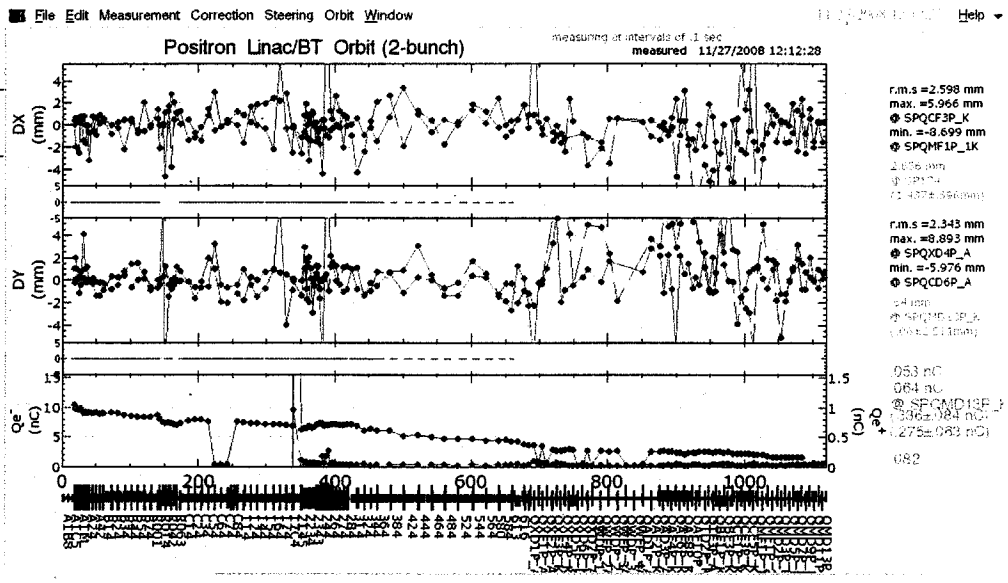
161 e^+



14:05 e^+

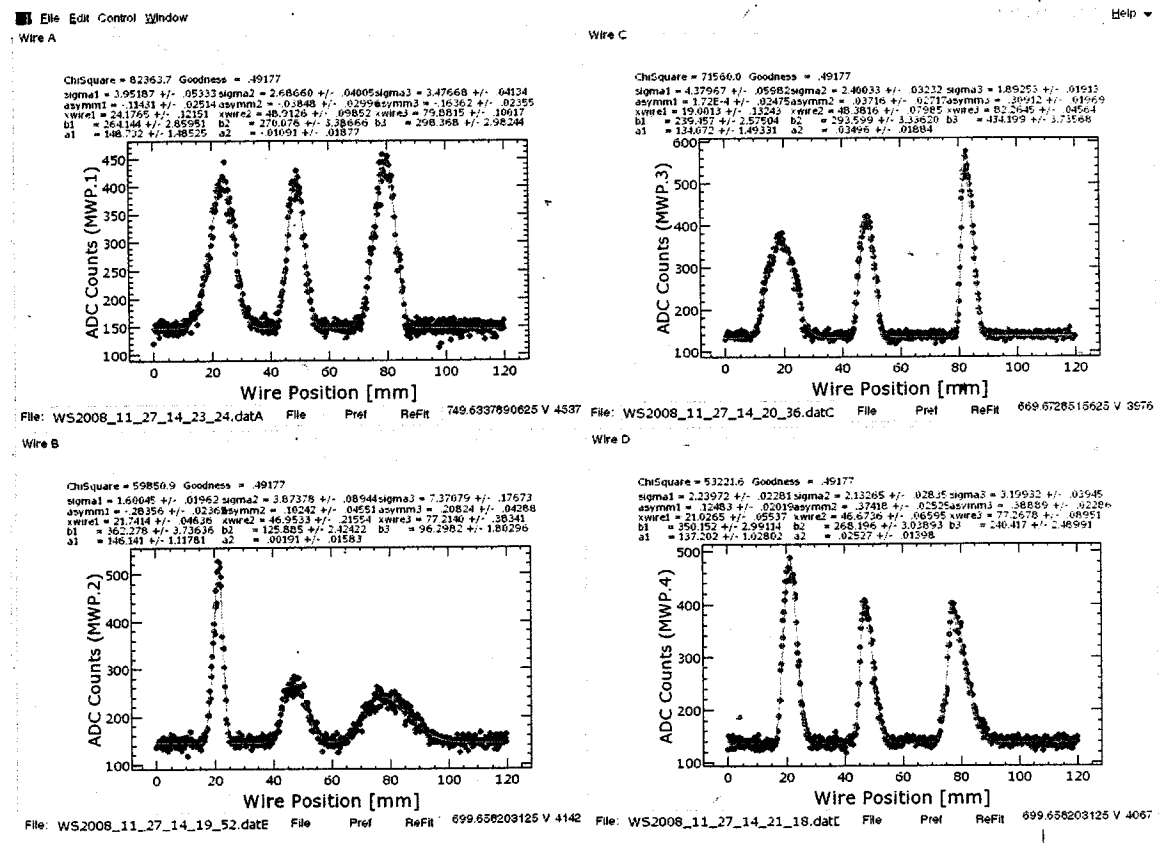
再開. この間 phasing 実施(富豊氏) 菊地, 飯田.

ビームがふらついている.

e^+/e^- 切り換えてみる. → 少しましになったがまだ揺れている

運転パラメーターの方がマシ.

"BTp11-27-2008-14:32:17" に 運転パラメーターを Save.



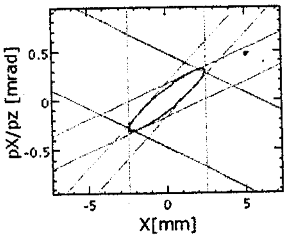
Mating 前
BTp11 27_2008-14:22:27 に Save

Matching

File Edit Window

Wire Scan | Optics Calculate | Matching

X phase space at Wire A

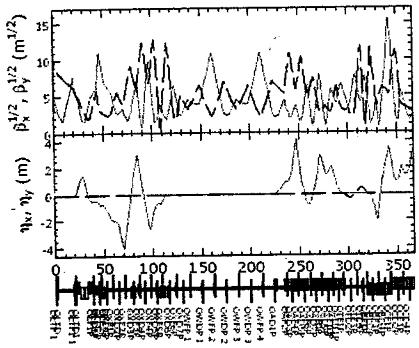


X phase space at Matching Point

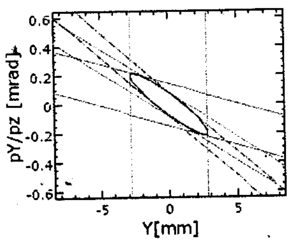
Results of Measurement

β_x @MWP.1 [m] :	20.497	β_y @MWP.1 [m] :	36.351
α_x @MWP.1 :	-2.435	α_y @MWP.1 :	2.552
ε_x [m] :	2.8903E-7	ε_y [m] :	2.1829E-7
$\gamma\varepsilon_x$ [π.mm.mrad] :	2032.846	$\gamma\varepsilon_y$ [π.mm.mrad] :	1535.355
Bmag x :	1.639	Bmag y :	1.069
εBmag x :	4.7386E-7	εBmag y :	2.3342E-7
γεBmag x :	3332.837	γεBmag y :	1641.729

