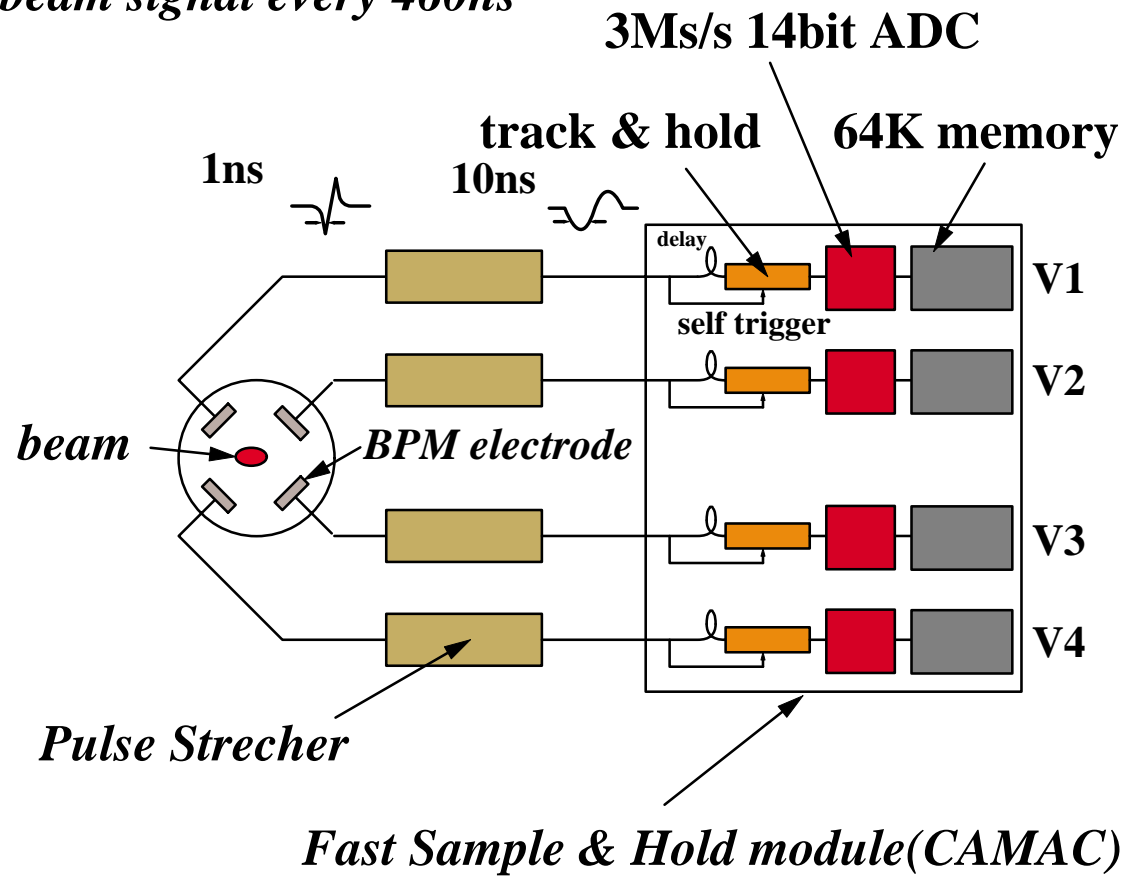
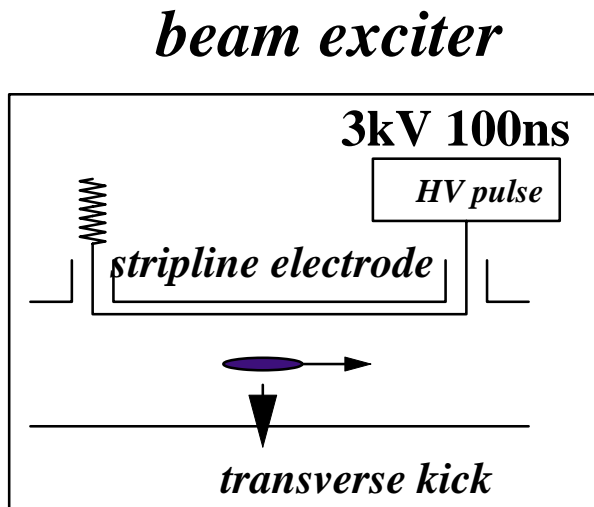


