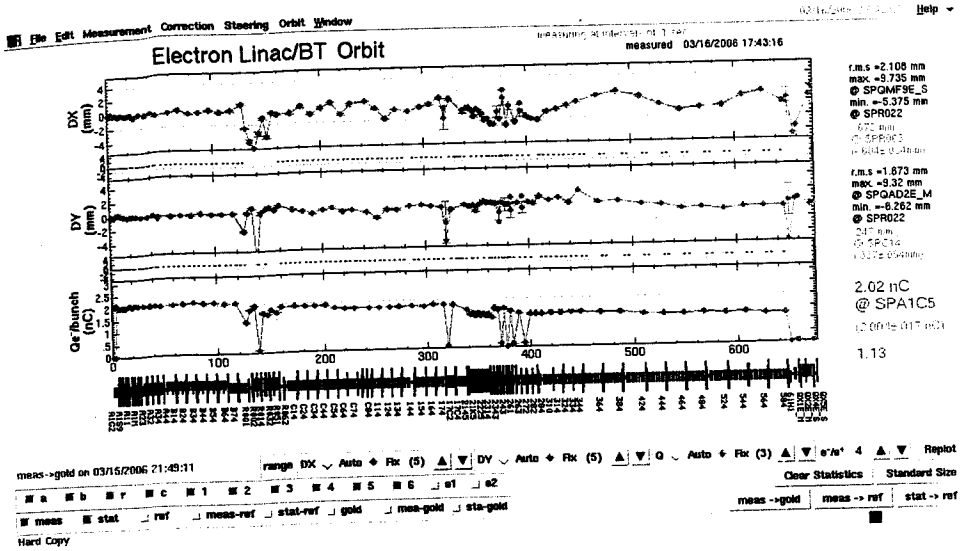
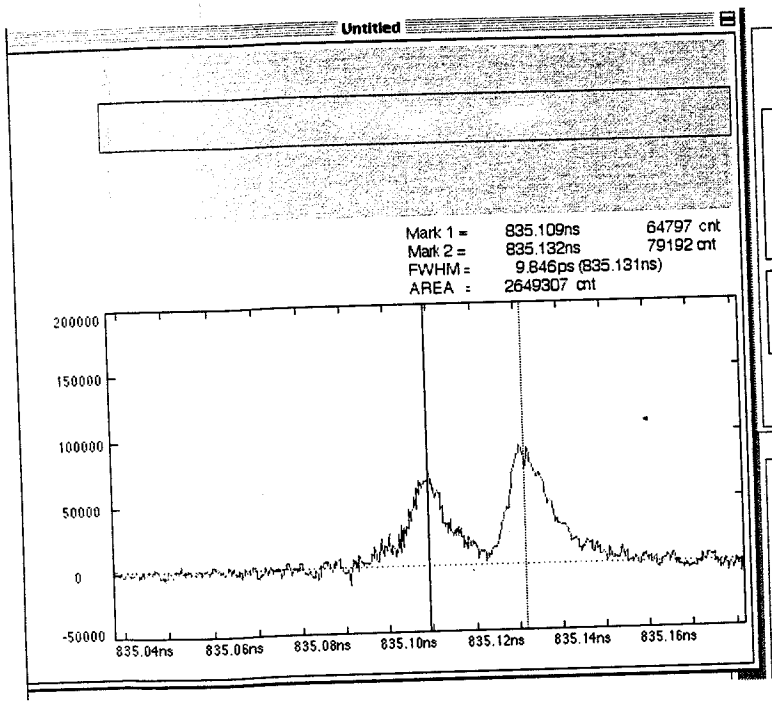
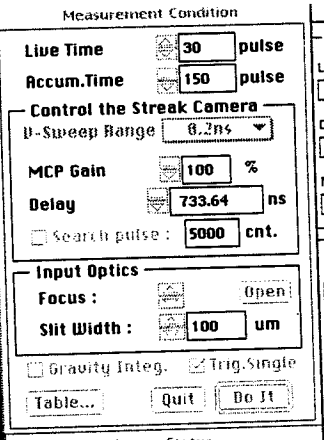

File Edit Measurement Correction Steering Orbit Window
Help
Electron Linac/BT Orbit
measured 03/16/2006 17:43:16
DX (mm)
DY (mm)
Qe/bunch (nC)
r.m.s =2.108 mm
max. =9.735 mm
@ SPQMF9E_S
min. =-5.375 mm
@ SPR022
r.m.s =1.873 mm
max. =9.32 mm
@ SPQAD2E_M
min. =-8.262 mm
@ SPR022
2.02 nC
@ SPA1C5
1.13
meas->gold on 03/15/2006 21:49:11
Clear Statistics
Standard Size
meas ->gold
meas -> ref
stat -> ref
Hard Copy


Untitled
Mark 1 = 835.109ns 64797 cnt
Mark 2 = 835.132ns 79192 cnt
FWHM = 9.846ps (835.131ns)
AREA = 2649307 cnt
200000
150000
100000
50000
0
-50000
835.04ns
835.06ns
835.08ns
835.10ns
835.12ns
835.14ns
835.16ns


Measurement Condition
Live Time 30 pulse
Accum.Time 150 pulse
Control the Streak Camera
Sweep Range 0.2ns
MCP Gain 100 %
Delay 733.64 ns
Search pulse : 5000 cnt.
Input Optics
Focus :
Open
Slit Width : 100 um
Gravity Integ.
Trig.Single
Table...
Quit
Do It

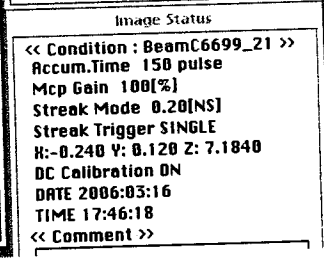
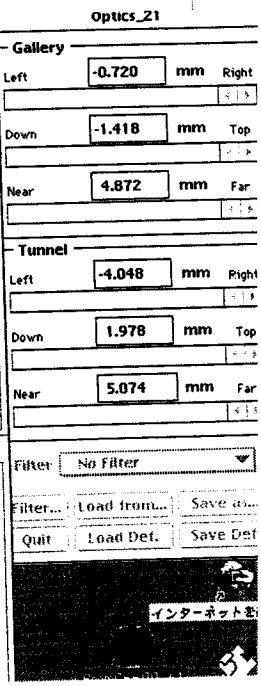
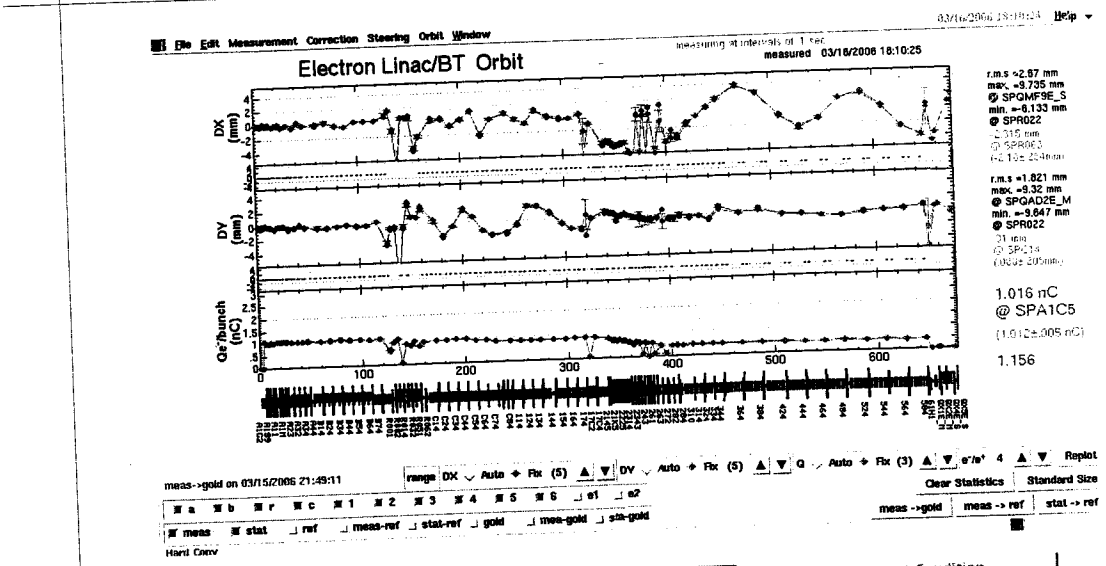
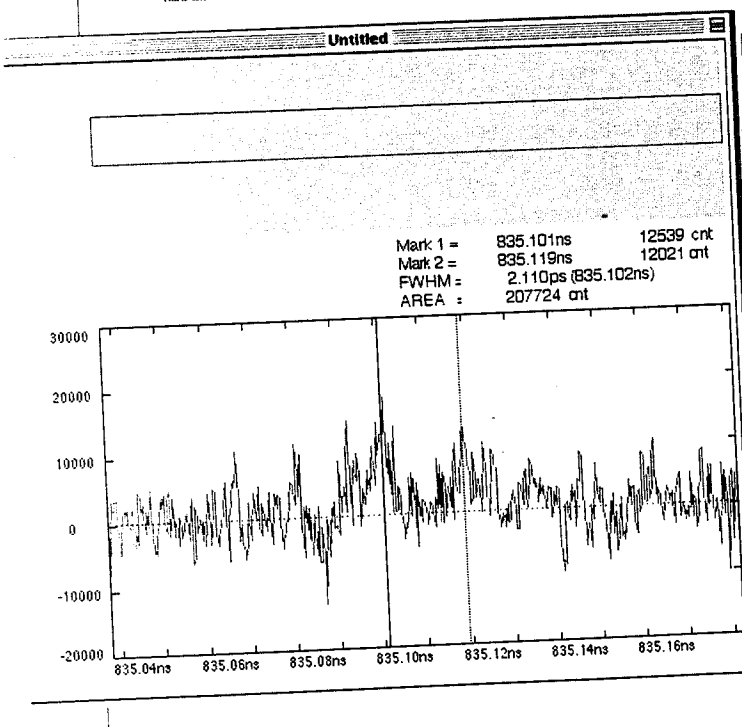


