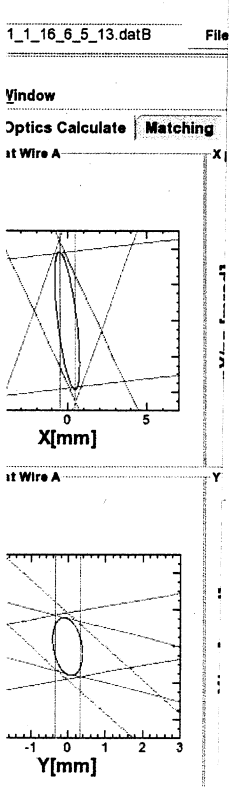
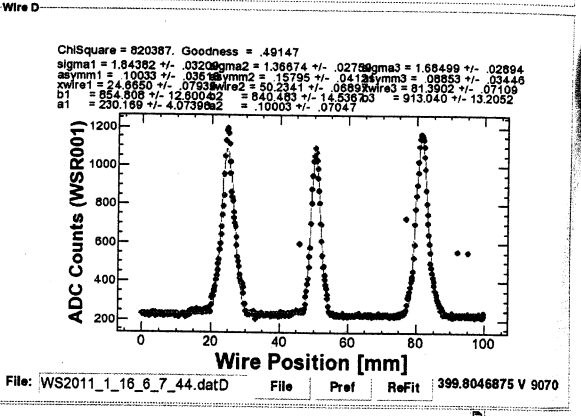
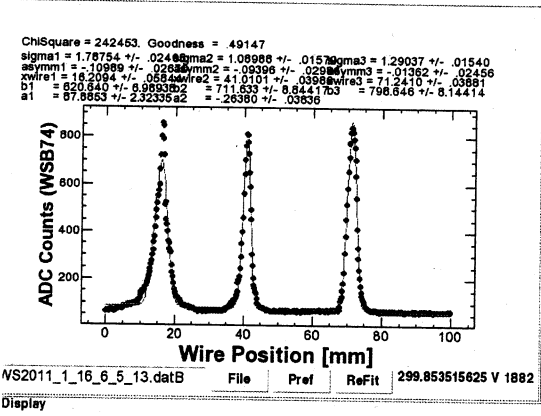
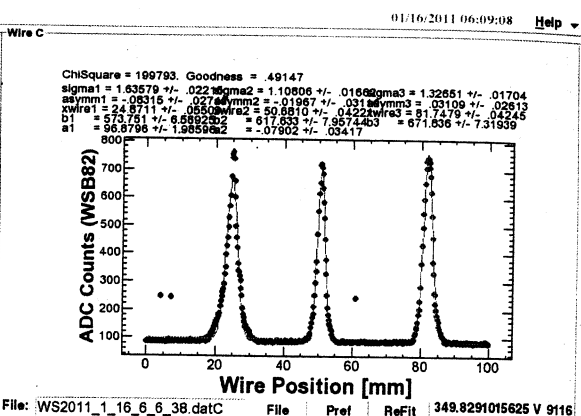
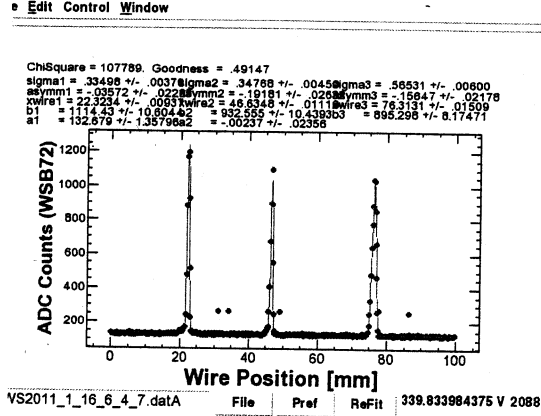
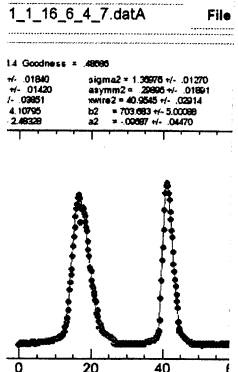
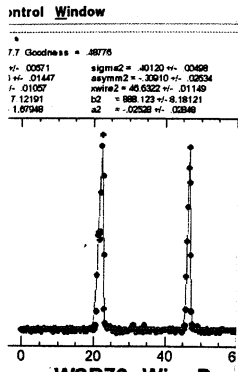


2011.1.16 C shift
8GeV C-6
5nC のインパルス測定

173



File Edit Window 01/16/2011 06:09:15 Help

Results of Measurement			
β_x @SCR003 [m] :	35.382	β_y @SCR003 [m] :	2.705
α_x @SCR003 :	13.057	α_y @SCR003 :	0.663
ϵ_x [m] :	5.4721E-8	ϵ_y [m] :	4.9687E-8
γ_{ex} [r.mm.mrad] :	182.048	γ_{ey} [r.mm.mrad] :	165.235
Bmag x :	1.055	Bmag y :	1.764
ϵ Bmag x :	5.7743E-8	ϵ Bmag y :	8.7597E-8
γ Bmag x :	192.101	γ Bmag y :	291.422

Optics Plot
Wire Selection
3-wire:ABC 3-wire:ABD 3-wire:ACD 3-wire:BCD
4-wire:ABCD
NonLinearFit Err(mes), nu n: 0 Err(opt) (%): 0
Calculate Optics Save All Parameters

