The new simulation campaign for CNAO2024

G. Battistoni, S. Muraro

INFN Milano

New developments

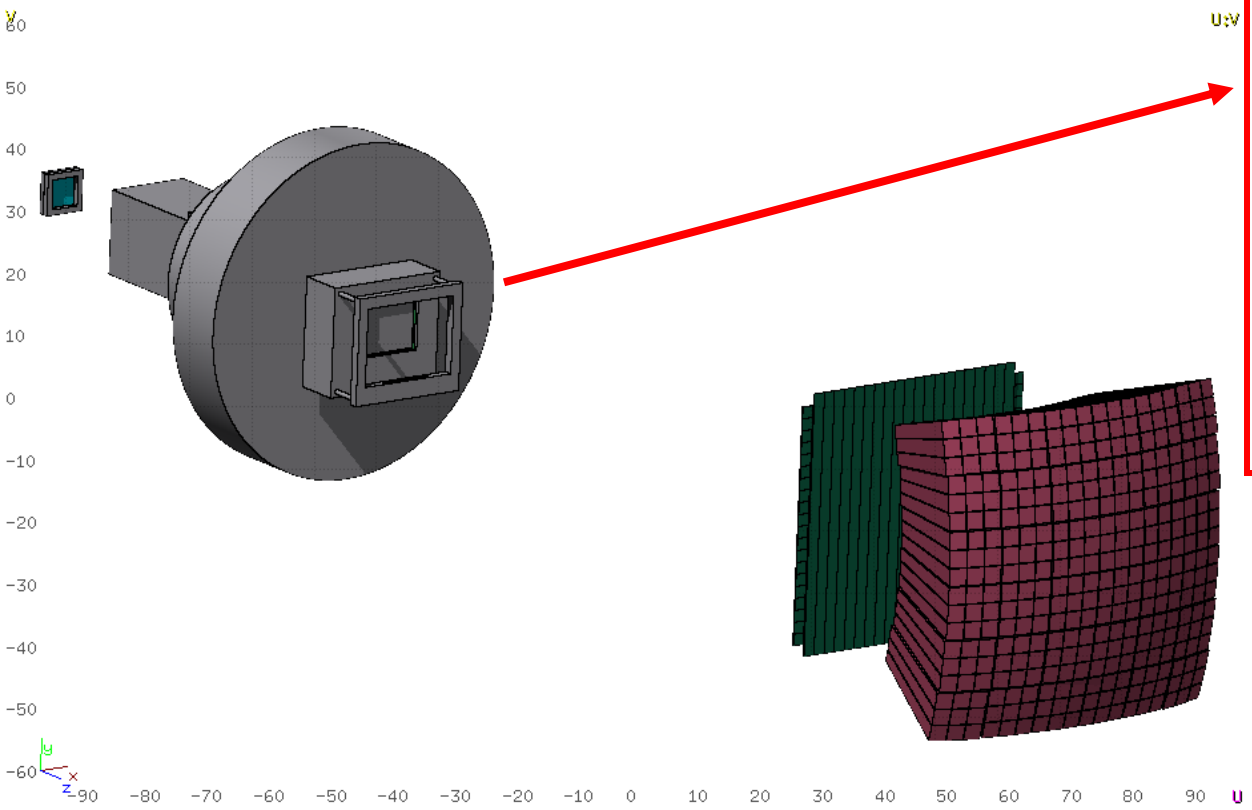
With respect to CNAO2023 the main innovations concern:

