

Mechanical integration of PANGEA

Marcell Steinen

Helmholtz-Institut Mainz

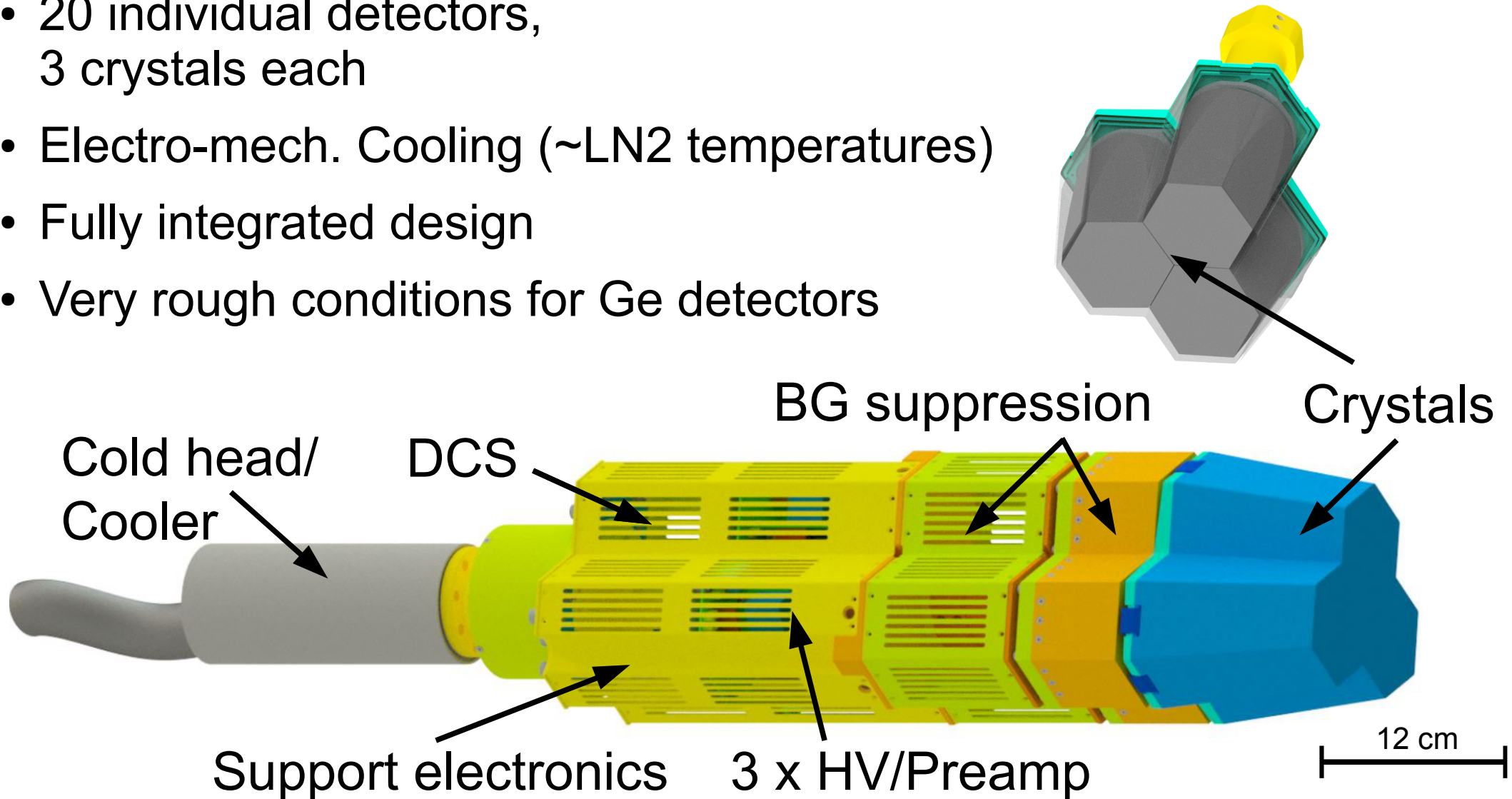


Panda Coll. Meeting 18/1, GSI, 03/06/17



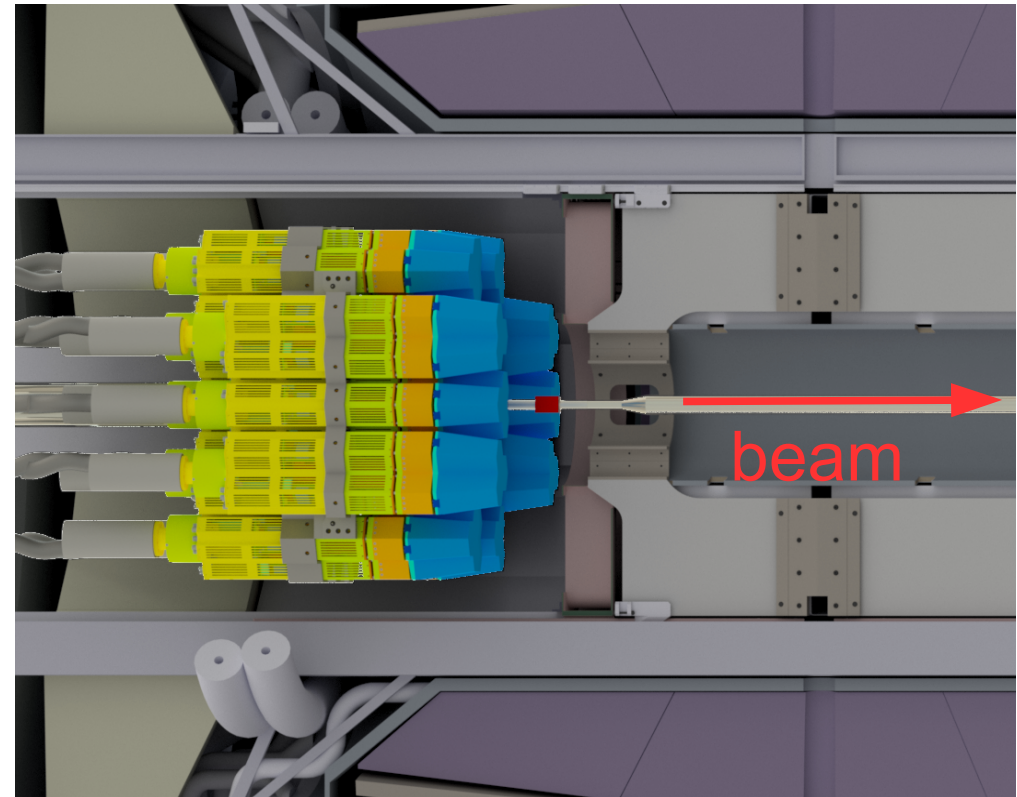
PANGEA – PAnda GERmanium Array

- 20 individual detectors, 3 crystals each
- Electro-mech. Cooling (\sim LN2 temperatures)
- Fully integrated design
- Very rough conditions for Ge detectors