Turn-by-turn BPM

beam signal every 460ns



Tune measurement by TBT monitor

ATF\$COMMON:ATF_START_MENU_V5.8CD

EXIT	BEAM ON	BEAM ON/OFF	RADIATION 4.9 %	CAMAC	PROCESS	SUMMARY	PRINT	ALARM PANEL CLEAR	ALARM CHECK
GUN	MONITOR	Linac RF	LINAC TIMING	MAGNET	SCREEN	LINAC VACUUM	Delta-f Ramp	OPTICS	
BUNCHER		LN RF TUNING	DR TIMING	INJ KICKER	STATUS	DR VACUUM	Correlation Plot	SAD	
SHB		DRRF	ENERGY FB	EXT KICKER	What's New?	BT EX VACUUM	OTHER	Reset magnet window	

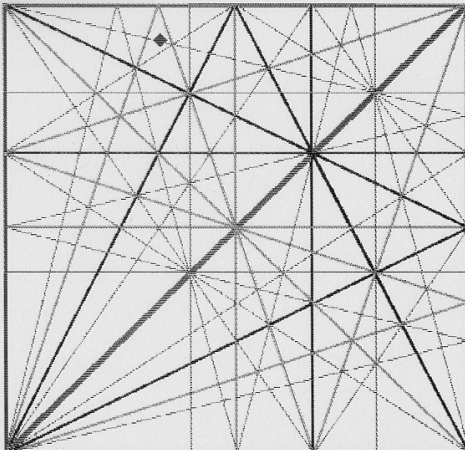
phase set data =
phase set data =
phase set data =
phase set data =
phase set data =
phase set data =
phase set data =
phase set data =
phase set data =
phase set data =
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phase set data =

