

Meeting FCC Vacuum and IN2P3

Vacuum skills for accelerators at LPSC

Solenne REY – Accelerator and ions sources division

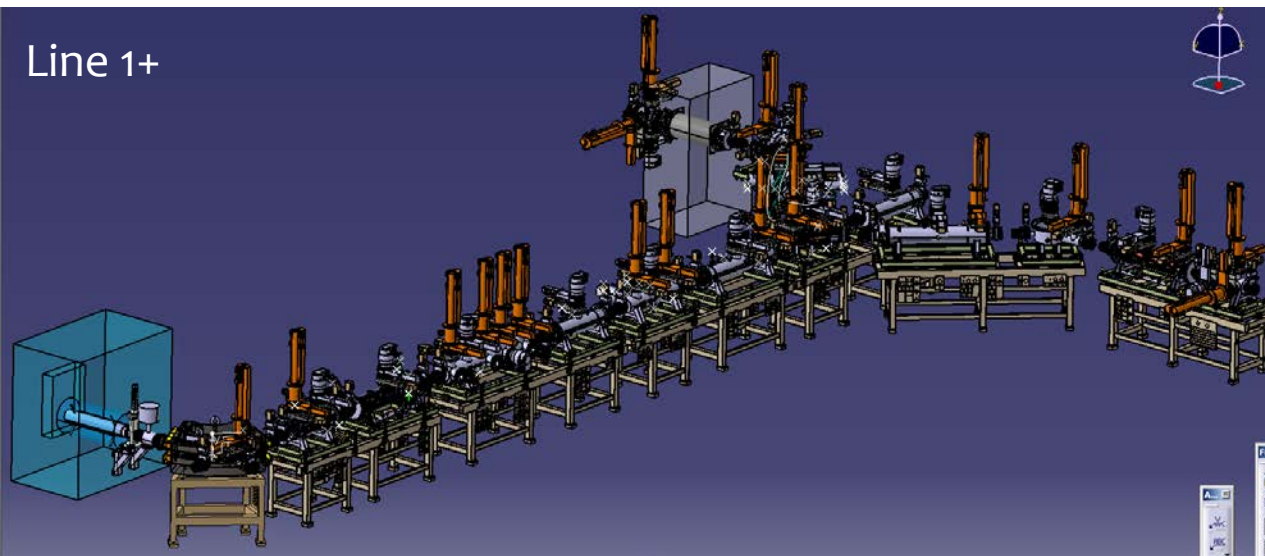
Summary

- Experience in vacuum calculations
- Experience in NEG coating

Experience in vacuum calculations

