



*Dismantle, assembly and installation plans  
for the ALBA II upgrade*

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# THE ALBA SYNCHROTRON UPGRADE

- ALBA synchrotron light source in Operation since 2012
  - Top-up @250mA
  - 13 Beamlines
- Upgrade to
  - Improve **brightness** and **coherence** of the beam
  - Add **two new long beamlines**
  - Enhance **data capabilities**
- Dark period 2030-2031

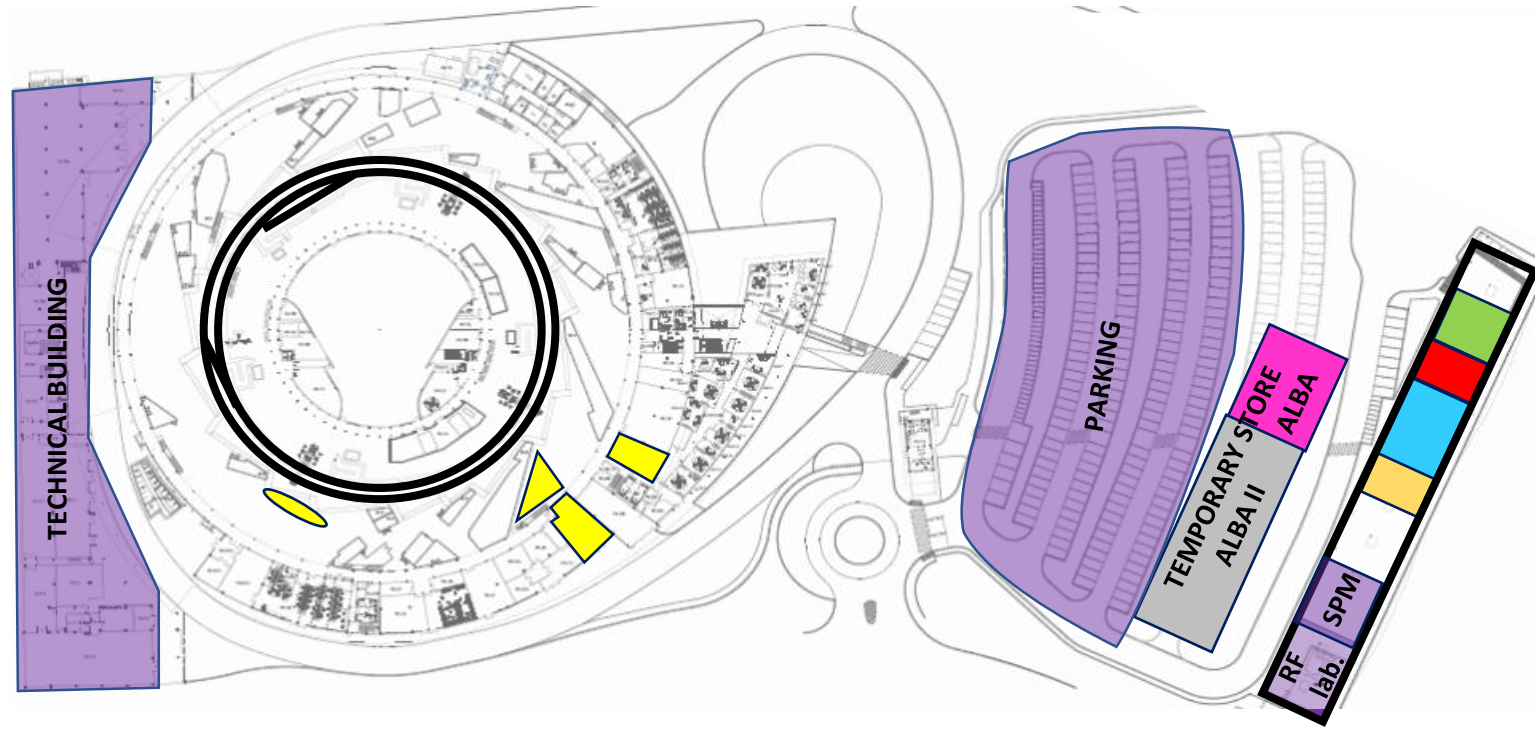
## Upgrade considerations

- Storage Ring Magnets, Vacuum, Diagnostics and Pulsed elements upgraded
- Insertion Devices, Radiofrequency, Front Ends Injector and main services kept
- 3<sup>rd</sup> order harmonic cavities and Solid State Amplifiers for the 500MHz RF
- Existing ID&BL positions maintained
- RF changes location in tunnel and Service Area
