



11 T Dipole

S2-LMBHA001 – Special programme

Work schedule and implications on overall plan

F. Savary



<https://vidyoportal.cern.ch/join/2YI178ScoQ> - 2020-07-16 - <https://indico.cern.ch/event/938508/>

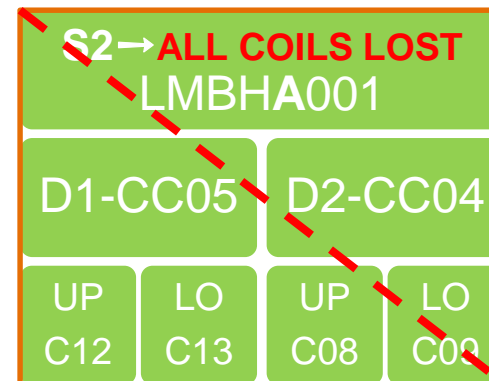
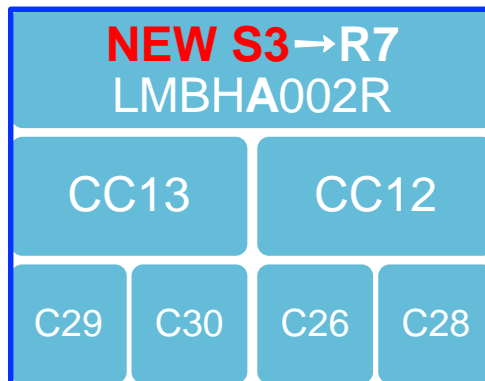
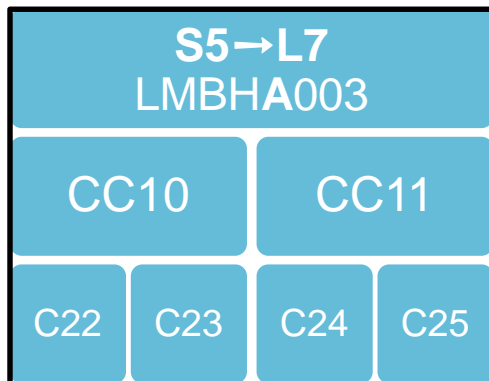
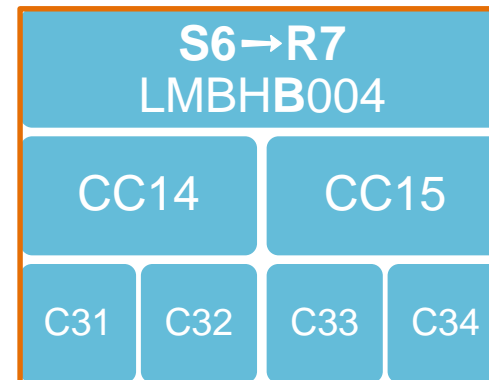
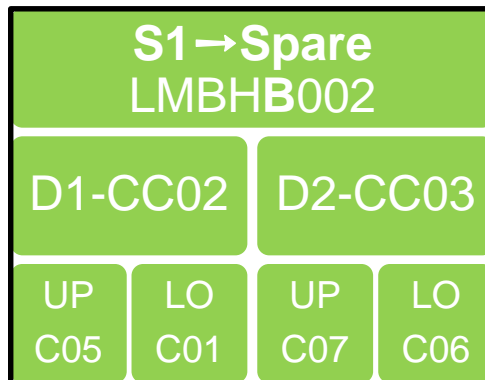
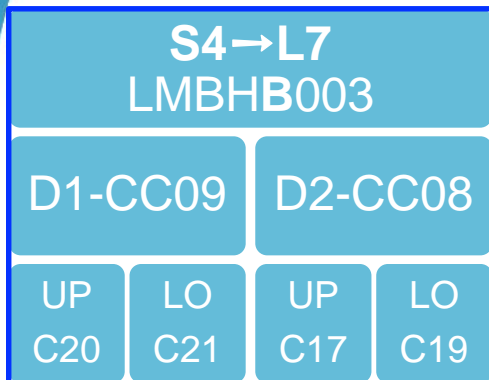
News from



