



# CTF3 commissioning status & schedule update

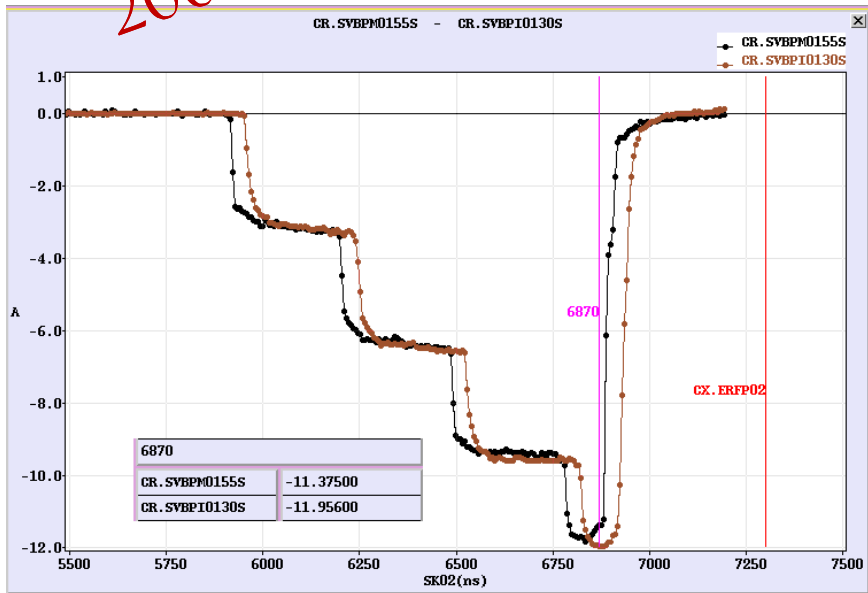
## Outline

- Activities & achievements:
  - Successful 4x recombination
  - More than 5 A sent through the PETS
  - Time to bunch length experiments
- Setbacks:
  - Lapp BPM
  - Phase of MKS02
  - Gun

