

# **Electron Beam Density Boosting**

**In a Gabor lens**

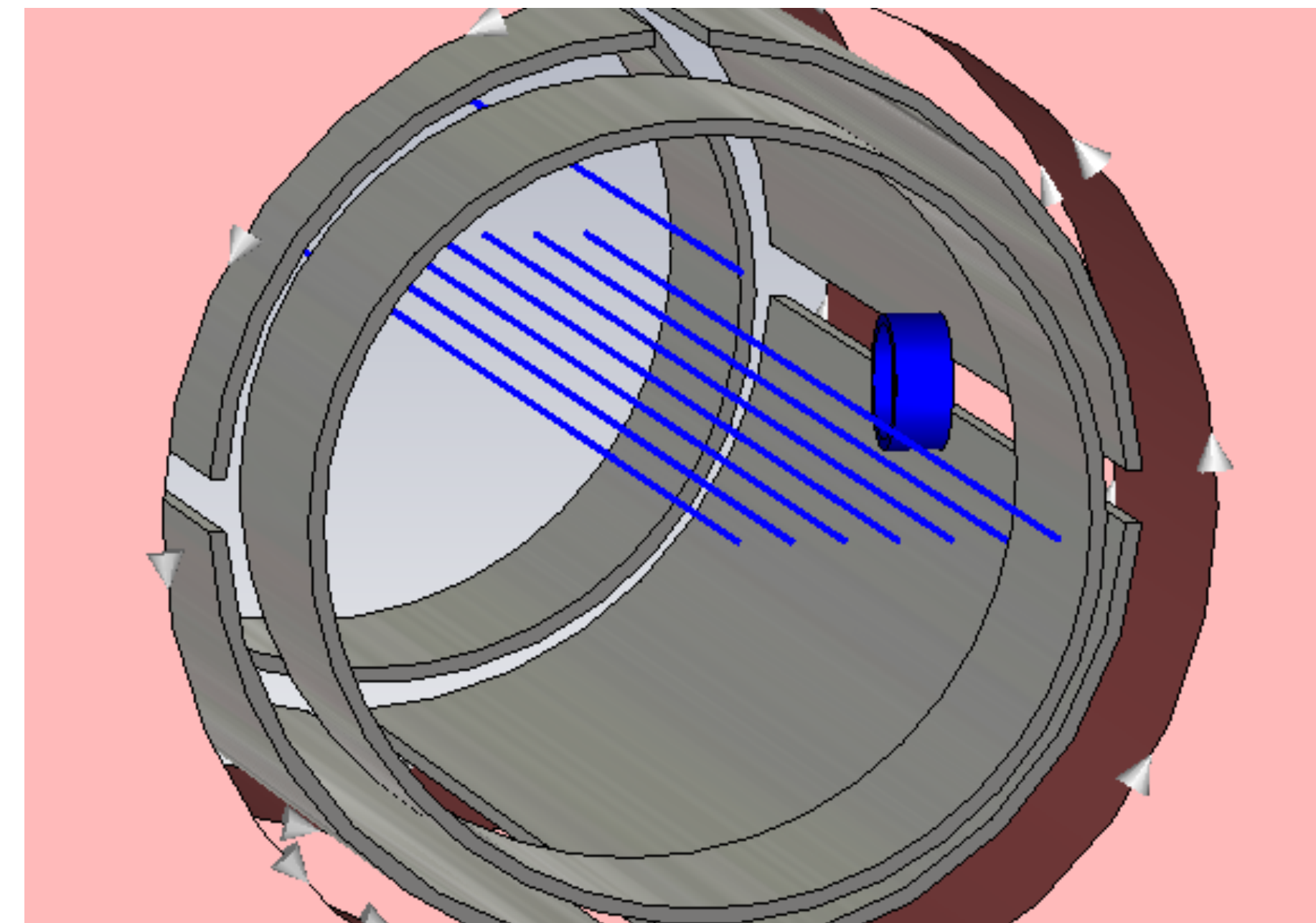
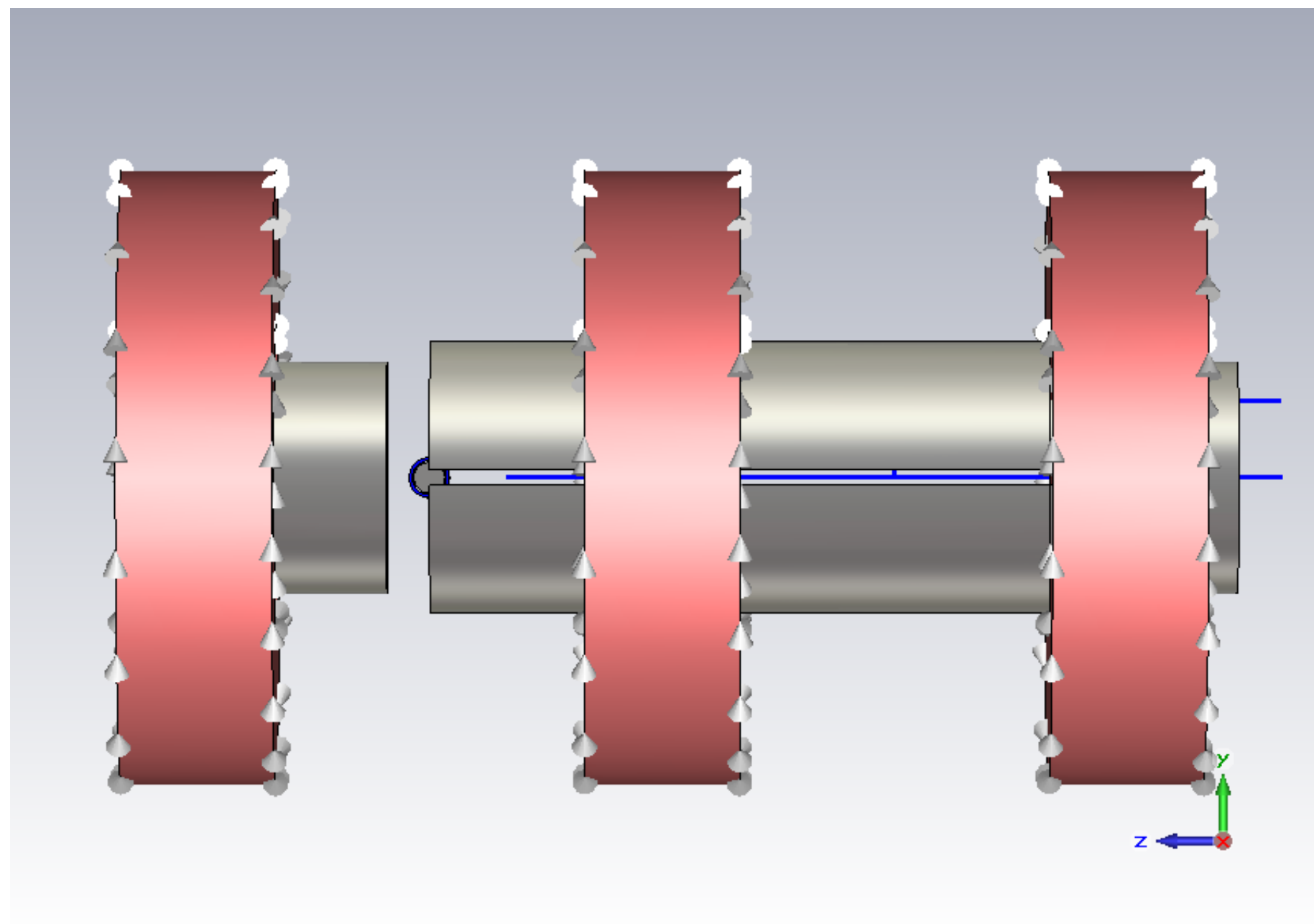
