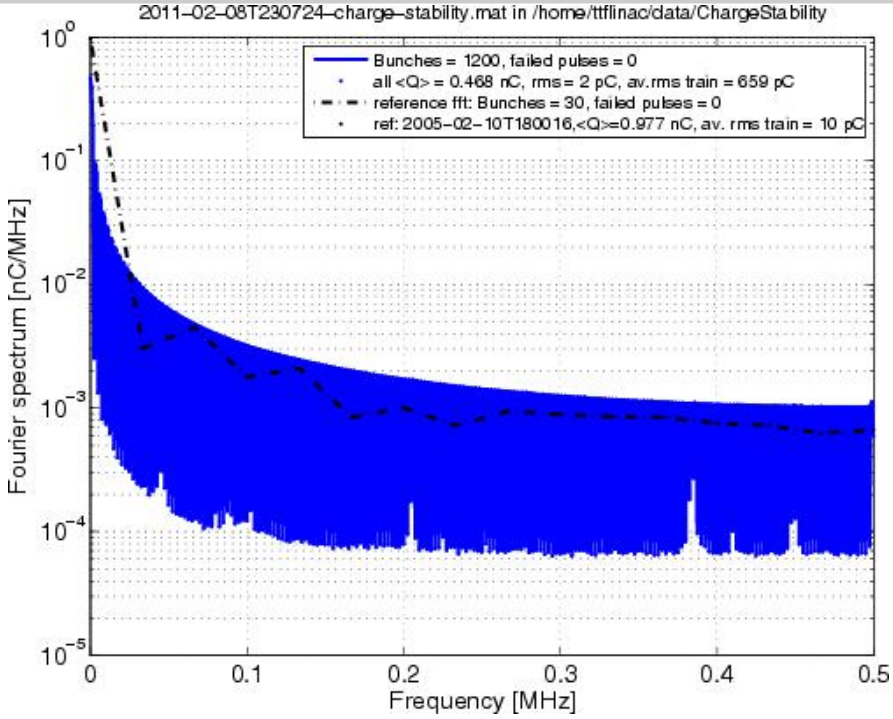
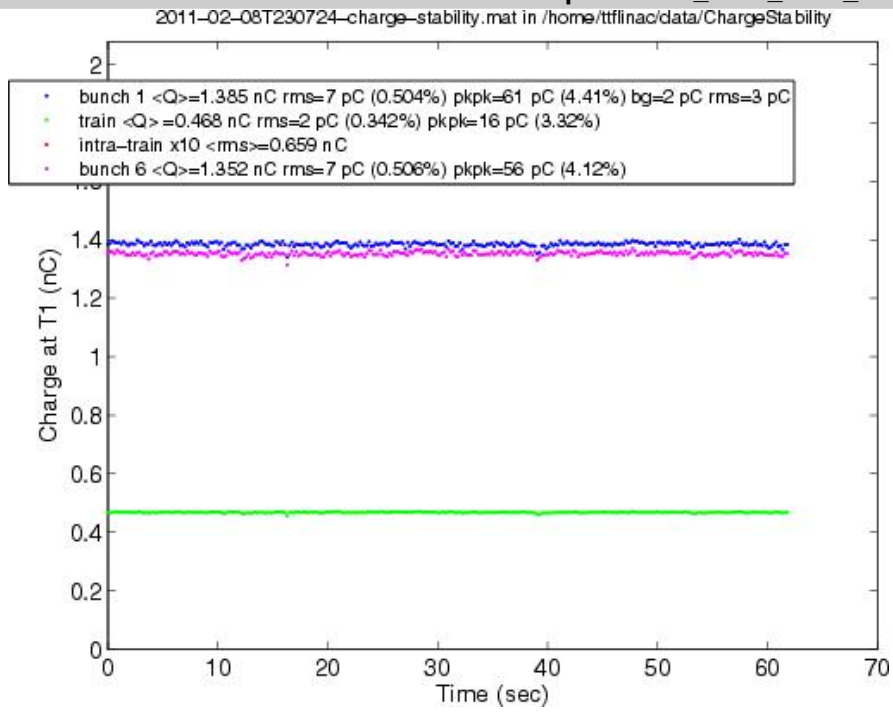
? 08.02.2011 23:07 oracle **Shift summary**

08.02.2011 23:08 ttflinac **tp55cec77c_2d1d_402a_8456_87027b778441.ps**



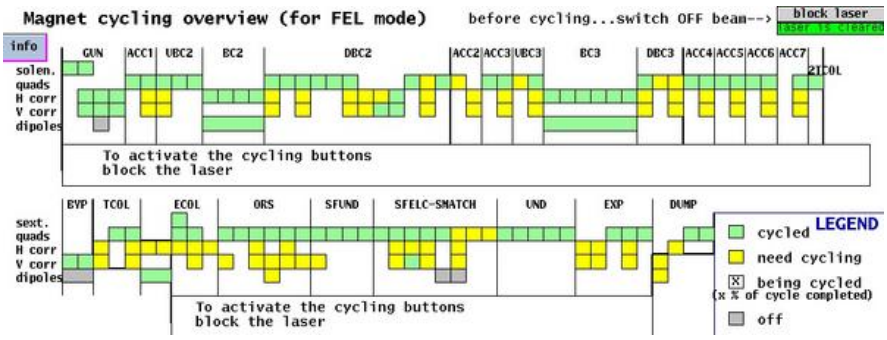
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:08:55-00.ps

08.02.2011 23:09 ttflinac **tp8cf95ca0_353e_424d_bd31_440df8159aef.ps**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:09:03-00.ps

08.02.2011 23:09 ttflinac **ttflinac@:magnet_cycle_overview_fel**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:09:22-00.JPG

08.02.2011 23:09 ttflinac **SASE tuning parameters**

Misc. parameters

```
Energy / Wavelength: 1009.46 MeV / 6.2 nm
Charge:              1.39 nC
Main solenoid:       -300.2 A
Bucking coil:        +20.7 A
Dipoles BC2/BC3:     +73.1 A / +56.0 A
```

RF parameters

	GUN	ACC1	ACC39	ACC2/3	ACC4/5	ACC6/7
Power/Gradient	+3.640	+163.70	+19.10	+297.50	+181.00	+359.50
Readback	3.86	163.7	19.1	295.8	181.1	351.8
Phase	-6.30	+2.70	+109.00	+2.00	-8.60	-5.00
on-crest		-1.0		-3.0	-5.0	-0.0
Readback	8.8	2.7	108.9	2.4	-8.2	-3.0

Undulator steerers and aircoils

H7SMATCH	H12SMATCH
+0.054	**-1.988**

V7SMATCH	V12SMATCH
-0.093	**-1.988**

Intra-undulator steerers

H3UND1	H3UND2	H3UND3	H3UND4	H3UND5	H3UND6
-4.90	**-5.00**	**-4.90**	**-4.70**	**-4.90**	**-5.00**

08.02.2011 23:09 ttflinac **Main linac parameters**

shift documentation

Laser

```
Number of bunches ...... 1200
Bunch frequency ........ 3000 kHz
Macropulse rep'rate .... 5.0 Hz
Pump time_3 ............ 0.0030 ms
Pump current_3 ......... 5.00 V
Pre-amp start time ..... 2.59 ms
Booster start time ..... 2.69 ms
Attenuator SP .......... 5.77
Iris diameter .......... 17248 steps
Iris diameter .......... 2.05 mm
```

Gun

```
Feedforward/Feedback ... on/on
FSM .................... on
Pfwd SP ................ 3.64
VS ampl. ............... 18.36
Phase SP ............... -6.30 deg
VS phase ............... 9.07 deg
Pfwd (peak) ............ 3.871 MW
Prefl (peak) ........... 2.816 MW
Pfwd sample point ...... 700
Pfwd (at sample point) . 18.338 MW
Prefl sample point ..... 720
Prefl (at sample point)  5.701 MW
Flat top ............... 460 us
Water temperature SP ... 72.32 deg C
Main solenoid (RBV) .... -300.24 A
Bucking coil (RBV) ..... 20.70 A
Gun dipole (RBV) ....... 0.000 A
Charge 3GUN(T1) ........ 1.39 nC
DC kicker delay ........ 6.80 ms
DC kicker HV ........... not local
DC kicker HV ........... enabled
DC kicker HV ........... on
DC kicker SP ........... 0.00 V
DC kicker start ........ 124.00 ns
```

ACC1

```
Feedforward/Feedback ... on/on
Feedback gain .......... 2.0
Pfwd SP ................ 163.70
Pfwd RBV ............... 163.70
Phase SP ............... 2.70 deg
Phase RBV .............. 2.77 deg
```

ACC39

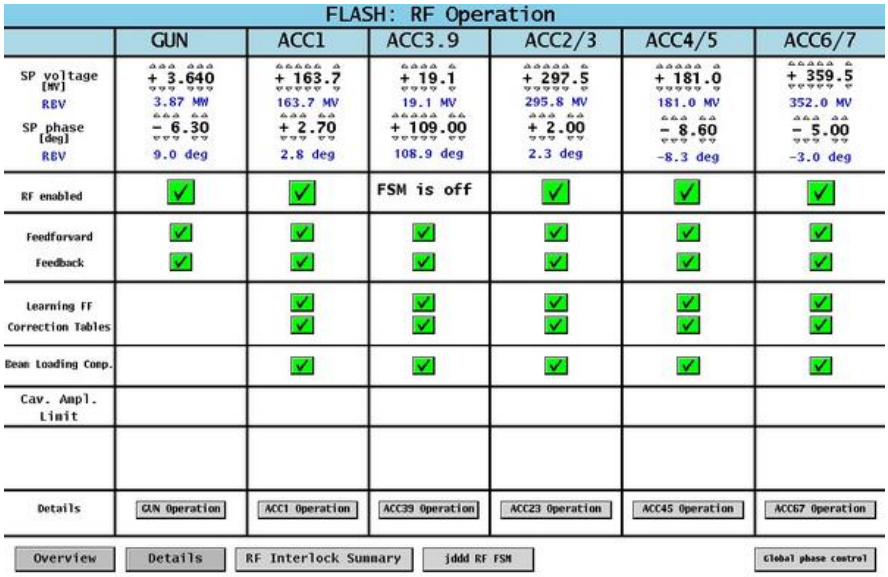
```
Feedforward/Feedback ... on/on
Feedback gain .......... 8.0
Pfwd SP ................ 19.10
Phase SP ............... 109.00 deg
Pfwd C1.ACC39 .......... <error>
Flat top ............... 800 us
```

```
Pfwd C1.ACC1 ........... 182.1 kW
Pfwd C5.ACC1 ........... 174.4 kW
Flat top ............... 800 us
Dipole BC2 (RBV) ....... 73.11 A
Pyro 9DBC2.1 ........... -0.1994 V
Radiator 9DBC2 ......... out
Slow phase feedback .... off
Slow ph. FB target/gain  -0.400/-0.1
Slow ph. FB pyrodet.used Pyro 9DBC2.1 (fine, old ADC)
ACC2/3                                      ACC4/5
Feedforward/Feedback ... on/on              Feedforward/Feedback ... on/on
Feedback gain .......... 2.0                Feedback gain .......... 40.0
Pfwd SP ................ 297.50             Pfwd SP ................ 181.00
Pfwd RBV ............... 295.59             Pfwd RBV ............... 181.14
Phase SP ............... 2.00 deg           Phase SP ............... -8.60 deg
Phase RBV .............. 2.42 deg           Phase RBV .............. -8.12 deg
Pfwd C5.ACC2 ........... 131.61 kW          Pfwd C1.ACC4 ........... 101.74 kW
Pfwd C1.ACC3 ........... 227.50 kW          Pfwd C2.ACC5 ........... 67.75 kW
Flat top ............... 450 us             Pfwd C1.ACC6 ........... 0.61 kW
Dipole BC3 (RBV) ....... 56.00 A            Flat top ............... 800 us
Pyro 4DBC3.1 ........... -0.0262 V
Pyro 4DBC3.3 ........... 0.0014 V
Radiator 4DBC3 ......... out
ACC6/7                                      Bypass
Feedforward/Feedback ... on/on              Dipole D1BYP (RBV) ..... 0.00 A
Feedback gain .......... 50.0               Energy bypass .......... 1211.4 MeV
Pfwd SP ................ 359.50             RF vector sum ALL ...... 617.3 MeV
Pfwd RBV ............... 351.58             Charge 16BYP ........... -0.00 nC
Phase SP ............... -5.00 deg
Phase RBV .............. -2.90 deg
Pfwd C1.ACC6 ........... 205.08 kW
Pfwd C1.ACC7 ........... 222.05 kW
Flat top ............... 450 us
Collimator                                  Undulator
Dipole D1ECOL (RBV) .... 176.89 A           1SFUND1 gap RBV ........ 220.0 mm
Energy dogleg .......... 1009.4 MeV         1SFUND2 gap RBV ........ 220.0 mm
Charge 7ORS ............ 1.45 nC            1SFUND3 gap RBV ........ 220.0 mm
                                            1SFUND4 gap RBV ........ 180.0 mm
Dump                                        Feedbacks
Dipole D9SMATCH (RBV) .. 0.00 A             Charge feedback gain ... <error>
Dipole D1DUMP (RBV) .... 0.00 A             Charge feedback SP ..... <error>
Dipole D6DUMP (RBV) .... 212.20 A           PTO feedback ........... on
Rotator RD13DUMP (RBV) . 9.13 A
Charge 9DUMP ........... 1.32 nC
Photon beamline
Aperture 1 ............ 3 mm
Offset h/v ............ 0/-1 mm
Aperture 2 ............ 10 mm
Offset h/v ............ 1/0 mm
```

```
Status saved in machine file 2011-02-08T23_08_59+01
Orbit reference for the root tool saved in /home/ttflinac/measurements/xy_jitter/2011-02-08T230859
```