MAIN MENU Mon
Linac / BT Line
LINAC/BT BPM
LINAC/BT ICT
LT/DR

atf\$monitor_turn:TBT_TUNE_DSP.8CD

EXIT Turn - by - Turn Tune Diagram

INITIALIZE GRAPH



EXIT Turn - by - Turn BPM status xy change scale OK... **TBT 64K**

TURN : 500000 **SELECT #** **TBT 64K AVE**

FET M.47 **FET M.51**

M.47 I
M.47 X
M.47 Y

M.51 I
M.51 X
M.51 Y

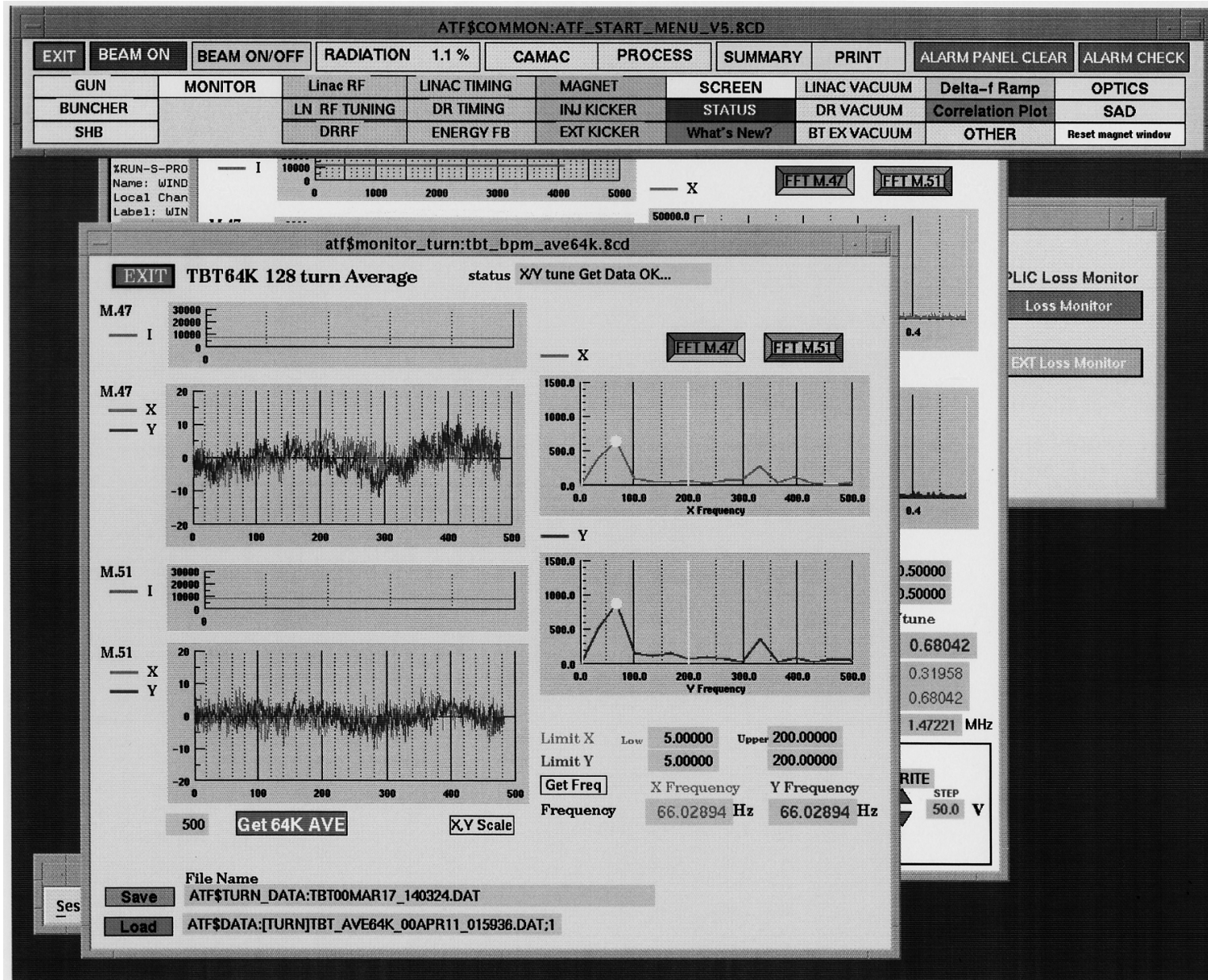
REV_Freq = 714.0090 MHz / 330
Limit X Low 0.02000 Upper 0.50000
Limit Y 0.02000 0.50000
Get Tune
TUNE Xtune Ytune
below USE 0.17029 OFF 0.45947
above OFF 0.82971 USE 0.54053
0.36844 MHz 1.16953 MH

of Turn 4096 **Get Data** **XY Scale**

File Name
Save ATF\$TURN_DATA:TBT00MAR17_140324.DAT
Load ATF\$DATA:[TURN]TBT99DEC14_1856.DAT;1
Get Ped 4K **Save TURN #500000** **Tune Diagram**
Get Ped DATE 00APR11 1955
status **Get Ped Data OK...**

Beam Exciter
21:58:24.40 END VOLTAGE WRITE
WRITE (0-2500V) 0.0 V STEP 50.0 V
READ 0.0 V