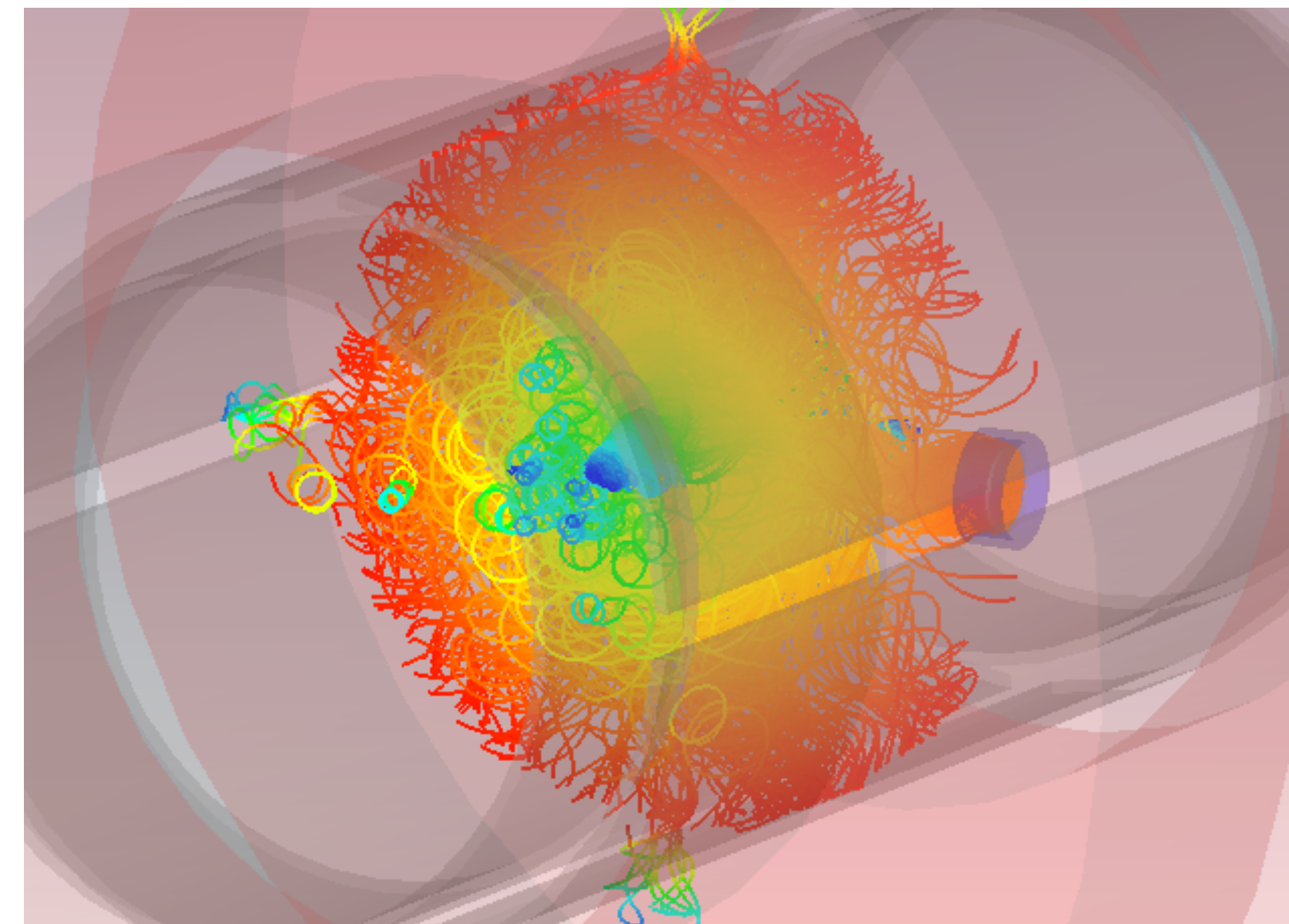
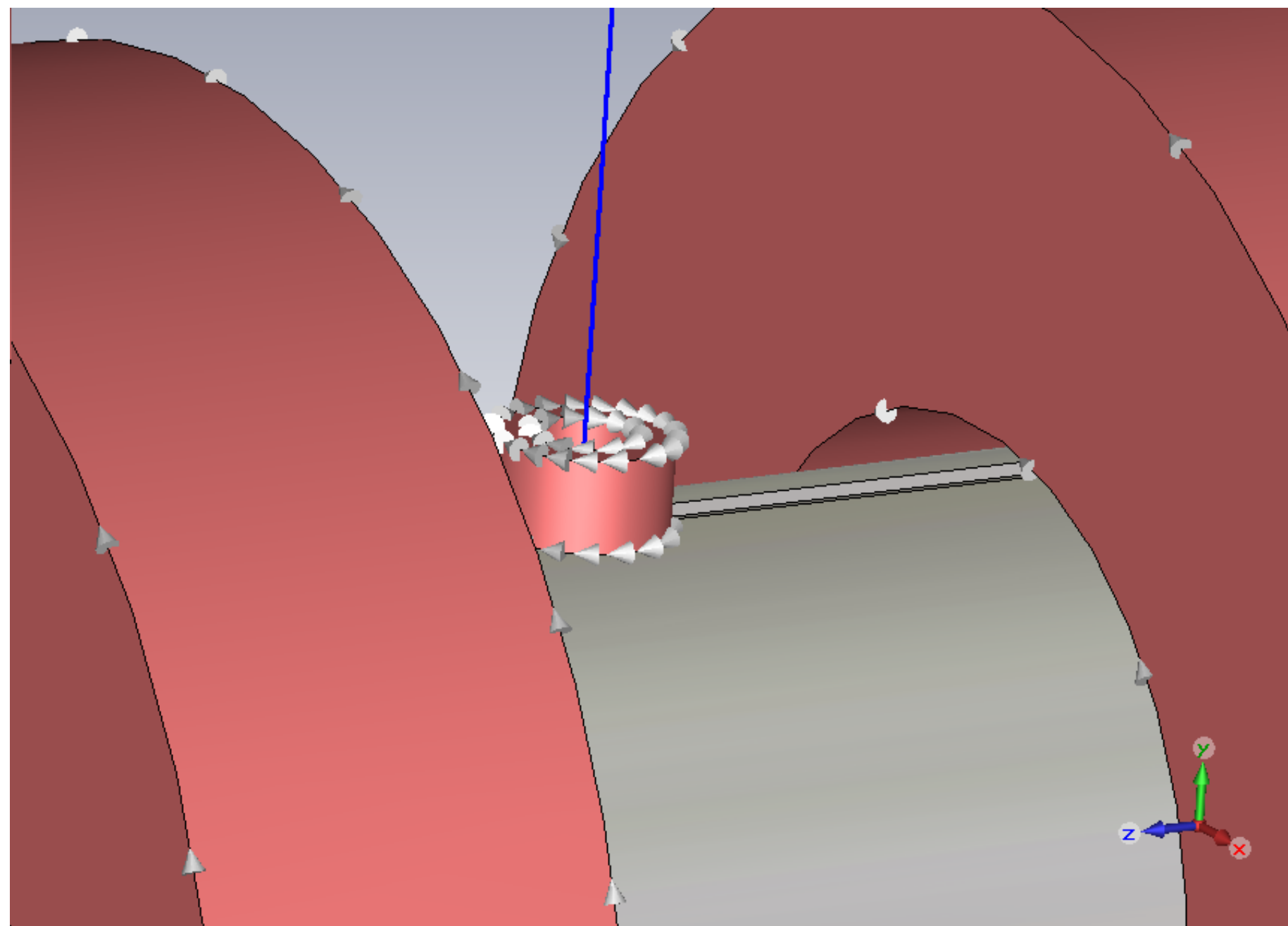
**Christoph Beberweil, Riezlern 2023**

