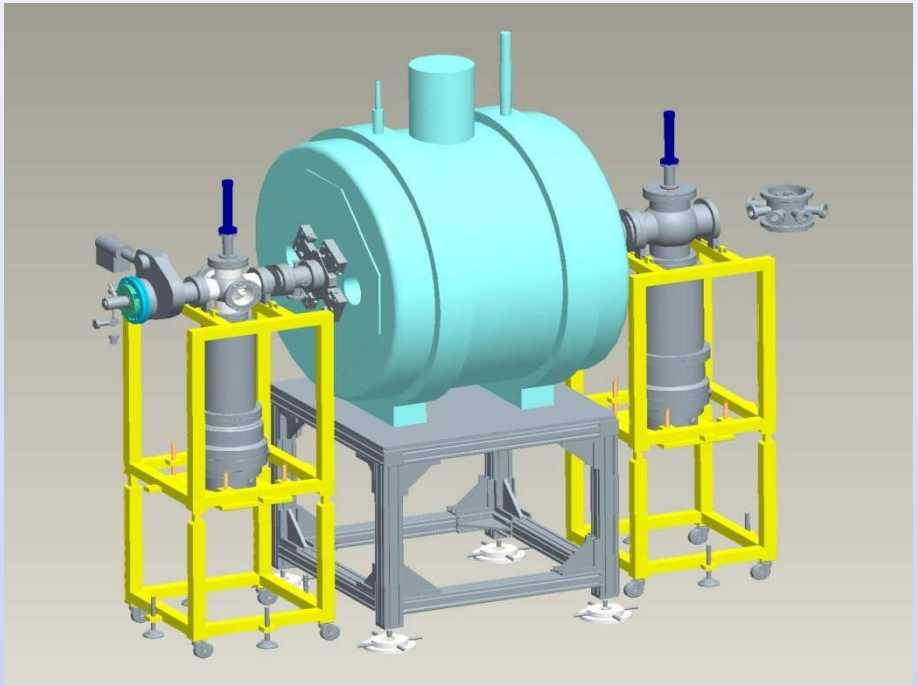
Infrastructural Requirements for MLLTRAP @ DESIR

P.G. Thirolf, C. Weber, R. Meißner, P. Müller
LMU München

MLLTRAP: Infrastructure

General properties in exp. hall:

- 8 x 5 m^2 floor space (includes electronics, control desk)
- limited access around high-field magnet (rest: free access)
- max. weight on floor ca. 1000 kg/m^2
- min. roof height 4.5 m
- position within crane range



- air conditioning/climatization: stable to ± 1 degree

- optical alignment capabilities (reference points/posts)

- no souces of magnetic stray fields in neighbourhood
- no sources of vibrations in neighbourhood

MLLTRAP: Infrastructure

Media supplies:

- electricity:
  ca. 18x 230V (16A), 4x 400V (16A), 1x 400V (32A)
- cooling water (for standard turbo pumps):
  demineralized, ≤ 8 bar , ca. 0.3 m^3/h
  standard water access in vicinity
- contribution to overall cooling power: < 10 kW
- compressed air: 5-7 bar

- liquid nitrogen: ca. 4000 l/year (100 l each ~10 days)
- liquid helium: ca. 800 l/year (200 l each ~90 days)
- nitrogen, helium gas bottles next to setup

- pump exhaust system
- helium recovery line system

- ethernet (ca. 4x), phone

MLLTRAP: Infrastructure

- local data acquisition will be part of the experimental setup

- use of stable-ion source: (e.g. Kr,Cs, Rb)
- license for use of radioactive (α, electron) calibration sources

- ≥ 2 cabinets for small parts near setup
- (access to) detector preparation lab
- (access to) general storage area

(local control of e.g. Faraday cups/beam diagnostics would be convenient)

Open Issues

Ion injection conditions:

- tolerable distance to buncher ??

Required, but not yet available:

- HV platform or pulsed drift tube ?

- local staff technician (routine operations, maintenance)

MLLTRAP @ SPIRAL-2:

- German funding of personnel and equipment ??