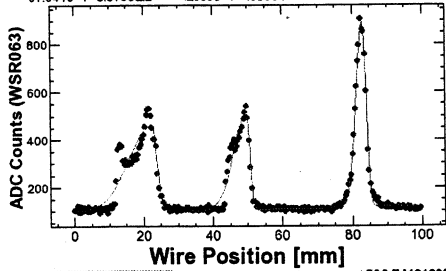
All informations are SAVED to /data1/KEKB/Wire/LINAC/sectorB/electron/data/MatchResult/WSLB_2011_1_16_6_8_55

2011/01/16 C shift B-Sec e- 10Hz 1st 熊野 (5nC)

2011/01/16 C shift B-Sec e- 10Hz 2nd 熊野 (5nC)

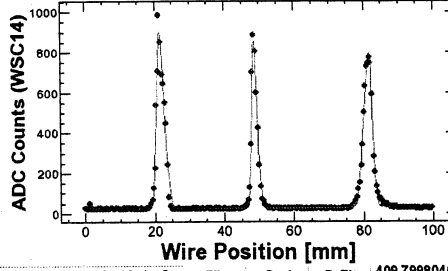
are SAVED to /data1/KEKB/Wir

ChiSquare = 215596 Goodness = 48776
 $\sigma_{m1} = 4.01895 \pm 1.1380$ $\sigma_{m2} = 2.30482 \pm 0.0804$ $\sigma_{m3} = 1.46907 \pm 0.03289$
 $\sigma_{sym1} = -66322 \pm 0.4488$ $\sigma_{sym2} = -61597 \pm 0.5488$ $\sigma_{sym3} = -26744 \pm 0.4360$
 $\sigma_{wire1} = 22.3768 \pm 2.1633$ $\sigma_{wire2} = 49.8973 \pm 15.4987$ $\sigma_{wire3} = 82.8997 \pm 0.7639$
 $\sigma_1 = 359.753 \pm 9.1983$ $\sigma_2 = 408.623 \pm 11.3083$ $\sigma_3 = 775.497 \pm 14.7074$
 $\sigma_4 = 97.0419 \pm 5.8768$ $\sigma_5 = 23936 \pm 0.9064$



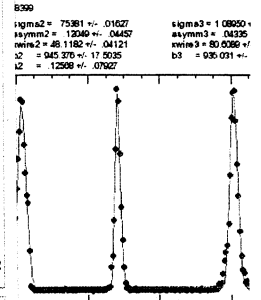
2011_1_16_6_11_29.datA File Pref ReFit 529.7412109375 V 2251

ChiSquare = 71384.9 Goodness = 48776
 $\sigma_{m1} = 1.06503 \pm 0.1428$ $\sigma_{m2} = 7.7433 \pm 0.1228$ $\sigma_{m3} = 1.23030 \pm 0.1726$
 $\sigma_{sym1} = 25843 \pm 0.2689$ $\sigma_{sym2} = 27141 \pm 0.3285$ $\sigma_{sym3} = 21130 \pm 0.2817$
 $\sigma_{wire1} = 21.2566 \pm 0.3478$ $\sigma_{wire2} = 48.3776 \pm 0.9022$ $\sigma_{wire3} = 81.5367 \pm 0.4248$
 $\sigma_1 = 873.374 \pm 9.7763$ $\sigma_2 = 847.843 \pm 11.5723$ $\sigma_3 = 770.903 \pm 9.20640$
 $\sigma_4 = 25.8108 \pm 2.3466$ $\sigma_5 = 0.7486 \pm 0.4064$



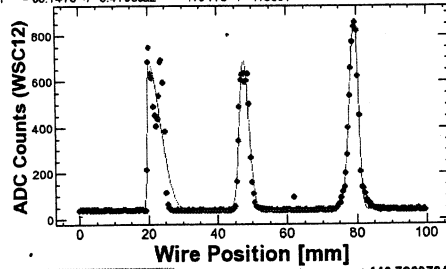
File: WS2011_1_16_6_13_42.datC File Pref ReFit 409.7998046875 V 8392

01/16/2011 0



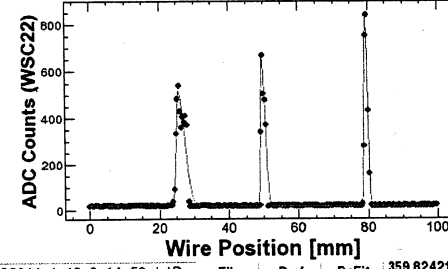
3_42.datC File Pref

ChiSquare = 499480 Goodness = 48776
 $\sigma_{m1} = 1.89695 \pm 0.0601$ $\sigma_{m2} = 1.34102 \pm 0.0520$ $\sigma_{m3} = 1.27255 \pm 0.04330$
 $\sigma_{sym1} = 90000 \pm 0.3303$ $\sigma_{sym2} = 0.9119 \pm 0.8448$ $\sigma_{sym3} = -2.2487 \pm 0.08800$
 $\sigma_{wire1} = 20.1586 \pm 0.9220$ $\sigma_{wire2} = 47.6354 \pm 13.9449$ $\sigma_{wire3} = 79.5943 \pm 10.586$
 $\sigma_1 = 639.181 \pm 9.9718$ $\sigma_2 = 658.434 \pm 23.2269$ $\sigma_3 = 626.650 \pm 23.9539$
 $\sigma_4 = 33.1476 \pm 6.4786$ $\sigma_5 = 104.76 \pm 10.937$



