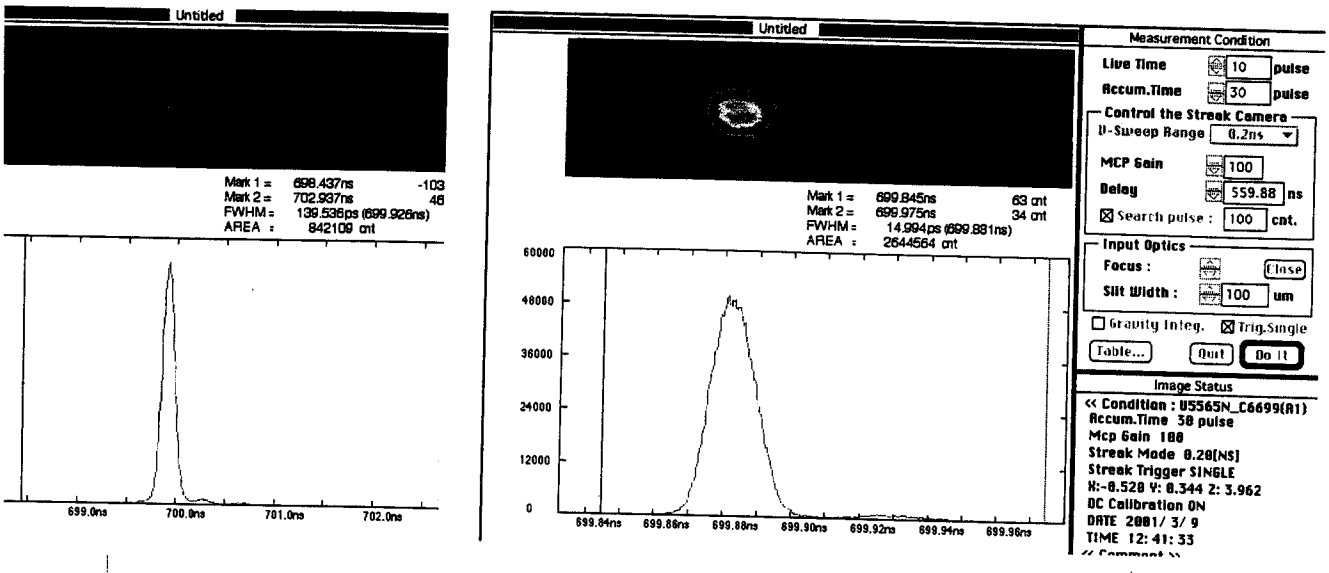
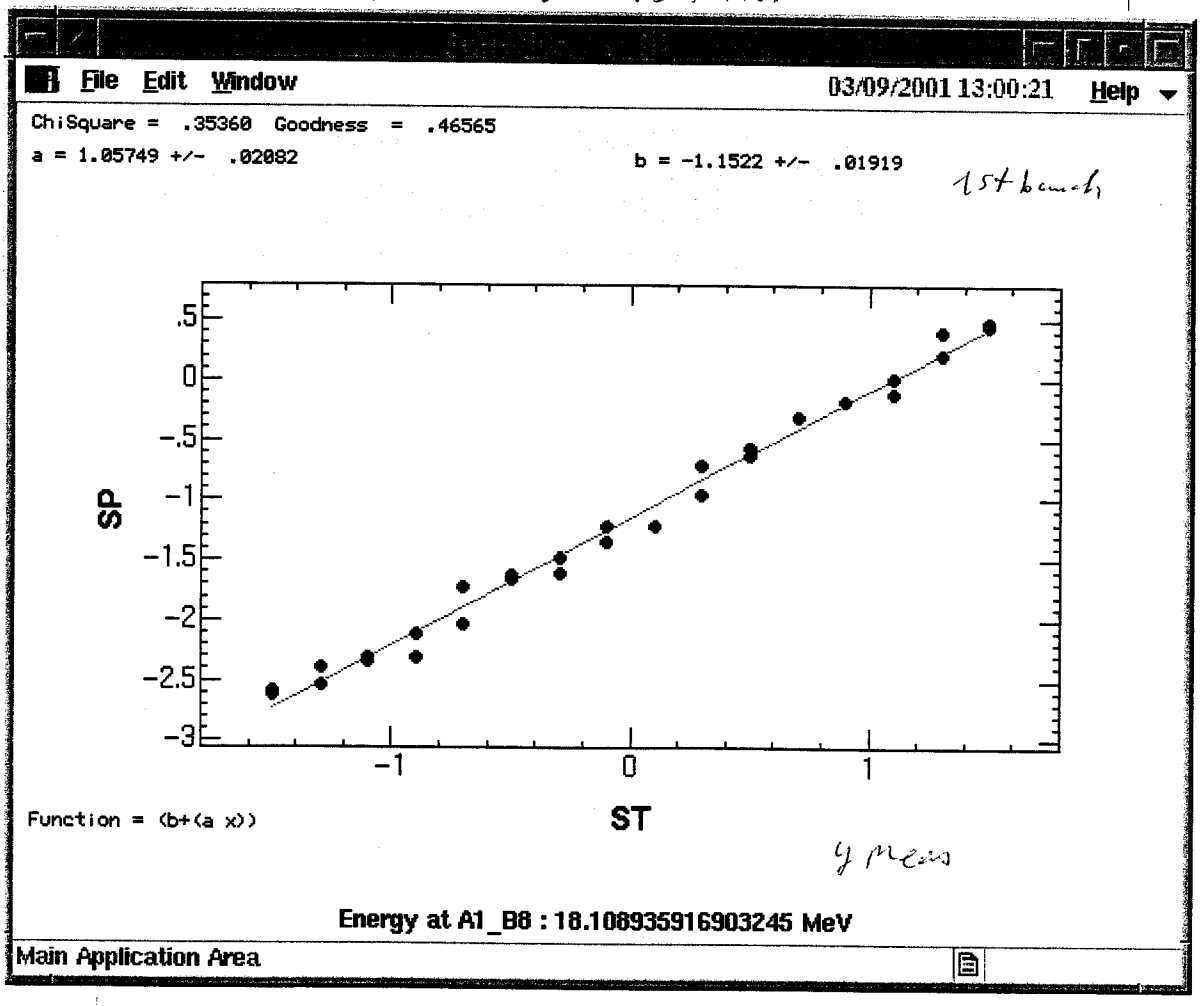
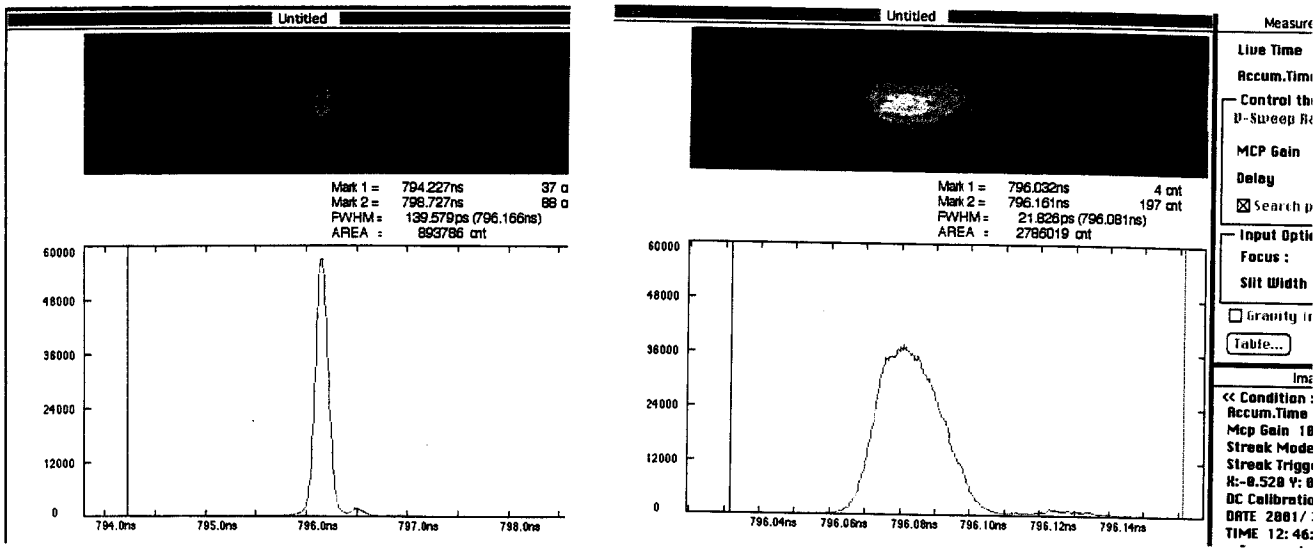
#1バンチ



