ECAL-P mechanical frame

input to discussion

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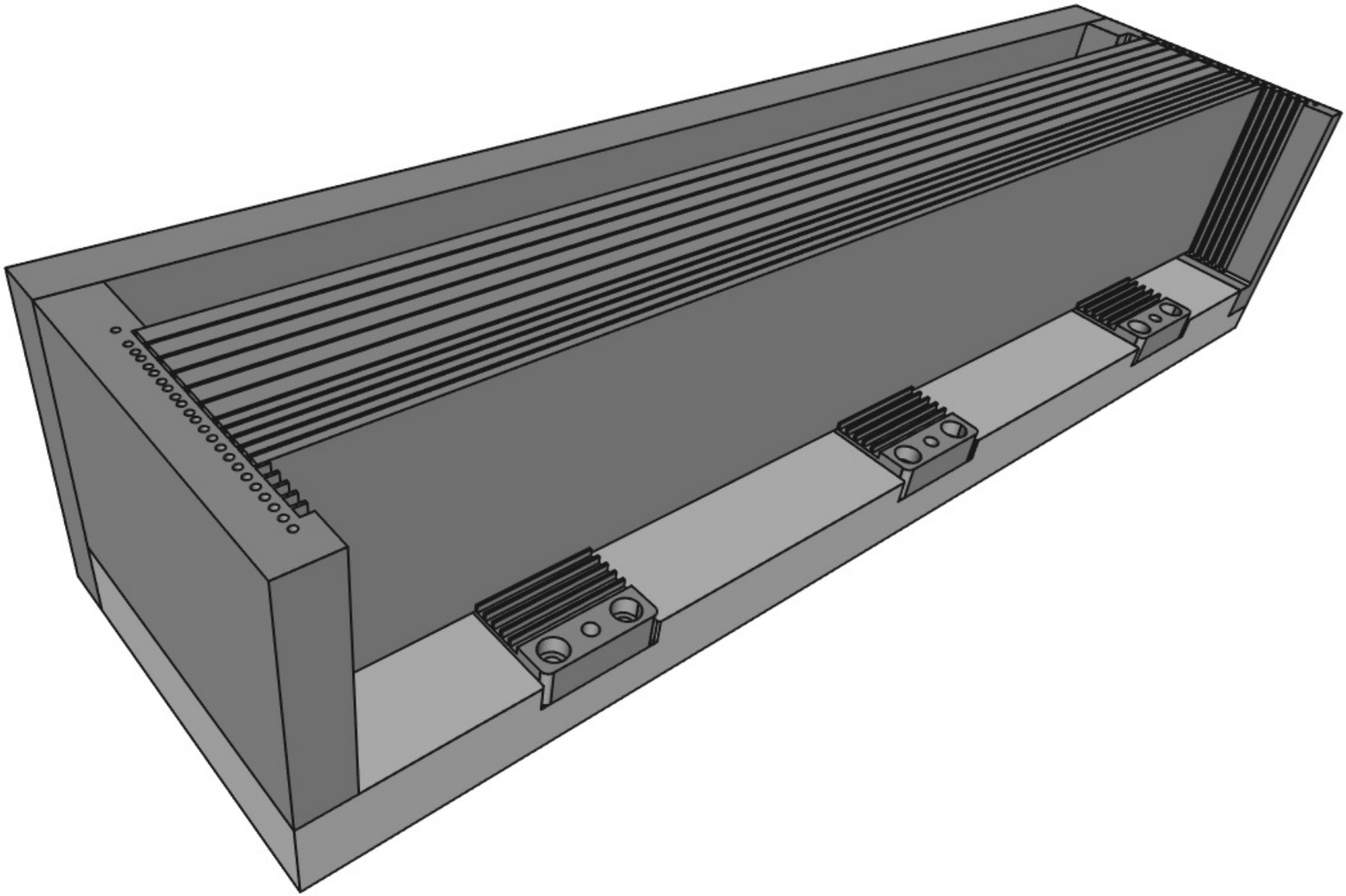
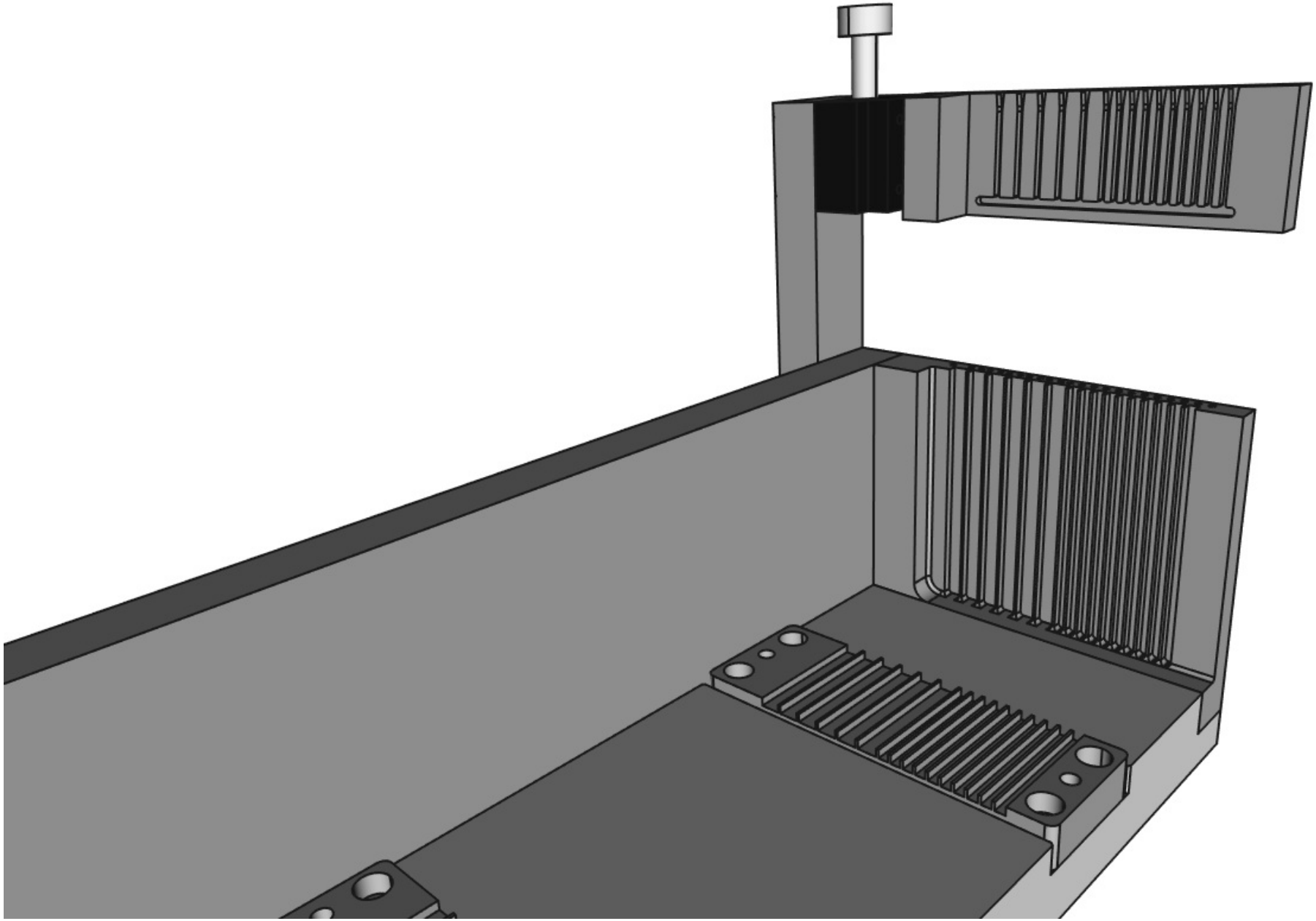
