

2008 9/17 (水)

我々 277 中本 草野

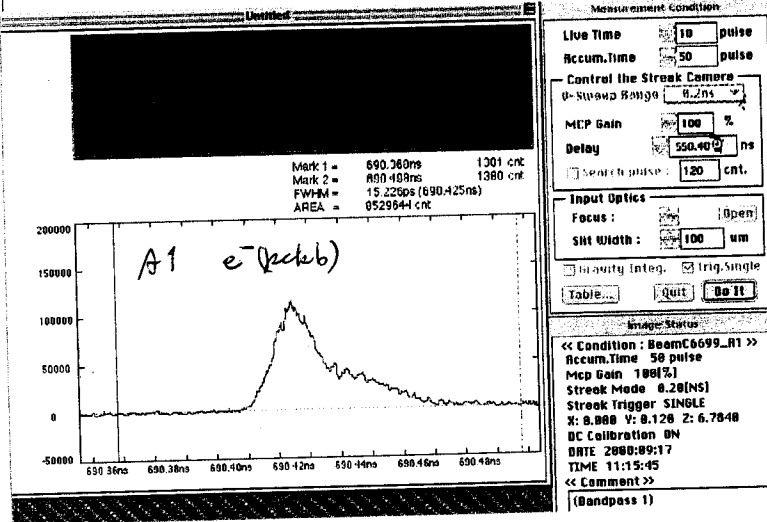
11:00

hepb e<sup>-</sup> 249 計測 @ AL

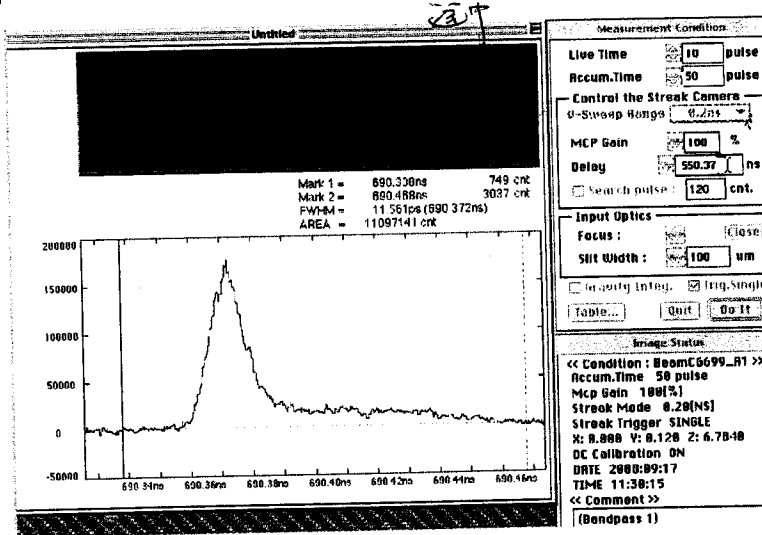
SHB1 349.9°  
SHB2 150.8°

調整前

Grid delay 1.5V



Grid delay 1.65 V  
SHB1 332.9°  
SHB2 151.3°

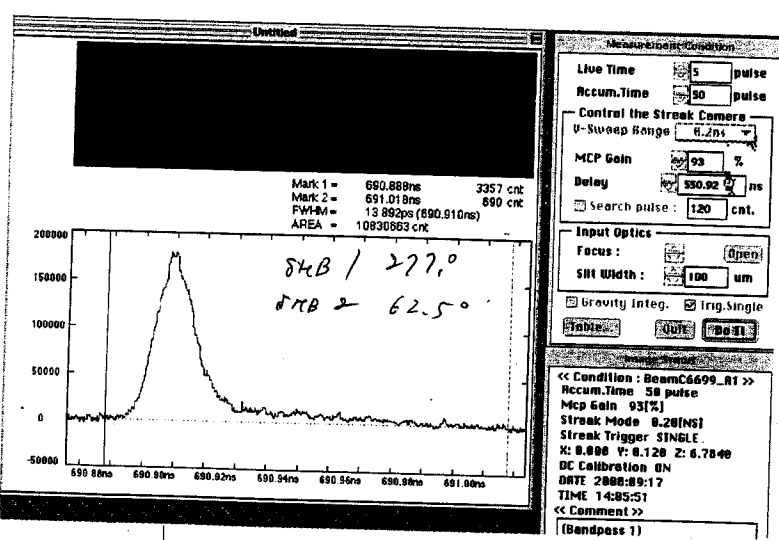
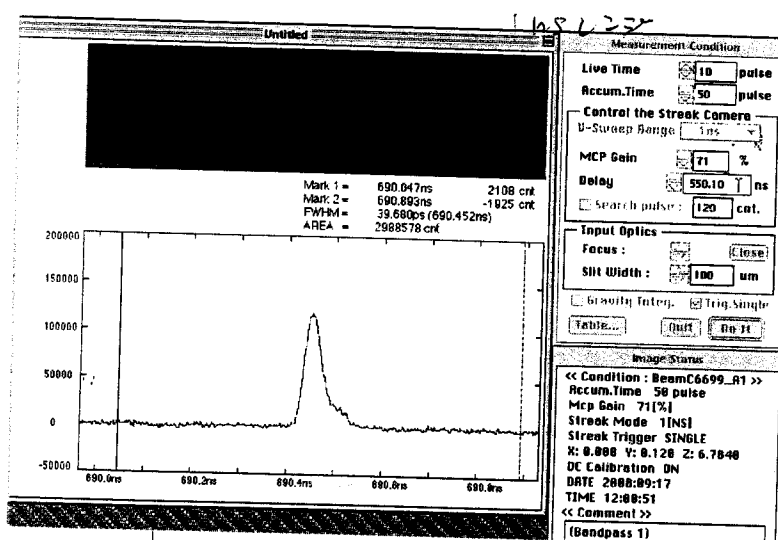
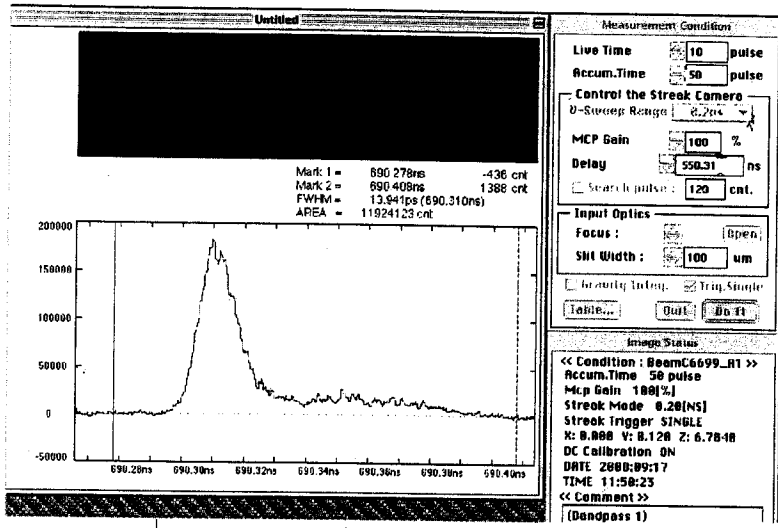