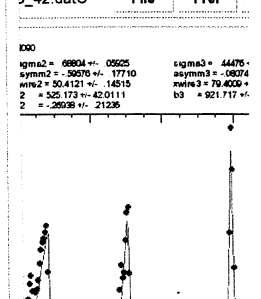
011_1_16_6_12_35.datB File Pref ReFit 449.7802734375 V 8823

ChiSquare = 132377 Goodness = 48776
 $\sigma_{m1} = 1.22509 \pm 0.0361$ $\sigma_{m2} = 5.9621 \pm 0.2025$ $\sigma_{m3} = 44.098 \pm 0.1240$
 $\sigma_{sym1} = 54746 \pm 0.0488$ $\sigma_{sym2} = 4.9858 \pm 100.85$ $\sigma_{sym3} = 10727 \pm 0.5216$
 $\sigma_{wire1} = 26.3913 \pm 0.7499$ $\sigma_{wire2} = 49.5586 \pm 0.7561$ $\sigma_{wire3} = 79.4210 \pm 0.392$
 $\sigma_1 = 436.689 \pm 12.5522$ $\sigma_2 = 616.030 \pm 20.4803$ $\sigma_3 = 807.428 \pm 20.9324$
 $\sigma_4 = 19.5908 \pm 3.1543$ $\sigma_5 = 0.1275 \pm 0.5369$

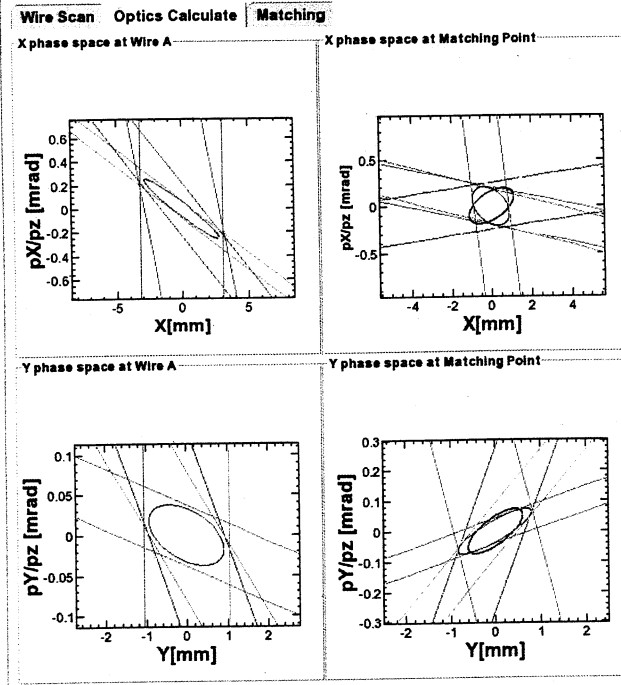


File: WS2011_1_16_6_14_50.datD File Pref ReFit 359.82421875 V 8461

3_42.datC File Pref

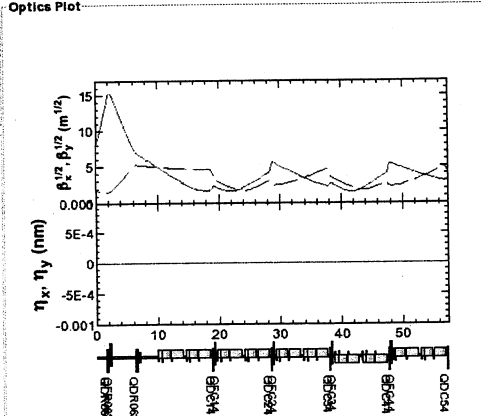


3_42.datC File Pref



Results of Measurement

β_x @QDC34 [m] :	4.799	β_y @QDC34 [m] :	22.109
α_x @QDC34 :	.404	α_y @QDC34 :	-1.704
ϵ_x [m] :	1.7771E-7	ϵ_y [m] :	3.0502E-8
γ_x [r.mm.mrad] :	778.560	γ_y [r.mm.mrad] :	133.627
Bmag x :	1.595	Bmag y :	1.203
ϵ Bmag x :	2.8353E-7	ϵ Bmag y :	3.6701E-8
γ Bmag x :	1242.117	γ Bmag y :	160.787



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

All informations are SAVED to /data1/KEKB/Wire/LINAC/sector/C/electron/data/MatchResult/WSLC_2011_1_16_6_16_8

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

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3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

3_42.datC File Pref

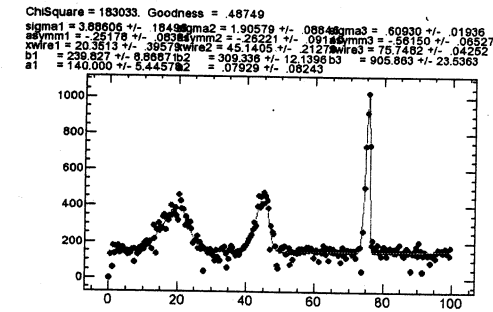
2011/01/16 C shift C-Sec e- 5Hz 1st 熊野 (5nC)

2011/01/16 C shift C-Sec e- 5Hz 2nd 熊野 (5nC)