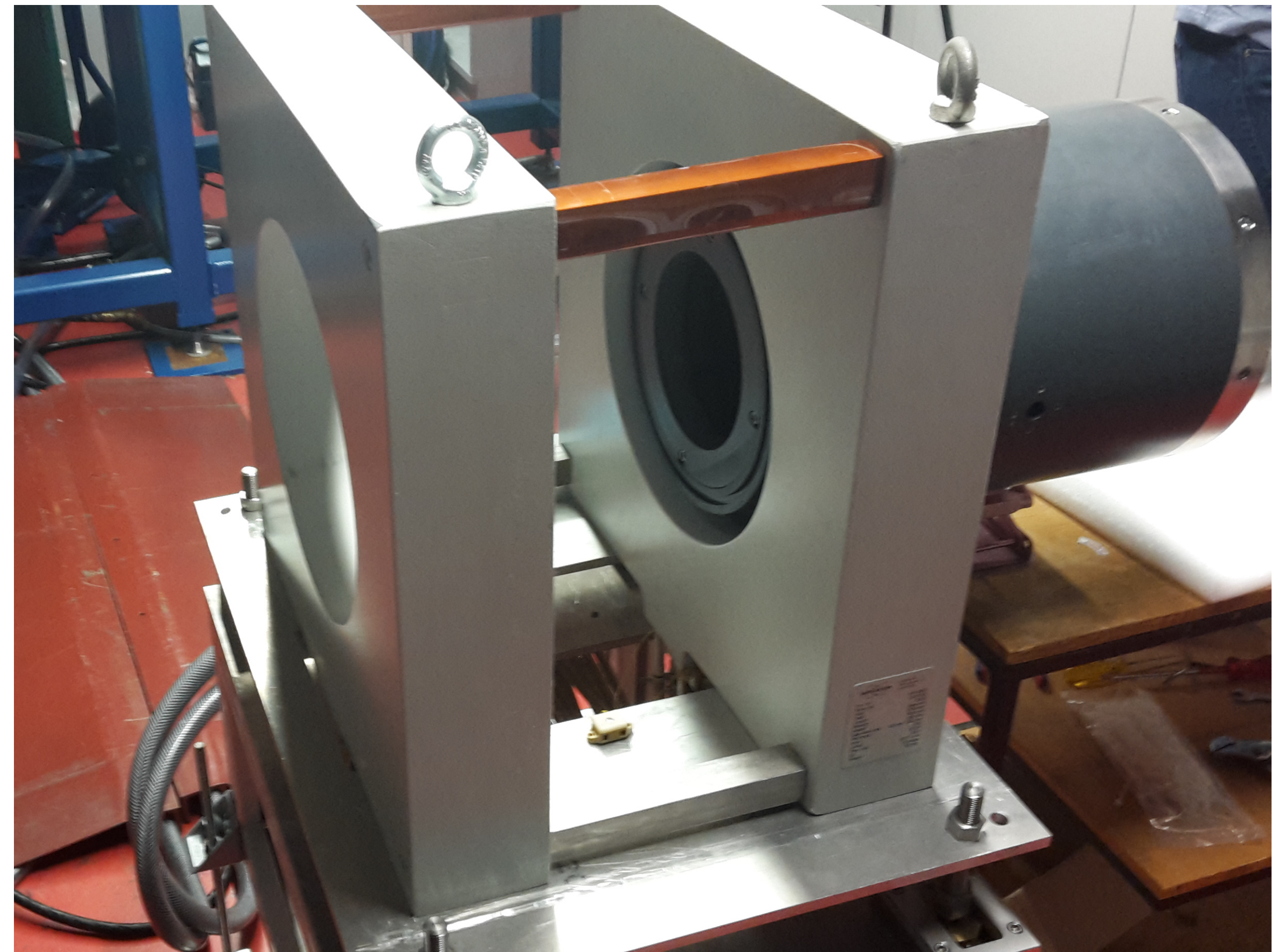
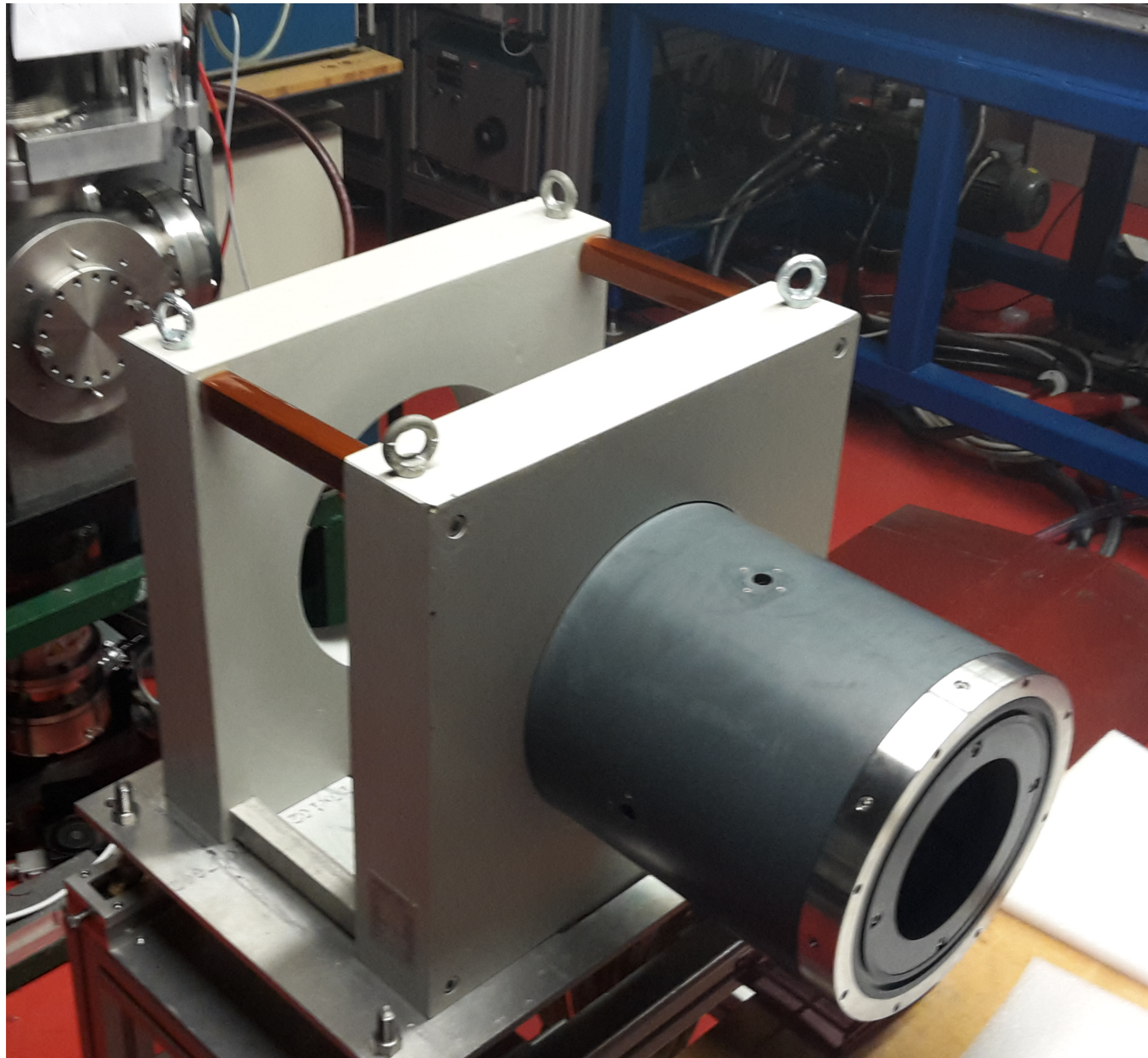
# Hello World

