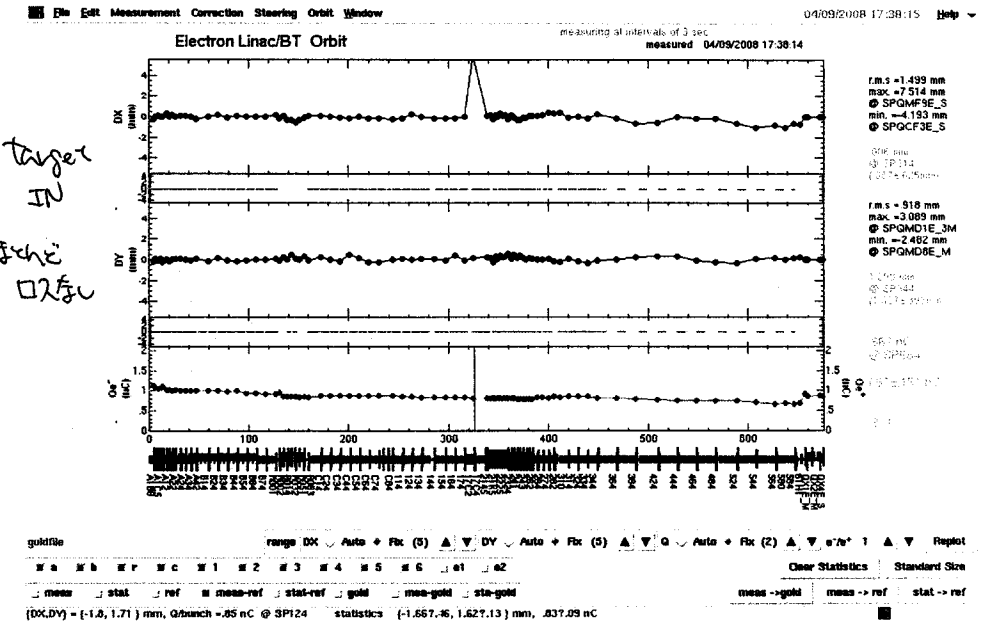
計算したOpticsと実測のビームサイズの比較をする.
PFビーム（ ϵ_x/ϵ_y ～ 2倍 を考慮すると割と合っている
しかし3～5セクターで ゆるやかにビームが減っていく.

15:00～
17:00

KEKB e^- ビームで同じく比較する.
SuperKEKB検討会の間は PFビームとKEKB e^- ビームで
どちらも target bumpなしで軌道が平らになるように鈴木さんに調整してもらった