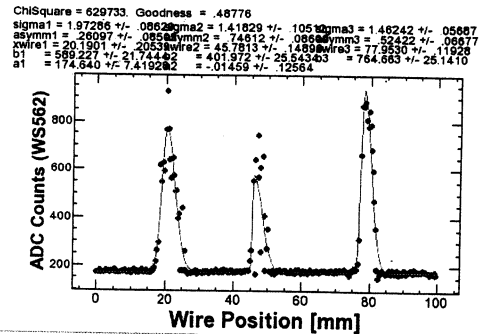
Window

dness = JB454

340	sigma2 = 90972 +/- 10220	sig
107	asymm2 = -1.0202 +/- 29713	as
12	wire2 = 44.6413 +/- 31429	wr
7	b2 = 111.803 +/- 23.1425	b3
	a2 = -31020 +/- 37159	

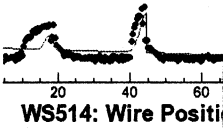


Wire C

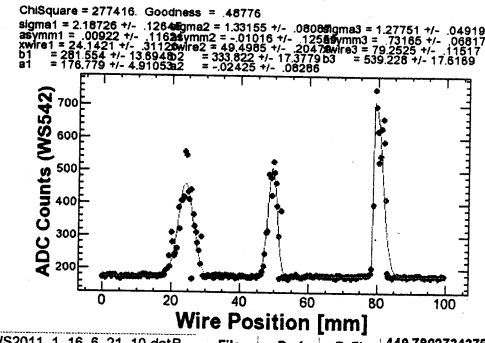


WS2011_1_16_6_25_40.datA File Pref ReFit 339.833984375 V 3124

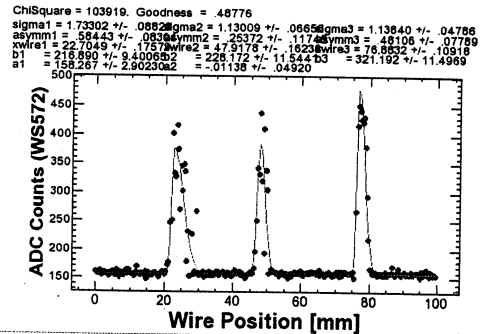
File: WS2011_1_16_6_22_17.datC File Pref ReFit 599.70703125 V 2787



_16_6_25_40.datA File



Wire D

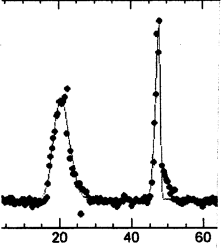


WS2011_1_16_6_21_10.datB File Pref ReFit 449.7802734375 V 2812

File: WS2011_1_16_6_24_28.datD File Pref ReFit 549.7314453125 V 2677

dness = JB540

078	sigma2 = 70129 +/- 02732	s
037	asymm2 = -44192 +/- 02707	a
70	wire2 = 47.9608 +/- 00055	w
4	b2 = 342.156 +/- 10.9620	b
1	a2 = 8.0024 +/- 04852	a



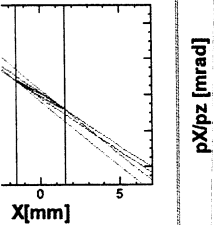
_16_6_21_10.datB File

low

ics Calculate Matching

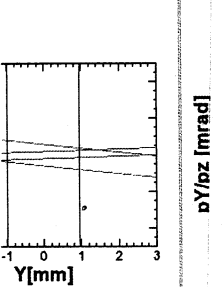
Wire A

X phase space at Wire A



Wire A

Y phase space at Wire A

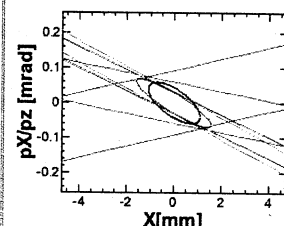
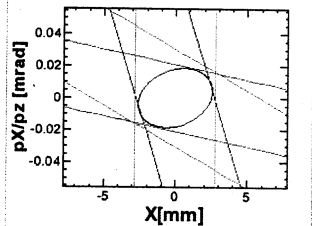


File Edit Window

Wire Scan Optics Calculate Matching

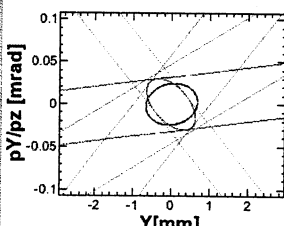
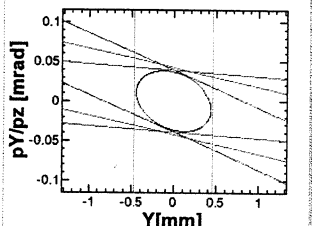
X phase space at Wire A

X phase space at Matching Point



Y phase space at Wire A

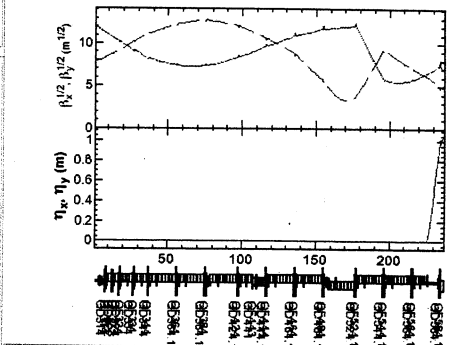
Y phase space at Matching Point



Results of Measurement

β_x @BM611E [m] :	52.534	β_y @BM611E [m] :	24.749
α_x @BM611E :	2.065	α_y @BM611E :	631
ϵ_x [m] :	4.7022E-8	ϵ_y [m] :	1.6220E-8
γ_x [r.m.mrad] :	736.150	γ_y [r.m.mrad] :	253.935
Bmag x :	1.292	Bmag y :	1.302
cBmag x :	6.0741E-8	cBmag y :	2.1122E-8
rcBmag x :	950.944	rcBmag y :	330.677