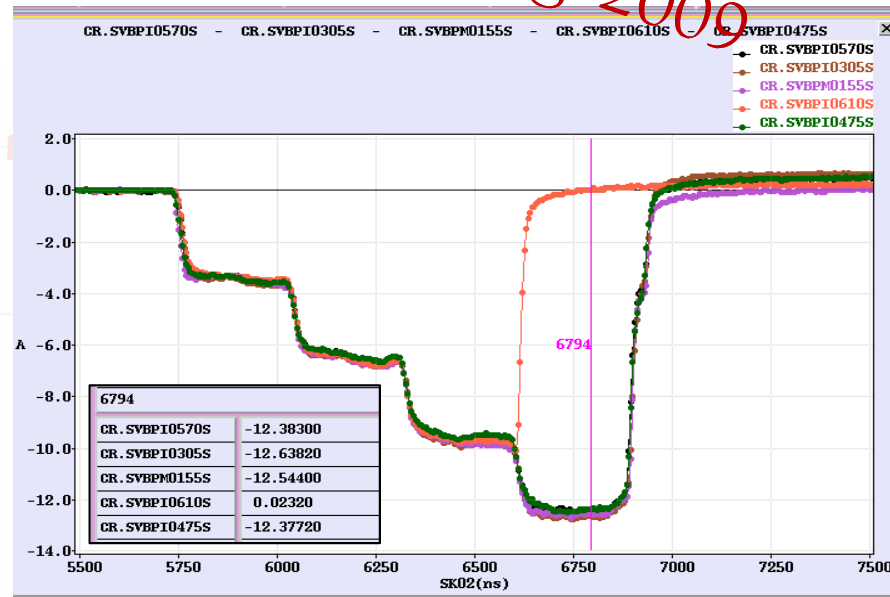




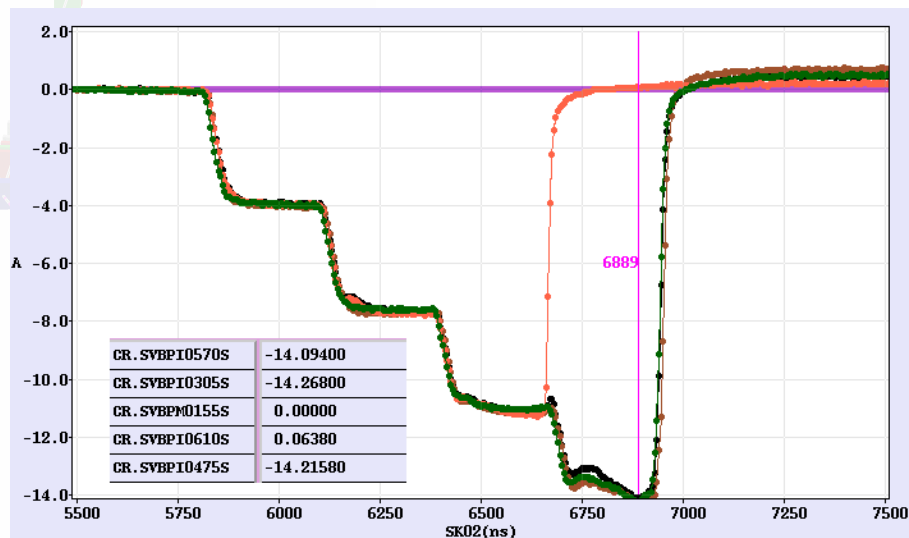
2008



Aug. 2009

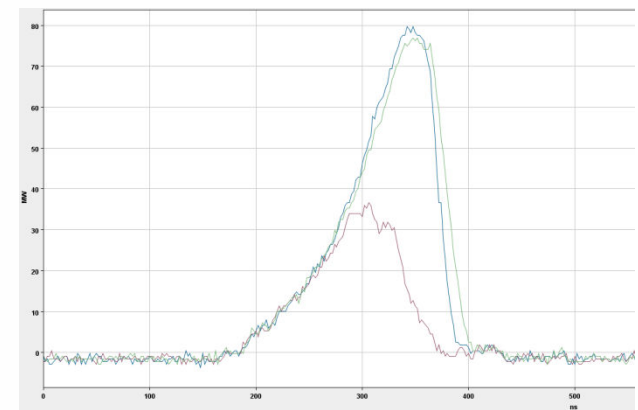
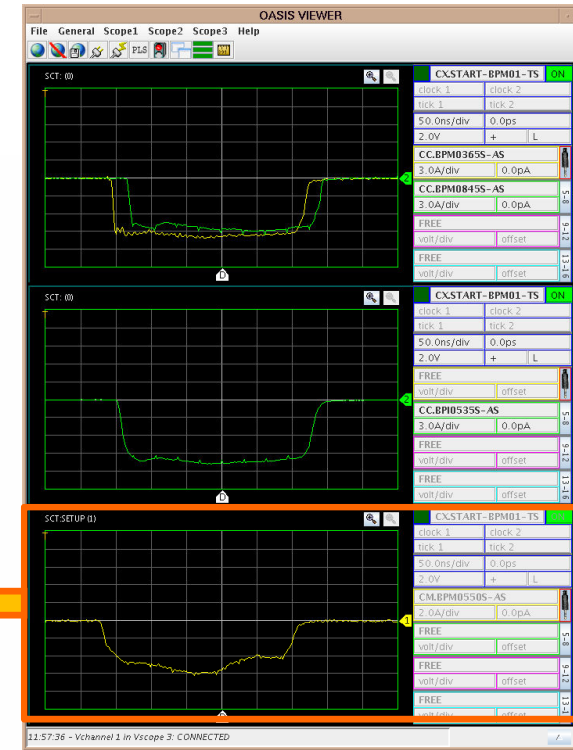
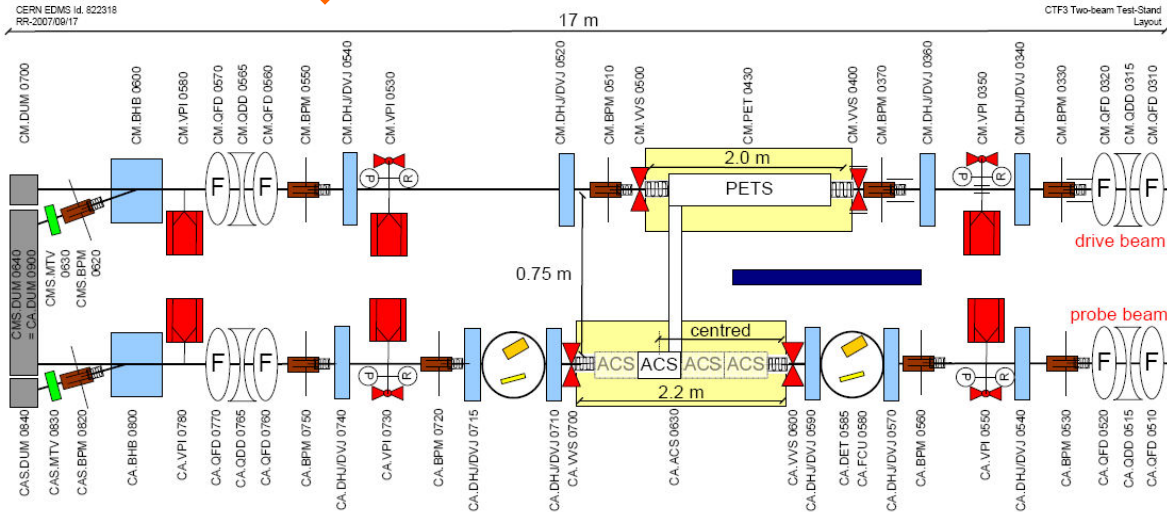


