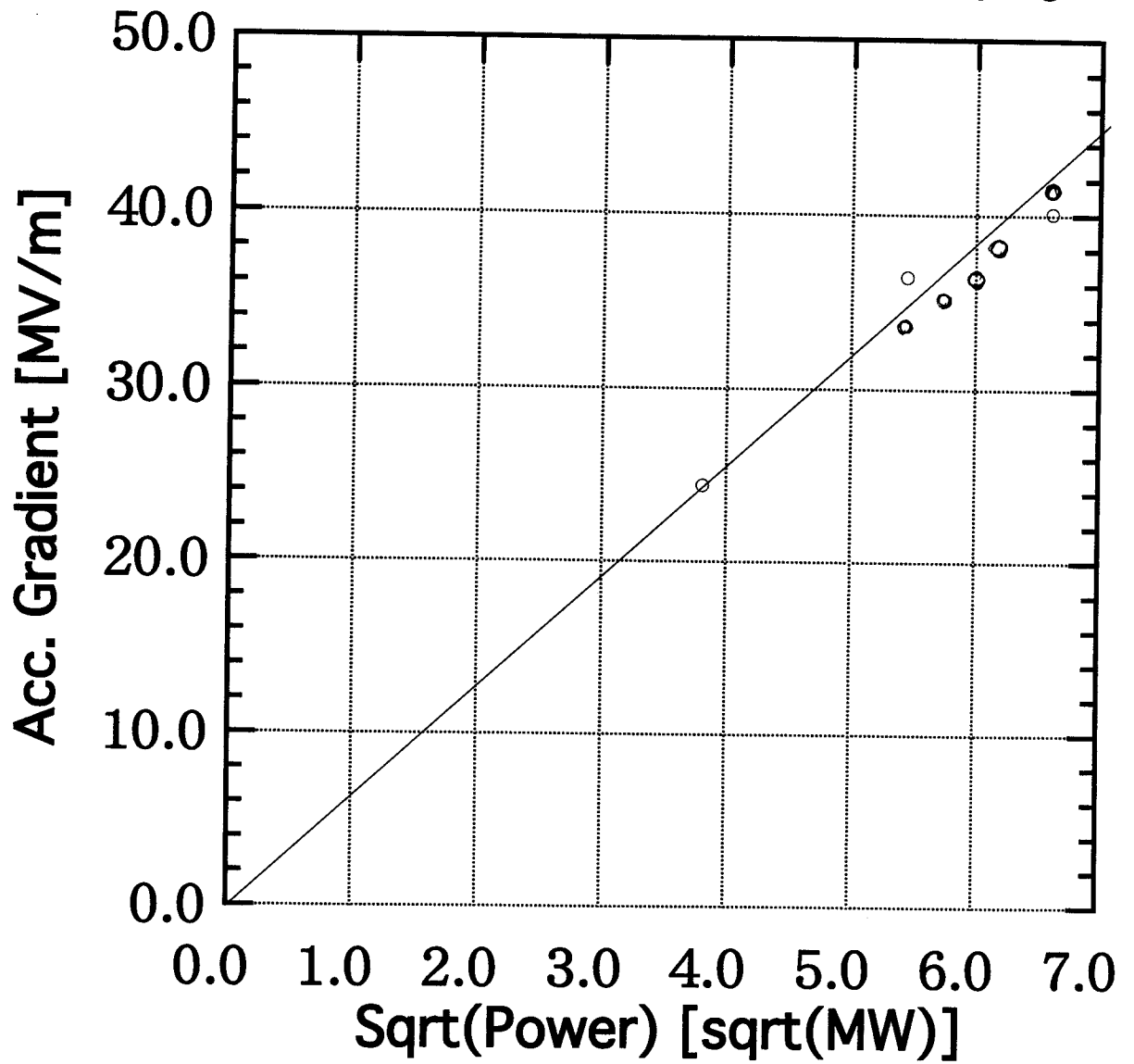
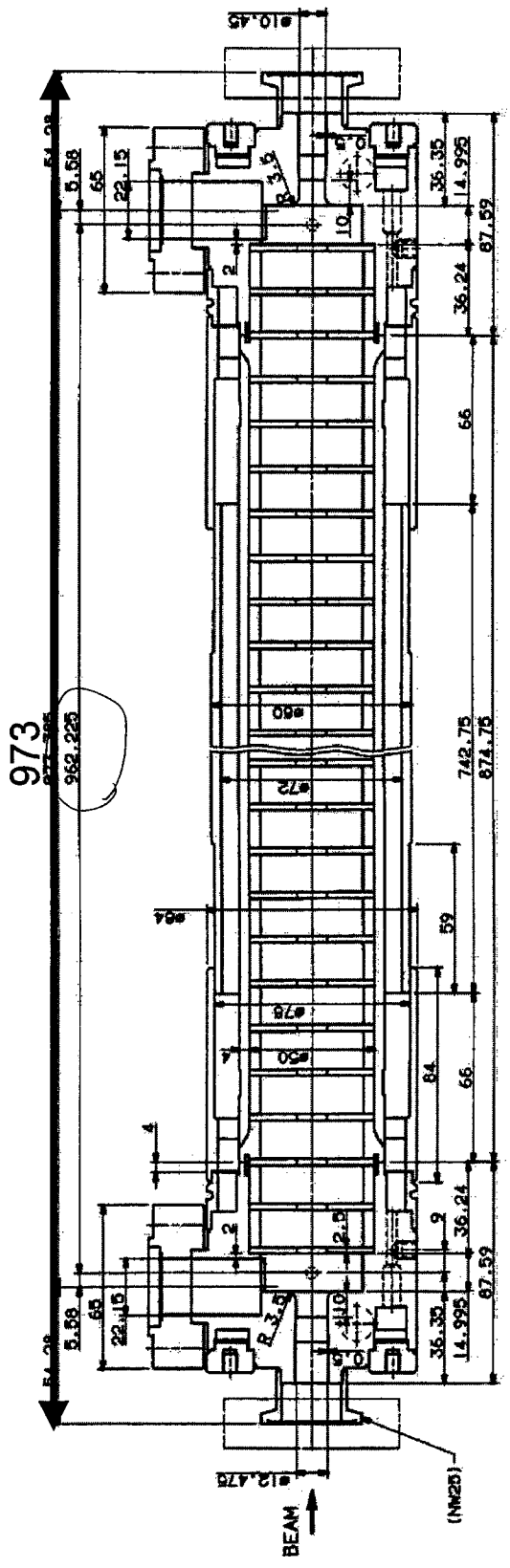


