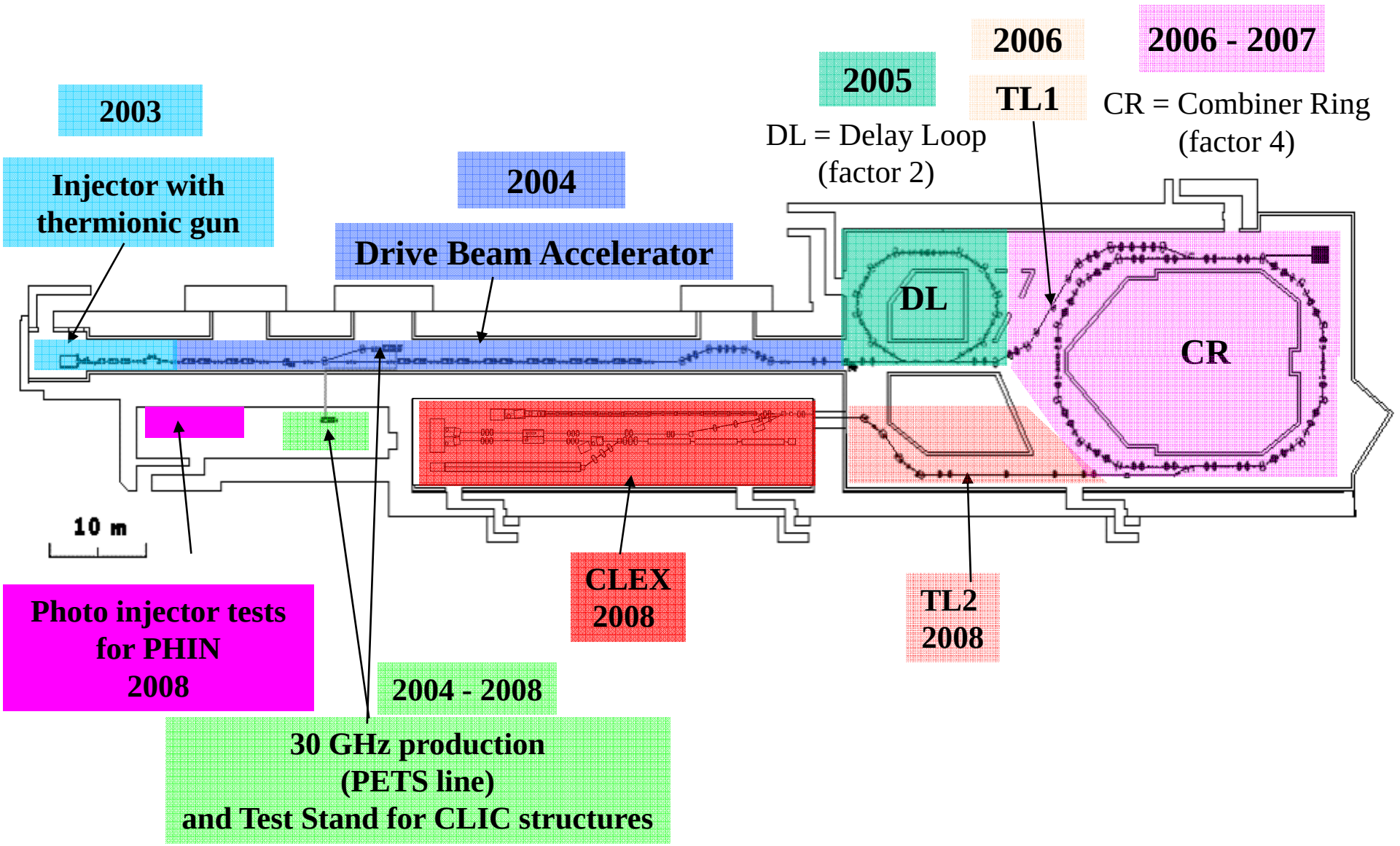
Update on CTF3 installation and planning