13 A 280 ns recombined in the combiner ring





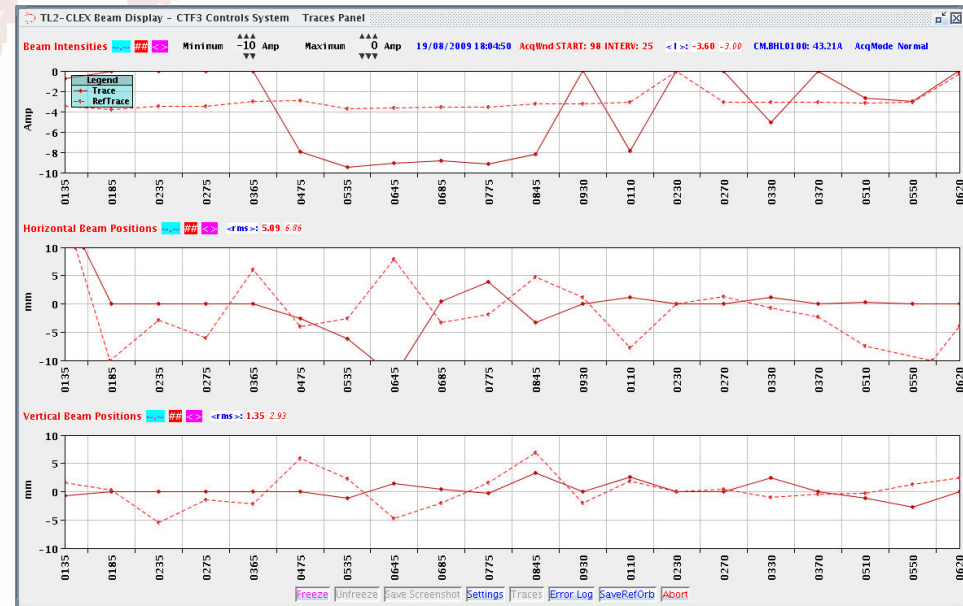
## About 6 A after the PETS





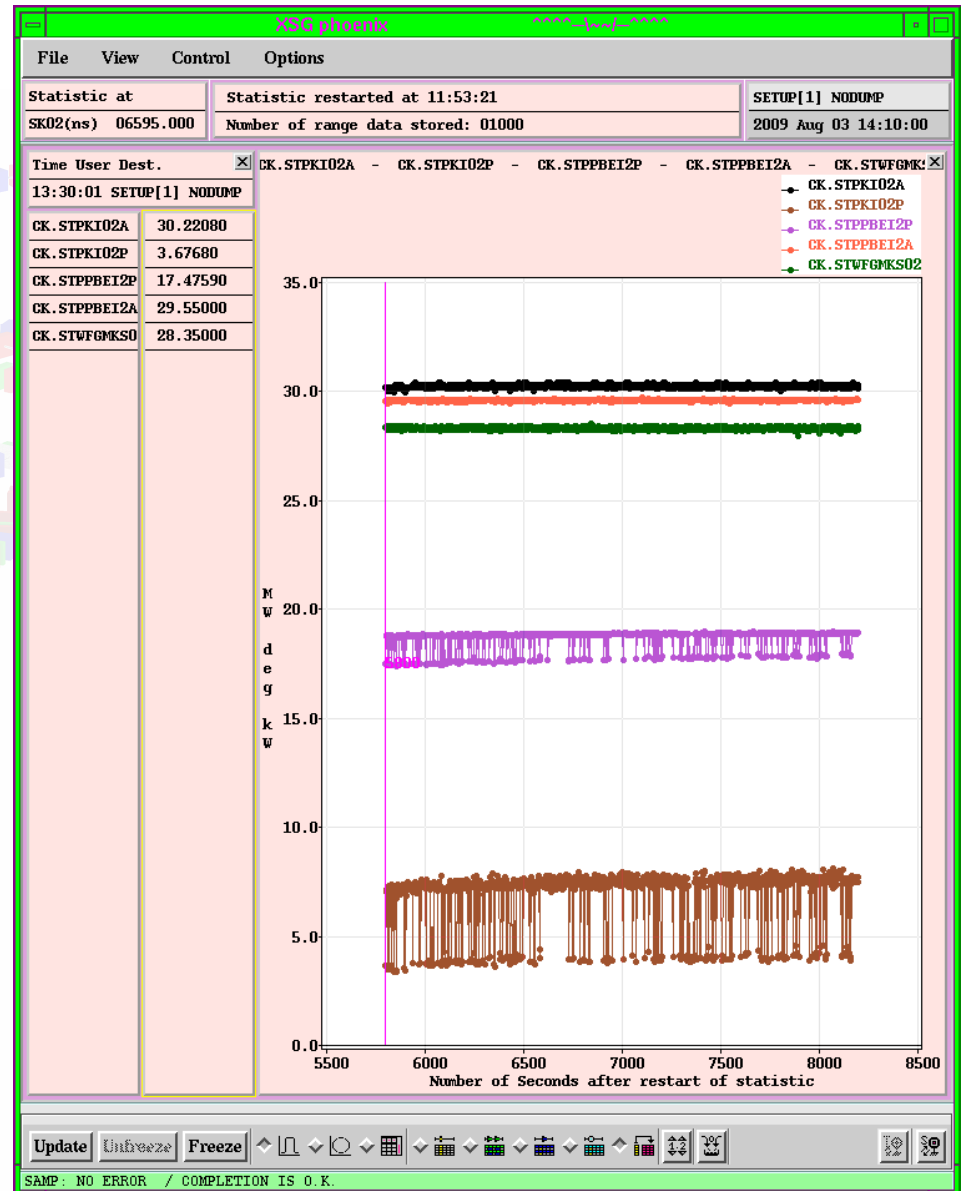
## Other issues:

- Lapp BPM:
  - Frequent interventions are needed (also accesses in the machine)
  - Almost constant contact with the LAPP people – local help from Franck Guillot (CERN)
  - Annoying system (necessary to readjust all the timings one by one after each frequent reset)
  - At the present we are blind for the majority of the line
- Phase of MKS02 jumps of some degrees:
  - Monitoring system installed
  - At the moment the problem disappeared
- Gun instability:
  - Problem solved (for the moment...)





- MKS02 phase jumps between 2 states





## 2009 CTF3 experimental program

## Goals

- 30 GHz: One structure test (TM02) + breakdown studies
- PHIN Beam characterization, reach  $\frac{1}{2}$  of nominal bunch charge ?
- CALIFES Beam characterization, beam to TBTS (most likely still reduced current)
- Delay Loop Back in operation, retrieve combination x 2 ( $\sim 7$  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...



