



LMBHA-002 (S3)

Information on the coil fabrication

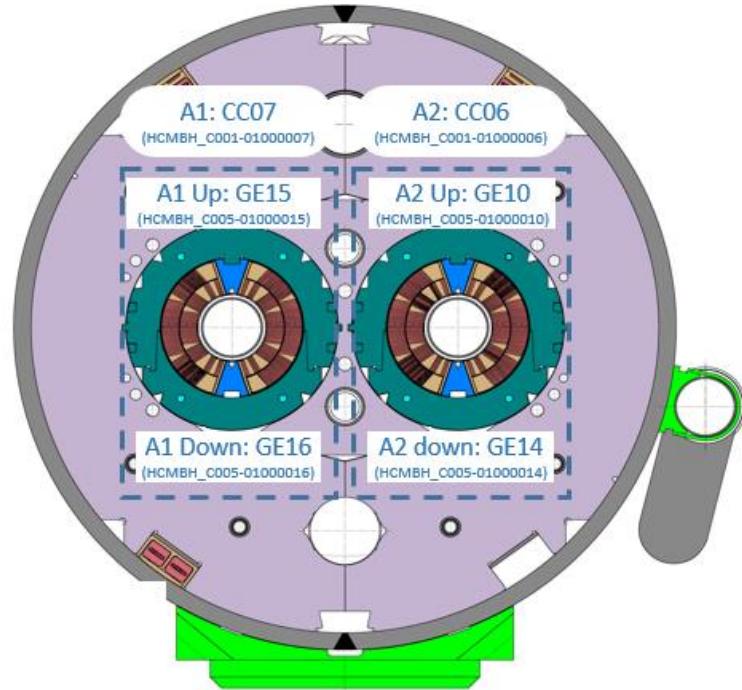
O. Housiaux, S. Menu, F. Savary

2020-02-05, 11T Dipole TM #23, <https://indico.cern.ch/event/885255/>



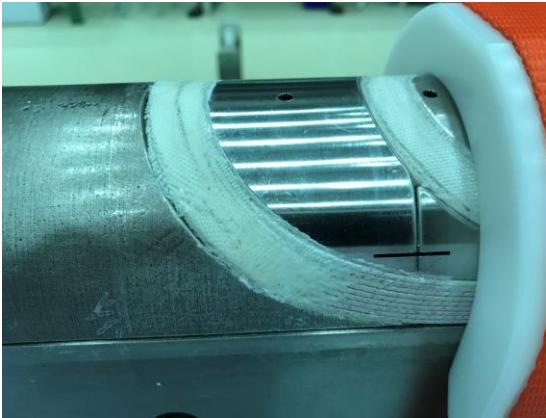
Outlook

- Coil fabrication
 - Focus on coil GE15
- Winding and pop-out
 - Nb events per coil
 - Nb events per turn (IL, and OL)
- RRR



Coil 15 after inner layer winding

Non connection side

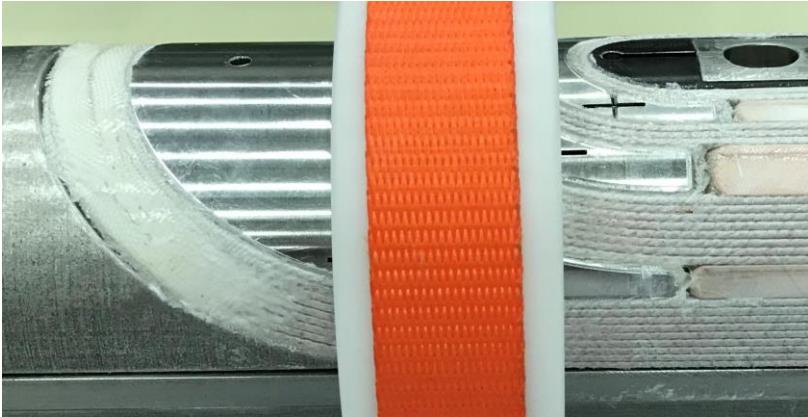


Connection side

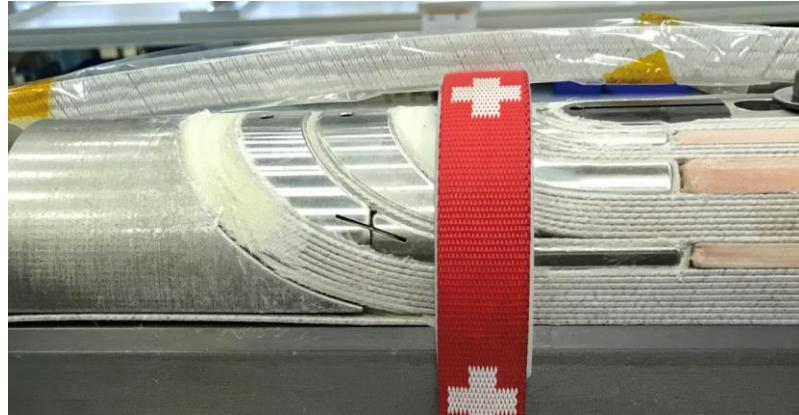
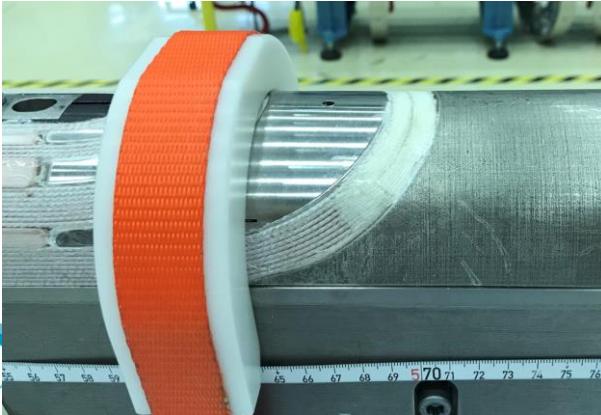