Image Status
<< Condition : BeamC6699_21 >>
Accum.Time 150 pulse
Mcp Gain 100[%]
Streak Mode 0.20[NS]
Streak Trigger SINGLE
X:-0.240 Y: 0.120 Z: 7.1840
DC Calibration ON
DATE 2006:03:16
TIME 17:46:18
<< Comment >>


Optics_21
Gallery
Left -0.720 mm Right
Down -1.418 mm Top
Near 4.872 mm Far
Tunnel
Left -4.048 mm Right
Down 1.978 mm Top
Near 5.074 mm Far
Filter No Filter
Filter...
Load from...
Save to...
Quit
Load Def.
Save Def


File Edit Measurement Correction Steering Orbit Window
Help
Electron Linac/BT Orbit
measured 03/16/2006 18:10:25
DX (mm)
DV (min)
Qe-/bunch (nC)
r.m.s =2.67 mm
max. =9.735 mm
@ SPQMF9E_S
min. =-8.133 mm
@ SPR022
r.m.s =1.821 mm
max. =8.32 mm
@ SPQAD2E_M
min. =-9.647 mm
@ SPR022
1.016 nC
@ SPA1C5
1.156
meas->gold on 03/15/2006 21:49:11
Clear Statistics
Standard Size
meas ->gold
meas -> ref
stat -> ref
Hard Conv


Untitled
Mark 1 = 835.101ns 12539 cnt
Mark 2 = 835.119ns 12021 cnt
FWHM = 2.110ps (835.102ns)
AREA = 207724 cnt
30000
20000
10000
0
-10000
-20000
835.04ns
835.06ns
835.08ns
835.10ns
835.12ns
835.14ns
835.16ns

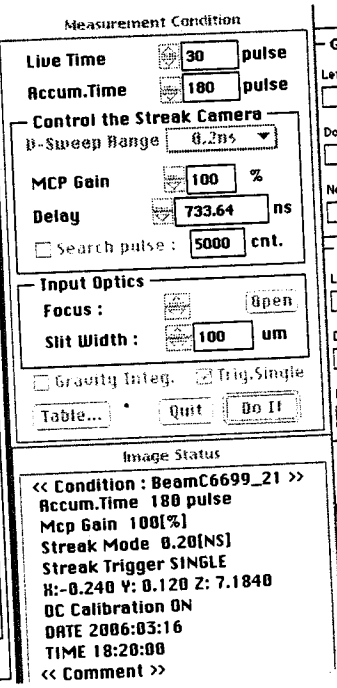
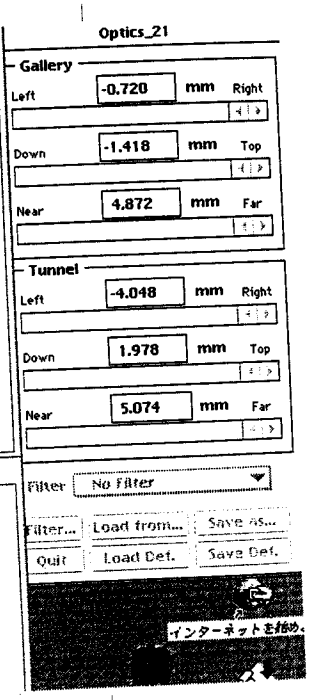
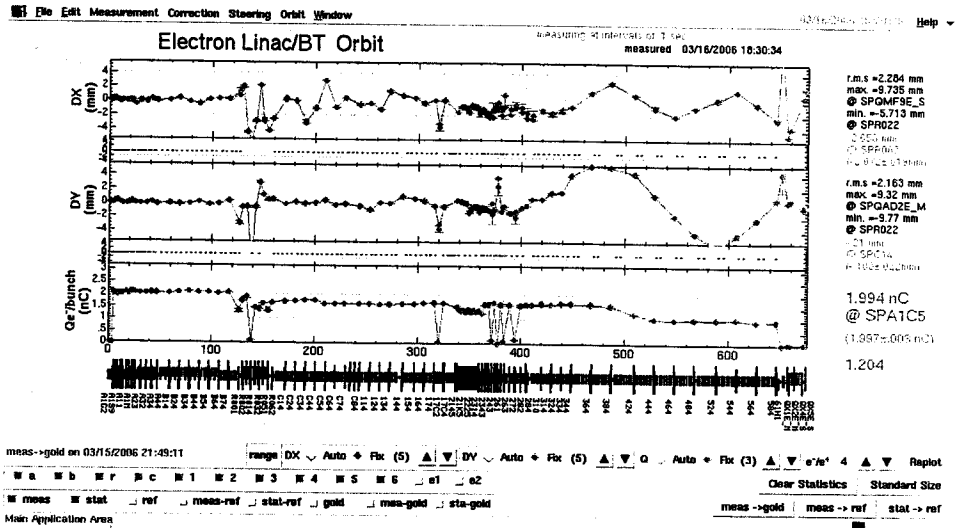
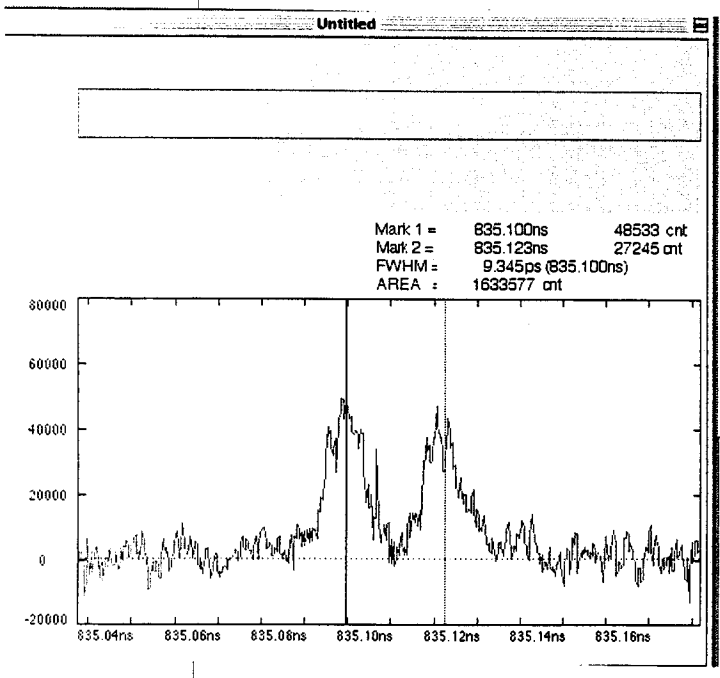
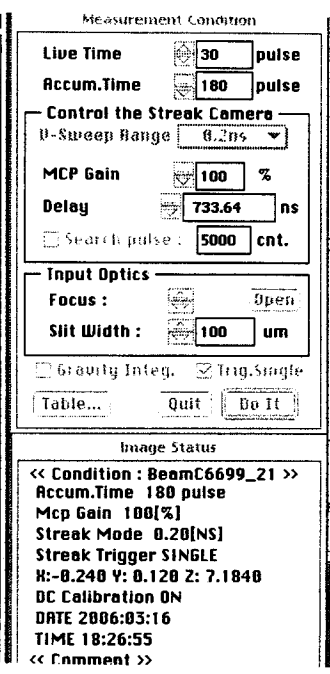

Measurement Condition
Live Time 30 pulse
Accum.Time 180 pulse
Control the Streak Camera
Sweep Range 0.2ns
MCP Gain 100 %
Delay 733.64 ns
Search pulse : 5000 cnt.
Input Optics
Focus :
Open
Slit Width : 100 um
Gravity Integ.
Trig.Single
Table...
Quit
Do It

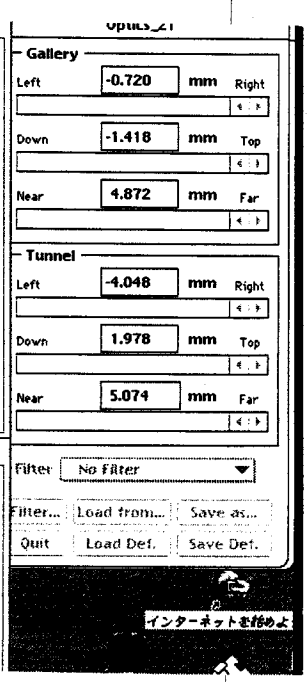
Image Status
<< Condition : BeamC6699_21 >>
Accum.Time 180 pulse
Mcp Gain 100[%]
Streak Mode 0.20[NS]
Streak Trigger SINGLE
X:-0.240 Y: 0.120 Z: 7.1840
OC Calibration ON
DATE 2006:03:16
TIME 18:20:00
<< Comment >>


Optics_21
Gallery
Left -0.720 mm Right
Down -1.418 mm Top
Near 4.872 mm Far
Tunnel
Left -4.048 mm Right
Down 1.978 mm Top
Near 5.074 mm Far
Filter No Filter
Filter...
Load from...
Save as...
Quit
Load Def.
Save Def.


