



FuSuMaTech

FuSuMaTech 2021

December 14, 2021

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# Applied Superconductivity Group Institut Néel – G2Elab - Grenoble

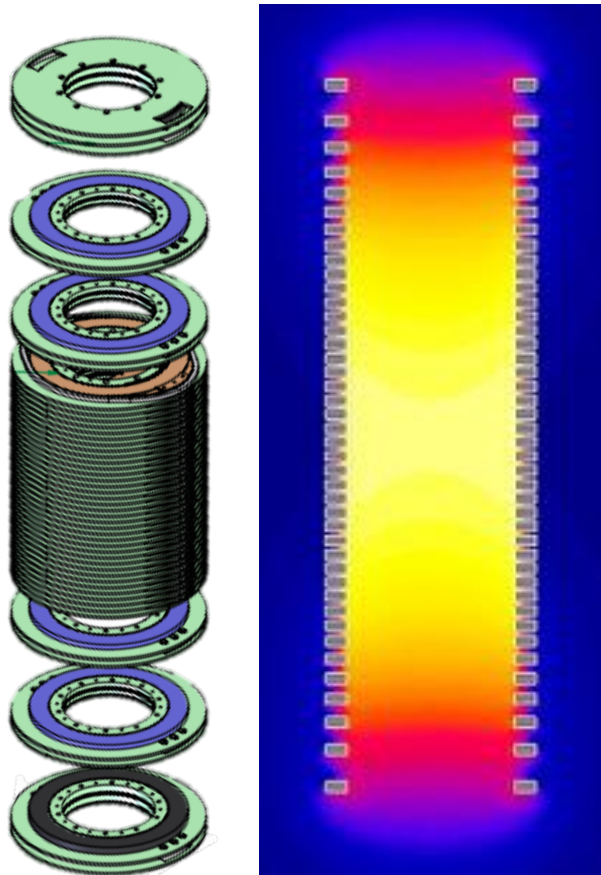
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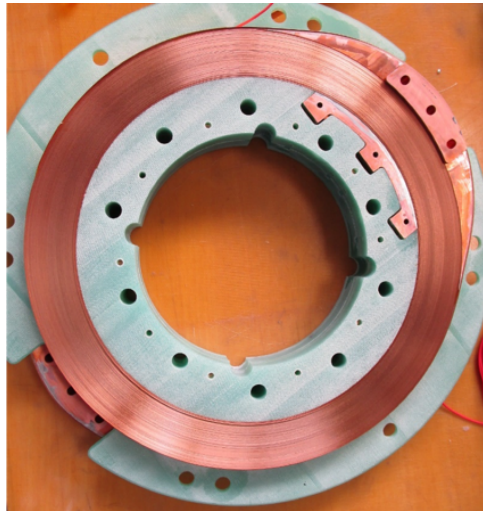