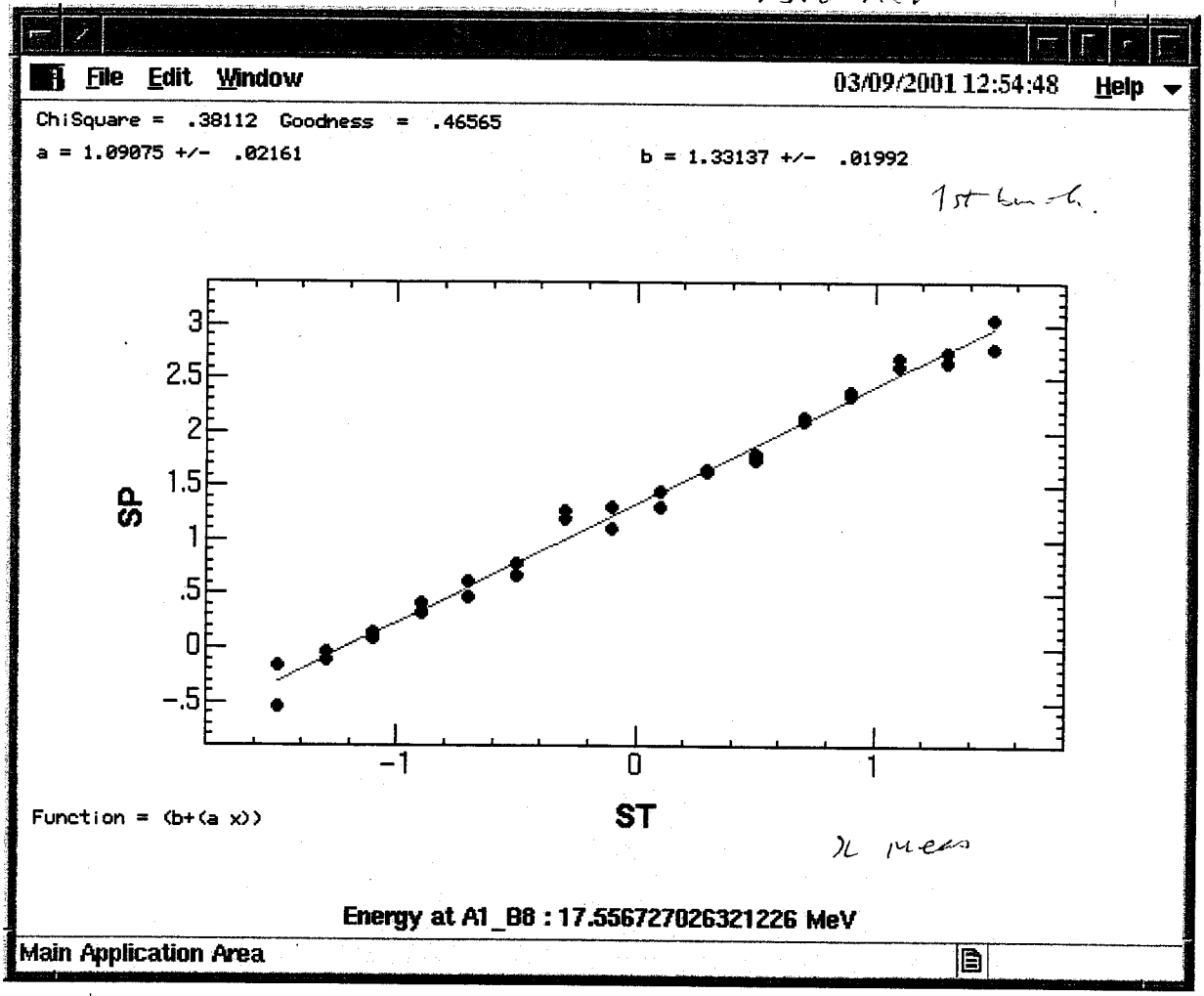
#1バンチ エネルギー (4-measure) 18.1 MeV



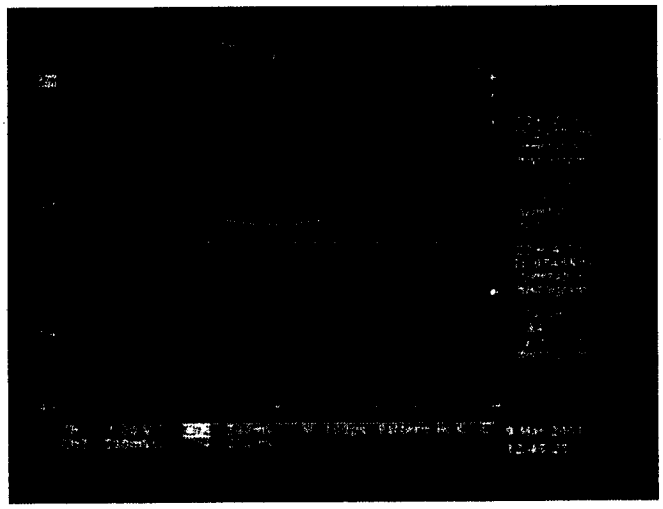
#2 バンチ



#2 バンチエネルギー (x-Measure) 17.6 MeV



First pulse



30.297 ns
1.62 V
31.056 ns
839 mV

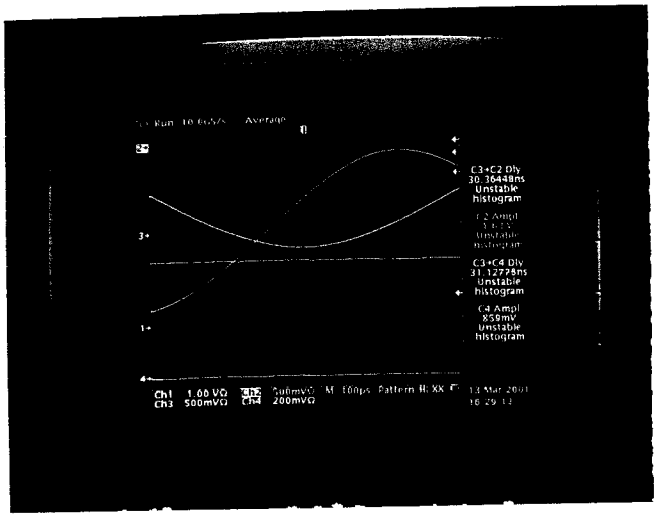
測定結果のまとめ.
3/9 と 3/13

	1st Bunch	2nd Bunch	
Gun Beam Intensity	839mV		
Gun Delay	0820	0CD0	3/9(金)
Gun Beam Delay	31.056 ns		
Beam Energy @ Buncher	x 17.6 MeV, y 18.1 MeV	–	
Bunch Width	15.0 ps	21.8 ps	
Charge @ Target	7.6 nC	7.5 nC	
Gun Beam Intensity	859 mV	832mV	
Gun Delay	0860 (0.179ns)	0CA0 (1.66ns)	3/13(火)
Gun Beam Delay	31.123 ns	31.174 ns	
Beam Energy @ Buncher	x 19.1 MeV, y 19.2 MeV	x 19.6 MeV, y	
Bunch width	15.4 ps	12.7 ps	
Charge @ Target	7.5 nC	6.0 nC	

3/13(火) Taro Bunch Beam

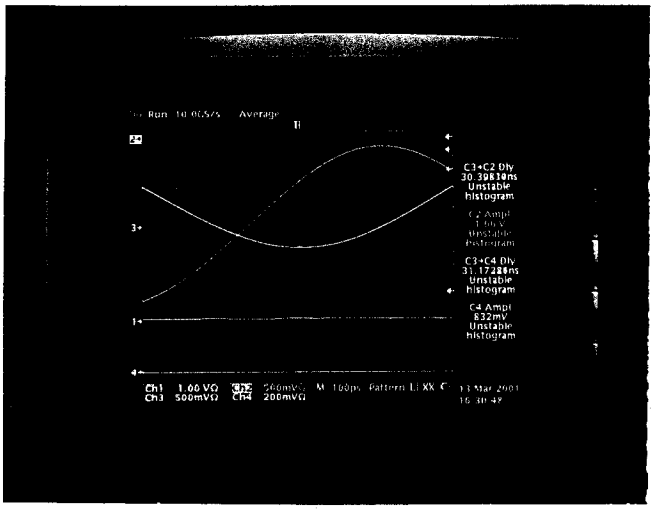
Grid pulse と Gun Beam の delay と pulse 波高値

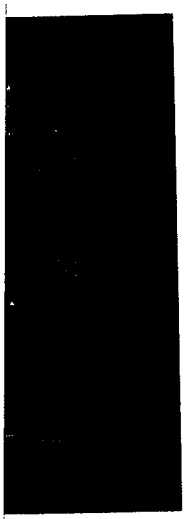
#1バンチ



Grid pulse
(30.360 ns (a
(1.63 V (Pu
Gun Beam (WM-A1-G
(31.123 ns (de
(858 mV (pu

#2バンチ





Grid pulse
(30.399 ns
(1.66 V
Gun Beam
(31.174 ns
(832 mV

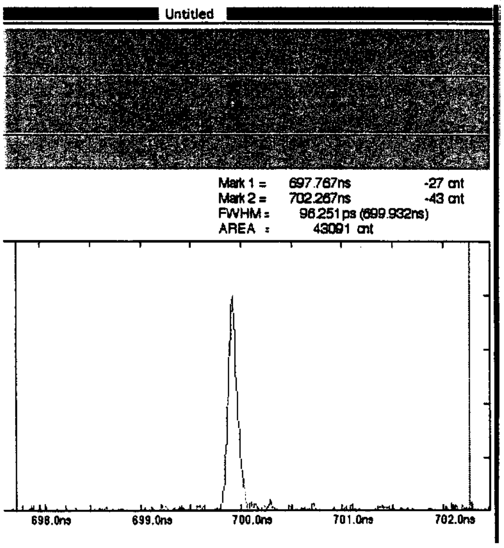
(火) 2バンチ加速.

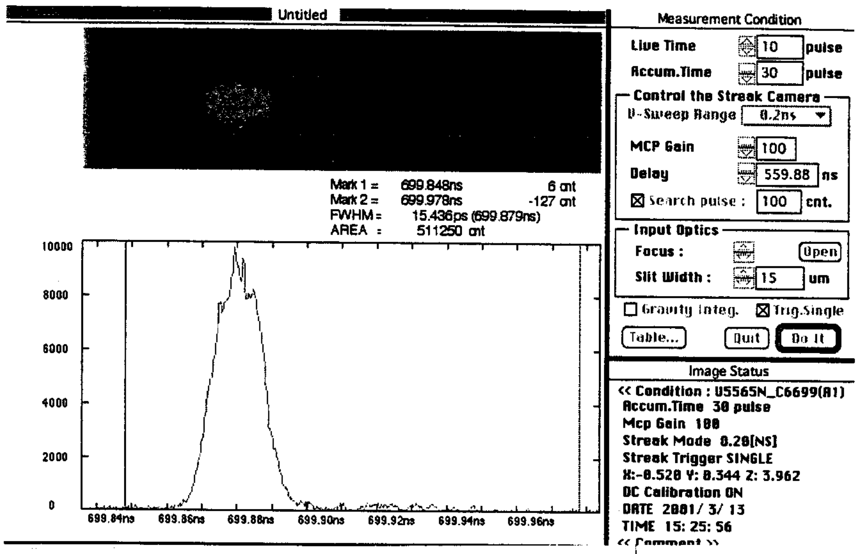
① KL-A2 stand-by. (エージング中)

② TD4 0719 → 0753
RFのパルス幅を100ns広げる.