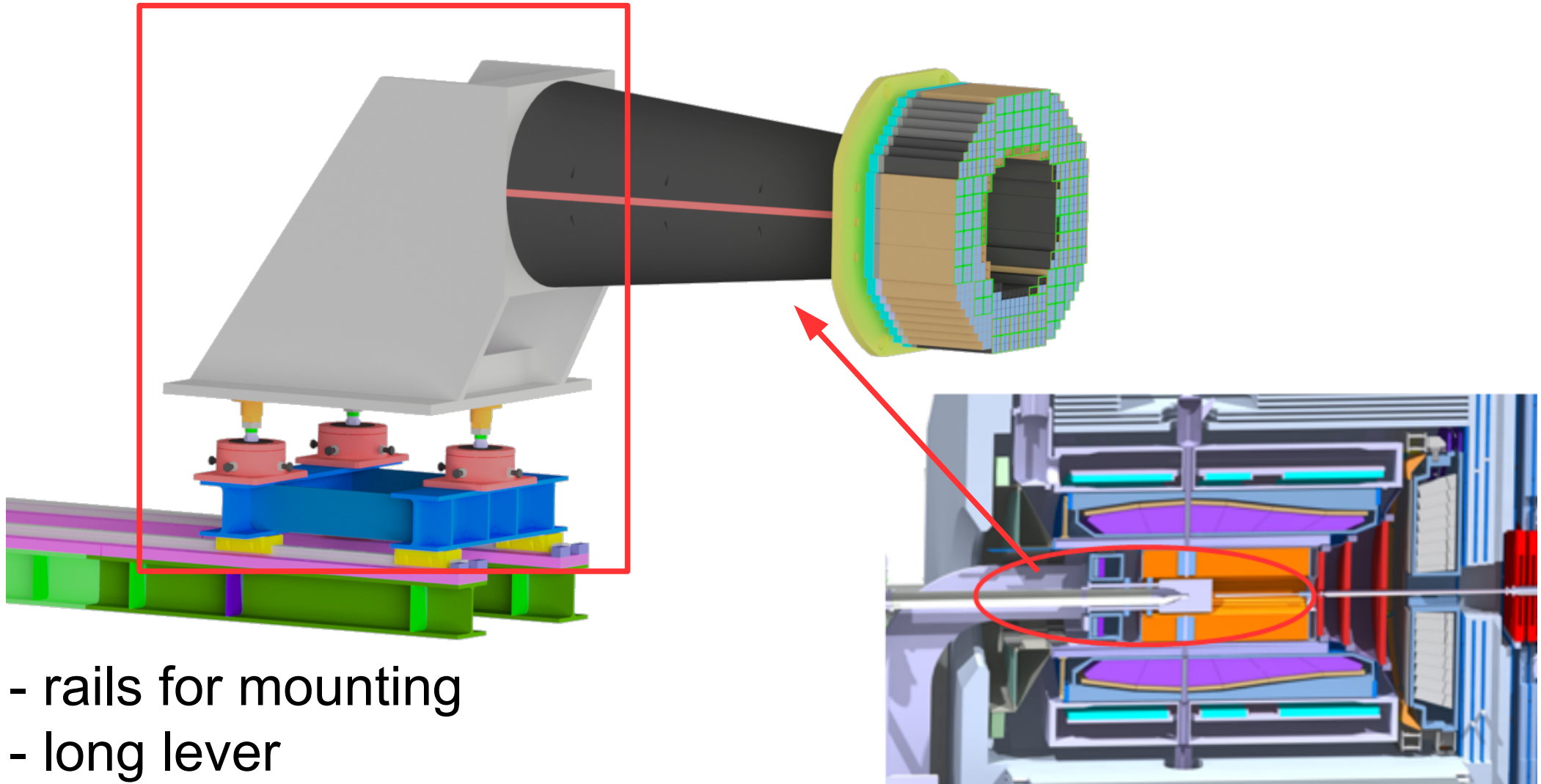


Floating detectors ...