75





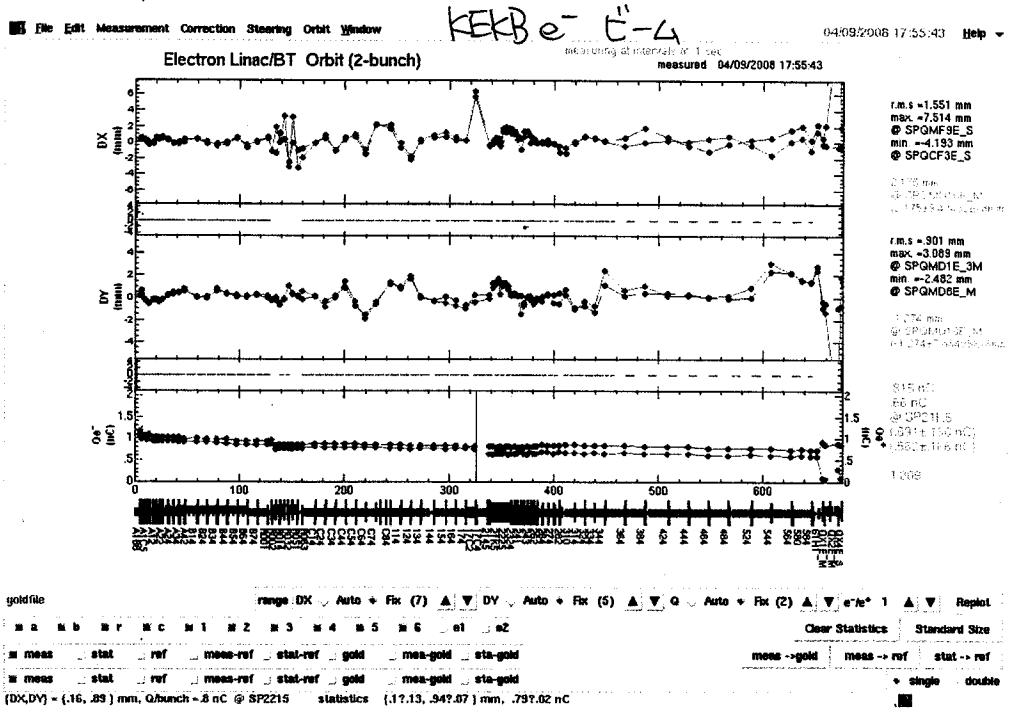
PX3
5.2A
target IN
ほぼなし
口2なし

Bump PX1 9.2
2 1.424
3 5.2 → 6.2
PY1 0.4

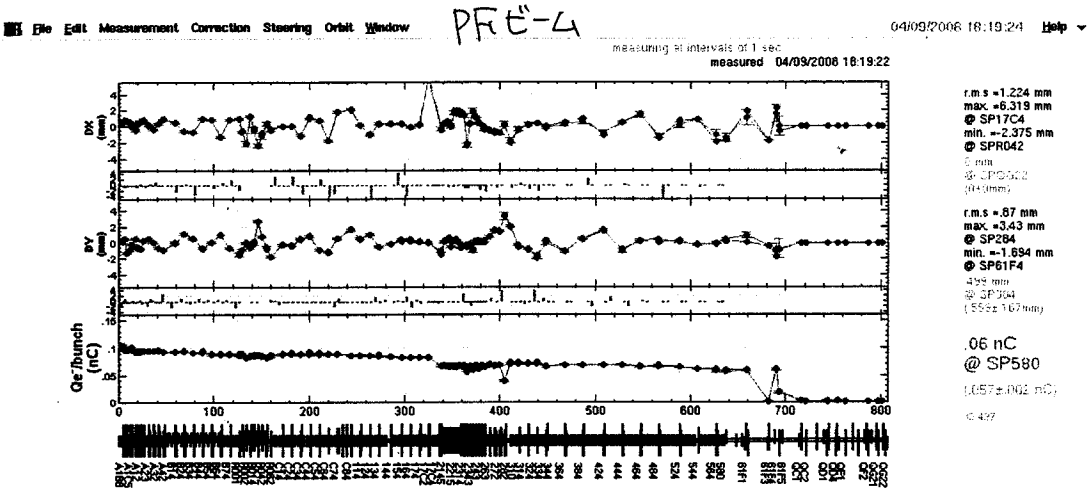
J-arcでのOPEを改善してターゲットを
2nd Bunchも通るように
Gun GP2 timing 2.50 → 2.20 ns
ΦSB_A.B
Overall timing A-B ΔT = +14ns
を調整した。

18:04

KEKB e⁻ ビーム



PFビーム



(?) KEKBeビームがターゲットと口スしないのにPFビームがすこし口スするのはなぜか?

77

19:06

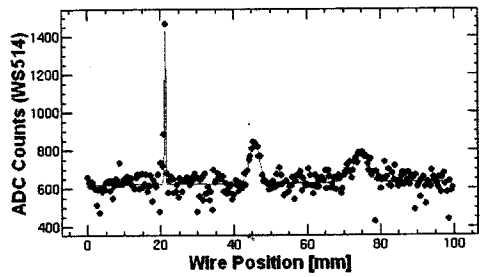
File Edit Control Window 04/09/2008 19:06:18 Help

5セクター

Wire A

ChiSquare = 650453. Goodness = .46776

sigma1 = .17512 +/- .18222	sigma2 = 1.31268 +/- .18591	sigma3 = 2.02469 +/- .35826
asymm1 = -.80000 +/- 9.89873	asymm2 = .01201 +/- .29308	asymm3 = -.32000 +/- .34147
xwire1 = 21.4720 +/- 5.98616	xwire2 = 45.5870 +/- .47182	xwire3 = 75.1546 +/- .84680
b1 = 841.998 +/- 9734.83	b2 = 220.497 +/- 26.7889	b3 = 144.698 +/- 21.7590
a1 = 621.231 +/- 6.84217	a2 = .15262 +/- .12098	