Grid Delay 1.7V      FWHM 13.82      調整前 (同程度)  
1.6V      " 13.59      同程度  
① 1.65V      " 14.05      " "  
1.5V      " 15.766      " "  
1.65V 調整前?

SMB1 328° (SMB2 157.2°) 76孔

調整後 0.245 L23

Gun delay 1.65 より前です



12:55  
17:00

phasing

2027 - 後年 2.5 GeV に加速する 準備中。

2008/9/19 (火)

準備シート (吉田)

2008/9/24 (水)

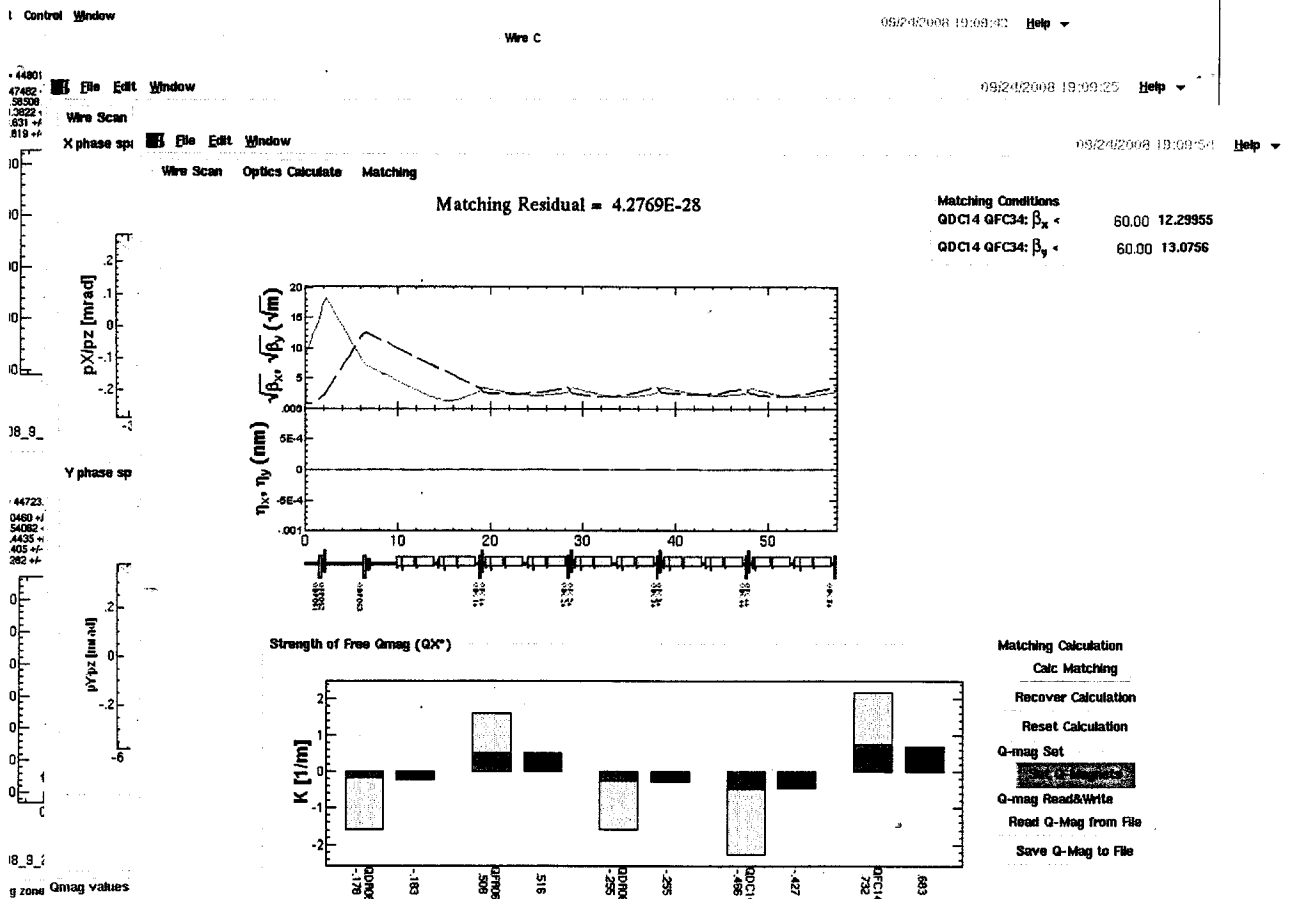
準備シート (大西) 飯田, 紙谷, 吉川

RF を含めて C セクタ - ワイヤ - Matching

1.8 GeV まで SABOT まで file open error 発生

Sabot OK. (8 GeV まで Sabot L. 2.5 GeV で再度 Sabot 発生)

C セクタ - Wire Scanner 測定



C-77 wire Scanner Matching 後

File: WS2C  
Wire B

Matching Residual = 3.4046E-28

Matching Conditions  
QDC14 QFC34:  $\beta_x <$  60.00 12.29955  
QDC14 QFC34:  $\beta_y <$  60.00 13.0756

Strength of Free Qmag (Q\*)

Qmag value: Q-Mag values were SET and saved to file and sad.  
Select Matching zone on 172

09/24/2008 19:17:48 Help

File: WS2C  
Wire A

Matching Residual = 1.5622E-28

Matching Conditions  
QDC14 QFC34:  $\beta_x <$  60.00 12.29955  
QDC14 QFC34:  $\beta_y <$  60.00 13.06519

Strength of Free Qmag (Q\*)