- 5 columns
- 3 z positions
- ~ 500 kg

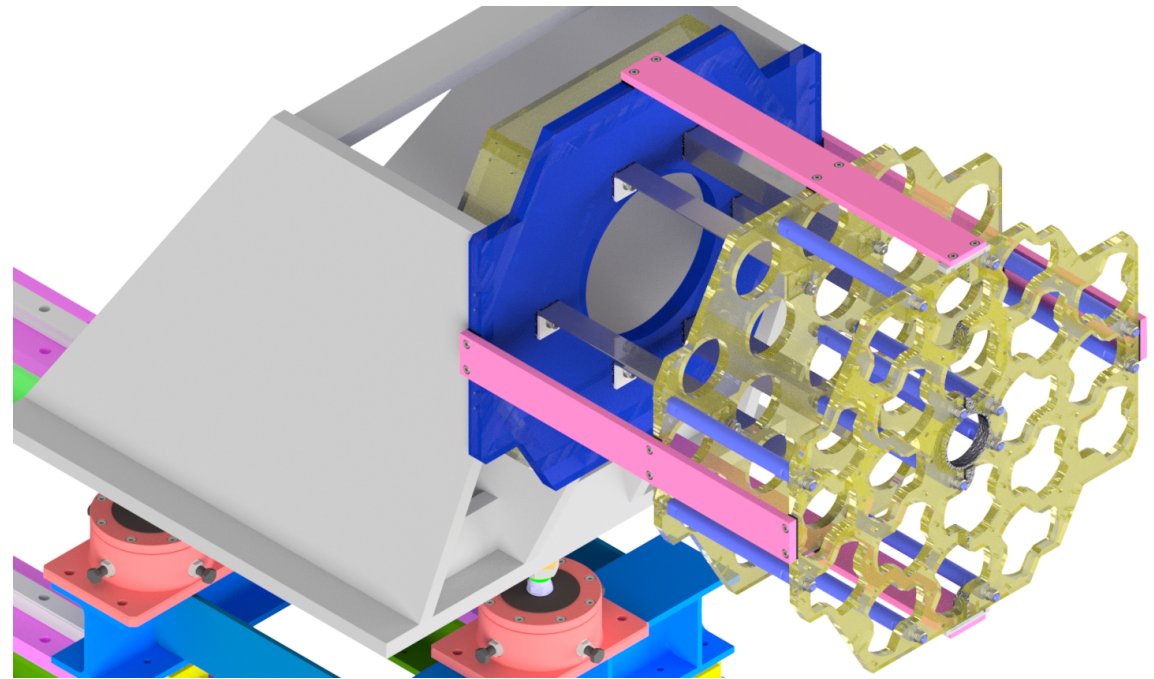
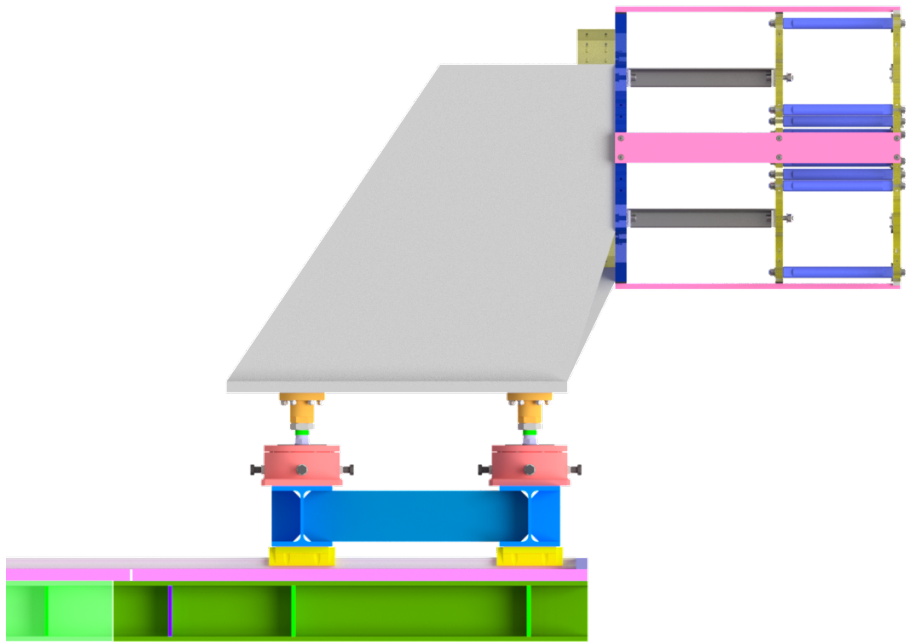