File Edit Measurement Correction Steering Orbit Window
Help
Electron Linac/BT Orbit
measured 03/16/2006 16:30:34
DX (mm)
DY (mm)
Ge-/bunch (nC)
r.m.s =2.284 mm
max =9.735 mm
@ SPQMF9E_S
min. =-5.713 mm
@ SPR022
r.m.s =2.163 mm
max =9.32 mm
@ SPQAD2E_M
min. =-9.77 mm
@ SPR022
1.994 nC
@ SPA1C5
1.204
meas->gold on 03/15/2006 21:49:11
range DX Auto Fix (5) DY Auto Fix (5) Q Auto Fix (3) Raplot
meas stat ref meas-ref stat-ref gold meas-gold sta-gold
Clear Statistics Standard Size
meas ->gold meas -> ref stat -> ref
Main Application Area


Untitled
Mark 1 = 835.100ns 48533 cnt
Mark 2 = 835.123ns 27245 cnt
FWHM = 9.345ps (835.100ns)
AREA : 1633577 cnt
80000
60000
40000
20000
0
-20000
835.04ns
835.06ns
835.08ns
835.10ns
835.12ns
835.14ns
835.16ns


Measurement Condition
Live Time 30 pulse
Accum.Time 180 pulse
Control the Streak Camera
U-Sweep Range 0.2ns
MCP Gain 100 %
Delay 733.64 ns
Search pulse : 5000 cnt.
Input Optics
Focus : Open
Slit Width : 100 um
Gravity Integ. Trig.Single
Table... Quit Do It
Image Status
<< Condition : BeamC6699_21 >>
Accum.Time 180 pulse
Mcp Gain 100[%]
Streak Mode 0.20[NS]
Streak Trigger SINGLE
X:-0.240 Y: 0.120 Z: 7.1840
DC Calibration ON
DATE 2006:03:16
TIME 18:26:55
<< Comment >>


Optics_21
Gallery
Left -0.720 mm Right
Down -1.418 mm Top
Near 4.872 mm Far
Tunnel
Left -4.048 mm Right
Down 1.978 mm Top
Near 5.074 mm Far
Filter No Filter
Filter... Load from... Save as...
Quit Load Def. Save Def.
インターネットをはめよ

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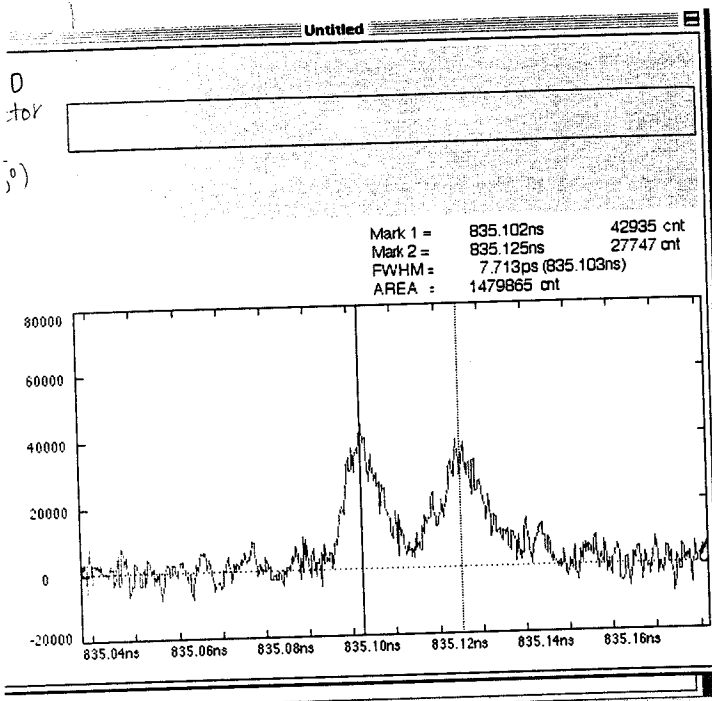
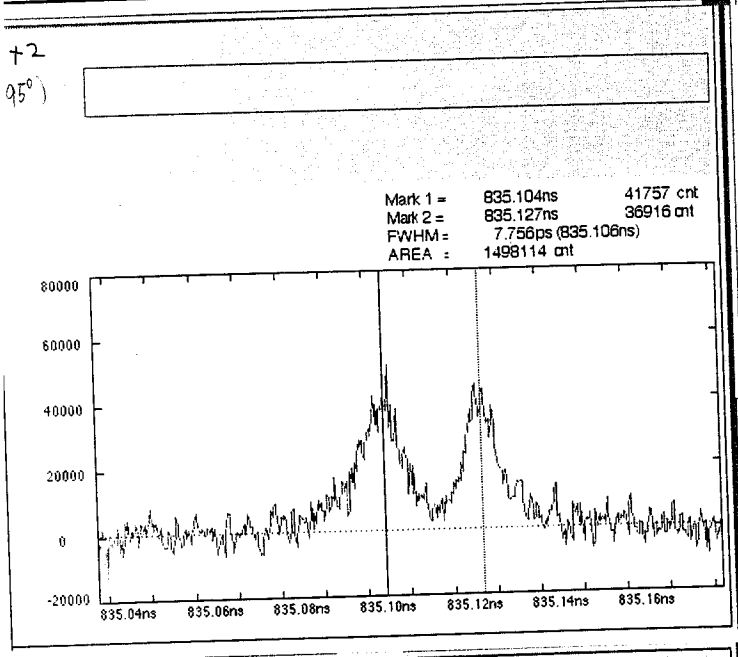
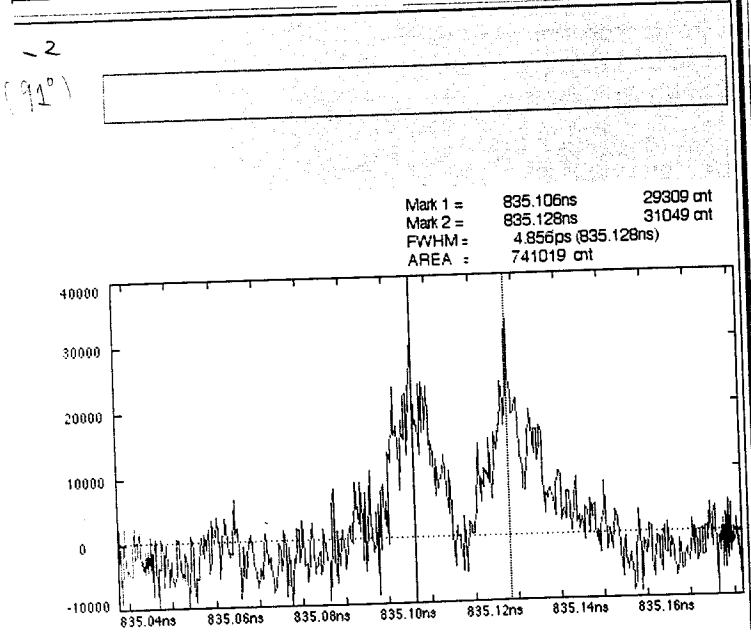
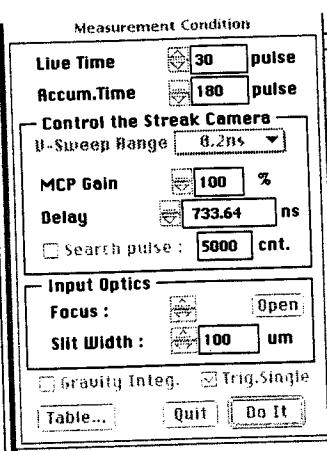

Untitled
Mark 1 = 835.102ns 42935 cnt
Mark 2 = 835.125ns 27747 cnt
FWHM = 7.713ps (835.103ns)
AREA = 1479865 cnt
80000
60000
40000
20000
0
-20000
835.04ns
835.06ns
835.08ns
835.10ns
835.12ns
835.14ns
835.16ns