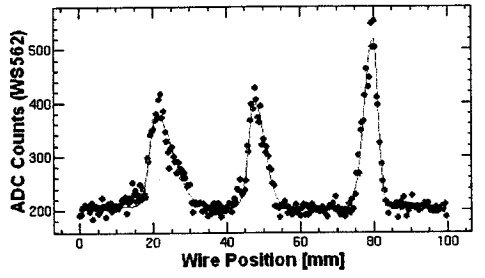


File: WS2008_4_9_19_4_59.datA File Pref ReFit 349.8291015625 V 1462

Wire C

ChiSquare = 53289.1 Goodness = .46776

sigma1 = 3.16275 +/- .11197	sigma2 = 2.19254 +/- .07883	sigma3 = 1.86036 +/- .04519
asymm1 = .42594 +/- .06290	asymm2 = .24023 +/- .07091	asymm3 = -.30536 +/- .04668
xwire1 = 20.7874 +/- .24339	xwire2 = 47.5662 +/- .19032	xwire3 = 79.6493 +/- .10635
b1 = 171.702 +/- 5.07050	b2 = 186.043 +/- 5.98849	b3 = 317.424 +/- 6.51058
a1 = 208.832 +/- 2.31701	a2 = -.07329 +/- .03776	

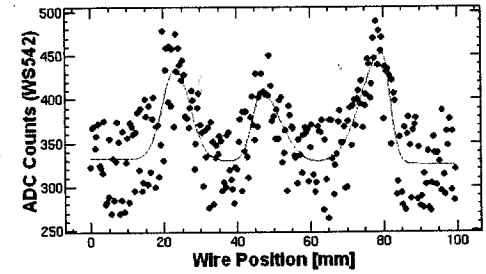


File: WS2008_4_9_19_2_34.datC File Pref ReFit 599.70703125 V 1265

Wire B

ChiSquare = 286347. Goodness = .46776

sigma1 = 3.73868 +/- .48525	sigma2 = 3.82440 +/- .63059	sigma3 = 3.93802 +/- .40907
asymm1 = .04245 +/- .24448	asymm2 = .31678 +/- .30480	asymm3 = -.44714 +/- .17845
xwire1 = 23.2606 +/- 1.11678	xwire2 = 46.7567 +/- 1.42441	xwire3 = 79.8094 +/- .84899
b1 = 104.211 +/- 10.8198	b2 = 78.4354 +/- 10.6729	b3 = 125.972 +/- 10.7502
a1 = 332.562 +/- 5.86848	a2 = -.08267 +/- .09457	

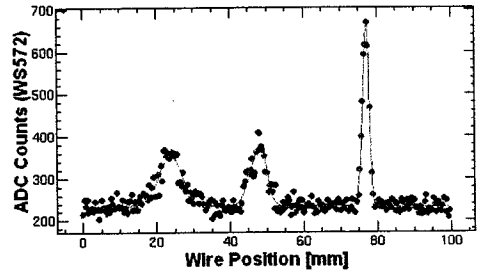


File: WS2008_4_9_19_1_22.datB File Pref ReFit 479.765625 V 1320

Wire D

ChiSquare = 61016.3 Goodness = .46776

sigma1 = 3.15135 +/- .17440	sigma2 = 2.15299 +/- .11463	sigma3 = .89608 +/- .02373
asymm1 = -.02306 +/- .10771	asymm2 = -.18295 +/- .10688	asymm3 = -.27109 +/- .05247
xwire1 = 23.7830 +/- .41523	xwire2 = 48.0814 +/- .26168	xwire3 = 77.2418 +/- .05746
b1 = 118.800 +/- 5.41278	b2 = 142.216 +/- 6.43688	b3 = 436.854 +/- 9.96261
a1 = 235.436 +/- 2.50422	a2 = -.02551 +/- .03959	