Coil 15 after inner layer curing

Non connection side

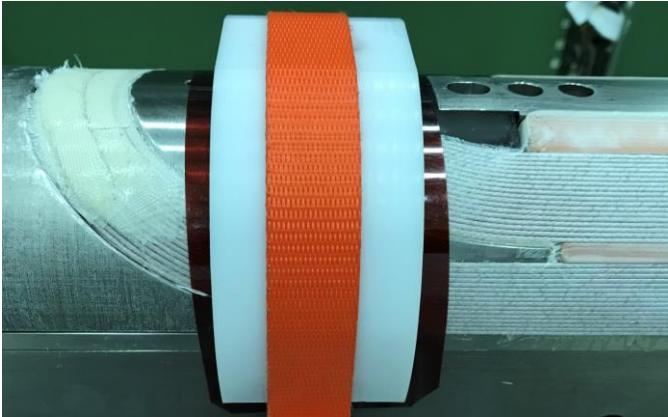


Connection side

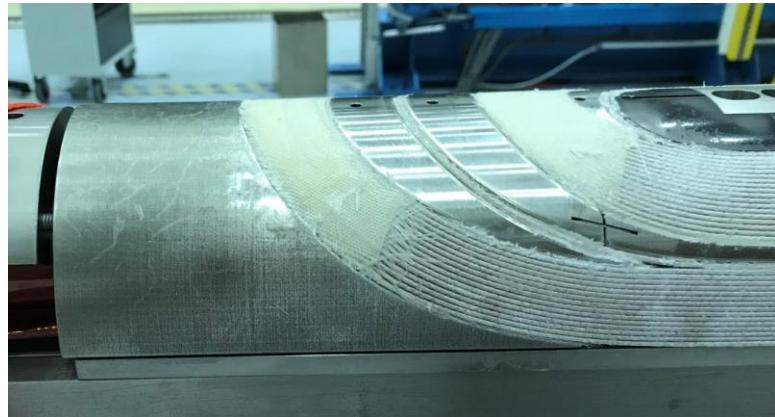
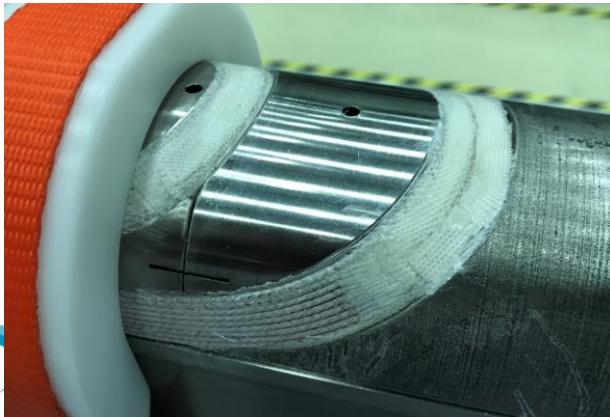
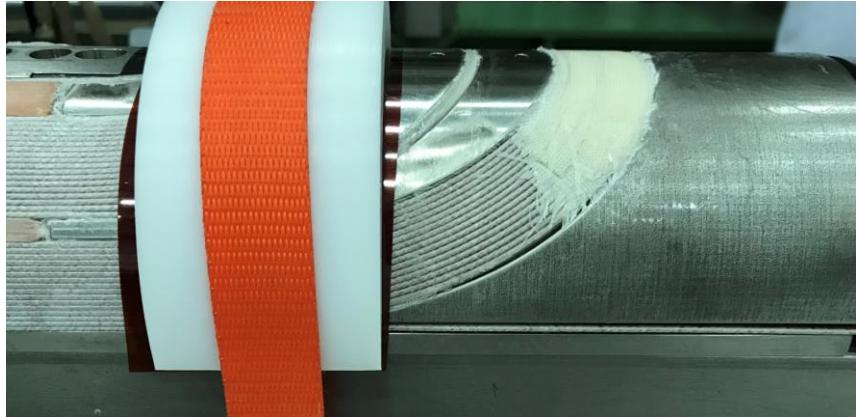


