

# *Ground Plane*

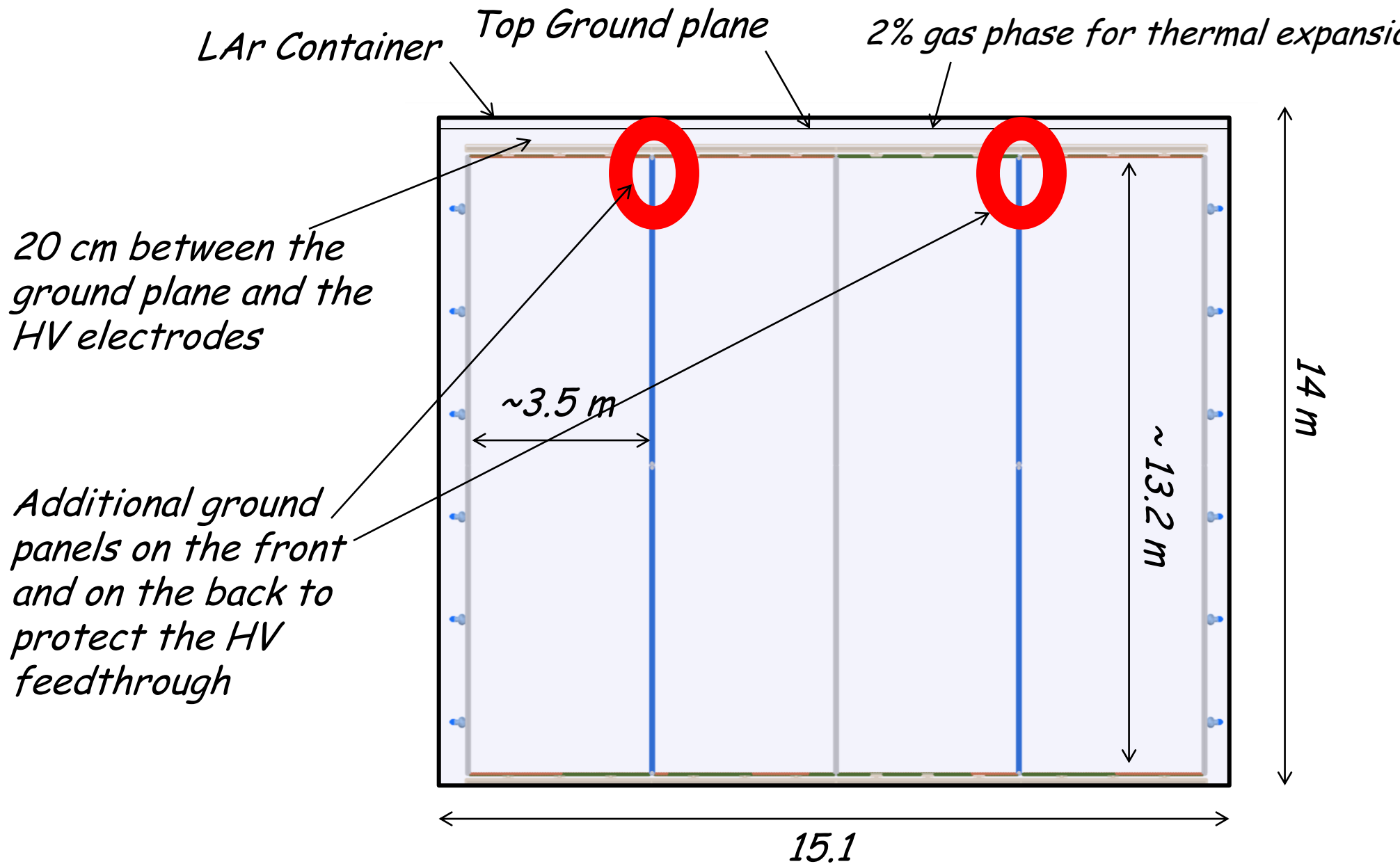
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# INTRODUCTION