- SR MA tested and mounted on girders in advance. VC assembled by sectors in advance (NEG ex-situ activation)

# UPGRADE SPACE REQUIREMENTS

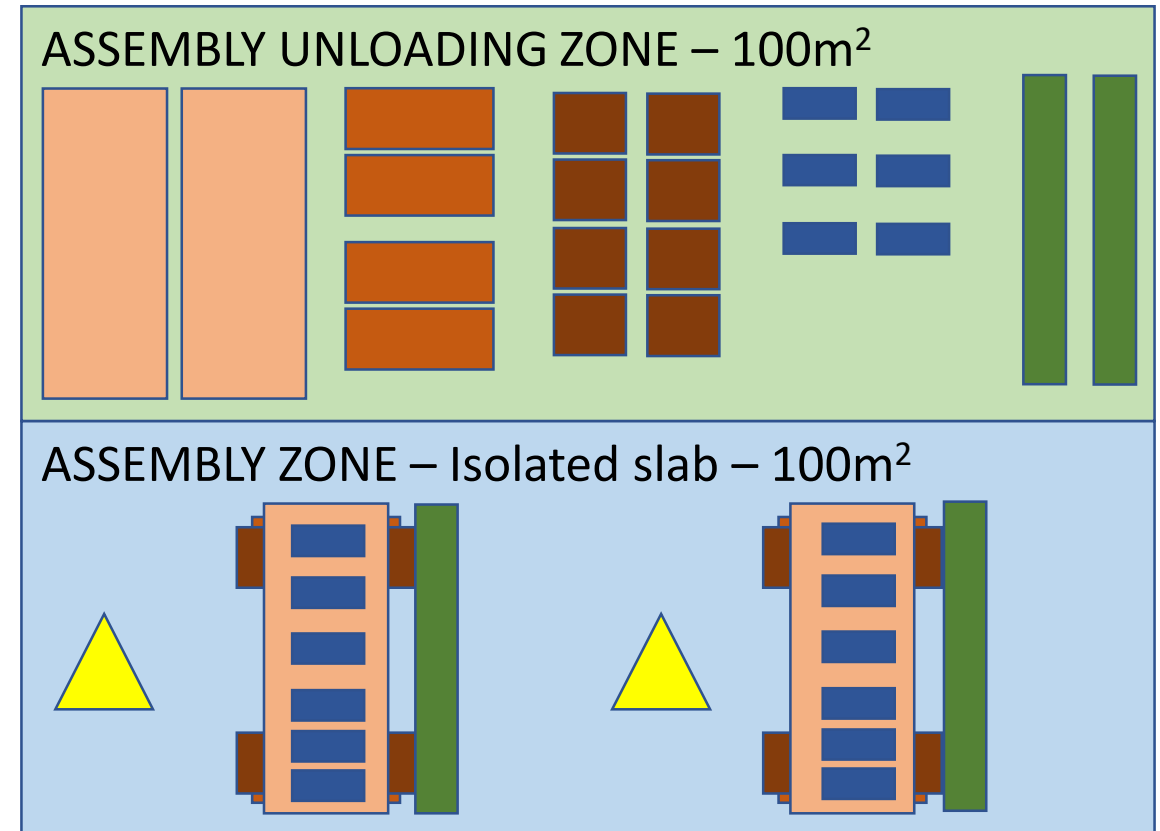
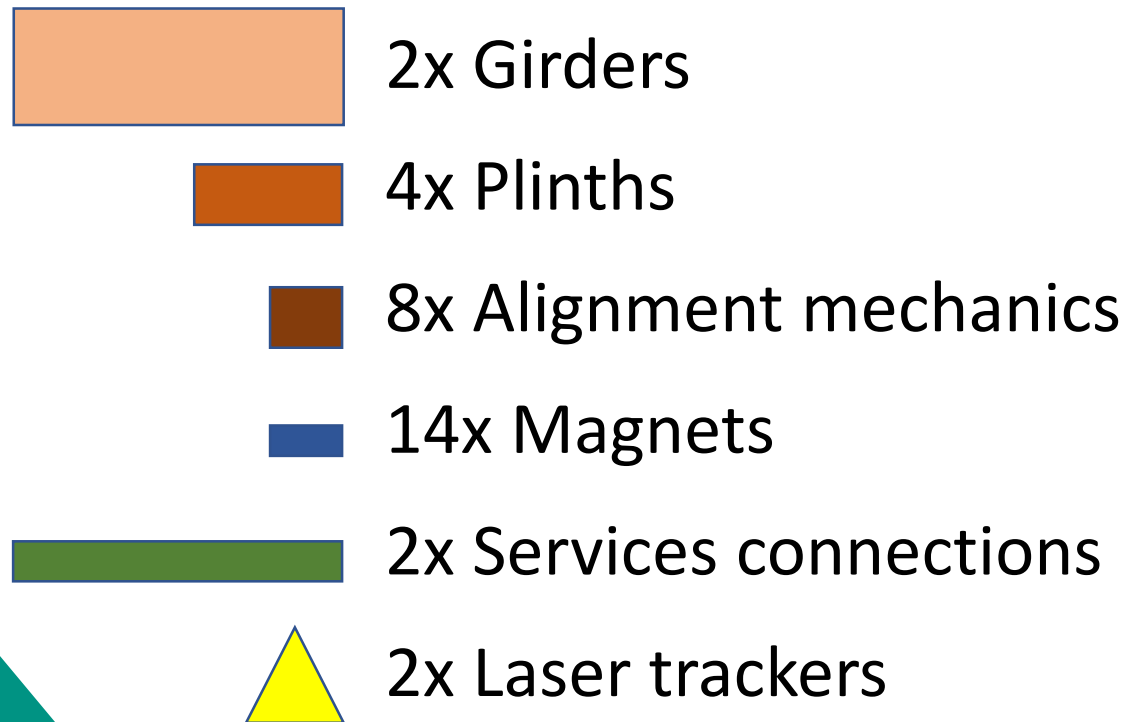
- Required spaces to store, test and assembly have been estimated
- Use of onsite areas
- A temporary storage area is required to store the new SR pre&post assembly as well as the present SR