Backward Endcap EMC



- rails for mounting
- long lever
- counterweights on the platform

Holding Frame

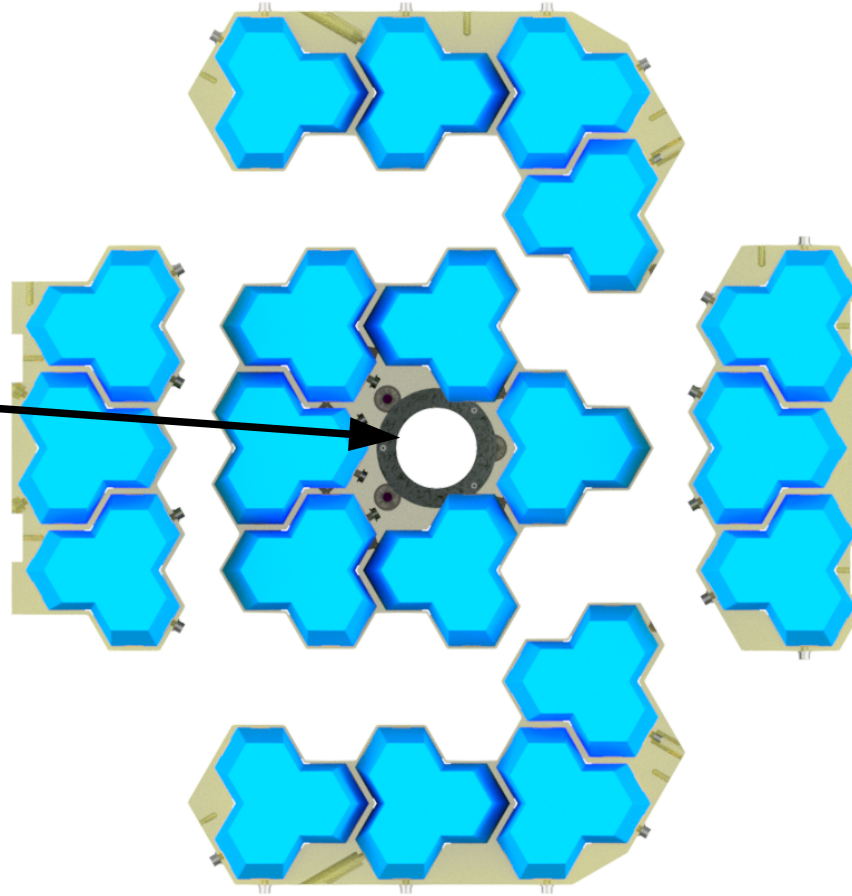


- same rails as BW EMC
- multiple segmented plates
- Stainless steel and aluminium
- individual parts electrically isolated
- tripping of solenoid uncritical