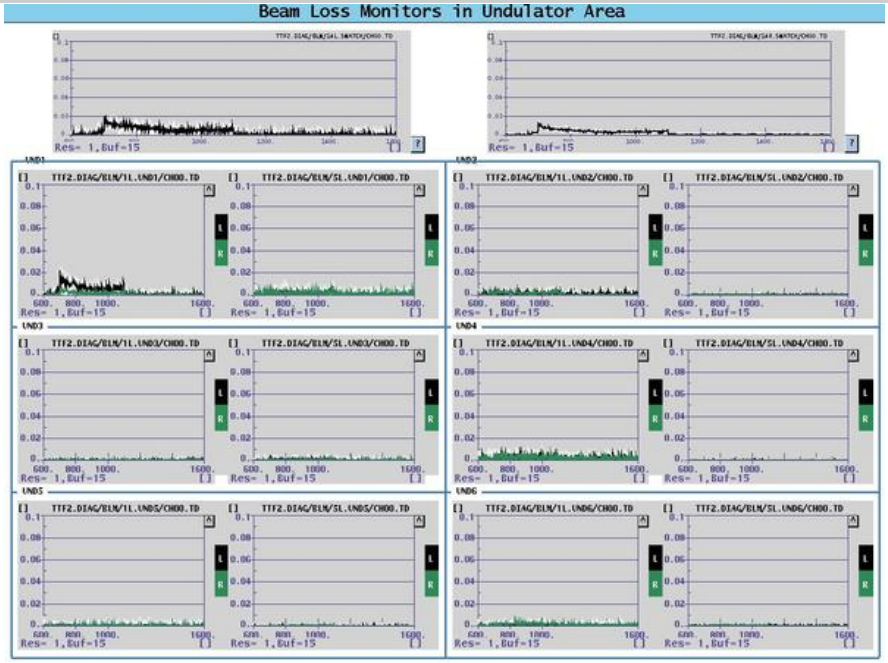
```
also in 'save and restore' files:
Magnets saved to: /home/ttflinac/save_restore/Magnets/autosaved/all_Magnets_20110208T230859.sr
uMovers saved to: /home/ttflinac/save_restore/Micromovers/autosaved/uMovers_20110208T230859.sr
from computer: flashbkr2
```

08.02.2011 23:09 ttflinac **ttflinac@:RF_OPERATION**



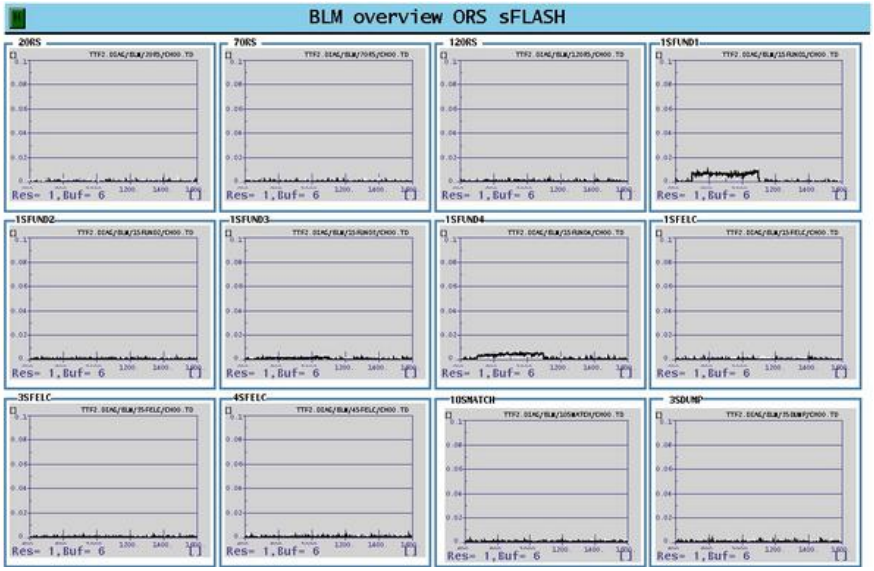
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:09:40-00.JPG

08.02.2011 23:09 ttflinac **ttflinac@:BLM_UNDULATORS**



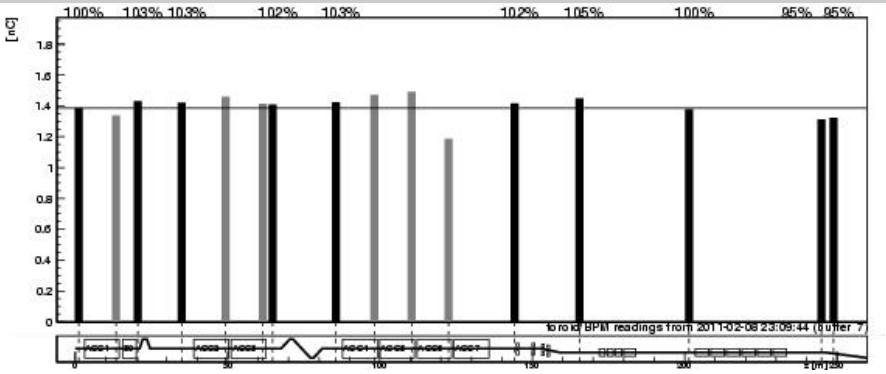
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:09:49-00.JPG

08.02.2011 23:09 ttflinac **ttflinac@:blm_overview_ORS**



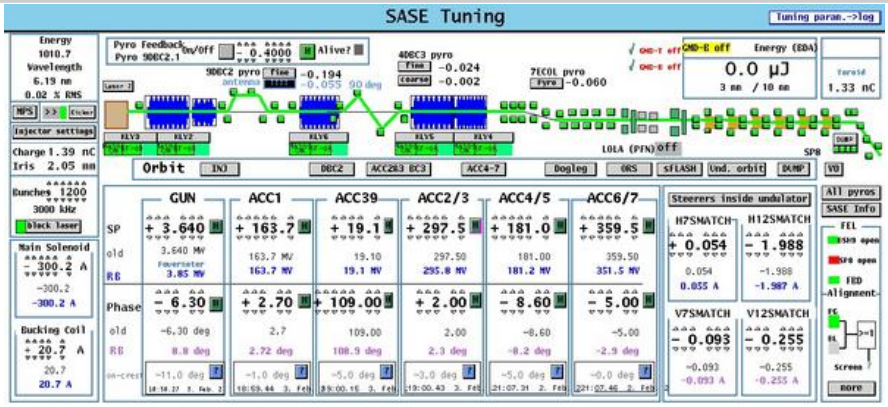
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:09:58-00.JPG

08.02.2011 23:10 ttflinac **toroid charge readings _transmission_**



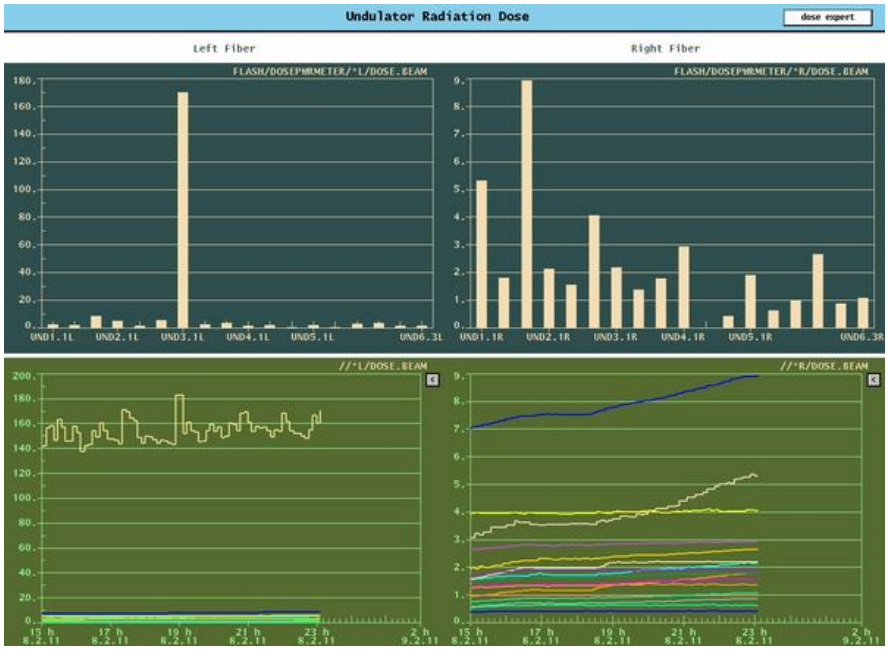
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:10:05-00.ps

08.02.2011 23:10 ttflinac **ttflinac@:SASE_tuning**



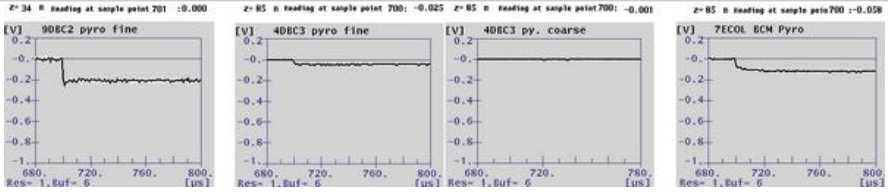
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:10:14-00.JPG

08.02.2011 23:10 ttflinac **ttflinac@:dose_und**



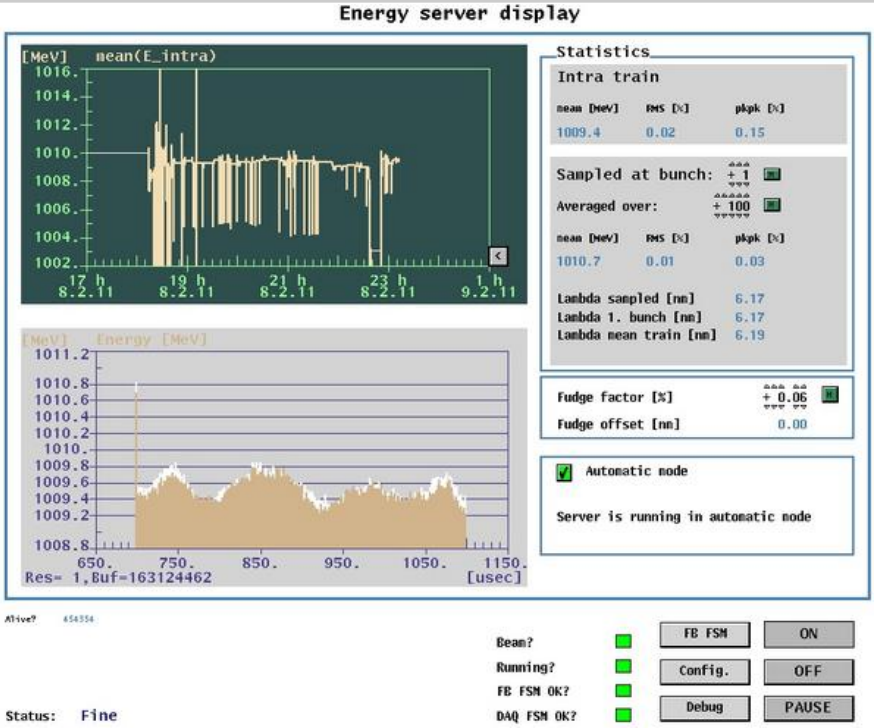
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:10:24-00.JPG

08.02.2011 23:10 ttflinac **ttflinac@:All_BCM**



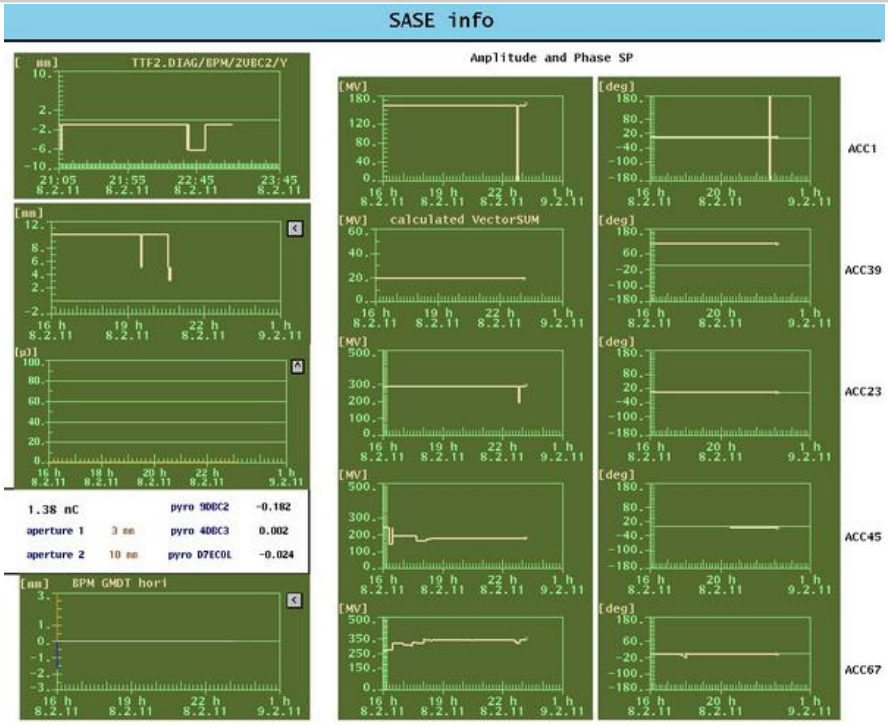
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:10:37-00.JPG