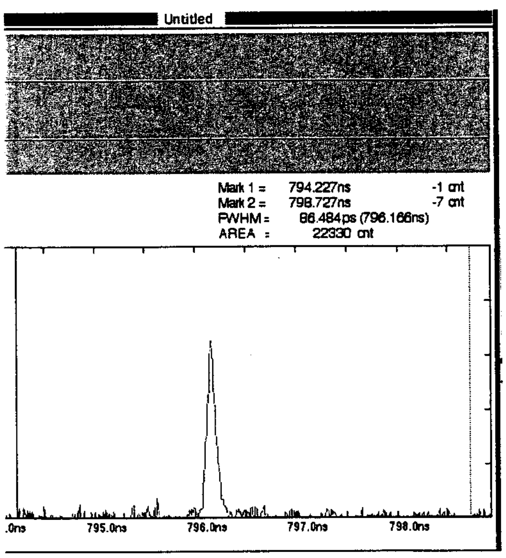
GUN delay 1 0820 → 08A0 → 0860] Gun Parameter
〃 〃 2 0CD0 → 0CA0] "010313-TB" にsave
↑ 3/9のParameter

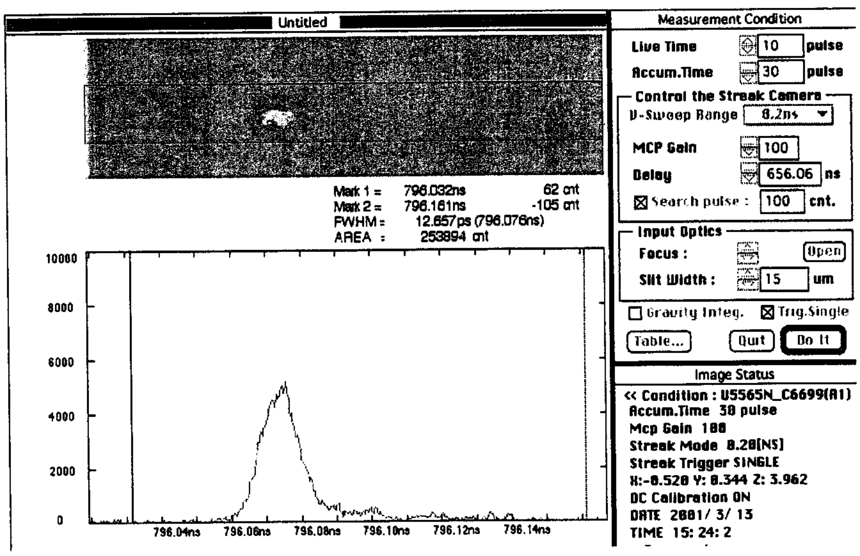
1バンチ

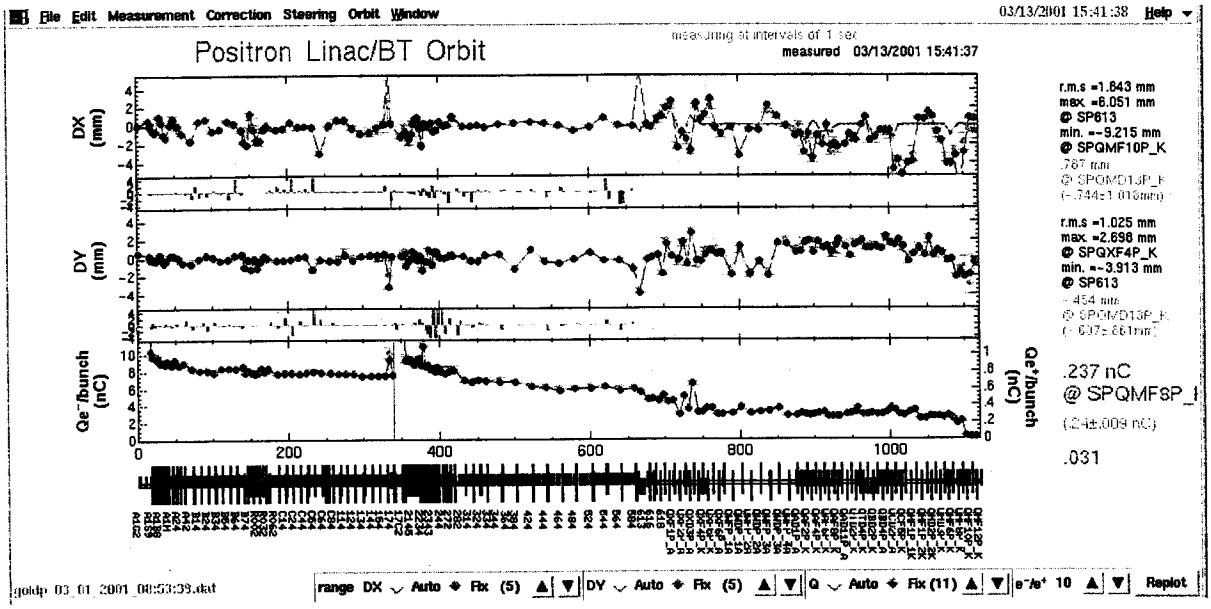


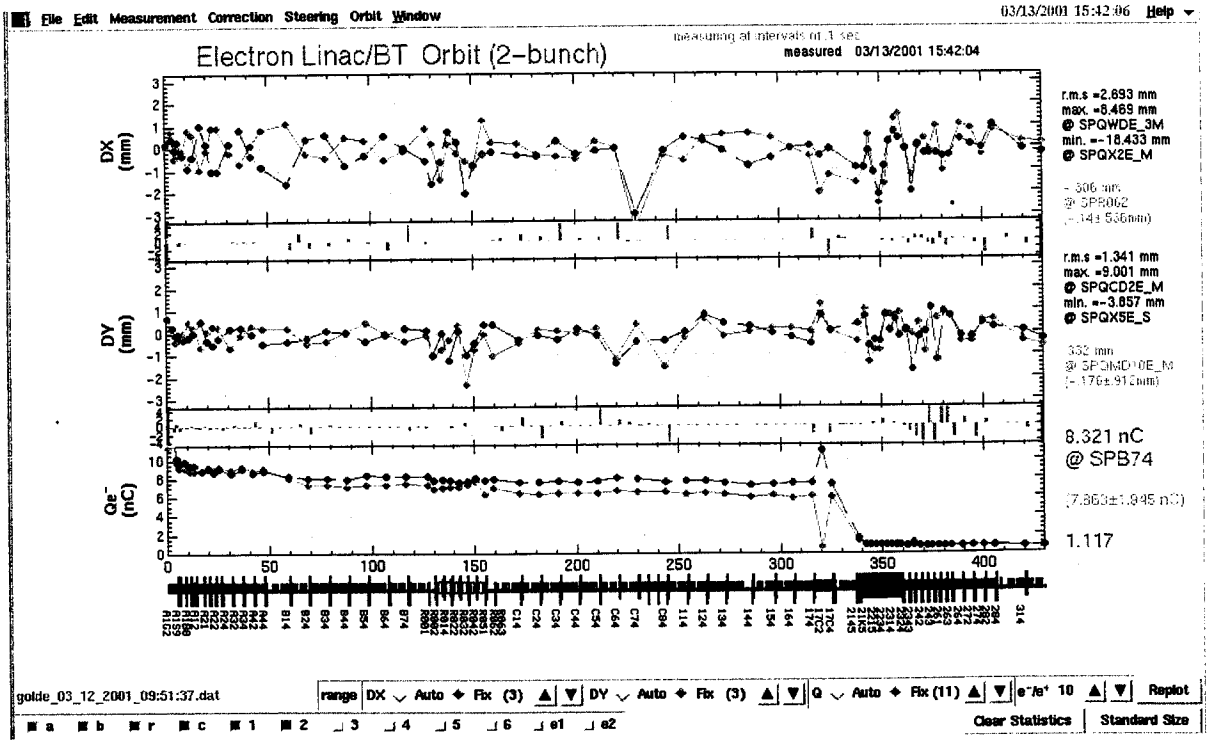


2バンチ





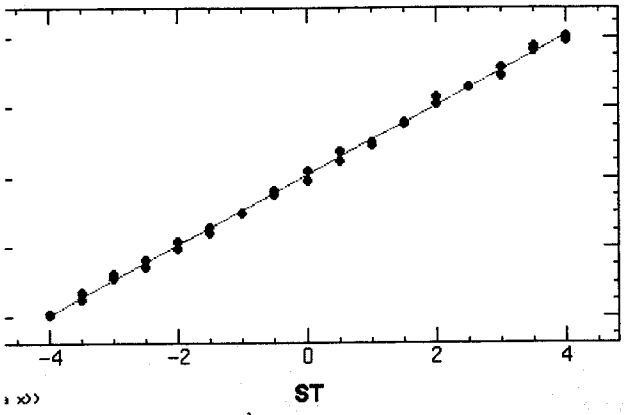

File Edit Measurement Correction Steering Orbit Window
03/13/2001 15:41:38 Help
Positron Linac/BT Orbit
measuring at intervals of 1 sec
measured 03/13/2001 15:41:37
DX (mm)
DY (mm)
Qe⁺/bunch (nC)
r.m.s =1.643 mm
max. =6.051 mm
@ SP613
min. =-9.215 mm
@ SPQMF10P_K
.237 nC
@ SPQMF8P_I
.031
goldp 03_01_2001_08:53:39.dat
range DX Auto Fix (5)
DY Auto Fix (5)
Q Auto Fix (11)
e⁻/e⁺ 10
Replot


File Edit Measurement Correction Steering Orbit Window
03/13/2001 15:42:06 Help
Electron Linac/BT Orbit (2-bunch)
measuring at intervals of 1 sec
measured 03/13/2001 15:42:04
DX (mm)
DY (mm)
Qe⁻ (nC)
r.m.s =2.693 mm
max. =8.469 mm
@ SPQWDE_3M
min. =-18.433 mm
@ SPQX2E_M
r.m.s =1.341 mm
max. =9.001 mm
@ SPQCD2E_M
min. =-3.857 mm
@ SPQX5E_S
8.321 nC
@ SPB74
1.117
golde_03_12_2001_09:51:37.dat
range DX Auto Fix (3)
DY Auto Fix (3)
Q Auto Fix (11)
e⁻/e⁺ 10
Replot
a b r c 1 2 3 4 5 6 e1 e2
Clear Statistics
Standard Size

Window 03/13/2001 16:43:32

919 Goodness = .46674

.00782 b = .05974 +/- .01915



x>)

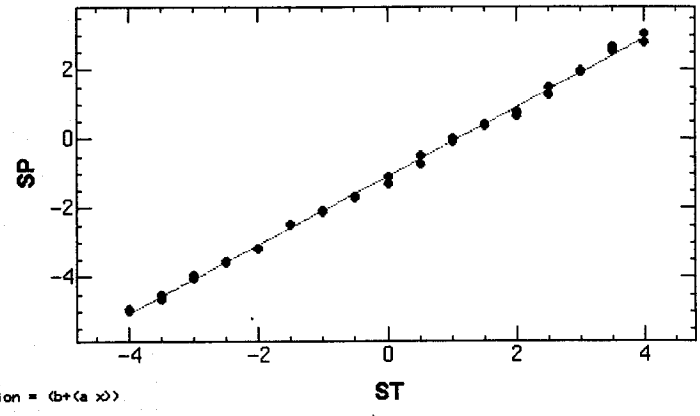
1st Bunch X

Energy at A1_B8 : 19.138273118455368 MeV

File Edit Window 03/13/2001 17:00:40

ChiSquare = .38429 Goodness = .46674

a = .99516 +/- .00767 b = -1.0736 +/- .01879



Function = (b+(a x))