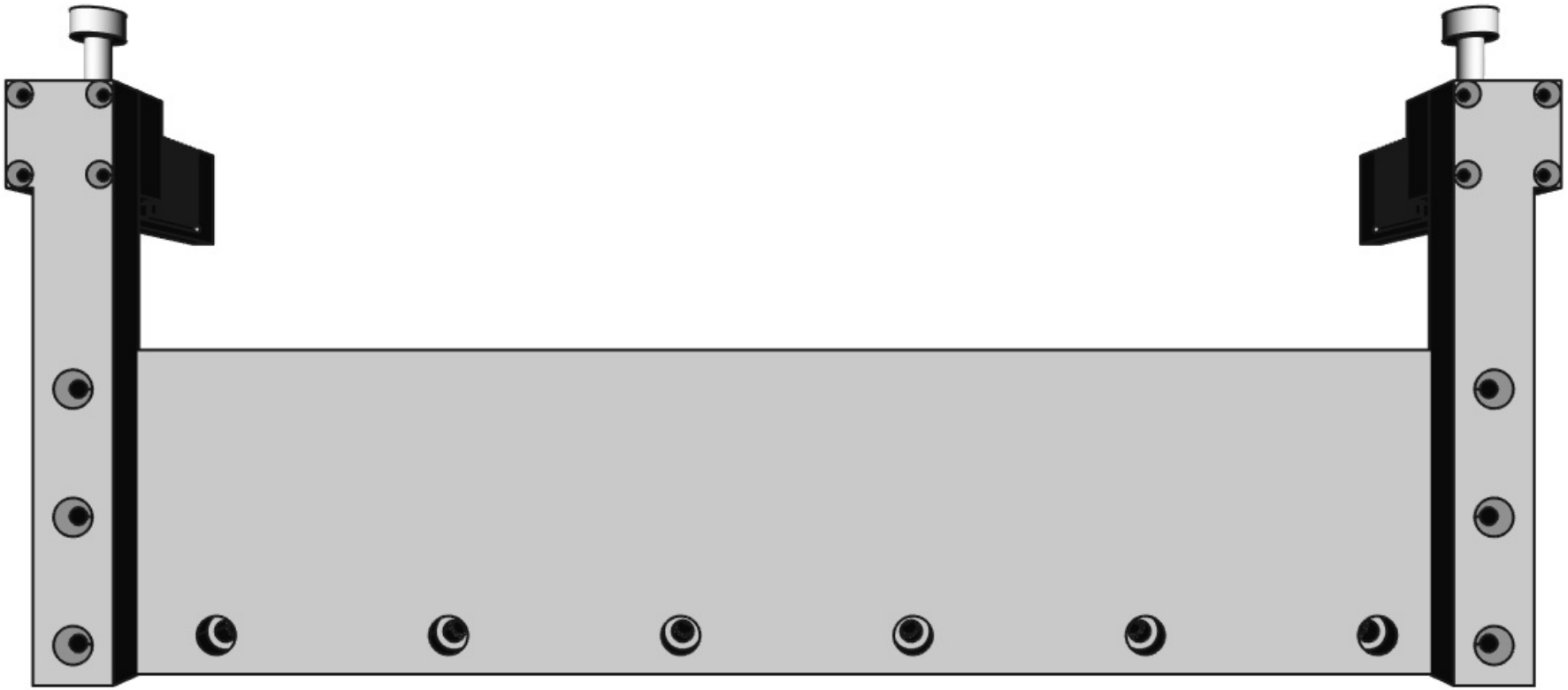
ECAL-P mechanical frame concept



