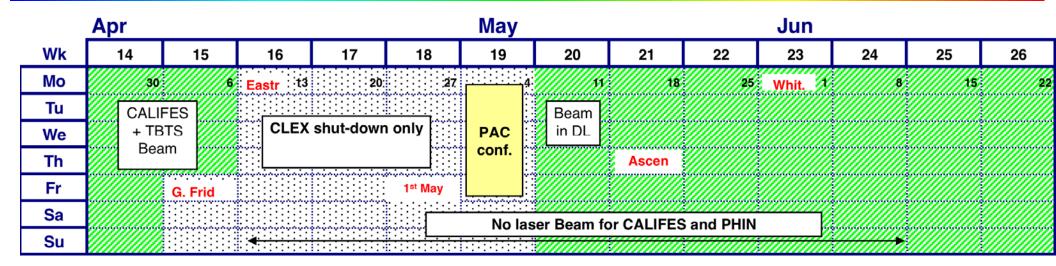
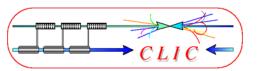


Last meeting's planning





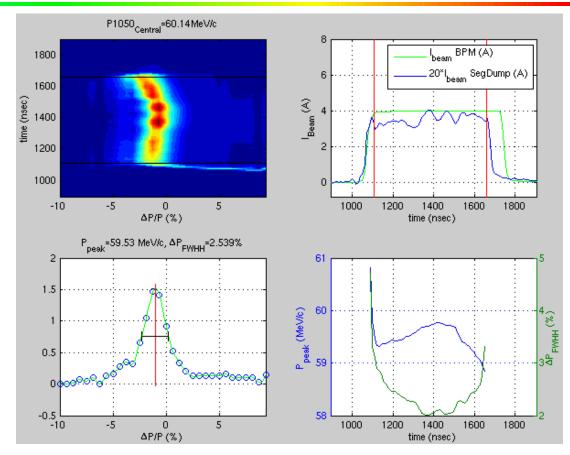
- DL
 - continue optics studies
 - set up 1.5 GHz beam
 - combine
- CR optics studies
- TL2 optics studies (new screens)
- send beam to TBTS/TBL

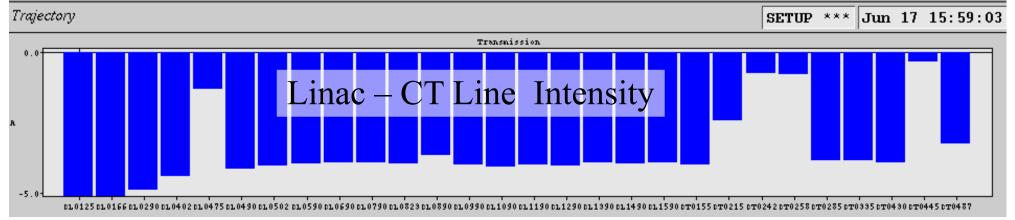


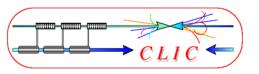
Delay Loop



- 3 GHz beam optics studies: kick measurements
- 1.5 GHz beam setup to DL
 - SHB optimized
 - good transmission to DL
 - not yet combined







Energy spread optimization



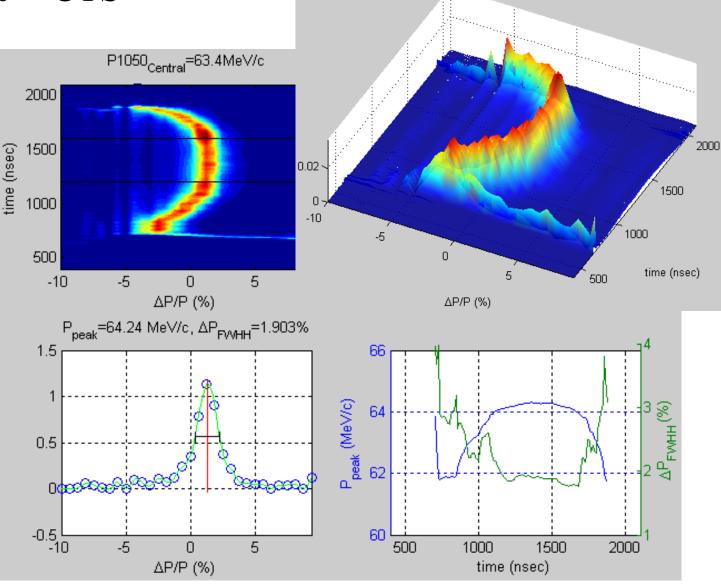
Injector, slit, and RF further optimized by segmented dumps

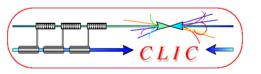
spectrometers 04/10 + CTS

(3 GHz beam)

bunch <2% ΔE/E(FWHM)