L. Rinolfi

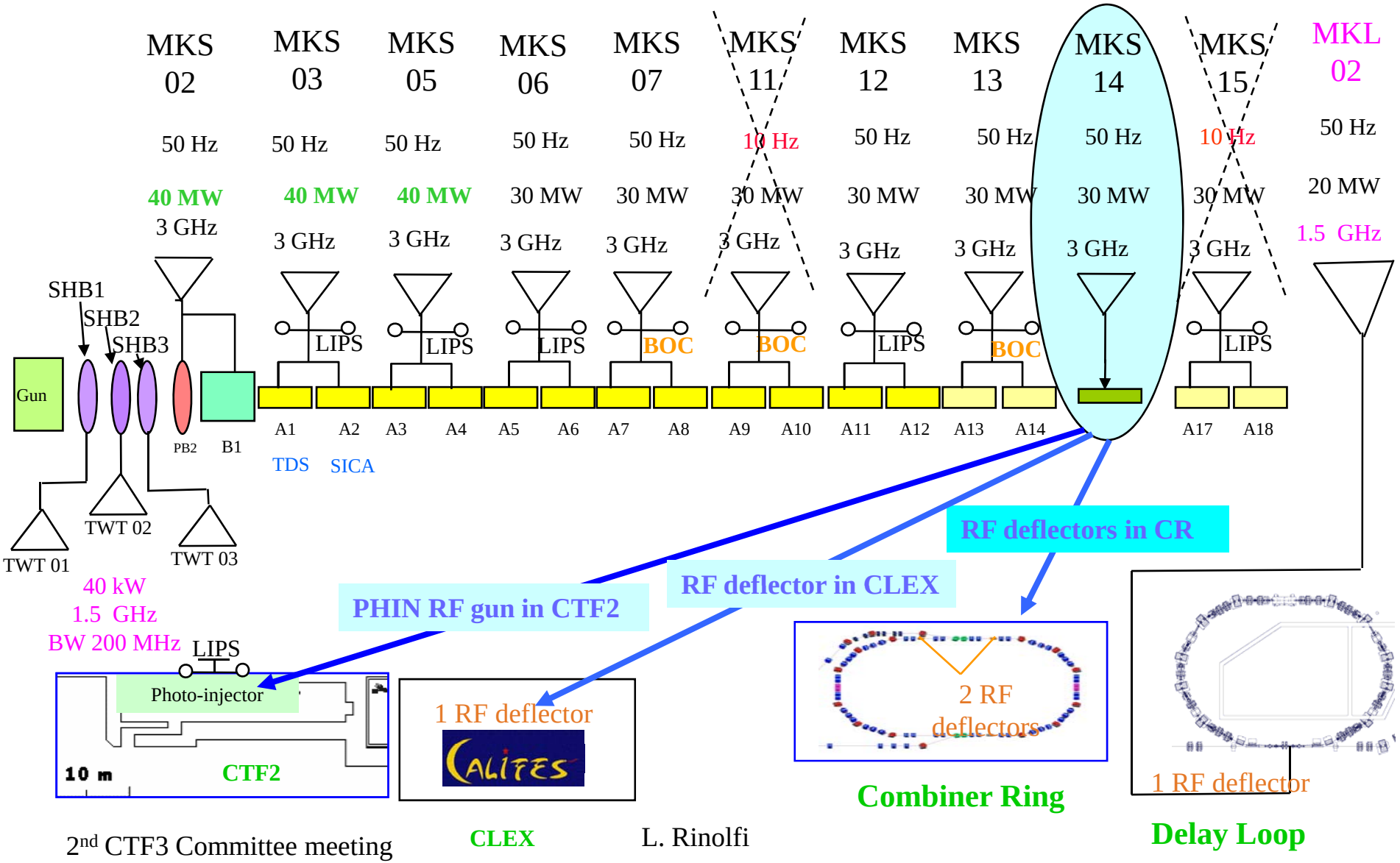
Brief history of the CTF3 installation



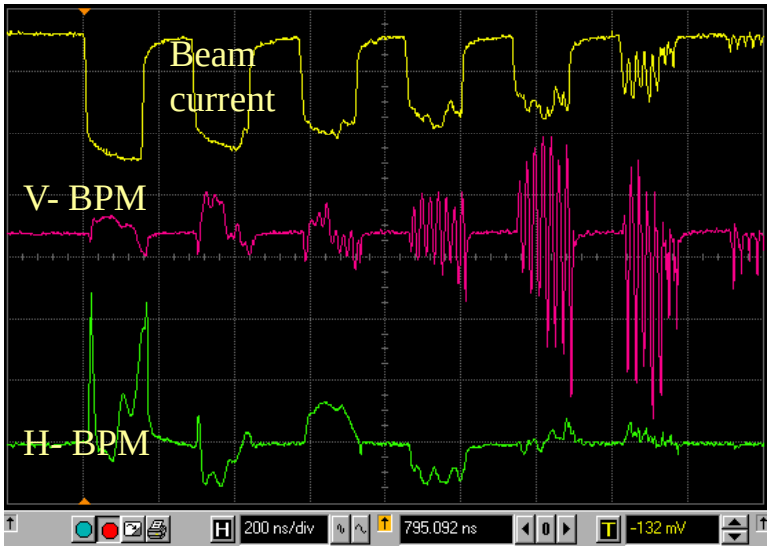
Conclusion of the 1st meeting

- Installation into the Injector, Drive Beam Linac, Delay Loop, Transfer Line TL1 and Combiner Ring is completed.
- Installation of the Transfer Line TL2 will be finished and connected to the Combiner Ring for the end of June 2008.
- Installation into CLEX (Phase 0) will be finished for the end of June 2008.
- Installation into CTF2 (for PHIN) will be finished for the end of August 2008. Tests with beam foreseen for September 2008 during the installation of the Tail Clipper into the TL2 line.

Klystrons


MKS 02
MKS 03
MKS 05
MKS 06
MKS 07
MKS 11
MKS 12
MKS 13
MKS 14
MKS 15
MKL 02
50 Hz
10 Hz
40 MW
30 MW
20 MW
3 GHz
1.5 GHz
SHB1
SHB2
SHB3
Gun
PB2
B1
LIPS
BOC
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A17
A18
TDS
SICA
TWT 01
TWT 02
TWT 03
40 kW
1.5 GHz
BW 200 MHz
PHIN RF gun in CTF2
RF deflector in CLEX
RF deflectors in CR
Photo-injector
10 m
CTF2
1 RF deflector
CLEX
2 RF deflectors
Combiner Ring
1 RF deflector
Delay Loop

Combiner Ring



RF deflectors CR. HDS 0150 & CR.HDS 1050

In order to cure the vertical instabilities, two new (3 GHz) RF deflectors (in Al) have been designed by LNF (Frascati) and are under construction.

They are foreseen:

- to be at CERN end of June,
- to be tested with RF power beginning of July,
- to be installed in the machine later on

