Tuning 400MeV Line

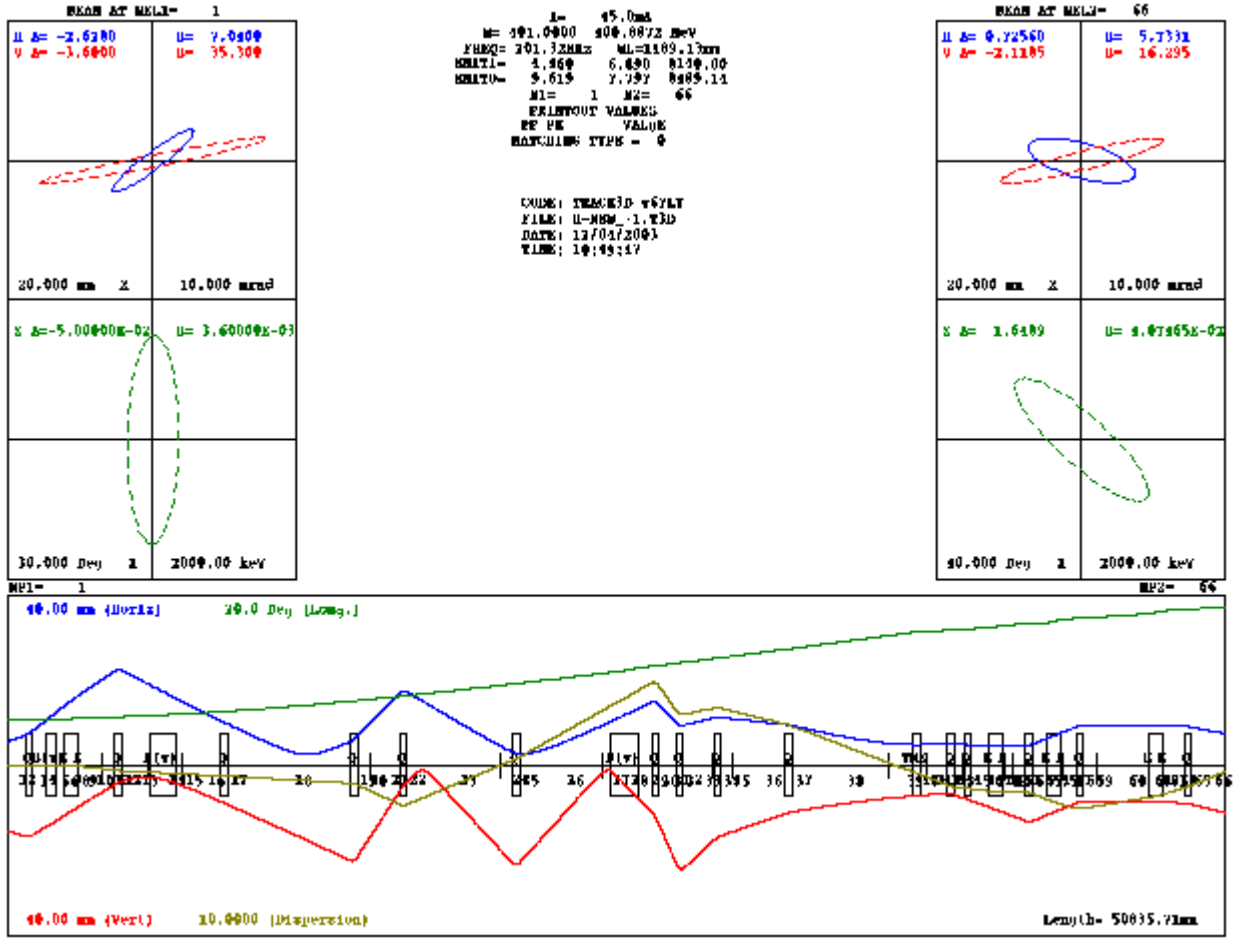
After Nov-03 Shutdown

Milorad Popovic

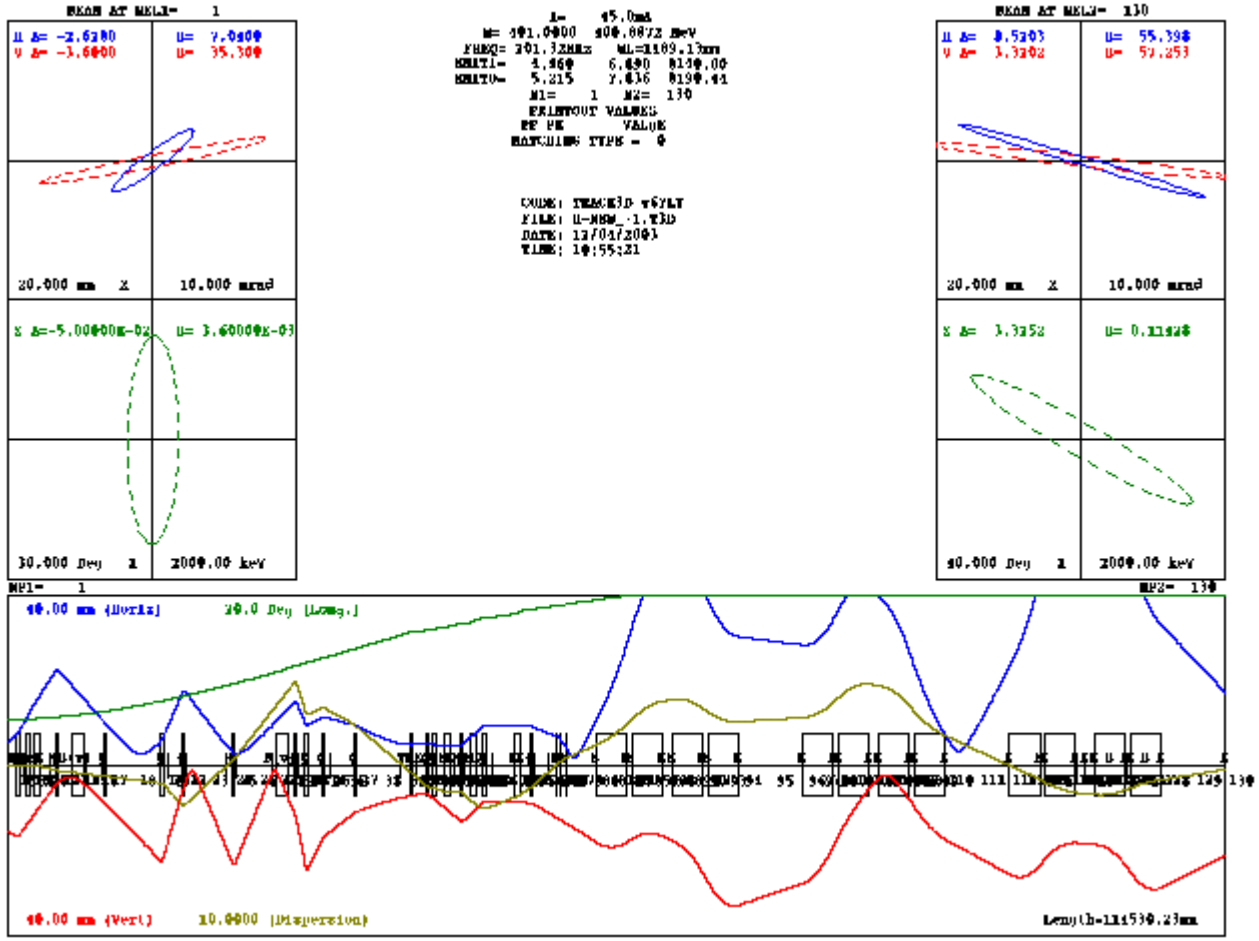
Strategy:

1. **Low Loss in the Line**
2. **Keep Booster CHGB/CHGA as it is or Higher**
3. **Extract Twiss parameters, Emittances from wire data**