Optics Plot



Wire Selection

- 3-wire:ABC
 - 3-wire:ABD
 - 3-wire:ACD
 - 3-wire:BCD
 - 4-wire:ABCD
- NonLinearFit Err(meas), no n: 0 Err(opt) (%) : 0

Calculate Optics

Save All Parameters

All informations are SAVED to /data1/KEKB/Wire/LINAC/sector5/KEKB/data/MatchResult/WSL5e_2011_1_16_6_27_38

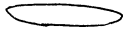

SAVED to /data1/KEKB/Wire/

2011/01/16 C shift 5-Sec e- 5Hz 1st 熊野 (5nc)

2011/01/16 C shift 5-Sec e- 5Hz 2nd 熊野 (5nc)

2011/1/20

PF-3T e-u

- ① F2 z  横長 T_2, L .
 $2 \times 9 \times 9$ e z z  縦長 L, L .
 } 系は charge 量
 変化せず.
- ② F2 z z z. e-u の 広巾 $z z$ の 方巾 (z z の spread 広い方) 通りが良い
- ③ テイルの 大きい $z z$ $1 \times 9 \times 9$, $9 \times 1 \times 9 \times 9$ z z 調整

2011.2.17(木) PF CSR Study

(事前準備)

古川さんのタイミング調整作業 9:40 終了予定

(E-4調整)

AI からの E-4 KEKB 用の grid pulser (1) (2) (3) PF E-4 用 grid pulser 9:40 終了予定

(1) KEKB
(2) → PF
(3) → Inc
o. Inc
b
bias > 60V
pulse V

9:34

AI-gun PF 用 grid pulser の Inc 値を電圧量を増やせるかどうかについて調べる。

9:59

PF 用 grid-pulser 用の E-4 のタイミングがおかしく

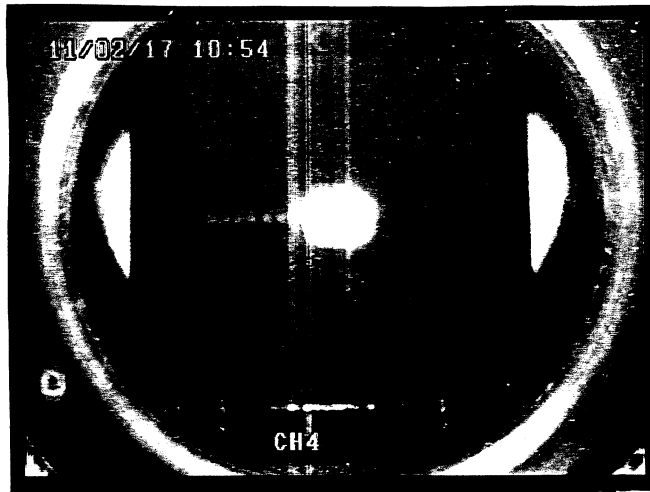
10:35

問題解決 - AI PF grid pulser beam ON

Gun bias のみで Inc 値を増やすことができた (180V → 145V)

SHB1-2 phase. Gun delay. SB phase の調整で J arc の E-4 用 grid pulser が適切に存在するように → gun delay の調整で energy-tail がなくなった。

Magnez 先生 study パワーが 運転パワー外に変更



10:59

軌道調整 wieh Inc E-4

○測定におこるべきことがS.