## C-band acceleration 20031010



# Accelerator Structure



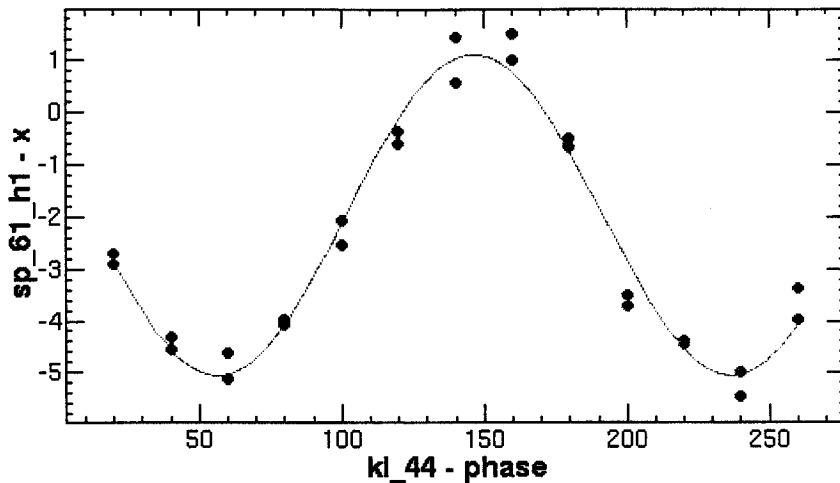
ChiSquare = 3.64125 Goodness = .46077

a = 3.07713 +/- .11360

b = 101.525 +/- 1.05001

c = -1.9697 +/- .08199

5



Function = (c+(a Sin[ (.034906585039887 (x+(-b))) ]))

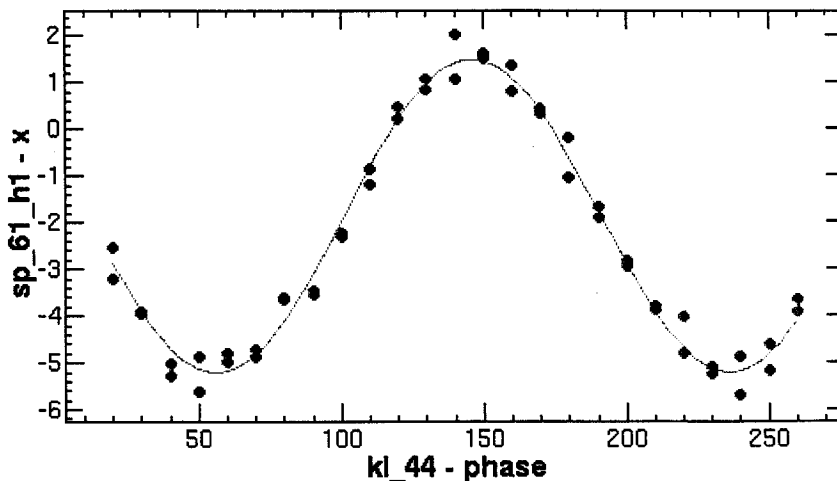
ChiSquare = 4.62427 Goodness = .47256

a = 3.34421 +/- .06341

b = 101.060 +/- .55821

c = -1.8696 +/- .04643

5  $E_s = 38.5 \text{ kJ}$  Power = 29.6 MW  $g = 33.89 \text{ My/m}$



Function = (c+(a Sin[ (.034906585039887 (x+(-b))) ]))

File Edit Window

10/10/2003 16:42:12 Help

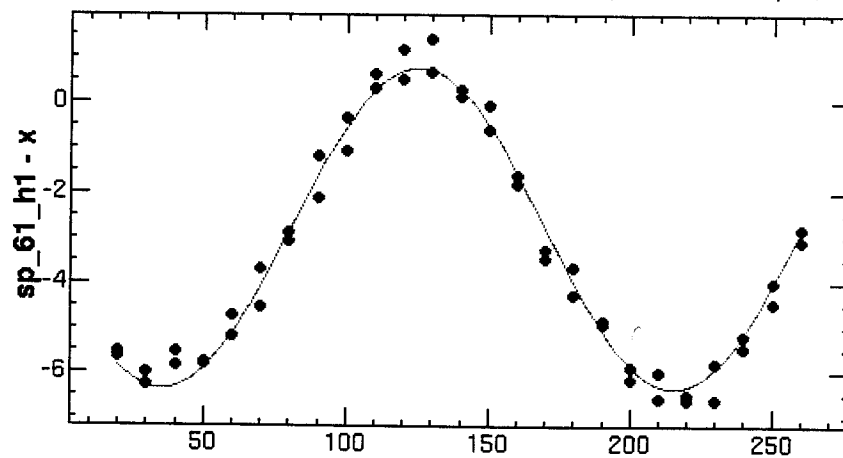
ChiSquare = 5.74777 Goodness = .47256

a = 3.54990 +/- .07111

b = 80.4349 +/- .58290

c = -2.7929 +/- .05176

(7)  $E_s = 42.00 \text{ kV}$  Power = 36.9 MW  $g = 36.02 \text{ MV/m}$



kl 44 - phase

Function = (c+(a Sin[(.034906585039887 (x+(-b))])))

