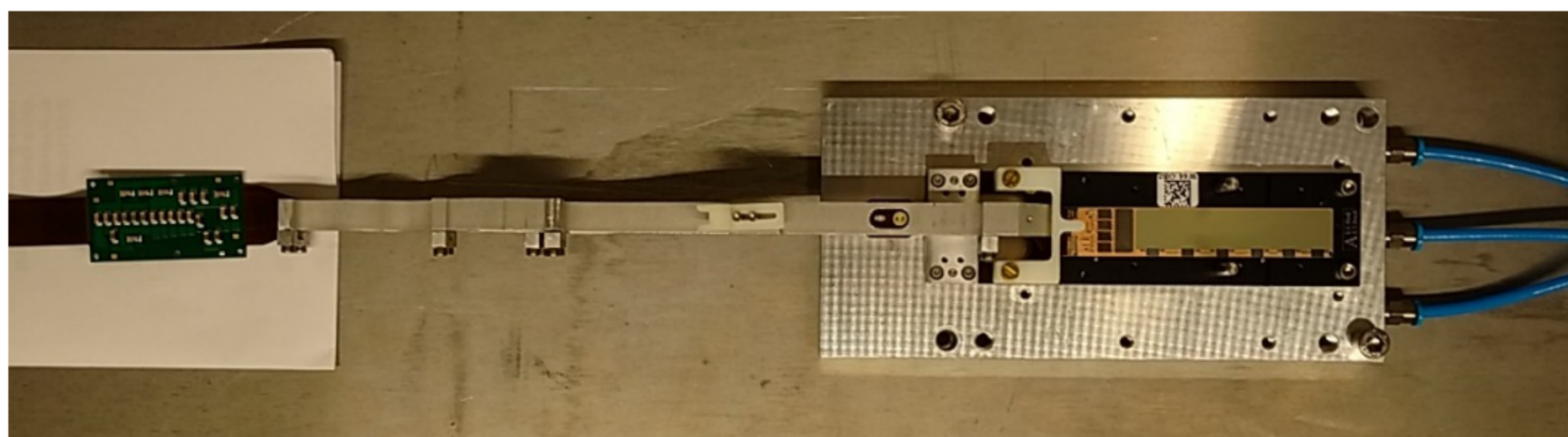
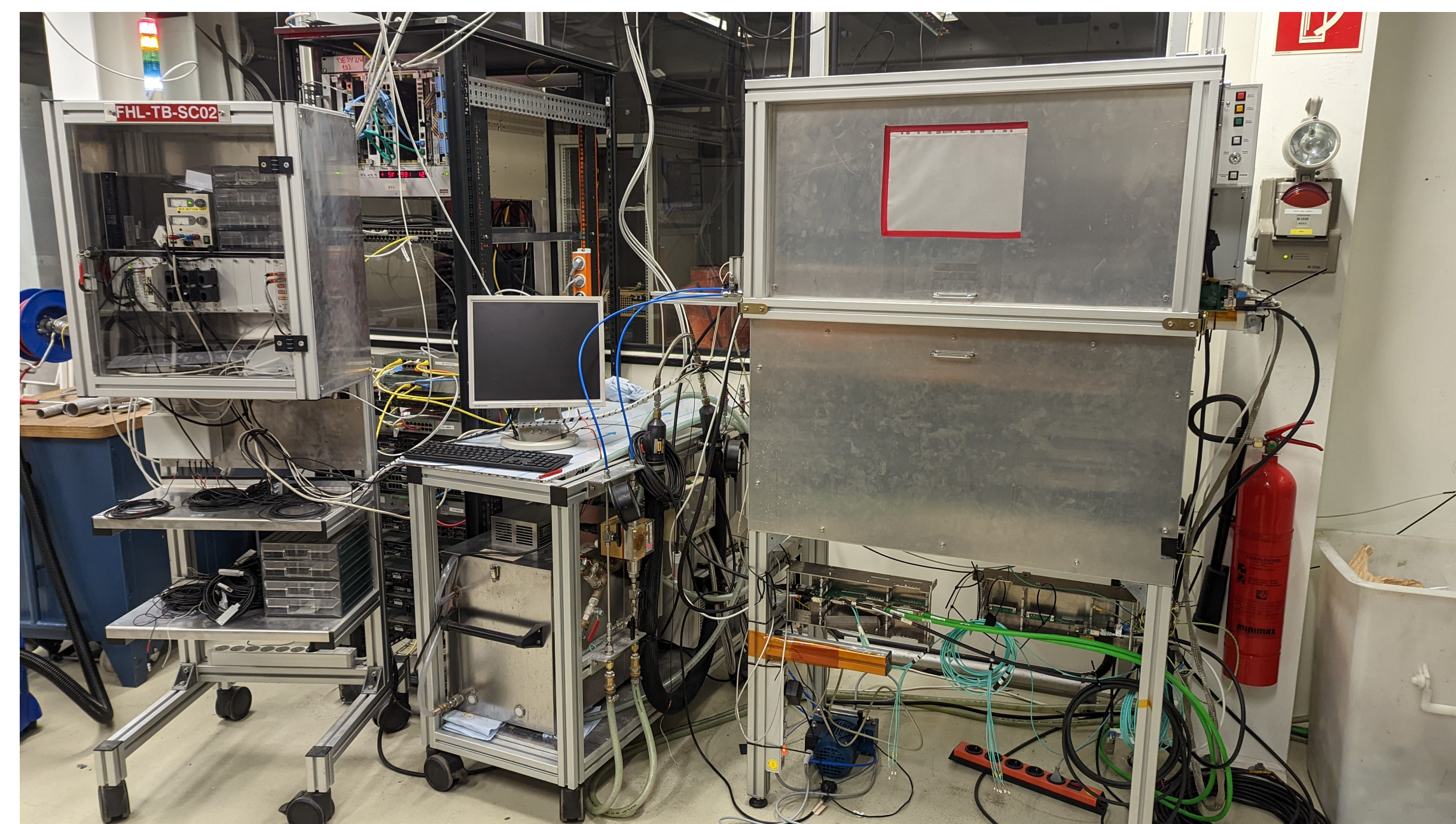