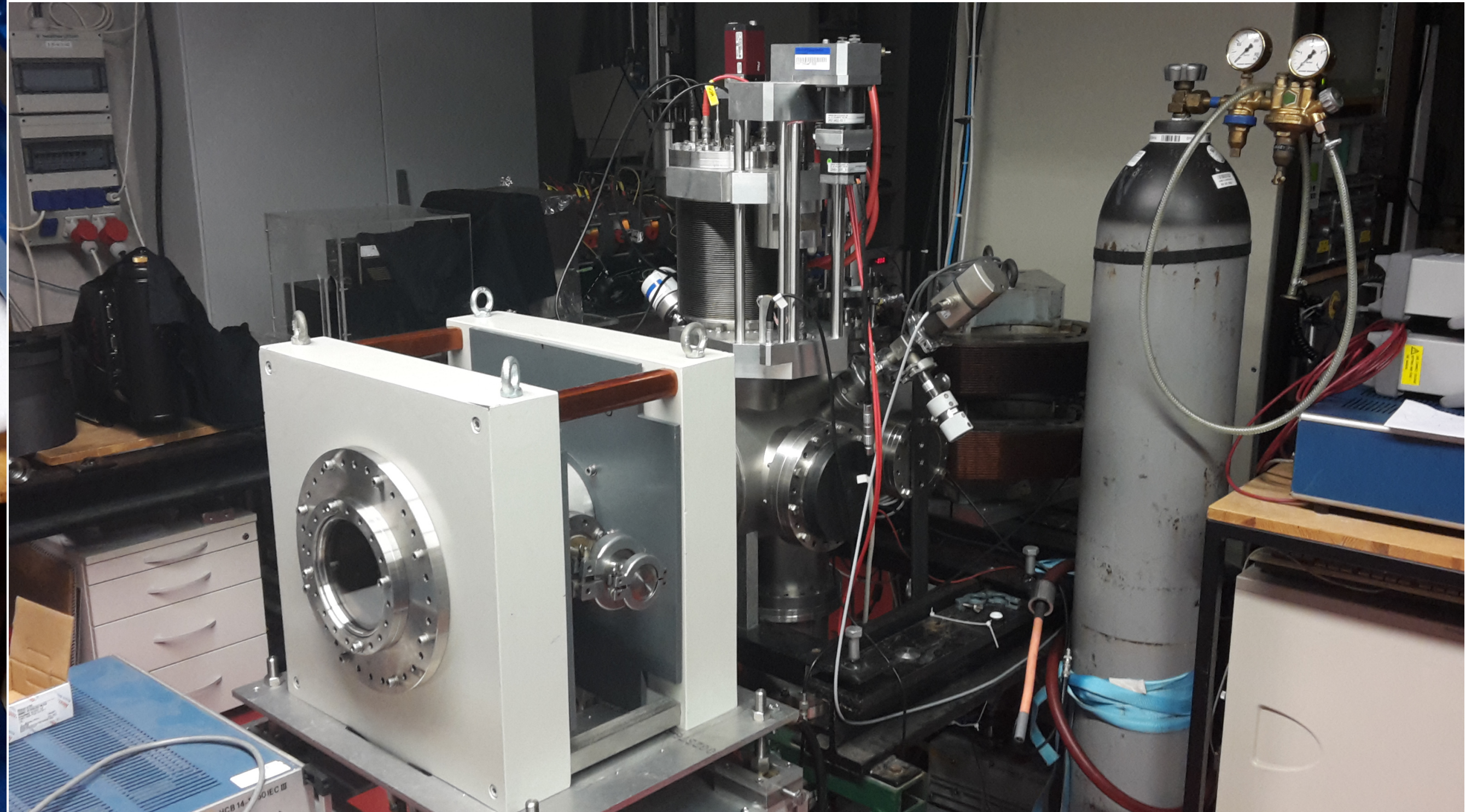
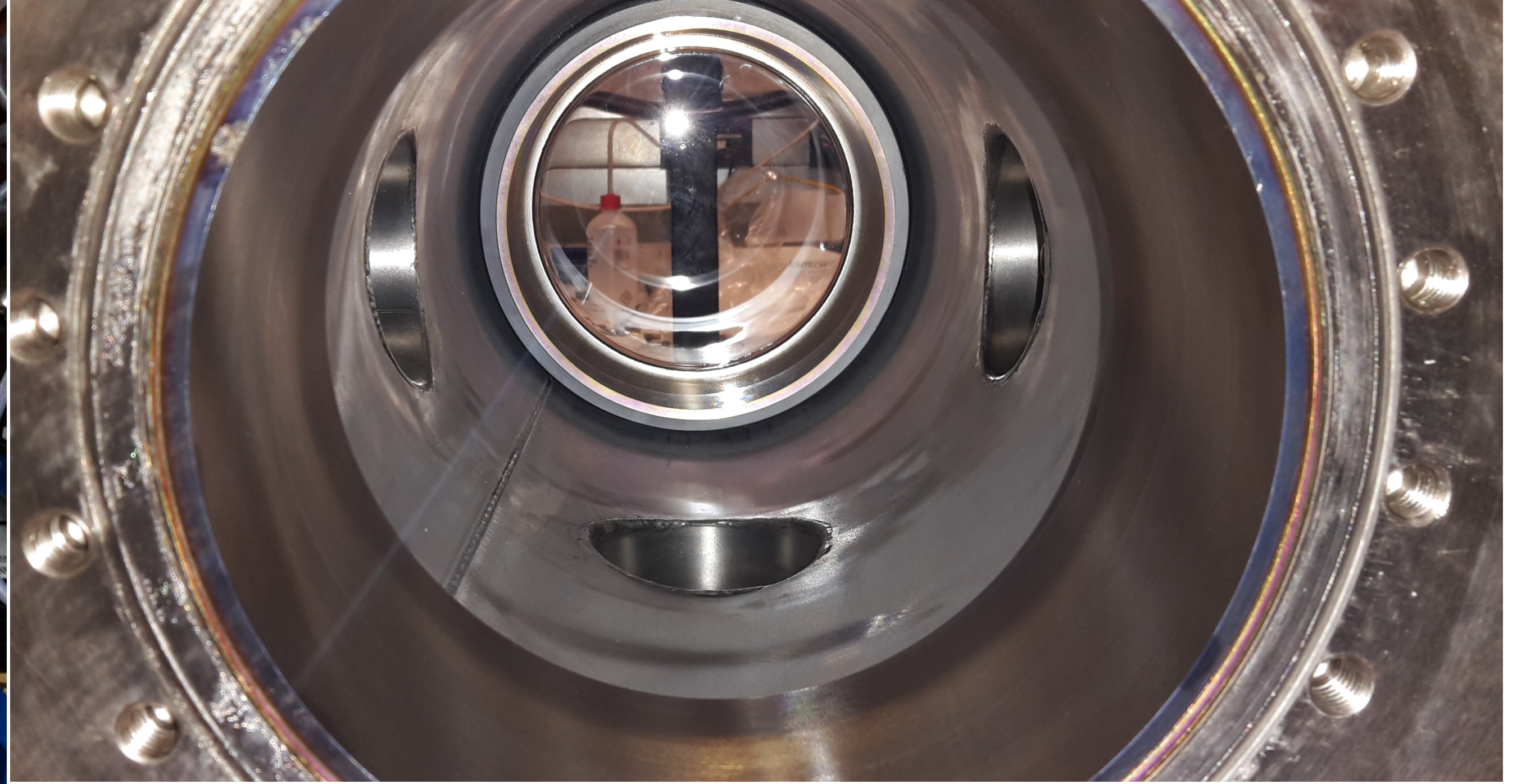
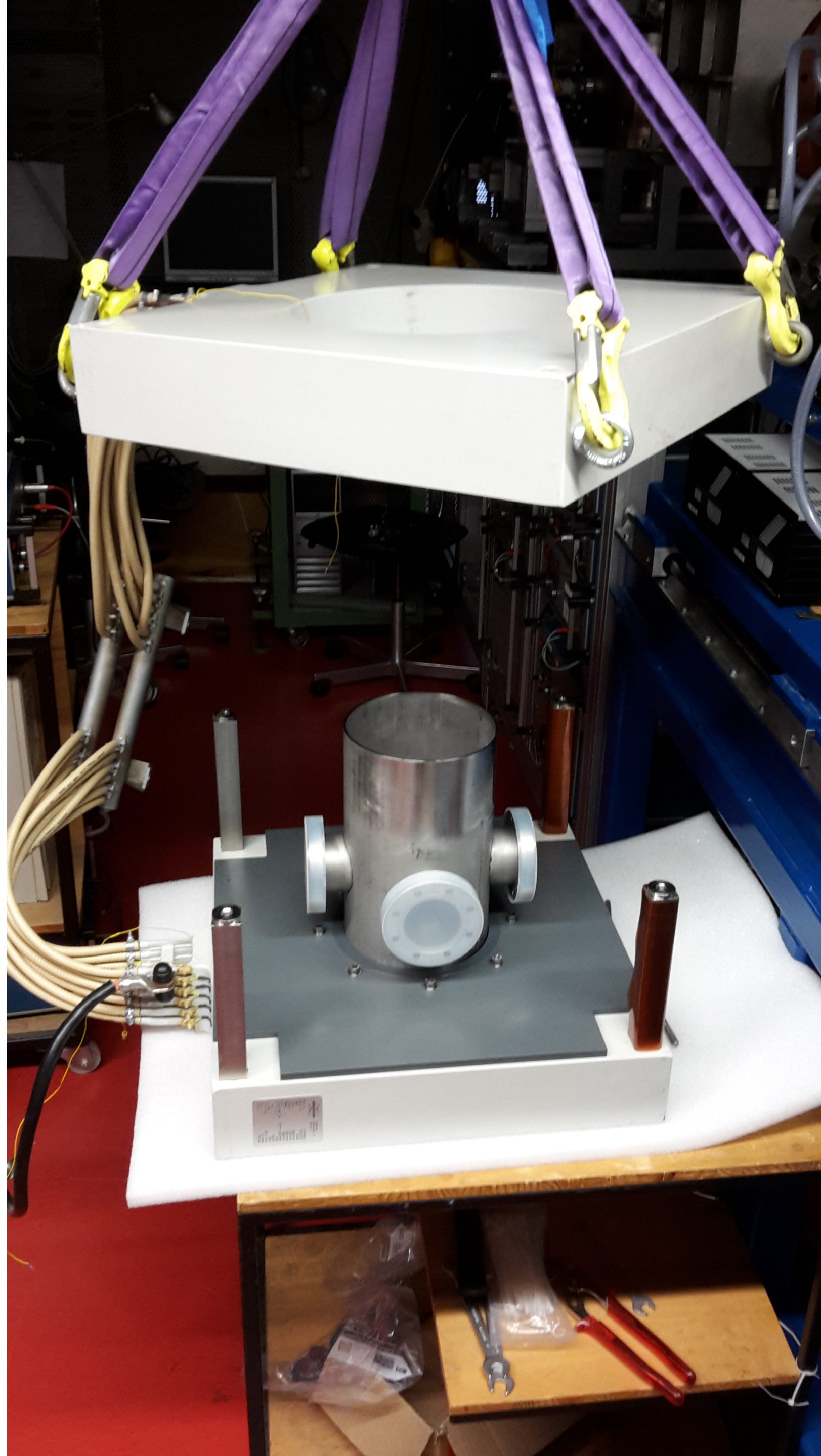
<https://beberweil.eu>