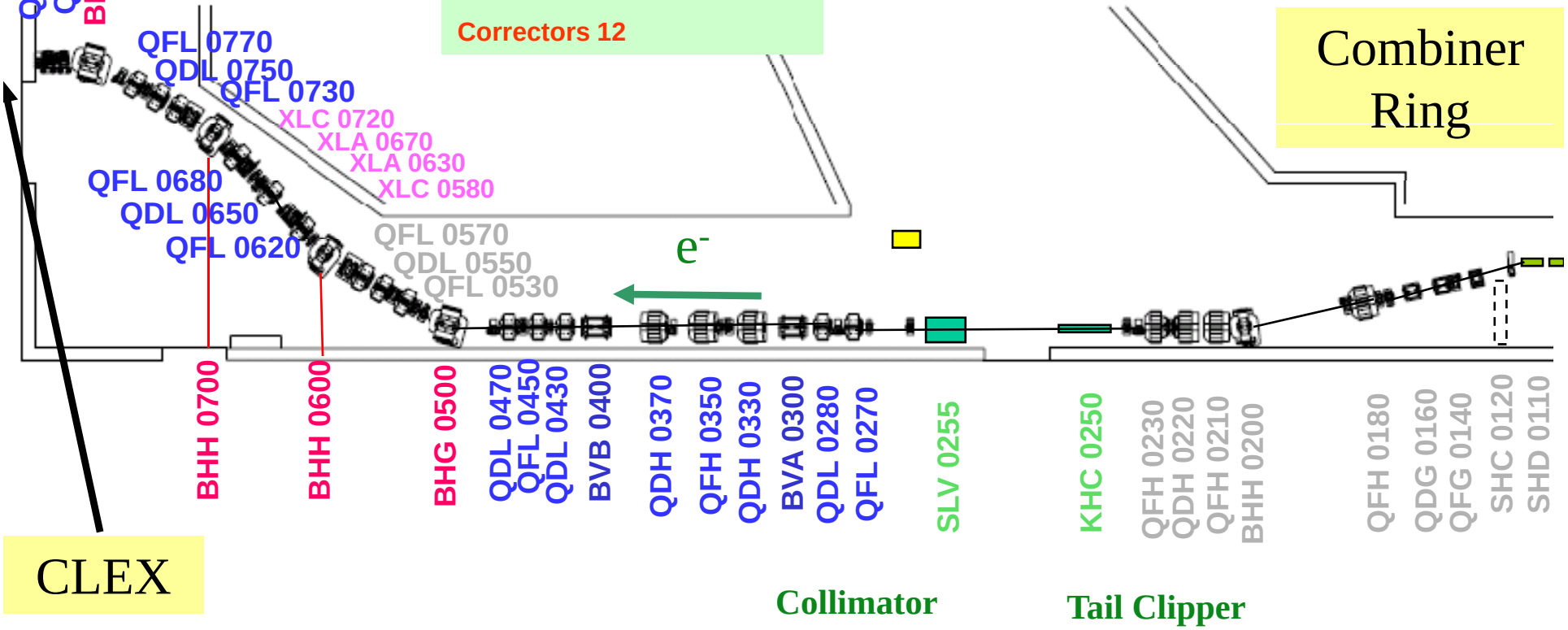
See A. Ghigo talk

Transfer Line TL2

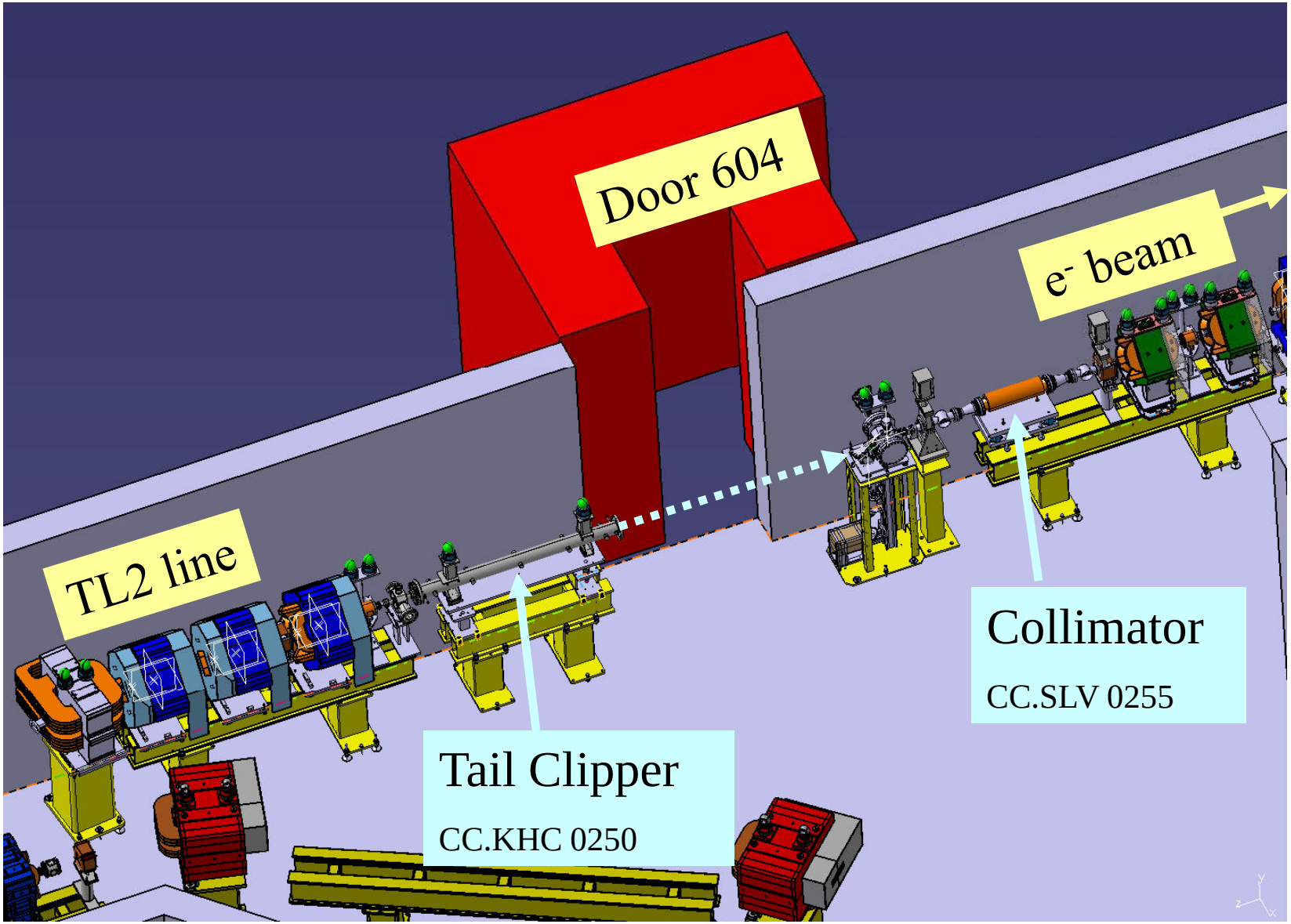
Vacuum	
VPI	9
VVS	2

Magnets	
Dipoles (Horizontal)	5
Dipoles (Vertical)	2
Quadrupoles	27
Sextupoles	4
Correctors	12