## Module testing

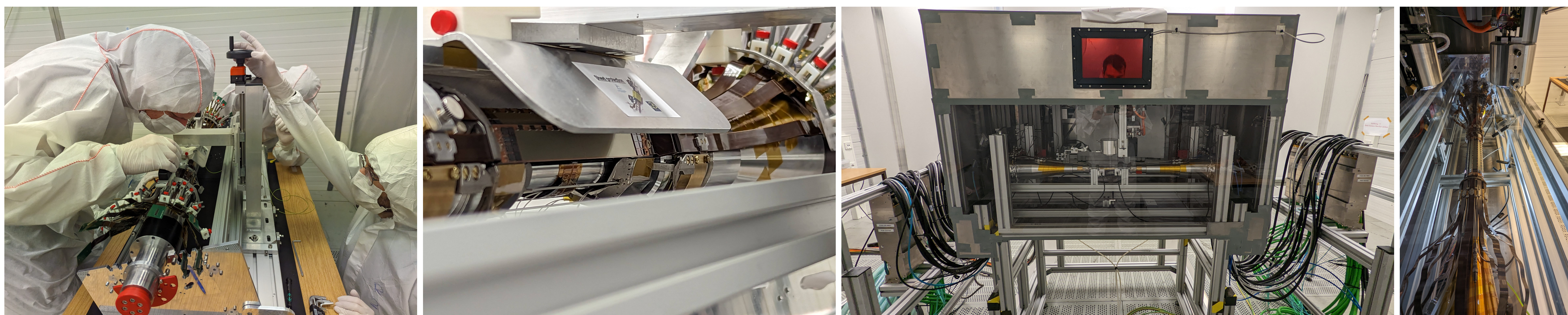


Mass testing of single modules in different German institutes:

- First operation to test functionality of modules
- Find for each module working points for stable operation
- Categorize modules in to different quality categories

