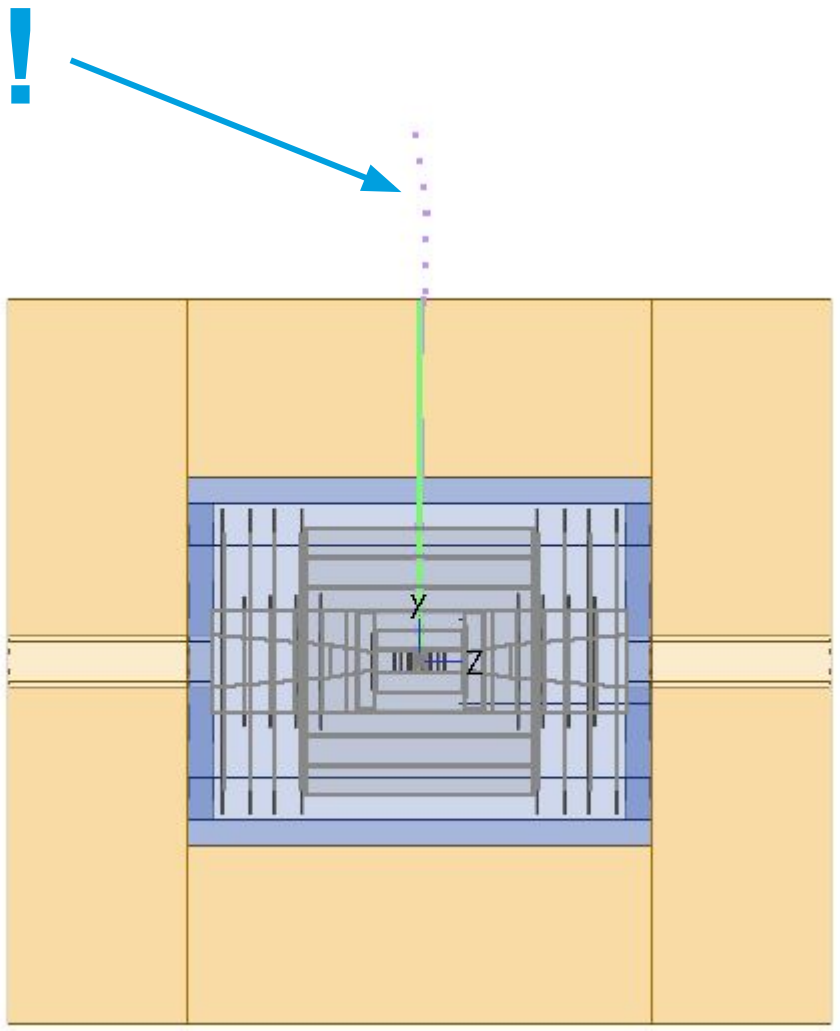
Intro and miscellanea



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Ben Rosser (University of Chicago)

Informal detector team meeting 27/07/2023

THE UNIVERSITY OF CHICAGO

DESY.

HELMHOLTZ RESEARCH FOR GRAND CHALLENGES

Key4hep-based image available

https://hub.docker.com/r/madbaron/k4test-ubuntu

docker pull madbaron/k4test-ubuntu

docker run -it -e DISPLAY=$IP:0 -v /path/to/local/data:/data --rm madbaron/k4test-ubuntu

source setup.sh

Updated geometry and CaloHitSelector processor.

- **Make sure you grab the latest version!**

Thomas has prepared an lcio converter that creates tracks with proper links to the hits