Instrumentation			
BPM	6	WCM	1
BPI	6	MTV	1
BPR	1		

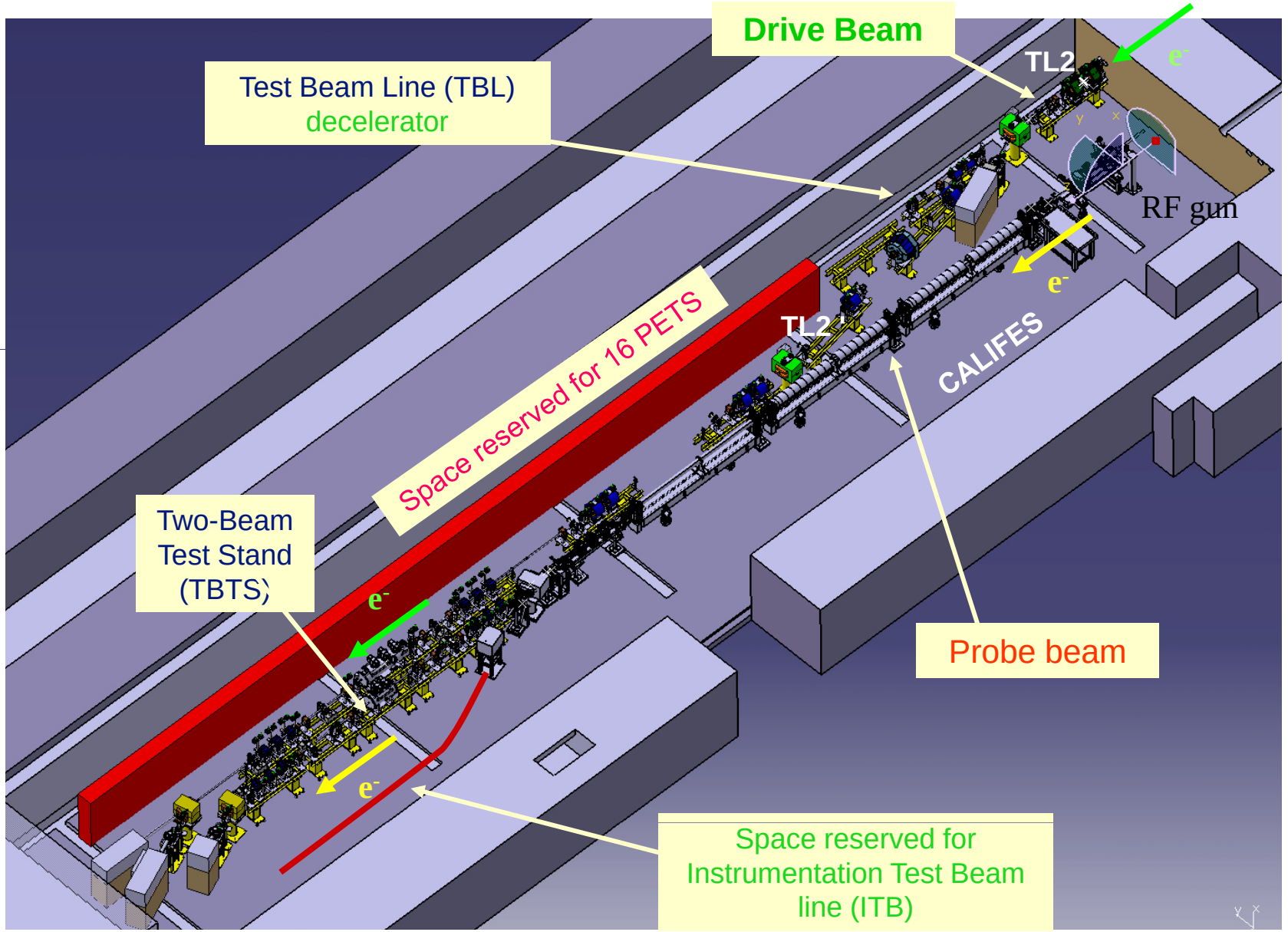


Tail clipper & Collimator



CTF3 - DL - CR - TL2 Schedule

CLEX Layout


Drive Beam
Test Beam Line (TBL)
decelerator
TL2
e-
RF gun
e-
TL2'
CALIFES
Space reserved for 16 PETS
Two-Beam
Test Stand
(TBTS)
e-
e-
Probe beam
Space reserved for
Instrumentation Test Beam
line (ITB)