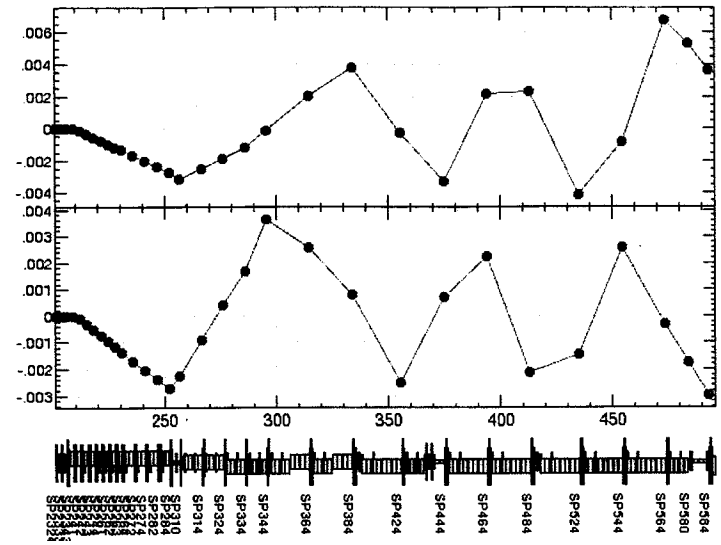
File: WS2008_4_9_19_3_41.datD File Pref ReFit 629.6323828125 V 1243