Optics Plot



Y phase space at Wire A



Y phase space at Matching Point

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

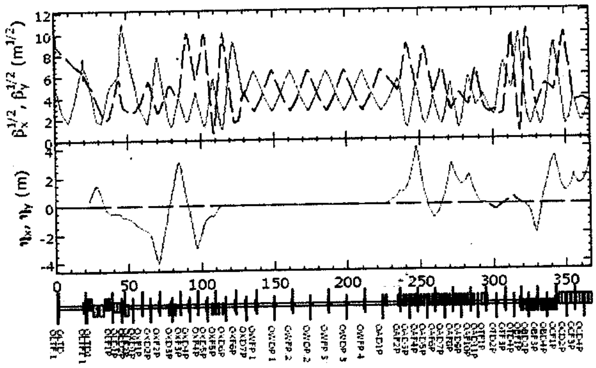
'Calculate Optics' Save All Parameters

Qmag values were SAVEd to /ldata1/KEKB/Wire/BTin/positron/data/Qvalue/lqname_2008_11_27_14_18_50.dat0

File Edit Window Help

Wire Scan | Optics Calculate | Matching

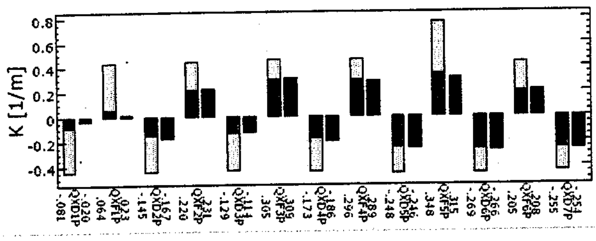
Matching Residual = .00521



Matching Conditions

QXF1P: β_x <	100.00	10.75765
QXD2P: β_y <	100.00	30.67493
QXF2P: β_x <	60.00	61.28262
QXF2P: η_x =	-4.00	-3.99226
QXD3P: β_y <	100.00	26.31743
QXF3P: β_x <	100.00	15.1986
QXF3P: η_x <	3.00	3.98884
QXD4P: β_y <	100.00	100.13875
QXF4P: β_x <	20.00	20.36128
QXD5P: β_y <	100.00	100.12875
QXD6P: β_y <	100.00	100.00127
QXD6P: η_x =	.00	-.00269
QXD6P: η'_x =	.00	3.00915E-4

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

The Calculation for Q-Mag values are RECOVERed to the before matching.

Matching後 BTp11 27_2008-14:28:30 に ~~at~~ save
この後は（やれば）Matchingできそうなので今日は e⁻ の Matching を
測定することにする。

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運転パラメーター

Matching前 "BTe11_27_2008_16:15:32" にQM st.datにsave.

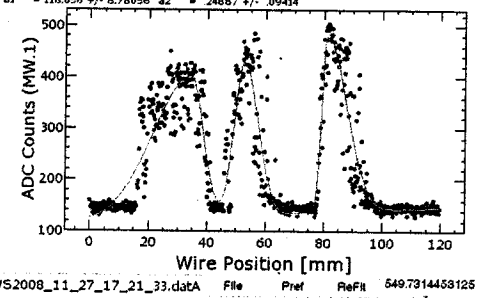
st補正 2008_17:11:28" ←st.datにsave

File Edit Control Window

Wire A

ChiSquare = 1514917 Goodness = .49307

sigma1 = 8.50701 +/- .35491 sigma2 = 4.04965 +/- .15200 sigma3 = 4.19525 +/- .12772
asymm1 = -.52774 +/- .04656 asymm2 = .14851 +/- .06960 asymm3 = .57388 +/- .04775
xwire1 = 345227 +/- .46407 xwire2 = 52.7567 +/- .33909 xwire3 = 81.0752 +/- .24854
b1 = 275.370 +/- 7.21484 b2 = 296.996 +/- 9.01934 b3 = 340.483 +/- 8.45606
a1 = 116.650 +/- 8.78056 a2 = .24887 +/- .09414

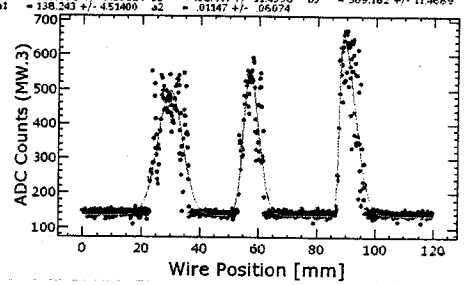


File: WS2008_11_27_17_21_33.datA File Pref ReFit 549.7314453125 V 344

Wire C

ChiSquare = 1805753 Goodness = .49307

sigma1 = 4.17610 +/- .13120 sigma2 = 2.59612 +/- .08573 sigma3 = 2.59974 +/- .07631
asymm1 = -.00190 +/- .06078 asymm2 = .22426 +/- .06548 asymm3 = .62437 +/- .04206
xwire1 = 29.7426 +/- .31032 xwire2 = 56.7713 +/- .20812 xwire3 = 88.5778 +/- .13387
b1 = 356.692 +/- 9.18824 b2 = 408.444 +/- 11.4396 b3 = 509.182 +/- 11.4689
a1 = 138.243 +/- 4.51400 a2 = .01147 +/- .06674

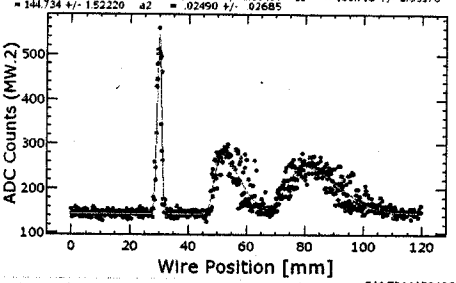


File: WS2008_11_27_17_19_49.datC File Pref ReFit 549.7314453125 V 3349

Wire B

ChiSquare = 266186. Goodness = .49307

sigma1 = .79646 +/- .01831 sigma2 = 4.18468 +/- .13835 sigma3 = 8.27957 +/- .28724
asymm1 = .02347 +/- .04760 asymm2 = .53860 +/- .05428 asymm3 = .35669 +/- .05583
xwire1 = 29.9269 +/- .04643 xwire2 = 51.0131 +/- .27596 xwire3 = 79.6155 +/- .54585
b1 = 399.459 +/- 7.87894 b2 = 131.180 +/- 3.55416 b3 = 105.718 +/- 2.65176
a1 = 144.734 +/- 1.52220 a2 = .02490 +/- .02685