	MA	GIRDERS	VC	PS
Storage	300m <sup>2</sup>	900m <sup>2</sup>	60m <sup>2</sup>	300m <sup>2</sup>
Testing	65m <sup>2</sup>		220m <sup>2</sup>	150m <sup>2</sup>
Assembly	200m <sup>2</sup>			
Storage Ring Assembled	800m <sup>2</sup>		50m <sup>2</sup>	300m <sup>2</sup>



# SR ASSEMBLY AREA

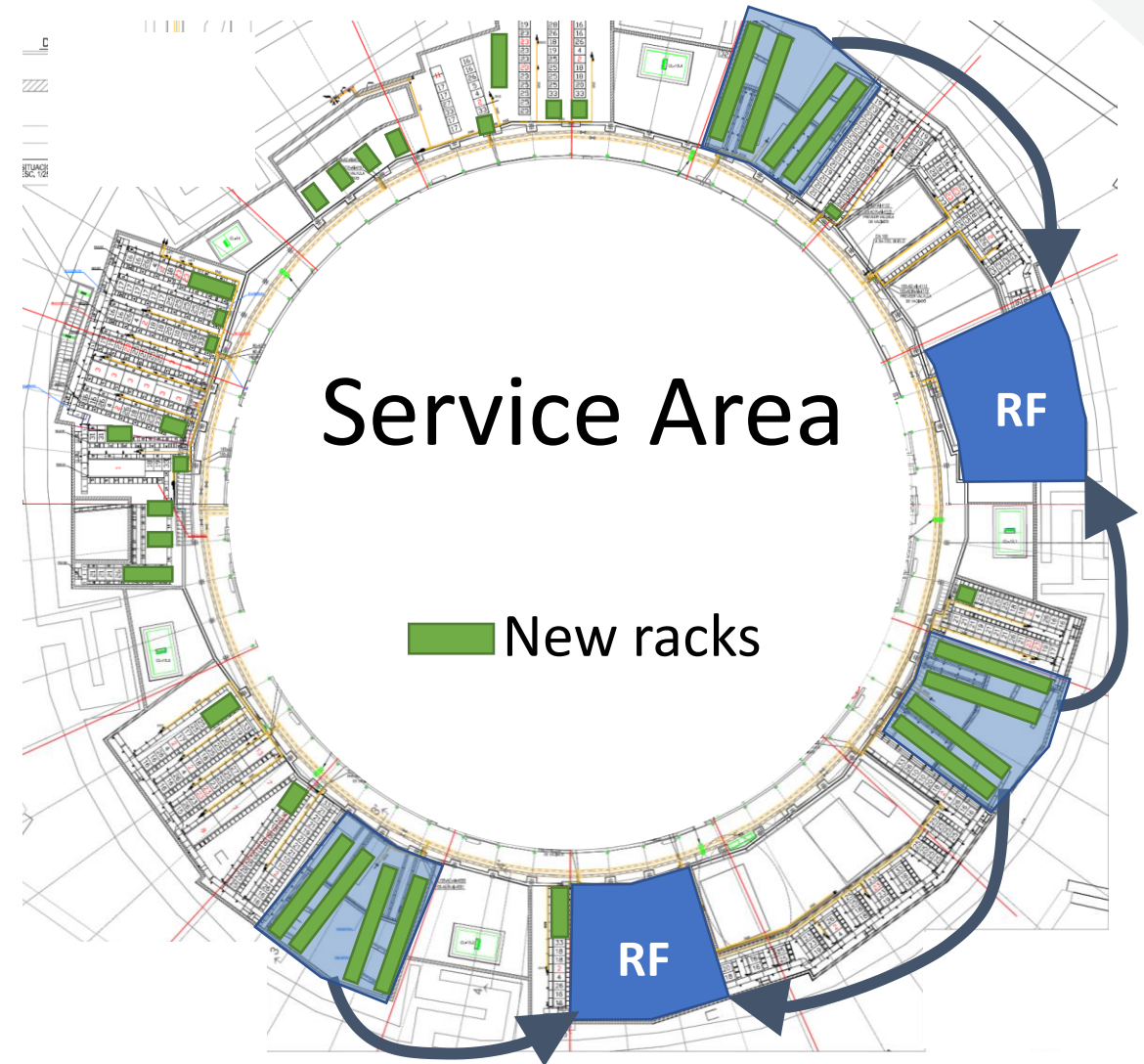
- 200m<sup>2</sup> are being considered to assembly&test 2 girders with their supports&mechanics and assembly and prealign the magnets on the girders



# SERVICE AREA

- A large reorganization of the Service Area will be needed
  - The RF plants & cavities change position
  - The number of racks will increase

	ALBA	ALBA II
Injector & others	155	187
SR_PC	58	128
SR_VC	34	34
SR_RF	19	50
SR_FE	20	36





**Thanks for your attention**