CLEX status

1) TL2, TL2', TBTS, TBL

- Nothing new regarding installation compared to the previous CTF3 meeting (18th April 2008)
- Waiting for alignment from CERN surveyors (this week)
- Vacuum chambers remains to be installed

2) CALIFES

- Put all the line at the atmospheric pressure
- Waiting for alignment from CERN surveyors (this week)
- Cabling all dipolar correctors by CEA (this week)
- RF wave guides still foreseen to be at CERN mid-June
- Finish the cabling of the Vacuum Control
- Bake-out of the RF gun and laser chamber downstream

See F. Orsini talk

CLEX hardware tests

1) Tests of power supplies (81 in total)

- 30 power supplies tested and operational
- 6 power supplies not tested (ripple, water leak, not connected to magnets)
- 45 power supplies for correctors not yet arrived at CERN
- Remote control not yet OK for several devices

2) Polarity tests

- Done on all standard magnets
- Found 10 wrong polarities
- All dipolar correctors remain to be done

CTF3 - CLEX Schedule 2008

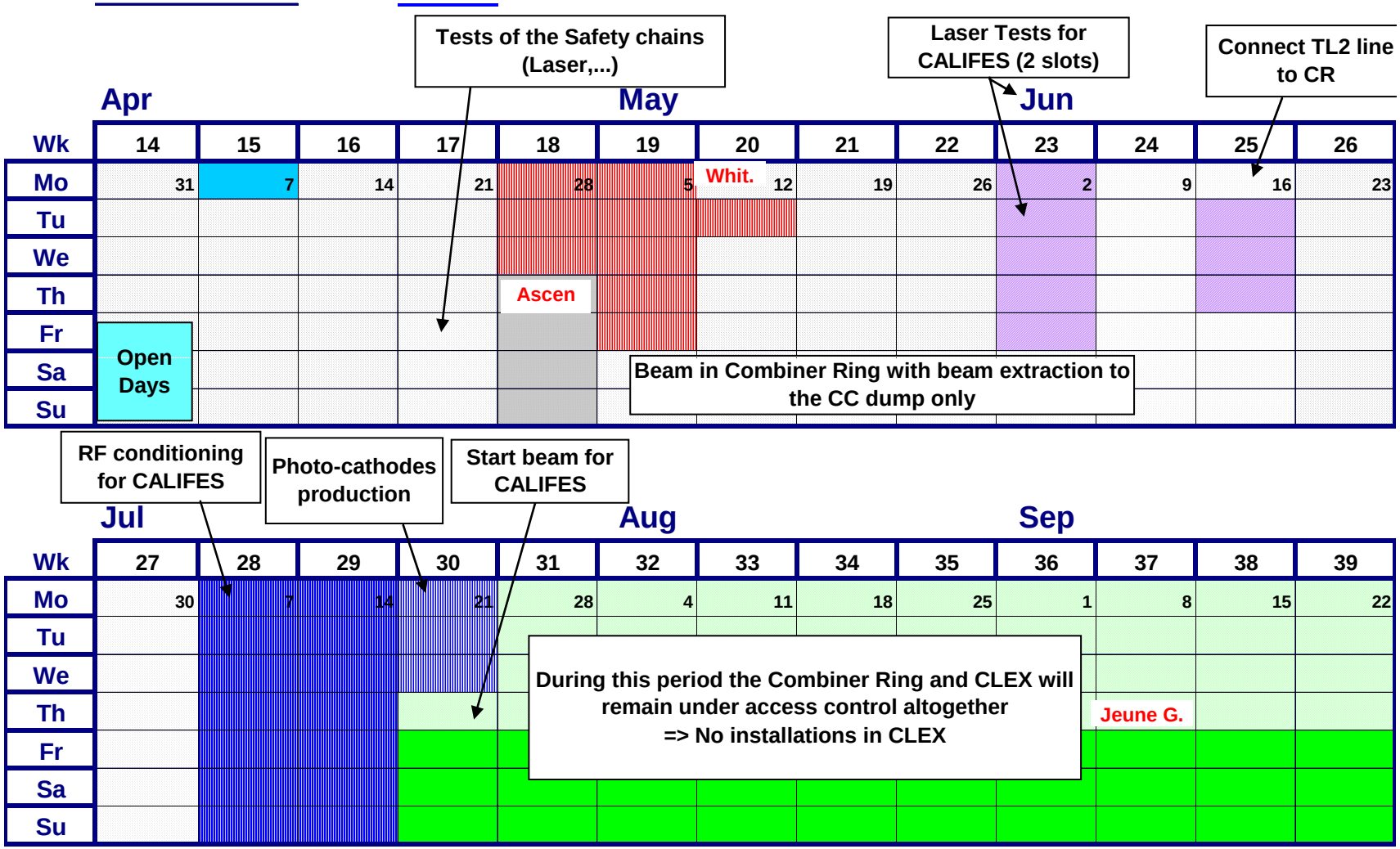
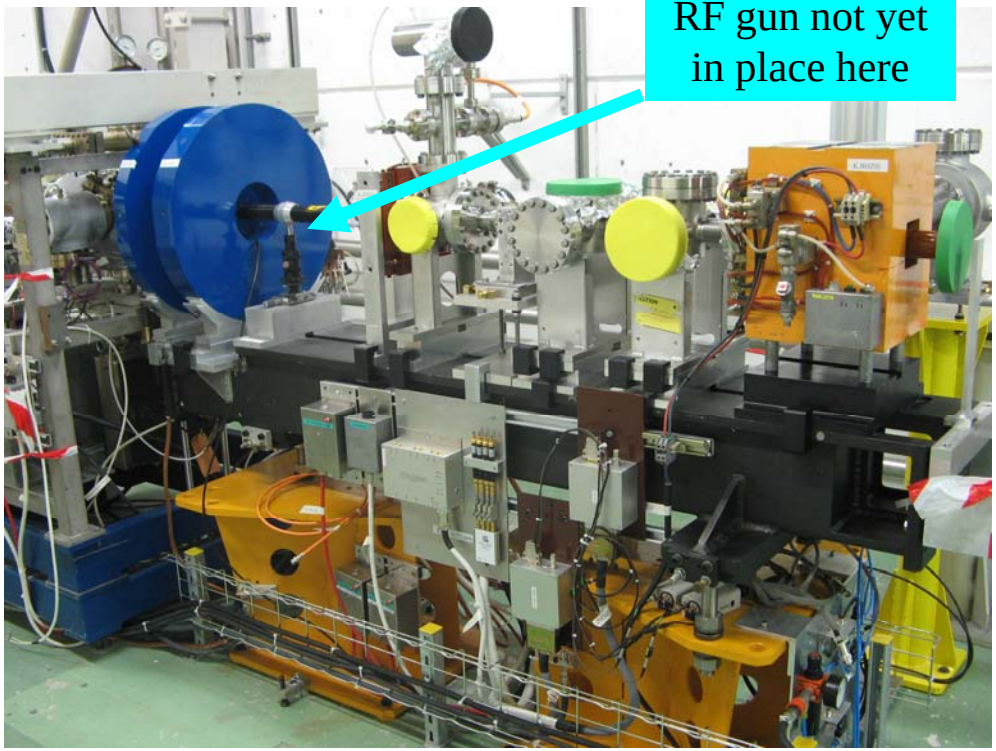


Photo-injector PHIN into CTF2



A single klystron MKS 14 shared with RF reflectors into the Combiner Ring and the RF deflector of CALIFES