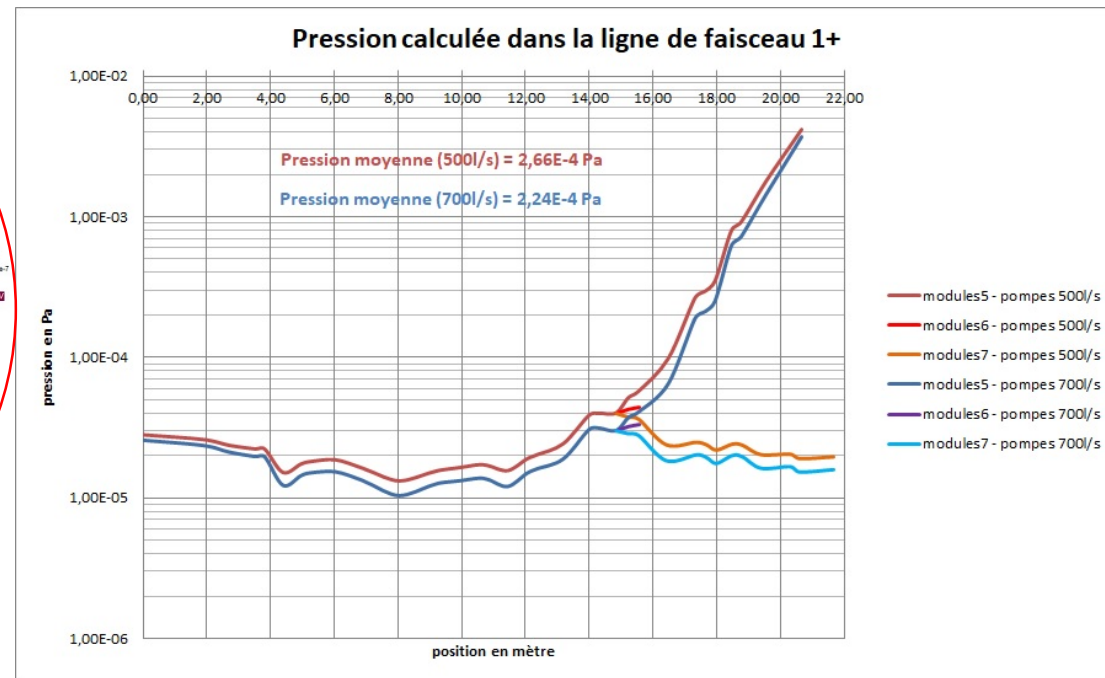
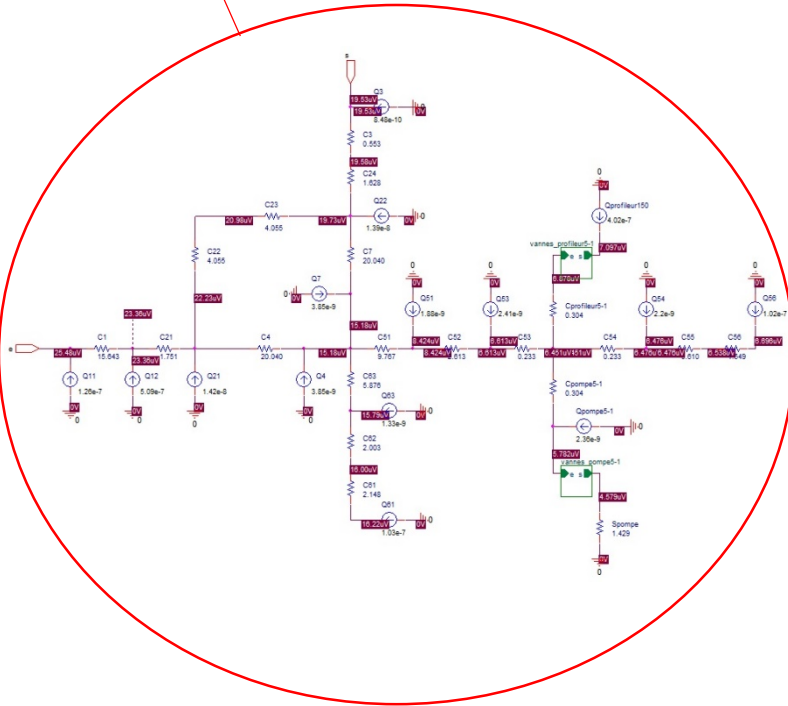
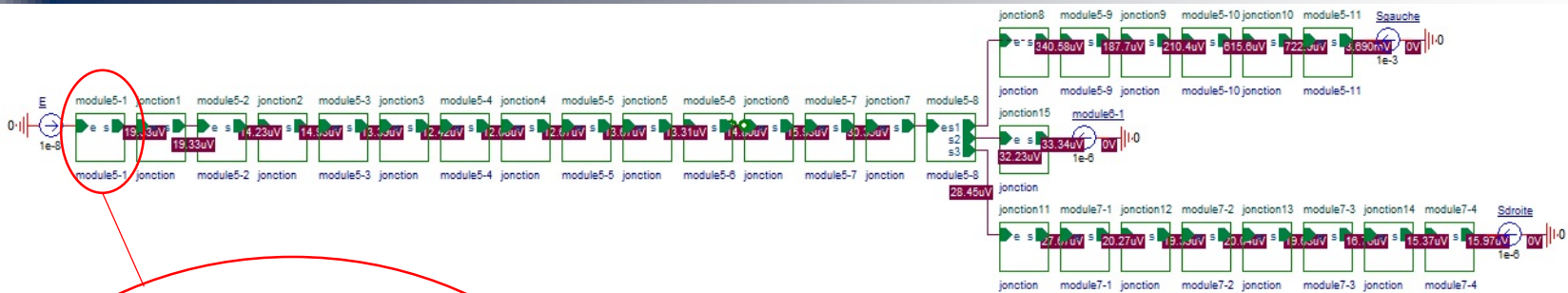
- Collaboration with vacuum group at GANIL for SPIRAL 2
 - ➔ Using the analogy between vacuum and electronics
 - ➔ Using PSpice software to simulate the expected vacuum levels