08.02.2011 23:11 ttflinac **ttflinac@:Energyfbm_display**



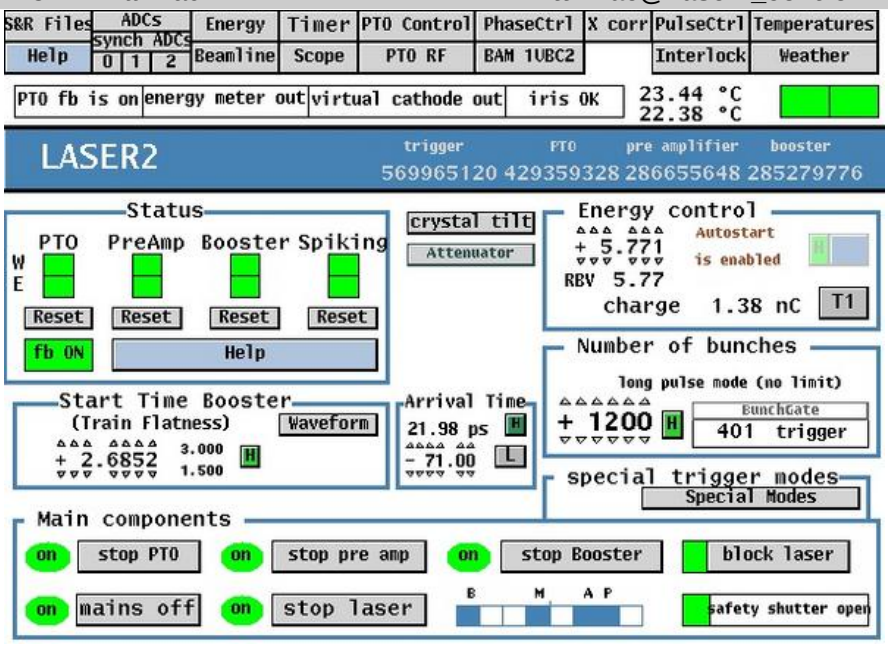
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:11:08-00.JPG

08.02.2011 23:11 ttflinac **ttflinac@:SASE_info**



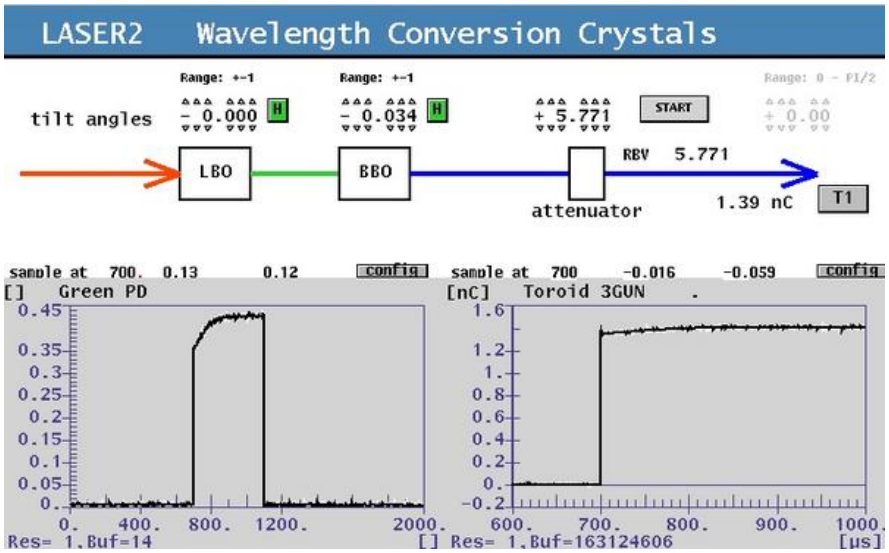
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:11:19-00.JPG

08.02.2011 23:11 ttflinac **ttflinac@:laser2_control**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:11:29-00.JPG

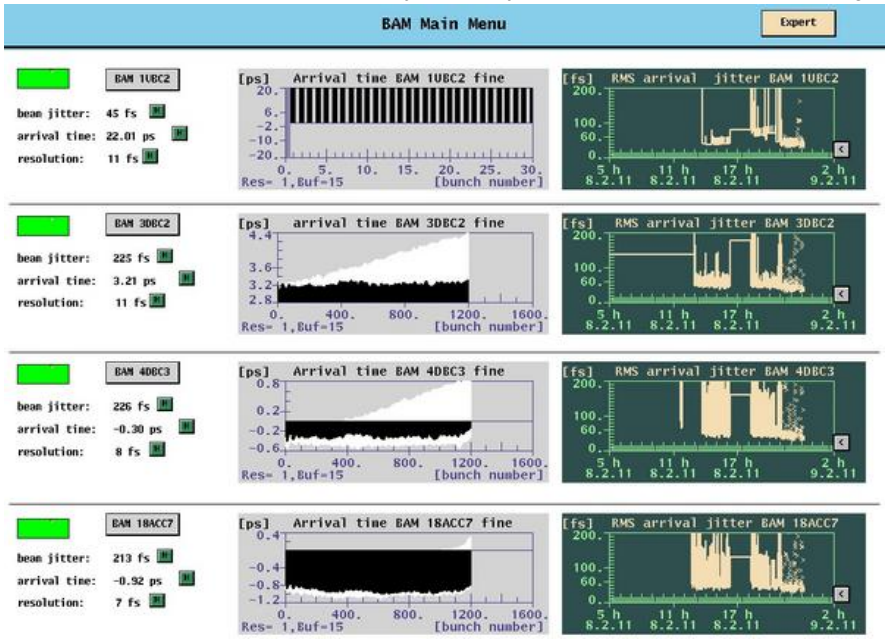
08.02.2011 23:11 ttflinac **ttflinac@:laser_crystal_tuning**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:11:44-00.JPG

08.02.2011 23:12 S. Pfeiffer **ttflinac@:BAM_Operator_main**

some controller tests for the arrival time, only done by a static SP correction signal



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:12:16-00.JPG

08.02.2011 23:45 W. Cichalewski **ACC6 detuning and loaded Qs after LFD compensation using piezos**

Cavity#	Loaded Q	Detuning
1	1.88e+06	-80.08
2	1.76e+06	-83.38
3	1.90e+06	-75.01
4	1.85e+06	-70.77
5	3.27e+06	27.56
6	3.10e+06	-64.19
7	2.22e+06	-76.84
8	2.23e+06	-80.26

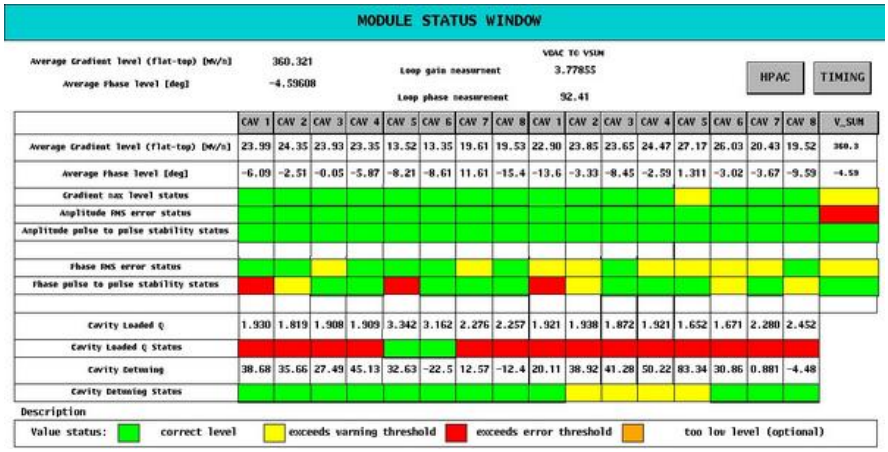
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:45:47-01.png

08.02.2011 23:48 W. Cichalewski **ACC7 detuning and loaded Qs after LFD compensation using piezos**

Cavity#	Loaded Q	Detuning
1	1.92e+06	-64.29
2	2.00e+06	-85.30
3	1.89e+06	-80.30
4	1.93e+06	-69.63
5	1.65e+06	-67.00
6	1.64e+06	-130.78
7	2.31e+06	-79.12
8	2.40e+06	-71.72

File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:48:51-00.png

08.02.2011 23:50 W. Cichalewski **ACC6 detuning and loaded Qs after LFD compensation using piezo (diagnostic server results).**



MODULE STATUS WINDOW

Average Gradient level (flat-top) [MV/m] 360.321
Average Phase level [deg] -4.59608
Loop gain measurment VDAC TO VSUN 3.77855
Loop phase measurement 92.41

HPAC TIMING

	CAV 1	CAV 2	CAV 3	CAV 4	CAV 5	CAV 6	CAV 7	CAV 8	CAV 1	CAV 2	CAV 3	CAV 4	CAV 5	CAV 6	CAV 7	CAV 8	V_SUM
Average Gradient level (flat-top) [MV/m]	23.99	24.35	23.93	23.35	13.52	13.35	19.61	19.53	22.90	23.85	23.65	24.47	27.17	26.03	20.43	19.52	360.3
Average Phase level [deg]	-6.09	-2.51	-0.05	-5.87	-8.21	-8.61	11.61	-15.4	-13.6	-3.33	-8.45	-2.59	1.311	-3.02	-3.67	-9.59	-4.59
Gradient max level status																	
Amplitude RMS error status																	
Amplitude pulse to pulse stability status																	
Phase RMS error status																	
Phase pulse to pulse stability status																	
Cavity Loaded Q	1.930	1.819	1.908	1.909	3.342	3.162	2.276	2.257	1.921	1.938	1.872	1.921	1.652	1.671	2.280	2.452	
Cavity Loaded Q Status																	
Cavity Detuning	38.68	35.66	27.49	45.13	32.63	-22.5	12.57	-12.4	20.11	38.92	41.28	50.22	83.34	30.86	0.881	-4.48	
Cavity Detuning Status																	

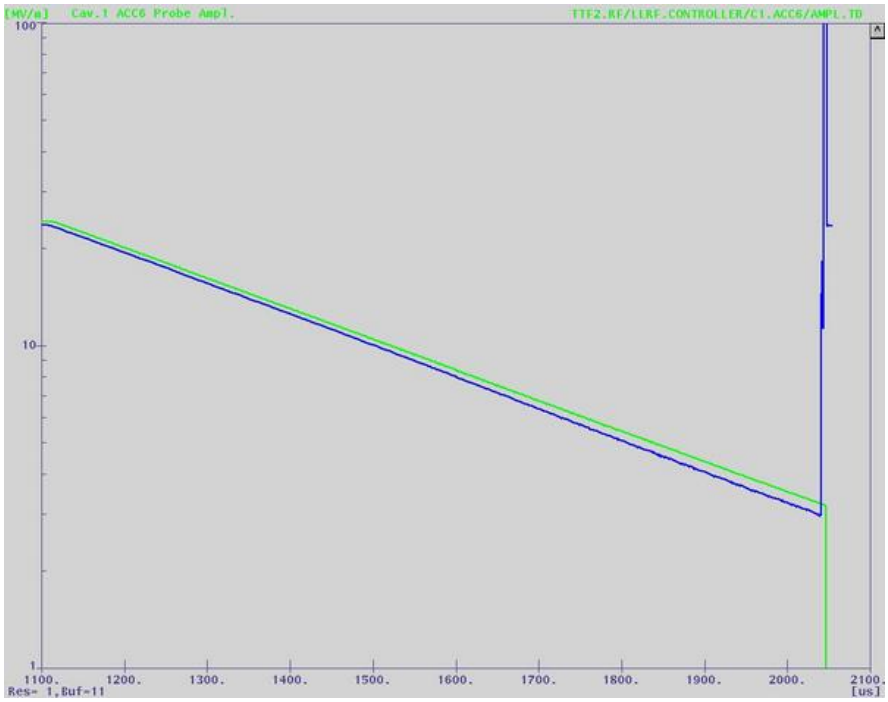
Description

Value status: correct level | exceeds warning threshold | exceeds error threshold | too low level (optional)

File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-08T23:50:32-00.JPG

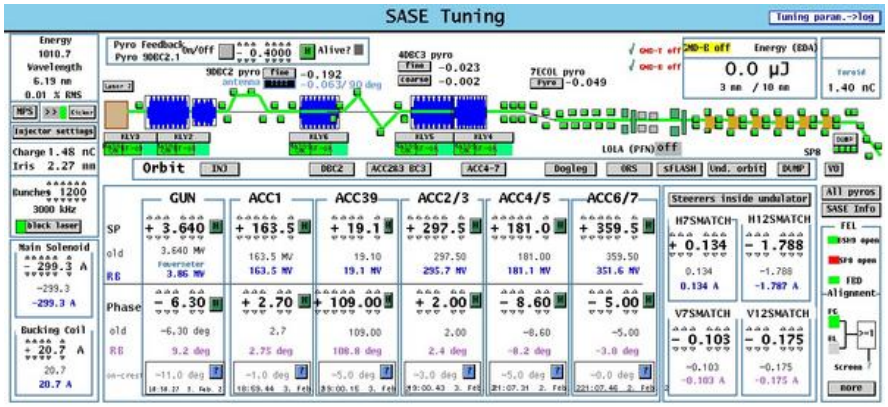
09.02.2011	00:01	W. Cichalewski	**Comparison of derivatives at end of rf pulse between monitoring ADC gradient (blue) and LLRF.Controller (green)**

```
The differences in slopes will result in different loaded Q numbers which are observed between
online
 diagnostic server vs matlab tool.
Of note: we have been using loaded Q readbacks from matlab tool to set up the optimum configurations
 for flat gradients.
```