Qmag values: Q-Mag values were SET and saved to file and sad.  
Select Matching zone on 172

09/24/2008 19:22:42 Help

File Edit Window

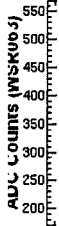
09/24/2008 19:30:09 Help

Wire Scan Optics Calculate Matching

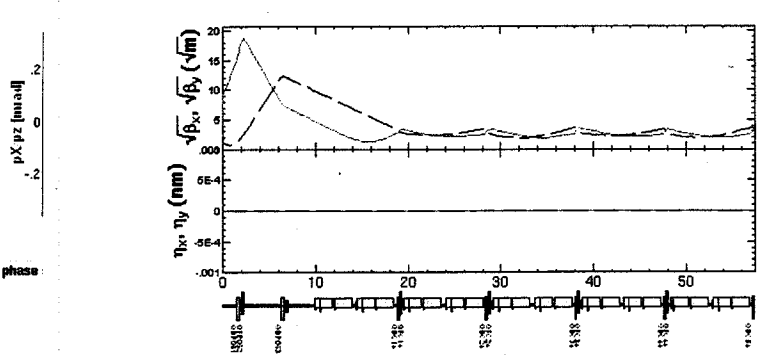
Matching Residual = 5.3161E-28

Matching Conditions  
 QDC14 QFC34:  $\beta_x <$  60.00 12.29955  
 QDC14 QFC34:  $\beta_y <$  60.00 13.0756

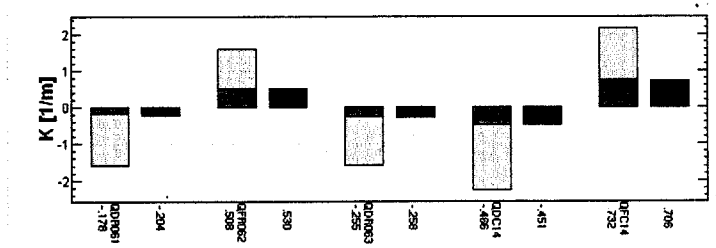
X phase



Y phase



Strength of Free Qmag (QX\*)



- Matching Calculation
- Calc Matching
- Recover Calculation
- Reset Calculation
- Q-mag Set
- Q-mag Read&Write
- Read Q-Mag from File
- Save Q-Mag to File

Qmag values were SAVED to fdata1/KEKB/Wire/LINAC/sector/electron/data/Qvalue/qname\_2008\_9\_24\_19\_25\_34.dat0  
 Matching zone on 172.19.66.32.0.0

Edit Control Window

Wire C

09/24/2008 19:32:16 Help

09/24/2008 19:32:37 Help

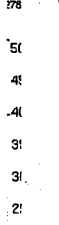
File Edit Window

Wire Scan Optics Calculate Matching

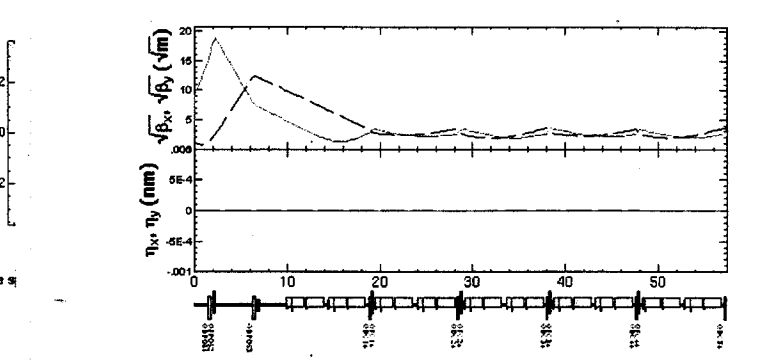
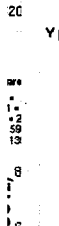
Matching Residual = 5.3161E-28