Slow oscillation measurement by TBT monitor



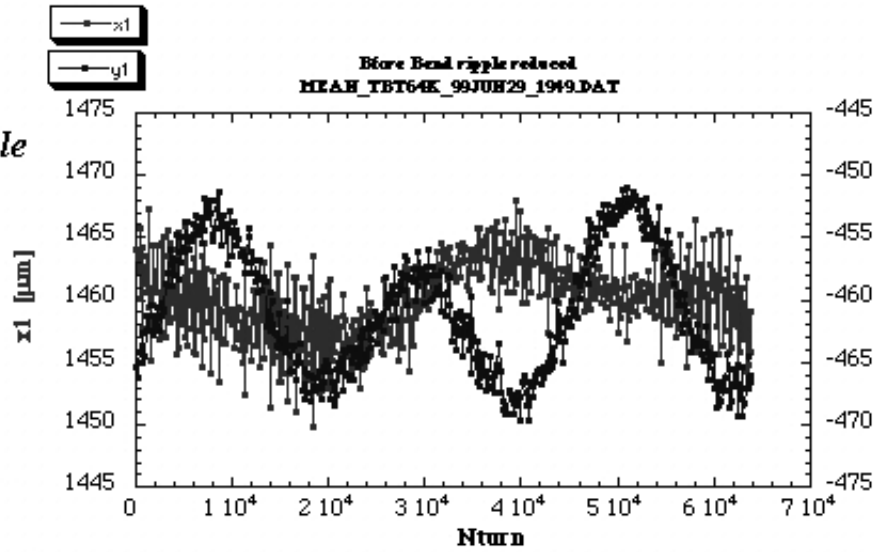
DR beam position drift by TBT monitor

DR Bend PS 100Hz ripple

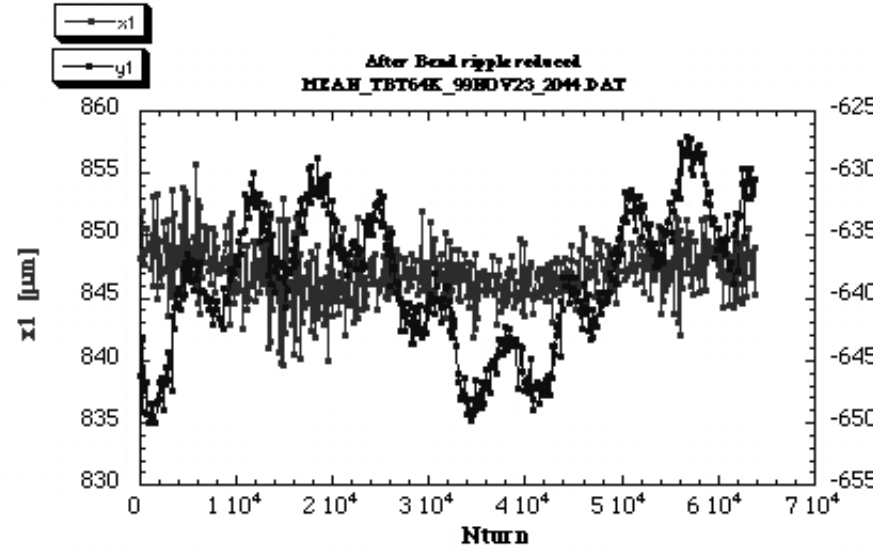
$2.4E-3$



$0.8E-3$

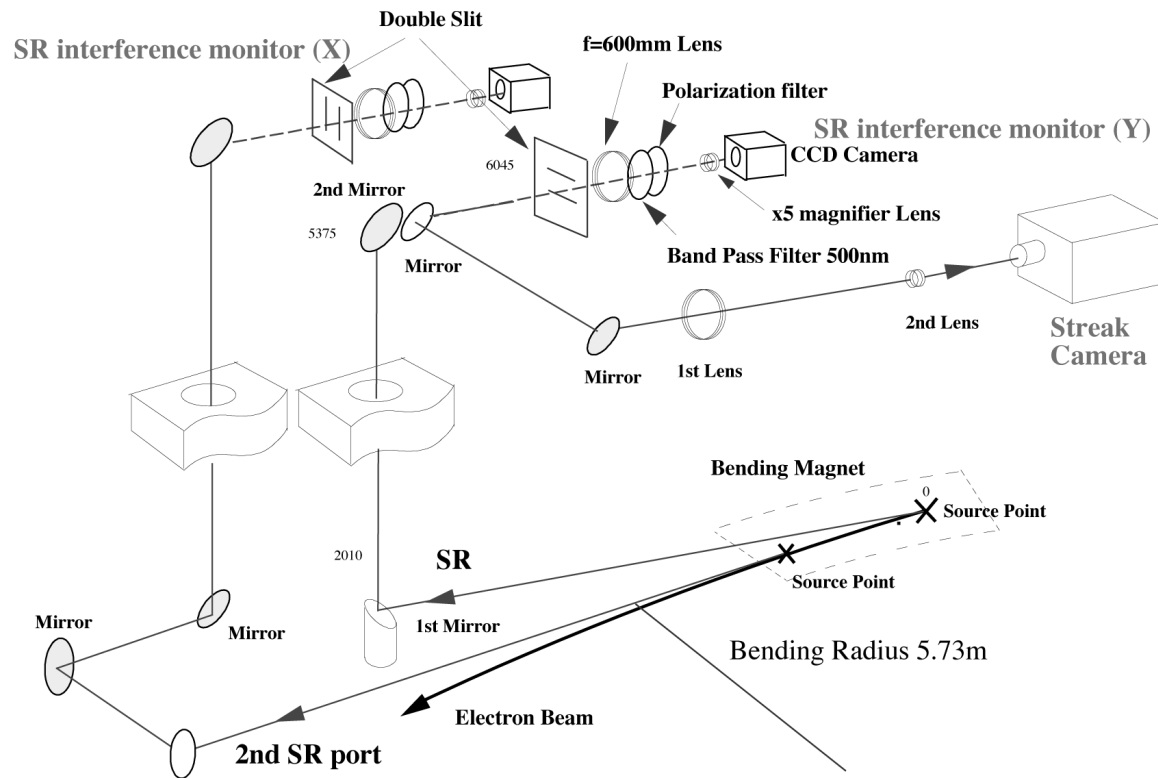


100Hz(20μm)



50Hz(20μm),
300Hz(10μm)