197

File Edit Window

10/10/2003 16:42:49 Help

ChiSquare = 4.82539 Goodness = .47256

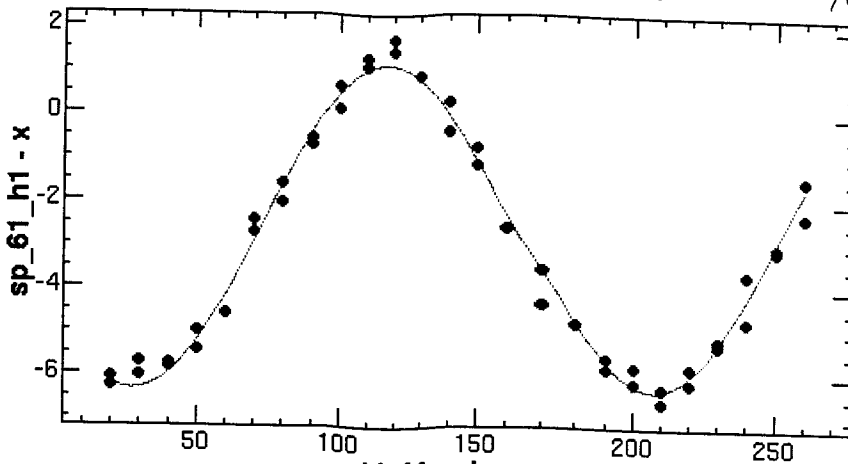
a = 3.73552 +/- .06567

b = 72.4299 +/- .50358

c = -2.5972 +/- .04743

⑧  $E_5 = 43.50 \text{ kJ}$  Power = 40.3 MW

$g = 37.91 \text{ MV/m}$



Function = (c+(a Sin[ (.034906585039887 (x+(-b))) ]))