Lower losses in CT chicane





Quad scans / MAD model

20.0

17.5

15.0

12.5

10.0

7.5

5.0

2.5

0.0

-2.5

-5.0

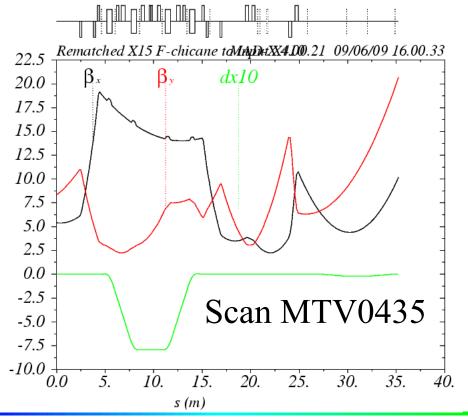
-7.5

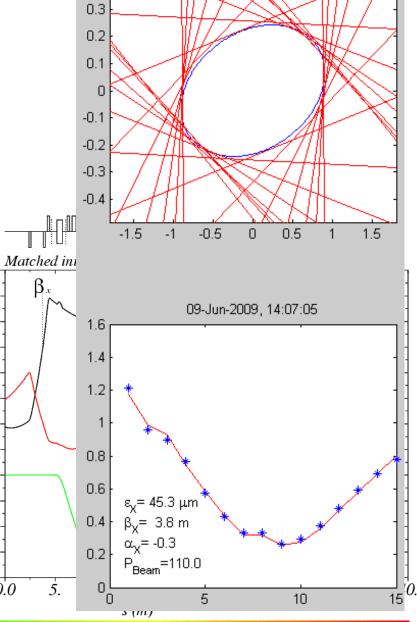
-10.0

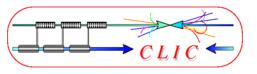
 $\beta_x(m)$, $\beta_y(m)$, dxI0



- discrepancy between scans on CT.MTV0435 and 0550
- scan very sensitive to small beam sizes
- careful scans give very good agreement between the MTVs





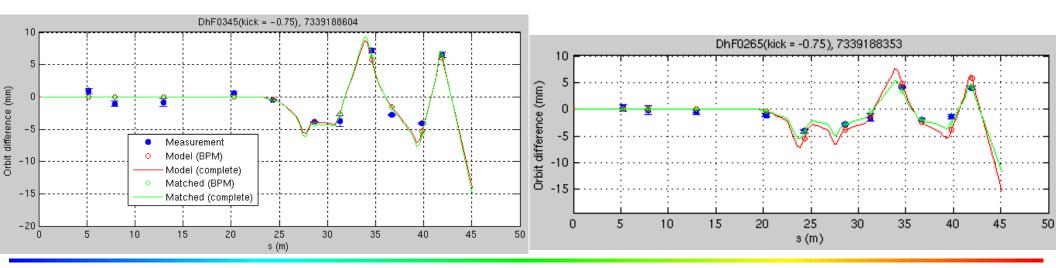


MAD model

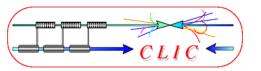


- response matrix measurements (single corrector kicks) analyzed
- disagreements in vertical plane in TL1
- analysis still being completed

- TL2 measurements agree well (especially in 2nd part of the line)
- 1st part to be re-measured



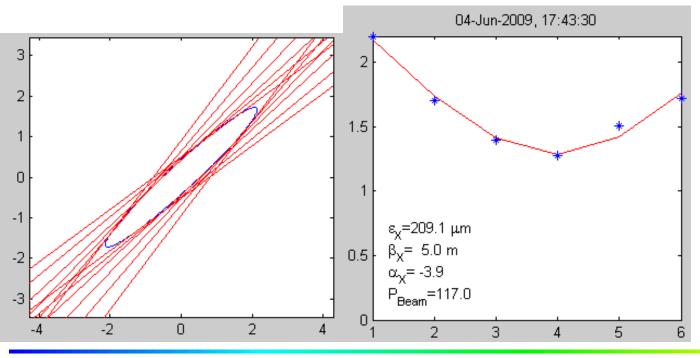
Frank Tecker CTF3 Committee 18.6.2009

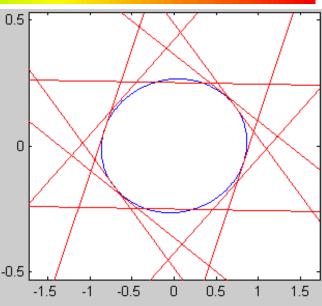


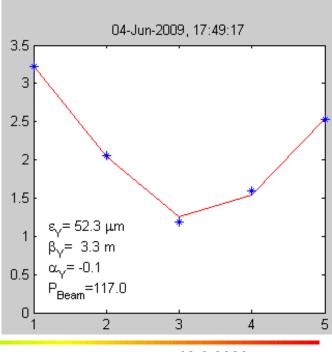
TL2 Line

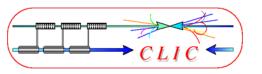


- Beam established until CLEX wall (old optics)
- had teething problems with the BPM system
- works well now
- Kick measurements
- Quad scans in MTV screen
- Rematching not conclusive (BPMs down)