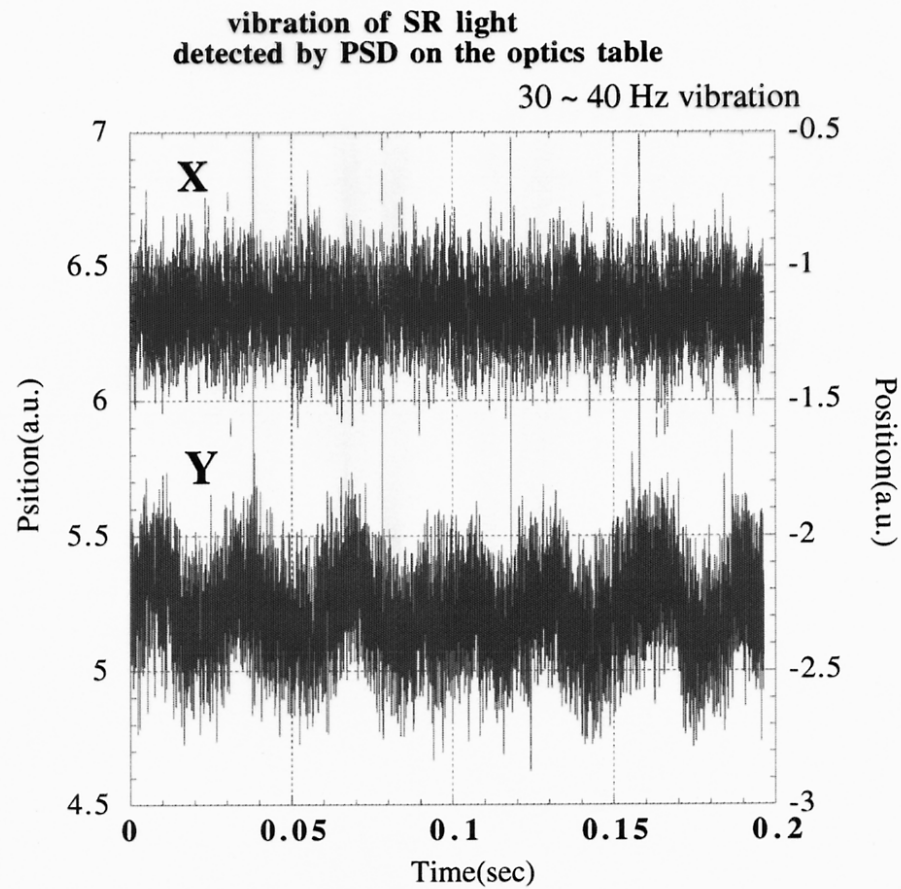
SR monitor setup



SR monitor optics set-up

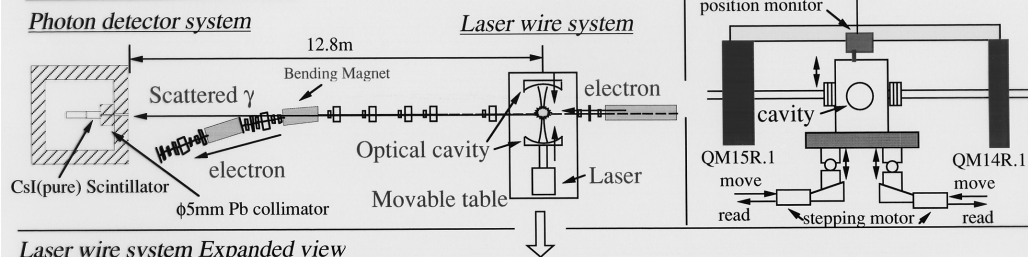
2nd SR port in Oct. 2000

PSD measurement of SR