- Physicist
  - M.Sc 2017
- Career
  - IT Support 2017
  - Consultant 2017
  - Software Developer 2019
- Musician

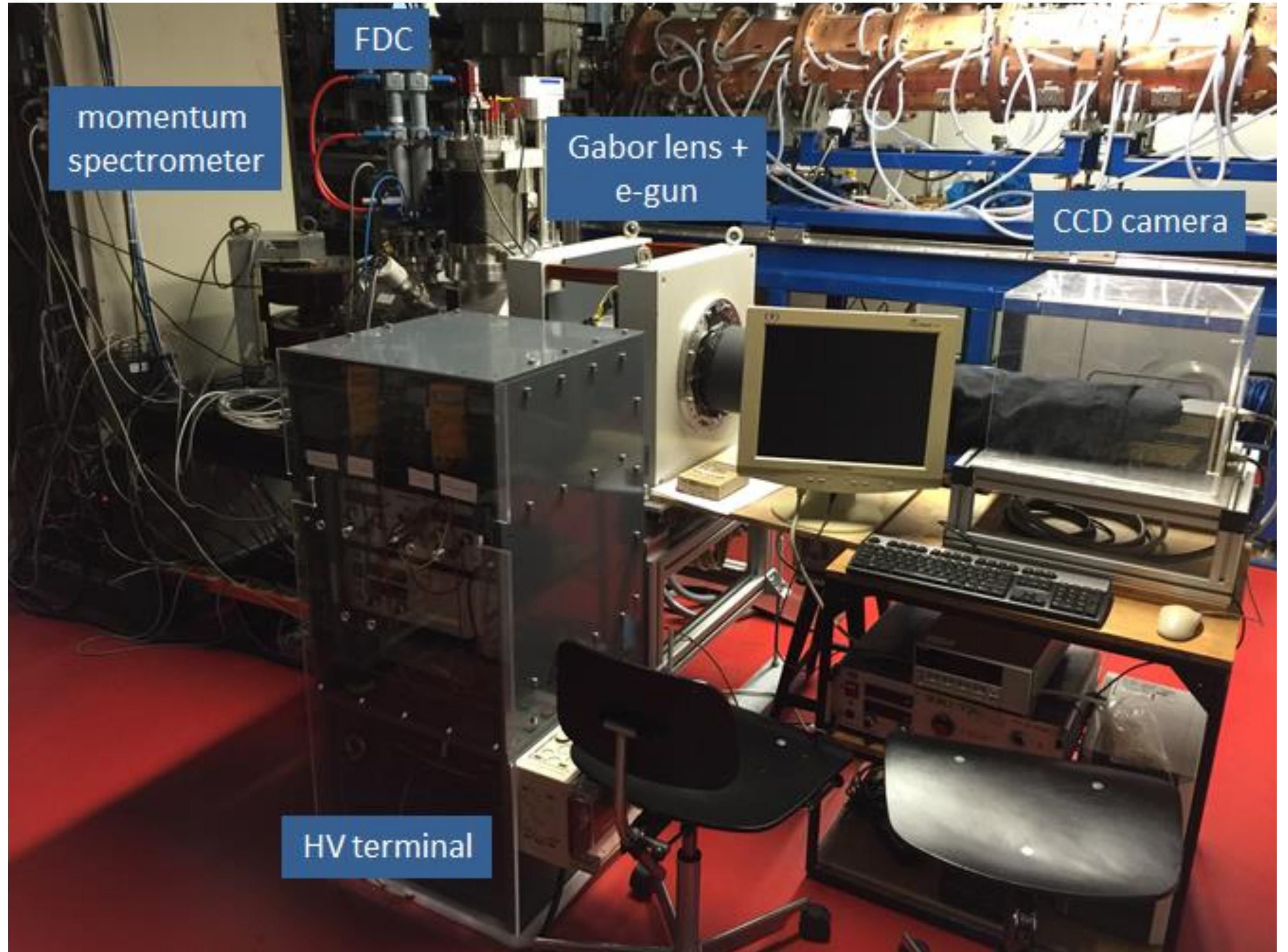
# Designs





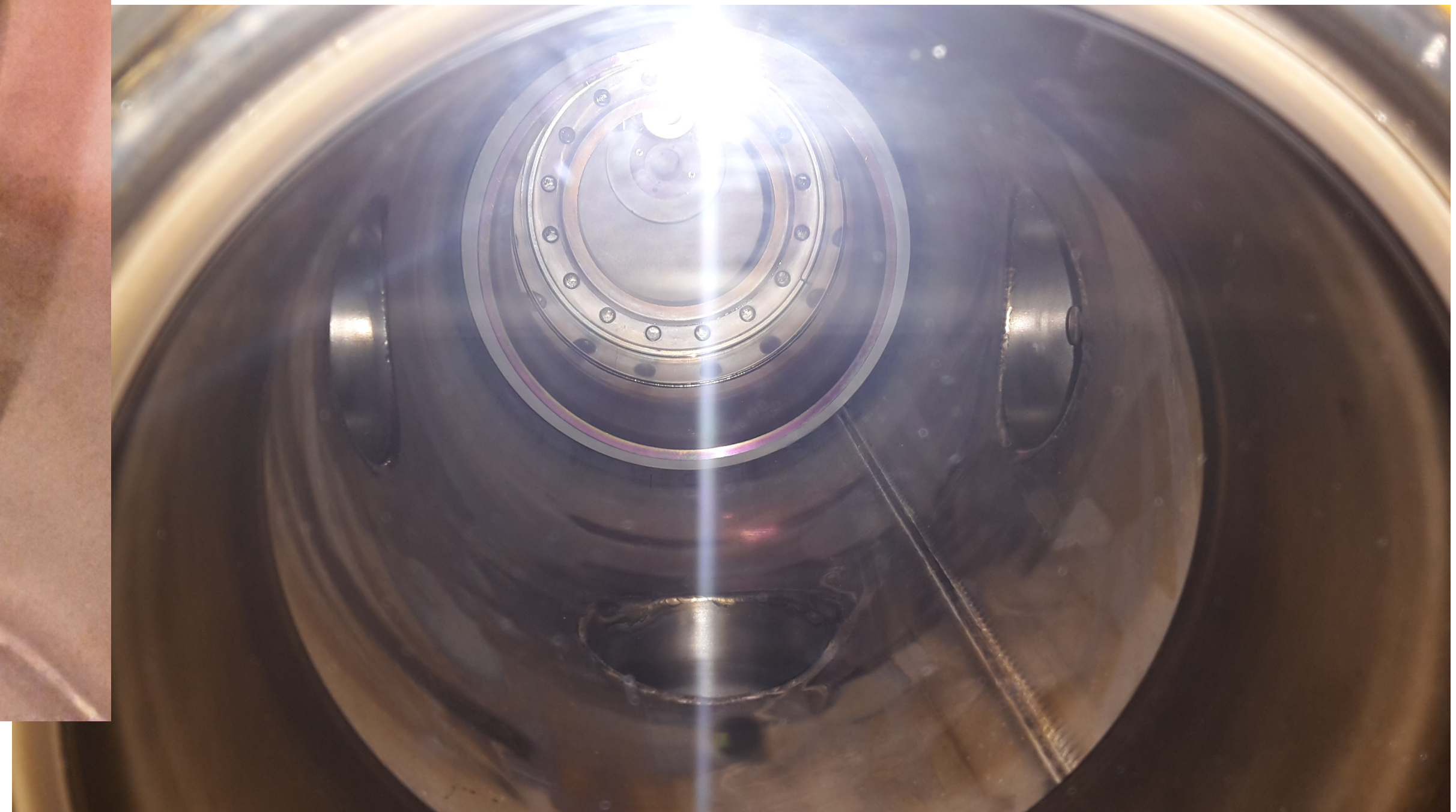
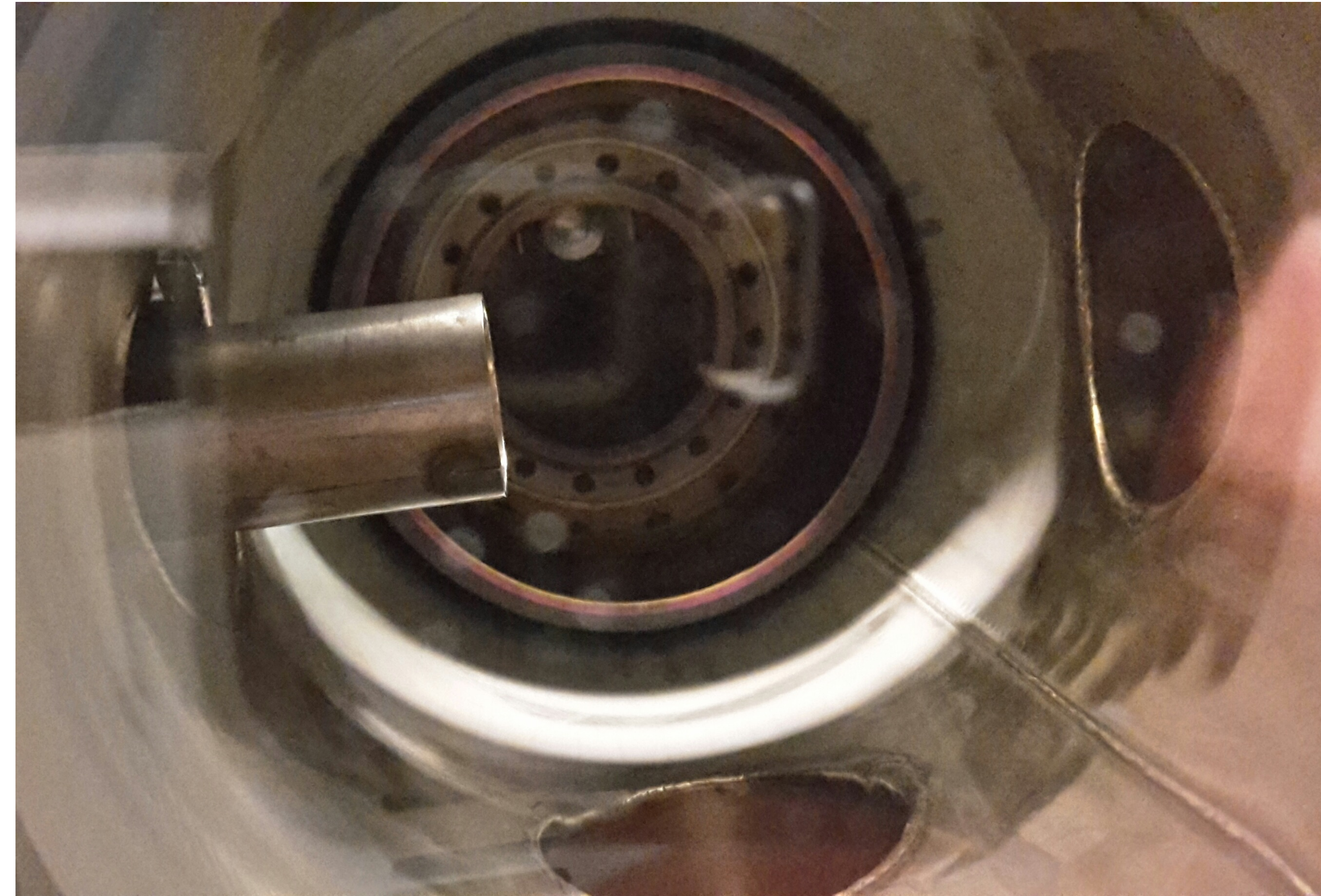