Mark 1 = 835.104ns 41757 cnt
Mark 2 = 835.127ns 36916 cnt
FWHM = 7.756ps (835.106ns)
AREA = 1498114 cnt
80000
60000
40000
20000
0
-20000
835.04ns
835.06ns
835.08ns
835.10ns
835.12ns
835.14ns
835.16ns


Mark 1 = 835.106ns 29309 cnt
Mark 2 = 835.128ns 31049 cnt
FWHM = 4.856ps (835.128ns)
AREA = 741019 cnt
40000
30000
20000
10000
0
-10000
835.04ns
835.06ns
835.08ns
835.10ns
835.12ns
835.14ns
835.16ns


Measurement Condition
Live Time 30 pulse
Accum.Time 180 pulse
Control the Streak Camera
U-Sweep Range 6.2ns
MCP Gain 100 %
Delay 733.64 ns
Search pulse : 5000 cnt.
Input Optics
Focus : Open
Slit Width : 100 um
Gravity Integ. Trig.Single
Table... Quit Do It

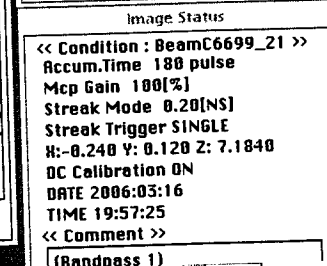
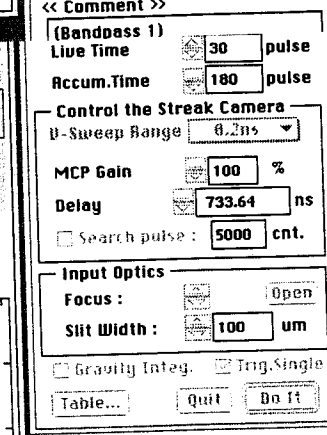


Image Status
<< Condition : BeamC6699_21 >>
Accum.Time 180 pulse
Mcp Gain 100[%]
Streak Mode 0.20[NS]
Streak Trigger SINGLE
H:-0.240 V: 0.120 Z: 7.1840
DC Calibration ON
DATE 2006:03:16
TIME 19:57:25
<< Comment >>


(Bandpass 1)
Live Time 30 pulse
Accum.Time 180 pulse
Control the Streak Camera
U-Sweep Range 6.2ns
MCP Gain 100 %
Delay 733.64 ns
Search pulse : 5000 cnt.
Input Optics
Focus : Open
Slit Width : 100 um
Gravity Integ. Trig.Single
Table... Quit Do It

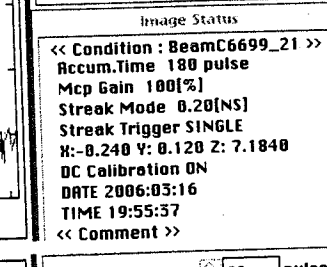
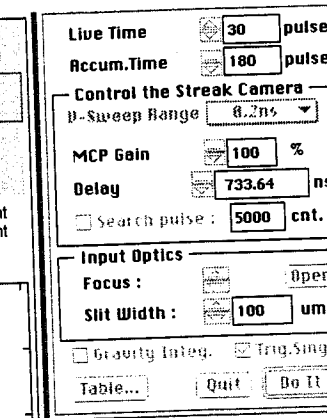


Image Status
<< Condition : BeamC6699_21 >>
Accum.Time 180 pulse
Mcp Gain 100[%]
Streak Mode 0.20[NS]
Streak Trigger SINGLE
H:-0.240 V: 0.120 Z: 7.1840
DC Calibration ON
DATE 2006:03:16
TIME 19:55:37
<< Comment >>


Live Time 30 pulse
Accum.Time 180 pulse
Control the Streak Camera
U-Sweep Range 6.2ns
MCP Gain 100 %
Delay 733.64 ns
Search pulse : 5000 cnt.
Input Optics
Focus : Open
Slit Width : 100 um
Gravity Integ. Trig.Single
Table... Quit Do It

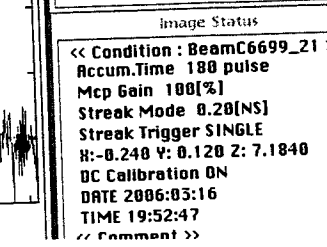
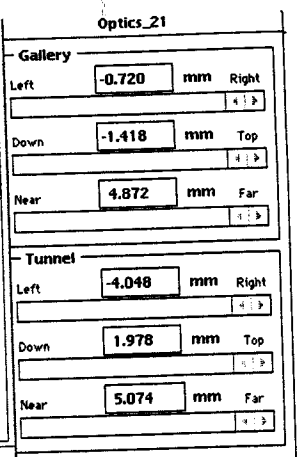
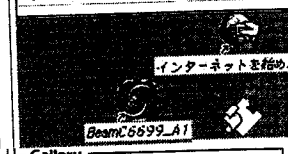
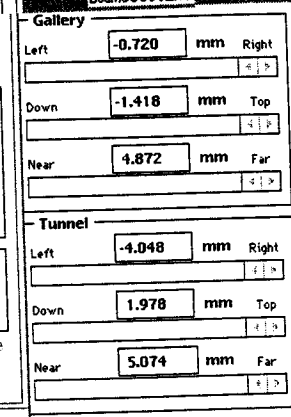
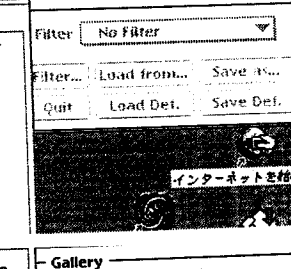


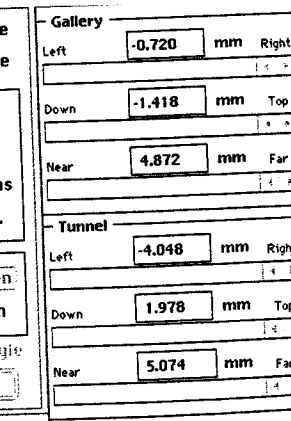
Image Status
<< Condition : BeamC6699_21 >>
Accum.Time 180 pulse
Mcp Gain 100[%]
Streak Mode 0.20[NS]
Streak Trigger SINGLE
H:-0.240 V: 0.120 Z: 7.1840
DC Calibration ON
DATE 2006:03:16
TIME 19:52:47
<< Comment >>

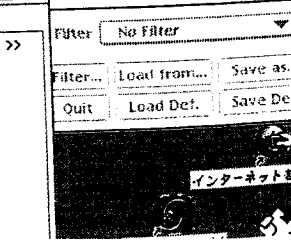

Optics_21
Gallery
Left -0.720 mm Right
Down -1.418 mm Top
Near 4.872 mm Far
Tunnel
Left -4.048 mm Right
Down 1.978 mm Top
Near 5.074 mm Far
Filter No Filter
Filter... Load from... Save as...
Quit Load Def. Save Def.

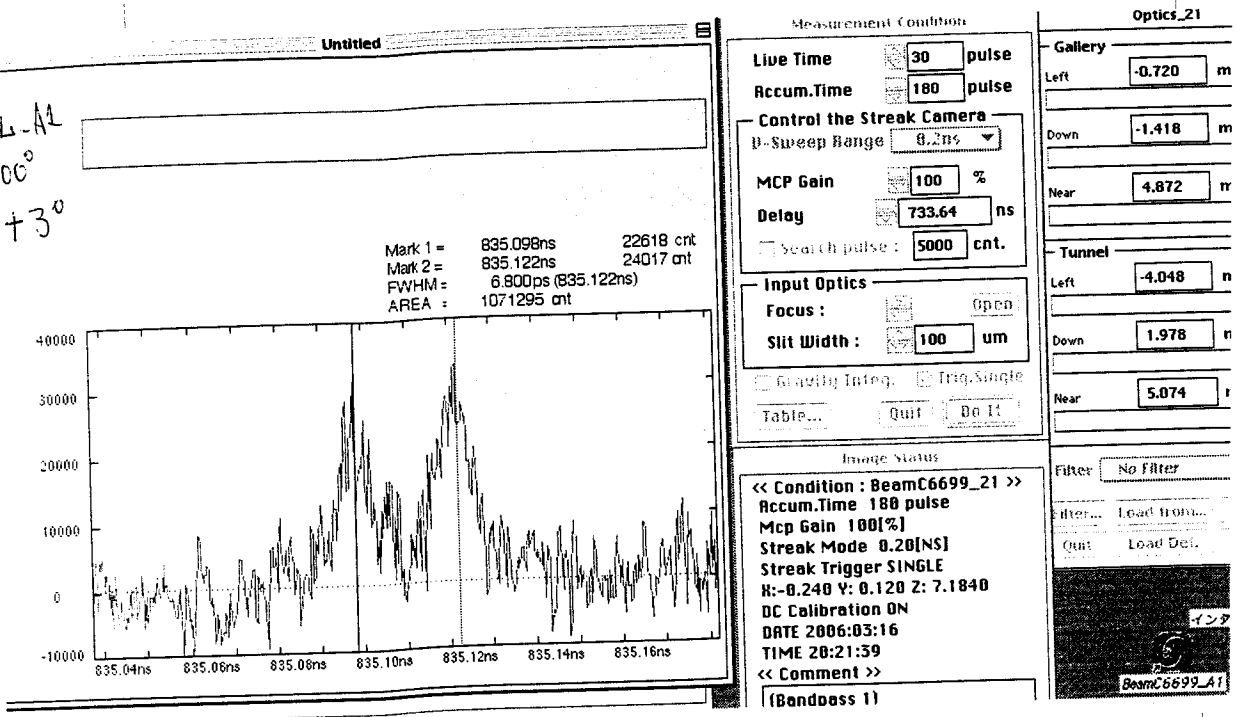

インターネットを始めよ
BeamC6699_A1


Gallery
Left -0.720 mm Right
Down -1.418 mm Top
Near 4.872 mm Far
Tunnel
Left -4.048 mm Right
Down 1.978 mm Top
Near 5.074 mm Far
Filter No Filter
Filter... Load from... Save as...
Quit Load Def. Save Def.