Coil 15 after outer layer curing

Non connection side

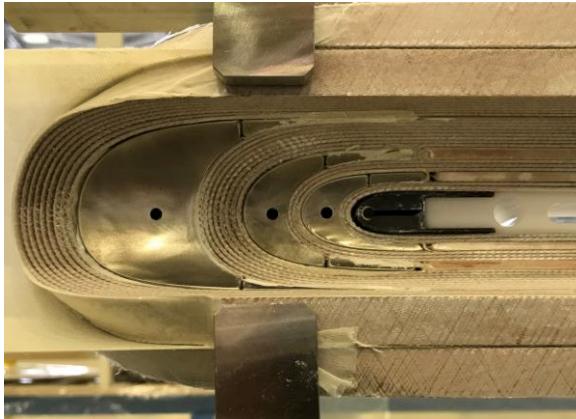


Connection side

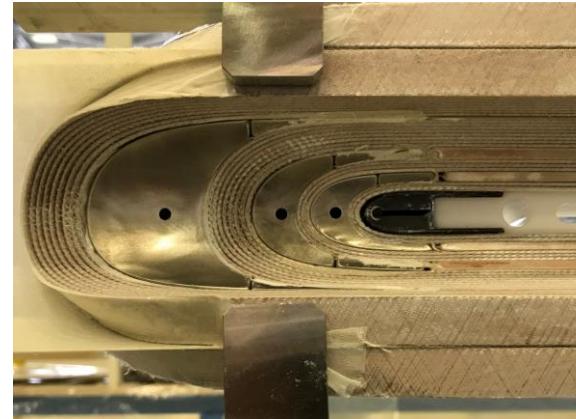


Coil 15 after outer layer curing – view inner diameter

Non connection side

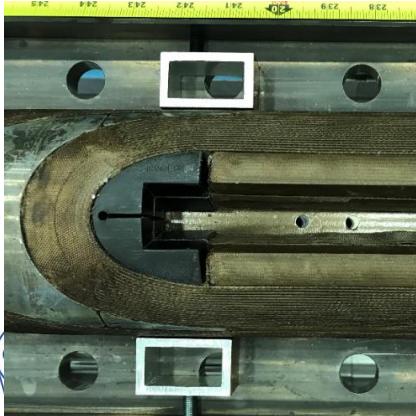


Connection side



Coil 15 after reaction

Non connection side

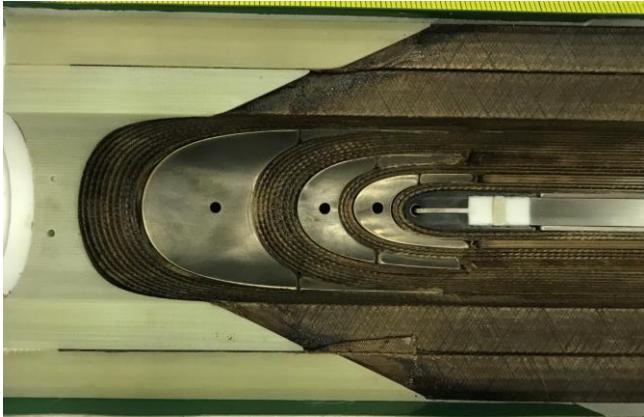


Connection side

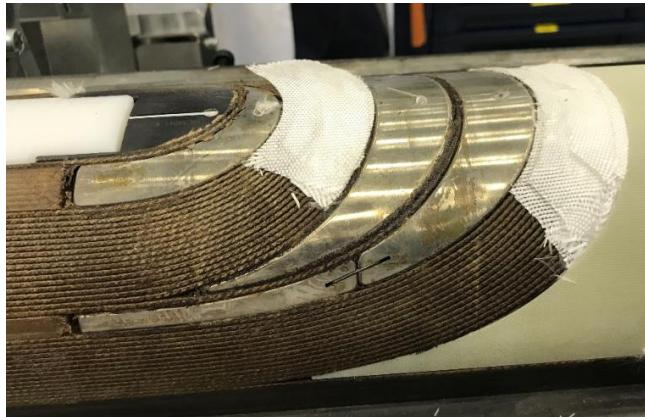
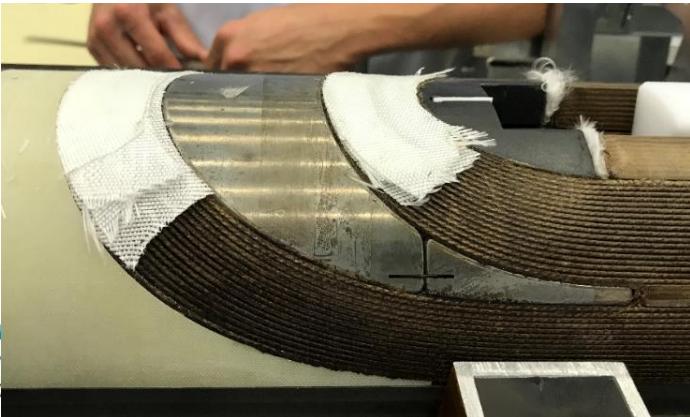
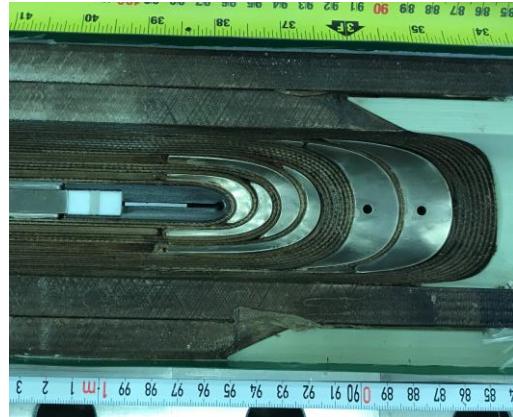