SY3 SC-61-hの観測した。

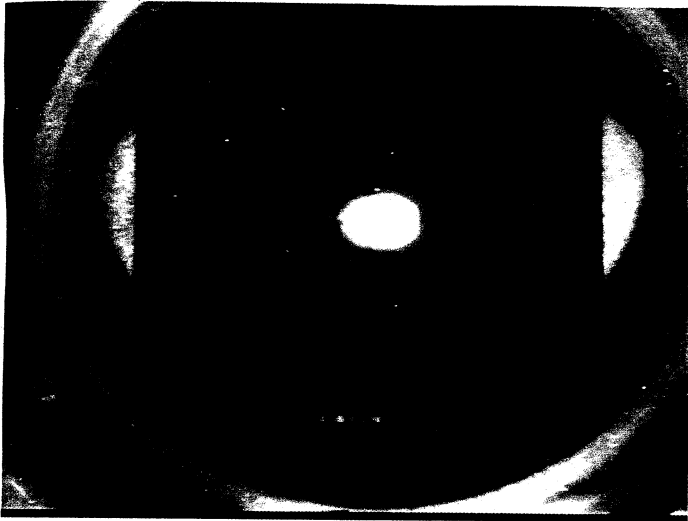
C-band 44A unitの

E_s - Energy gain 関係式

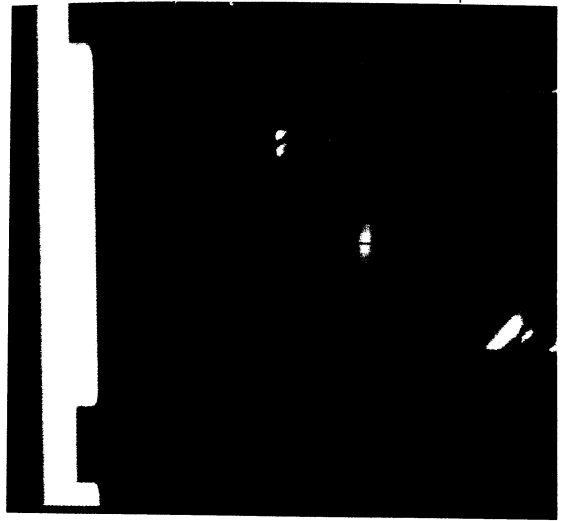
E_s - zero crossing 位相の関係式

11:23

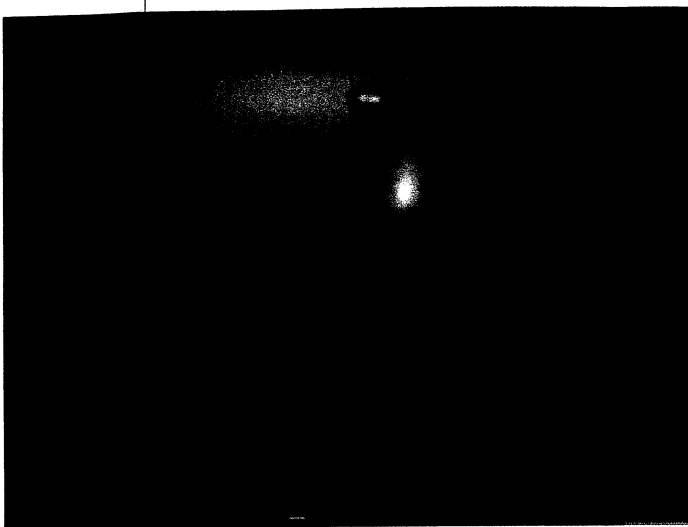
• ライトウィル終端まではビーム通る。PFBTにビームが通るおに energy-knobは。SC-61-F1, ZV F9 はビーム確認。SB phaseの調整



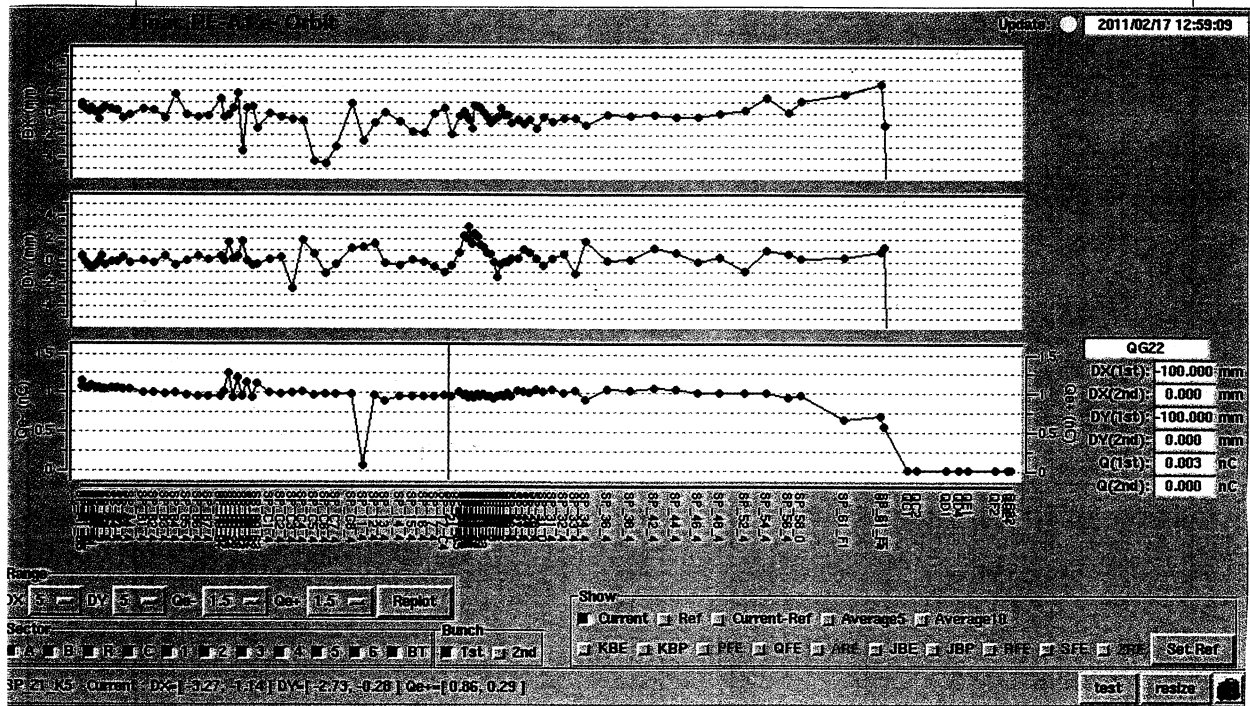
SC_R0_31



SC_61_F1



SC 61 F9



13:25

Wire Scanner 測定 (プログラムの修正後)

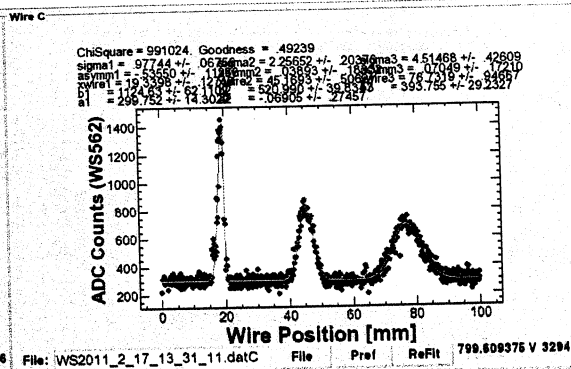
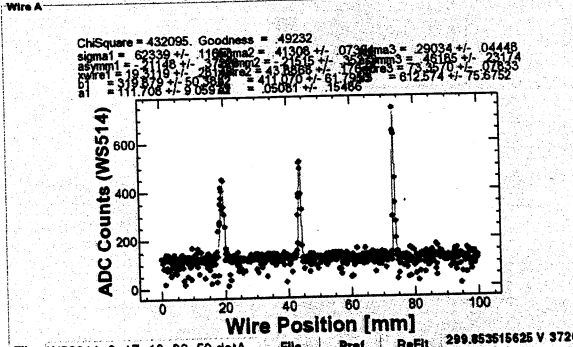
13:40