File Edit Window

10/10/2003 16:58:14 Help

ChiSquare = 5.21447 Goodness = .47062

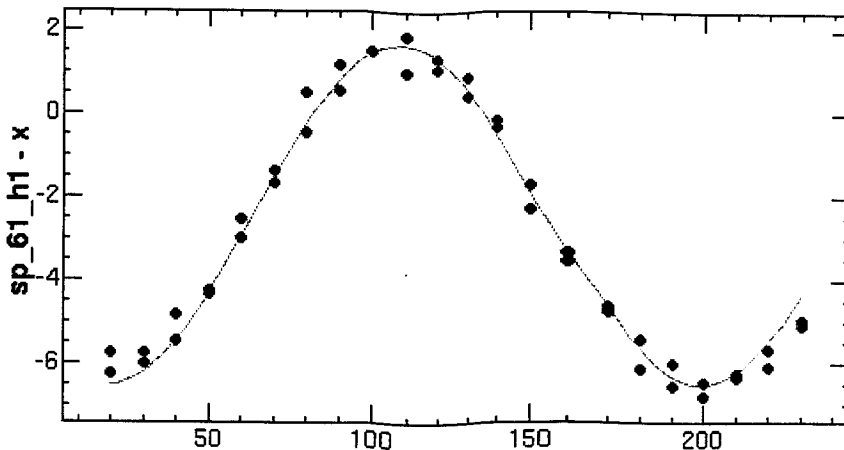
a = 4.06240 +/- .07581

b = 63.7829 +/- .56329

c = -2.4275 +/- .05516

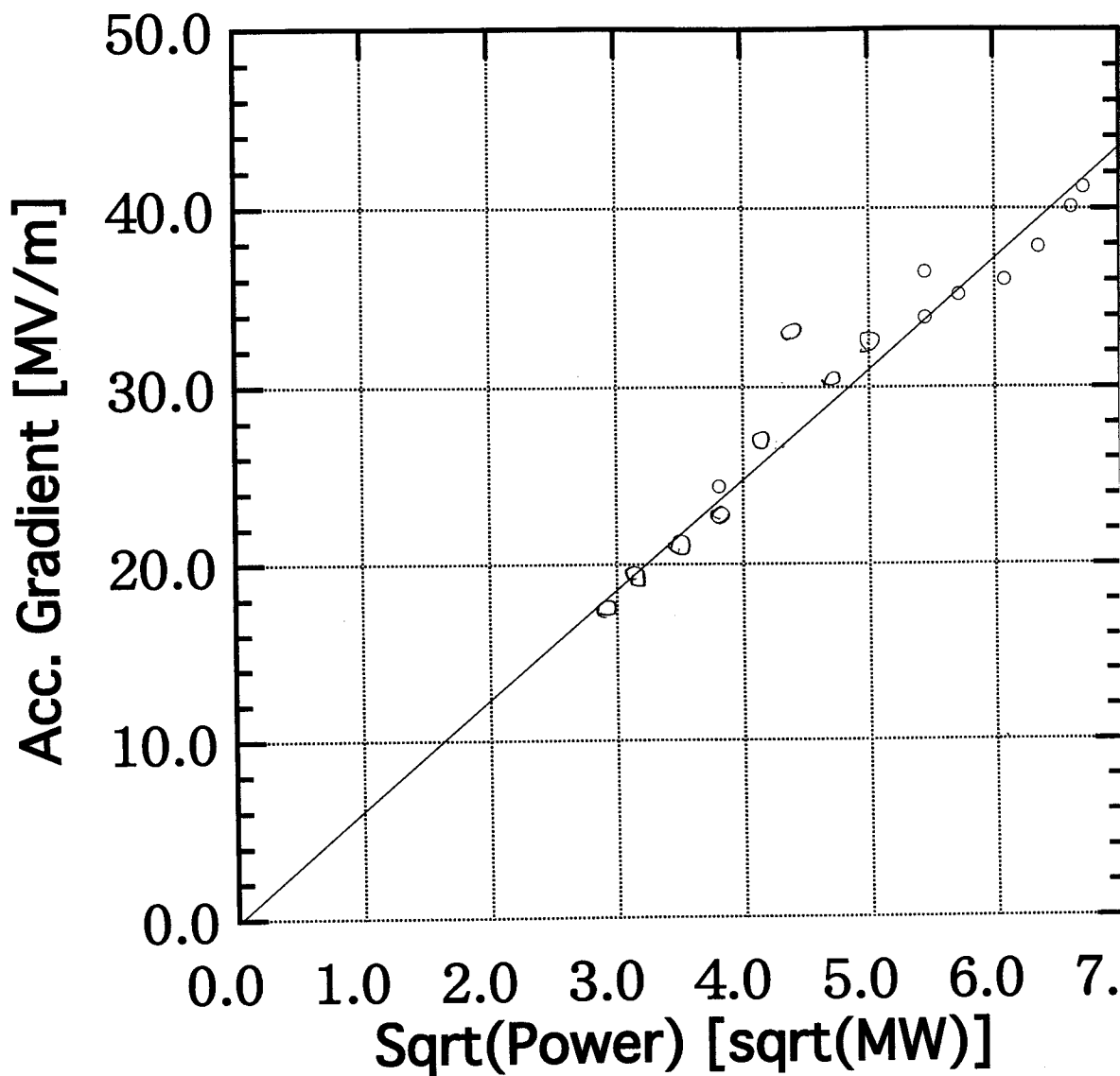
⑨  $E_5 = 45.0 \text{ kJ}$  Power = 43.8 MW

$g = 41.23 \text{ MV/m}$



Function = (c+(a Sin[ (.034906585039887 (x+(-b))) ]))