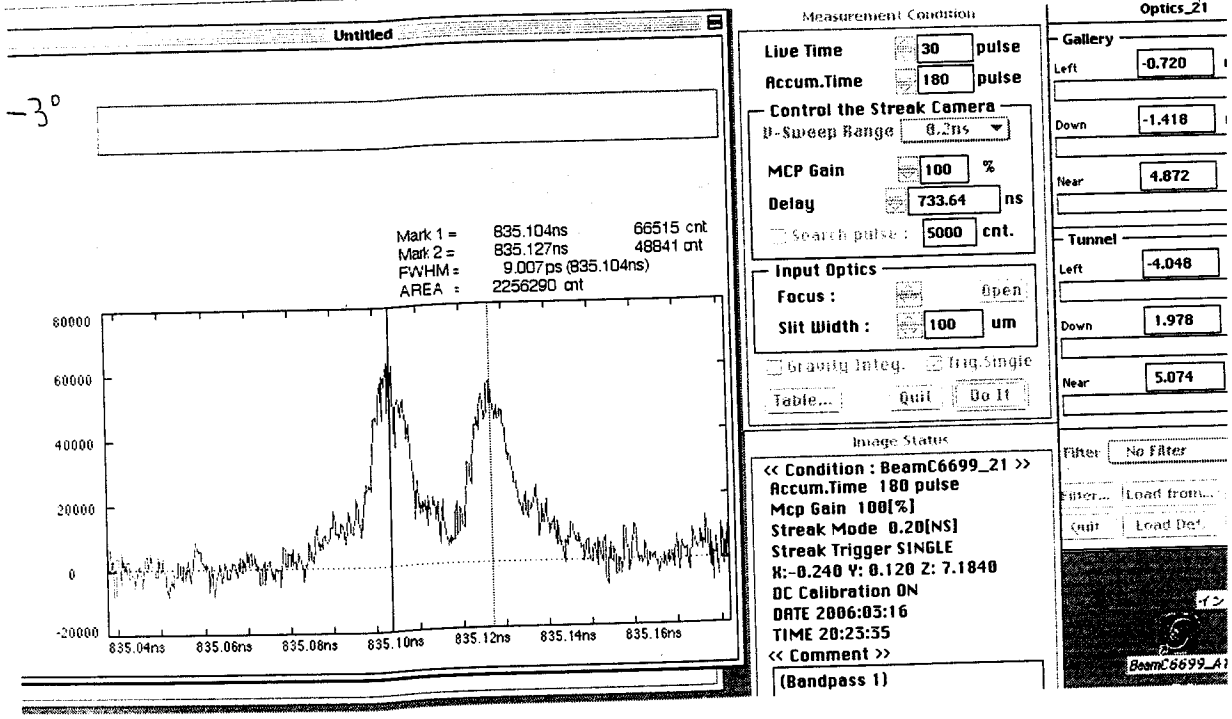

インターネットを始めよ


Gallery
Left -0.720 mm Right
Down -1.418 mm Top
Near 4.872 mm Far
Tunnel
Left -4.048 mm Right
Down 1.978 mm Top
Near 5.074 mm Far
Filter No Filter
Filter... Load from... Save as...
Quit Load Def. Save Def.


インターネットを始めよ



KL-A1
100°
+3°



-3°

A1 $\phi = 0.9998$

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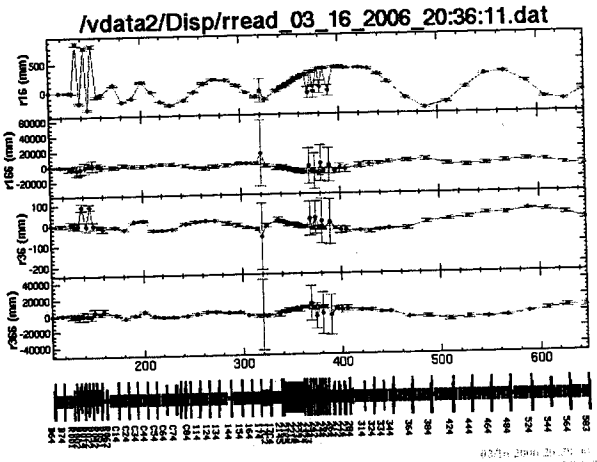
測定（運転値）

Window

E(6) (BPMs) | dE/E vs X (BPMs) | dE/E vs Y (BPMs) | dE/E vs Q (BPMs) | R56(6) (Streak Camera) | Fit

Help

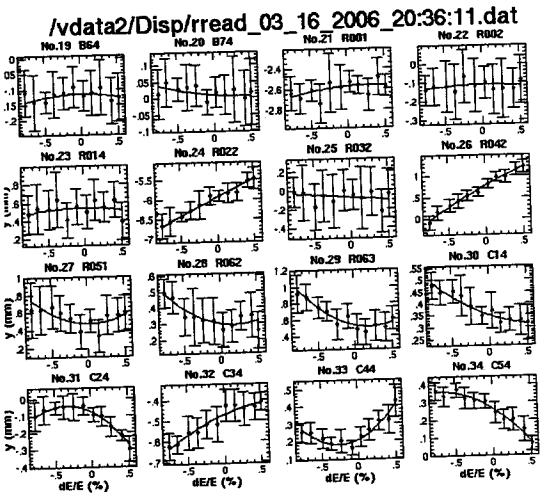


Energy = 1.54502670811 [GeV]

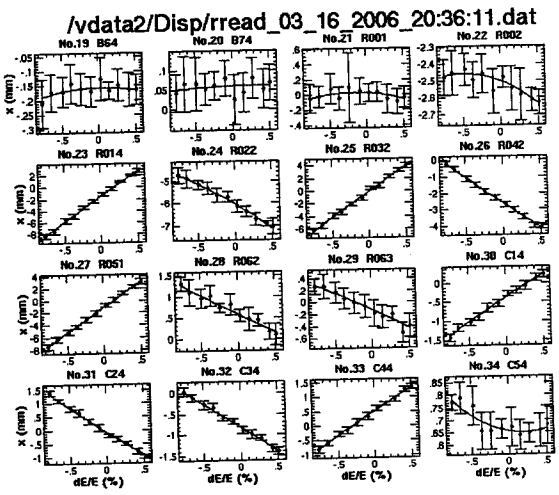
Measurement
Low energy: 1.5342
High energy: 1.5558
Delta energy: .002
Iterations/step: 10
Comments: <none>
No Streak Camera Use Streak Camera
Wait for Streak Camera
Debugging Mode Execution Mode
Go
Abort
Files
Load Raw Data File
Dispersion file: /vdata2/Disp/rmeas_03_16_2006_
Write Dispersion File
Analysis
<none>
Drop streak points (1): 0
Drop streak points (2): 0
Energy Scale Factor (current): 1
Energy Scale Factor (replot): .91201252507571
Energy Offsets (current): 0
Energy Offsets (replot): 0

E vs Y (BPMs) | dE/E vs Q (BPMs) | R56(6) (Streak Camera) | Fit

dE/E vs Y (BPMs) | dE/E vs Q (BPMs) | R56(6) (Streak Camera) | Fit



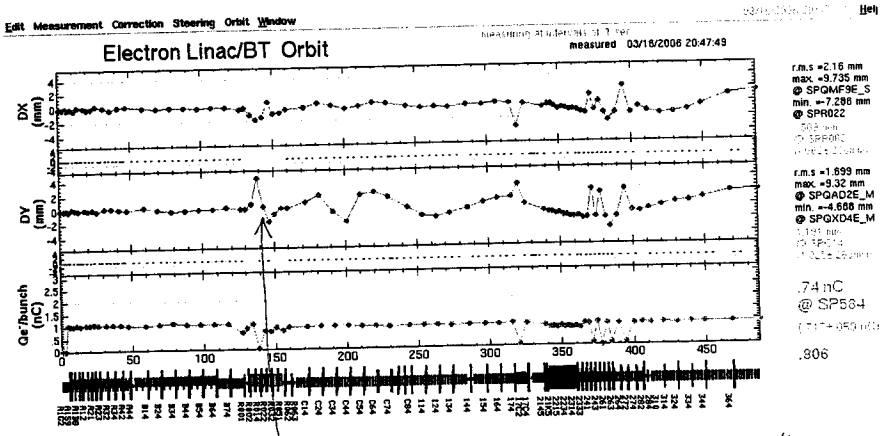
File name
/vdata2/Disp/rread_03_16_2006_20:36:11.dat