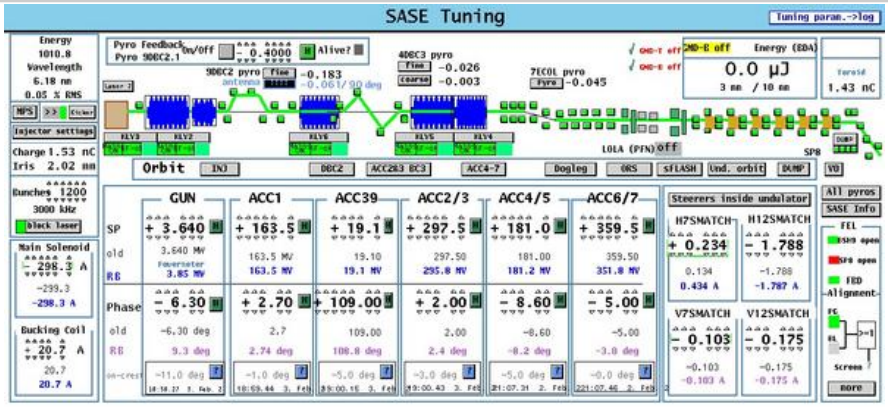
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T00:01:34-00.JPG

09.02.2011	00:20	ttflinac	**ttflinac@:SASE_tuning**



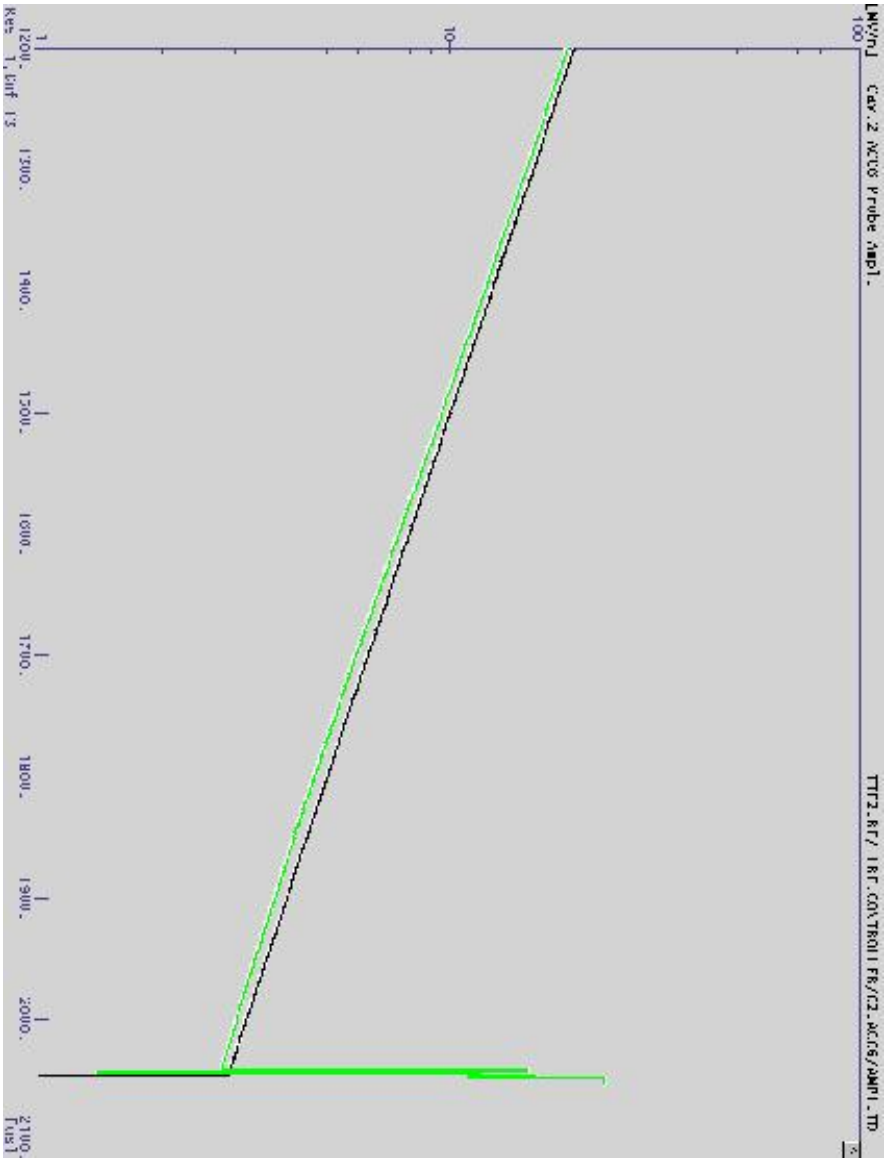
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T00:20:22-00.JPG

09.02.2011 00:29 ttflinac **ttflinac@:SASE_tuning**



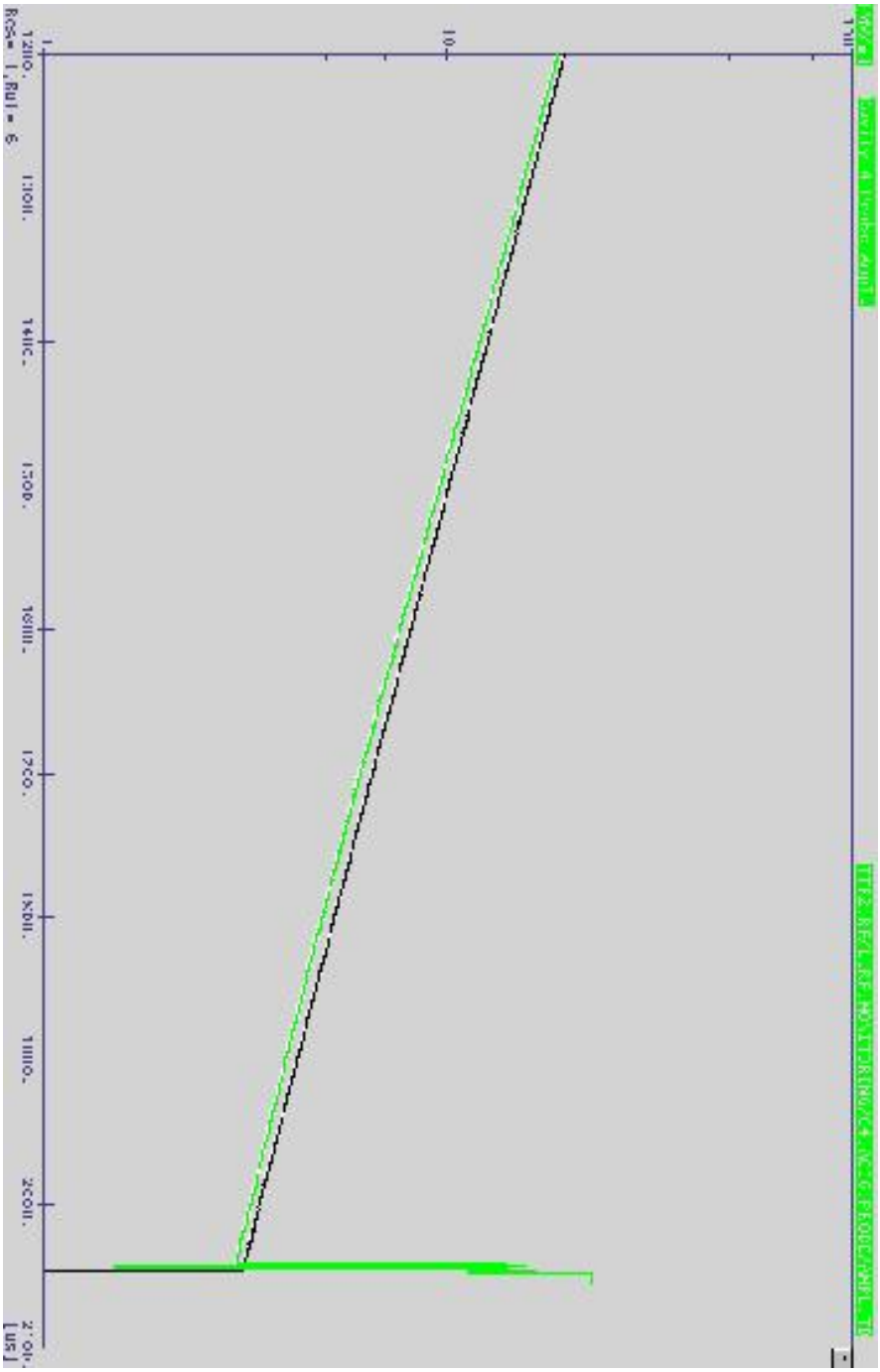
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T00:29:48-00.JPG

09.02.2011 01:16 ttflinac **comp_acc6_c2_1297210589.ps**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T01:16:48-00.ps

09.02.2011	01:17	ttflinac	**comp_acc6_c4_1297210595.ps**



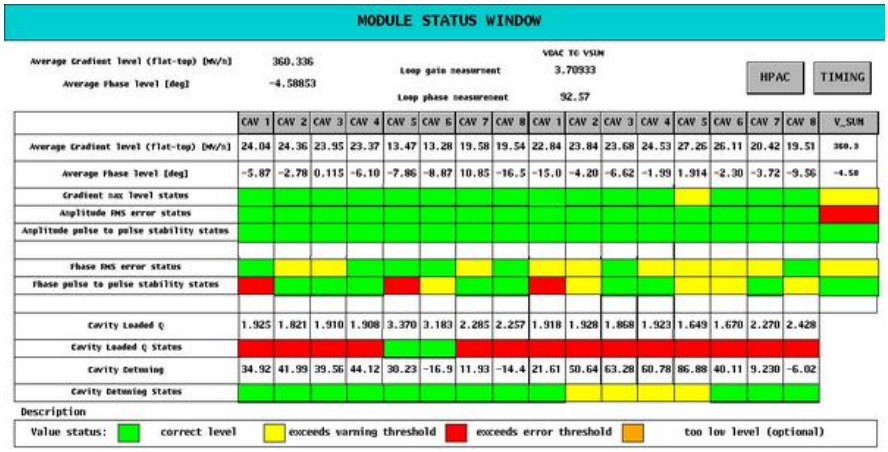
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T01:17:00-00.ps

09.02.2011	01:21	Carwardine	**Completed a beam current scan from ~4.5mA down to ~1.5mA**

```
Same loaded Q settings as per the end of last shift
```

09.02.2011	01:35	Carwardine	**Reference point for iterative algorithm for adjusting loaded Qs to reduce spread of tilts**

```
We're going to do a simple adjustment of one cavity at a time, adjusting the loaded Q by one
 'tick' on the cavity with the highest absolute slope
```



MODULE STATUS WINDOW

Average Gradient level (flat-top) [MV/m] 360.336
Average Phase level [deg] -4.58853
VDAC TO VSUM
Loop gain measurment 3.70933
Loop phase measurement 92.57
HPAC TIMING

	CAV 1	CAV 2	CAV 3	CAV 4	CAV 5	CAV 6	CAV 7	CAV 8	CAV 1	CAV 2	CAV 3	CAV 4	CAV 5	CAV 6	CAV 7	CAV 8	V_SUM
Average Gradient level (flat-top) [MV/m]	24.04	24.36	23.95	23.37	13.47	13.28	19.58	19.54	22.84	23.84	23.68	24.53	27.26	26.11	20.42	19.51	360.3
Average Phase level [deg]	-5.87	-2.78	0.115	-6.10	-7.86	-8.87	10.85	-16.5	-15.0	-4.20	-6.62	-1.99	1.914	-2.30	-3.72	-9.56	-4.58
Gradient max level status																	
Amplitude RMS error status																	
Amplitude pulse to pulse stability status																	
Phase RMS error status																	
Phase pulse to pulse stability status																	
Cavity Loaded Q	1.925	1.821	1.910	1.908	3.370	3.183	2.285	2.257	1.918	1.928	1.868	1.923	1.649	1.670	2.270	2.428	
Cavity Loaded Q Status																	
Cavity Detuning	34.92	41.99	39.56	44.12	30.23	-16.9	11.93	-14.4	21.61	50.64	63.28	60.78	86.88	40.11	9.230	-6.02	
Cavity Detuning Status																	

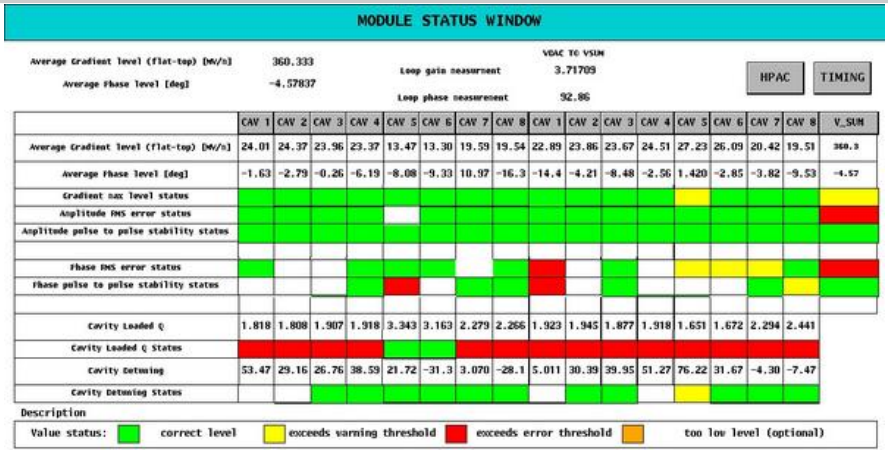
Description
Value status: correct level | exceeds warning threshold | exceeds error threshold | too low level (optional)