ECAL-P mechanical frame concept



ECAL-P mechanical frame concept



Design concept

First design of the main frame for tungsten planes ready.

Proposed approach assumes modular structure of the frame.

Design should be extended to include (as independent modules):

- frame for holding PCBs (connected with sensor layers)
- additional structures for holding cables, covers etc.
- **frame support for proper positioning on the table**

Many details required for their design are still missing...

Questions to be answered

Tungsten plane frame

Base plate, 3 cm thick, needed for proper mounting of beam side wall

Beam has to be in the middle of silicon sensor

$\Rightarrow$ about 8 cm above lower base plane

(3 cm + half tungsten plate width)

Questions to be answered

Tungsten plane frame

Base plate, 3 cm thick, needed for proper mounting of beam side wall

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Frame support

How much space (table to base) can we have for the support structure?

⇒ Any suggestions for design? Legs, pillars, micrometric screws...

Support should allow for adjusting frame position:

⇒ How many degrees of freedom should we consider?

⇒ What is the required range and precision?

⇒ Is there any dedicated fixture to the experimental table considered?

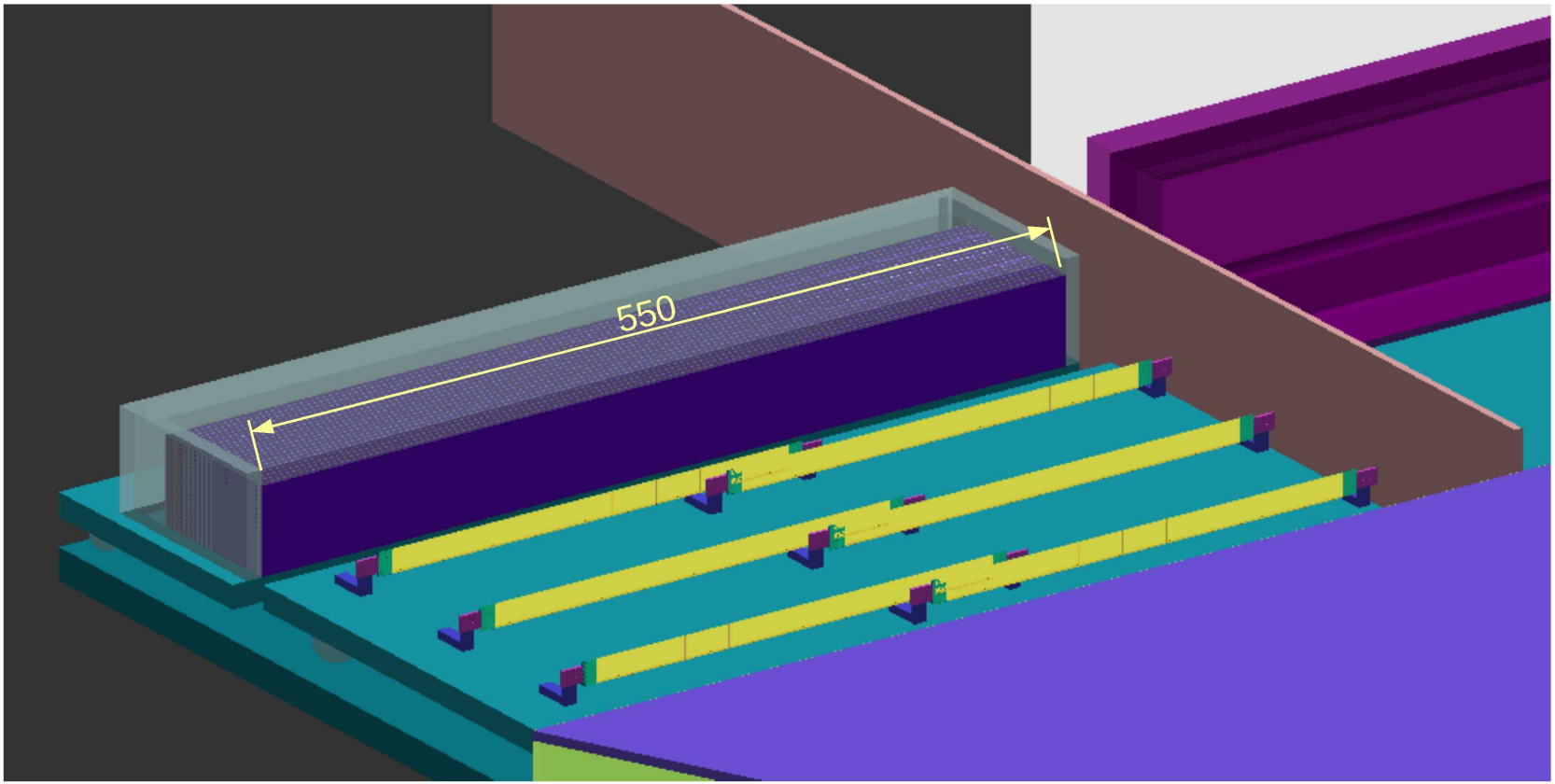
Questions to be answered

Frame alignment

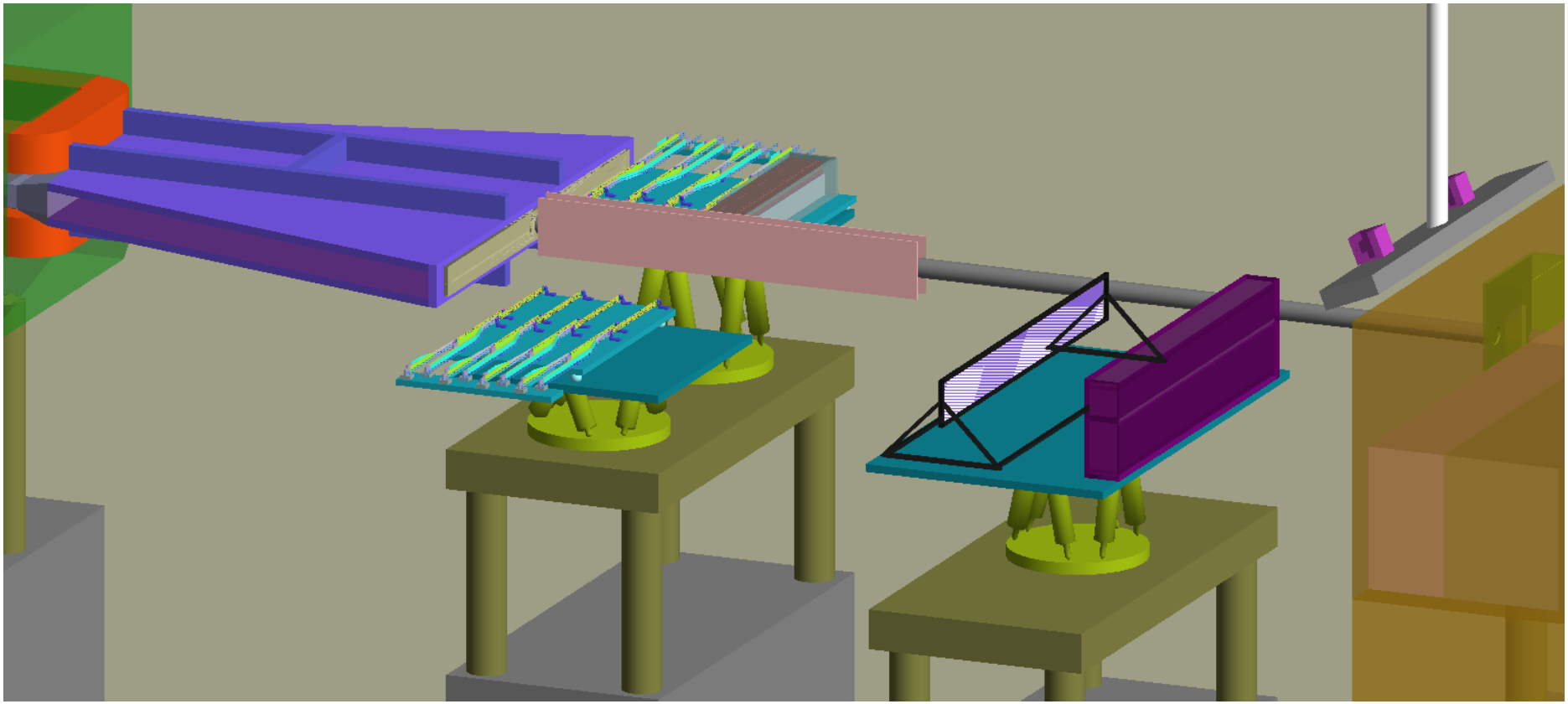
- frame alignment/positioning in the 'global experimental frame' in the hall (in praxis on the experimental table ?) (relatively to the tracker ?)
- number and optimal location of 'monuments' for the retro-reflectors (geodetic survey)

Geant4 simplified geometry

ECal



Drawing from confluence data base



Drawing from WIS