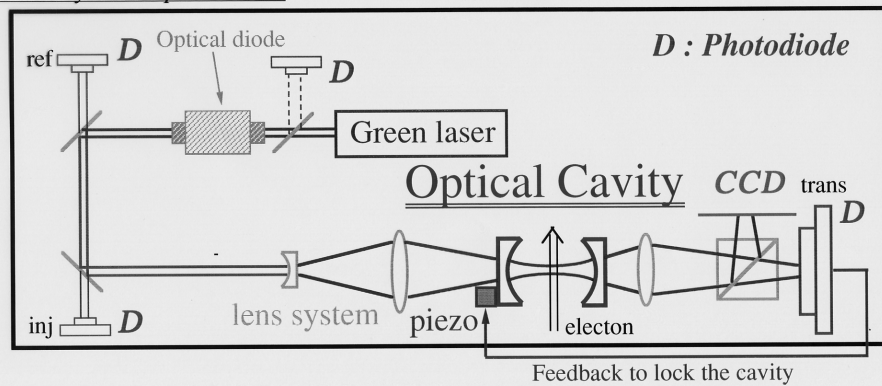


30 ~ 40Hz osc. in Y
SR light vibration? / Optics table/mirror vibration?

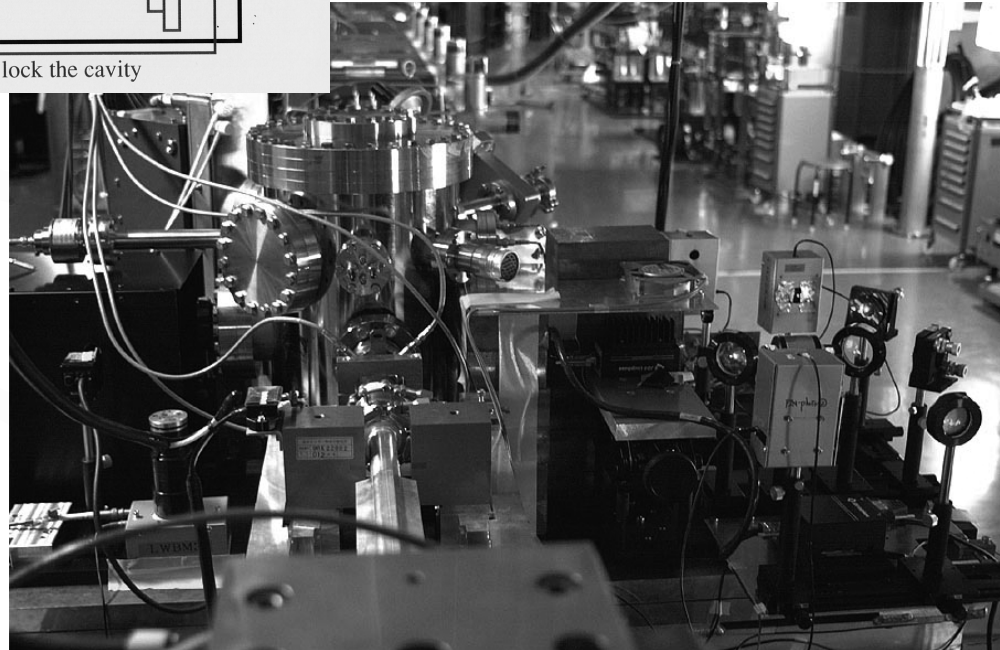
Experimental Set-up (top view)