File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T01:35:12-00.JPG

09.02.2011 01:45 Carwardine **First iteration step: ACC6 Cavity Cav1**

Moved coupler up by 100 (was wrong direction). Went down by 200, but didn't get back to original value due to back-lash in coupler motor
Final change: 352000 to 359000
Delta in loaded Q -0.1 (to 1.8)
BTW, we're ignoring the two low-gradient cavities in ACC6

09.02.2011 01:54 ttflinac **ttflinac@:MODULE_STATUS_67**



MODULE STATUS WINDOW

Average Gradient level (flat-top) [MV/m] 360.333
Average Phase level [deg] -4.57837
VDAC TO VSUM
Loop gain measurment 3.71709
Loop phase measurement 92.86
HPAC TIMING

	CAV 1	CAV 2	CAV 3	CAV 4	CAV 5	CAV 6	CAV 7	CAV 8	CAV 1	CAV 2	CAV 3	CAV 4	CAV 5	CAV 6	CAV 7	CAV 8	V_SUM
Average Gradient level (flat-top) [MV/m]	24.01	24.37	23.96	23.37	13.47	13.30	19.59	19.54	22.89	23.86	23.67	24.51	27.23	26.09	20.42	19.51	360.3
Average Phase level [deg]	-1.63	-2.79	-0.26	-6.19	-8.08	-9.33	10.97	-16.3	-14.4	-4.21	-8.48	-2.56	1.420	-2.85	-3.82	-9.53	-4.57
Gradient max level status																	
Amplitude RMS error status																	
Amplitude pulse to pulse stability status																	
Phase RMS error status																	
Phase pulse to pulse stability status																	
Cavity Loaded Q	1.818	1.808	1.907	1.918	3.343	3.163	2.279	2.266	1.923	1.945	1.877	1.918	1.651	1.672	2.294	2.441	
Cavity Loaded Q Status																	
Cavity Detuning	53.47	29.16	26.76	38.59	21.72	-31.3	3.070	-28.1	5.011	30.39	39.95	51.27	76.22	31.67	-4.30	-7.47	
Cavity Detuning Status																	

Description
Value status: correct level | exceeds warning threshold | exceeds error threshold | too low level (optional)

File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T01:54:38-00.JPG

09.02.2011 01:55 Carwardine **Now, worst slope is on ACC7 C6**

Moving 5000 up

09.02.2011 01:57 Carwardine **Now, worst is ACC7 C1**

Motor up by 5000 (loaded Q down)

09.02.2011 01:58 Carwardine **Cavitity 3, ACC6 is now worst**

Motor up by 5000

09.02.2011 01:59 Carwardine **ACC6 Cav 3**

Up by 5000

09.02.2011 01:59 Carwardine **Cavity 4 ACC7**

Motor up by 5000
The spread in tilts is reducing - the algorithm seems to be working so far

09.02.2011 02:02 Carwardine **Cavity 2 Acc7**

Motor down by 5000

09.02.2011 02:04 Carwardine **Cavity 2 Acc7 still the worst**

Another 5000 steps up

We got to the lowest loaded Q we can get on ACC7 Cav 2 (consistent with the scans done on Friday night)

09.02.2011	02:22	Carwardine	**ACC7 C3 is worst**

Tried two steps of 5000 down, now loaded Q isn't changing anymore, so we're at the end stop of the loaded Q on this too

09.02.2011	02:25	Carwardine	**ACC7 C6**

Down by 5000

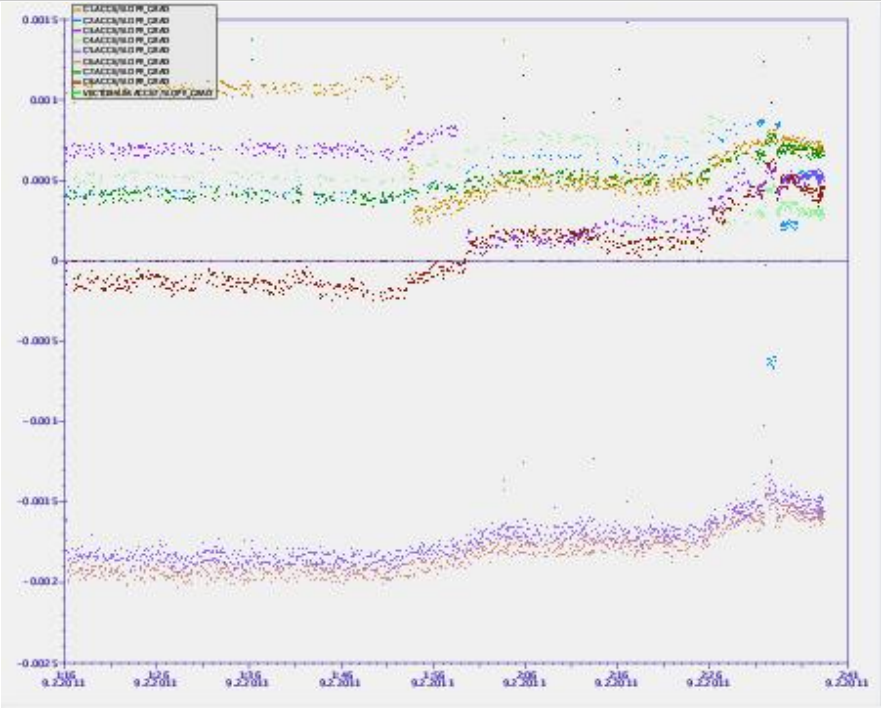
09.02.2011	02:27	Carwardine	**ACC6 C4**

down 5000

09.02.2011	02:32	Carwardine	**ACC6 C2**

Down by 10000 - but this was too much, so back up by 10000
Down by 5000 instead
Since we have two cavities out of our algorithm, all the remaining cavities will have a positive slope. this means our algorithm should try to reach the center of mass of the remainder rather than for zero.
We're going to reduce our step size from 5000 to 25000, which put the cavity slope in the center of mass

09.02.2011	02:38	ttflinac	**jddd Screenshot**



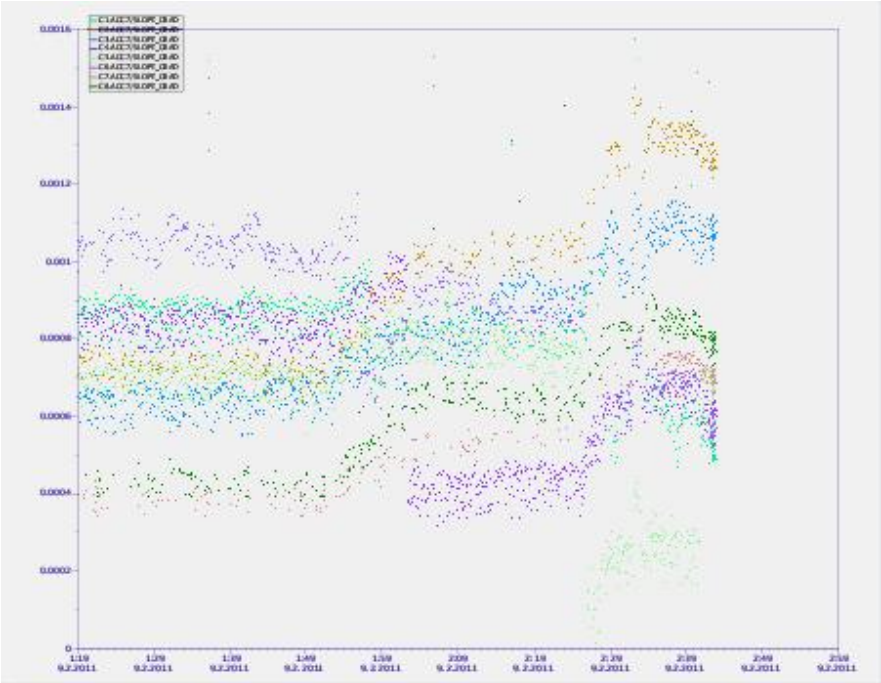
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T02:38:40-00.ps

09.02.2011	02:40	Carwardine	**One more step ACC7 Cavity 5**

Heading towards to center of mass
Up by 25000

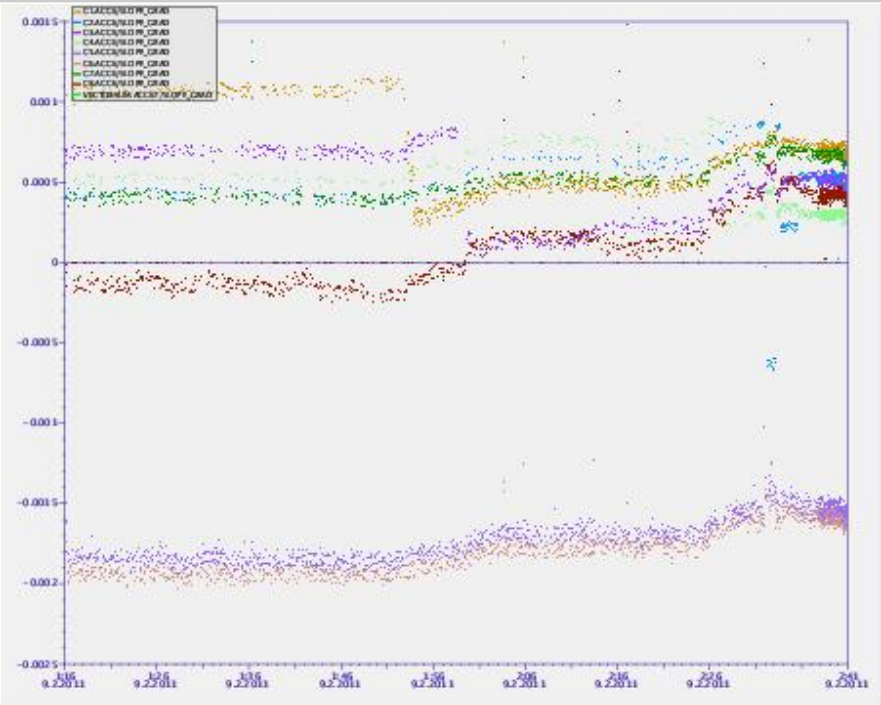
09.02.2011	02:42	Carwardine	**Starting a new current scan with our narrower center of mass of the gradient tilts**

09.02.2011	02:43	ttflinac	**jddd Screenshot**



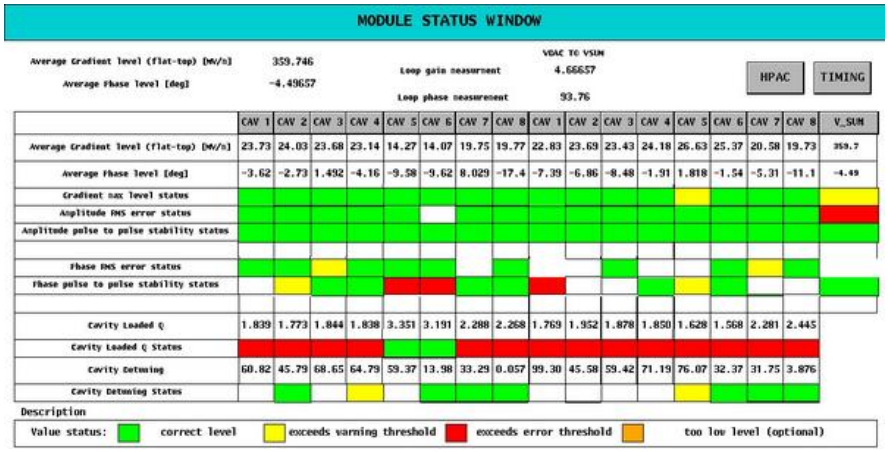
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T02:43:11-00.ps

09.02.2011	02:43	ttflinac	**jddd Screenshot**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T02:43:41-00.ps

09.02.2011	02:47	Carwardine, C. Schmidt, W. Cichalewski	**Loaded Qs at the completion of our optimization algorithm**



MODULE STATUS WINDOW

Average Gradient level (flat-top) [MV/m] 359.746
Average Phase level [deg] -4.49657
VDAC TO VSUM
Loop gain measurement 4.66657
Loop phase measurement 93.76
HPAC TIMING