Coil 15 after reaction

Non connection side

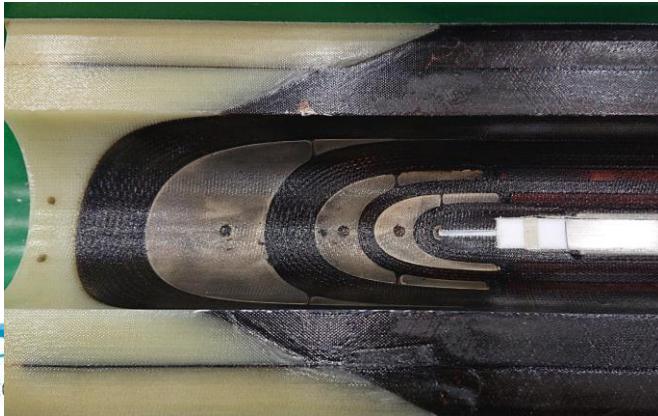
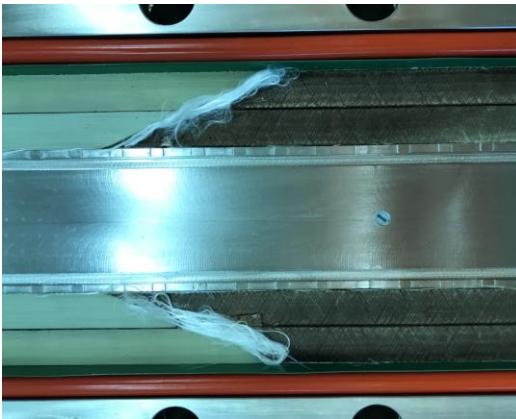


Connection side

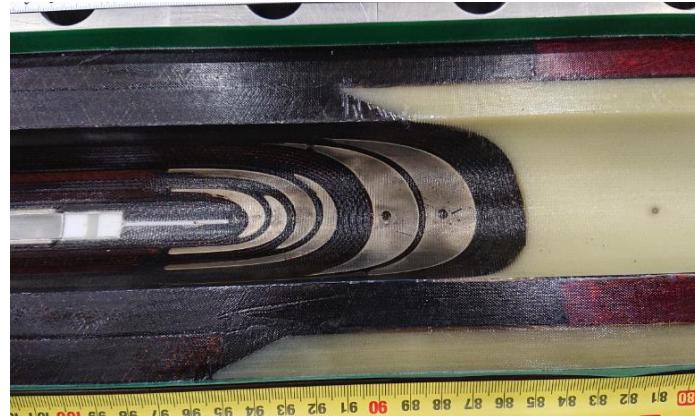
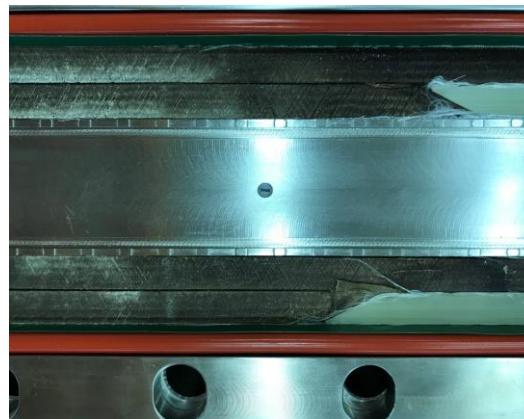