Matching Conditions  
 QDC14 QFC34:  $\beta_x <$  60.00 12.29955  
 QDC14 QFC34:  $\beta_y <$  60.00 13.0756

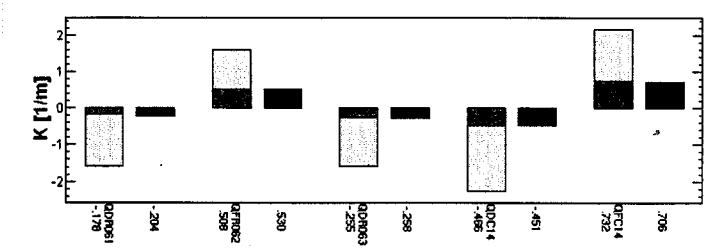
X phase



Y phase



Strength of Free Qmag (QX\*)



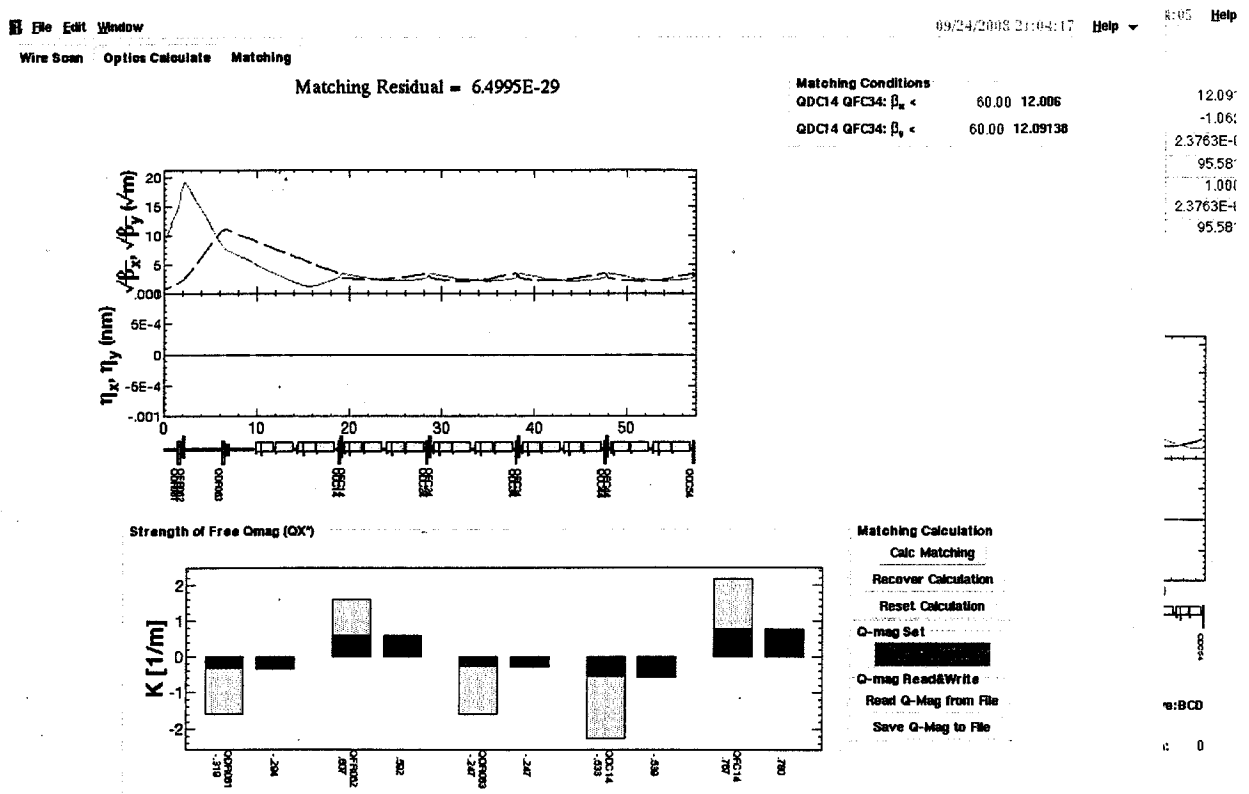
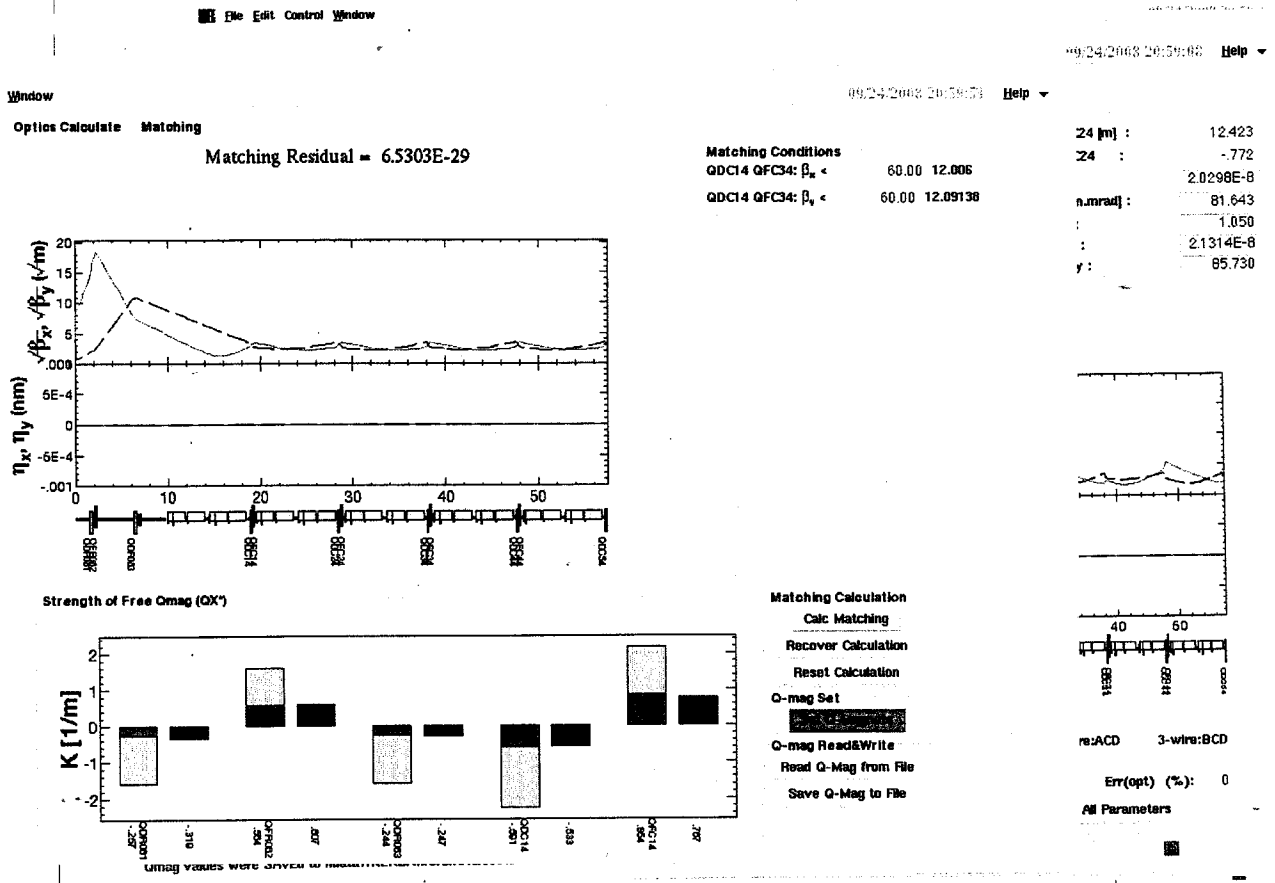
- Matching Calculation
- Calc Matching
- Recover Calculation
- Reset Calculation
- Q-mag Set
- Set Q-Magnets
- Q-mag Read&Write
- Read Q-Mag from File
- Save Q-Mag to File