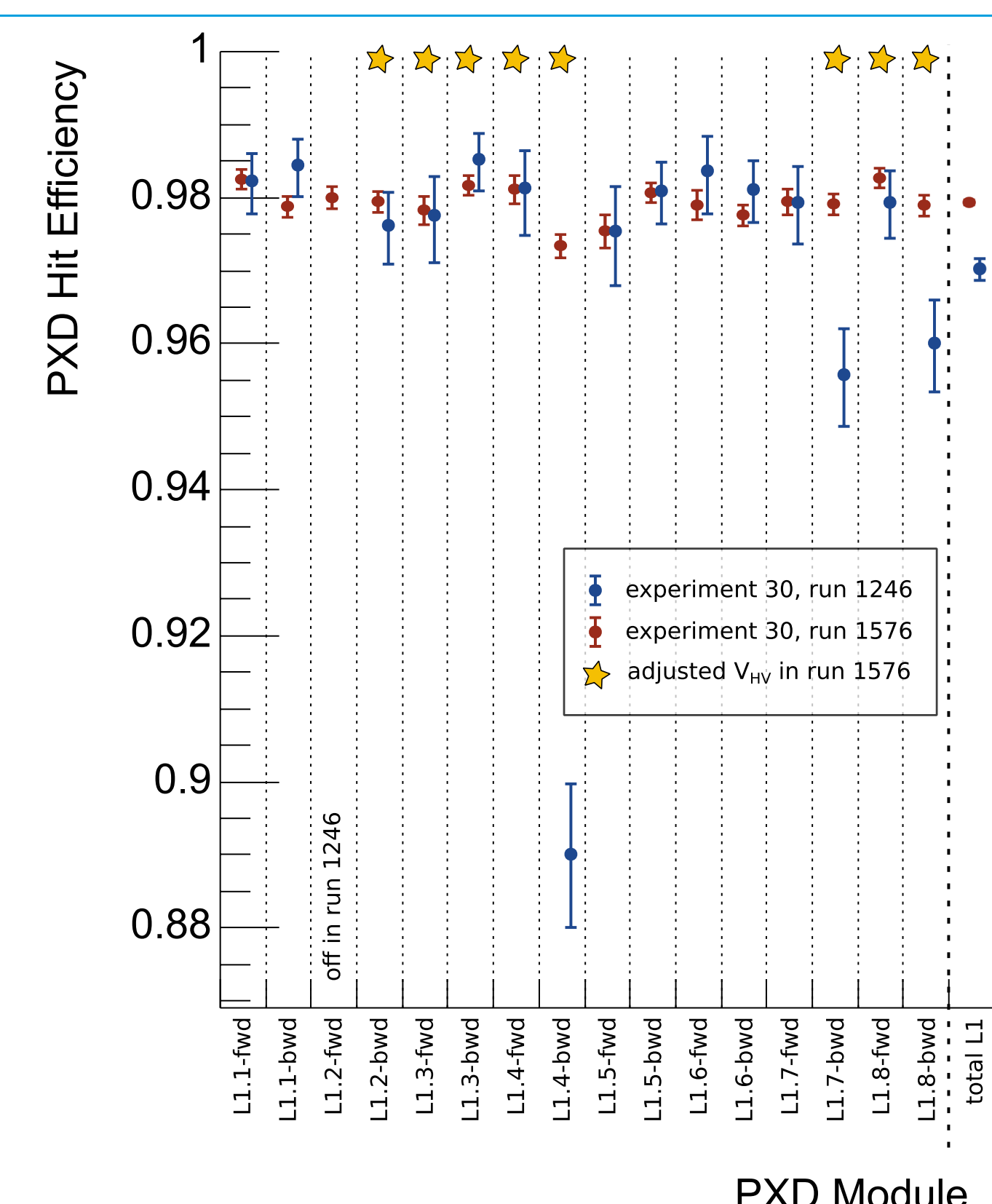
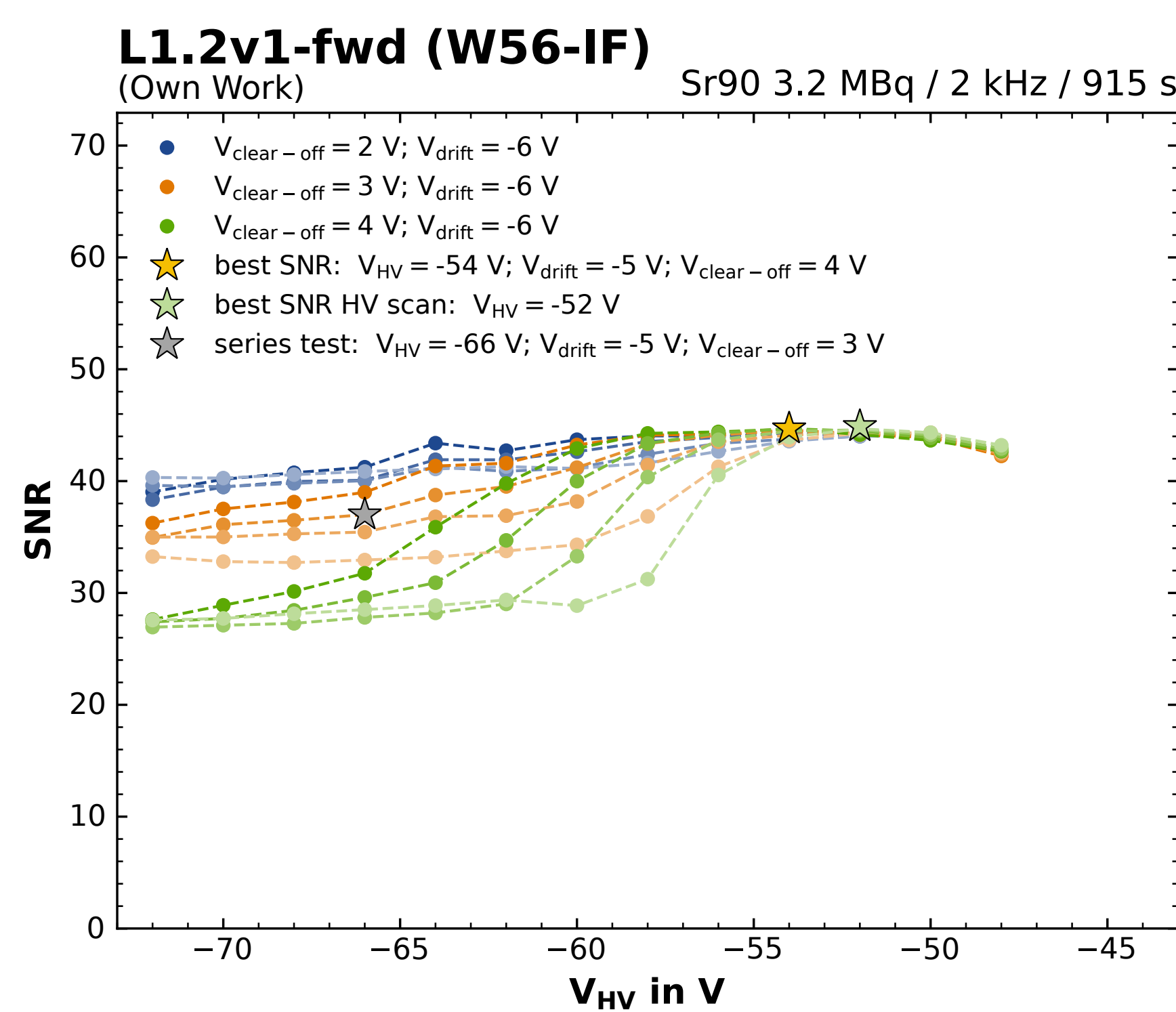