Coil 15 at prep. for impregnation and after impregnation

Non connection side

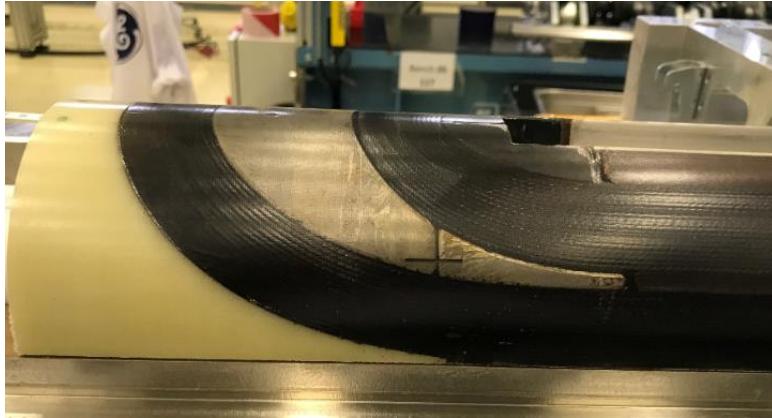


Connection side

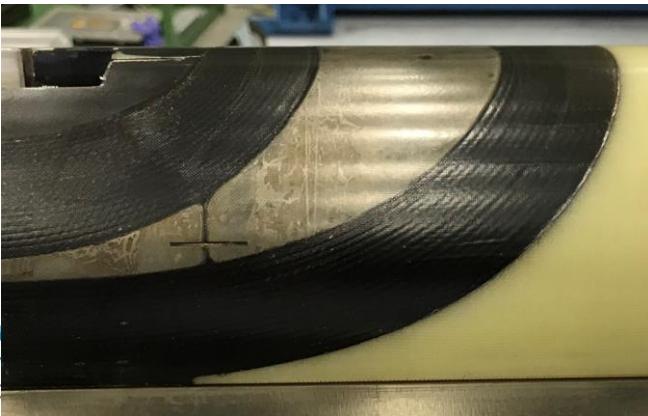
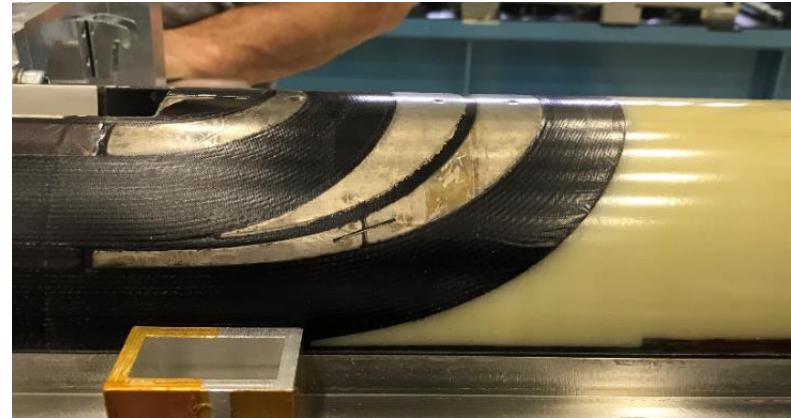