Q-Mag values were SET and saved to file and save.  
 Qmag values were SAVED to fdata1/KEKB/Wire/LINAC/sector/electron/data/Qvalue/qname\_2008\_9\_24\_19\_33\_33.dat0  
 Matching zone on 172.19.66.32.0.0

SABOT 2. QMの値を書いたfileに、amsadと 66

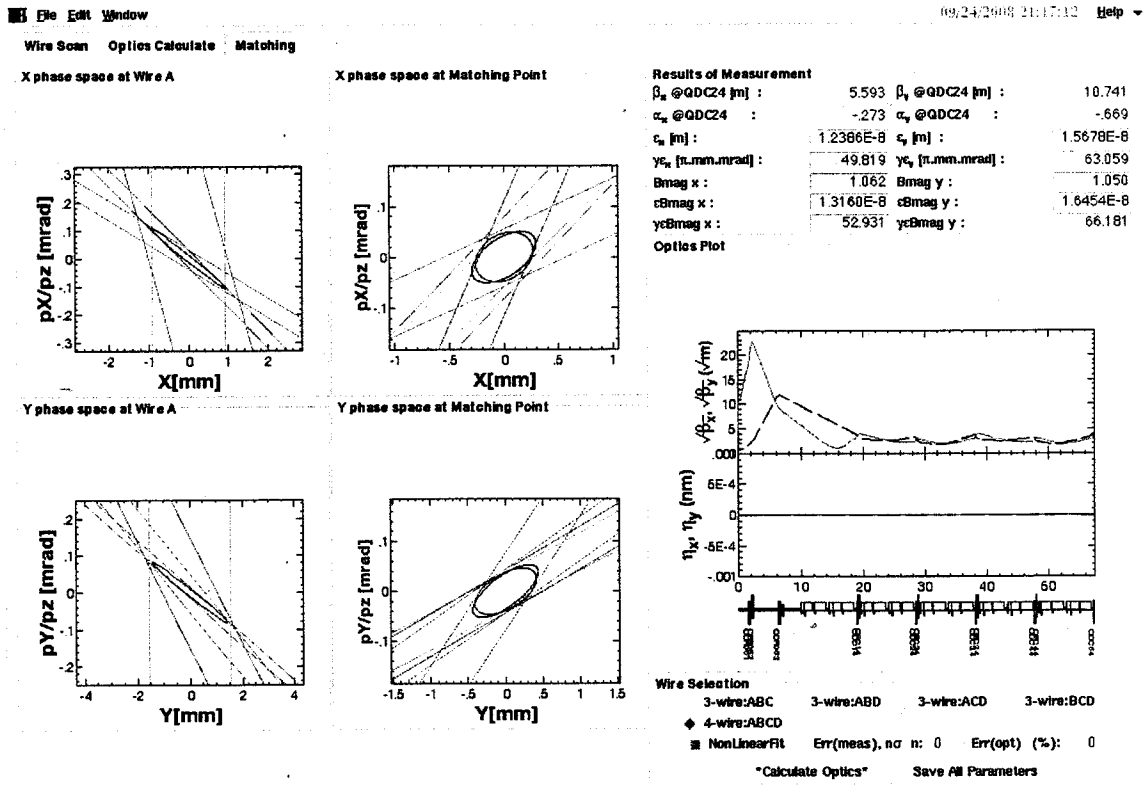
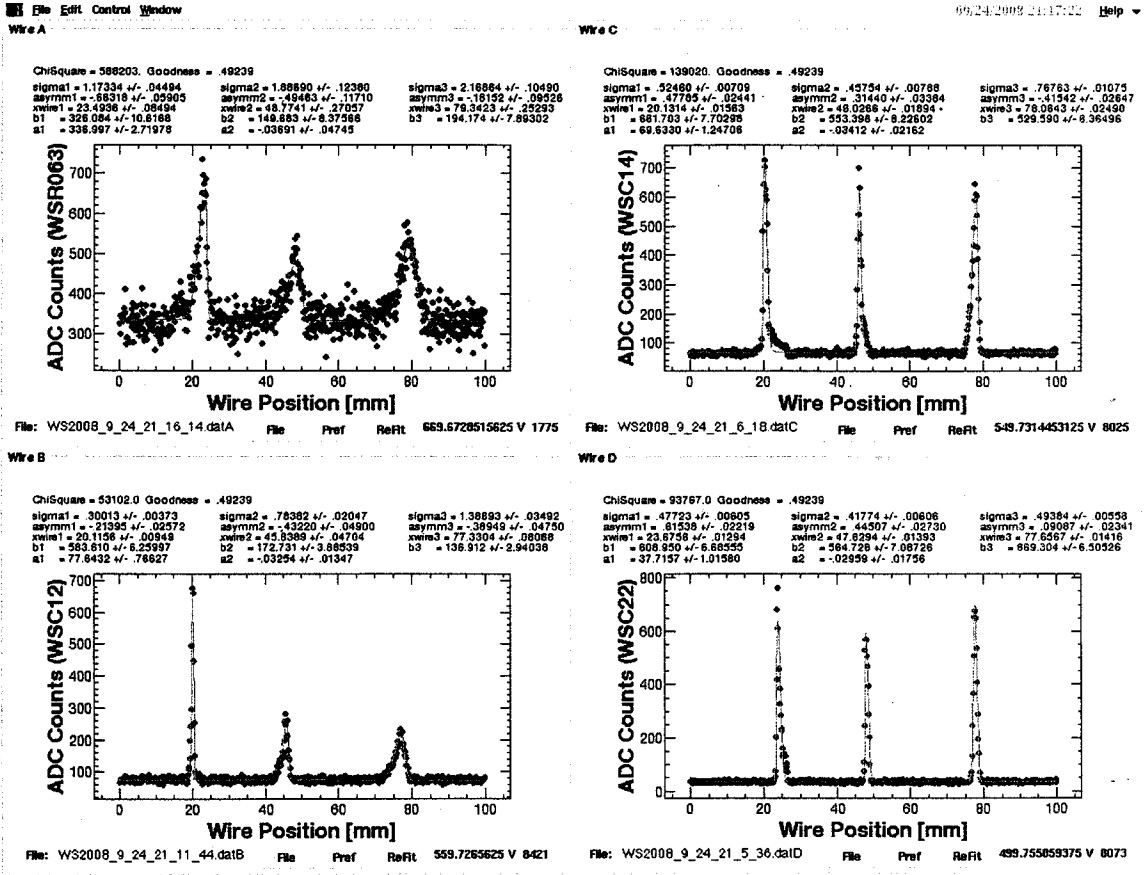
読んでいるから、acsad file "Fit.n" を Get できる。

→ 1/2の位に、amsad と a.mtsaddata と読み込ませる必要がある。



# C<sub>2</sub>77-Matching 最終値

Pf 2.5 GeV

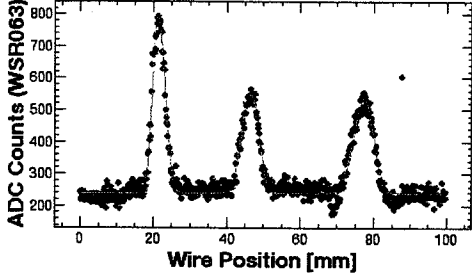


# KEKB e<sup>-</sup> SPECT

File Edit Control Window

Wire A

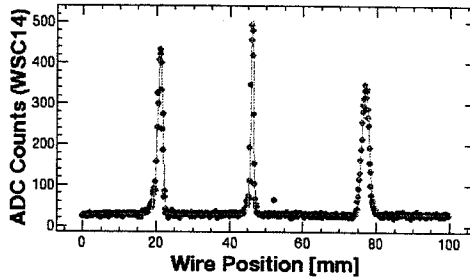
ChiSquare = 432504 Goodness = .49239  
 sigma1 = 1.67829 +/- .02747    sigma2 = 2.25417 +/- .05586    sigma3 = 2.65007 +/- .06537  
 asymm1 = .12017 +/- .03286    asymm2 = -.06639 +/- .05044    asymm3 = -.14916 +/- .04870  
 xwire1 = 21.2016 +/- .08756    xwire2 = 46.8880 +/- .13613    xwire3 = 77.8800 +/- .19688  
 b1 = 553.338 +/- 7.05689    b2 = 313.097 +/- 6.56871    b3 = 296.801 +/- 6.16779  
 a1 = 240.081 +/- 2.41744    a2 = .01866 +/- .04158    a3 =