Screen 61-F1, F2, F9 之現状の spot size 確認

13:42

WS 測定結果に基づいて matching 計算してその値を Set

File Edit Control Window



β_y @BP581 [m] :

α_y @BP581 :

τ_y [m] :

$\Delta\epsilon_y$ [m] :

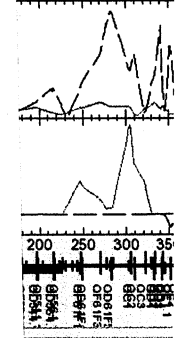
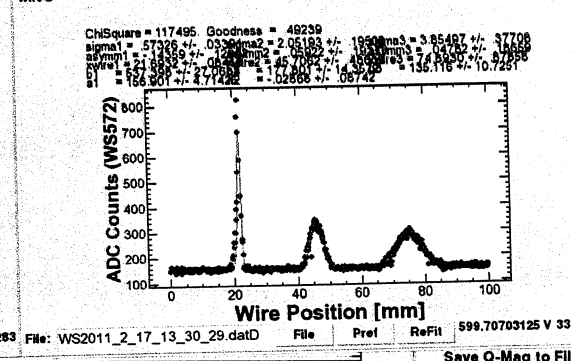
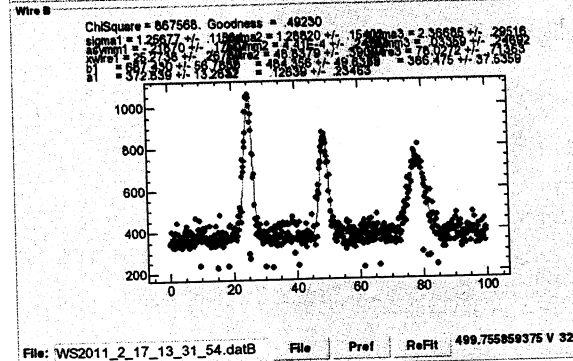
γ_y [mm.mrad] :

$\Delta\gamma_y$ [mm.mrad] :

Bmagy :

Bmagy :

γ_e Bmagy :

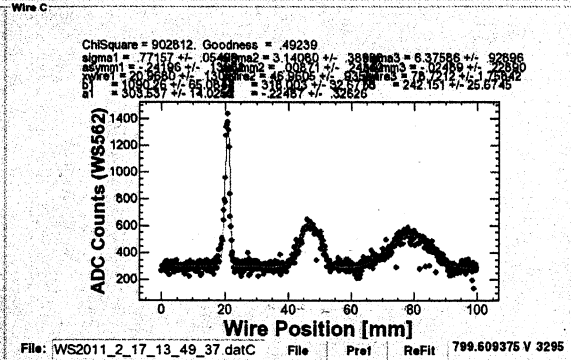
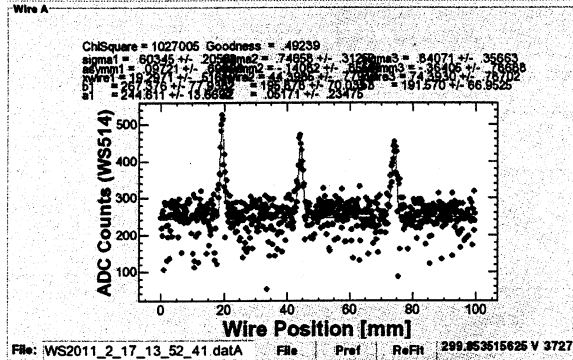


3-wire:ACD

Save Q-Mag to File

DD484	-422
OF484	-451
883	879
OF484	879
DD524	-349
-331	-331
OF524	342
346	346
DD544	-160
-168	-168
OF544	164
175	175
OF544	-371
DD564	-382
354	354
OF564	382

File Edit Control Window



β_y @BP581 [m] :

α_y @BP581 :

τ_y [m] :

$\Delta\epsilon_y$ [m] :

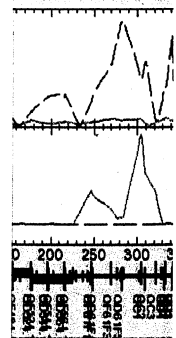
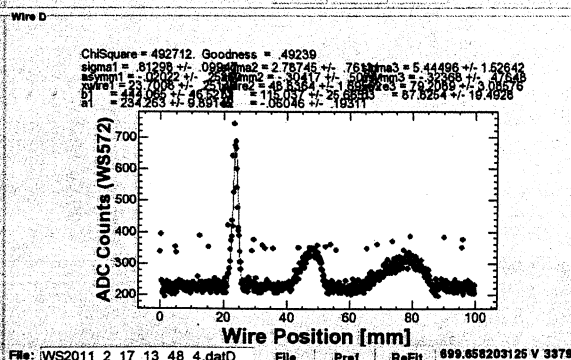
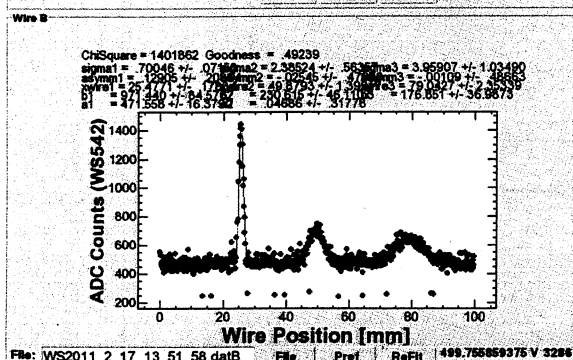
γ_y [mm.mrad] :

