Design actual status

Two stations on the same kinematic mount platform. Cheap X stages

X axis PI L-408.501200

https://www.physikinstrumente.com/en/products/linear-stages/stages-with-stepper-dc-brushless-dc-bldc-motors/l-408-compact-linear-stage-100000035/

Y axis PI Q-545

https://www.physikinstrumente.com/en/products/linear-stages/miniature-linear-stages/q-545-q-motion-precision-linear-stage-103170/

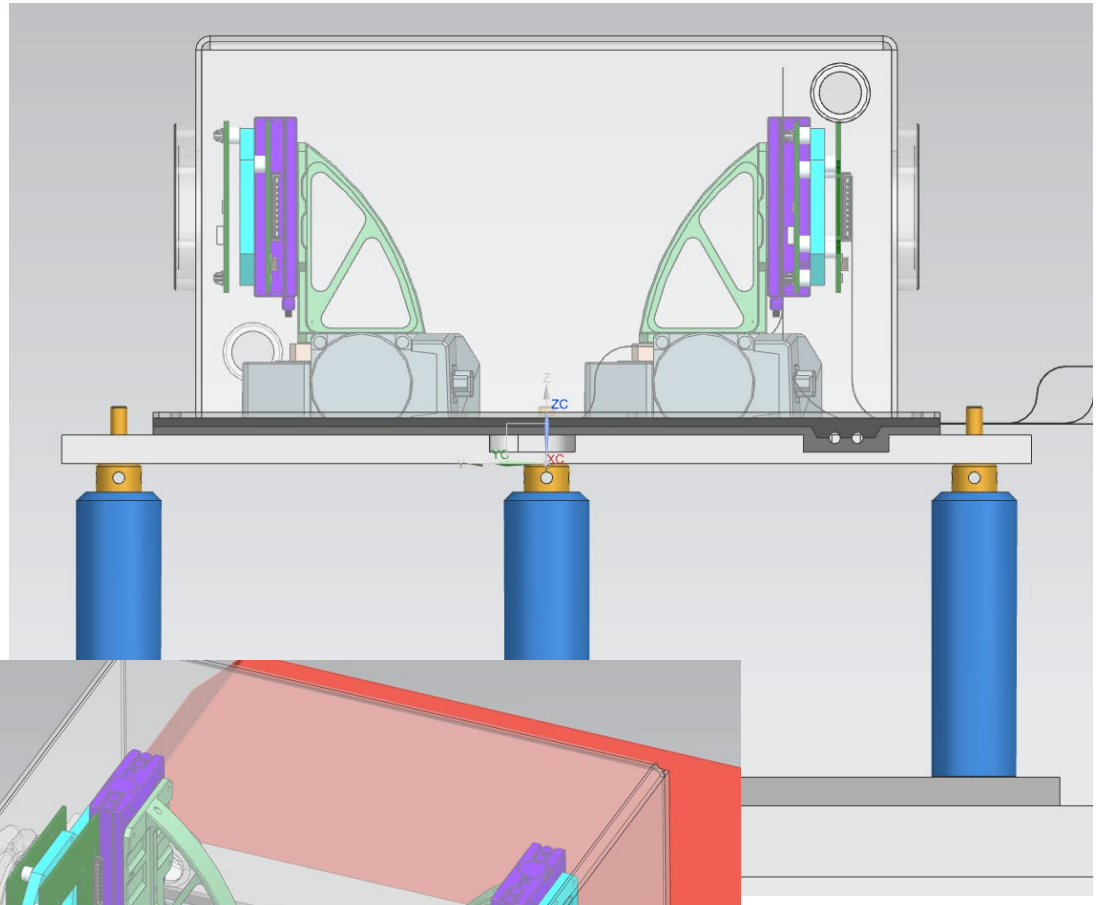
“specular” layout to maximize accessibility to detectors
for mounting / dismounting / maintenance (once cage removed)

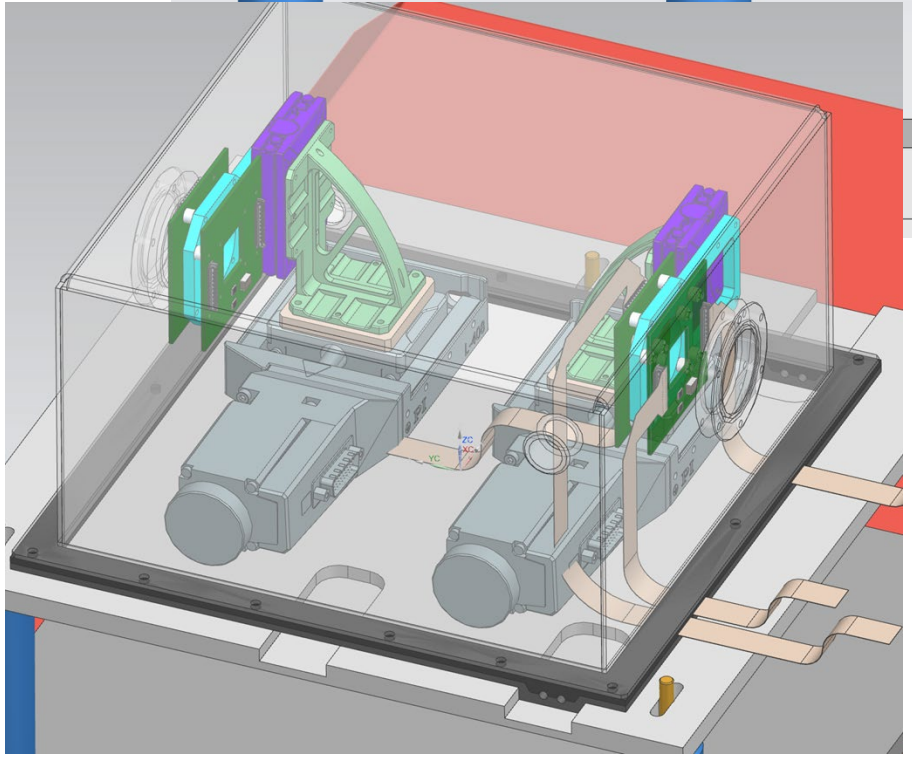
Faraday cage made of bent s.steel (or aluminum) sheets
Air sealing of cage to base plate by means of gasket
E.g. 3D printed gasket
Flat cables compressed between gaskets

(flat cables bent/folded at 45 ^ to get 90 deg angle and adequate degree of freedom for movements ..)

Slots in the base plate to pass cables (sealed with gasket)

Circular flanges for beam Kapton windows
Dry air or N2 in/out vent ports at opposite corners





.. possible missing inputs/requirements

Full platform remotely adjustable?
- -Which direction(s) and angle(s) ?

Needing to move detectors outside beam?
- E.g. longer stroke, now 25 mm
- full platform may displace, two position mechanism

Any requirement on:

- distance between detectors couples?
- distance of cage / windows from detectors?

- Inlet windows requirements?
- “exit window” needed?

- Signals cables routing
  - (grouped vs spaced, shielded, which direction)
- Separation/distance/shielding
  - between stages cables and detector cables?

- Anything else….?