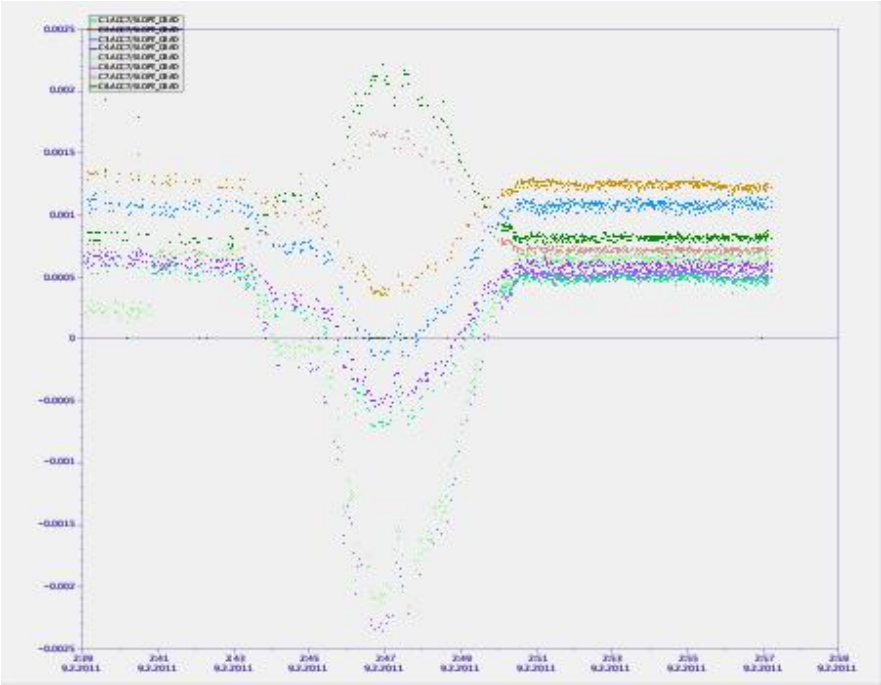
	CAV 1	CAV 2	CAV 3	CAV 4	CAV 5	CAV 6	CAV 7	CAV 8	CAV 1	CAV 2	CAV 3	CAV 4	CAV 5	CAV 6	CAV 7	CAV 8	V_SUM
Average Gradient level (flat-top) [MV/m]	23.73	24.03	23.68	23.14	14.27	14.07	19.75	19.77	22.83	23.69	23.43	24.18	26.63	25.37	20.58	19.73	359.7
Average Phase level [deg]	-3.62	-2.73	1.492	-4.16	-9.58	-9.62	8.029	-17.4	-7.39	-6.86	-8.48	-1.91	1.818	-1.54	-5.31	-11.1	-4.49
Gradient max level status																	
Amplitude RMS error status																	
Amplitude pulse to pulse stability status																	
Phase RMS error status																	
Phase pulse to pulse stability status																	
Cavity Loaded Q	1.839	1.773	1.844	1.838	3.351	3.191	2.288	2.268	1.769	1.952	1.878	1.850	1.628	1.568	2.281	2.445	
Cavity Loaded Q Status																	
Cavity Detuning	60.82	45.79	68.65	64.79	59.37	13.98	33.29	0.057	99.30	45.58	59.42	71.19	76.07	32.37	31.75	3.876	
Cavity Detuning Status																	

Description

Value status: correct level | exceeds warning threshold | exceeds error threshold | too low level (optional)

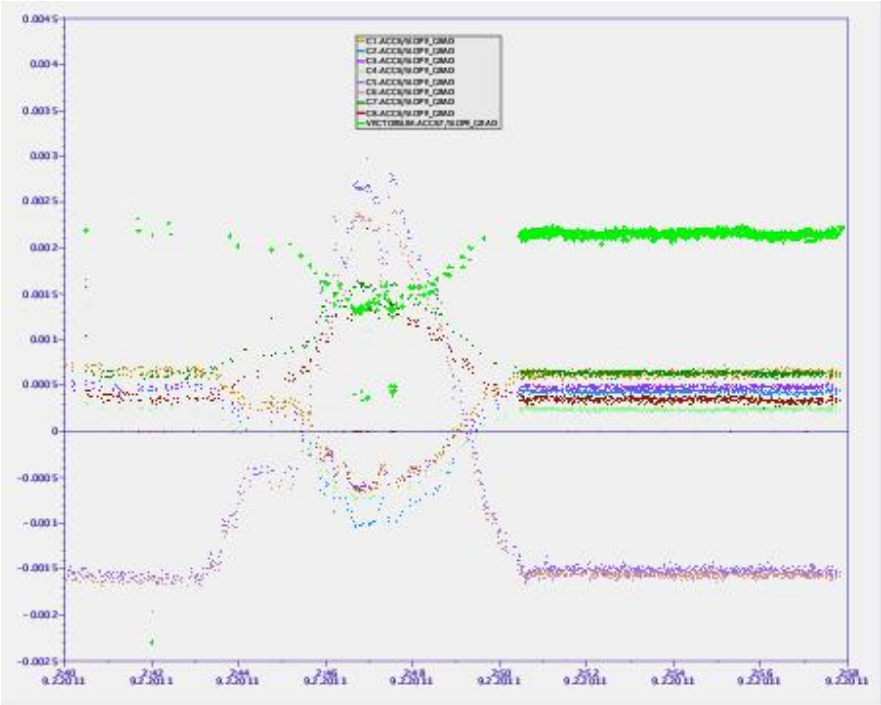
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T02:47:30-00.JPG

09.02.2011 02:57 ttflinac **jddd Screenshot**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T02:57:32-00.ps

09.02.2011 02:58 ttflinac **jddd Screenshot**

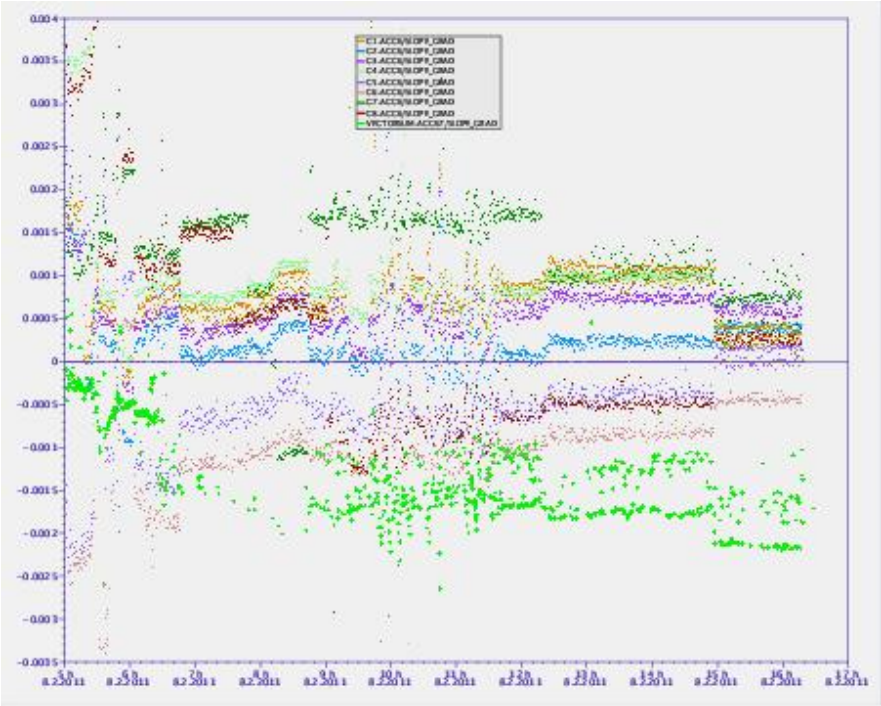


File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T02:58:08-00.ps

09.02.2011	03:12	Carwardine, C. Schmidt, W. Cichalewski	**Did detuning scans**

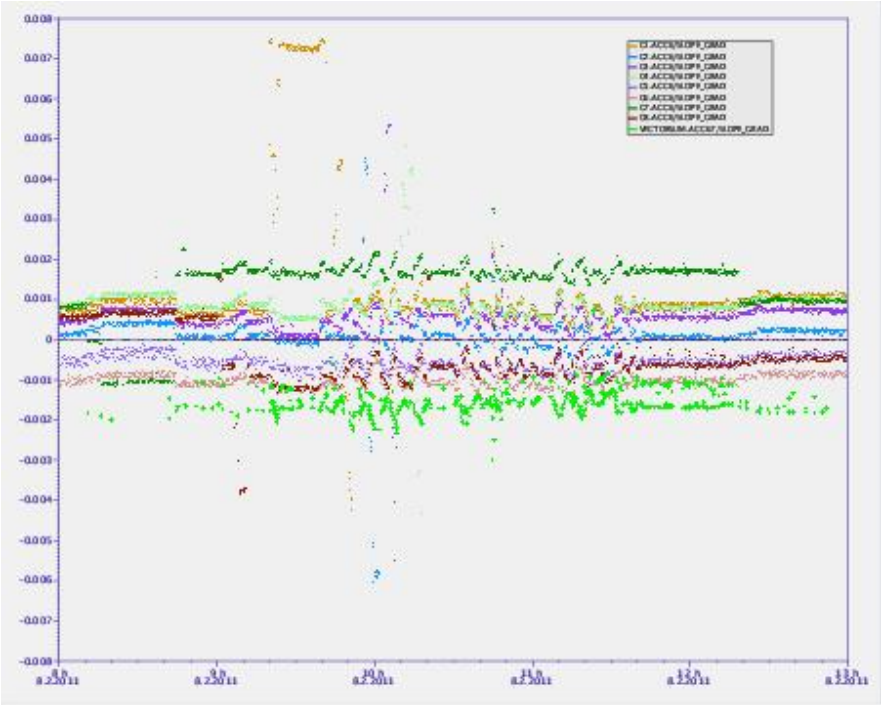
```
Scanning flat-top length from 450 to 75us, and number of pulses from 1200 to 150
```

09.02.2011	03:23	ttflinac	**jddd Screenshot**



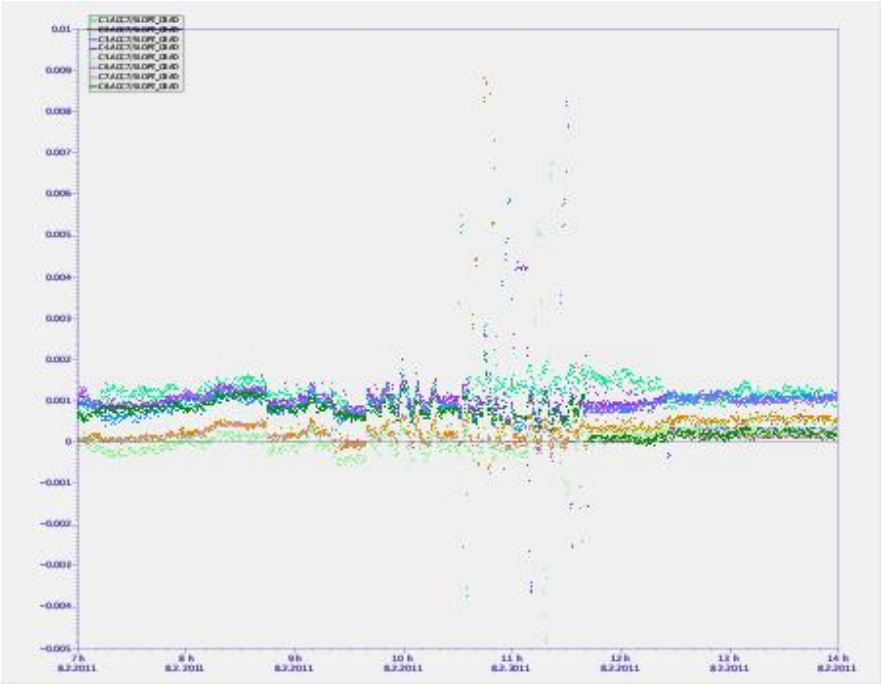
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T03:23:22-00.ps

09.02.2011	03:24	ttflinac	**jddd Screenshot**



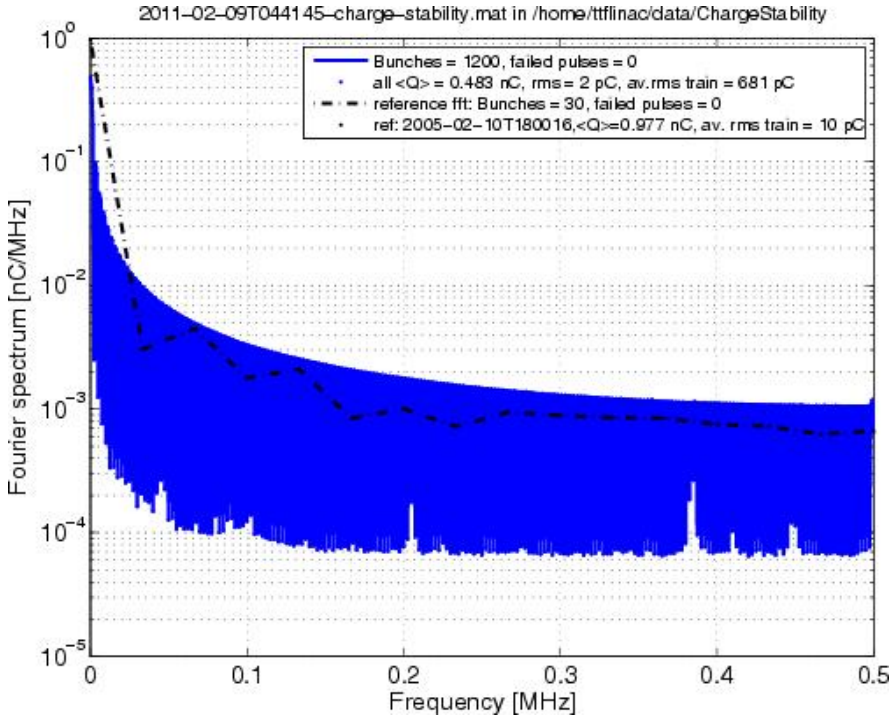
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T03:24:35-00.ps