Magnets equipped with external QH

Reshuffling of the magnets, collared coils, and coils

Magnets equipped with impregnated QH



Because of S2 and S3, a type A spare magnet is now missing

Schedule – Cold mass construction

	Start	Finish	Note
Magnet S1-Type B / Pair 2	-	-	<ul style="list-style-type: none"> • Being readied for installation • Concerns with impregnated QH**
Magnet S2-Type A	-	-	Completed, tested
Magnet S4-Type B / Pair 1	-	-	Completed, on test bench
MQXFBP1 - Q2b	27.05.2019	08.11.2019	
Magnet S5-Type A / Pair 1	03 21.07.2020	02 19.10.2020	1 st CC completed; 2 nd CC collaring done today
MQXFBP2 - Q2a	25.08.2020	04.12.2020	
Magnet S3-Type A / Pair 2	18.09.2020	14.01.2021	New coils being manufactured
MQXFBP1 - Q2b* + Corr.	23.11.2020	24.03.2021	
Magnet S6-Type B / Spare	07.12.2020	12.04.2021	Not yet started

* MQXFBP1 – Q2b rebuilt with Spanish correctors

** See slides 20 and 21

Schedule – Cold tests

	Start**	Finish**	Note
Magnet S1-Type B			Being readied for installation Need to be re-tested @ cold if we want to install it (not yet in the test plan of SM18): <ul style="list-style-type: none"> To carry out V-I measurements To carry out representative HV tests on impregnated QHs
Magnet S2-Type A	DD-11-2019	26.06.2020	Special test under preparation (thermal model and further optimization of CDWU process)
Magnet S4-Type B	25.02.2020 (in SM18)	DD.11.2020	Will be tested as soon as causes of degradation of S2 are understood (work in progress)
MQXFBP1 - Q2b	22.06.2020	04.09.2020	
Magnet S5-Type A	26.10 09.11.2020	15.12.2020 12.01.21	
MQXFBP2 - Q2a	05.02.2021	06.04.2021	
Magnet S3-Type A	05.02.2021	29.03.2021	
Magnet S6-Type B	27.04.2021	21.06.2021	
MQXFBP1 - Q2b*	26.05.2021	21.07.2021	

- MQXFBP1 – Q2b rebuilt with Spanish correctors
- ** The start / finish dates comprise the preparation activities, cool down, warm up, and disconnection from the bench

Schedule 11T – Availability for installation

	Start	Finish	Note	
			Cannot be replaced due to lack of new coils	
Pair 1 {	Magnet S4-B	dd.11.2020	dd.12.2020	On test bench
	Magnet S5-A	16.12. 13.01.21	28.01 11.02.21	1 st CC completed; 2 nd CC collaring done today
Pair 2 {	Magnet S1-B			See comment on previous slide
	Magnet S3-A	30.03.2021	30.04.2021	New coils being manufactured
	Magnet S6-B } Spare	22.06.2021	21.07.2021	Not yet started

As to CDWU process

- W33-34-35: cold tests (thermal performance) of S2 equipped with additional T sensors
 - See detailed work plan / schedule by Vittorio
- Cold tests of S4, which is currently on the test bench (powering and other qualification tests)
 - To be completed not later than November 2020, such that preparation for installation can be completed by end December 2020
- Construction of S5
 - The second aperture is now available (the collaring was done successfully this week and the WMM will be done today)
 - Is there anything specific that we can/should do inside the cold mass assembly, like installing features to force He flow in specific directions, or filling pieces in the $\Phi 60$ -mm hole in the yoke?

As to the monitoring of the axial load on the coils

- The integration of bullet gauges in S5 is given consideration
 - 4 strain gauges per bullet
 - 6 wires per bullet
 - 16 bullets
 - 96 wires
- M. Guinchard will start the work on Monday (July 20), and will deliver on August 9 (Week 32)
- We then need one week to put things together (W33) before we can move the assembly in the welding press
- Welders will be on leave in W34 and W35
- The implementation would imply a delay of 5 weeks on the date of availability of the first pair of magnets (11.02.2021 + 5 weeks)