File: WS2008\_9\_24\_21\_40\_37.datA    File    Pref    ReFit    549.7314453125 V 1777

Wire C

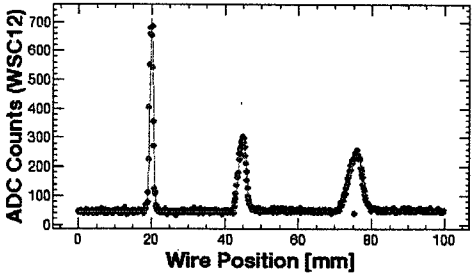
ChiSquare = 35326.9 Goodness = .49239  
 sigma1 = .68685 +/- .00702    sigma2 = .38111 +/- .00416    sigma3 = .96356 +/- .01021  
 asymm1 = -.15364 +/- .02084    asymm2 = .01356 +/- .02293    asymm3 = -.07735 +/- .02180  
 xwire1 = 21.0740 +/- .01761    xwire2 = 46.1197 +/- .01070    xwire3 = 77.0699 +/- .02575  
 b1 = 388.676 +/- 3.39112    b2 = 478.480 +/- 4.53787    b3 = 316.175 +/- 2.66748  
 a1 = 23.9038 +/- 6.8401    a2 = -.00843 +/- .01100    a3 =



File: WS2008\_9\_24\_21\_38\_28.datC    File    Pref    ReFit    399.8046875 V 8027

Wire B

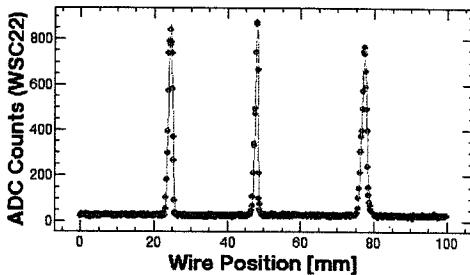
ChiSquare = 68729.2 Goodness = .49239  
 sigma1 = 4.6832 +/- .00462    sigma2 = .9984 +/- .01777    sigma3 = 1.80329 +/- .03323  
 asymm1 = .07503 +/- .02049    asymm2 = -.09203 +/- .03681    asymm3 = -.26717 +/- .03611  
 xwire1 = 19.8620 +/- .01175    xwire2 = 44.8792 +/- .04502    xwire3 = 78.2036 +/- .07870  
 b1 = 673.800 +/- 5.71992    b2 = 256.172 +/- 3.91909    b3 = 168.122 +/- 2.94152  
 a1 = 46.4229 +/- .88292    a2 = .05637 +/- .01553    a3 =



File: WS2008\_9\_24\_21\_39\_18.datB    File    Pref    ReFit    449.7802734375 V 8422

Wire D

ChiSquare = 89458.1 Goodness = .49239  
 sigma1 = 5.5852 +/- .00485    sigma2 = 3.9576 +/- .00417    sigma3 = .68621 +/- .00653  
 asymm1 = -.07535 +/- .01602    asymm2 = -.58908 +/- .01607    asymm3 = -.18957 +/- .01938  
 xwire1 = 24.4339 +/- .01203    xwire2 = 48.2047 +/- .00765    xwire3 = 77.4296 +/- .01627  
 b1 = 843.228 +/- 6.00139    b2 = 829.050 +/- 7.54186    b3 = 696.480 +/- 5.89124  
 a1 = 27.4657 +/- 1.05065    a2 = .00730 +/- .01620    a3 =

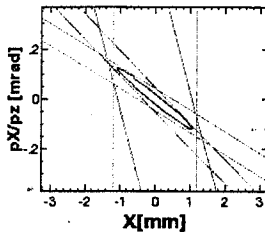


File: WS2008\_9\_24\_21\_36\_58.datD    File    Pref    ReFit    399.8046875 V 8075