# Experiment



# Electron source



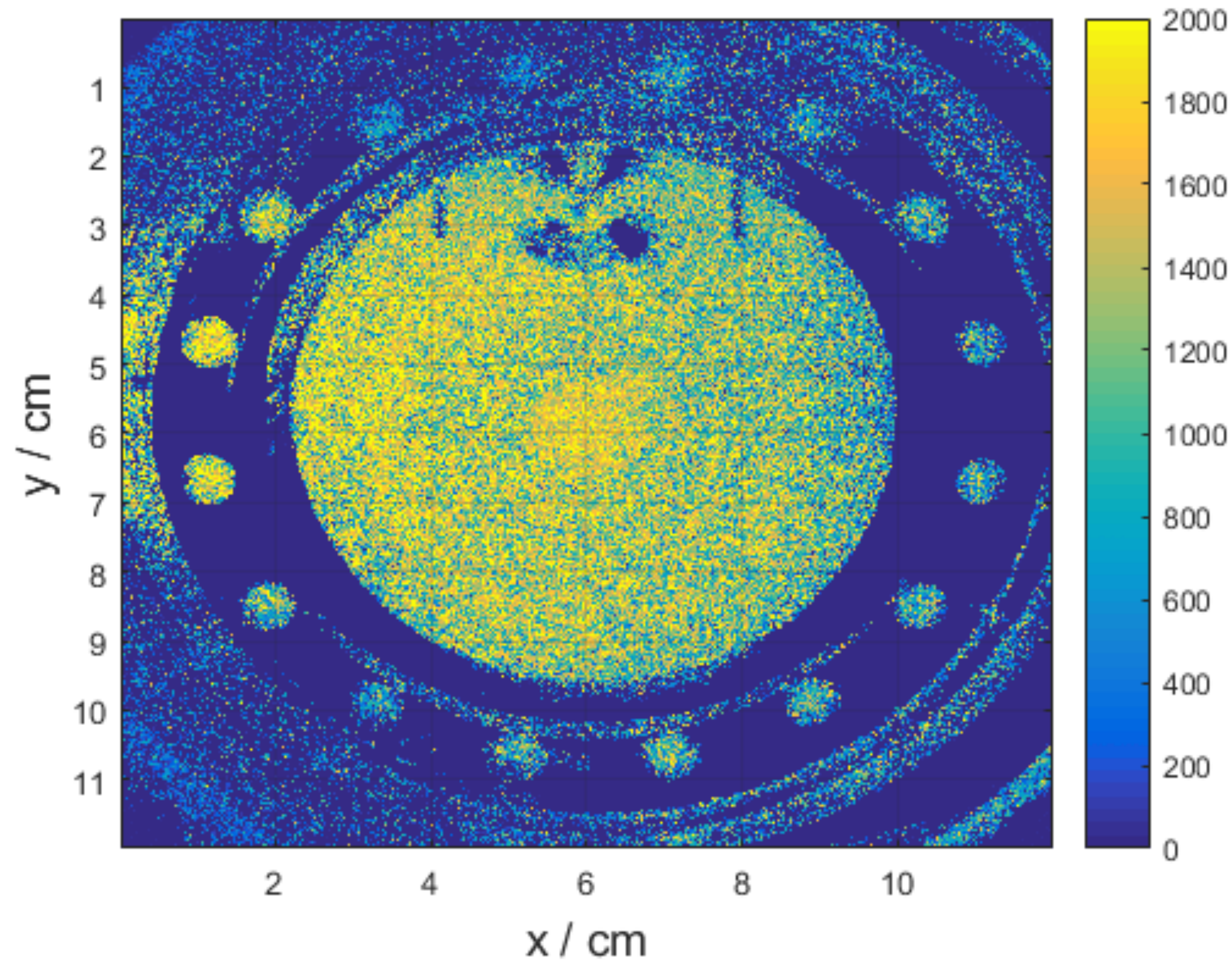




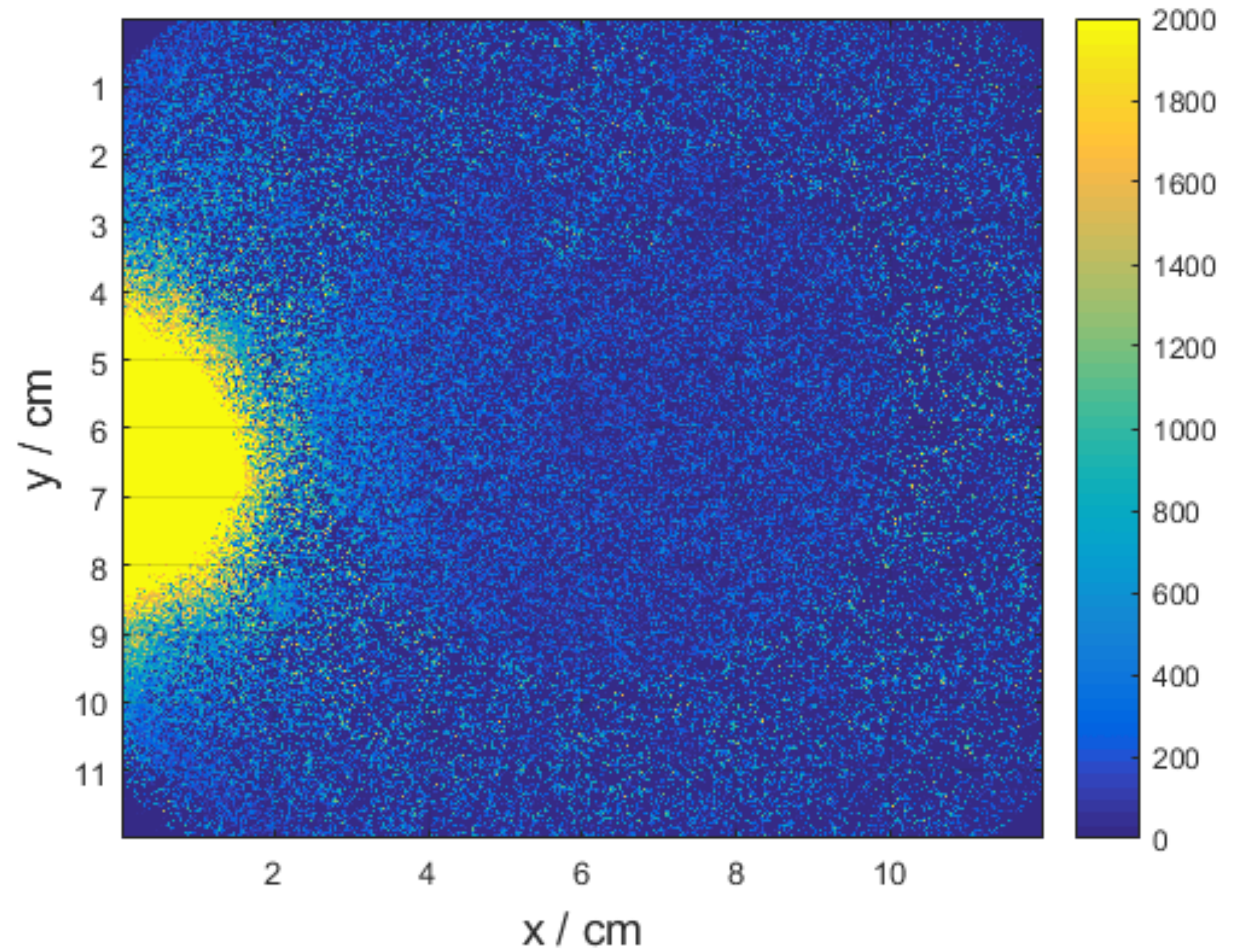