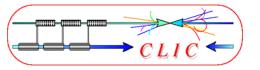




Various



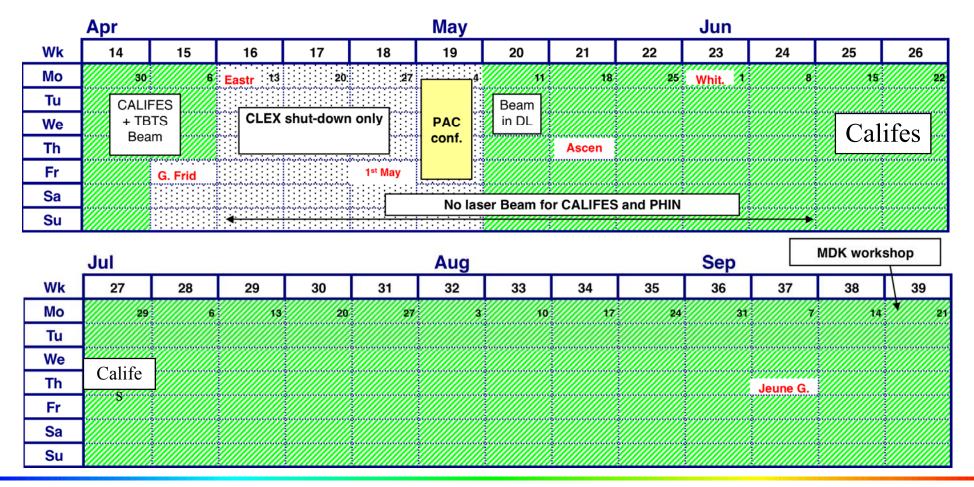
- MKS03 had another HV diode broken that needed replacement lost week-end for PETS 30 GHz beam repair took 1½ days potential problem with spares, PO studies alternative
- 30 GHz operation on week-ends with mixed success one more good week-end needed
- Laser for CALIFES optimized (=> Massimo)
- CALIFES operation restarted (=> Wilfrid)
- today klystron tube of MKS11 broke (1-2 days down time)
- Reference sheets for RF and BPM signals extremely useful to reproduce settings!



Schedule



- installation of acc. structure in CLEX after mid-Sept (1-2 weeks)
- MTV installation in TBTS
- TBL installation





2009 CTF3 experimental program

Goals

• 30 GHz: One structure test (TM02) + breakdown studies

PHIN Beam characterization, reach ½ of nominal bunch charge?

CALIFES Beam characterization, beam to TBTS (most likely still reduced current)

Delay Loop Back in operation, retrieve combination x 2 (~ 7 A)

Combiner Ring Final optics checks, isochronicity, put together with DL (> 24 A)

TL2 Complete commissioning (tail clipper), bunch length control, > 20 A to users

• TBTS PETS to nominal power/pulse length (15 A, recirculation)

Beam commissioning of probe beam line

First accelerating structure tests (one structure? – CLIC G)

Two-beam studies (deceleration/acceleration), initial breakdown kicks studies

TBL PETS validation (100 MW, need > 20 A), beam line studies (2-3 PETS ?)

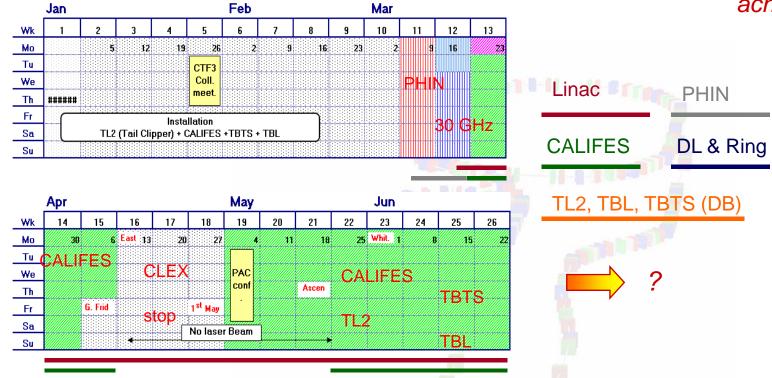
Others CDR studies in CRM, beam dynamics benchmarking, stability studies, control

of beam losses...



2009 CTF3 experimental program

What could we reasonably achieve before summer?



Delay Loop

C. Ring

30 GHz:

PHIN

CALIFES

Delay Loop

Combiner Ring

TL2

 TBTS Beam commissioning of probe beam line

One structure test (TM02) + breakdown studies First tests, (reach ½ of nominal bunch charge)

Beam characterization, beam to TBTS

Back in operation, retrieve combination x 2 (~ 7 A)

Final optics checks, isochronicity,

Complete commissioning (tail clipper)

PETS to nominal power/pulse length (15 A, recirculation)

Two-beam studies (deceleration/acceleration), initial breakdown kicks studies

TBL

beam line studies (2-3 PETS ?)

some more time later

need 2nd run later

reduced current, full characterization later

will be difficult ...

put together with DL (> 24 A) most likely later!

bunch length control, 20 A to users

First accelerating structure tests

PETS validation (100 MW, need > 20 A),

Others

CDR studies in CRM, beam dynamics benchmarking, stability studies, control of beam losses...