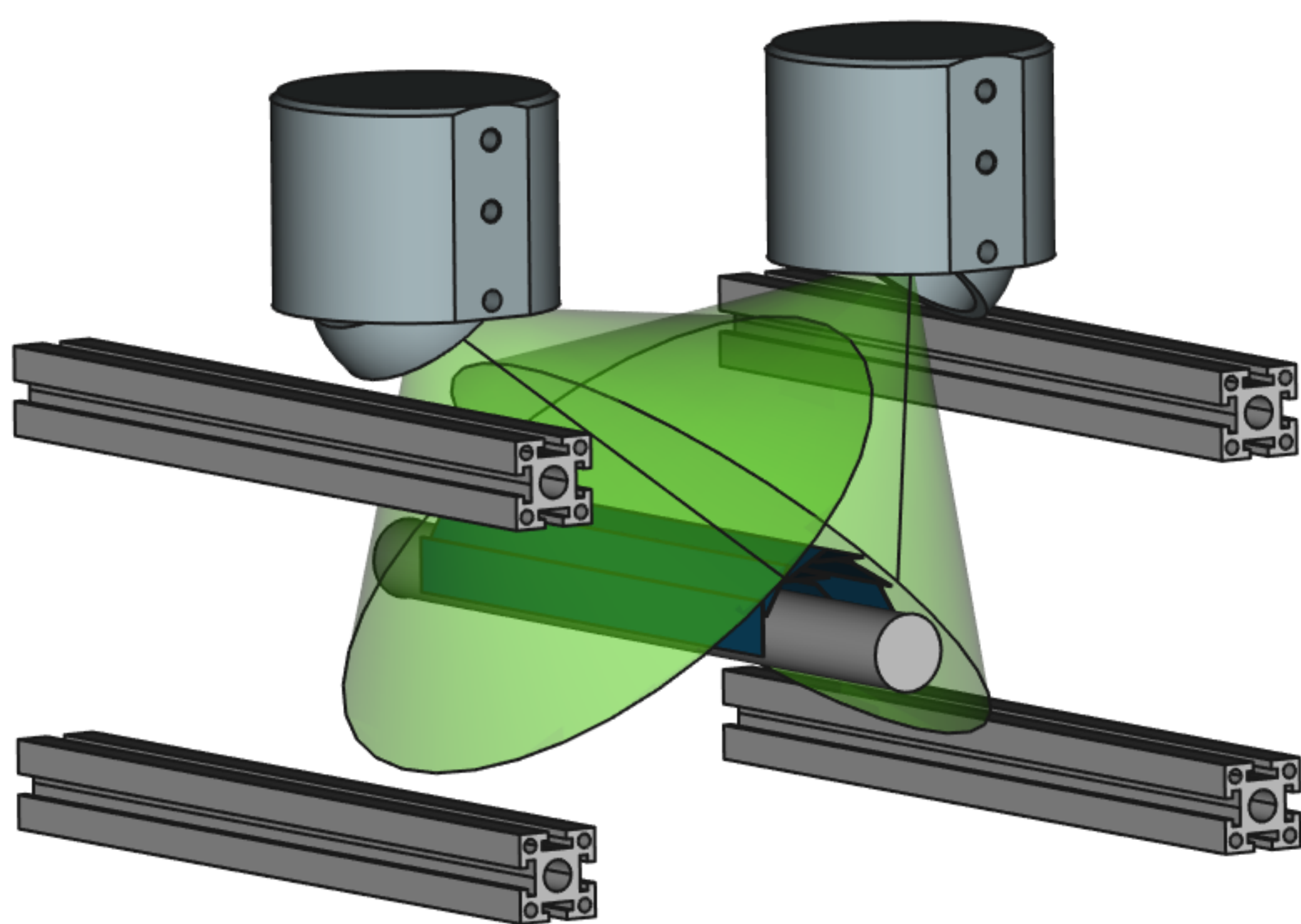