# Shape of the electron beam

## Observed by CCD camera

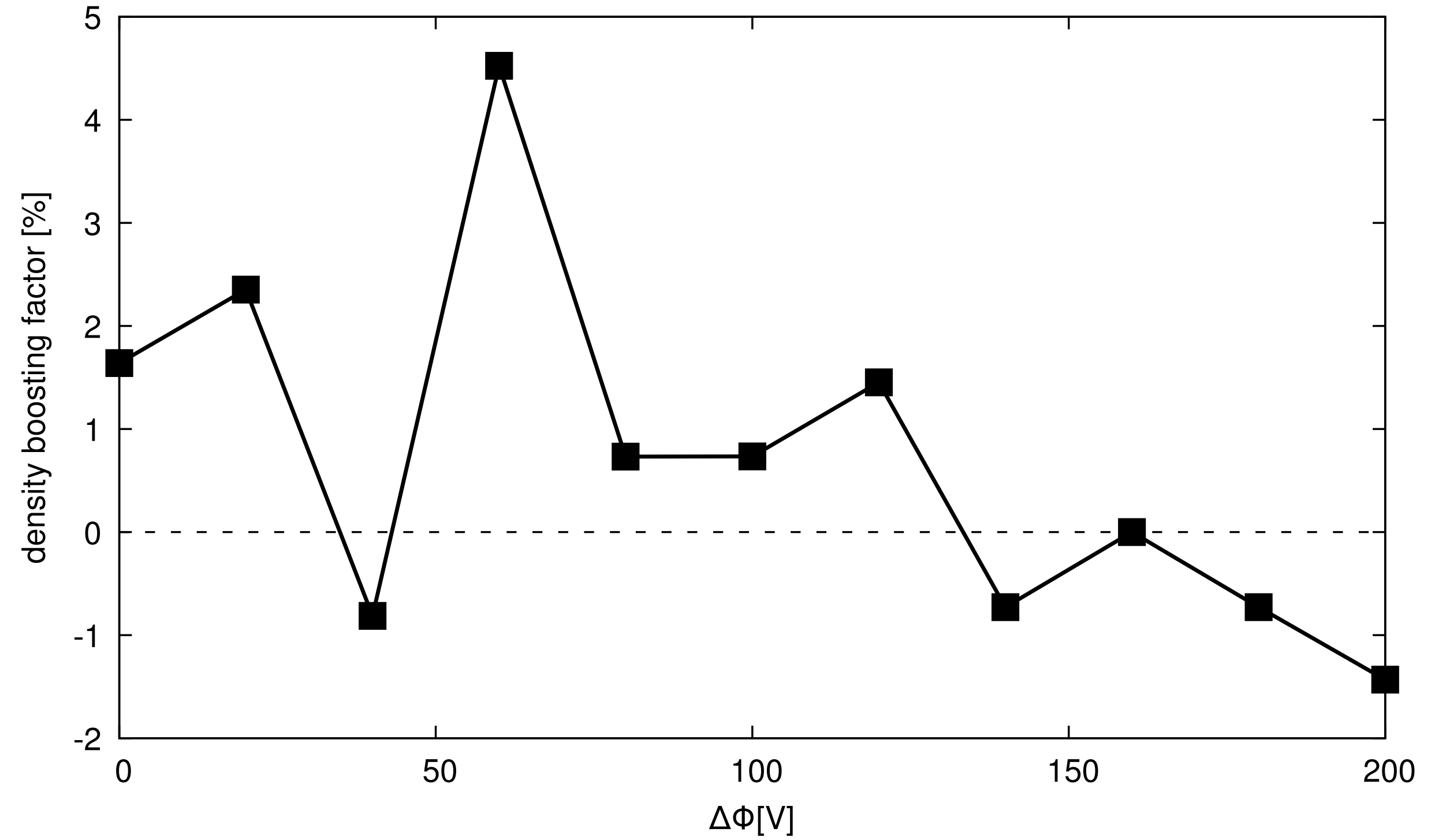
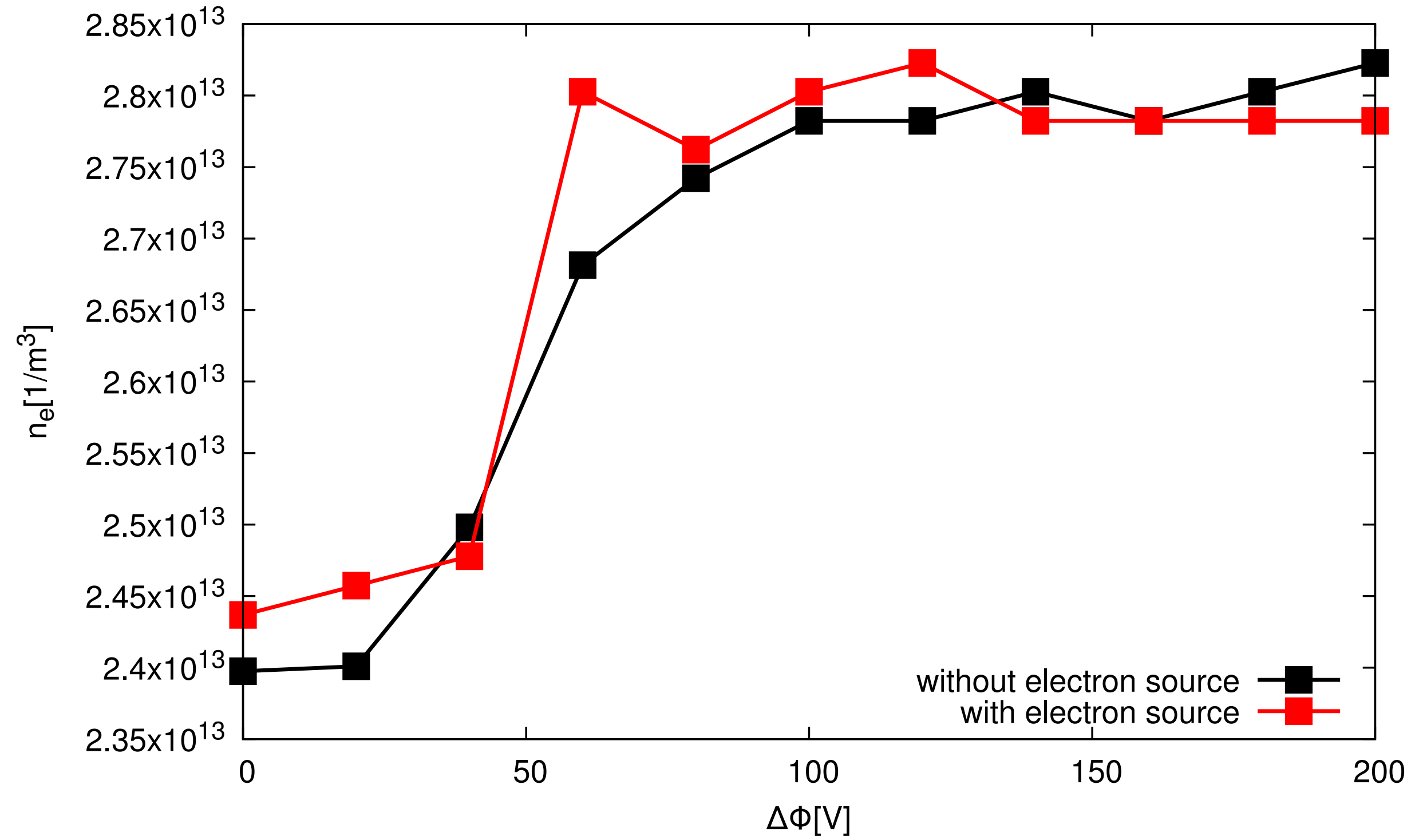