In coll. with Ferchau Engineering

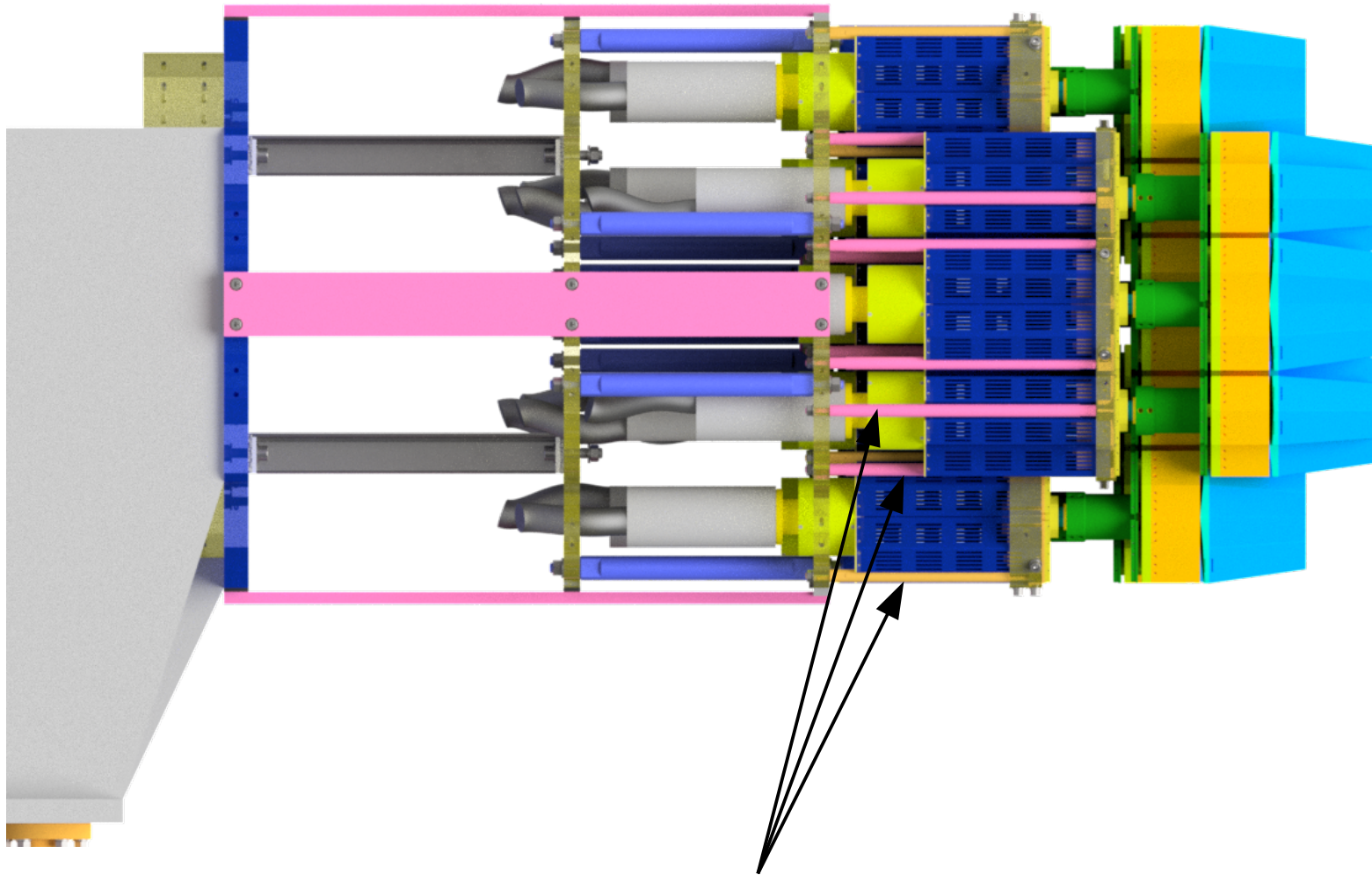
Sub-modules

Beam pipe hole:
 $d = 95 \text{ mm}$
No MVD in this setup