WS514で、異常に縦長である。

2セクター以降、モデルとの違いを

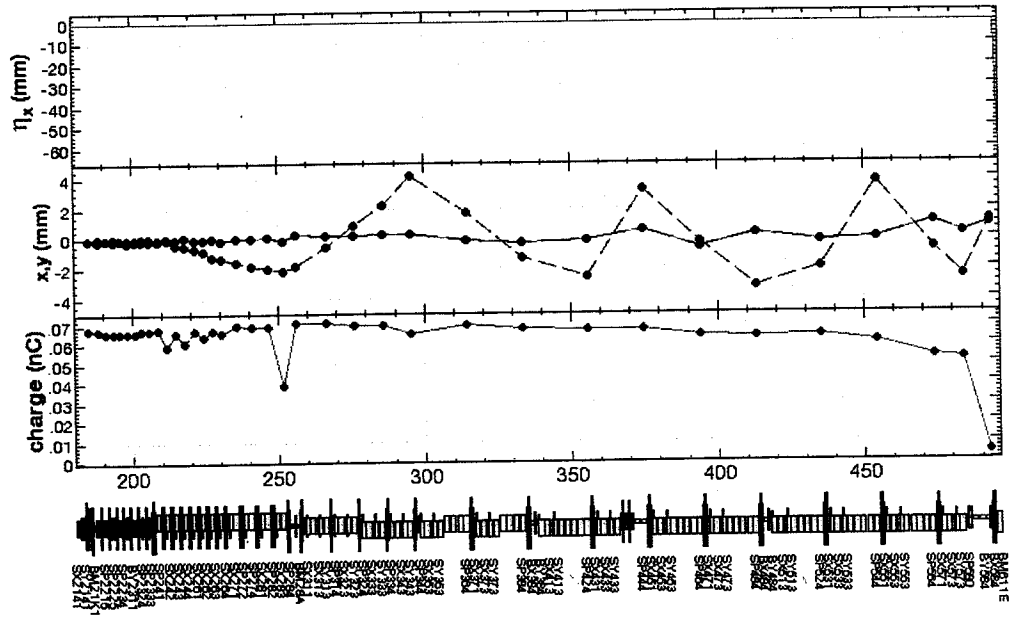
追求することにする。

PF



File Edit Window

04/09/2008 20:03:38



以下のように design 変えた

OF384 +3%

QF424 +1%

QF464 +2%

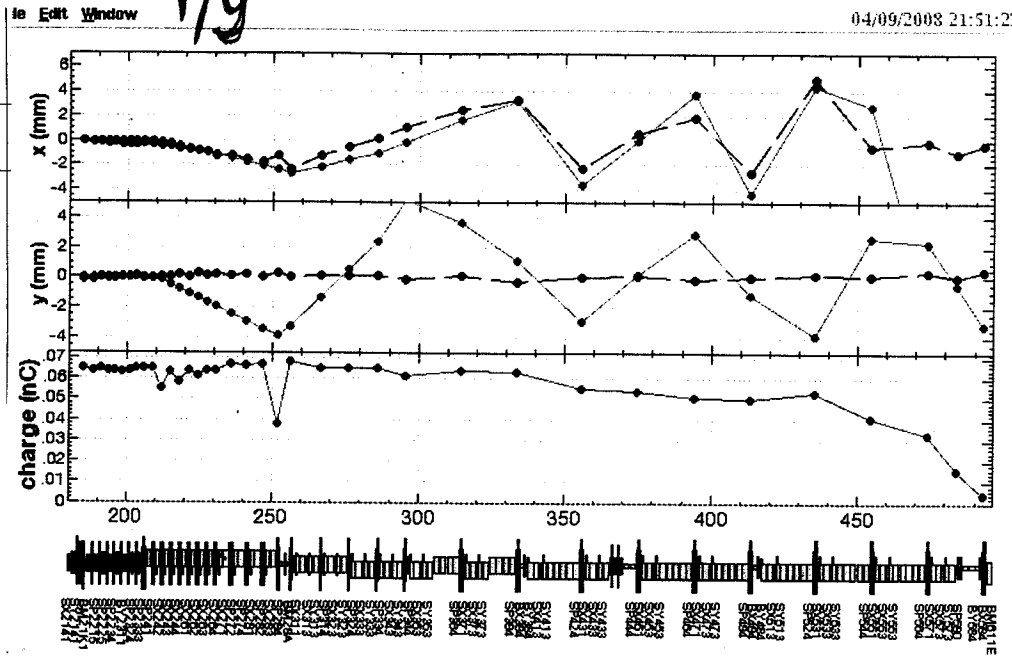
QF484 +5%

~~QF444 +4%~~

PF

測定値

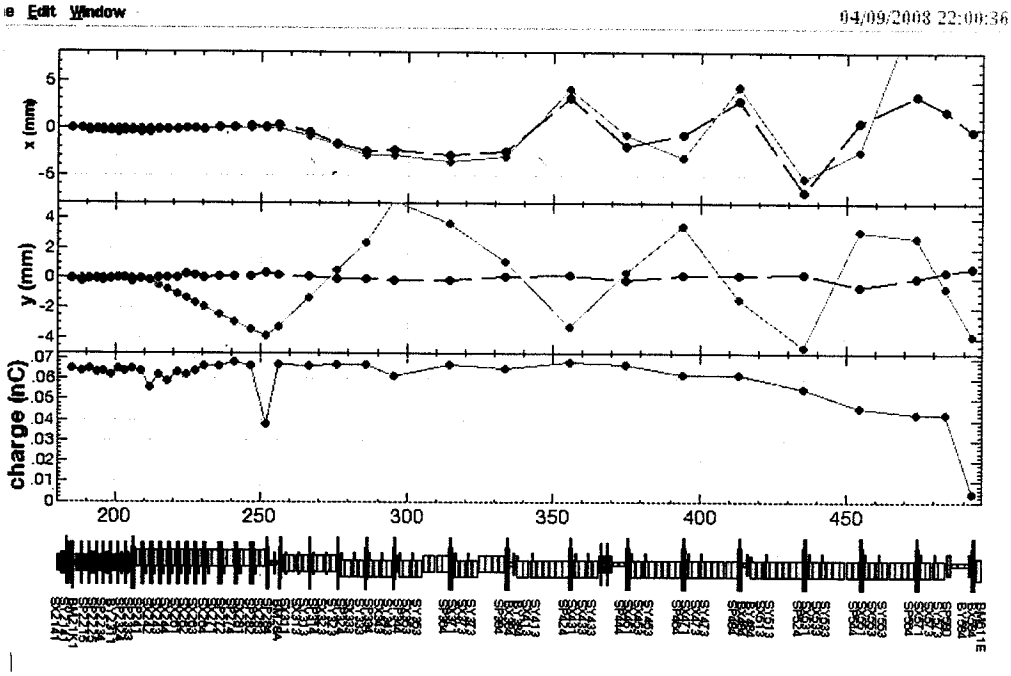
(design) 計算値



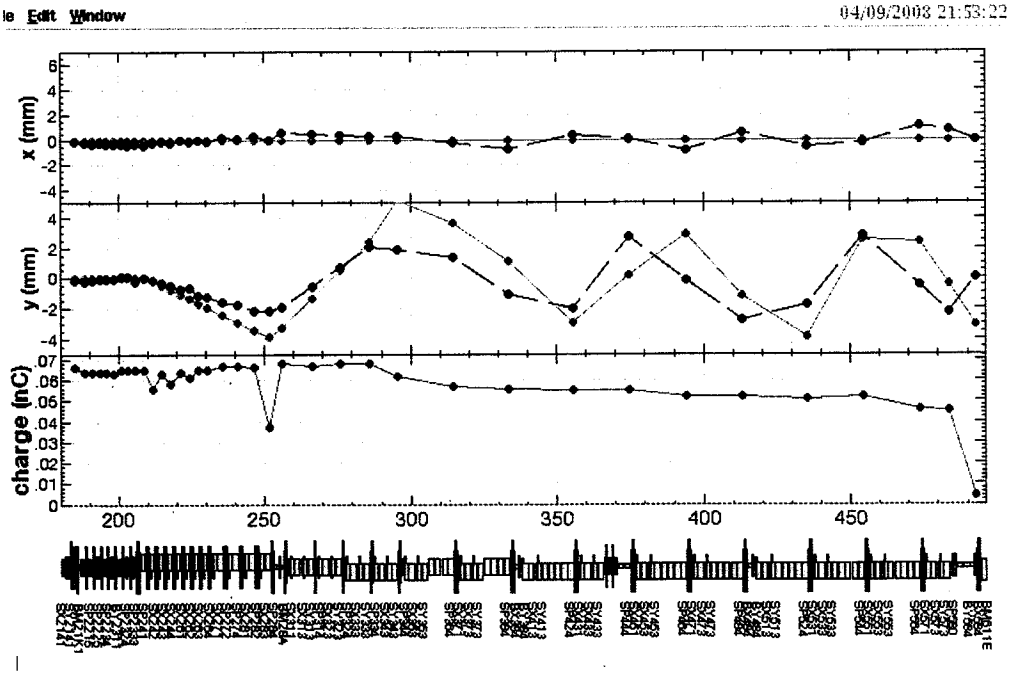
↑ このままで

90°位相がずれたところで

QF444 +4% を追加

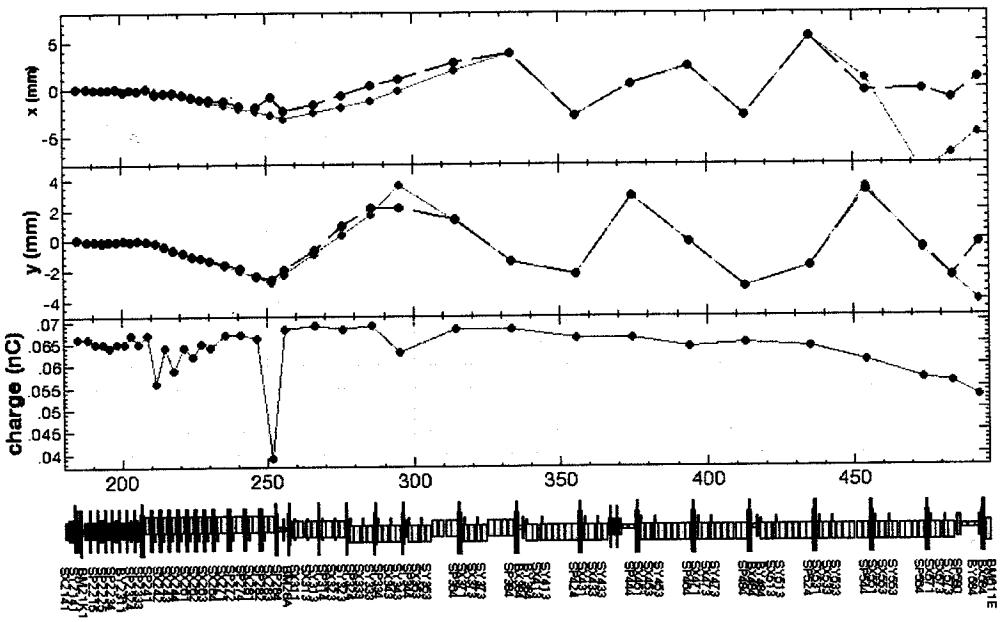


y方向の kick だけ合っている



PF

File Edit Window 04/09/2008 23:51:00

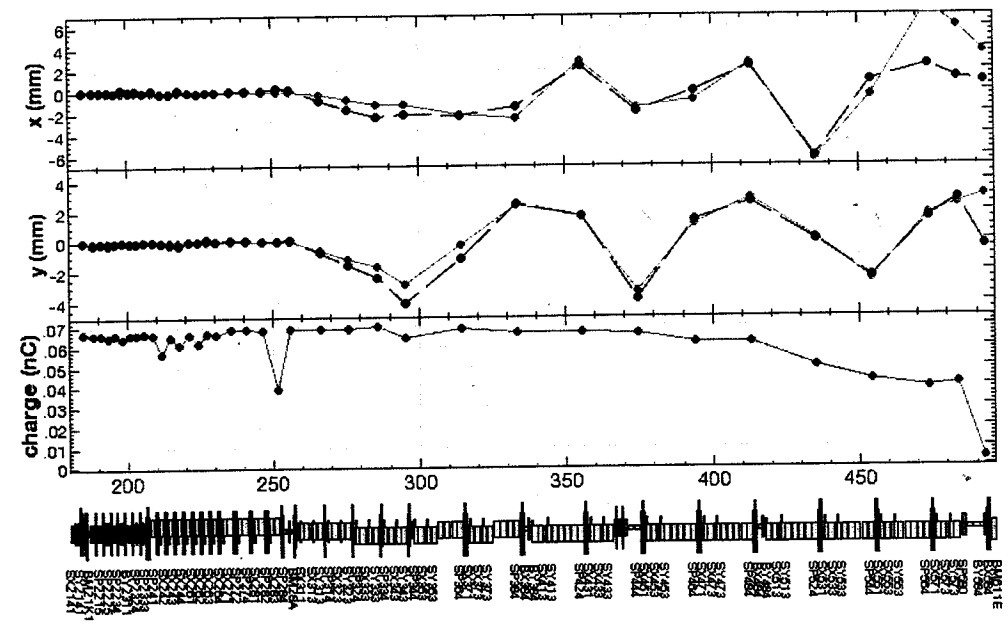


Read Optics Steering(X) SX242
s1(m) 180 K0 7E-5
s2(m) 500 Set
Set ref Steering(Y) SY242