Hard Copy

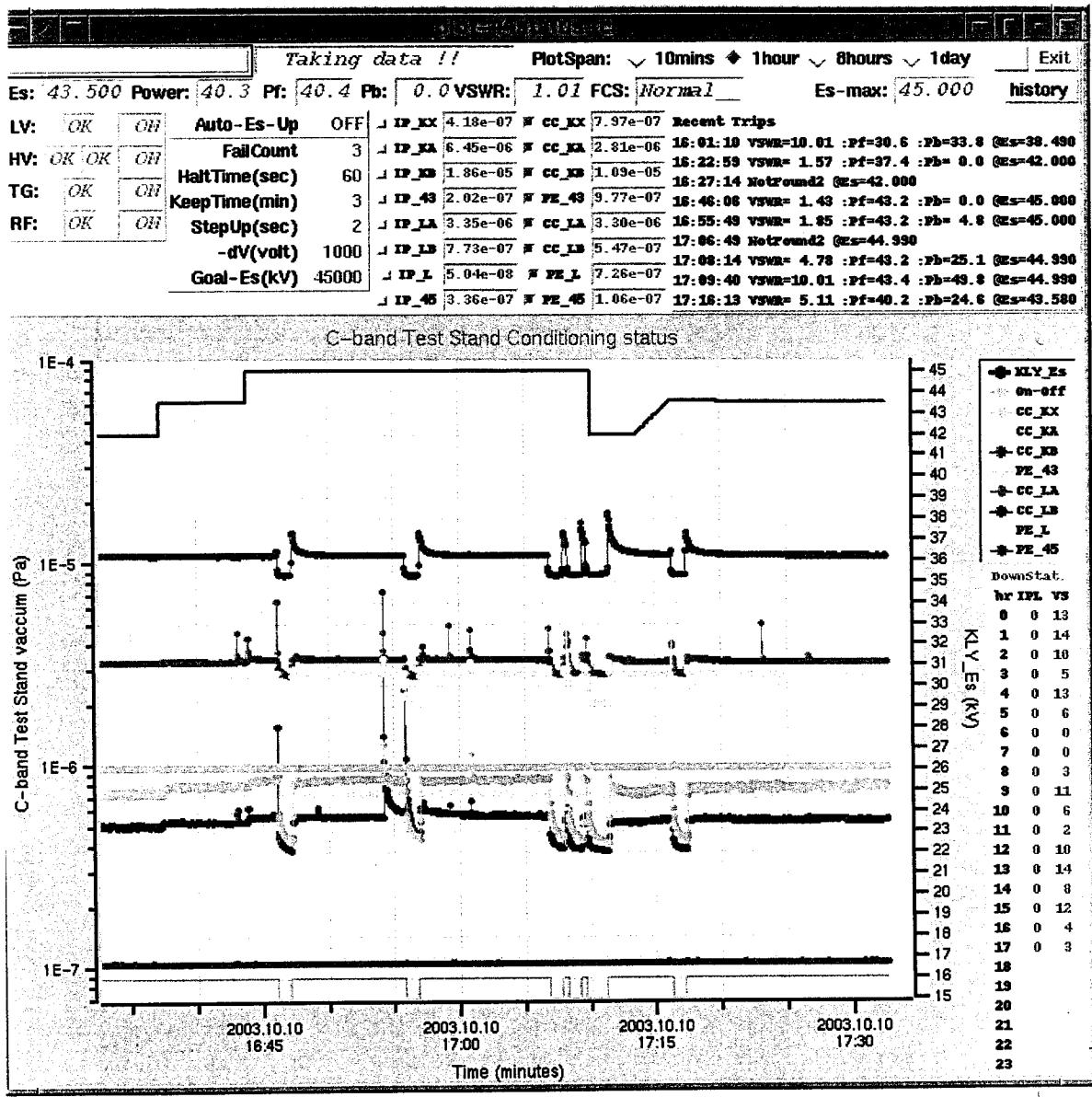


17:28

C-band Acc ON: AR 7射  
 ( $E_s = 43.50 \text{ kV}$ , Power = 40.3 MW.)

~ 0.6 mA

199



17:26 ~ 17:29  
AR 入 5/1

200

PF-AR e- INJECTION DATA

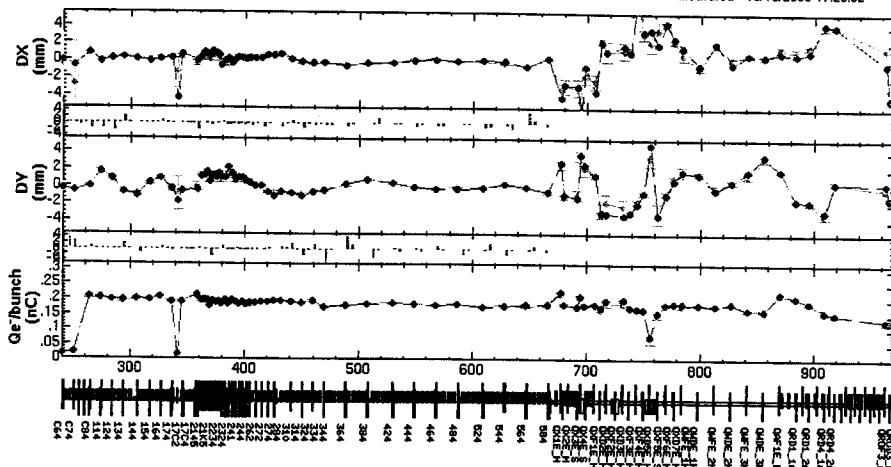
DATA 2003.10.10 TIME 17:29

File Edit Measurement Correction Steering Orbit Window

10/10/2003 17:29:03 Help

Electron Linac/ARBT Orbit

measuring at intervals of 1 sec  
measured 10/10/2003 17:29:02



r.m.s = 1.832 mm  
max = 7.528 mm  
SPQXF4E\_M  
min. = -6.448 mm  
SPQX5E\_S  
= 309 mm  
SPQR0D3\_K  
= 245.1577 mm

r.m.s = 1.431 mm  
max = 4.822 mm  
SPQXF5E\_S  
min. = -3.412 mm  
SPQXF3E\_M  
= 1.339 mm  
SPQR0D3\_K  
= 1.1861 mm

