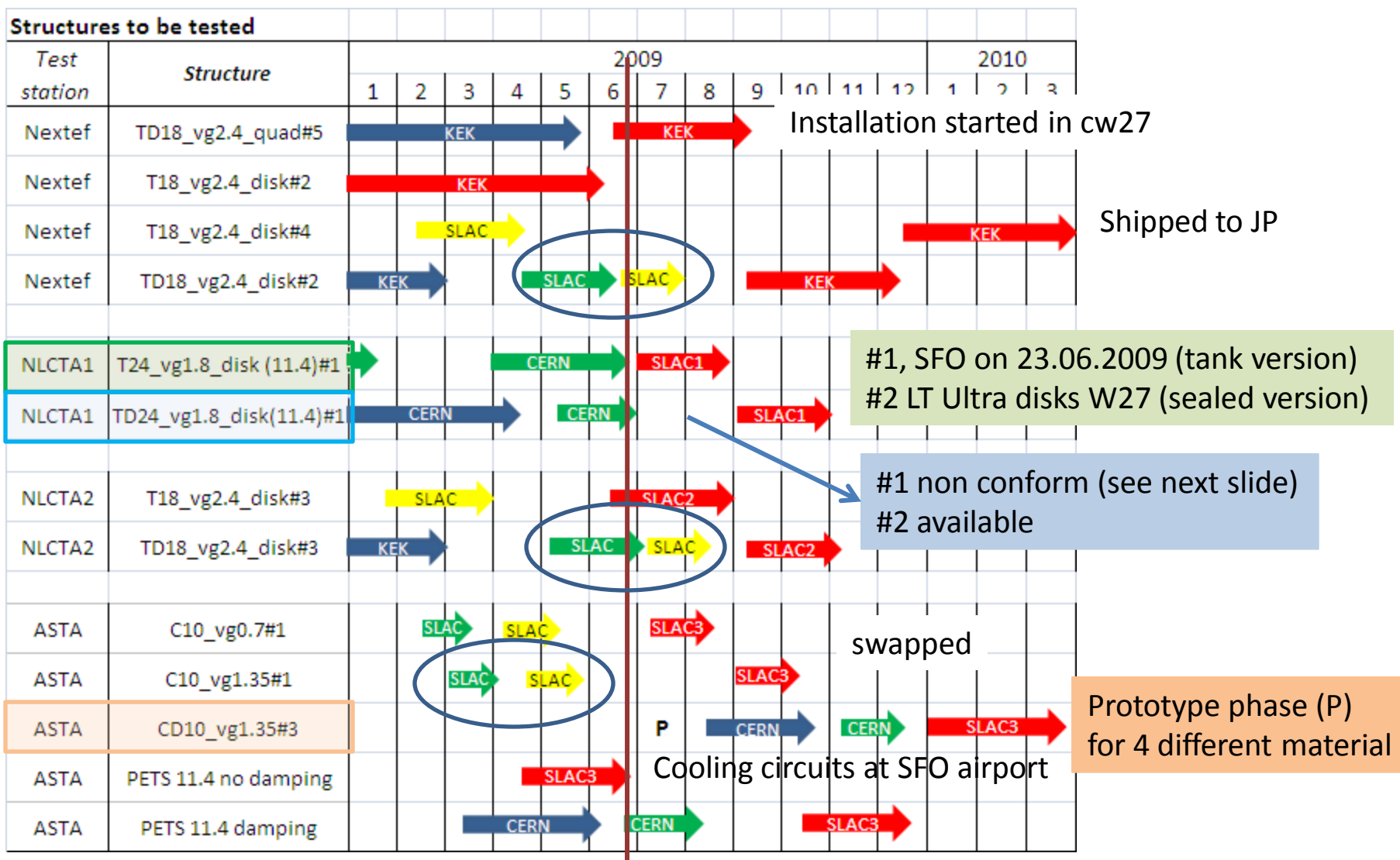


# CLIC RF structure production

G. Riddone

20090626

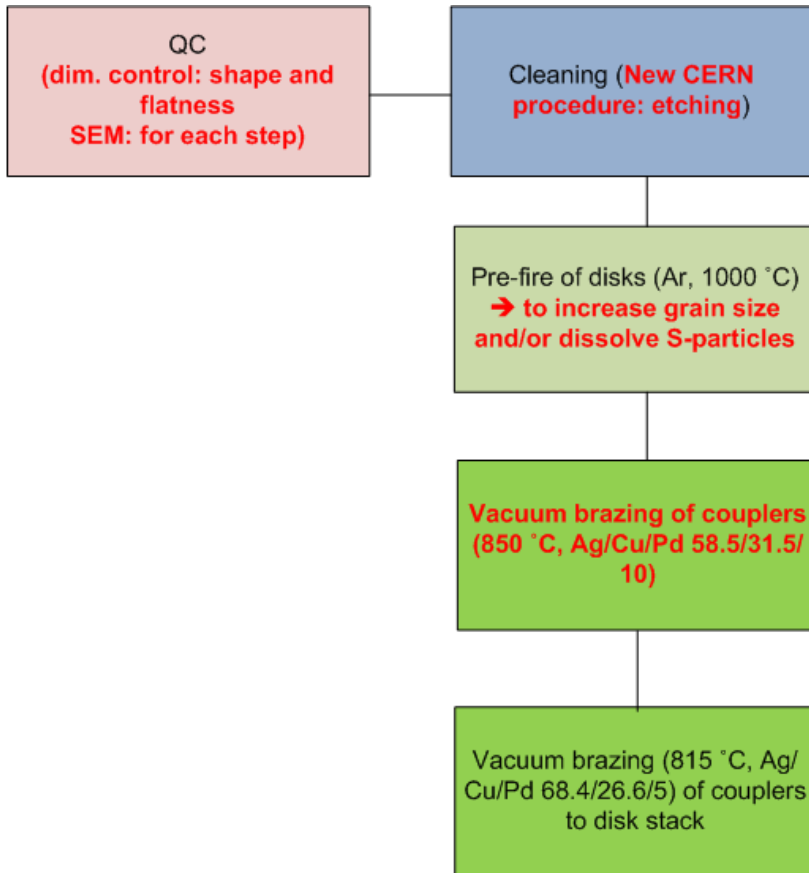
# Structure master schedule



# Actions

- T18 #2 test finished, inspection with bore scope
- T18#1 to be cut and open → to be sent to CERN

# TD24 #1



RF check → non conform

Inspection of all disks (see EDMS report: [10006094](#))

Brazing material inside the disks

Causes under investigation → decision to cut the structure for better understanding

Launched program to qualify assembly procedure (aim bonding at 1000 C)

Assembly of #2 will be undertaken after qualification program

# Structure master schedule

Structures to be tested		2009												2010		
Test station	Structure	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
TBTS	T24_vg1.8_disk (12)															
TBTS	TD24_vg1.8_disk#1 (12)															
TBTS	PETS 12 no damping															
TBTS	PETS 12 damping															

Fabrication at Kugler:

- #1 received in April NC,
- #2 required
  - prototype disk OK
  - disks at CERN CW28

Fabrication at VDL:

- #1 and #2 disks finished
- measurement method discussed: agreement on free state conditions

## Structures in the pipeline

Test station or F [GHz]	Family	2009												2010		
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
	<i>CLIC VG1</i>															
ASTA	TD18_vg2.4_quad#3		SL			SLAC3										
11.424	TD18_vg2.4_disk#1		CERN													
11.424	T18_vg1_kst#1_CERN						CERN									
11.424	T18_vg1_kst#2_CERN						CERN									

Missed slot in ASTA, back to CERN?

Stand-by

SLAC/KEK technology,  
KEK copper disks CW31

Structures in the pipeline		2009												2010		
Test station or F [GHz]	Family	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
<i>CLIC G</i>																
11.424	T24_vg1.8_disk #2	CERN						CERN								
11.424	TD24_vg1.8_disk#2	CERN														
12	TD24_vg1.8_disk#2			CERN				CERN								