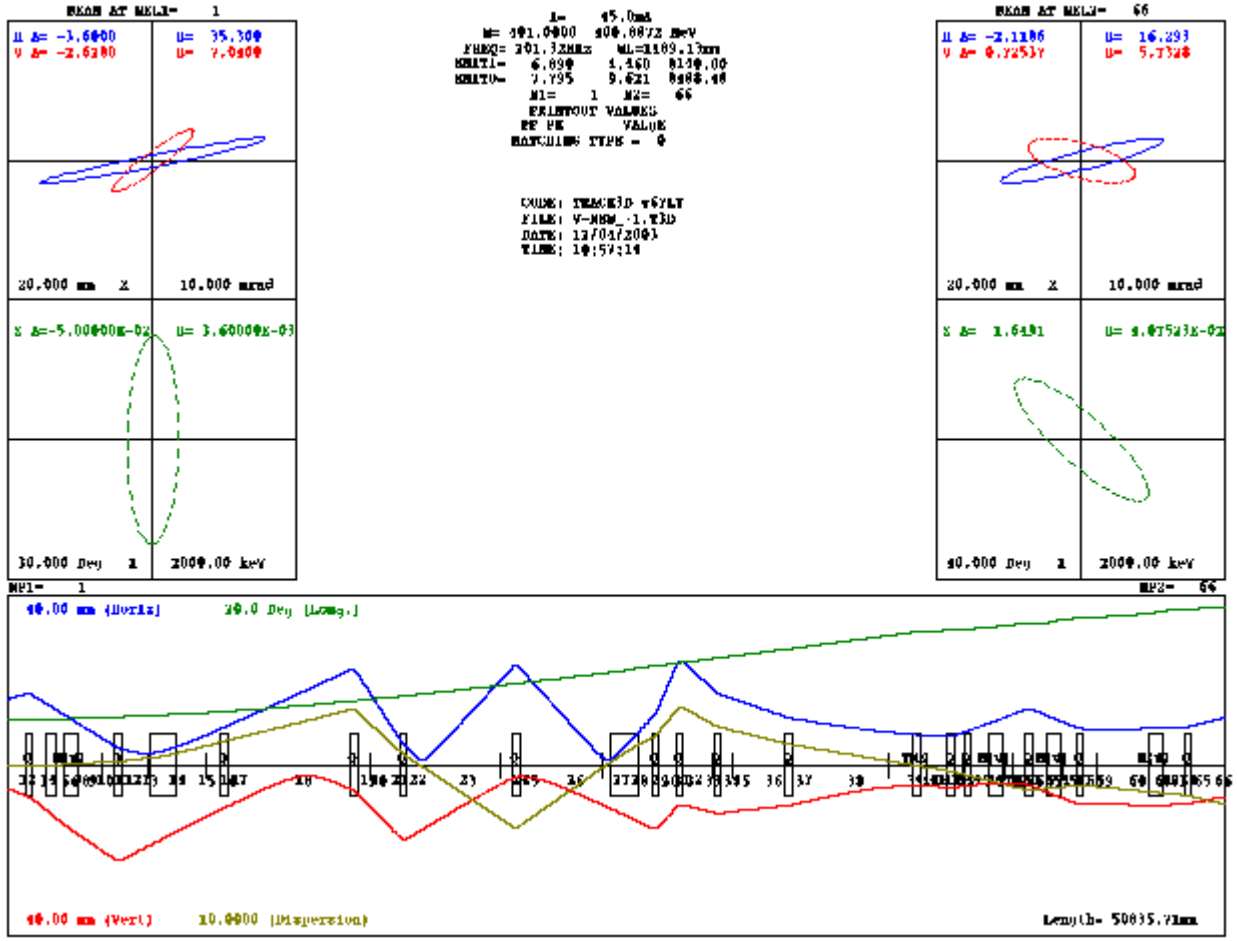
400MeV Line, from W1 to W12



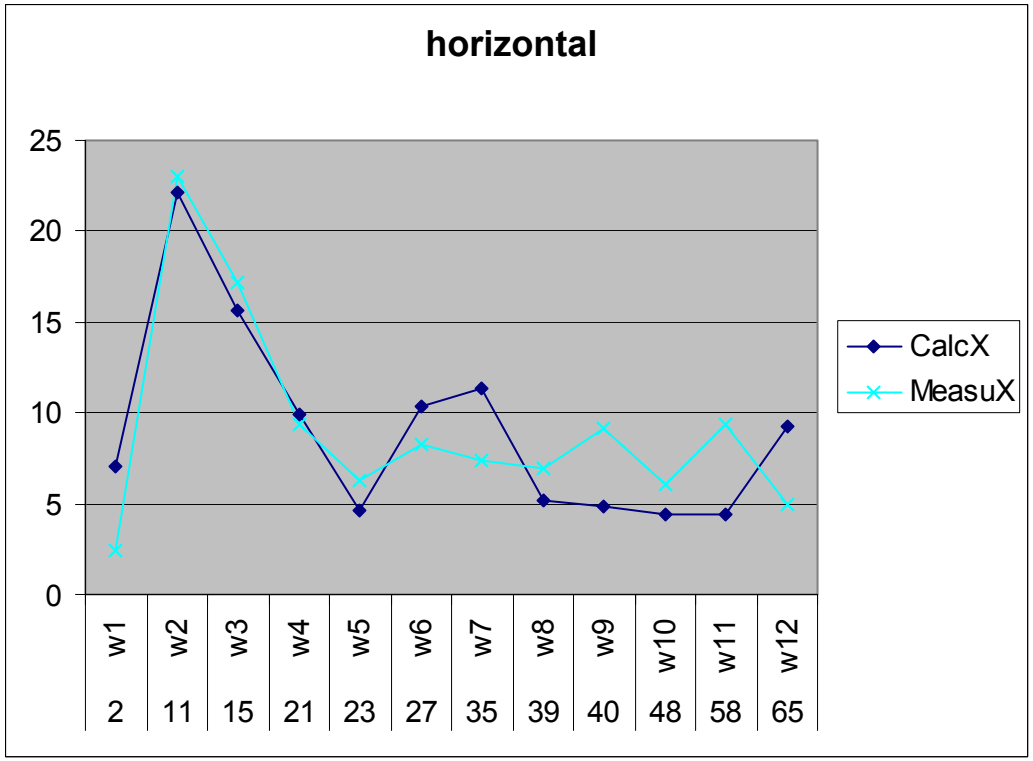
400MeV+3 Booster Cells