.128 nC  
@ SPQR0D3\_K  
1.101,000 nC  
.654

range DX Auto Fix (5) DY Auto Fix (5) Q Auto Fix (3) e/e' 4 Replot

a b r c 1 2 3 4 5 6 e1 e2

meas stat ref meas-ref stat-ref

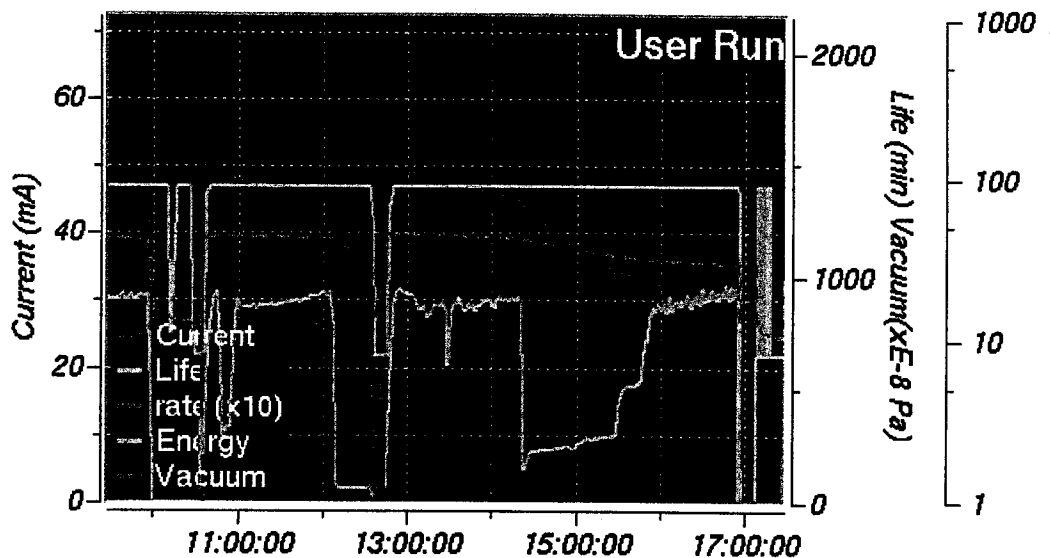
Clear Statistics Standard Size

meas -> ref stat -> ref

Main Application Area

PF-AR

Injection@25.0 Hz



25.88mA +0.730mA/sec 2.5e-07Pa

Fri Oct 10 17:28:10 2003

PRT QUIT

SP_C8.4	0.203	nC
SP_17_C4	0.192	nC
SP_58.4	0.176	nC

SP_QROD3_K	0.128	nC
------------	-------	----

蓄積率	0.730	mA/s
ビーム線返し	25.0	Hz
BT Energy Feedback offset	0	



201

2003/10/10

271 杉村

Energy FB ON

17:23~

19:15 4-4

Es 36.0 kV

紙巻 FB ON

Acc Mode

20° ~ 260° step 5°

19/6

Power 24.7 MW

$a = 2.28574 \pm 0.07169$

Cresc. 225.8362°

23.20 MV/m

$\sqrt{\text{Power}} = 4.97$

File Edit Window

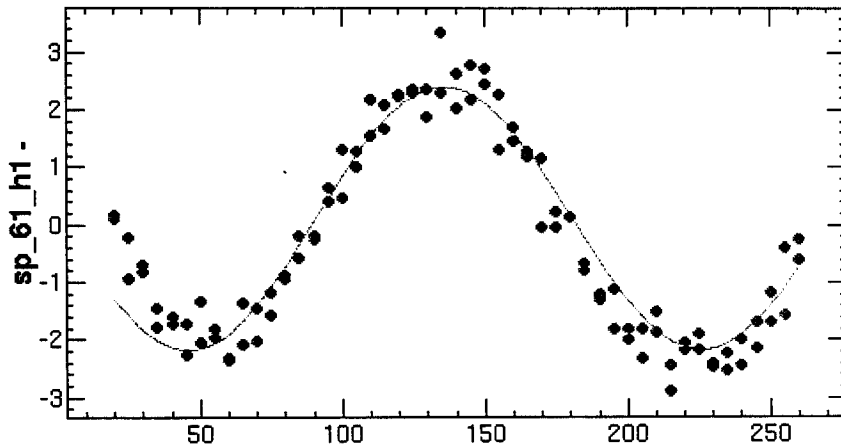
10/10/2003 19:16:53 Help

ChiSquare = 23.8746 Goodness = .48070

a = 2.28574 +/- .07169

b = 90.8362 +/- .94009

c = .11562 +/- .05287



kl\_44 - phase

Function = (c+(a Sin[(.034906585039887 (x+(b)))]))

Hard Copy



19:22

4-4 Es = 34.5 kV

Power 22.0 MW

$\Rightarrow 21.93 \text{ MV/m}$

$a = 2.16124 \pm 0.09$

$\sqrt{\text{Power}} = 4.69$

Cresc = 237.05°

202

File Edit Window

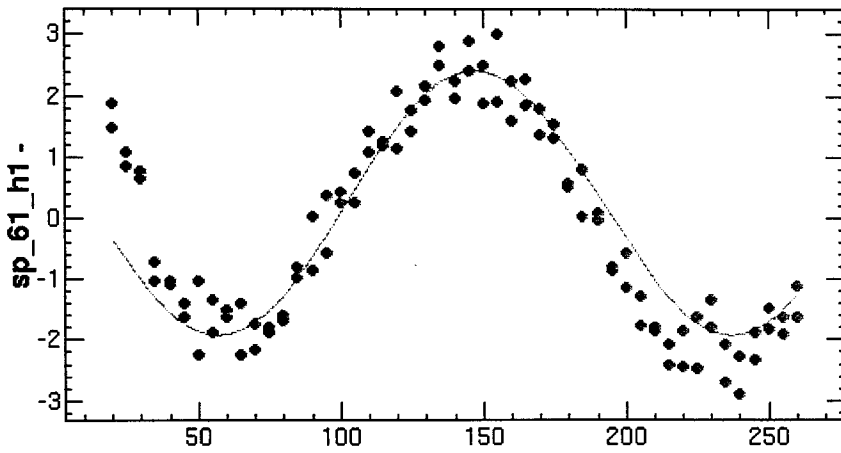
10/10/2003 19:26:50 Help

ChiSquare = 40.3305 Goodness = .48070

a = 2.16124 +/- .09336

b = 102.053 +/- 1.29101

c = .24367 +/- .06872



Function = (c+(a Sin[({.034906585039887 (x+(-b))})]))