09.02.2011	03:26	ttflinac	**jddd Screenshot**



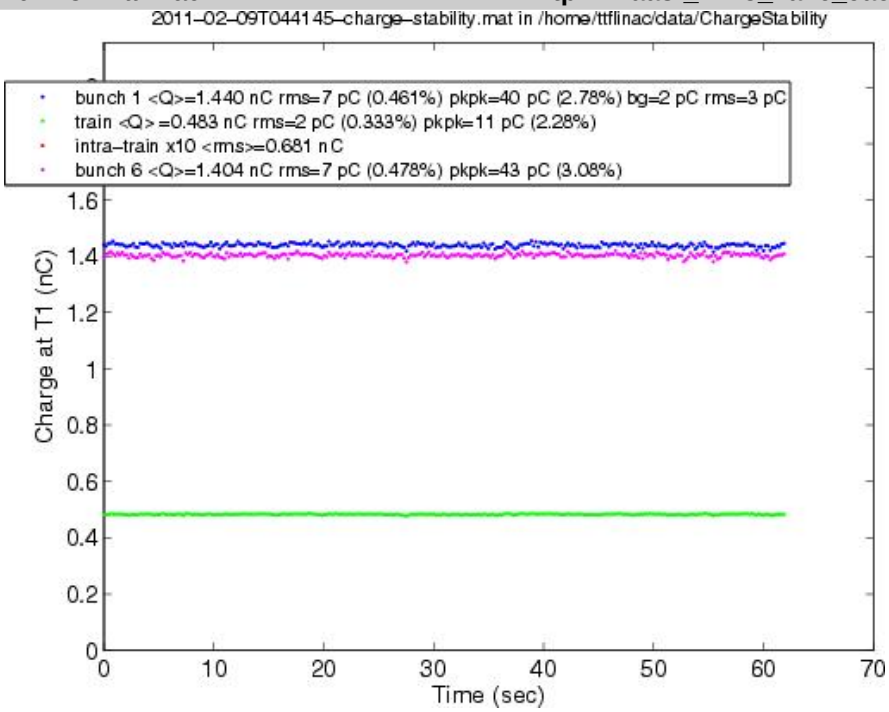
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T03:26:27-00.ps

09.02.2011	04:43	ttflinac	**tpe8be6dcd_9e0a_40be_9eb5_56c38a107553.ps**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T04:43:07-00.ps

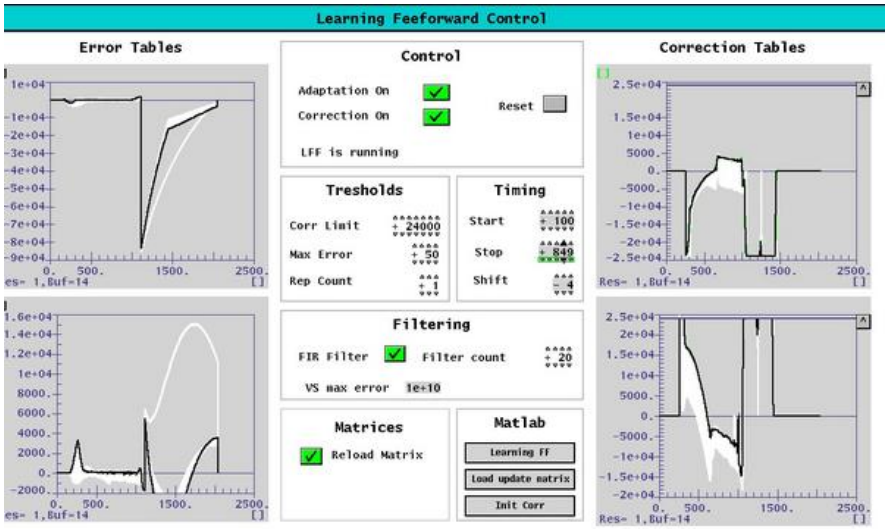
09.02.2011 04:43 ttflinac **tp224faa8f_7125_4a16_9a9e_48789fa792ab.ps**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T04:43:14-00.ps

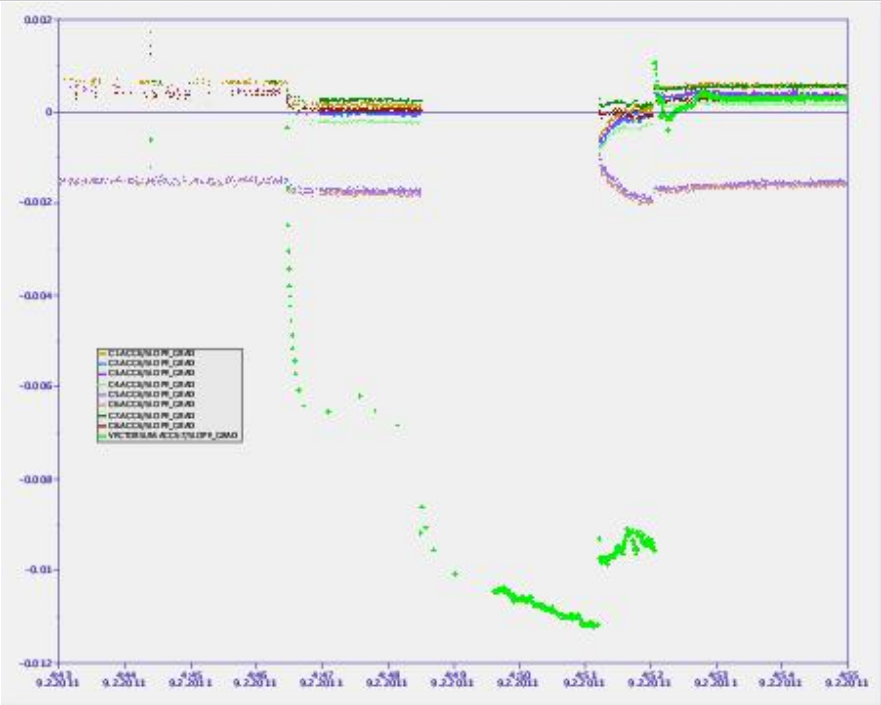
09.02.2011 04:50 CSchmidt **LFF turnes itself off due to large VS error**

Most probably due to the shortening of the RF pulse, the VS error immediately gets high, because the stop time of LFF is not automatically adjusted. This has to be included to the server calculation procedure.
This elogbook entry was sent to following experts:
Schmidt Hensler



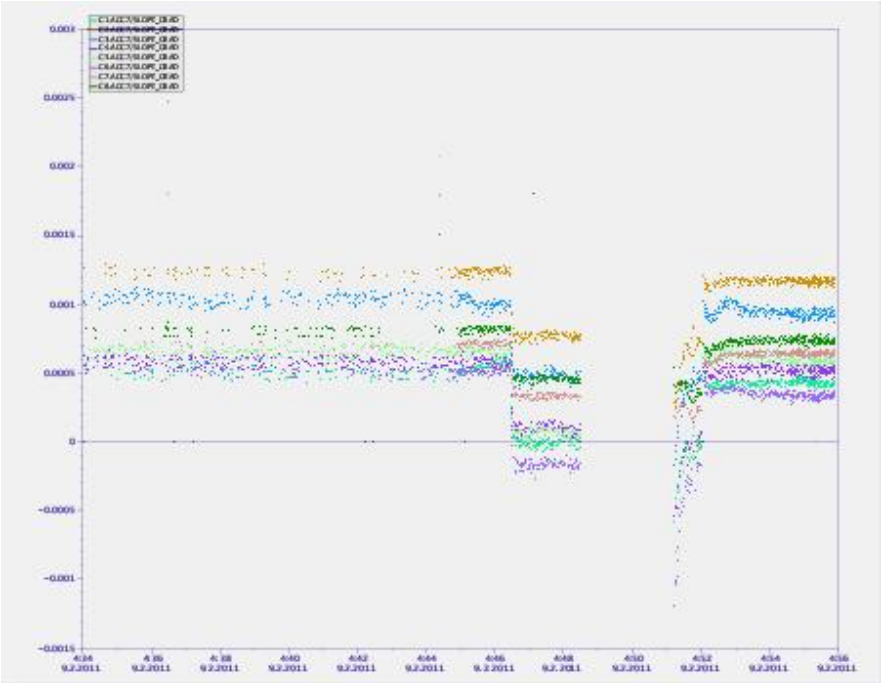
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T04:50:06-00.JPG

09.02.2011	04:58	W. Cichalewski	**ACC6 cavities gradient tilts before and after LFF adjustment**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T04:58:04-00.ps

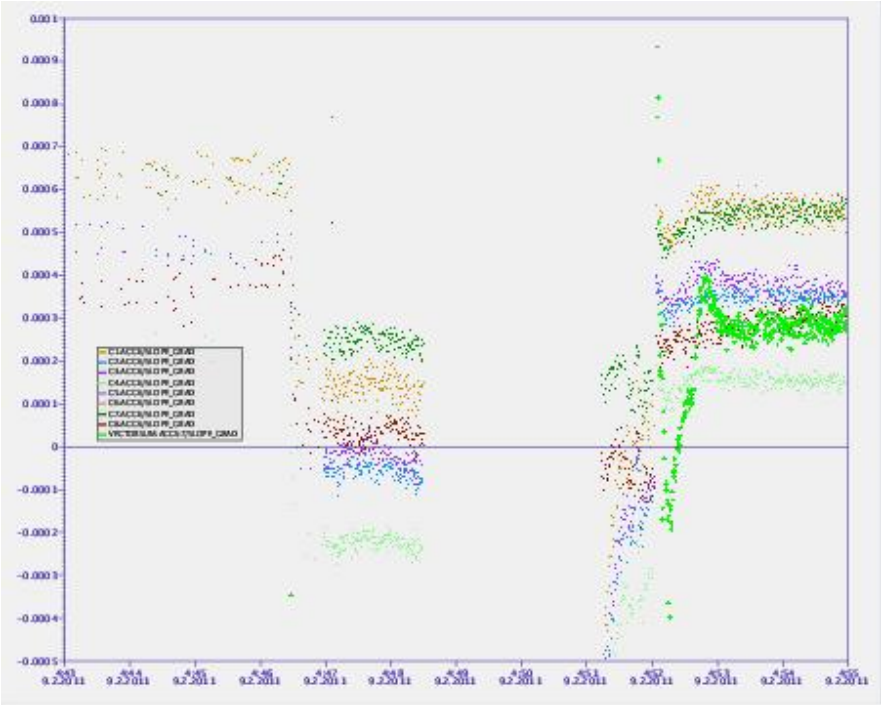
09.02.2011	04:58	ttflinac	**jddd Screenshot**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T04:58:11-00.ps

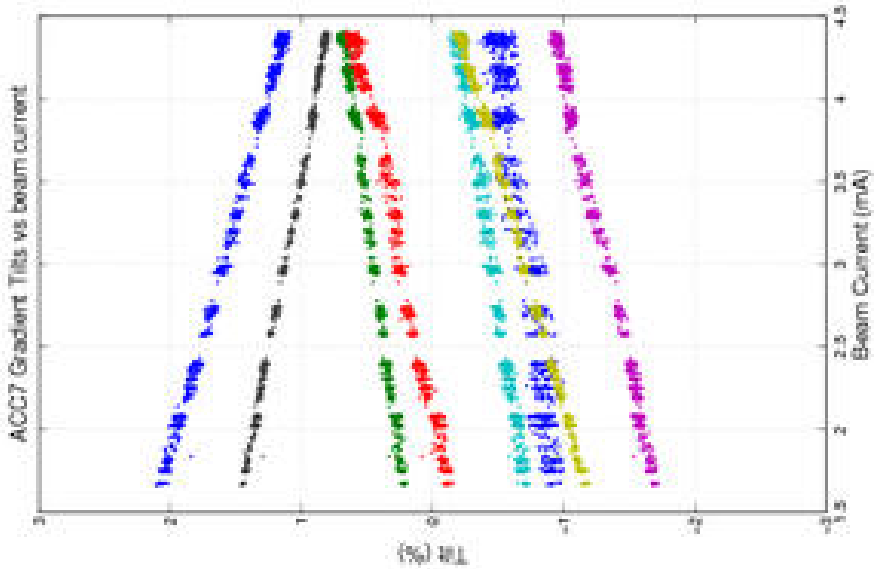
09.02.2011	04:58	ttflinac	**zoom of ACC6 cavities slopes (before and after adjustment)**

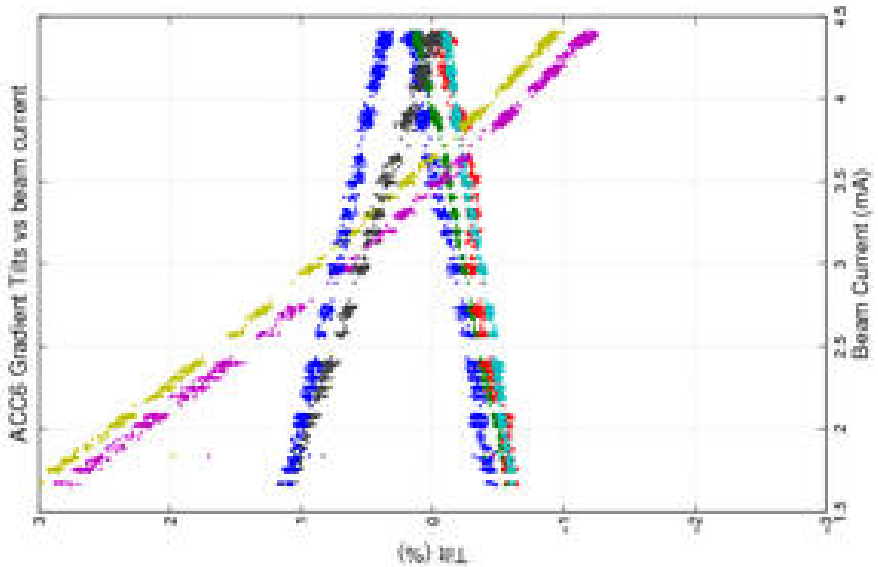
It



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T04:58:55-00.ps

09.02.2011	04:59	Carwardine	**Gradient tilts vs beam current after loaded-Q optimization**