Clear ref K0 7E-5
Plot orbit Set

測定値に合うように、
Q1にfactorをかけた。
(by 大西プログラム)

カロ連モー都切っていた

File Edit Window 04/09/2008 23:45:35



Read Optics Steering(X) SX311
s1(m) 180 K0 4E-5
s2(m) 500 Set
Set ref Steering(Y) SY311
Clear ref K0 7E-5
Plot orbit Set

90°位相ずれたところでkickしてさらにQ1にfactorをかけて合わせた

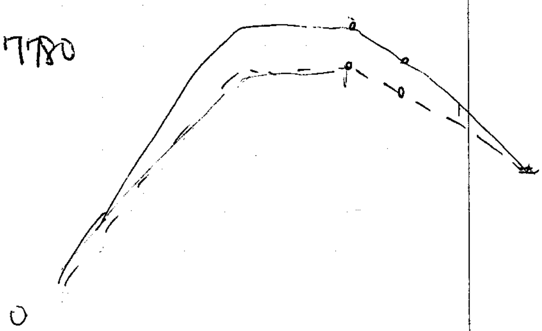
QD344 .928811312672
QF344 .852256916072
QD384 1.0730755408
QF384 1.0929934073
QD424 1.0736227083
QF424 1.0862317892
QD444 1.0896532800
QF444 1.0967366833
QD464 1.0437734007
QF464 1.0471282563
QD484 1.0025205835
QF484 1.0796509459

```
In[35]:= disp a $$$
  AX    BX    NX    EX    EPX  Element  p(GeV)emitx(m)emity(m) DDP   AY    BY    NY    EY    EPY    DZ    #
180.844 1646.78 6.30586 -.15598 -.08817 $$$     2.50000 7.E-13 7.E-13 2.9E-7 -2.7695 35.0306 6.48002 -.02245 -.00391 -4.E-4 2451
In[36]:= disp a sp484
  AX    BX    NX    EX    EPX  Element  p(GeV)emitx(m)emity(m) DDP   AY    BY    NY    EY    EPY    DZ    #
-172.21 2353.11 5.30522 .03952 -1.6E-4 SP484    3.49359 5.E-13 5.E-13 3.0E-8  .29461 5.04170 5.21487  .00920 -.00195 -9.E-6 2141
180.844 1646.78 6.30586 -.15598 -.08817 $$$     2.50000 7.E-13 7.E-13 2.9E-7 -2.7695 35.0306 6.48002 -.02245 -.00391 -4.E-4 2451
In[37]:= 3.27/3.49
Out[37]= .936962750716332 = 1/1.067
```