	Jul					Aug					Sep			
Wk	27	28	29	30	31	32	33	34	35	36	37	38	39	
Mo	29	6	13	20	27	3	10	17	24	31	7	14	21	
Tu														
We								Today						
Th											Jeune G.			
Fr														
Sa														
Su														

	Oct			Nov					Dec				
Wk	40	41	42	43	44	45	46	47	48	49	50	51	52
Mo	28	5		7	14	21	28	4	11	30	7	14	21
Tu													
We			CLIC work shop										
Th													
Fr													
Sa													
Su													

All accelerators stop

CTF3 stop

CTF3 SHUTDOWN

 Installations in TBTS and TBL lines  
 Optional week.

### Programme (updated end July)

- wk 32+33:
- 1 day (Mo) CRM line or bunch length measurements
  - 2 days (Tu+We) DL set-up with 2x 1.5GHz TWTs
  - 2 days (Th+Fr) CR set-up for beam to TBTS (3x recombination), when stable beam, it will be given to TBTS for measurements

- wk 34:
- 1 day (Mo) bunch length measurements
  - 4 days (Tu-Fr) CR beam to TBTS

- wk 35+36+37
- DL+CR optics
  - CALIFES to TBTS, for commissioning probe beam line
  - 1 day CR to TBL

- wk 38-40
- probably stop for installation work in CLEX: TBTS accelerating structure, TBL continuation