# Works on HTS magnets - BOSSE

## BOSSE Project: REBCO isolated 1 MJ SMES



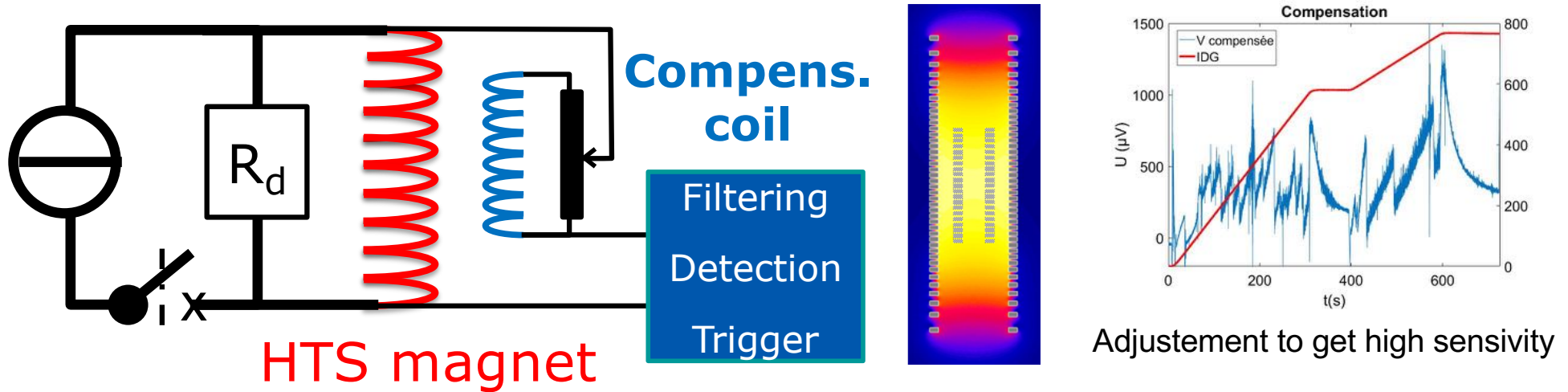
18 kJ/kg



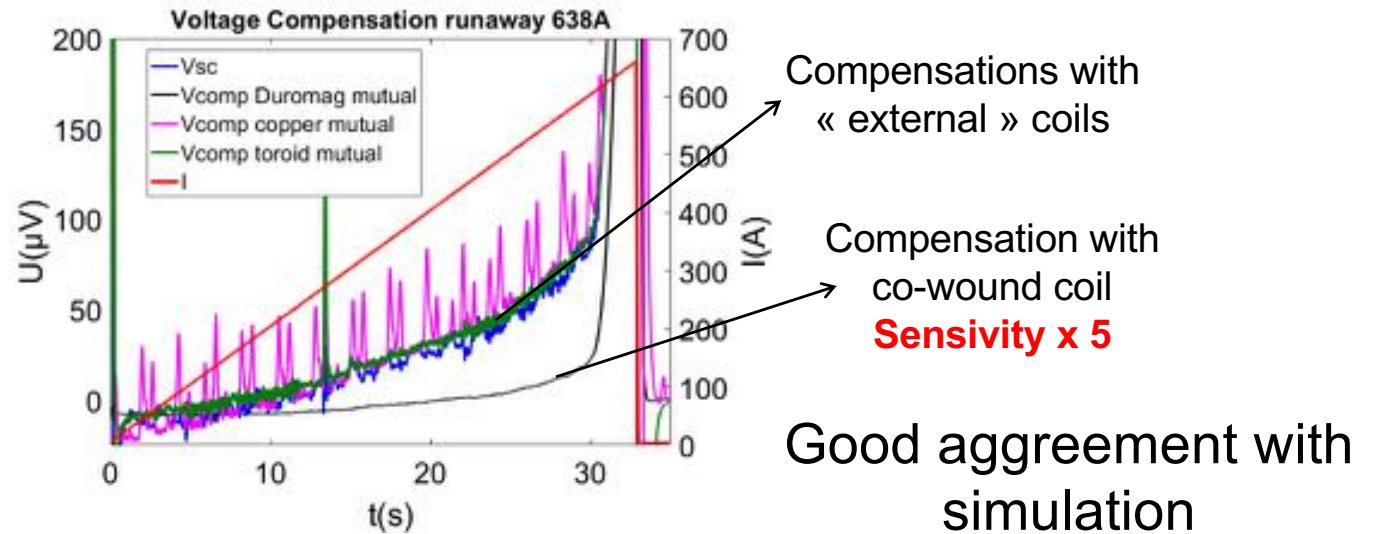
Double Pancake	21
Serie turns	178
$R_i$ (mm)	94.25
$R_e$ (mm)	120
Unit length (m)	120.7
Total height (mm)	814
L(H)	2.79
Tape	12 mm SuperOx
I/J (A/A/mm <sup>2</sup> )	850/525
$B_{lg}/B_{tr}$ (T)	11.5 / 4.2
$\sigma$ (Mpa)	400

# Works on HTS magnets - BOSSE

Use of a compensating coil for protection



Use of a co-wound tape as compensation coil



# Works on HTS magnets - Bosse

Test on 3 DP assembly  
Global compensation  
Voltage  $\approx 200 \mu\text{V}$



Test on 5 DP assembly  
Individual (DG) compensations  
Voltage  $\approx 50 \mu\text{V}$   
Sensitivity x 4





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Knowledges and skills on  
designing, modeling, realization,  
protection and test of HTS magnets

Thank you for your kind attention!