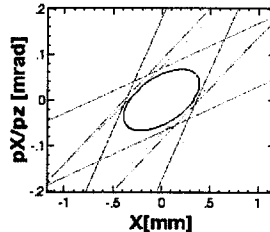
File Edit Window

Wire Scan    Optics Calculate    Matching

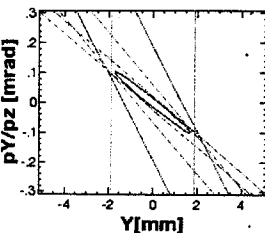
X phase space at Wire A



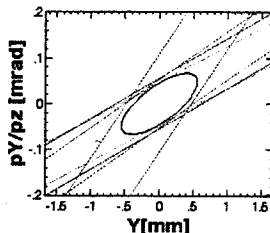
X phase space at Matching Point



Y phase space at Wire A



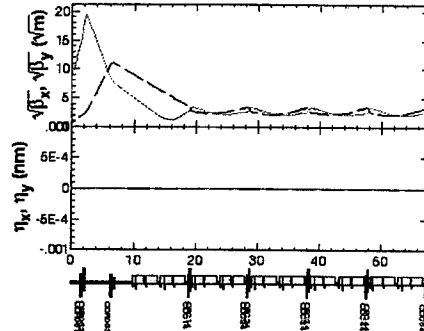
Y phase space at Matching Point



Results of Measurement

$\beta_x$ @QDC24 [m] :	6.961	$\beta_y$ @QDC24 [m] :	12.091
$\alpha_x$ @QDC24 :	-.649	$\alpha_y$ @QDC24 :	-1.062
$c_x$ [m] :	2.1943E-8	$c_y$ [m] :	2.5357E-8
$\gamma_x$ [r.mm.mrad] :	88.260	$\gamma_y$ [r.mm.mrad] :	101.992
Bmag x :	1.000	Bmag y :	1.000
cBmag x :	2.1943E-8	cBmag y :	2.5357E-8
$\gamma$ cBmag x :	88.260	$\gamma$ cBmag y :	101.992

Optics Plot



Wire Selection

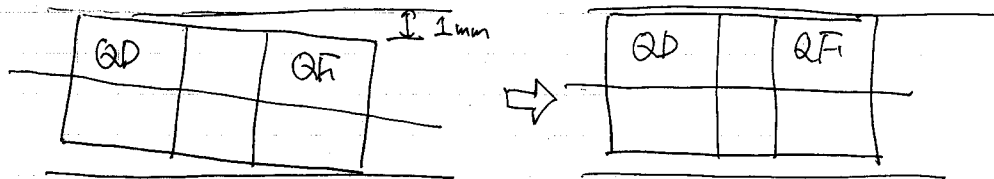
3-wire:ABC    3-wire:ABD    3-wire:ACD    3-wire:BCD  
 4-wire:ABCD  
 NonLinearFit    Err(meas), n: 0    Err(opt) (%): 0  
 \*Calculate Optics\*    Save All Parameters

8/21/46:12



2008.9.24

☆ QM-C6-4 3ラインメント調整

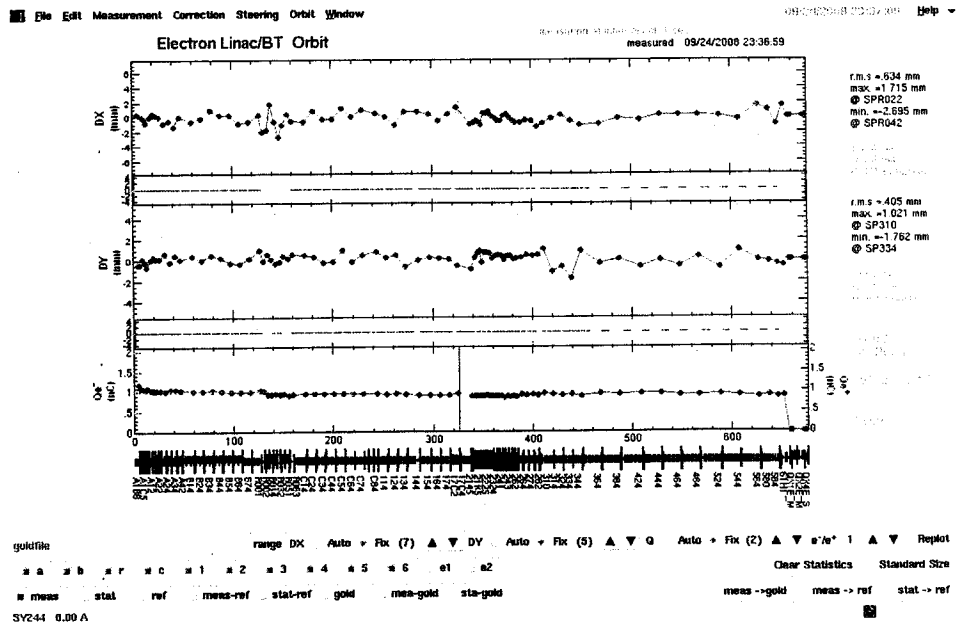


QF側も基準レベルに当たるように動かした  
Quad BPM とも +0.91mm のズレを吸収していた。

Steering の電流値はまた C6-C7 付近での  
のきなみ 2ヶ所に揺る必要のある傾向は、解消された。

さらに 3ラインメントの調整が必要なのか？  
or QM 自体の問題か？  
↳ スライスも horizontal のみに kick するのは、不可解？

☆ Target Bump



PX-17C1	⊗ SP-17-C4	⊗ SP-21-K5	⊗ SP-22-15
0.0 8.0 A	+1.4 mm +6.1 mm	-1.2 +4.0	-0.7 +3.5
PX-17C5			
5.3 A	+6.1	-1.2	-3.0
PX-21-45			
4.3 A	6.1	-0.8	-0.7
PX-17C5			
5.7 A	6.1	-1.2	-1.2
PX-21-45			
5.5 A	6.1	-1.0	-0.6
PX-17C5			
5.8 5.75	6.1	-1.2	-0.7

PX 2 2 0 PX-21-45 0	⊗ SP-21-45-1
	0.46
PX all ON	1.45
0.54	0.47

PX-17C1	8.0 A
17C5	5.75 A
21-45	5.5 A
PX-21-45	0.54 A

PF. KEKBe compat. optics