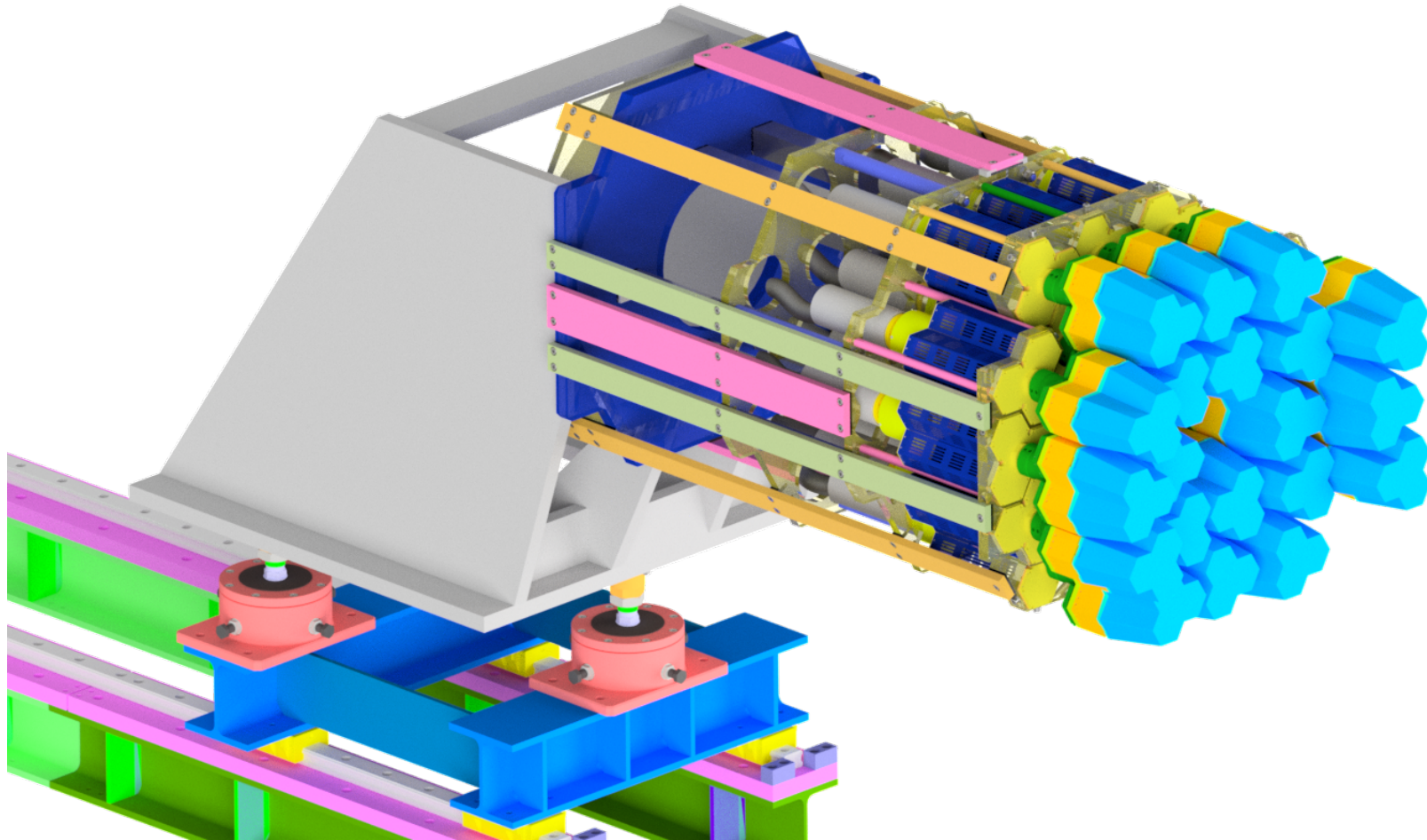
- 5 sub-modules for easy mounting / maintenance
- each sub-module accessible via crane / lifting device