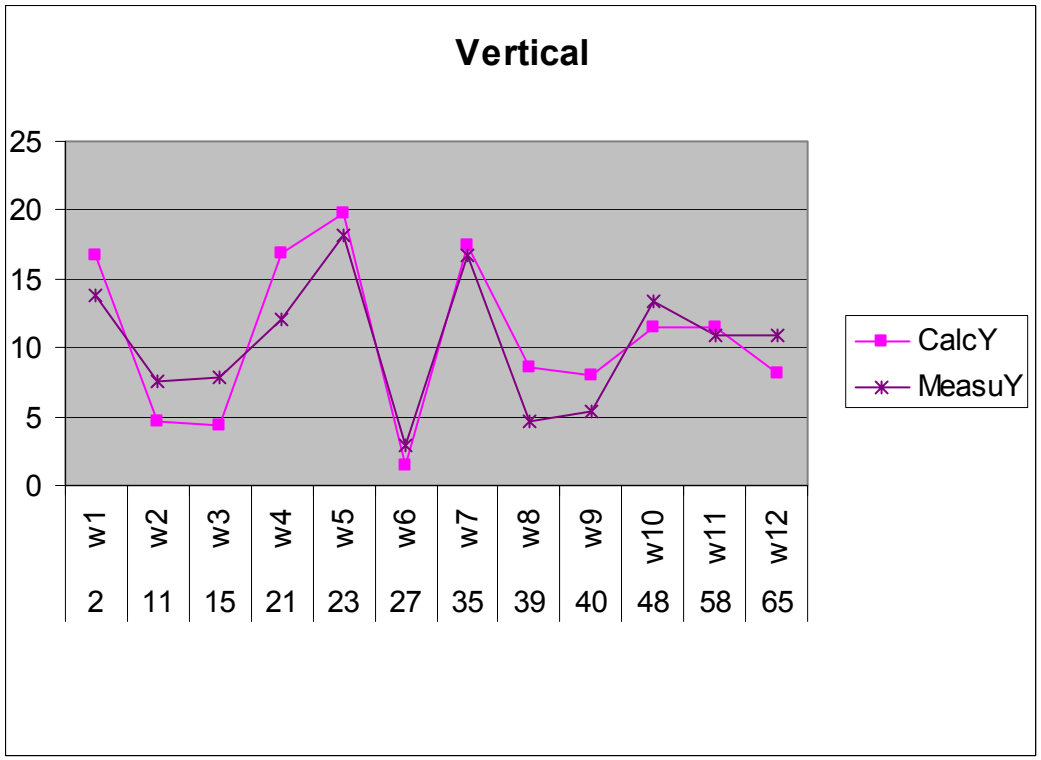
X-Y Exchanged for V Dispersion



H-Wire date(23-Nov-023) and Trace3D,



V-Wire and Trace3D(See Booster Log)