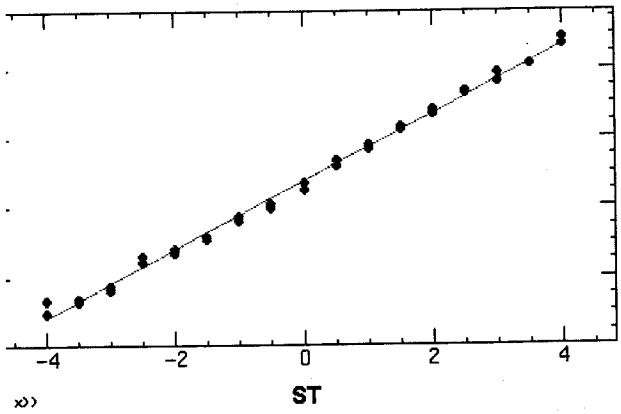
1 st Bunch Y

Energy at A1_B8 : 19.243055266323245 MeV

Window 03/13/2001 17:10:16

363 Goodness = .46674

.01137 b = -1.2438 +/- .02785



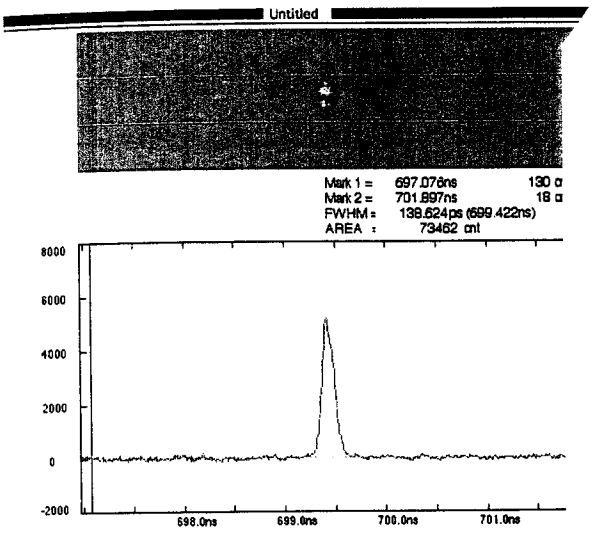
x>)

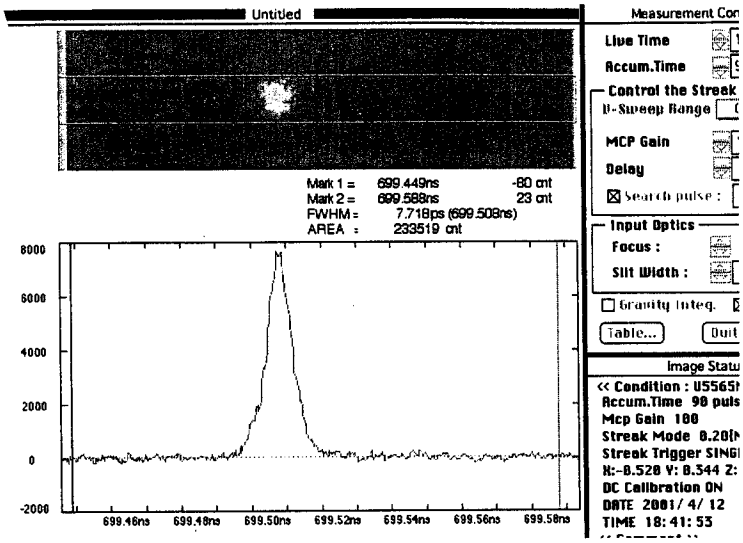
2nd Bunch X

Energy at A1_B8 : 19.550497695042279 MeV

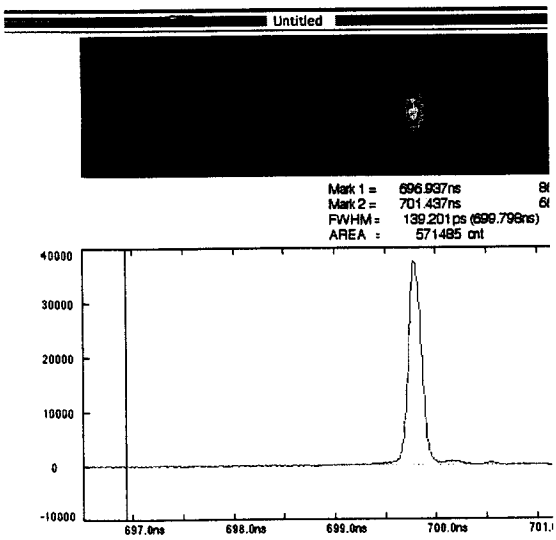
4/12(木)　営業運転ビームチェック

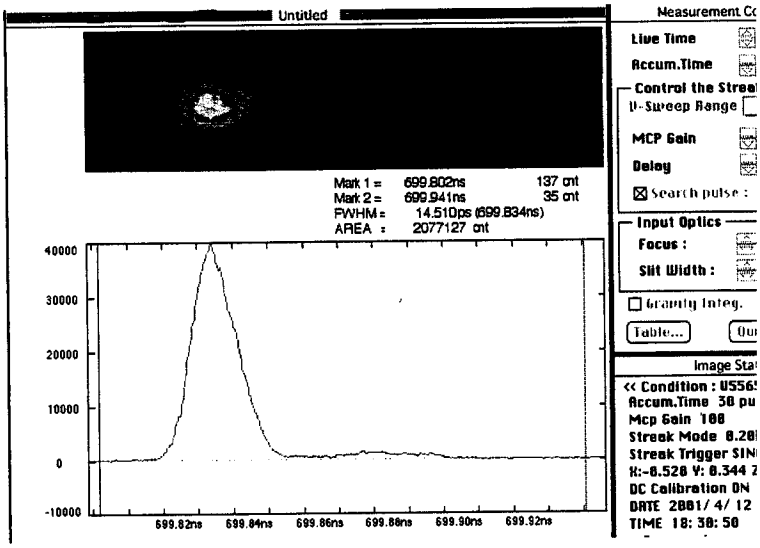
1nC ビーム





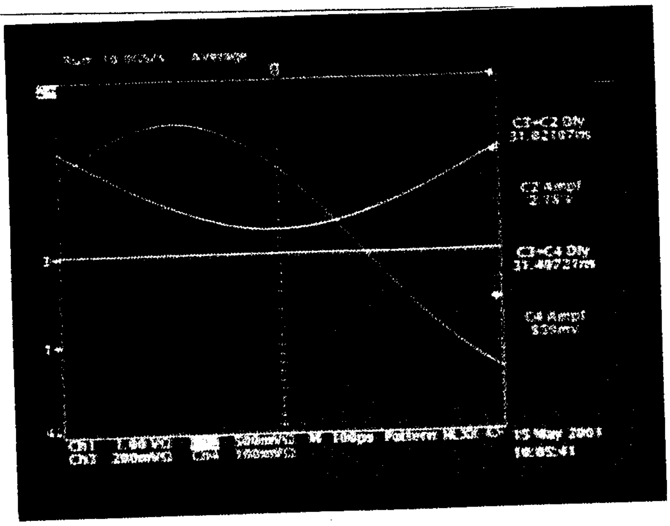
10nC ビーム



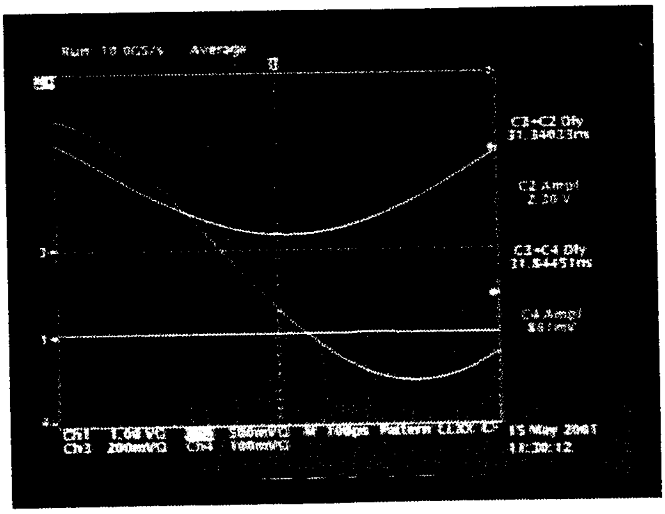


5

1st



2nd



Grid pulse Height
= 2.19V

1st

設定 0540.
0.35kV (ADC

④ Delay = 0.74ns
(08C0)

初値 = C3→C2 Dly 31.06
C3→C4 Dly 31.53
C2 = 2.20V
C4 = 868mV

2nd
2.31V

設定. 07FF
0.41kV (ADC)

⑪. Delay = 1.48ns
(0BFF)

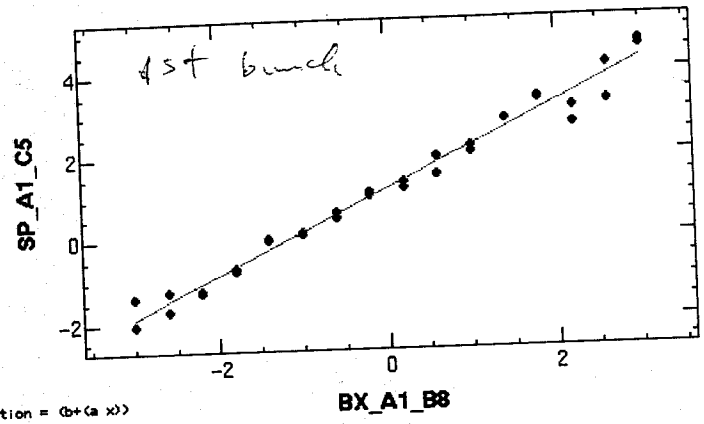
初値 = C3→C2 Dly 31.08 ns
C3→C4 Dly 31.59 ns
C2 = 2.51V
C4 = 863mV

2nd グリッドパルス波高は Charge 量の Gain が (ほぼ) 同じになるように設定した。

エネルギー測定 ⑤ SP_A1_C5

File Edit Window 05/15/2001 13:34:13 Help

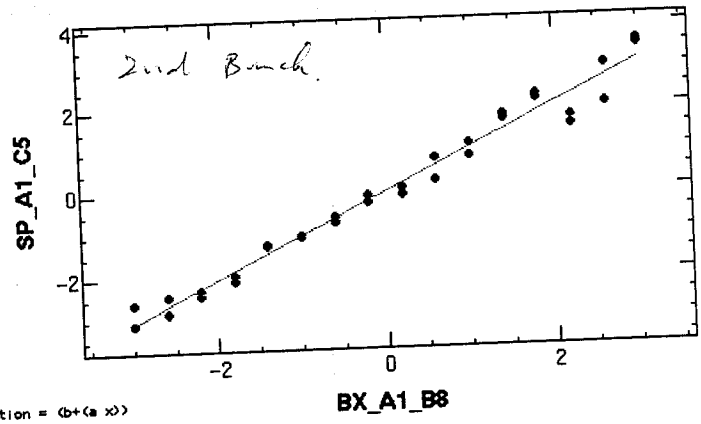
ChiSquare = 2.41809 Goodness = .46565
a = 1.01644 +/- .02722 b = 1.17728 +/- .05019



Function = (b+(a x))