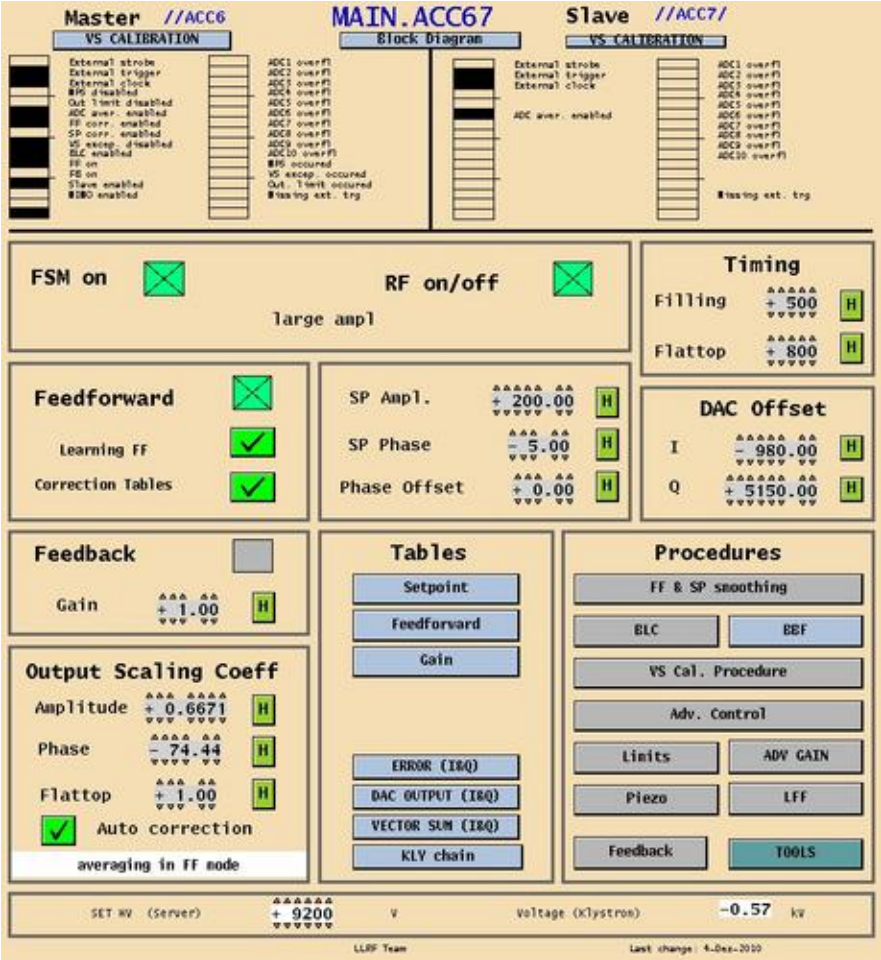


File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T20:04:15-00.ps

09.02.2011	05:58	Carwardine	**We are finished with the 9mA studies program and handing over the machine to ops**

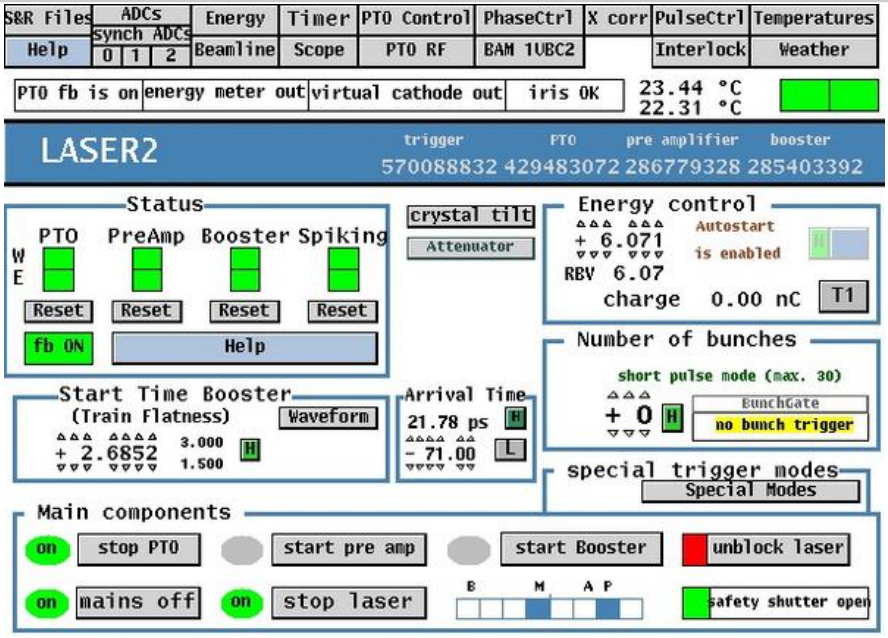
```
Got a couple of hours of operation under stable conditions to evaluate stability of this
configuration.
 First impression: looks good!
Karsten and Christian are returning the machine to the normal condition (returning loaded Qs to
 3e6 nominal values, rf pulse lengths,..)
```

09.02.2011	06:03	CSchmidt	**set back flattop length for ACC67 to 800us, adjusted LFF to equal timing**



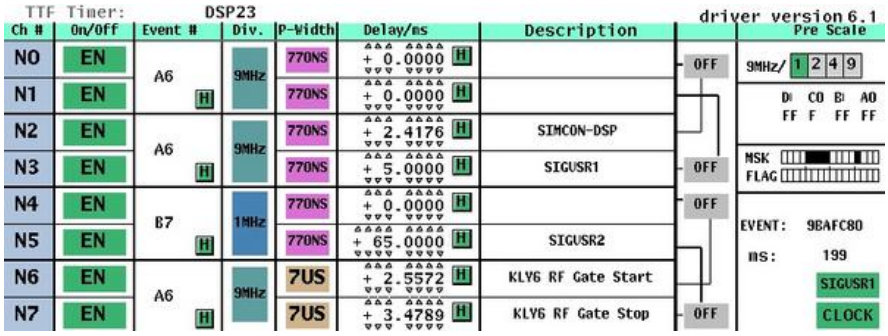
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T06:03:37-00.JPG

09.02.2011 06:03 klose **Laser blocked and amps switched off**



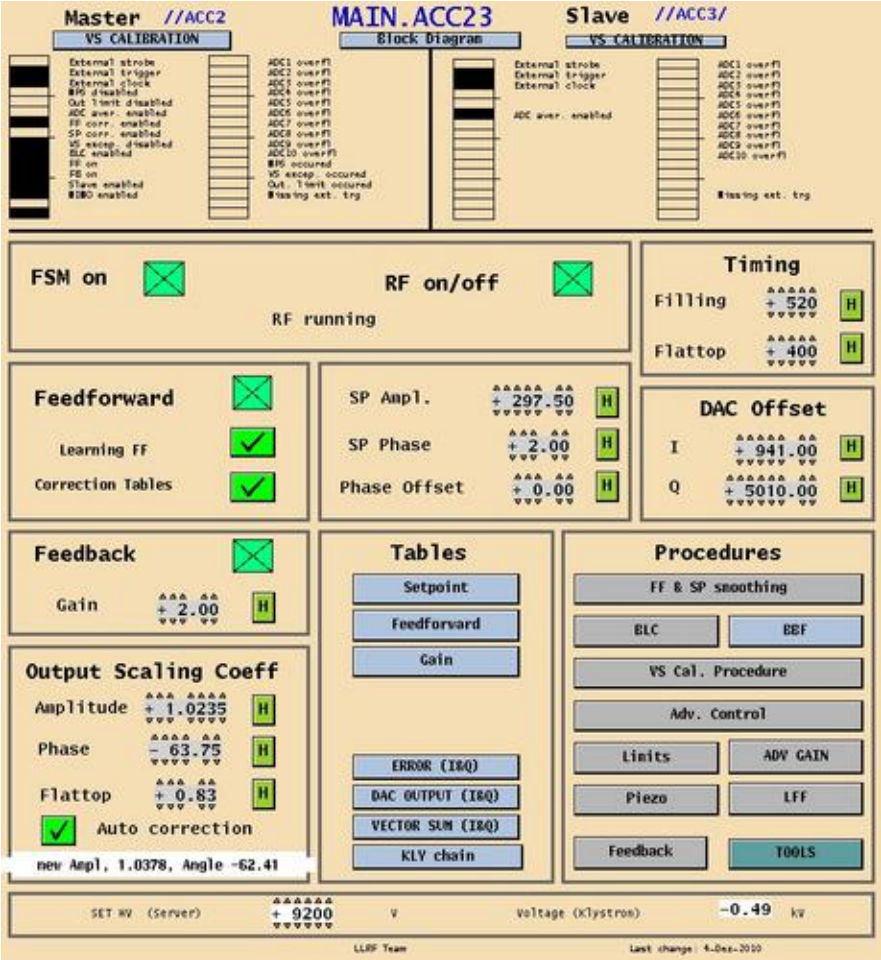
File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T06:03:56-00.JPG

09.02.2011 06:07 CSchmidt **see next plot**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T06:07:10-00.JPG

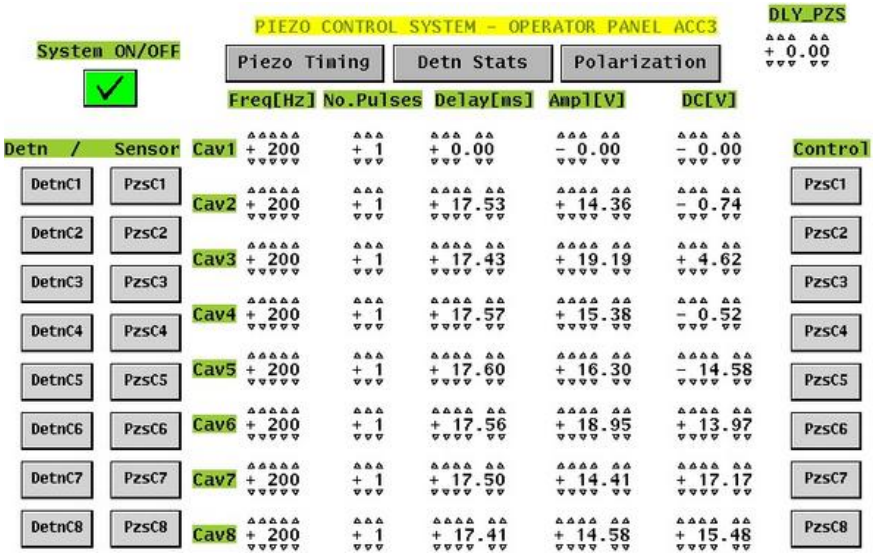
09.02.2011 06:07 CSchmidt **Set back timing ACC23 to 400us flattop length, timing adjusted as well (RF gate stop)**



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T06:07:35-00.JPG

09.02.2011 06:16 CSchmidt **last ACC7 piezo settings before turn off**

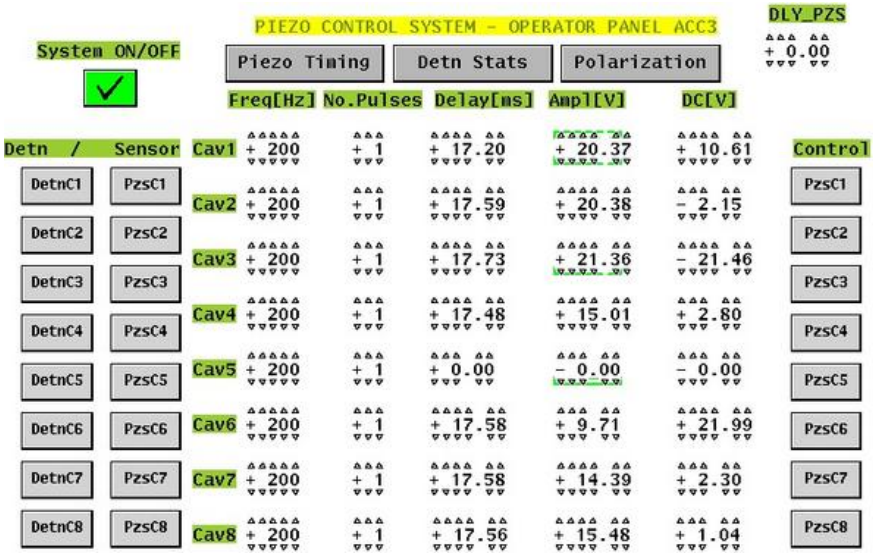
```
I will set back all amplitudes to zero and switch the piezo control off
```



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T06:16:06-00.JPG

09.02.2011 06:17 CSchmidt **Last ACC6 piezo settings before turn off**

I will set back all amplitudes to zero and switch the piezo control off



File: http://ttfinfo.desy.de/TTFelog/data/2011/06/08.02_n/2011-02-09T06:17:25-00.JPG

09.02.2011 07:04 W. Cichalewski, C. Schmidt **ACC67 adjustment after 9 mA run**

We have adjusted Ql and detuning for cavities at SP 200 MV to 3.1e6 and near to 0 Hz (according to the diag. server) .
Before running ACC67 - revision and probably more careful adjustment (for higher energies) will be needed.