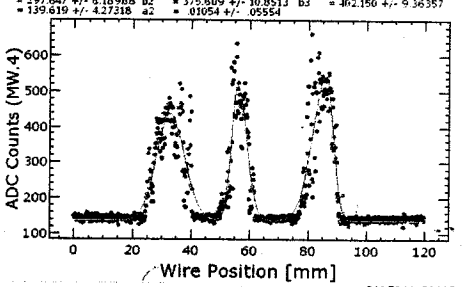


File: WS2008_11_27_17_23_6.datB File Pref ReFit 549.7314453125 V 3747

Wire D

ChiSquare = 1599235 Goodness = .49307

sigma1 = 4.69347 +/- .15786 sigma2 = 2.56232 +/- .08742 sigma3 = 3.50065 +/- .09723
asymm1 = .05394 +/- .06462 asymm2 = .38952 +/- .06796 asymm3 = -.32710 +/- .05239
xwire1 = 32.5679 +/- .37059 xwire2 = 55.7938 +/- .21319 xwire3 = 86.1118 +/- .22493
b1 = 297.647 +/- 8.18988 b2 = 375.609 +/- 10.8513 b3 = 462.150 +/- 9.36357
a1 = 139.619 +/- 4.27218 a2 = .01054 +/- .05554



File: WS2008_11_27_17_20_43.datD File Pref ReFit 549.7314453125 V 3161

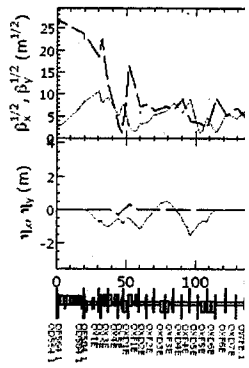
Window

Optics Calculate Matching

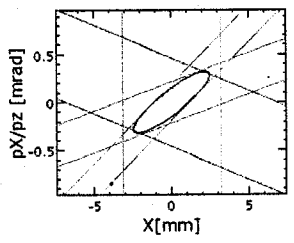
Matching Re

File Edit Window

Wire Scan Optics Calculate Matching

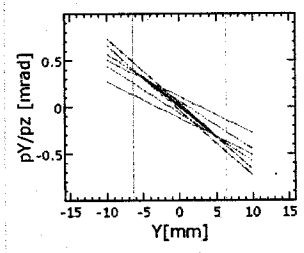


X phase space at Wire A



X phase space at Matching Point

Y phase space at Wire A

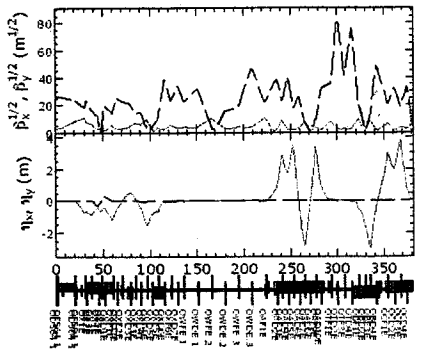


Y phase space at Matching Point

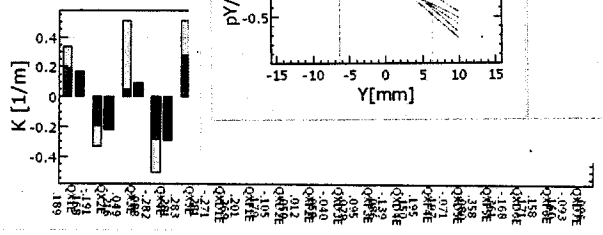
Results of Measurement

β_x @MW.1 [m] :	16.568	β_y @MW.1 [m] :	876.79
α_x @MW.1 :	-1.905	α_y @MW.1 :	55.37
ε_x [m] :	3.6708E-7	ε_y [m] :	3.1515E-8
$\gamma\varepsilon_x$ [π.mm.mrad] :	5901.271	$\gamma\varepsilon_y$ [π.mm.mrad] :	506.64
βmag x :	1.394	βmag y :	12.55
εBmag x :	5.1183E-7	εBmag y :	3.9553E-7
γεBmag x :	8228.349	γεBmag y :	6358.64

Optics Plot



Strength of Free Qmag (QX*)



Wire Selection

3-wire:ABC 3-wire:ABD 3-wire:ACD 3-wire:BCD

• 4-wire:ABCD

Save Q-mag to File

Matching後 "BTe11-97-2008-17:27:22" にsave (QM SA 共に)

再測定 軌道 :SA "18:27:47" にsave
18:30
WireScanner

BTのQW*がdesignと違う値にsetされていた
~QATTE までの値が6月までと違う。
ARのfileが誤ってloadされていたようである。
然も、QWTEは正常だが、QWDEは
設定に失敗して低い値になっていた

- 6/18 22時のfileをloadし、Studyはこの
パラメータで続行する。
(運転もこれにすべきであるが、別途、調整時間を
もらうことにする。)

Matching前 "BTe 21:17.41" Qをsave

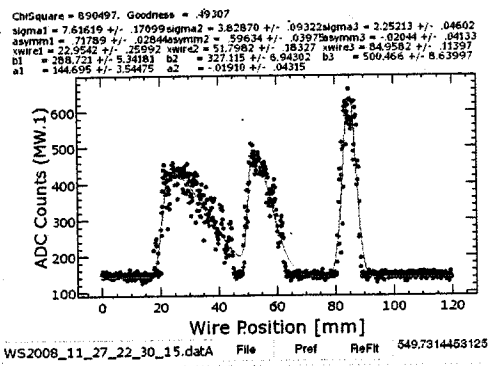
軌道補正後 "21:45:16" Stをsave

Matching前 "BTe 22:33 " Qをsave
軌道補正後 " " " :10" Stをsave

~~18:42:12 に SA. Q. save~~

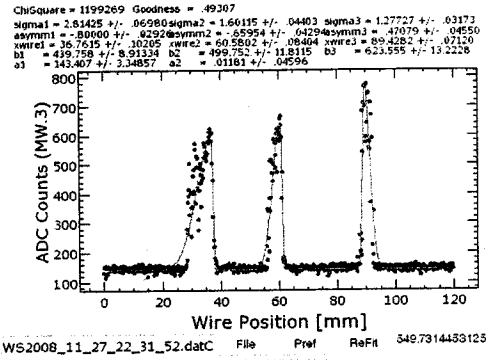
File Edit Control Window

Wire A



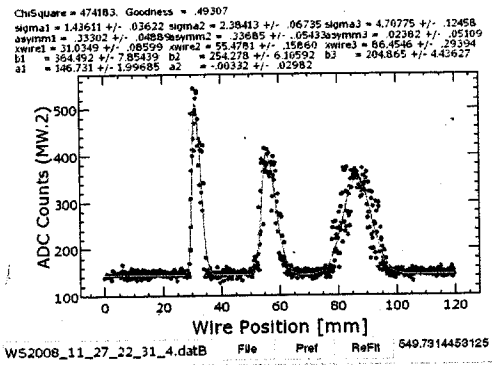
File: WS2008_11_27_22_30_15.datA File Pref ReFit 549.7314453125 V 351