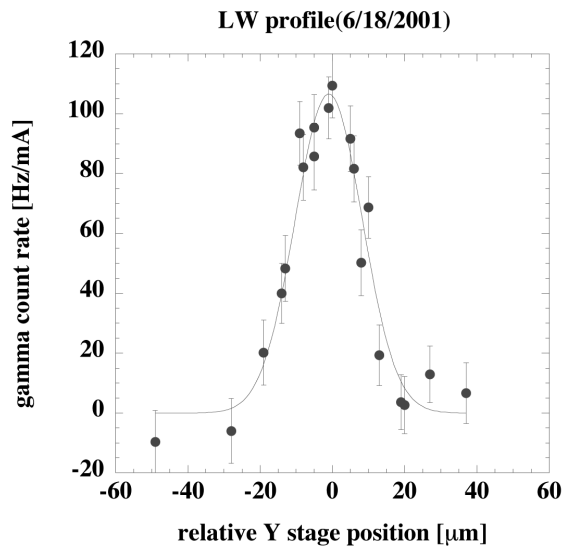
Laser wire system Expanded view



Laser Wire Scanner in DR



Y profile by Laser Wire



$$\sigma_{\text{meas.}} = 9.29 \pm 0.62 \text{ } [\mu\text{m}]$$

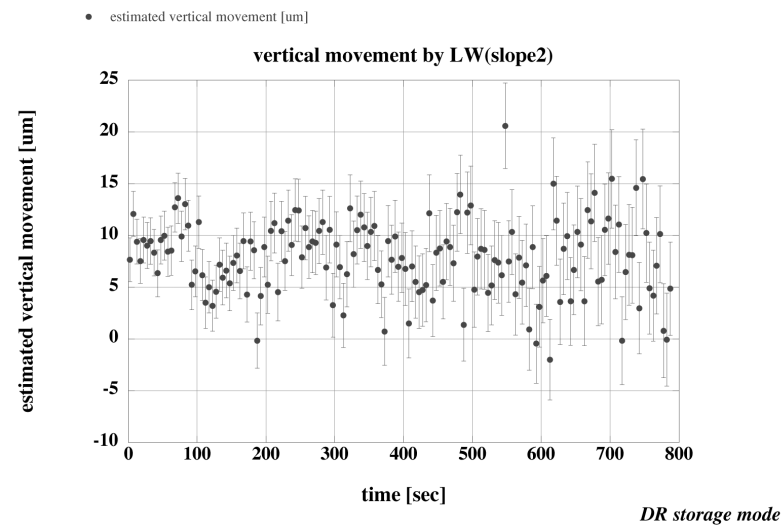
$$\sigma_{\text{LW}} = 7.15 \pm 0.2 \text{ } [\mu\text{m}]$$

$$\sigma_{\text{beam}} = 5.9 \pm 0.9 \text{ } [\mu\text{m}]$$

$$\beta_{\text{YLW}} = 6.44 \pm 0.11 \text{ } [\text{m}]$$

$$\epsilon_y = (0.55 \pm 0.18) \times 10^{-11} \text{ } [\text{rad.m}]$$

Vertical orbit drift measured by LW



Vertical beam position drift by Laser wire