Line 1+



- Line 1+ ~20 m
- Transfer line LIRAT to
DESIR experiment
 ~10 m

Experience in vacuum calculations

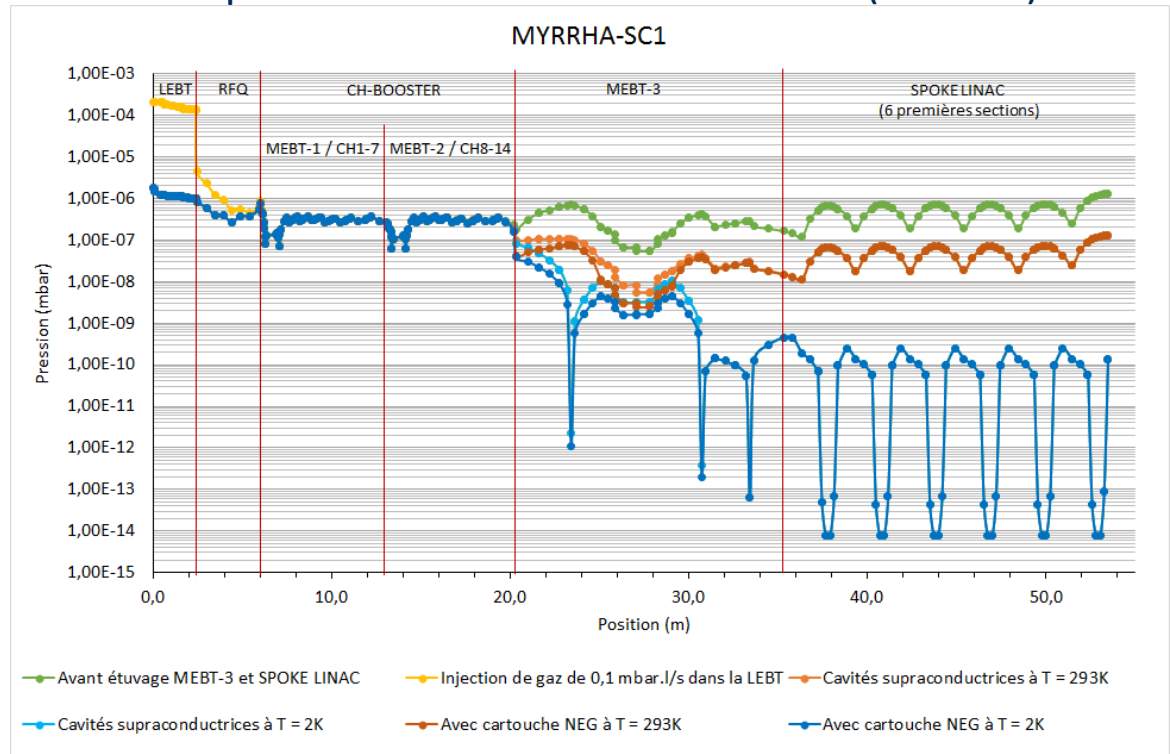
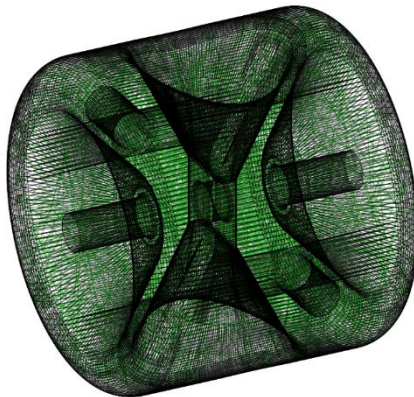