Wire C



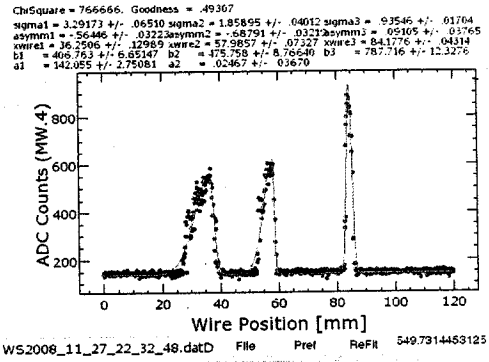
File: WS2008_11_27_22_31_52.datC File Pref ReFit 549.7314453125 V 3355

Wire B



File: WS2008_11_27_22_31_4.datB File Pref ReFit 549.7314453125 V 3752

Wire D



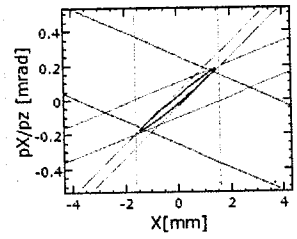
File: WS2008_11_27_22_32_48.datD File Pref ReFit 549.7314453125 V 3168

Help

File Edit Window

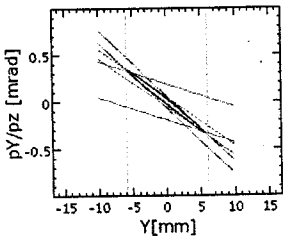
Wire Scan Optics Calculate Matching

X phase space at Wire A



X phase space at Matching Point

Y phase space at Wire A

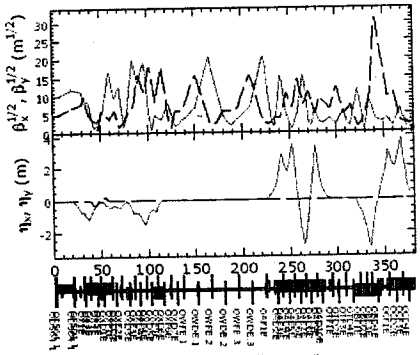


Y phase space at Matching Point

Results of Measurement

β, @MW.1 [m] :	61.745	β, @MW.1 [m] :	212.859
α, @MW.1 :	-7.582	α, @MW.1 :	12.563
ε, [m] :	3.3263E-8	ε, [m] :	1.4733E-7
γε, [π.mm.mrad] :	534.750	γε, [π.mm.mrad] :	2368.528
Bmag x :	4.477	Bmag y :	2.766
εBmag x :	1.4893E-7	εBmag y :	4.0757E-7
γεBmag x :	2394.181	γεBmag y :	6552.314

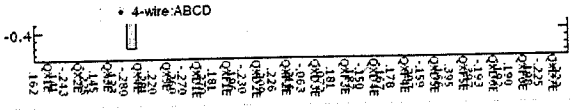
Optics Plot



Wire Selection

3-wire:ABC 3-wire:ABD 3-wire:ACD 3-wire:BCD

• 4-wire:ABCD



Conditions

<	100.00	77.69391
<	120.00	90.31986
<	100.00	96.85579
<	60.00	11.86004
<	50.00	49.99647
<	60.00	36.52357
<	60.00	41.66335
<	80.00	12.94528
<	62.00	61.99673
<	110.00	106.43456
<	80.00	42.53218
<	100.00	100.01705
<	100.00	63.33618
=	.00	-1.8631E-5
=	.00	9.13163E-6
=	.00	-3.8175E-6
=	.00	2.04062E-7
KD6E: η, <	-1.50	1.50608

Matching Calculation

Calc Matching

Recover Calculation

Reset Calculation

Q-mag Set

Q-mag Read&Write

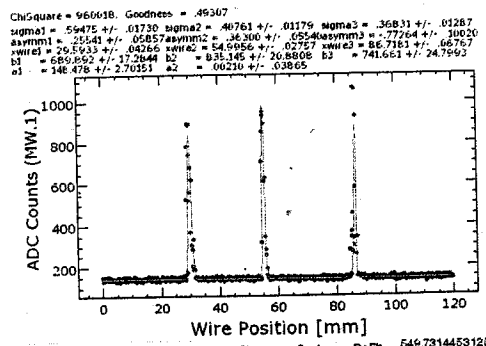
Read Q-Mag from File

Save Q-Mag to File

Pre 20:40:37 22:40:55

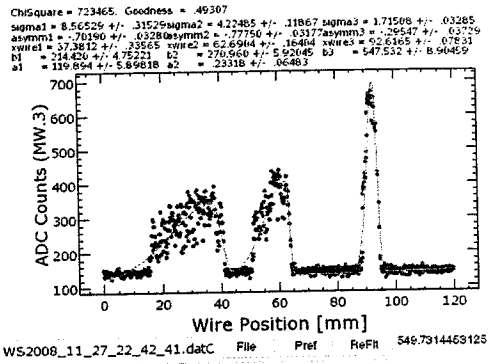
QM 18:42:12 ST 18:40:55 1: Save

Wire A



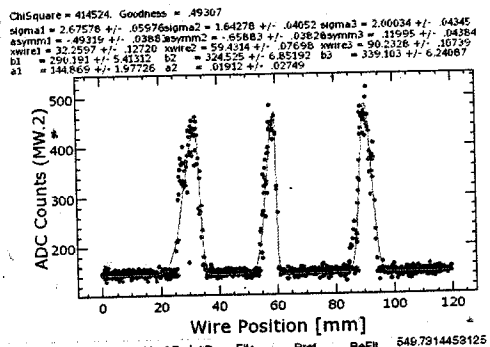
File: WS2008_11_27_22_43_32.datA File Pref ReFit 549.7314453125 V 354