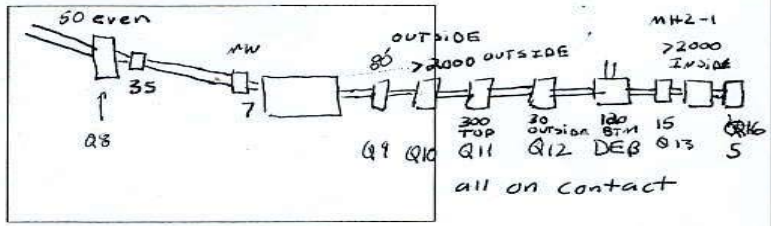
Booster Log

PRI coil. 150

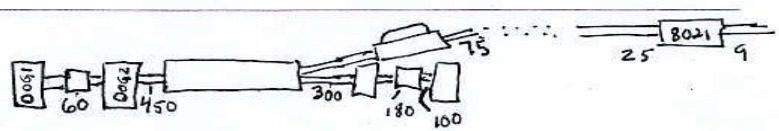
NOV. 24 2003

index:	17
date:	2/28/2002
time:	8:30:00 AM
hourscooldown:	

beamhistory:



L20:	55	@ contact
S20:	7	@ contact
L21_RF9_us:	85	@ 1 foot
L21_RF9_ds:	26	@ 1 foot
L21_RF10_us:	25	@ 1 foot
L21_RF10_ds:	10	@ 1 foot
S21:	30	@ contact
L22_RF11_us:	150	@ 1 foot
L22_RF11_ds:	40	@ 1 foot
L22_RF12_us:	40	@ 1 foot
L22_RF12_ds:	28	@ 1 foot
S22:	28	@ contact
L23_RF13_us:	17	@ 1 foot
L23_RF13_ds:	7	@ 1 foot
L23_RF14_us:	7	@ 1 foot
L23_RF14_ds:	3	@ 1 foot
S23:	30	@ contact
L24_RF15_us:	100	@ 1 foot
L24_RF15_ds:	35	@ 1 foot
L24_RF16_us:	40	@ 1 foot
L24_RF16_ds:	23	@ 1 foot
S24:	20	@ contact
Orbmp1:	70	@ 1 foot
L1:	550	@ contact
S1:	35	@ contact
L2:	610	@ contact
S2:	35	@ contact
L3:		@ contact

MP02:		@ 1 foot
Bex2:		@ contact
S3:	70	@ contact
L4:	100	@ contact
S4:	155	@ contact
L5:	200	@ contact
S5:	50	@ contact
L6:	700	@ contact
S6:	470	@ contact
L7:	450	@ contact
S7:	1500	@ contact
L8:	200	@ contact
L8_midstraight	50	@ contact
S8:	145	@ contact
L9:	300	@ contact
S9:	100	@ contact
Magnet_9-3:	200	@ contact
L10:	1000	@ contact
S10:	300	@ contact
L11:	650	@ contact
S11:	250	@ contact
L12 outside:	2000	@ contact
L12 inside:	1500	@ contact
S12:	110	@ contact
Magnet_12-3:	400	@ contact
Magnet_12-4:	470	@ contact
L13:	1600	@ contact
MP01:	220	@ 1 foot

Bex12:	1200	@ contact
S13:	100	@ contact
L14_RF1_us:	90	@ 1 foot
L14_RF1_ds:	40	@ 1 foot
L14_RF2_us:	35	@ 1 foot
L14_RF2_ds:	25	@ 1 foot
S14:	55	@ contact
L15_RF3_us:	150	@ 1 foot
L15_RF3_ds:	38	@ 1 foot
L15_RF4_us:	35	@ 1 foot
L15_RF4_ds:	17	@ 1 foot
S15:	125	@ contact
L16_RF5_us:	28	@ 1 foot
L16_RF5_ds:	15	@ 1 foot
L16_RF6_us:	15	@ 1 foot
L16_RF6_ds:	10	@ 1 foot
S16:	23	@ contact
L17_RF7_us:	55	@ 1 foot
L17_RF7_ds:	20	@ 1 foot
L17_RF8_us:	15	@ 1 foot
L17_RF8_ds:	10	@ 1 foot
S17:	60	@ contact
L18:	35	@ contact
S18:	45	@ contact
L19_RF17_us:	23	@ 1 foot
L19_RF17_ds:	9	@ 1 foot
L19_RF18_us:	9	@ 1 foot
L19_RF18_ds:	4	@ 1 foot
S19:	60	@ contact