Coil 15 after impregnation

Non connection side

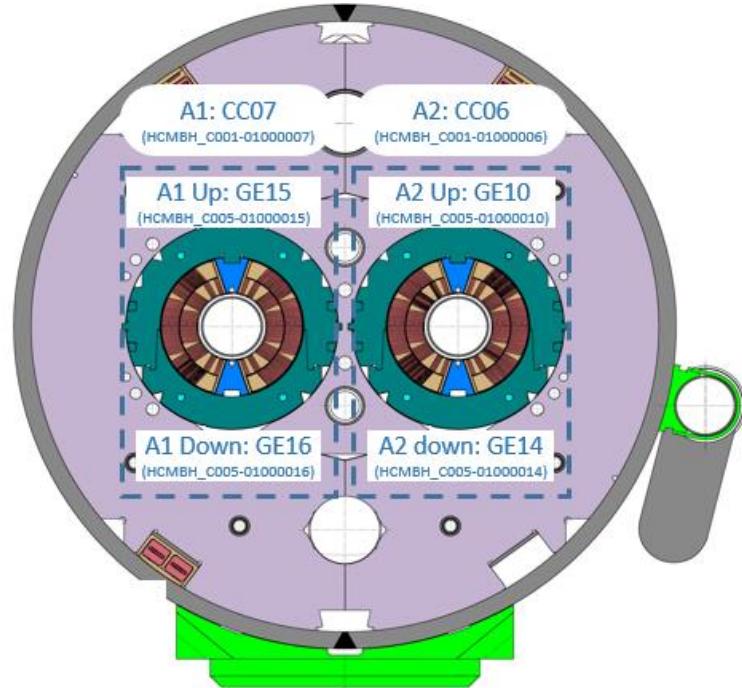


Connection side

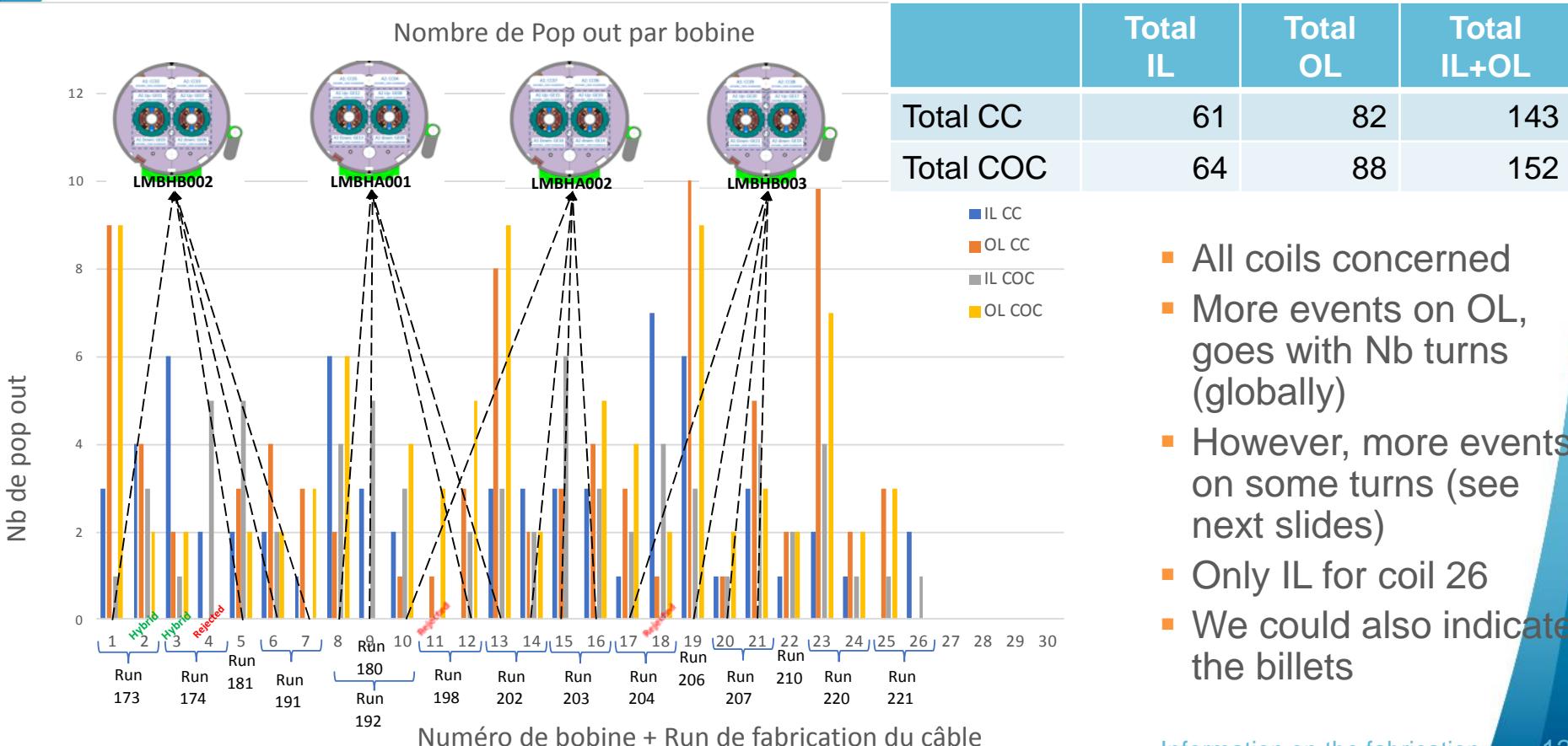


Outlook

- Coil fabrication
 - Focus on coil GE15
- Winding and pop-out
 - Nb events per coil
 - Nb events per turn (IL, and OL)
- RRR