Hard Copy



4-4 ES 34.5 KV

Power 22.0 MW

a = 2.15 ± 0.07

⇒

20.8 MW/m

↑ 同一条件

File Edit Window

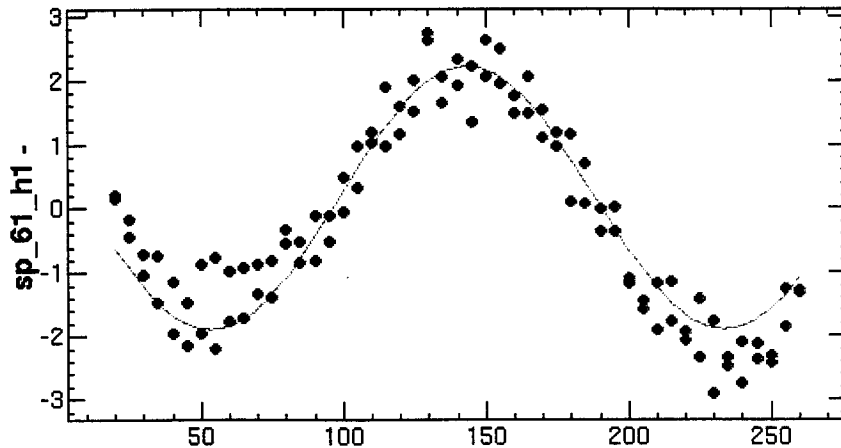
10/10/2003 19:35:39 Help

ChiSquare = 21.7440 Goodness = .48070

a = 2.04866 +/- .06840

b = 98.5055 +/- 1.00169

c = .14838 +/- .05046



Function = (c+(a Sin[({.034906585039887 (x+(-b))})]))

Hard Copy



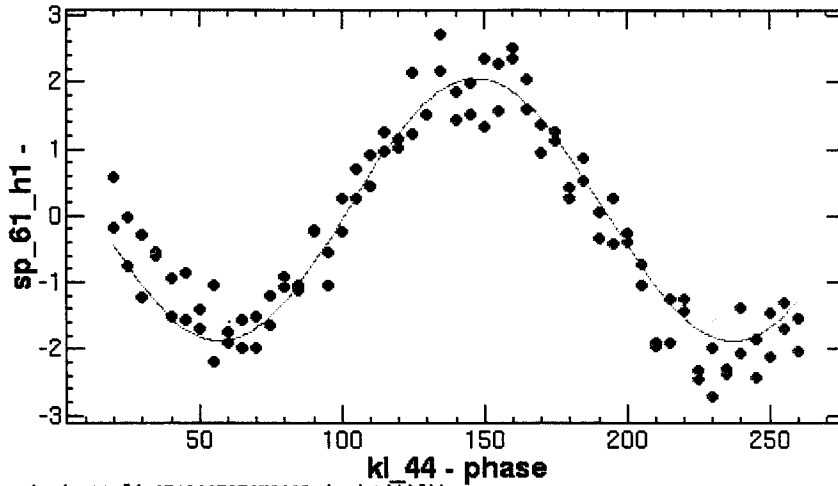
203

系統FB off.  $E_s$  34.50 Power 22.0 MW.

File Edit Window

10/10/2003 19:44:59 Help

ChiSquare = 18.6958 Goodness = .48070  
a = 1.96472 +/- .06357 b = 102.158 +/- .96705 c = .08039 +/- .04679



Function = (c+(a Sin[(.034906585039887 (x+(-b)))]))

Hard Copy

系統FB OFF.  
Step 10°

{ Power 22.0 MW  
E<sub>s</sub> 34.5KV.

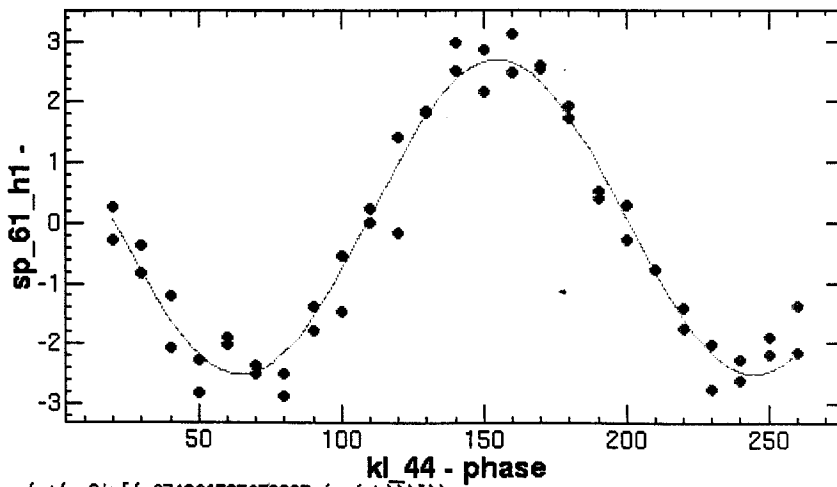
a = 2.59911

26.39 MV/m

File Edit Window

10/10/2003 19:54:18 Help

ChiSquare = 7.82837 Goodness = .47256  
a = 2.59911 +/- .08300 b = 109.767 +/- .92898 c = .08083 +/- .06041



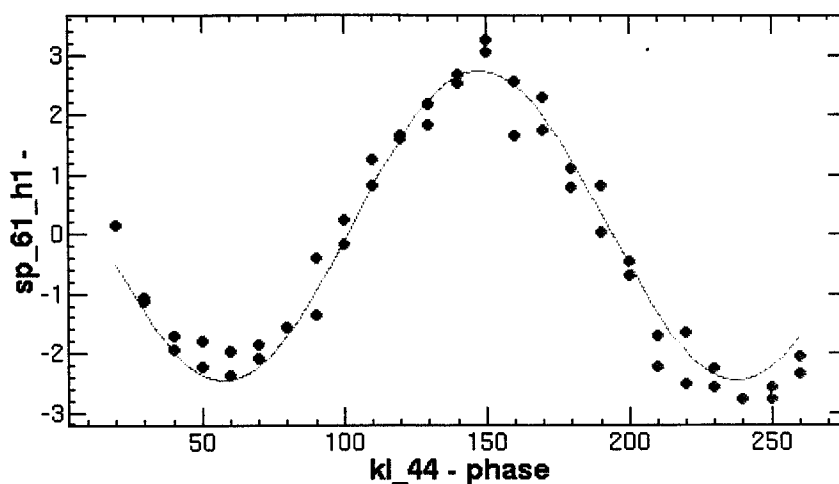
Function = (c+(a Sin[(.034906585039887 (x+(-b)))]))