Energy at A1_B8 : 18.640276295133698 MeV

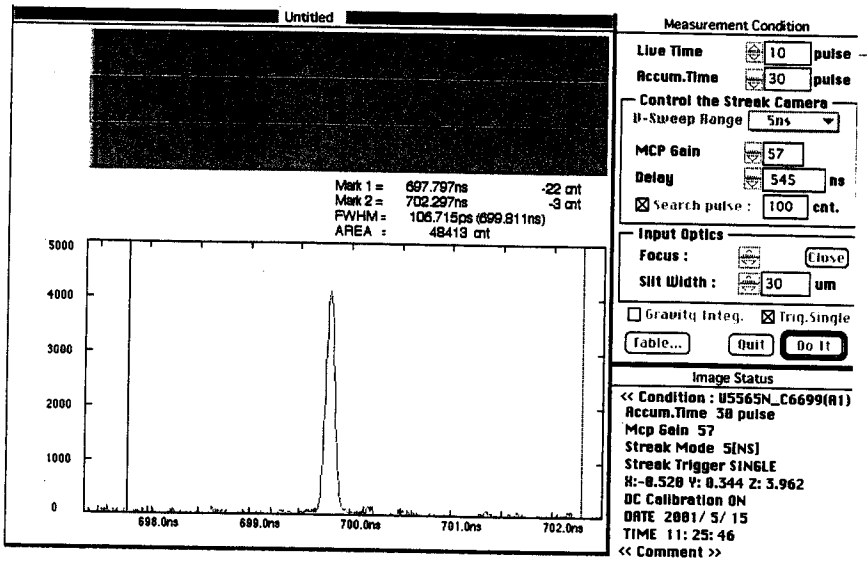
ChiSquare = 2.98472 Goodness = .46565
a = 1.02162 +/- .03024 b = -.00453 +/- .05576



Function = (b+(a x))

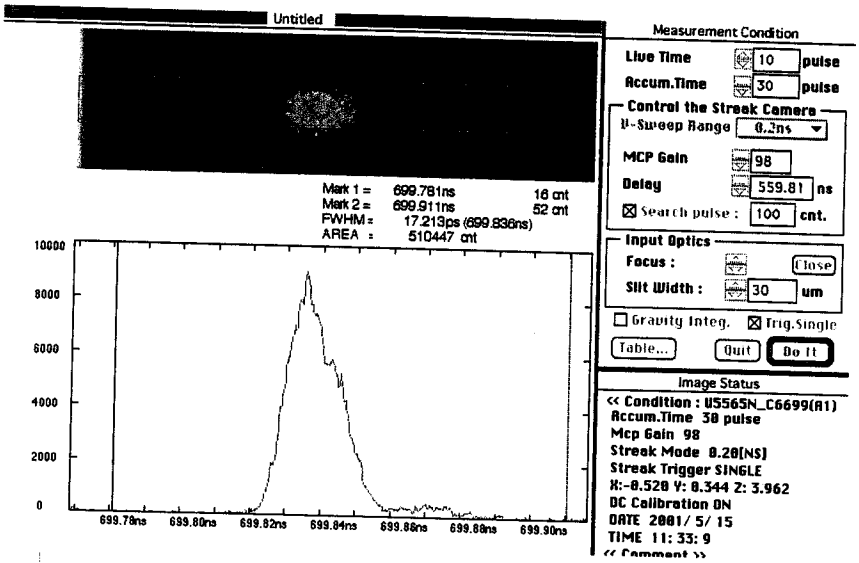
Energy at A1_B8 : 18.744748194225895 MeV