$B=0$  mT

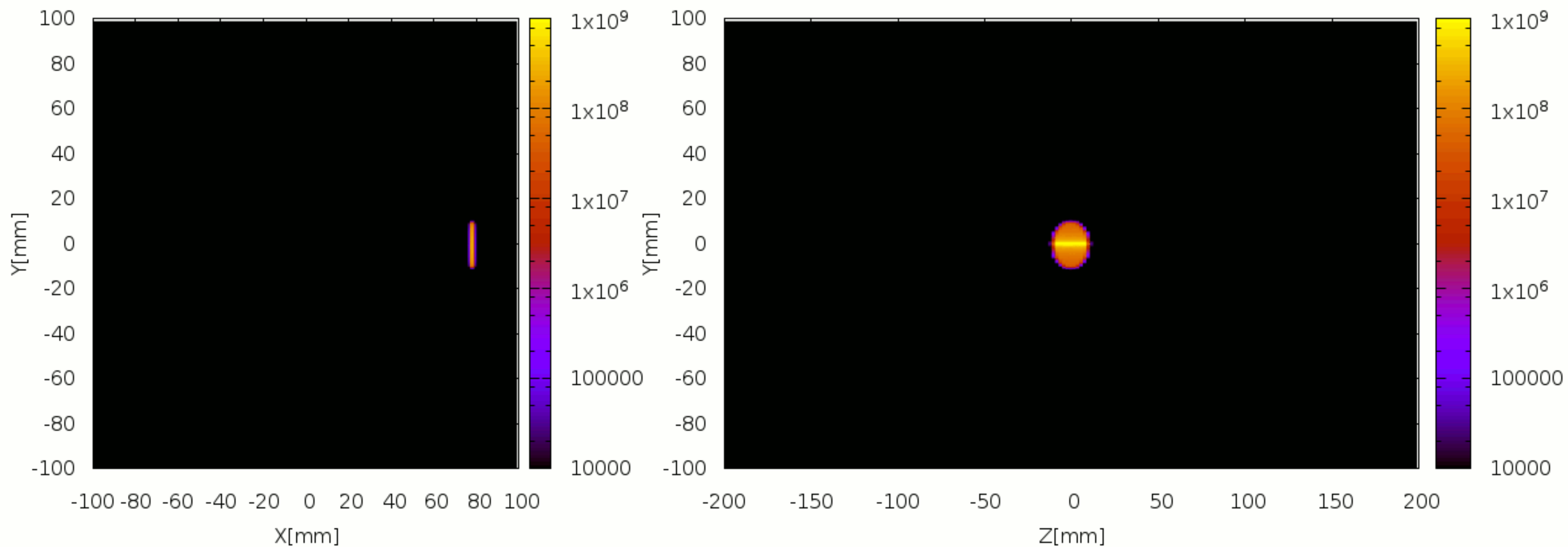


**$B=12.5$  mT**

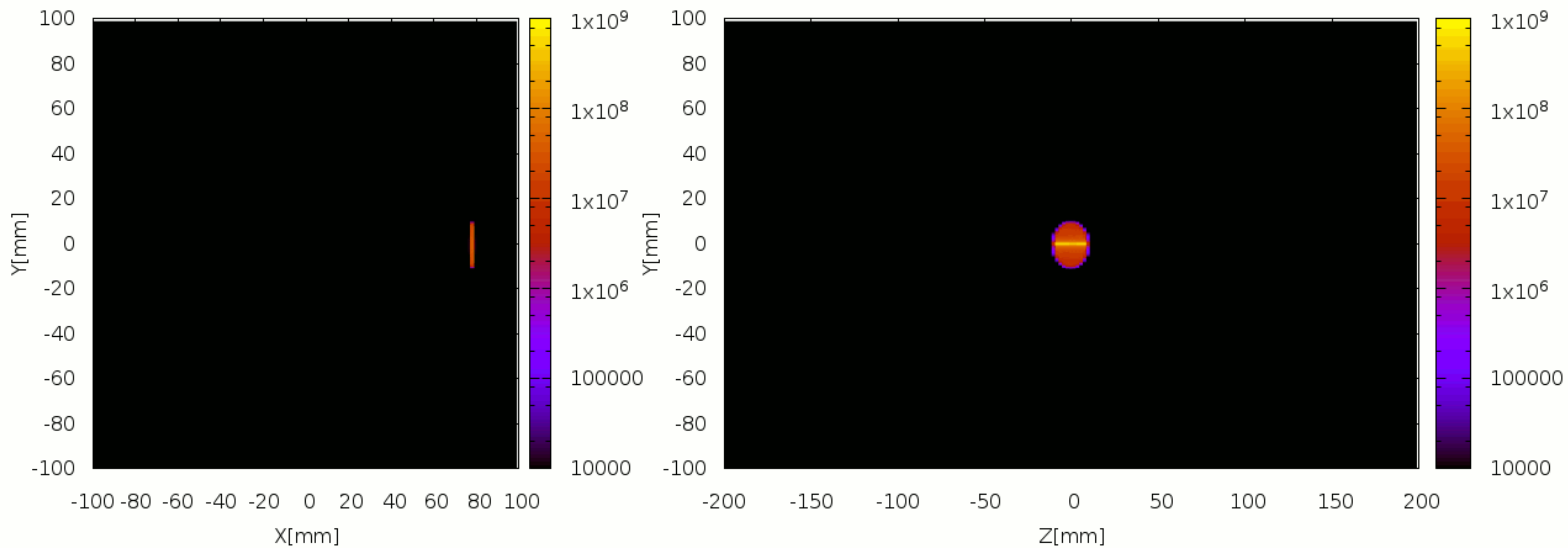
# Density Boosting



# Internal Source Pulse



# Cusp Pulse



# Internal Source

Long running, continuous beam, with space charge, 0.05 ns/step

See video file for better quality