Wire C



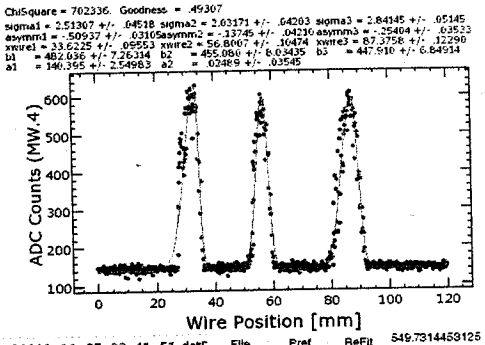
File: WS2008_11_27_22_42_41.datC File Pref ReFit 549.7314453125 V 3356

Wire B



File: WS2008_11_27_22_40_27.datB File Pref ReFit 549.7314453125 V 3758

Wire D

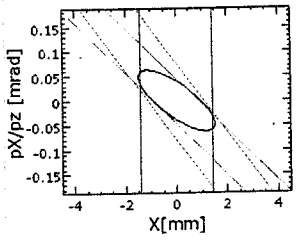


File: WS2008_11_27_22_41_51.datD File Pref ReFit 549.7314453125 V 3190

File Edit Window

Wire Scan Optics Calculate Matching

X phase space at Wire A

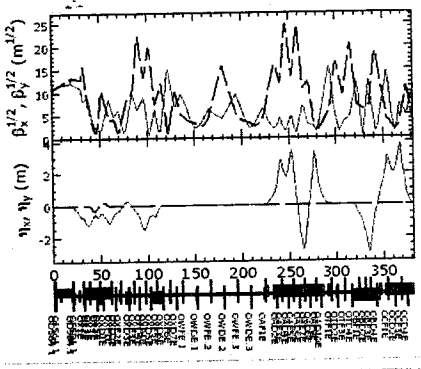


X phase space at Matching Point

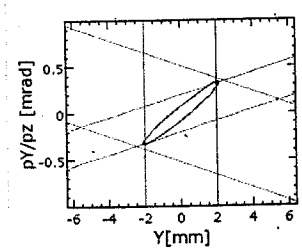
Results of Measurement

β_x @MW.1 [m] :	4.886	β_y @MW.1 [m] :	9.455
α_x @MW.1 :	.025	α_y @MW.1 :	.777
ε_x [m] :	5.8999E-8	ε_y [m] :	1.6701E-7
$\gamma\varepsilon_x$ [x.mm.mrad] :	948.495	$\gamma\varepsilon_y$ [x.mm.mrad] :	2684.903
Bmag x :	1.325	Bmag y :	2.662
εBmag x :	7.8191E-8	εBmag y :	4.4465E-7
$\gamma\varepsilon$Bmag x :	1257.034	$\gamma\varepsilon$Bmag y :	7148.367

Optics Plot



Y phase space at Wire A

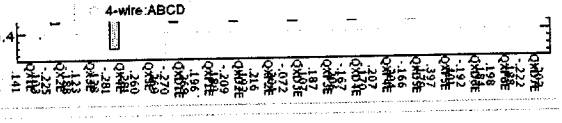


Y phase space at Matching Point

Wire Selection

3-wire:ABC 3-wire:ABD 3-wire:ACD 3-wire:BCD

4-wire:ABCD



ig Conditions

β_x <	100.00	61.83348
β_y <	300.00	221.1002
β_x <	200.00	115.68744
β_x <	60.00	18.93864
β_y <	50.00	49.91551
β_y <	80.00	70.8141
β_y <	60.00	60.00821
β_y <	80.00	6.38008
β_y <	62.00	48.43148
β_y <	110.00	76.32081
β_y <	80.00	35.55307
β_y <	100.00	96.29902
β_y <	100.00	41.51618
η_x =	.00	-7.7797E-5
η'_x =	.00	-1.6078E-7
η_y =	.00	2.78774E-5
η'_y =	.00	4.56051E-6
QXD6E: η_x <	-1.50	1.50293

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

BC 22:50:49

QM ~~18:55:32~~

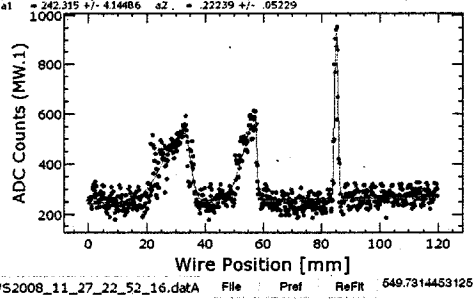
ST. 22:50:55

ST. ~~18:55:41~~

File Edit Control Window

Wire A

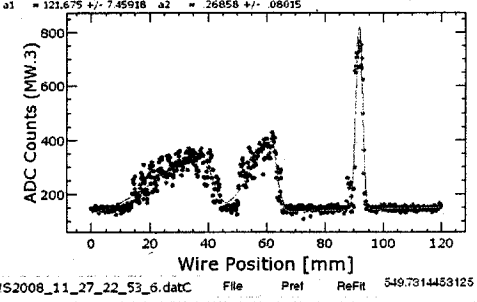
ChiSquare = 1283676 Goodness = .49307
sigma1 = 4.58153 +/- .16061 sigma2 = 2.40025 +/- .08904 sigma3 = .57124 +/- .02025
asymm1 = -.54725 +/- .05236 asymm2 = -.80000 +/- .04485 asymm3 = .12007 +/- .07331
xwire1 = 32.7888 +/- .29622 xwire2 = 57.3070 +/- .13219 xwire3 = 84.9516 +/- .05133
b1 = 272.910 +/- 7.37129 b2 = 320.469 +/- 10.0047 b3 = 667.635 +/- 20.3762
a1 = 242.315 +/- 414486 a2 = .22239 +/- .05229



File: WS2008_11_27_22_52_16.datA File Pref ReFit 549.7314453125 V 355

Wire C

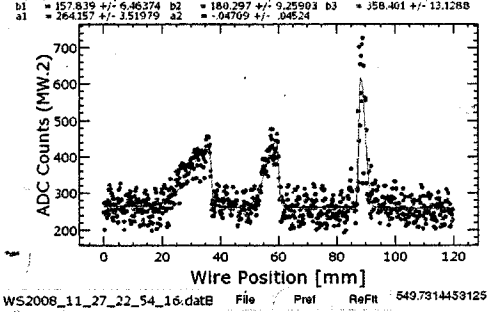
ChiSquare = 825726. Goodness = .49307
sigma1 = 9.70832 +/- .41829 sigma2 = 4.54297 +/- .14816 sigma3 = 1.11476 +/- .02266
asymm1 = -.64425 +/- .03947 asymm2 = -.58753 +/- .04608 asymm3 = -.04555 +/- .04181
xwire1 = 37.8037 +/- .43605 xwire2 = 61.6711 +/- .25307 xwire3 = 91.7337 +/- .05708
b1 = 205.564 +/- 5.32470 b2 = 254.353 +/- 6.37947 b3 = 676.369 +/- 11.7520
a1 = 121.675 +/- 7.45918 a2 = .26858 +/- .08015