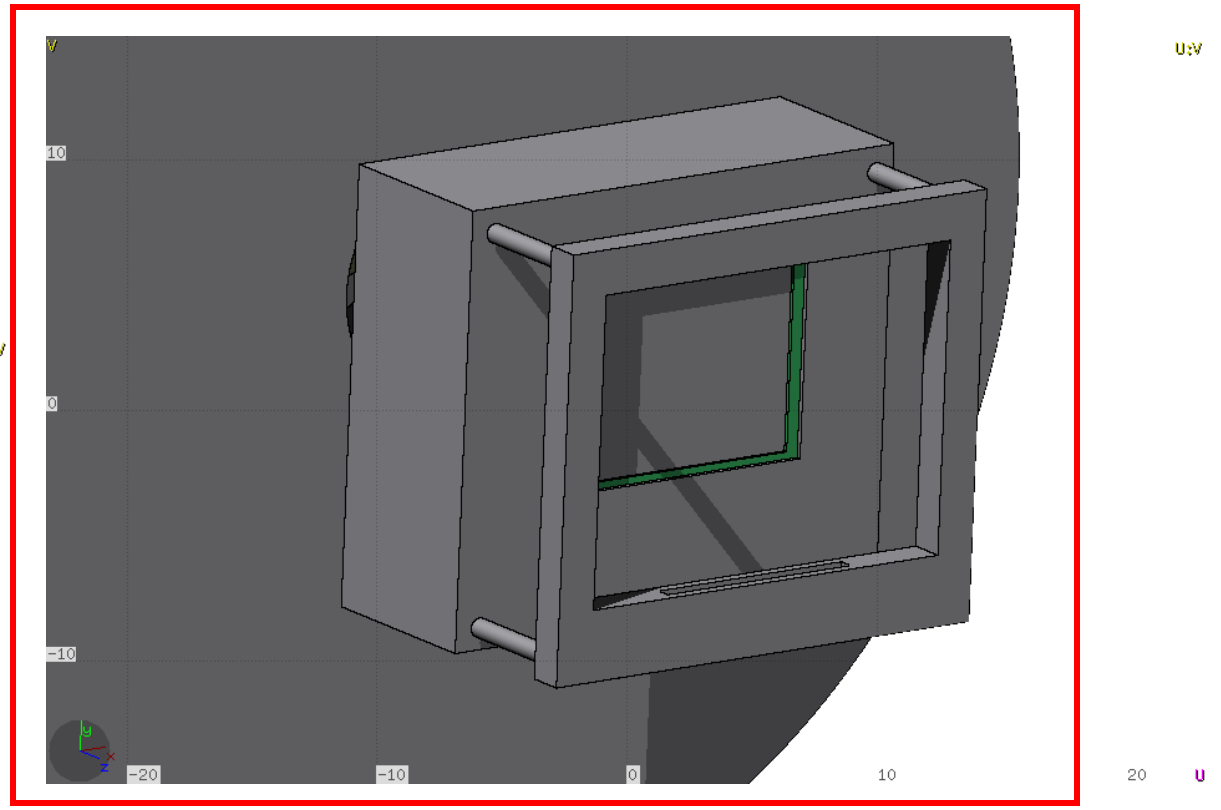
1) The full CALO geometry
2) The new MSD box (we thank Pg group for providing the CAD file)

A new simulation campaign is now ready:

- CNAO24PS_MC
- run 200 (C target)
- run 202 (Air target = no target)