File name
/vdata2/Disp/rread_03_16_2006_20:36:11.dat

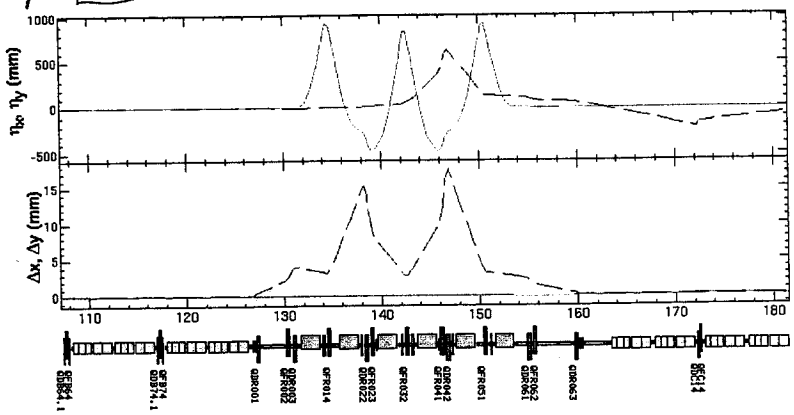
Edit Measurement Correction Steering Orbit Window

Help



かいの2つの符号が反対ではないか？ ← 反対では

Bump [A]



mode e+ e- range DX Auto Fix (7) DY Auto Fix (7) Q Auto Fix (13) e-/e+ 40 Replot

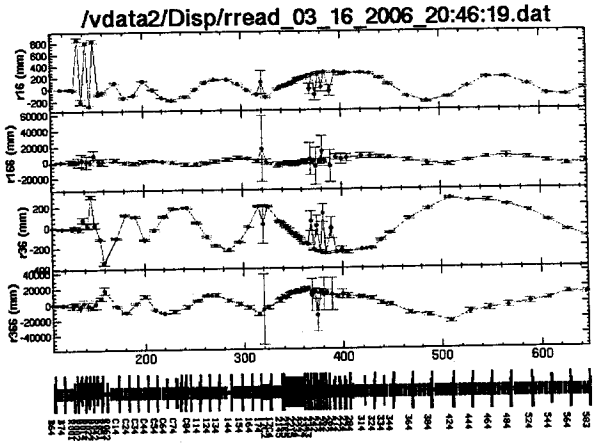
a b r c 1 2 3 4 5 6

position	dx	dpx	ex	epx	dy	dpy	ey	epy	
SPB64	0	0	0	0	0	0	0	0	del
SPR022	0	0	0	0	15	0	0	0	del
SPR042	0	0	0	0	15	0	0	0	del
SPC14	0	0	0	0	0	0	0	0	del

Control
Read Orbit
Calculate Bump
Clear Conditions
bunch length (ps): 30
Reset Lorc Quads

Window
(6) (BPMs) | dE/E vs X (BPMs) | dE/E vs Y (BPMs) | dE/E vs Q (BPMs) | R56(6) (Streak Camera) | Fit

/vdata2/Disp/rread_03_16_2006_20:46:19.dat



Energy = 1.54403013006 [GeV]

Measurement
Low energy: 1.5342
High energy: 1.5558
Delta energy: .002
Iterations/step: 10
Comments: <none>
No Streak Camera Use Streak Camera
Wait for Streak Camera
Debugging Mode Execution Mode
Go
Abort

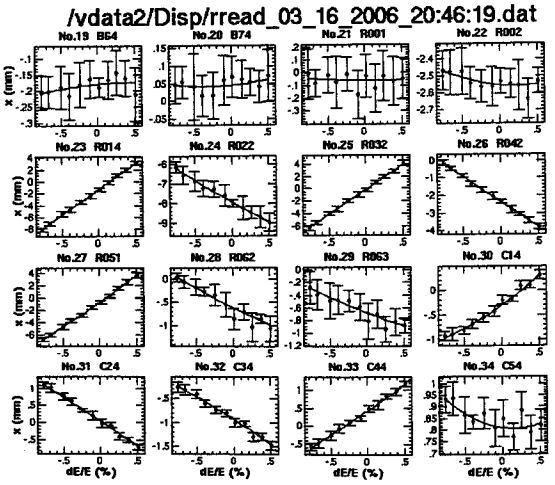
Files
Load Raw Data File
Dispersion file: /vdata2/Disp/rmeas_03_16_2006_
Write Dispersion File

Analysis
<none>
Drop streak points (1): 0
Drop streak points (2): 0
Energy Scale Factor (current): 1
Energy Scale Factor (replot): .902210709314125
Energy Offsets (current): 0
Energy Offsets (replot): 0

dE/E vs Y (BPMs) | dE/E vs Q (BPMs) | R56(6) (Streak Camera) | Fit

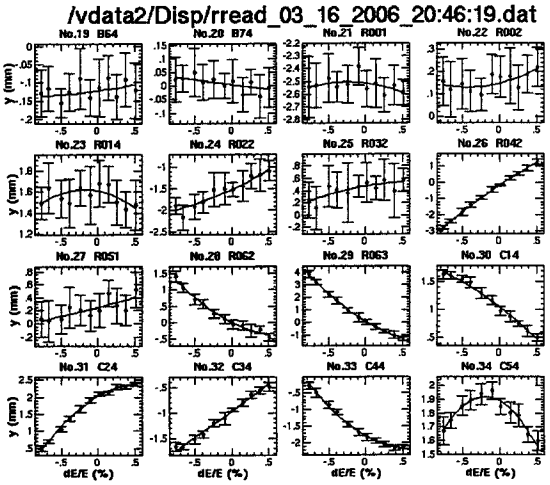
dE/E vs Y (BPMs) | dE/E vs Q (BPMs) | R56(6) (Streak Camera) | Fit

/vdata2/Disp/rread_03_16_2006_20:46:19.dat



File name
/vdata2/Disp/rread_03_16_2006_20:46:19.dat

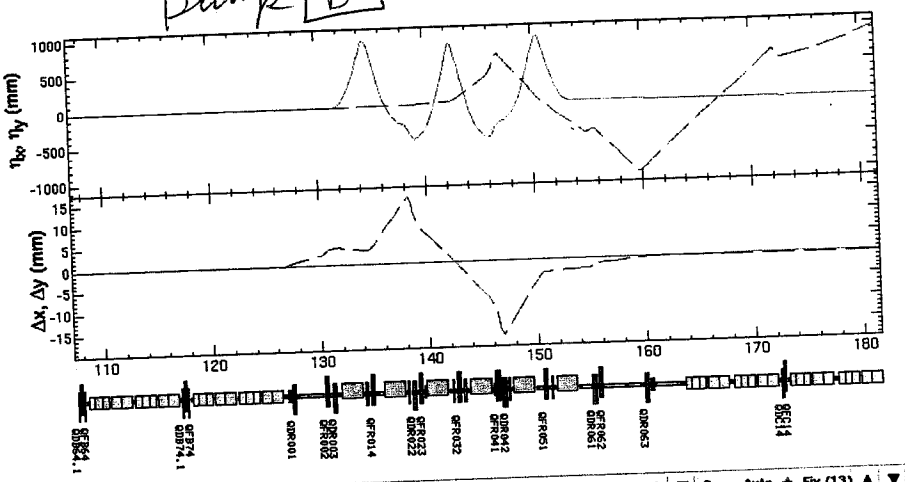
/vdata2/Disp/rread_03_16_2006_20:46:19.dat



File name
/vdata2/Disp/rread_03_16_2006_20:46:19.dat

File Edit Measurement Correction Steering Orbit Window

Bump B



mode e+ e-

range DX Auto Fix (7) DY Auto Fix (7) Q Auto Fix (13) e-/e+ 40 Replot

position	dx	dpx	ex	epx	dy	dpy	ey	epy	
SPB64	0	0	0	0	0	0	0	0	del
SPR022	0	0	0	0	15	0	0	0	del
SPR042	0	0	0	0	-15	0	0	0	del
SPC14	0	0	0	0	0	0	0	0	del

Control: Read Orbit, Calculate Bump, Clear Conditions, bunch length (ps): 30, Reset J-arc Quads

BPMs) dE/E vs X (BPMs) dE/E vs Y (BPMs) dE/E vs Q (BPMs) R56(5) (Streak Camera) Fit