File: WS2008_11_27_22_53_6.datC File Pref ReFit 549.7314453125 V 3357

Wire B

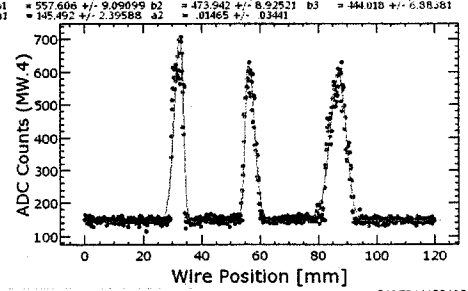
ChiSquare = 986534. Goodness = .49307
sigma1 = 3.73094 +/- .29047 sigma2 = 2.21411 +/- .12966 sigma3 = 1.06603 +/- .04546
asymm1 = -.80000 +/- .08278 asymm2 = -.64612 +/- .10122 asymm3 = .42582 +/- .08072
xwire1 = 36.0292 +/- .46386 xwire2 = 59.2176 +/- .26686 xwire3 = 88.1833 +/- .10515
b1 = 157.839 +/- 6.46374 b2 = 180.297 +/- 9.25903 b3 = 358.401 +/- 13.1288
a1 = 264.157 +/- 1.51979 a2 = -.04709 +/- .04524



File: WS2008_11_27_22_54_16.datB File Pref ReFit 549.7314453125 V 3754

Wire D

ChiSquare = 688468. Goodness = .49307
sigma1 = 1.55548 +/- .02976 sigma2 = 1.60714 +/- .03532 sigma3 = 2.75064 +/- .05653
asymm1 = -.33284 +/- .03706 asymm2 = .28435 +/- .04356 asymm3 = -.09171 +/- .03692
xwire1 = 32.7102 +/- .07049 xwire2 = 56.0370 +/- .08573 xwire3 = 86.9783 +/- .12434
b1 = 557.606 +/- 9.09099 b2 = 473.942 +/- 8.92521 b3 = 444.018 +/- 6.88381
a1 = 145.492 +/- 2.29588 a2 = .01465 +/- .03441



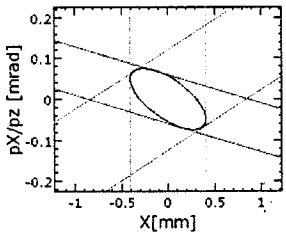
File: WS2008_11_27_22_55_6.datD File Pref ReFit 549.7314453125 V 3191

idow

File Edit Window

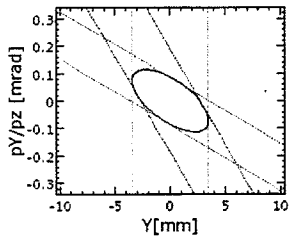
Wire Scan | Optics Calculate | Matching

X phase space at Wire A



X phase space at Matching Point

Y phase space at Wire A

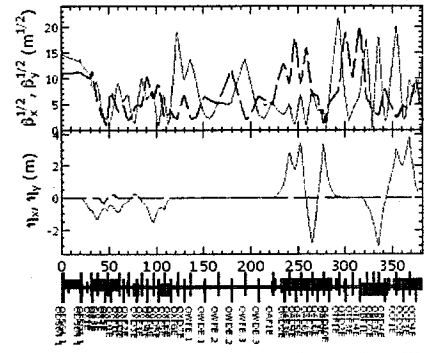


Y phase space at Matching Point

Results of Measurement

β_x @MW.1 [m] :	7.203	β_y @MW.1 [m] :	40.113
α_x @MW.1 :	.879	α_y @MW.1 :	.849
ε_x [m] :	2.2799E-8	ε_y [m] :	2.9718E-7
$\gamma\varepsilon_x$ [π.mm.mrad] :	366.518	$\gamma\varepsilon_y$ [π.mm.mrad] :	4777.553
Bmag x :	2.171	Bmag y :	1.824
εBmag x :	4.9504E-8	εBmag y :	5.4209E-7
γεBmag x :	795.847	γεBmag y :	8714.802

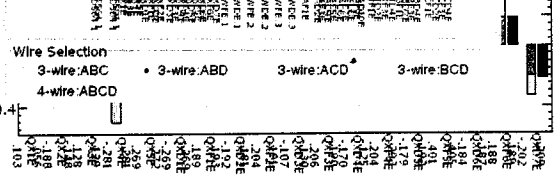
Optics Plot



Wire Selection

3-wire:ABC • 3-wire:ABD 3-wire:ACD 3-wire:BCD

4-wire:ABCD



Matching Conditions

QX2E: β_x <	100.00	86.39146
: β_y <	300.00	111.69479
QX3E: β_x <	200.00	132.3507
QX5E: β_x <	60.00	26.37543
QXF1E: β_x <	50.00	49.99803
QXD2E: β_x <	80.00	23.9471
QXF2E: β_x <	60.00	60.00144
QXD3E: β_x <	80.00	19.09433
QXF3E: β_x <	62.00	33.06904
QXD4E: β_x <	110.00	40.53078
QXF4E: β_x <	80.00	26.8227
QXD5E: β_x <	100.00	99.99264
QXD6E: β_x <	100.00	47.64671
: η_x =	.00	-2.8625E-5
: η'_x =	.00	-3.6907E-6
: η_y =	.00	-7.3732E-7
: η'_y =	.00	6.53803E-9
QX1E QXD6E: η_x <	-1.50	1.60138