11.424	T24_vg1.8_disk #3_KEK															
11.424	TD24_vg1.8_disk#3_KEK															
11.424	T24_vg1.8_nd#1_CERN			CERN												
11.424	T24_vg1.8_nd#2_CERN			CERN												
12	T24_vg1.8_nd#1_CERN			CERN												
12	T24_vg1.8_nd#2_CERN			CERN												
11.424	TD24_vg1.8_cc			CERN												
11.424/12	TD25_vg1.7_sd															
11.424/12	TD25_vg1.7_LDT															

2<sup>nd</sup> unit, preparation in stand-by

Contract with KEK signed on 19.06

T24 with smaller D and new tuning features  
Under tendering

Compact coupler, asymm. disks

Ridged waveguides



Mode launcher coupler, symm. disks  
J. Huopana, disks for brazing test cw28

Structures in the pipeline		2009												2010		
Test station or F [GHz]	Family	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
		<i>C10 structures</i>														
11.424	C10_vg0.7#2_SLAC	SLAC		SLAC		SLAC										
11.424	C10_vg1.35#2_SLAC	SLAC		SLAC		SLAC										
11.424	C10_vg2.25#1_SLAC					SLAC		SLAC		SLAC						
11.424	C10_vg2.25#2_SLAC					SLAC		SLAC		SLAC						
11.424	C10_vg3.3#1_SLAC							SLAC		SLAC		SLAC				
11.424	C10_vg3.3#2_SLAC							SLAC		SLAC		SLAC				
11.424	C10_vg1.35#3_KEK									KEK		SLAC		SLAC		
11.424	C10_vg1.35#4_KEK									KEK		SLAC		SLAC		
11.424/12	C10_vg1.35_CERN															
11.424/12	C10_vg1.35_milled															

Mechanical design not started yet

Mechanical design under way



Structures in the pipeline		2009												2010		
Test station or F [GHz]	Family	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
	<i>CD10 structures</i>															
11.424	CD10_vg1.35#1_KEK											KEK	SLAC	SLAC		
11.424	CD10_vg1.35#2_KEK											KEK	SLAC	SLAC		
11.424	CD10_vg1.35#4_CERN											CERN	CERN			
11.424/12	CD10_vg1.16_Choke															
11.424/12	CD10_vg1.32															

Lower  $\Delta T$

Radial choke damping

Other structures:

- x-band speed bump structure
- CLIC K structures
- 500 GeV structures