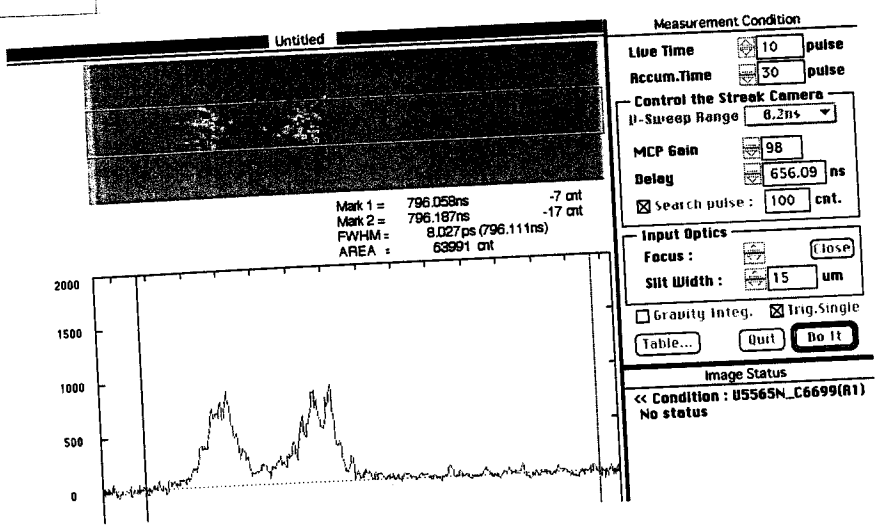
Main Application Area



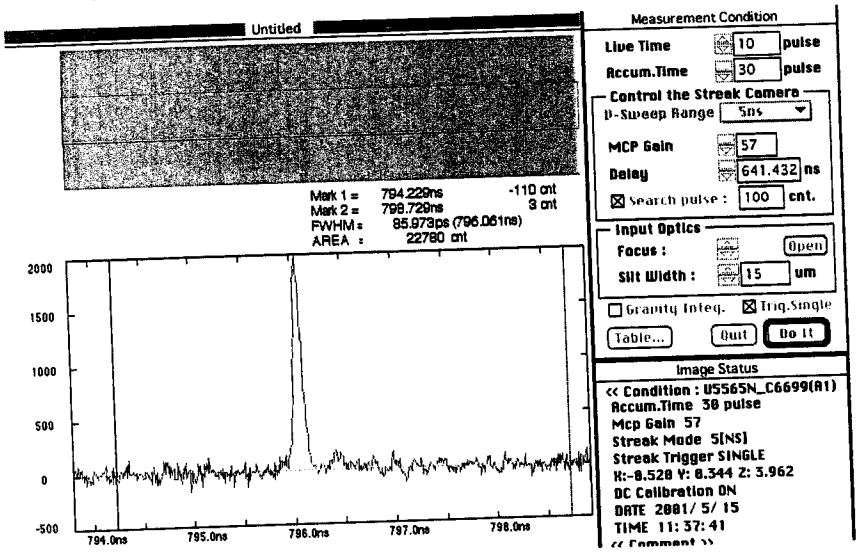
157 bunch

Trig 17Hz

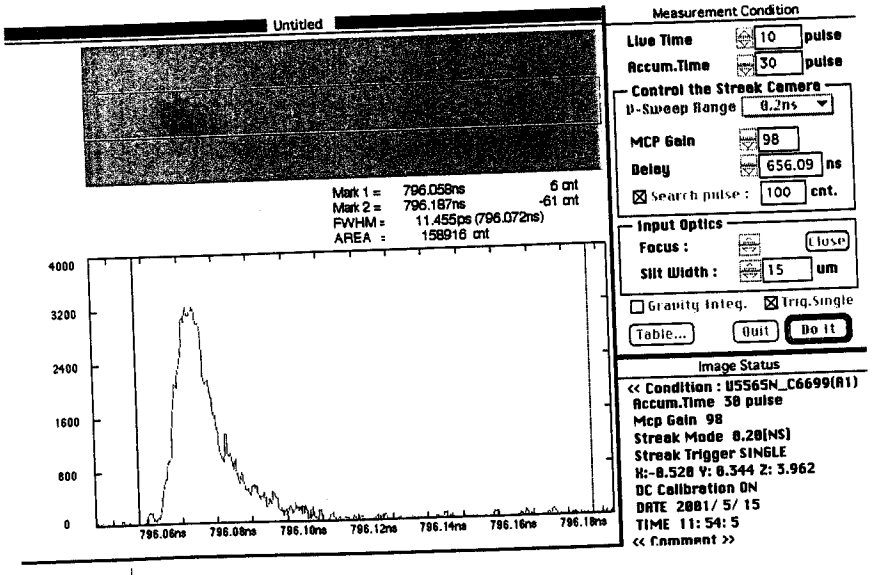


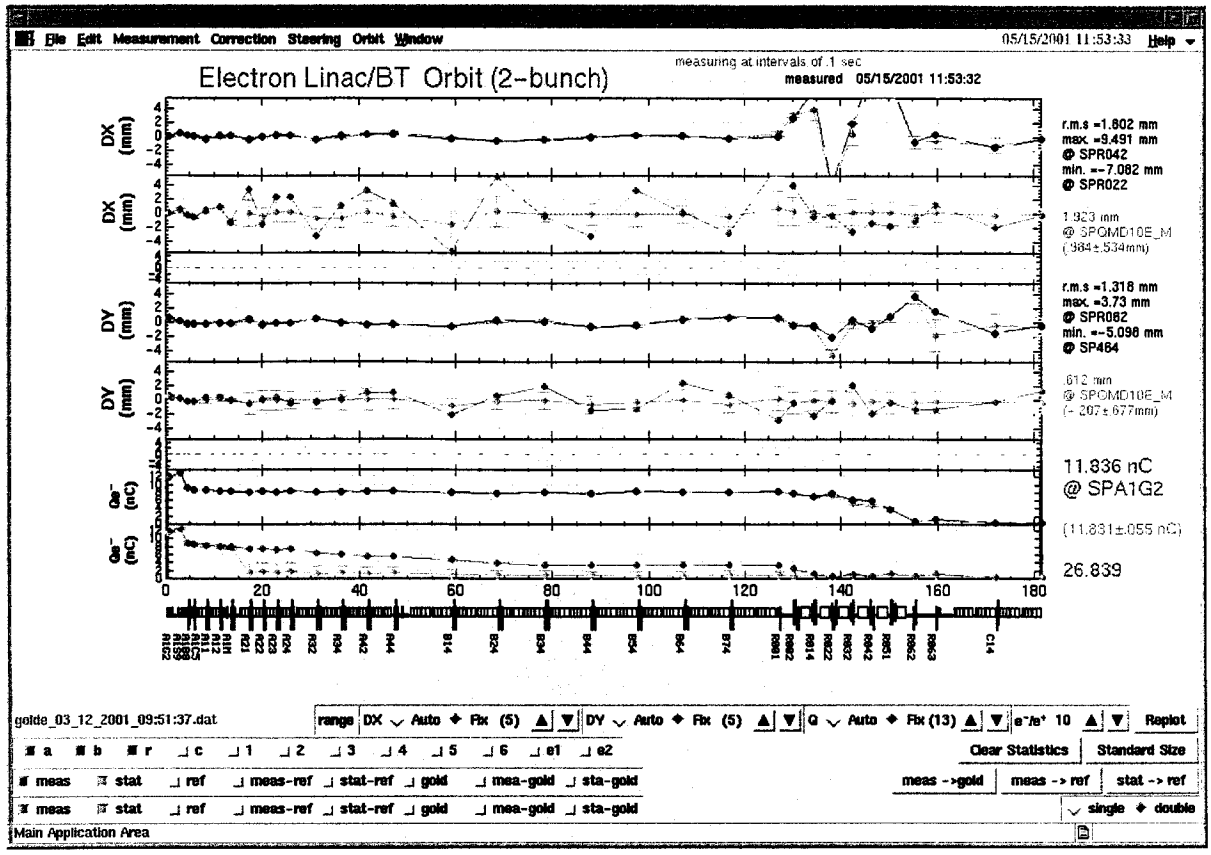


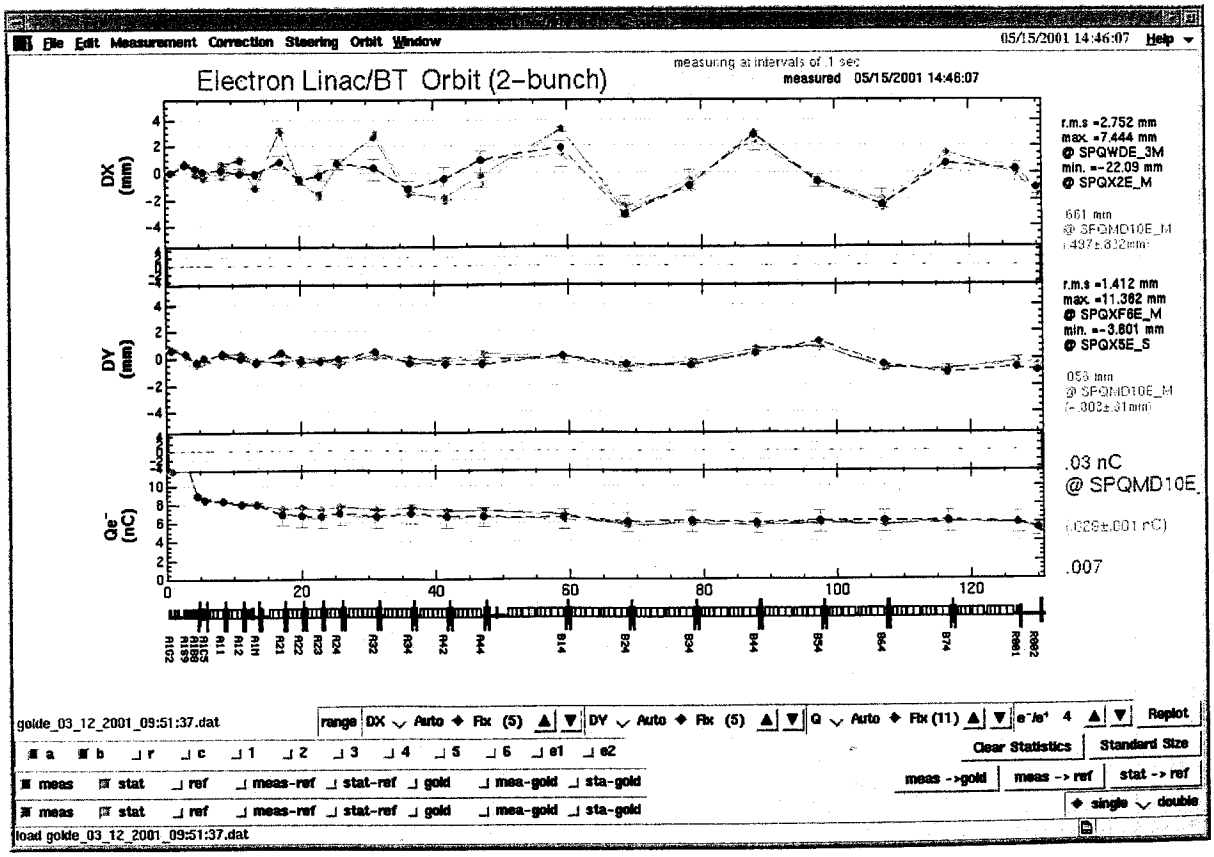
2nd bunch

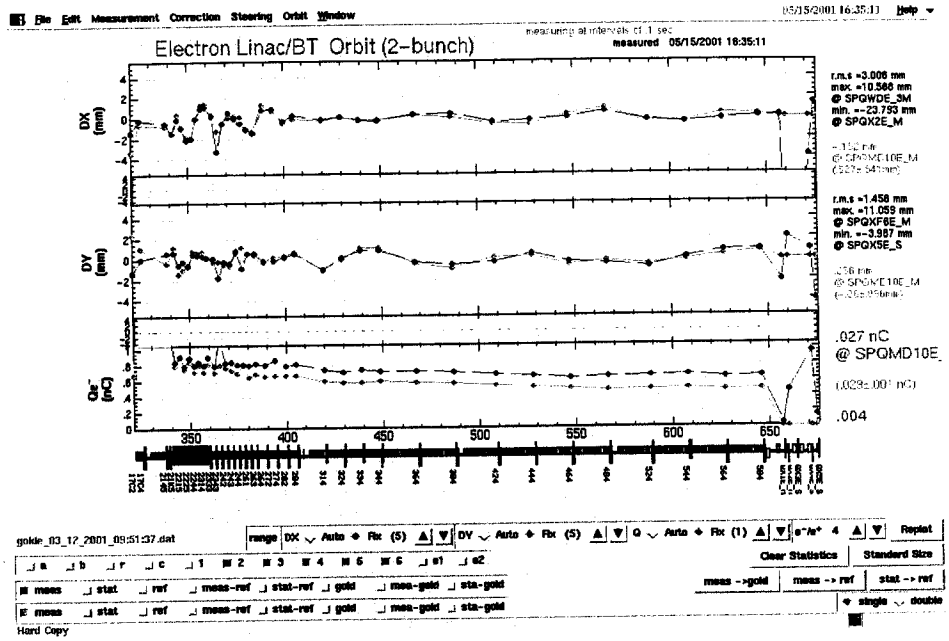


調整後 Delay a.



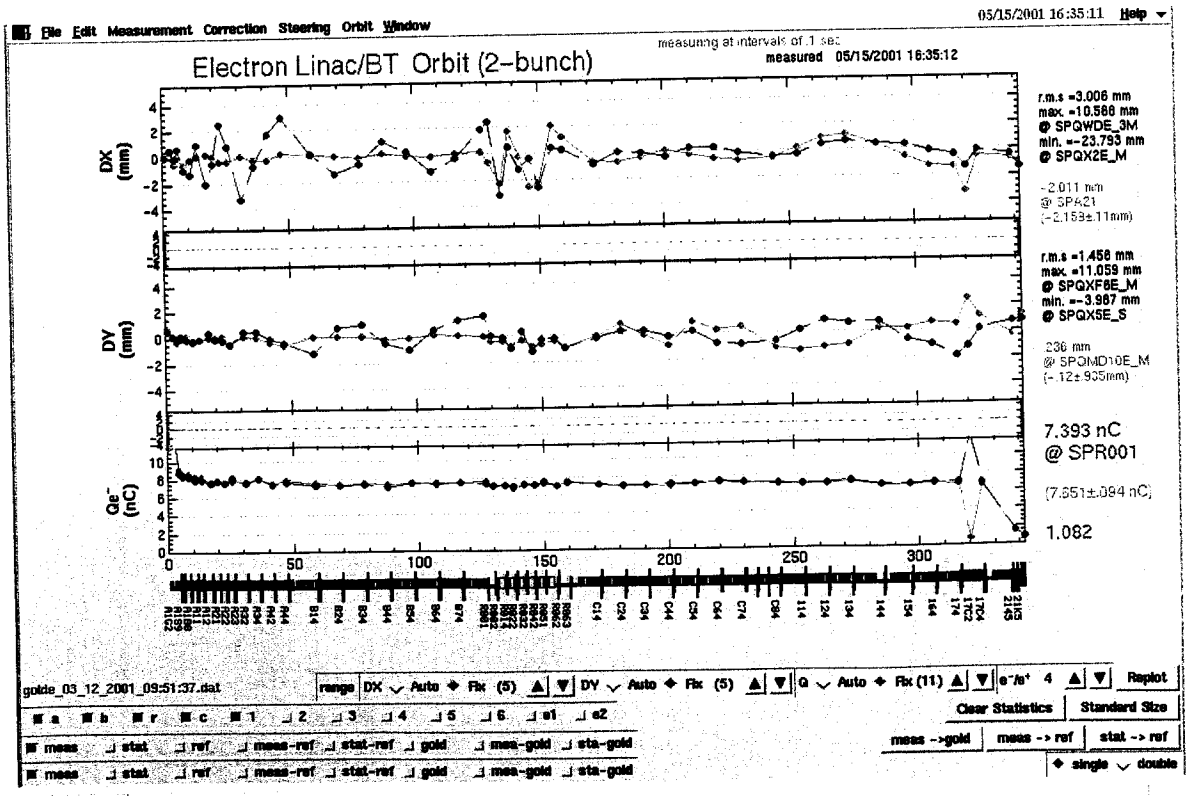

File Edit Measurement Correction Steering Orbit Window
05/15/2001 11:53:33
Help
Electron Linac/BT Orbit (2-bunch)
measuring at intervals of .1 sec
measured 05/15/2001 11:53:32
DX (mm)
DY (mm)
Qe⁻ (nC)
r.m.s =1.802 mm
max. =9.491 mm
@ SPR042
min. =-7.082 mm
@ SPR022
1.923 mm
@ SPQMD10E_M
(.984±.534mm)
r.m.s =1.318 mm
max. =3.73 mm
@ SPR062
min. =-5.098 mm
@ SP464
.612 mm
@ SPQMD10E_M
(-.207±.677mm)
11.836 nC
@ SPA1G2
(11.831±.055 nC)
26.839
golde_03_12_2001_09:51:37.dat
range DX Auto Fix (5) DY Auto Fix (5) Q Auto Fix (13) e⁻/e⁺ 10 Replot
a b r c 1 2 3 4 5 6 e1 e2
meas stat ref meas-ref stat-ref gold mea-gold sta-gold
Clear Statistics Standard Size
meas ->gold meas -> ref stat -> ref
single double
Main Application Area