Matching Calculation

Calc Matching

Recover Calculation

Reset Calculation

Q-mag Set

Q-mag Read&Write

Read Q-Mag from File

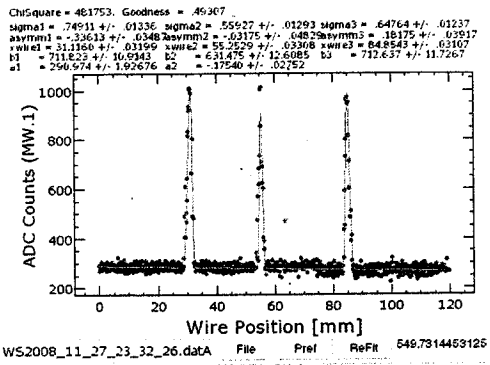
Save Q-Mag to File

BTe

QM 23:02:39

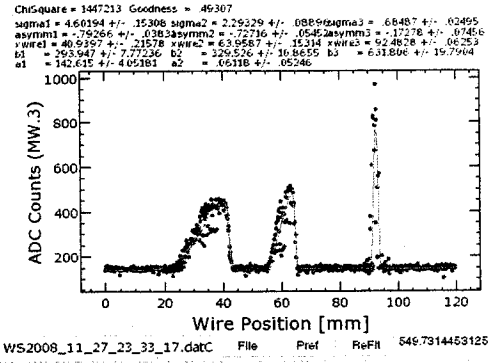
St 23:02:50

Wire A



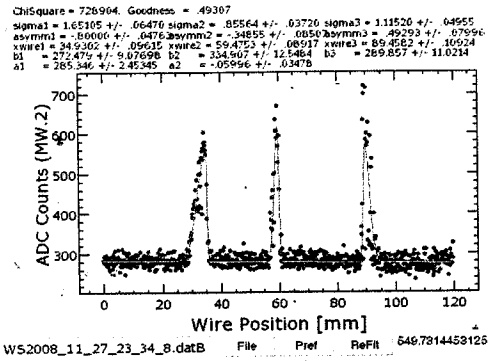
File: WS2008_11_27_23_32_26.datA File Pref ReFit 549.7314453125 V 357

Wire C



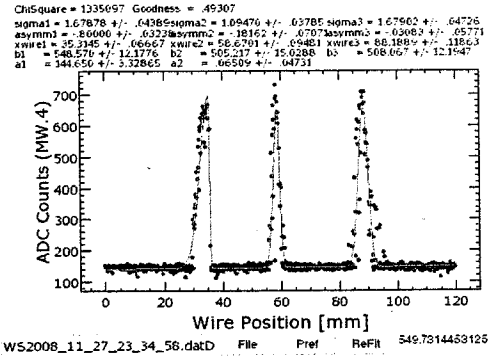
File: WS2008_11_27_23_33_17.datC File Pref ReFit 549.7314453125 V 3356

Wire B



File: WS2008_11_27_23_34_8.datB File Pref ReFit 549.7314453125 V 3755

Wire D

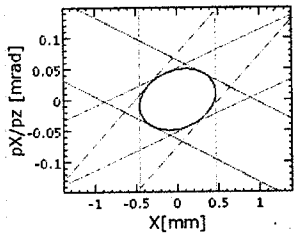


File: WS2008_11_27_23_34_56.datD File Pref ReFit 549.7314453125 V 3192

File Edit Window Help

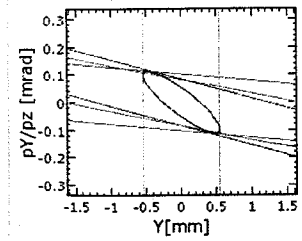
Wire Scan Optics Calculate Matching

X phase space at Wire A



X phase space at Matching Point

Y phase space at Wire A

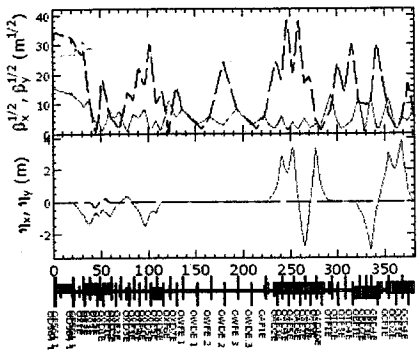


Y phase space at Matching Point

Results of Measurement

β_x @MW.1 [m] :	9.556	β_y @MW.1 [m] :	10.154
α_x @MW.1 :	-.215	α_y @MW.1 :	1.842
ε_x [m] :	2.2257E-8	ε_y [m] :	2.9057E-8
$\gamma\varepsilon_x$ [π.mm.mrad] :	357.820	$\gamma\varepsilon_y$ [π.mm.mrad] :	467.124
Bmag x :	1.065	Bmag y :	6.134
εBmag x :	2.3702E-8	εBmag y :	1.7822E-7
γεBmag x :	381.044	γεBmag y :	2865.153

Optics Plot



Wire Selection

3-wire:ABC 3-wire:ABD 3-wire:ACD 3-wire:BCD

4-wire:ABCD

Matching Conditions

QX2E: β_x <	100.00	88.63621
: β_y <	800.00	752.43104
QX3E: β_x <	200.00	135.05597
QX5E: β_x <	60.00	22.13917
QXF1E: β_x <	60.00	60.06566
QXD2E: β_x <	60.00	36.01951
QXF2E: β_x <	60.00	60.01653
QXD3E: β_x <	200.00	71.68433
QXF3E: β_x <	62.00	62.12794
QXD4E: β_x <	110.00	110.01985
QXF4E: β_x <	80.00	38.11044
QXD5E: β_x <	100.00	72.61222
QXD6E: β_x <	100.00	86.57773
: η_x =	.00	3.27456E-4
: η'_x =	.00	8.61053E-5
: η_y =	.00	-6.0677E-5
: η'_y =	.00	-6.318E-6
QX1E QXD6E: η_x <	-1.50	1.50077

Matching Calculation

Calc Matching

Recover Calculation

Reset Calculation

Q-mag Set

Q-mag Read&Write

Read Q-Mag from File

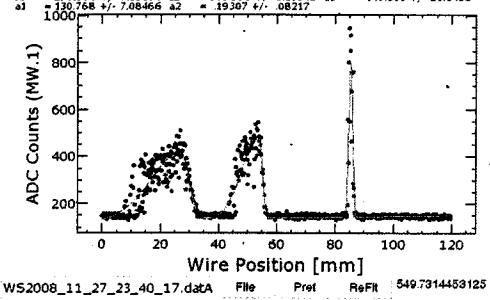
Save Q-Mag to File

QM 23:40:3" St 23:40:39

File Edit Control Window

Wire A

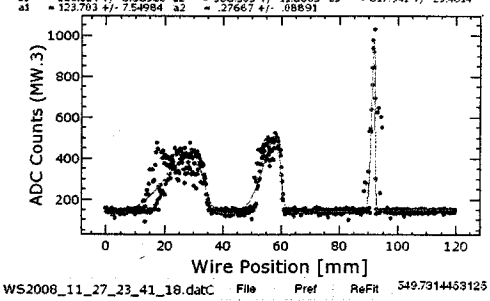
ChiSquare = 1517900 Goodness = .49307
sigma1 = 6.45211 +/- .25647 sigma2 = 3.41027 +/- .11581 sigma3 = .65913 +/- .02434
asymm1 = -.55763 +/- .04773 asymm2 = -.64885 +/- .04823 asymm3 = .09814 +/- .07649
xwire1 = 26.9239 +/- .37567 xwire2 = 53.7635 +/- .20140 xwire3 = 85.2667 +/- .06175
b1 = 279.368 +/- 7.53590 b2 = 346.388 +/- 9.30548 b3 = 649.303 +/- 20.6458
a1 = 130.768 +/- 7.08466 a2 = .19307 +/- .08217



