

# CYGNO simulations update

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CYGNO simulation working group

12/12/24

# Simulation updates and open points

- CYGNO-04 simulations:
  - copper shielding, acrylic box, copper cathode → completed
  - next volumes to simulate → field cage
  - caveat: for many materials (e.g FC) we only have upper limits on activities, ICP-MS measurements needed
- Calibration simulations:
  - preliminary simulation presented by Zahoor al last simulation meeting
  - more realistic simulation needed (including geometry of the calibration window in copper shielding and acrylic)
- Digitization:
  - parameters for saturation have been tuned → good agreement with  $^{55}\text{Fe}$  data, preliminary comparison with alpha seems promising
  - needed validation with other datasets (radon, 59 keV of  $^{241}\text{Am}$ )
- AmBe data/MC comparison (Geant4+digi)
  - Previous simulations by Flaminia could be resumed to clarify some data/MC discrepancy