Experience in vacuum calculations

- Calculations for the superconducting Linac of MYRRHA

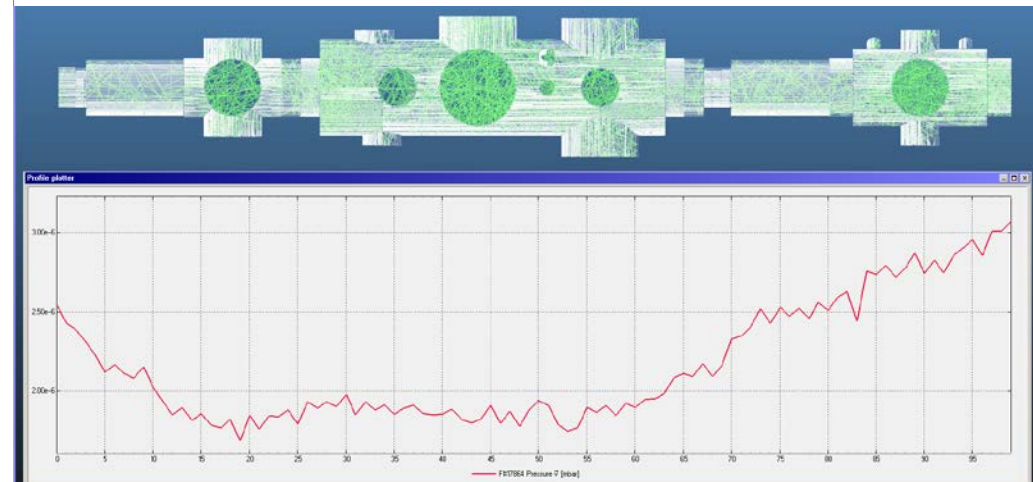
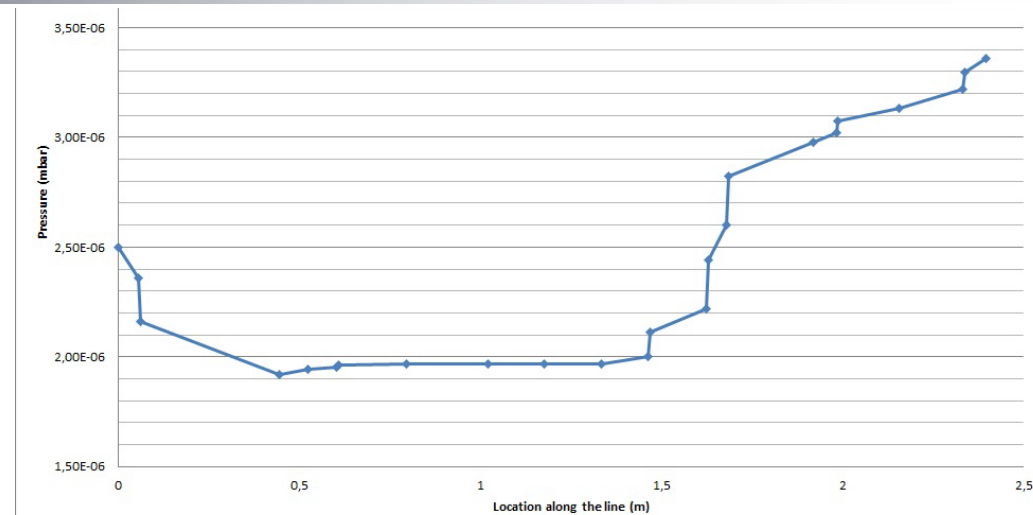
S. Rey et al., Vacuum Models for Minerva Linac Design, IPAC2021, Campinas, SP, Bresil.

- ➔ Using Molflow+ for conductance calculation of Spoke cavities
- ➔ Using PSpice to estimate the expected vacuum levels of the line (~180 m)



Experience in vacuum calculations

- Calculations for the LEBT MYRRHA
 - ➔ Using PSpice software
 - ➔ Using Molflow+ to compare the two simulation methods
- Experimental results are in good agreement with the simulations



Experience in NEG coating

- 7 years in vacuum group at Synchrotron SOLEIL
 - ➔ In situ bake out, with NEG coating activation at 180°C (56% of storage ring)
 - ➔ Collaboration with vacuum group at ESRF to produce NEG coating for SOLEIL vacuum chambers