File: WS2008_11_27_23_40_17.datA File Pref ReFit 549.7314453125 V 356

Wire C

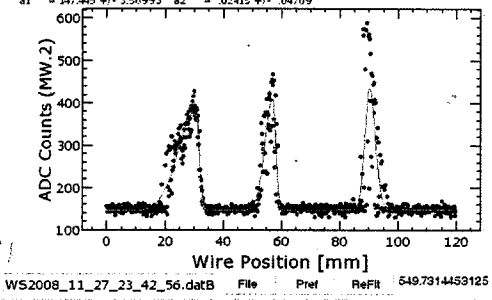
ChiSquare = 2236471 Goodness = .49307
sigma1 = 6.54715 +/- .29450 sigma2 = 3.02050 +/- .11877 sigma3 = .64004 +/- .02314
asymm1 = -.50803 +/- .05954 asymm2 = -.59623 +/- .06174 asymm3 = -.47825 +/- .06569
xwire1 = 29.88868 +/- .47457 xwire2 = 58.5920 +/- .22822 xwire3 = 91.8626 +/- .05342
b1 = 280.324 +/- 8.68560 b2 = 368.303 +/- 11.8805 b3 = 817.941 +/- 25.4614
a1 = 123.703 +/- 7.54984 a2 = -.27667 +/- .08891



File: WS2008_11_27_23_41_18.datC File Pref ReFit 549.7314453125 V 3359

Wire B

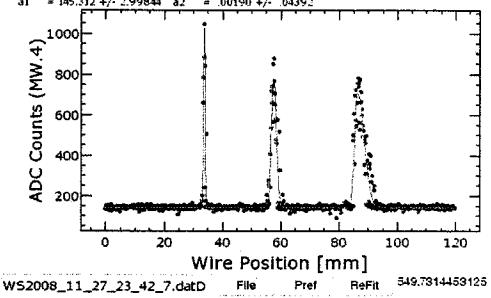
ChiSquare = 1102359 Goodness = .49307
sigma1 = 3.50521 +/- .14344 sigma2 = 1.84900 +/- .08767 sigma3 = 1.76969 +/- .07886
asymm1 = -.69186 +/- .05673 asymm2 = -.39376 +/- .08955 asymm3 = .12207 +/- .09032
xwire1 = 30.6055 +/- .24334 xwire2 = 56.8443 +/- .20279 xwire3 = 90.1253 +/- .19574
b1 = 234.920 +/- 7.76914 b2 = 260.622 +/- 10.5453 b3 = 285.307 +/- 10.8042
a1 = 147.445 +/- 3.50993 a2 = -.02415 +/- .04709



File: WS2008_11_27_23_42_56.datB File Pref ReFit 549.7314453125 V 3756

Wire D

ChiSquare = 1204971 Goodness = .49307
sigma1 = .27194 +/- .00999 sigma2 = .83560 +/- .02481 sigma3 = 1.66384 +/- .05938
asymm1 = -.09413 +/- .07531 asymm2 = .23483 +/- .06023 asymm3 = .45958 +/- .04590
xwire1 = 33.6661 +/- .02506 xwire2 = 57.3165 +/- .06165 xwire3 = 86.1076 +/- .08846
b1 = 901.314 +/- 28.6046 b2 = 617.927 +/- 16.3241 b3 = 565.864 +/- 11.8383
a1 = 145.312 +/- 2.99844 a2 = .00190 +/- .04392



File: WS2008_11_27_23_42_7.datD File Pref ReFit 549.7314453125 V 3193

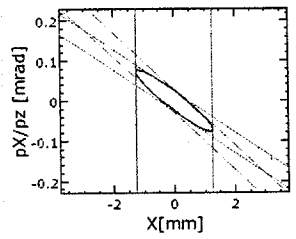
low

File Edit Window

Help

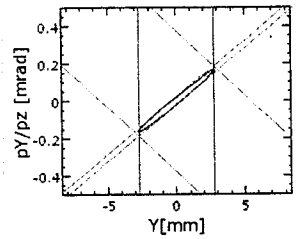
Wire Scan Optics Calculate Matching

X phase space at Wire A



X phase space at Matching Point

Y phase space at Wire A

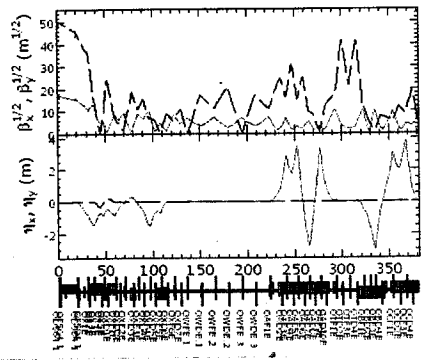


Y phase space at Matching Point

Results of Measurement

β, @MW.1 [m] :	12.676	β, @MW.1 [m] :	273.550
α, @MW.1 :	-.768	α, @MW.1 :	6.867
ε, [m] :	3.2057E-8	ε, [m] :	5.6338E-8
ε, [π.mm.mrad] :	515.369	ε, [π.mm.mrad] :	905.706
Bmag x :	1.043	Bmag y :	7.350
εBmag x :	3.3446E-8	εBmag y :	4.1407E-7
εBmag x :	537.683	εBmag y :	6656.780

Optics Plot



Matching Conditions

QX2E: β, <	130.00	123.89853
: β, <	1300.0	1299.8749
QX3E: β, <	200.00	195.64285
QX5E: β, <	60.00	47.25531
QXF1E: β, <	60.00	60.01295
QXD2E: β, <	60.00	60.21433
QXF2E: β, <	60.00	60.00393
QXD3E: β, <	200.00	200.08948
QXF3E: β, <	62.00	62.0133
QXD4E: β, <	110.00	109.97115
QXF4E: β, <	80.00	36.09958
QXD5E: β, <	100.00	64.37087
QXD6E: β, <	100.00	98.9693
: η, =	.00	1.21791E-5
: η', =	.00	5.83221E-6
: η, =	.00	-3.3708E-4
: η', =	.00	6.28382E-5
QX1E QXD6E: η, <	-1.50	1.5041

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

QM 23:54:27 St 23:54:30 IF save

BT スクリーン

・MSE12 で見ると 色々みえる (Energy) ← 切りかえでは直らない

・軌道問題 ヨセクター から出ている

Pulse Steer ?

DCにしても同じく出る

・レーザー バックグラウンド

~1.3Hz の変動

Pulse St を DCにすると消えた

・Matching は やれば できそう