$\Delta\gamma_y$ [mm.mrad] :

Bmagy :

Bmagy :

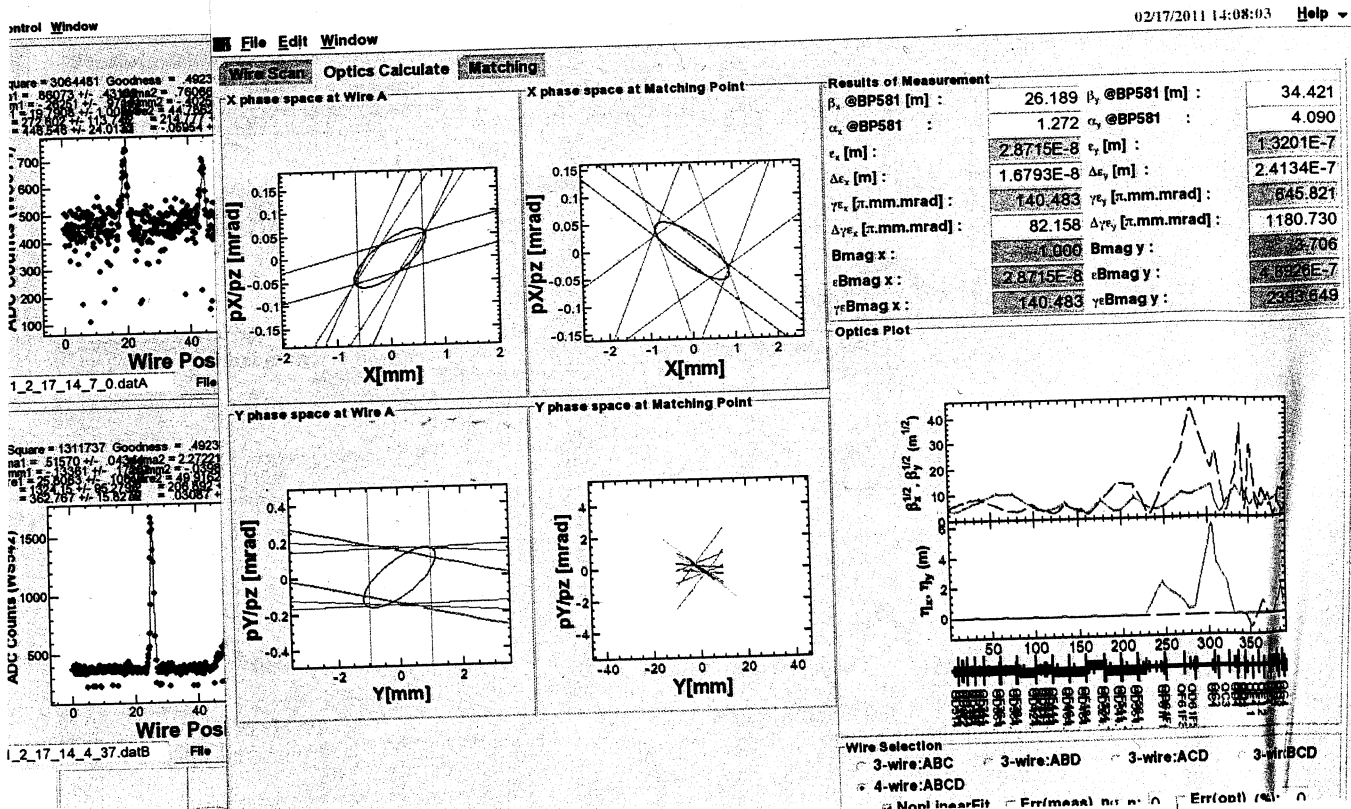
γ_e Bmagy :



4-wire:ABCD

NonLinearFit Err(meas), no n: 0 Err(opt)

DD484	-451
OF484	-451
879	879
OF484	879
DD524	-328
-331	-331
OF524	346
346	346
DD544	-168
-171	-171
OF544	164
164	164
OF544	-182
DD564	-380
382	382
OF564	382



↑
Set LTに。F1, F2, F9 を調整して長さを調整して。
前頁の 13=55 の Set に戻した。
(1回目 Matching 後)

14:15

RF に E-4 を送る。
RF に E-4 の trigger 信号が正しく伝わらない。
RF BPM の タイミング 調整中
CSR 用 モニタ の 信号 確認中

帯域幅出しの相違中

14:50

E-4 電荷量に 対応 依存性 を 見 ため に。Gun の 電荷量 を
1nC → 0.1nC に 減 した。 Bias 電圧 145V → 176V に 変 更
その他 パラメータ は 変 更 せず

Q = 0.5nC (これ以下。A部2の電荷量を2倍)

Q = 1.0nC

Streak Camera の 信号 を 取 った が 0.5nC の とき は
見 込 り に 1nC の とき は 見 込 り ない。