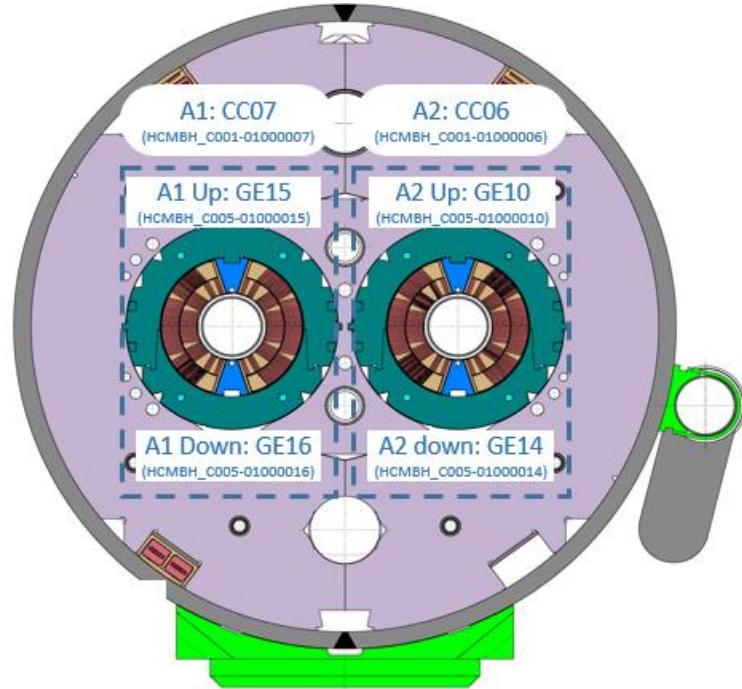


Winding and pop out – Nb events per coil

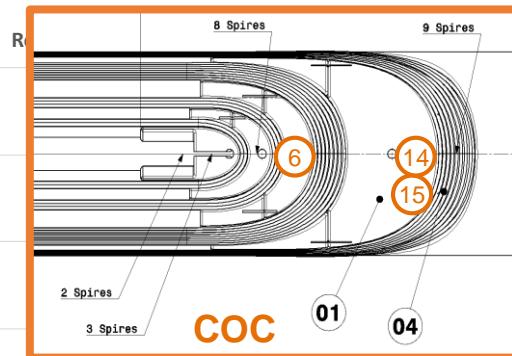
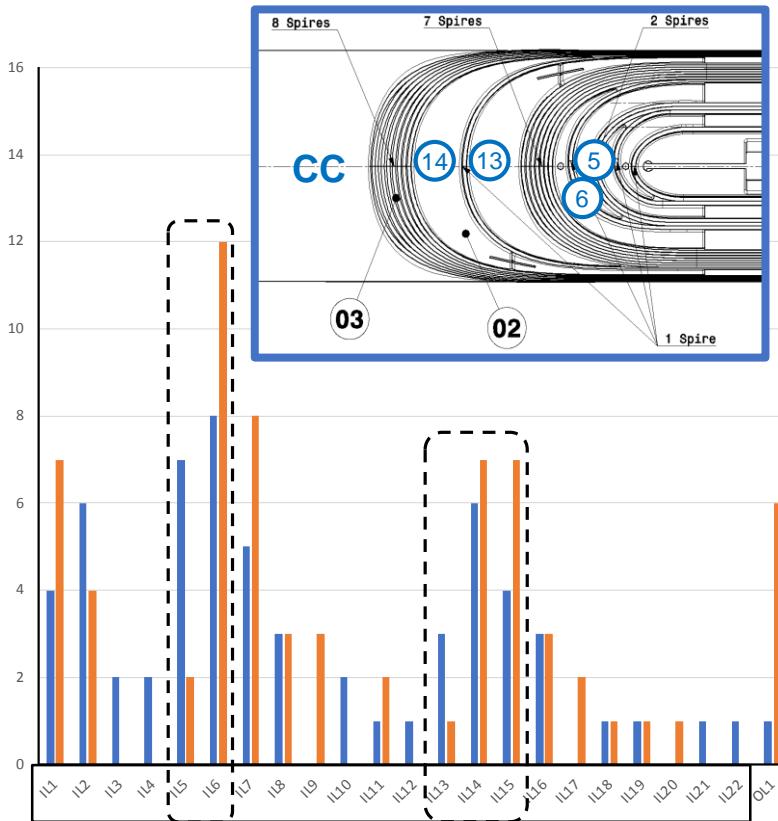


Outlook

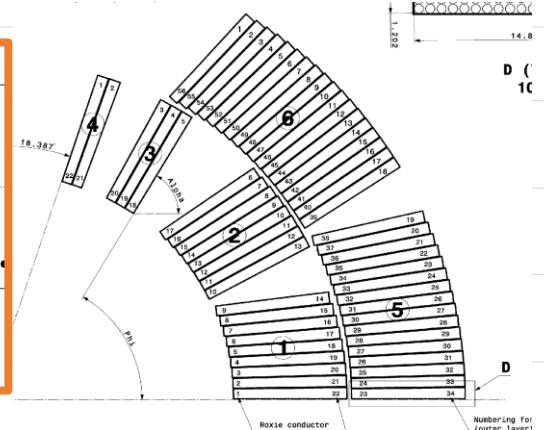
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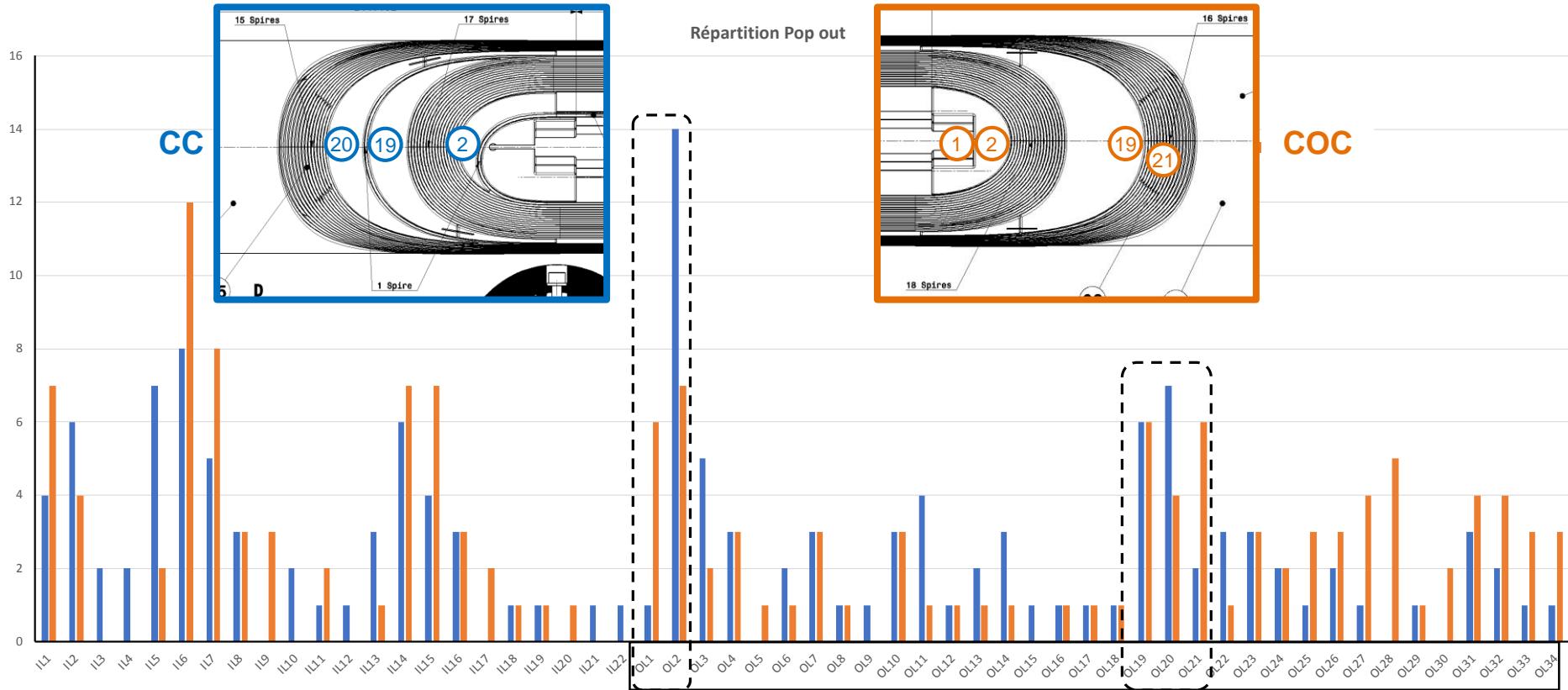
Winding and pop out – Inner layer (22 turns)