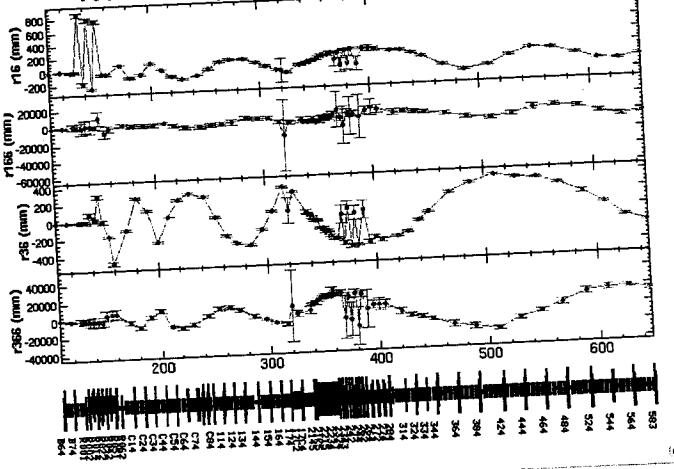
Energy = 1.54253284459 [GeV]

Measurement
Low energy: 1.5342
High energy: 1.5558
Delta energy: .002
Iterations/step: 10
Comments: <none>
No Streak Camera / Use Streak Camera
Wait for Streak Camera
Debugging Mode / Execution Mode
Go
Abort

Files
Load Raw Data File
Dispersion file: /vdata2/Disp/rmeas_03_16_2006_
Write Dispersion File

Analysis
<none>
Drop streak points (1): 0
Drop streak points (2): 0
Energy Scale Factor (current): 1
Energy Scale Factor (replot): .856318062679053
Energy Offsets (current): 0
Energy Offsets (replot): 0

/vdata2/Disp/rread_03_16_2006_20:53:31.dat



$$\begin{pmatrix} \Delta\eta_{A1} & \Delta\eta_{B1} \\ \Delta\eta_{A2} & \Delta\eta_{B2} \end{pmatrix} \begin{pmatrix} a \\ b \end{pmatrix} = -\begin{pmatrix} \eta_{01} \\ \eta_{02} \end{pmatrix}$$

↑ ↑ ↑

Bump A の (η_A − η_0) Bump B の (η_B − η_0) ; η_0 の ηd

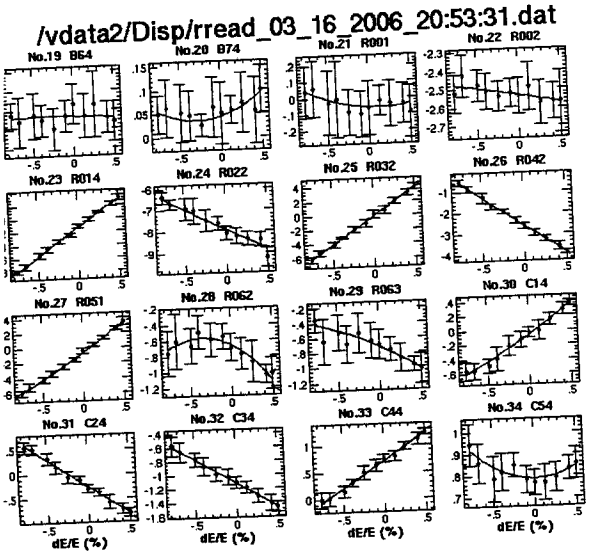
a, b を求める.

(a × Bump A の高さ + b × Bump B の高さ)

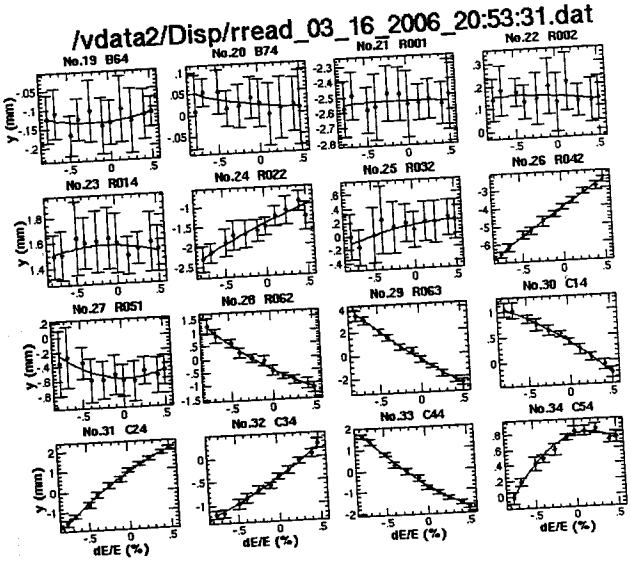
Bump を作る.

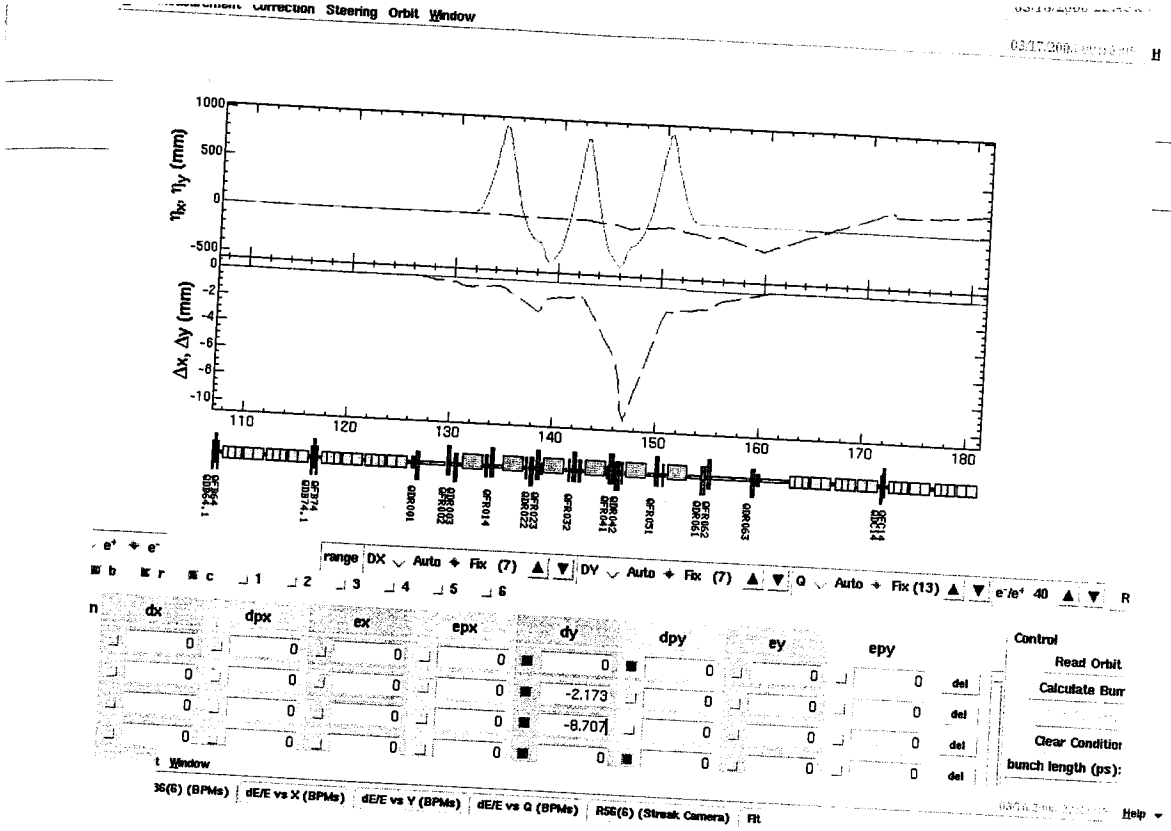
dE/E vs Y (BPMs) dE/E vs Q (BPMs) R56(5) (Streak Camera) Fit