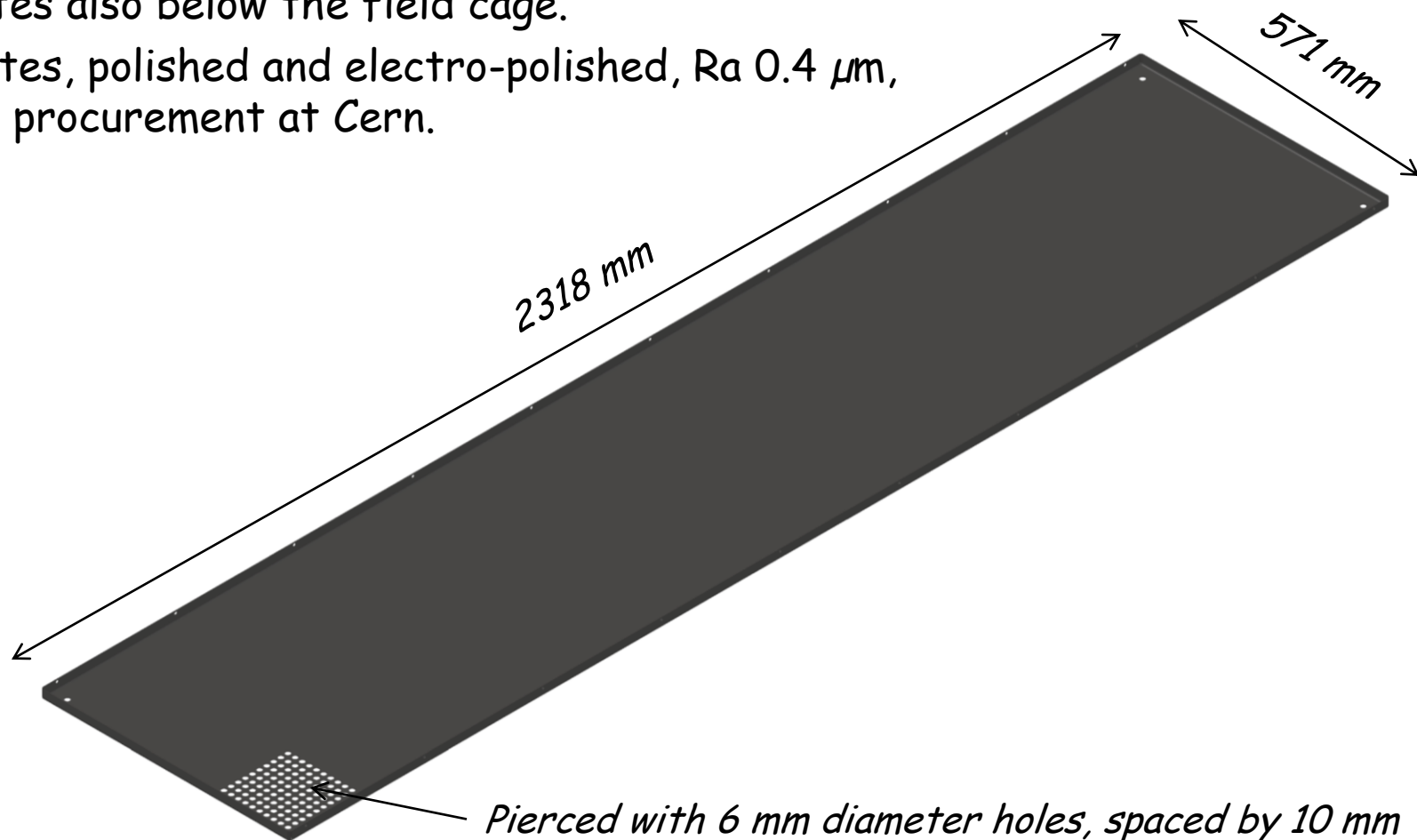
- *Purposes:*
  - *Establish a well defined fringe field between the HV regions and the "outer world".*
  - *Maximize the active volume.*
  - *Establish a well defined safety factor on the maximum field in the liquid argon:  $< 30$  kV/cm*
  - *Minimize the field in the gas volume:  $< 2$  kV/cm*
  - *Minimize the gas volume.*

# Layout



# Ground plates

- Ground plates are inserted above the cathodes and race-tracks to limit the field in the gas phase (see Diamanto presentation for integrated drawings).
- We have to discuss about the opportunity to insert these plates also below the field cage.
- These plates, polished and electro-polished, Ra 0.4  $\mu\text{m}$ , are under procurement at Cern.



# Test chamber

- A test chamber is being setup for the HV field cage and resistive cathode.

*Prototype ground plate  
6 mm piercing holes, St. Steel,  
polished and electro-polished, Ra 0.4  $\mu\text{m}$   
8 pieces + 1 pre-production,  
under procurement  
Same geometry as the one for the large  
panels.*