The new CNAO24PS_MC geometry





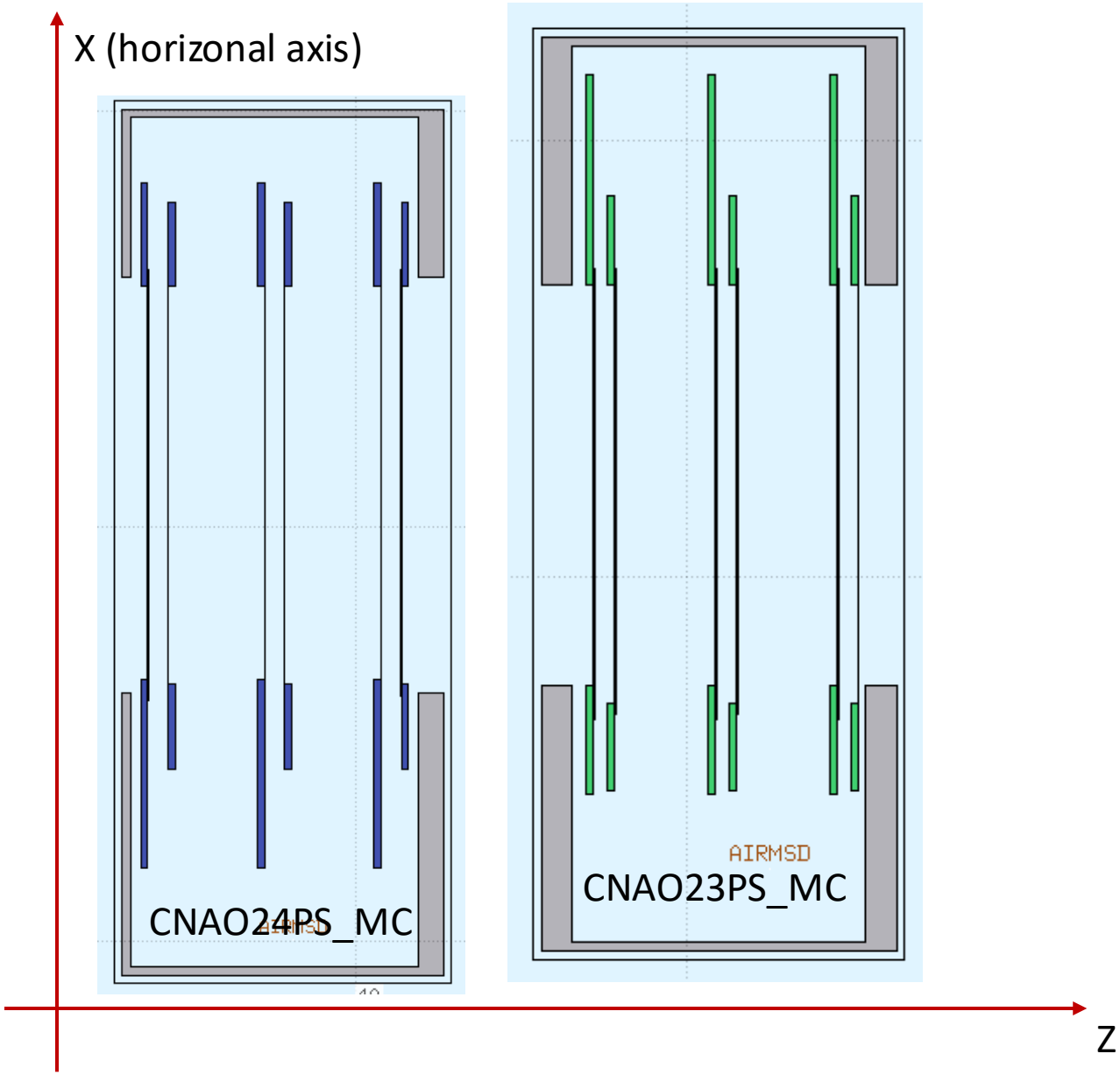
SupportInfo = 4 in TAMSDdetector.geo

Question: what about the Root geometry for GenFit etc?