/vdata2/Disp/rread_03_16_2006_20:53:31.dat



/vdata2/Disp/rread_03_16_2006_20:53:31.dat



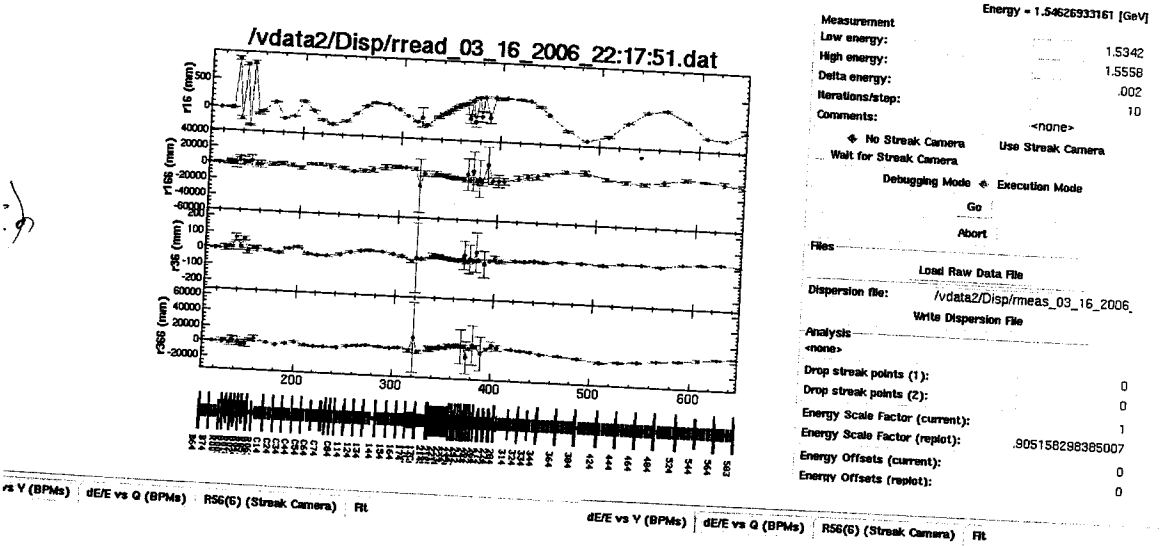


SPR022
-2.173 mm

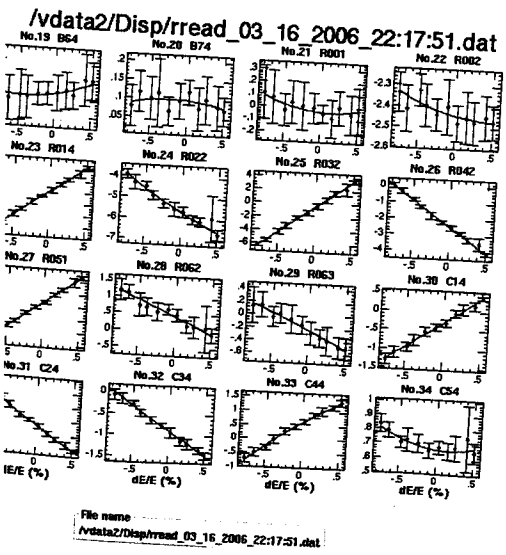
SPR042
-8.707

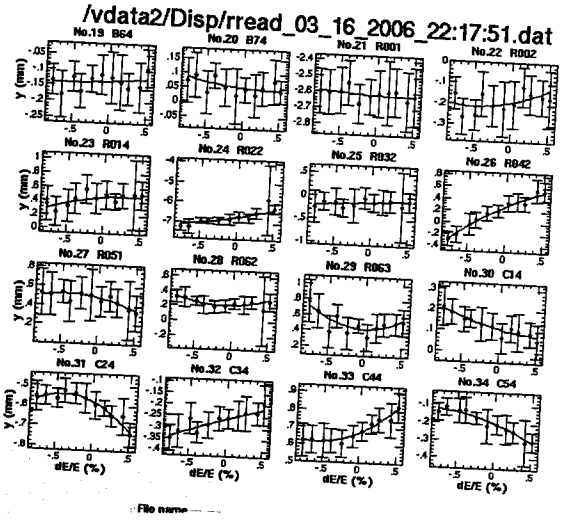
V. Bump をたてた

"data4157
(J-Arc Dispersion)
(Vcorr7)"
に save。



← Fitは
きれいになった

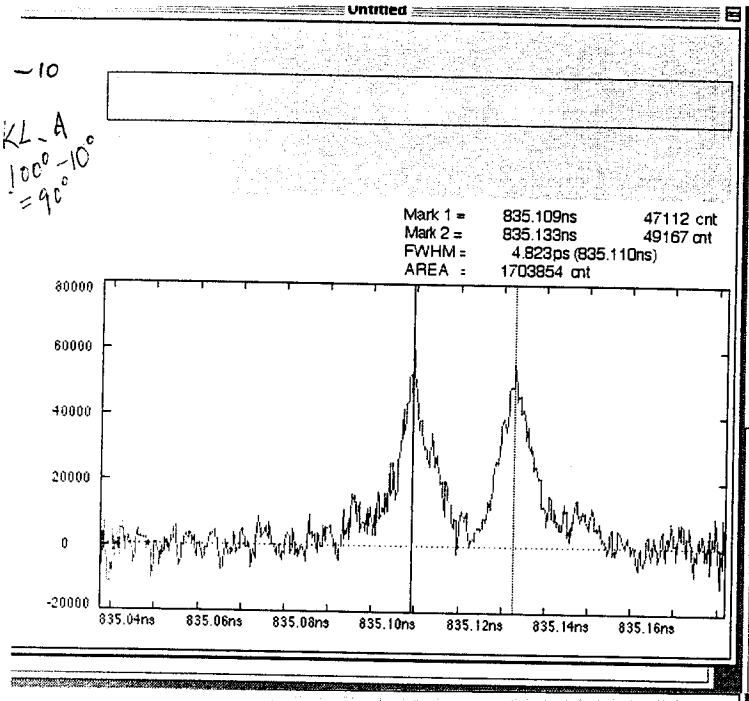


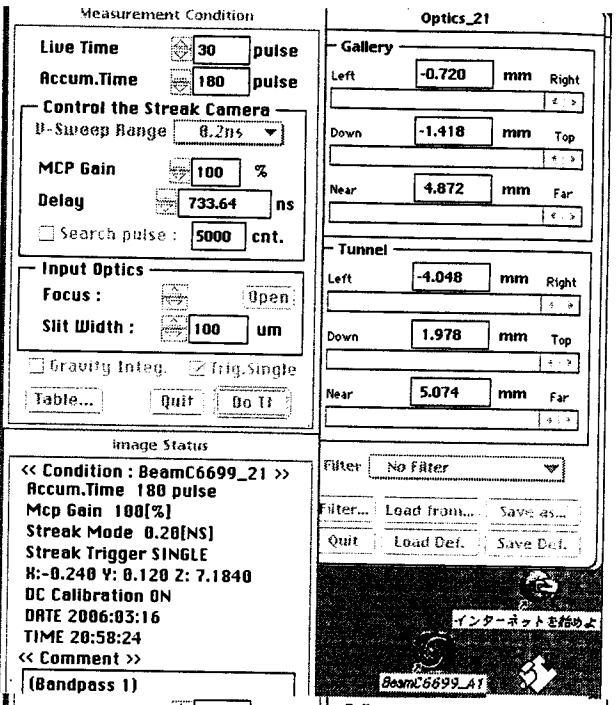


111

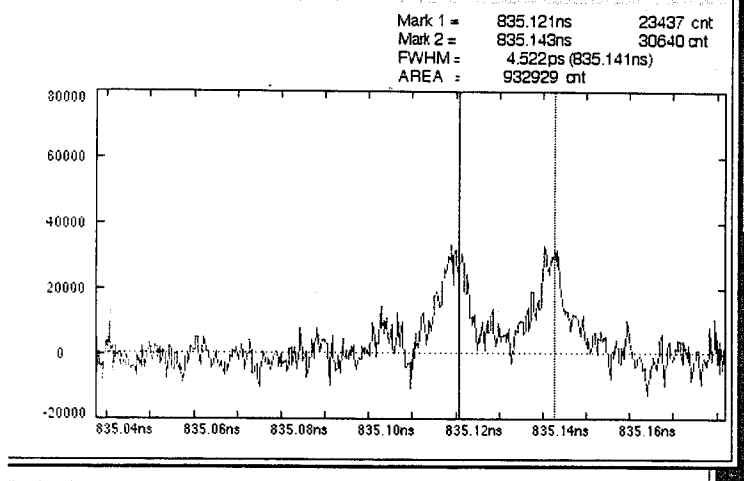
−10

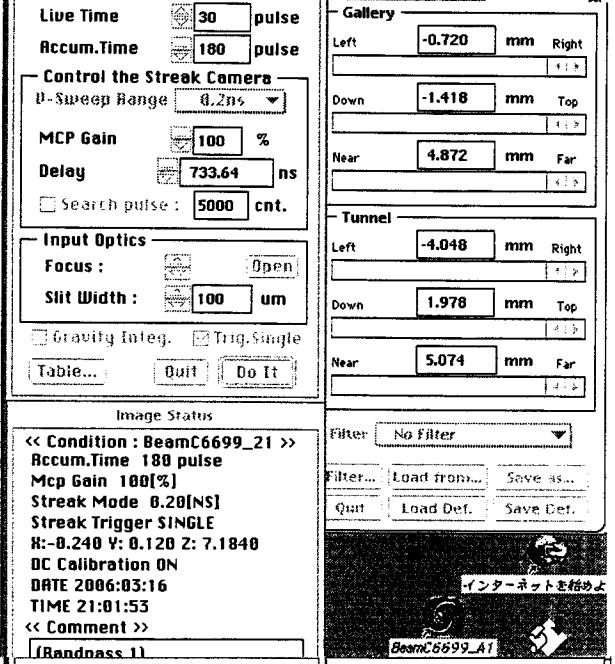
KL−A
100°−10°
=90°





−20





fit