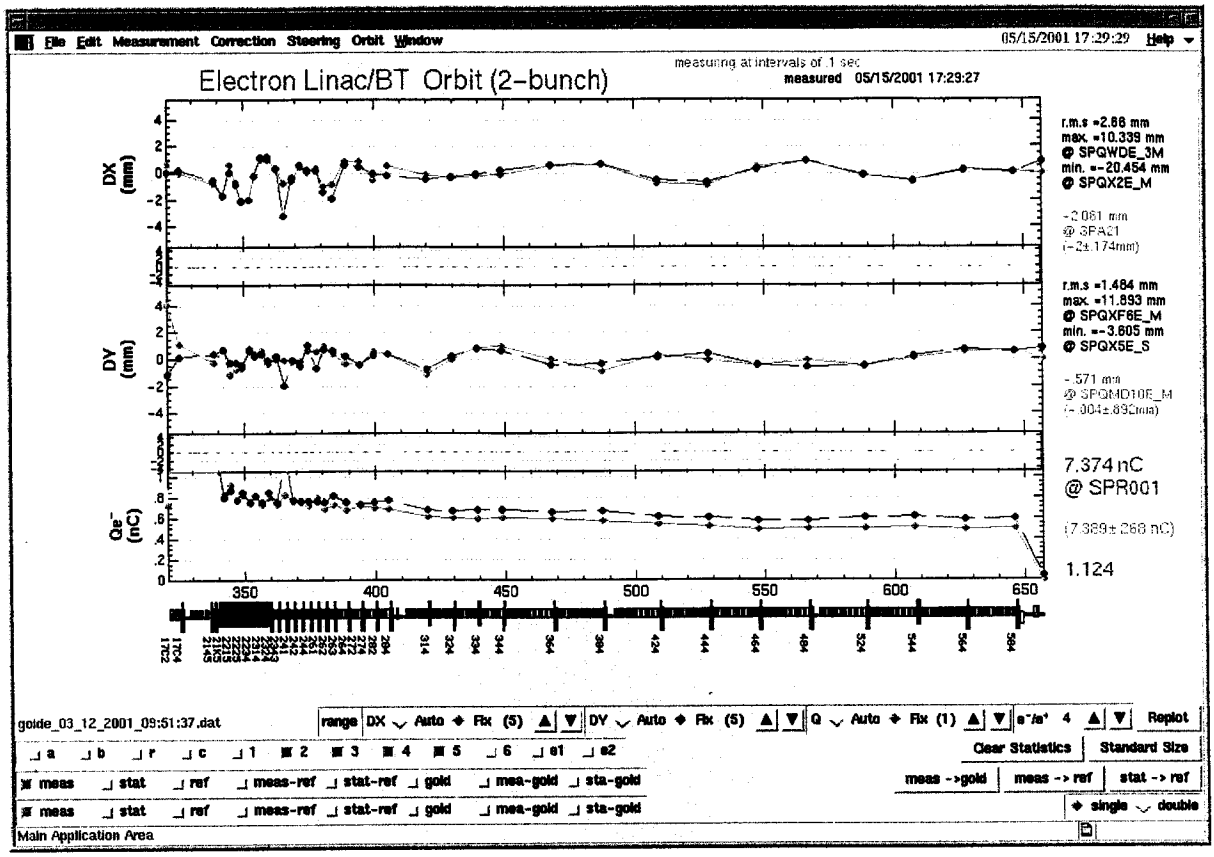

File Edit Measurement Correction Steering Orbit Window
05/15/2001 14:46:07
Help
Electron Linac/BT Orbit (2-bunch)
measuring at intervals of .1 sec
measured 05/15/2001 14:46:07
DX (mm)
DY (mm)
Qe⁻ (nC)
r.m.s =2.752 mm
max. =7.444 mm
@ SPQWDE_3M
min. =-22.09 mm
@ SPQX2E_M
.661 mm
@ SPQMD10E_M
(.497±.822mm)
r.m.s =1.412 mm
max. =11.362 mm
@ SPQXF8E_M
min. =-3.801 mm
@ SPQX5E_S
.053 mm
@ SPQMD10E_M
(-.302±.31mm)
.03 nC
@ SPQMD10E_
(.029±.001 nC)
.007
golde_03_12_2001_09:51:37.dat
range DX Auto Fix (5) DY Auto Fix (5) Q Auto Fix (11) e⁻/e⁺ 4 Replot
a b r c 1 2 3 4 5 6 e1 e2
meas stat ref meas-ref stat-ref gold mea-gold sta-gold
Clear Statistics Standard Size
meas ->gold meas -> ref stat -> ref
single double
load golde_03_12_2001_09:51:37.dat

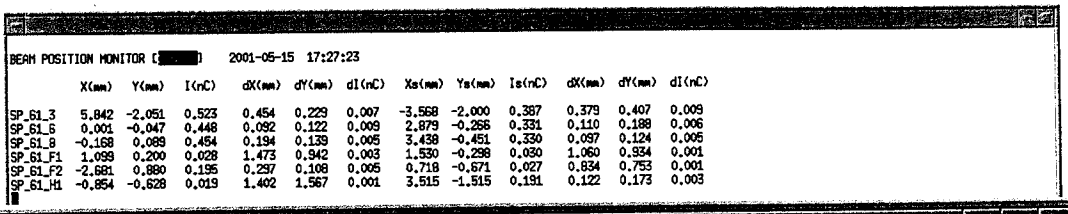


ヤ2バンチのみ 軌道補正する. (A, Bセクターのみ)
Data Save data 750. All (mag)