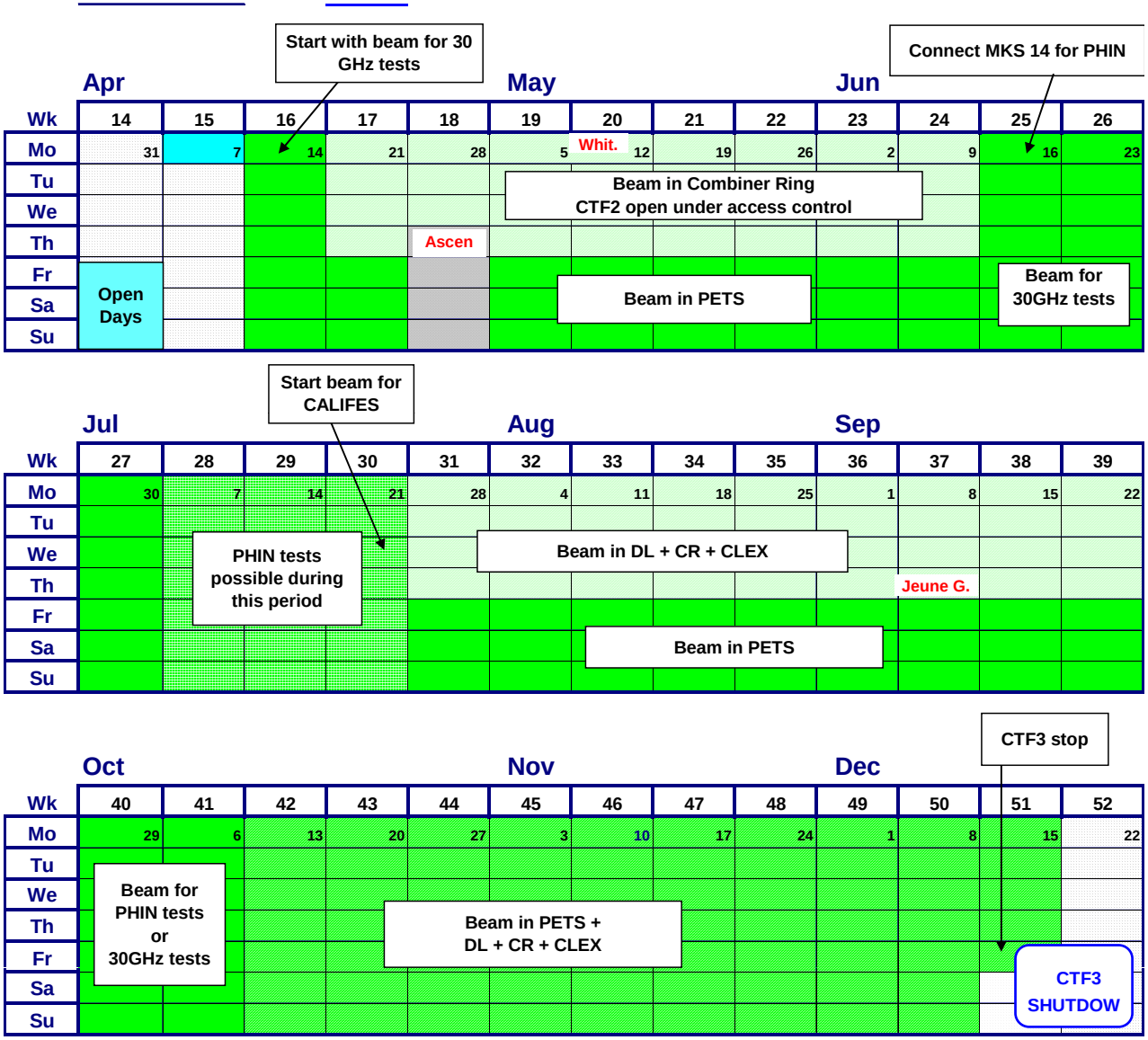
PHIN RF gun expected next week at CERN

and laser beam still under development

See K. Elsener talk

Possibility to use MKS 14 klystron to test the 2 new Al RF deflectors coming from LNF if the wave guides are in place before connecting the PHIN RF gun

CTF3 - CTF2 Schedule 2008



Conclusion

➢Installation into the Injector, Drive Beam Linac, Delay Loop, Transfer Line TL1 and Combiner Ring => **OK**

➢ Installation of the Transfer Line TL2 connected to the Combiner Ring for the end of June 2008 but:

- Indian dipole magnets ?
- Power supplies for dipolar correctors ?

➢ Installation into CLEX (Phase 0) will be finished for the end of June 2008 but:

- Laser for CALIFES ?

Conclusion (con't)

➢Installation into CTF2 for the photo-injector

- LAL proposed help during week 25 (Monday 16th June 2008)

- However this week is foreseen to be dedicated full time for 30 GHz

- Hardware tests for PO and CO not yet in the Schedule

- Installation expected to be finished for the end of August

- Tests with beam could take place in October 2008 during the installation of the Tail Clipper into the TL2 line.

- Strong request from CARE to finalize the test as deliverable for EU-FP6-JRA-PHIN