紙谷氏によるEnergy測定
蓄積リング領域で
3.27GeV
計算では
3.49GeV
比は1.067 QF484の補正factorとconsistent

	Energy	@4セクター頭	@5セクター先頭
実測	4.360		3.271 GeV
計算	4.857		3.491 GeV

$\frac{1.860}{2.357} = 0.789$, $\frac{0.771}{0.991} = 0.780$



GeV

PF2.5GeV: 110.A 2.4993 110A

-4.0mm
~~7.63mm~~

4.360
2.500
1.860

366A → 8.0GeV
200A → 4.5GeV

~~300mm~~
3mm

1.86

5-sector All STDBY

236 | 1860

580: -0.2080
584 -0.888

146.0A	3.293 GeV	$x = -0.537$
145.5	3.282	$x = -1.964$
140.0	3.271 GeV	$x = -3.84$ mm

3.491 GeV 大西計算

5.4-sector All STDBY

220.0 A 4.95G
200.0 A 4.5G

194.0A	4.366 GeV	$x = -1.573$	580	-2.019
193.8A	4.360 GeV	$x = -2.80$ m	584	-0.868

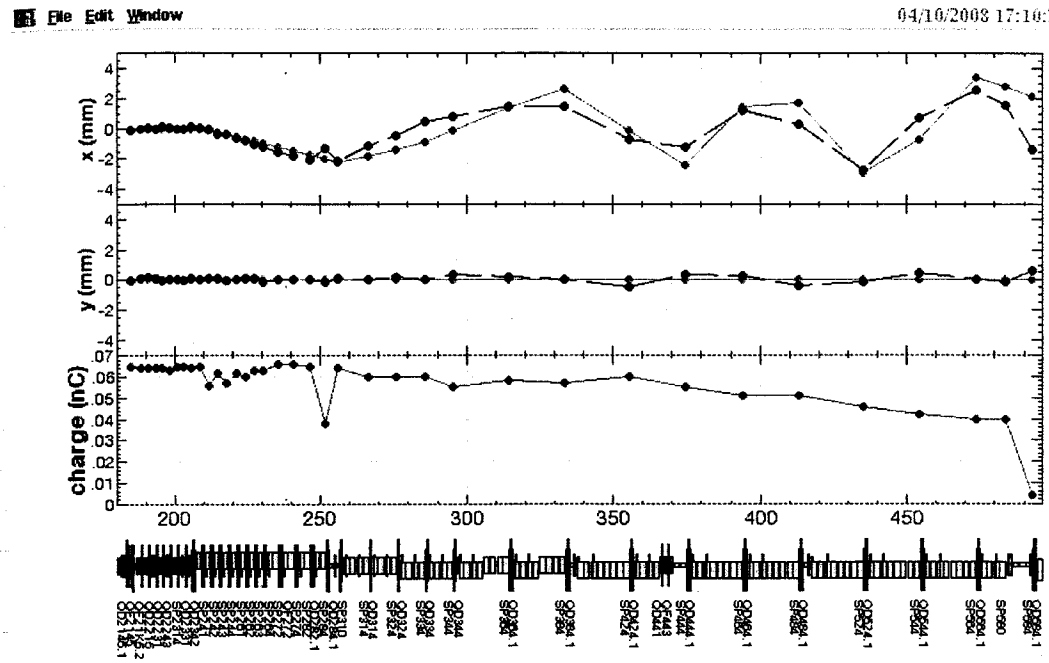
4.856 GeV 大西計算

計算上で

17:17 QD344, QT344 の Fudge Factor を 1 にセットした

QT484 の Fudge Factor を 1/1.079 → 1/(1.079×4.05)

af = 1/1.8



90° 位ずれたものも確認した