SHB1 = 165.4°
SHB2 = 170.1°

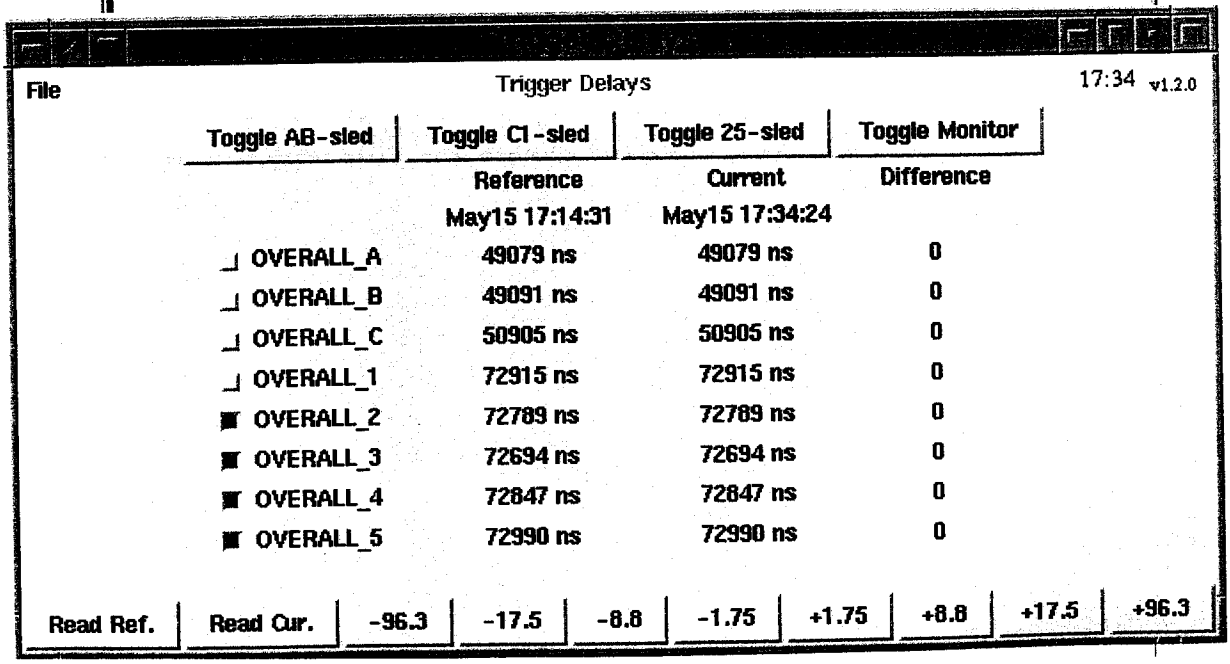


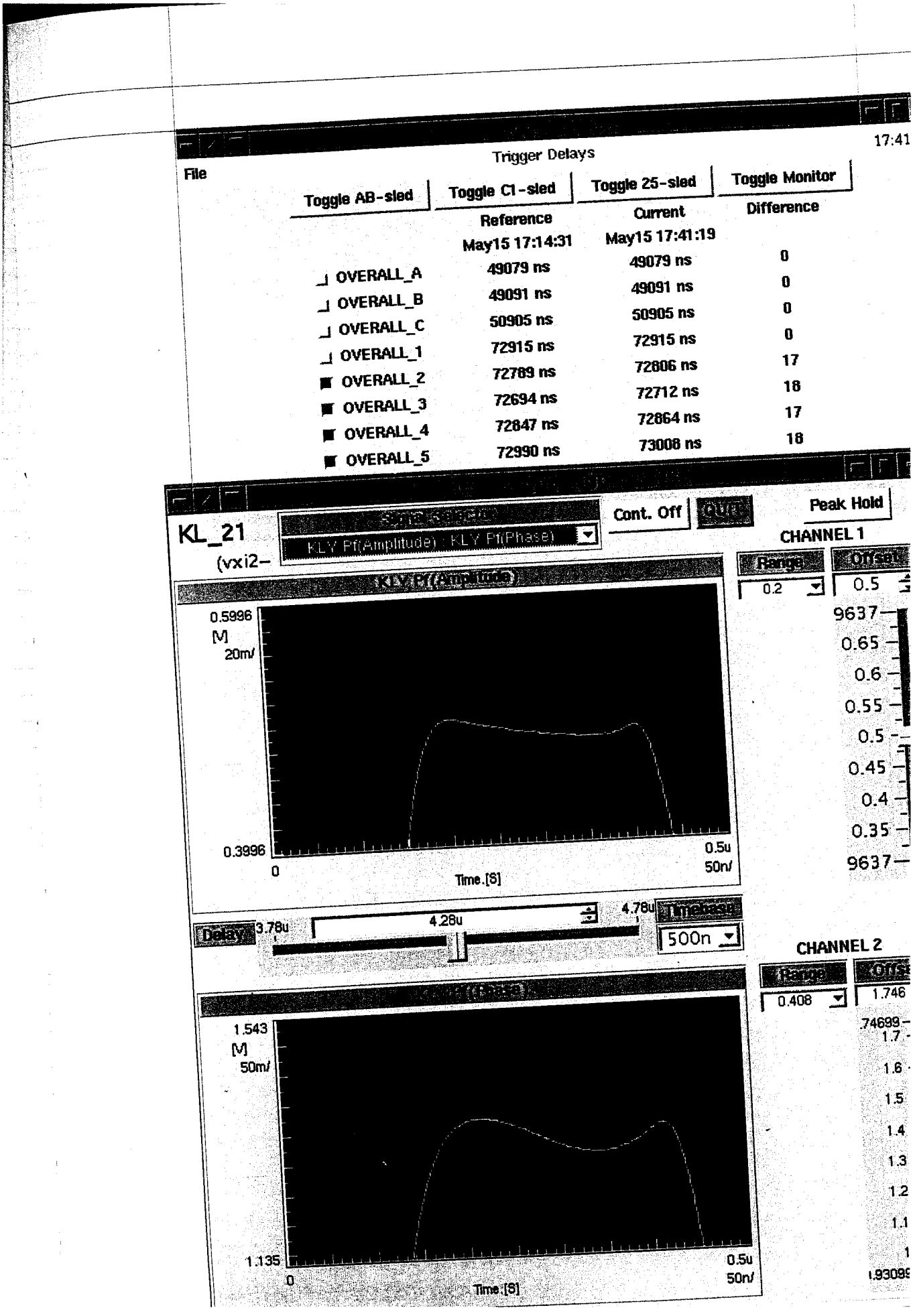


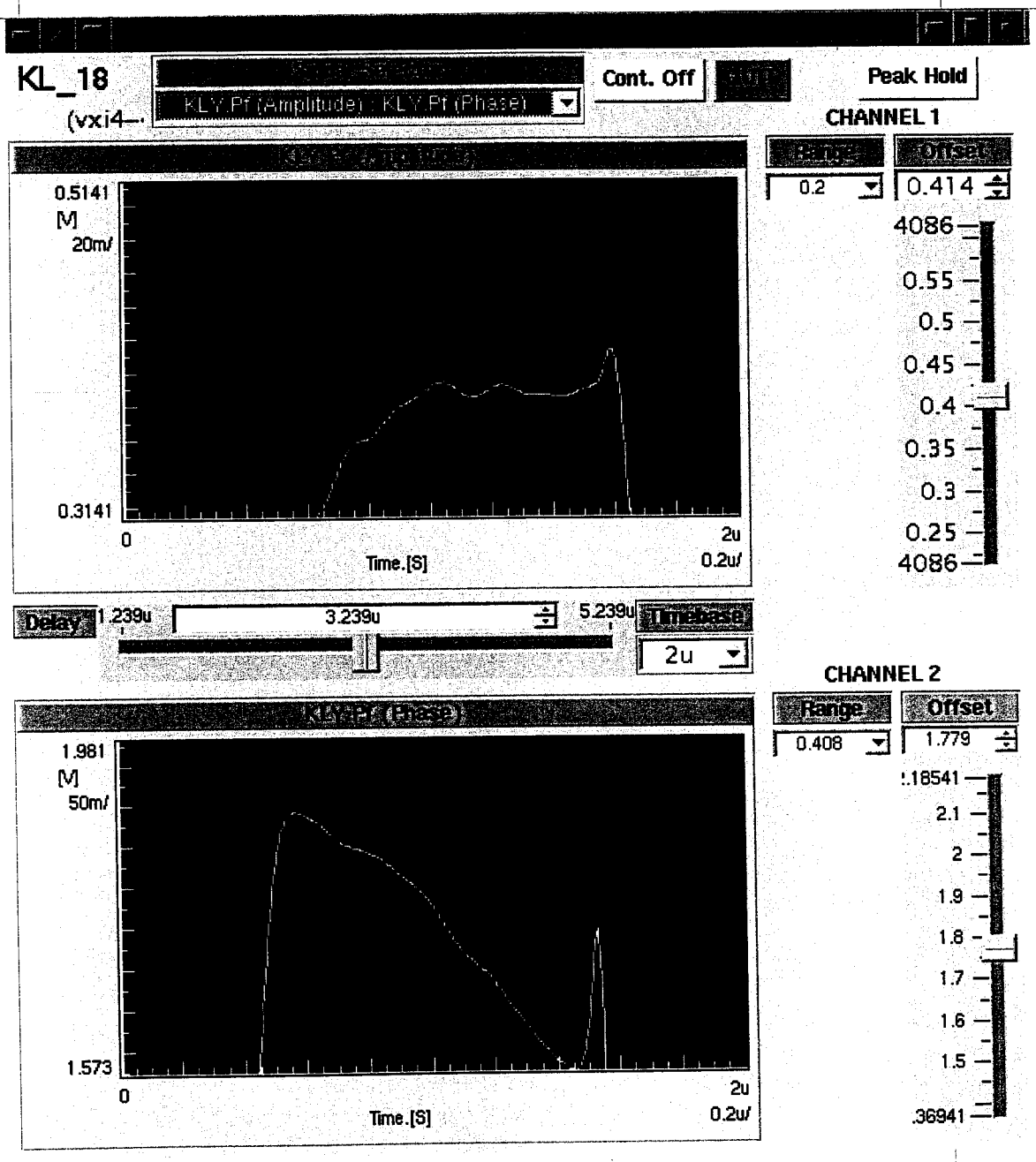


BEAM POSITION MONITOR [ ] 2001-05-15 17:27:23

	X(mm)	Y(mm)	I(nC)	dX(mm)	dY(mm)	dI(nC)	Xs(mm)	Ys(mm)	Is(nC)	dX(mm)	dY(mm)	dI(nC)
SP_61_3	5.842	-2.051	0.523	0.454	0.229	0.007	-3.568	-2.000	0.387	0.379	0.407	0.009
SP_61_6	0.001	-0.047	0.448	0.092	0.122	0.009	2.879	-0.266	0.331	0.110	0.188	0.006
SP_61_8	-0.168	0.089	0.454	0.194	0.139	0.005	3.438	-0.451	0.330	0.097	0.124	0.005
SP_61_F1	1.099	0.200	0.028	1.473	0.942	0.003	1.530	-0.298	0.030	1.060	0.934	0.001
SP_61_F2	-2.681	0.880	0.195	0.297	0.108	0.005	0.718	-0.671	0.027	0.834	0.753	0.001
SP_61_H1	-0.854	-0.628	0.019	1.402	1.567	0.001	3.515	-1.515	0.191	0.122	0.173	0.003



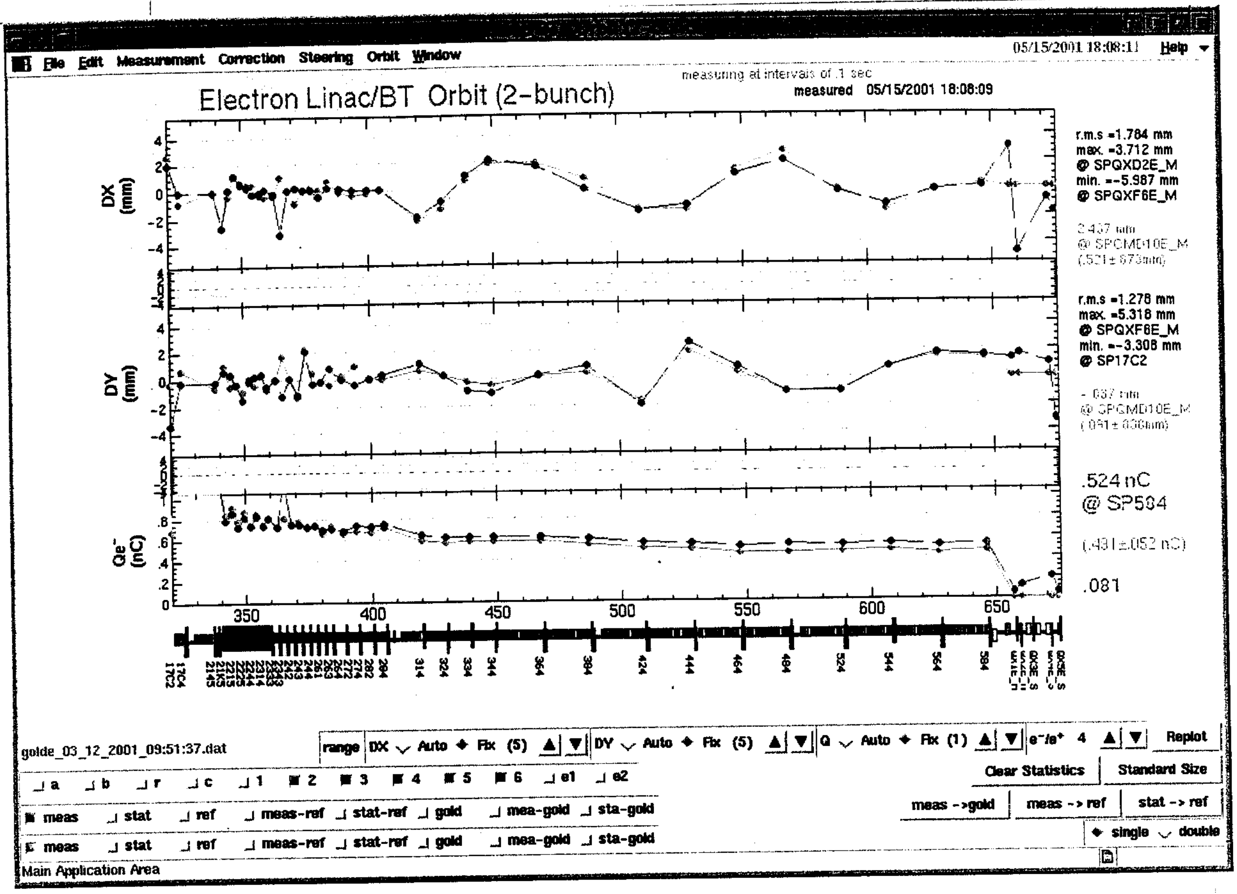

17:41
Trigger Delays
File
Toggle AB-sled
Toggle C1-sled
Toggle 25-sled
Toggle Monitor
Reference
May15 17:14:31
Current
May15 17:41:19
Difference
OVERALL_A 49079 ns 49079 ns 0
OVERALL_B 49091 ns 49091 ns 0
OVERALL_C 50905 ns 50905 ns 0
OVERALL_1 72915 ns 72915 ns 0
OVERALL_2 72789 ns 72806 ns 17
OVERALL_3 72694 ns 72712 ns 18
OVERALL_4 72847 ns 72864 ns 17
OVERALL_5 72990 ns 73008 ns 18
KL_21
(vxi2-
Cont. Off
QUIT
Peak Hold
CHANNEL 1
KLY Pf(Amplitude)
0.5996
M
20m/
0.3996
0
Time.[S]
0.5u
50n/
Range
0.2
0.5
9637
0.65
0.6
0.55
0.5
0.45
0.4
0.35
9637
Delay
3.78u
4.28u
4.78u
Timebase
500n
CHANNEL 2
1.543
M
50m/
1.135
0
Time.[S]
0.5u
50n/
0.408
1.746
1.7
1.6
1.5
1.4
1.3
1.2
1.1



1°/10mT

位相差
(max)
= 30°

e+ Sector 2 自動軌道補正 (chargeは かえている)



magnet data751.all に一応save した (よくはない)

(元は data750.all)

timing data24.delay.all saved

(Sector 2~5 overall timing 調整
Screen 61-4 を見て

軌道補正 Sector 3~5

mag data 752.all r save