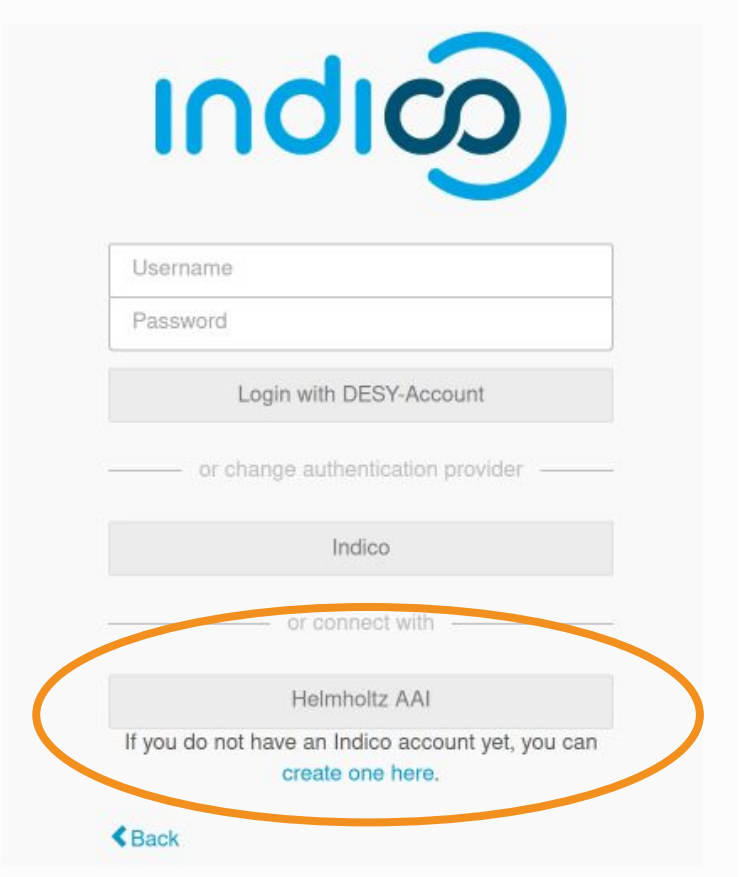
Updates to v0A geometry

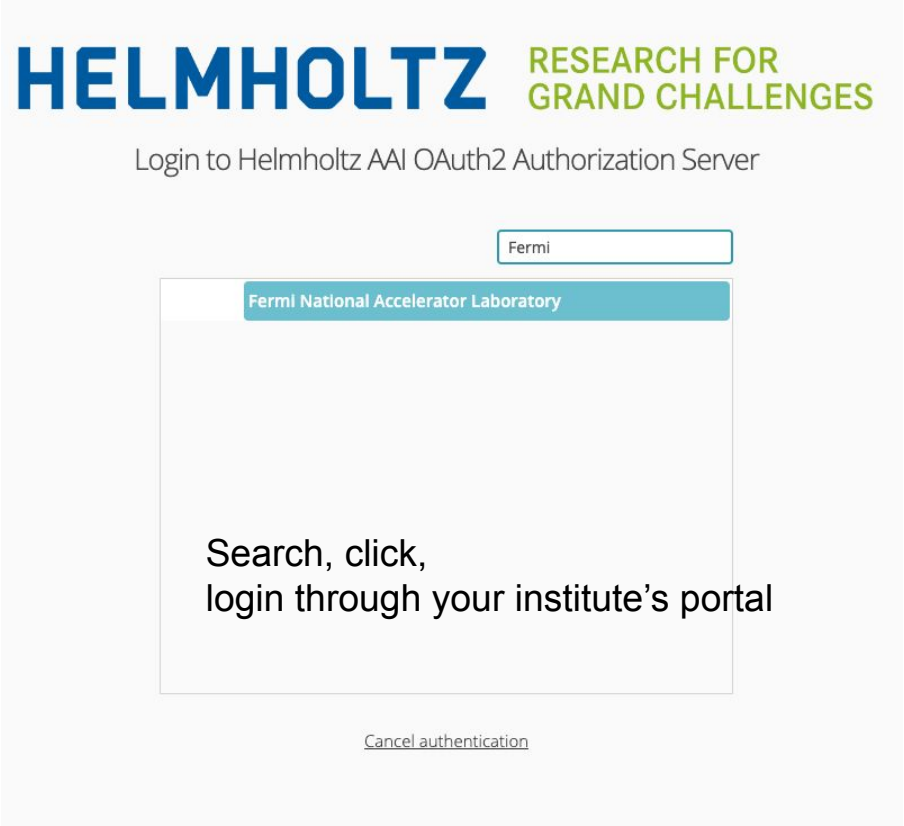
Finally added the magnetic field in the standalone muon spectrometer

- Added a 5T magnetic field outside of the HCal
- Script to generate custom magnetic field map here
  - Now writing a dd4hep::ToroidalField to be more efficient (no interpolation)
- Got rid of the “silicon shells” and used CLIC’s implementation of RPCs instead (i.e. I removed the iron from the yoke, and kept the rest the same)
  - We can reconstruct muons with the software as is (TBC: the curvature now is in a different plane)
  - Long term: evolve DDSimpleMuonDigi into a processor that creates tracker hits, and to muon tracking with ACTS
- Visualisation I can’t get ced2go to show only the RPC chambers instead of the whole “yoke” volume.
  - Can somebody help?

Thank you!

Logging in DESY indico





Full instructions at
https://indico.desy.de/news/6-using-helmholtz-aai-as-login-method