



# SMACC1: open questions

## PSI/CERN LTS WP Progress Meeting

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# Agenda

Requests to CERN

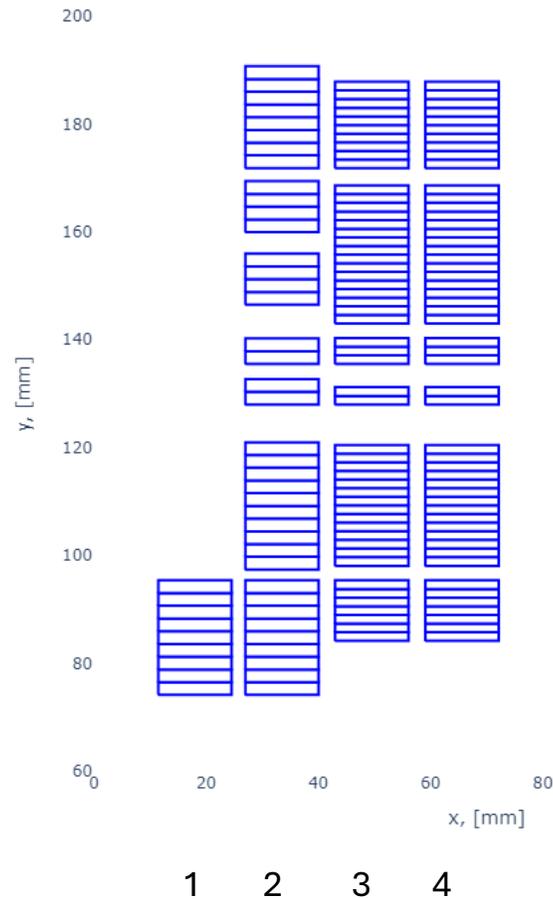
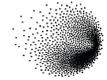
316 LN plates

I Iron pole raw material

Kapton for SMACC1 coils

SMACC1 spare conductor

# Cable Unit Lengths



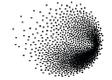
Type	High-Field	Low-Field
Wire type	Nb <sub>3</sub> Sn RRP® 162/169	Nb <sub>3</sub> Sn RRP® 78/91
CERN Wire Denomination	DEM-1.1	ERMIC-0.7
N wire x dia in mm	21 x 1.1	34 x 0.7
Cu/nCu	0.9	1.2
Bare Cable dimensions in mm	12.74 x 2.06	12.74 x 1.31
Insulation thickness in mm	0.155	0.155
Cable Originally Designed for	R2D2 HF	SMACC1 LF

Layers	1	2	3/4
Cable Type	High-field	High-field	Low-field
Number of turns	9	39	52/5 2
*Coil unit length in m	<b>15</b>	<b>75</b>	<b>100</b>
W <sub>eq</sub> in mm	20.1		19.1
Area of insulated cable in mm <sup>2</sup>	2954		4367

# Use of R2D2 LF cable



HFM  
High Field Magnets  
Programme



PSI

For the low-field cable, an alternative would be to use the R2D2 low-field cable (layer 4), based on a Cu/nCu conductor of 1.8 instead of 1.2 (SMACC1 low-field cables). This would represent a reduction by 5% of the load line margin.

Possible risk mitigation, *tbd*:

- Mutualizing the spare conductor between SMACC1 and R2D2.
- Producing spare cables on “need basis”.