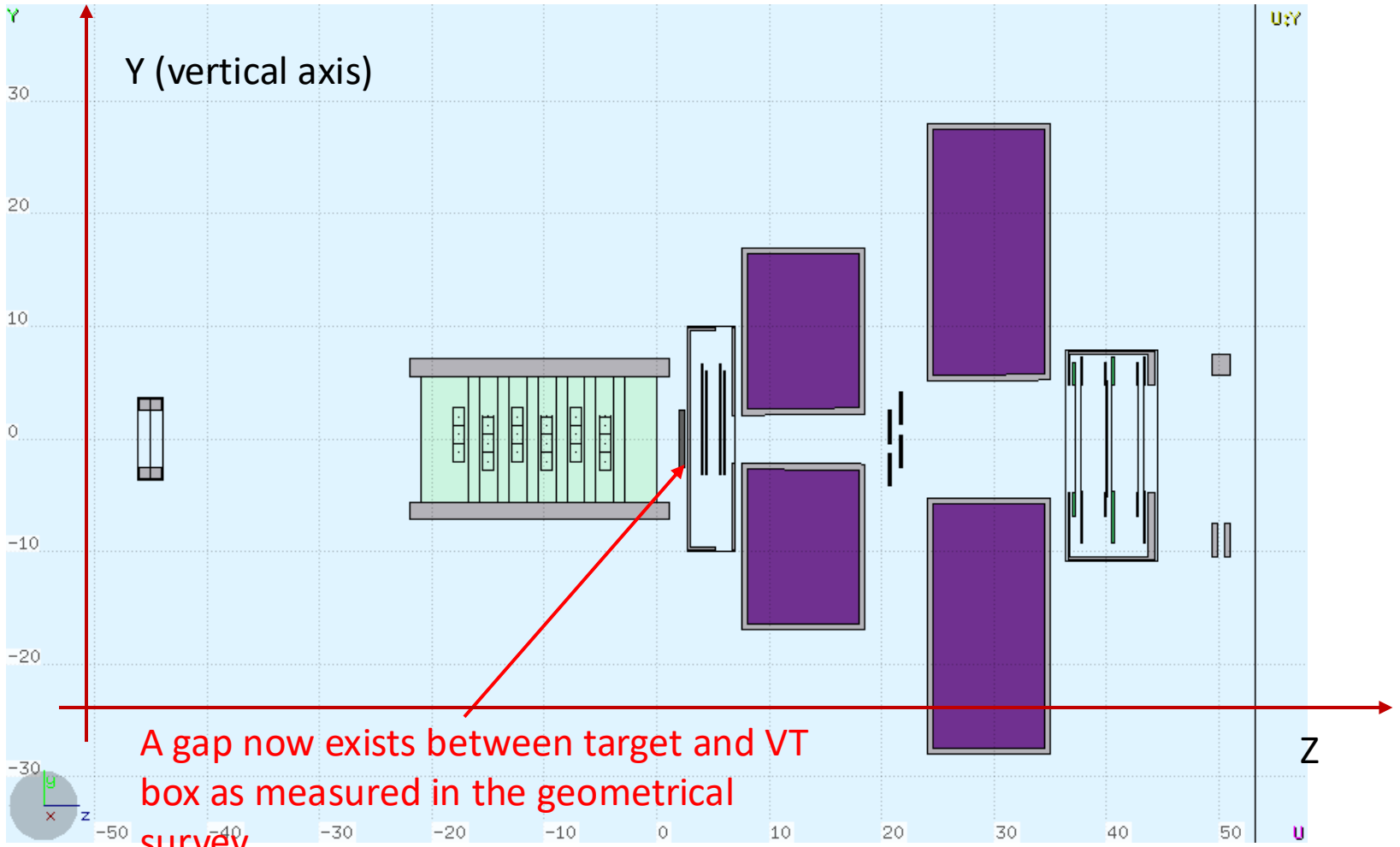
MSD sensors

Thanks to the CAD files we could understand some details of the arrangement of MSD sensors, that were probably not exact in CNAO23PS _MC and previous campaigns (orientation of PCB and sensors)

