

# CYGNO simulation tasks

---

Giulia D'Imperio

09/09/25

# Simulation activities

Tasks and people involved:

- CYGNO-04 full background simulation → Geant4+digi+reco (Giulia)
- Radon simulation and comparison with data (Federico V., thesis Jan 26)
- Calibration simulation:  $^{55}\text{Fe}$  and Kr (Zahoor)
- Full simulation LIME RUN4 for background model and DM sensitivity studies  
→ re-digitization + reconstruction + background model
- Full simulation LIME RUN5 AmBe and comparison with data (Pietro)
- Full simulation LIME RUN3 for Ba, Eu, Am source runs (?)
- Low energy ER and NR simulations for ML
  - New samples available on cygno-sim (ER from 1 to 50 keV, NR from 20 to 50 keV)