- More events on first turns on spacers
- More spacers on inner layer

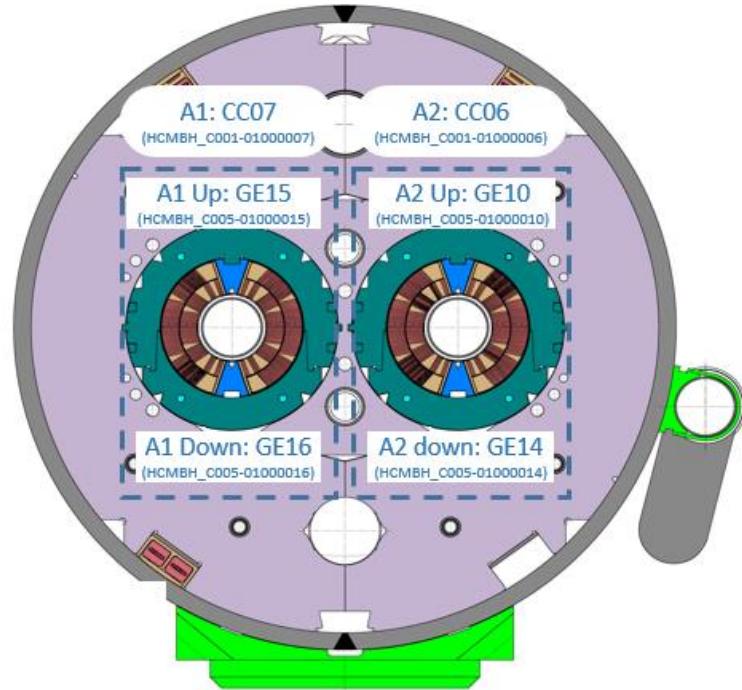


Winding and pop out – Outer layer (34 turns)



Outlook

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- RRR



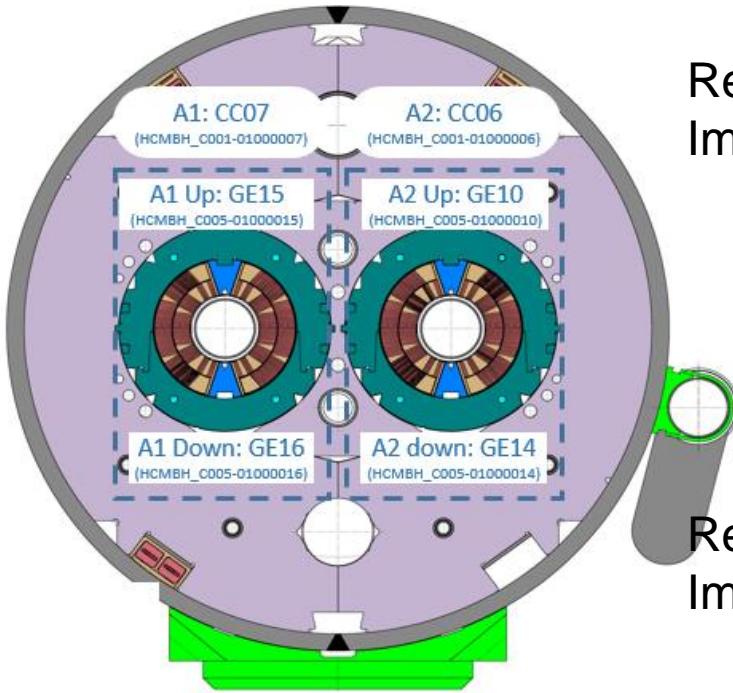
RRR

Magnet	LMBHA-002 (S3)				LMBHB-002 (S1)				P-001	
Coil number	GE10	GE14	GE15	GE16	GE05	GE01	GE07	GE06	GE02	GE03
Minimum extracted witness sample	170		<u>214</u>	145	169	162	145	131	127	124
Estimated for the coil	190	221	<u>262</u>	215	184	210	164	166	178	136

Reaction / Impregnation moulds

Reaction fixture A
Impregnation mould B

Reaction fixture B
Impregnation mould A



Reaction fixture B
Impregnation mould B

Reaction fixture B
Impregnation mould A



Thank you for your attention!