Mounted Detectors



Sub-modules screwed to holding plates via rods

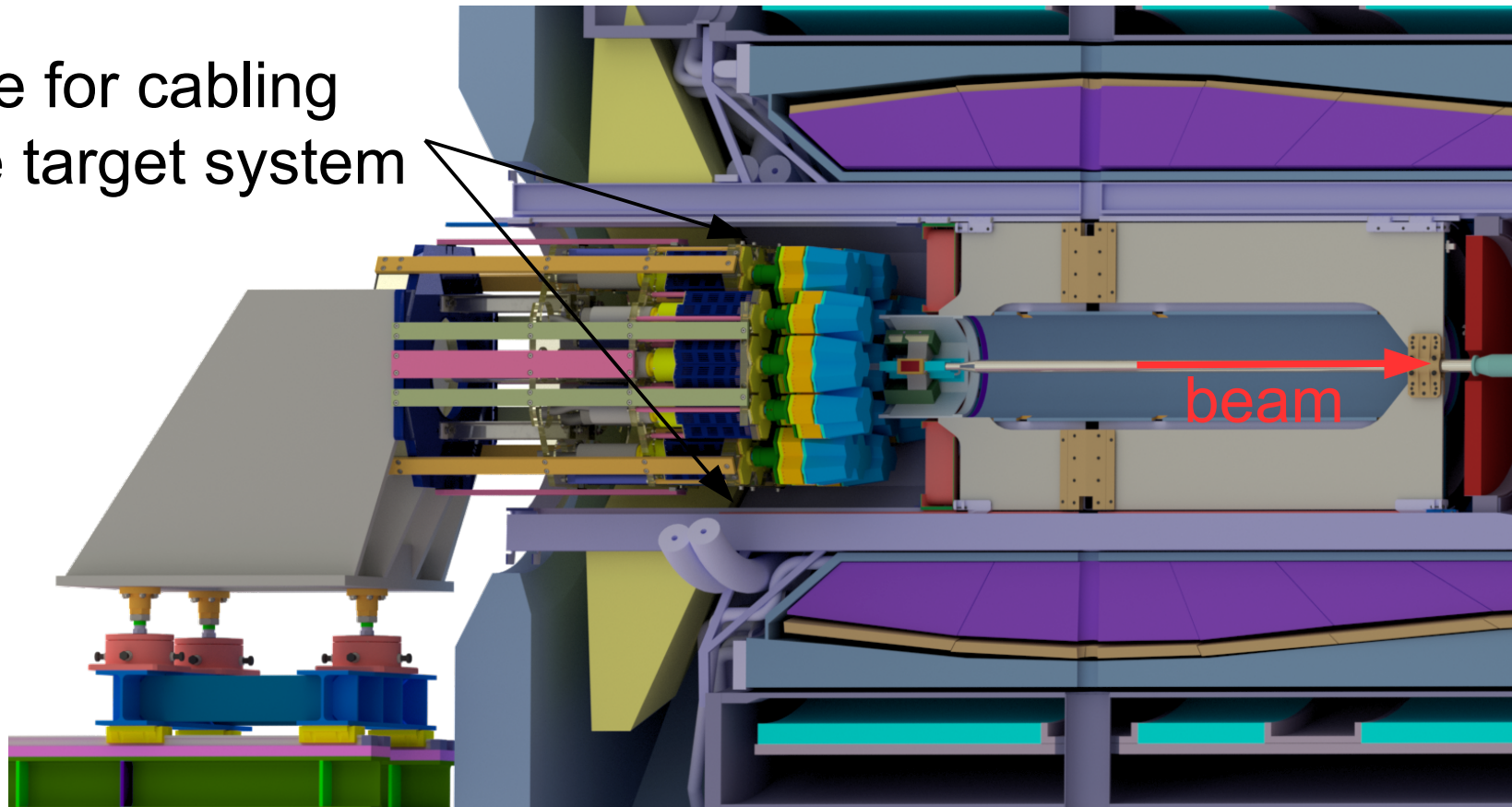
Mounted Detectors



Additional connectors on the outside

PANGEA inside the PANDA barrel

Space for cabling
of the target system



Backup slides

Backup slides

Production of hypernuclei at PANDA