Hard Copy

204

ES = 36.0 kV      Power 24.7 MW  
 $a = 2.59244$        $\Rightarrow 26.31 \text{ MV/m}$        $\sqrt{P} = 4.97$

File Edit Window      10/10/2003 20:02:09 Help ▾  
 ChiSquare = 7.25790    Goodness = .47256  
 a = 2.59244 +/- .07951      b = 102.741 +/- .90221      c = .13399 +/- .05817



Function = (c+(a Sin[(.034906585039887 (x+(-b))])))

Hard Copy

級合 FB ON    Energy, FB OFF  
 Es 36.00 kV    Power 24.7 MW     $\sqrt{P} = 4.97$   
 Energy 3.002 GeV

Phase  $\approx 107.6^\circ$  1-sec  $\Rightarrow$   $\frac{1}{2}$   $\approx 0 \text{ MV/m}$

UP'S ( Energy, FB ON    加速電圧 OFF

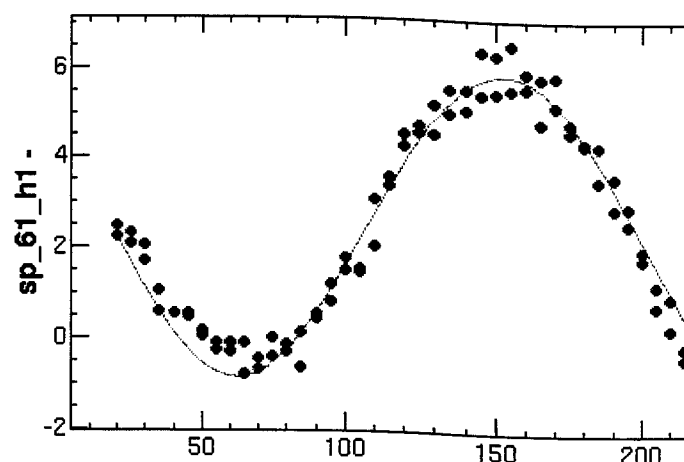
$a = 3.25095$        $\Rightarrow 32.99 \text{ MV/m}$

205

File Edit Window

ChiSquare = 20.8517 Goodness = .48070  
 a = 3.37809 +/- .06753 b = 107.620 +/- .59012

10/1	205	0.781	-0.338	0.129
	210	0.957	-0.629	0.129
	210	0.245	-0.333	0.129
	215	-0.384	-0.519	0.13
	215	-0.163	-0.522	0.13
	220	-0.763	-0.460	0.13
	220	-0.133	-0.377	0.13
	225	-1.030	-0.521	0.13
	225	-0.493	-0.409	0.13
	230	-1.160	-0.517	0.13
	230	-1.024	-0.500	0.13
	235	-1.494	-0.714	0.13
	235	-1.212	-0.552	0.12
	240	-1.053	-0.498	0.12
	240	-0.286	-0.410	0.12
	245	-0.979	-0.547	0.12
	245	-1.272	-0.614	0.12
	250	-0.612	-0.635	0.12
	250	-1.165	-0.629	0.12
	255	-0.972	-0.553	0.13
	255	-0.612	-0.635	0.12
	260	-0.441	-0.690	0.12
	260	-0.551	-0.579	0.12
	#	End		



Function = (c+(a Sin[ (.034906585039887 (x+(-b))) ]))

Sine360

Main Application Area

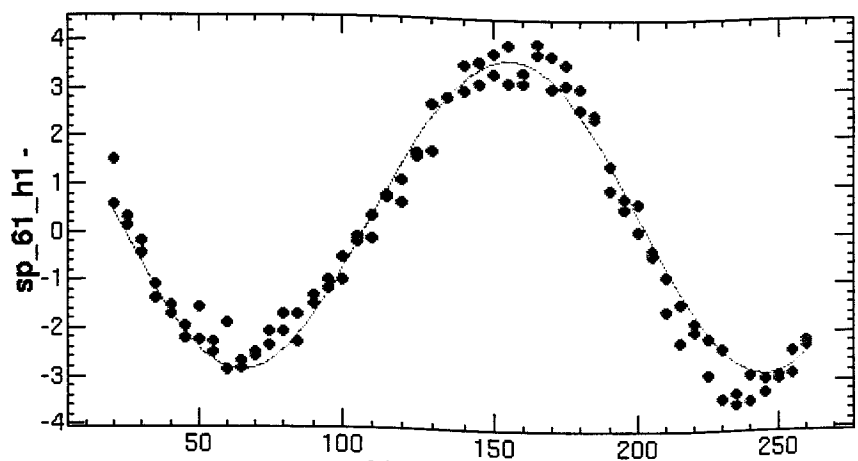
File Edit Window

10/10/2003 20:48:48 Help

ChiSquare = 16.9273 Goodness = .48070  
 a = 3.25095 +/- .06108 b = 110.392 +/- .55048

c = .38827 +/- .04452

32.99MV/m



Function = (c+(a Sin[ (.034906585039887 (x+(-b))) ]))

Progress Bar