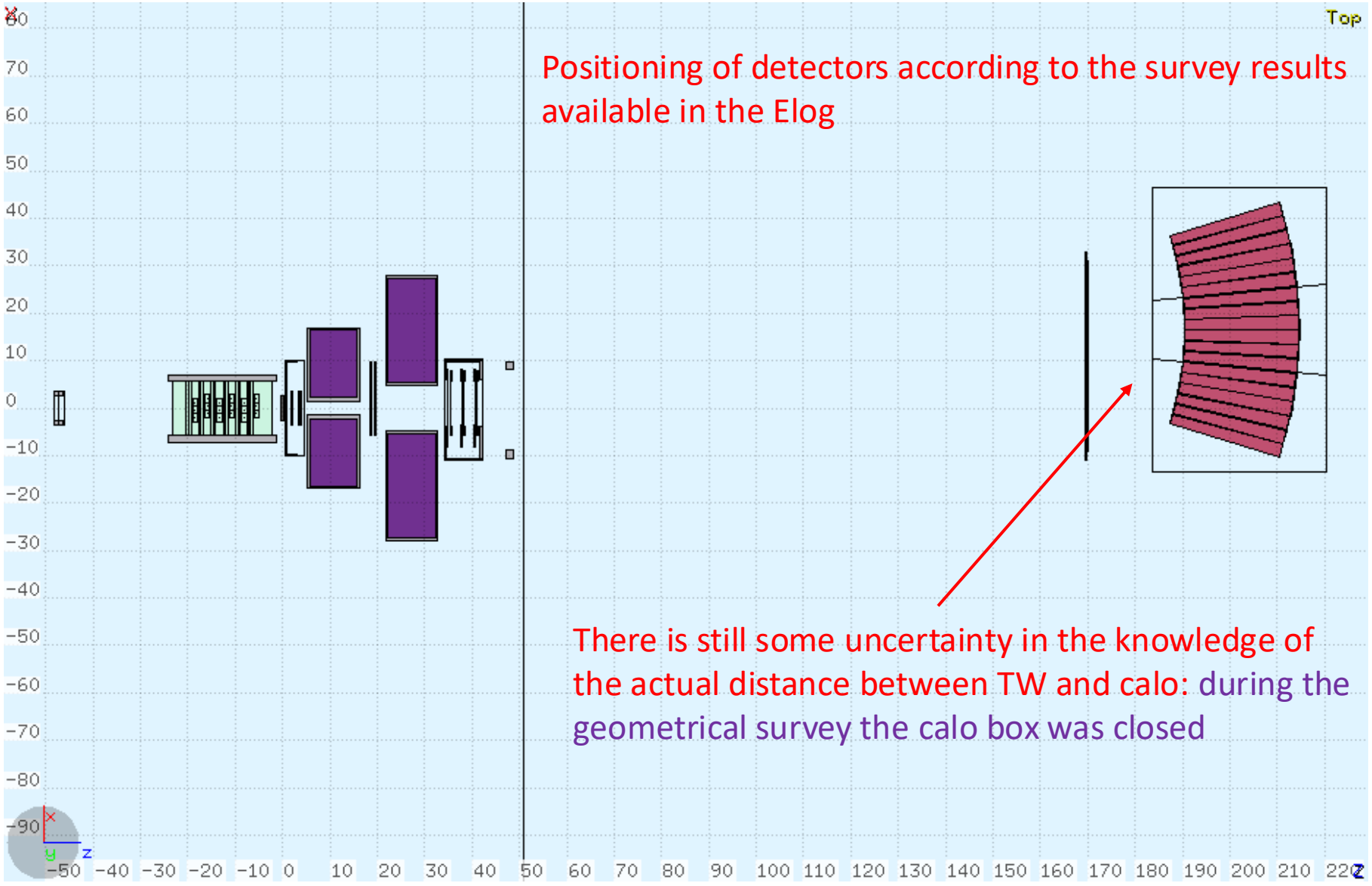
This, however, should not invalidate the previous simulations



The new CNAO24PS_MC geometry



The new CNAO24PS_MC geometry



Conclusions

- The CNAO24PS_MC is essentially ready
- We are waiting to clarify the missing details and discuss with the Physics and analysis group about the production strategy
- For example: which calibration files?

Increasing backlog for MC simulation:

- GSI21PS_MC at 200 MeV/u: waiting to clarify geometry details
- HIT22PS_MC, CNAO22PS_MC: waiting to define and freeze beam model
- CNAO23PS_MC: more statistics is required (easy)
- A lot of work for GSI2026 design…