## Half-shell test setup



- Setup to install and operate one half-shell of PXD2
- Test and optimize installation process
- Long term test operation of half-shell
- Study and optimize mechanical and thermal behavior
- Optimize and test functionality of modules
- Test services, slow control, DAQ system, etc.

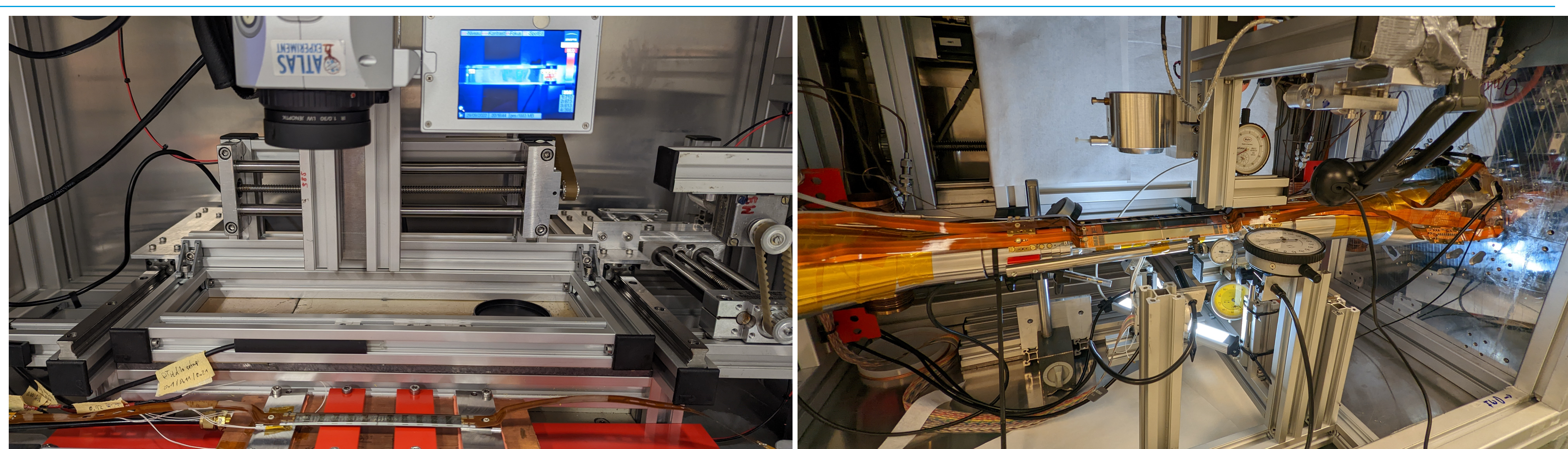
## Source scan optimization of PXD2



- Optimize working points
  - Two SR<sup>90</sup> sources to radiate full half-shell
  - Simultaneous optimization of all modules
- Optimize mass testing configuration
  - Use same optimization strategy for all modules
  - Correct for cross talk effects, operation temperature and radiation

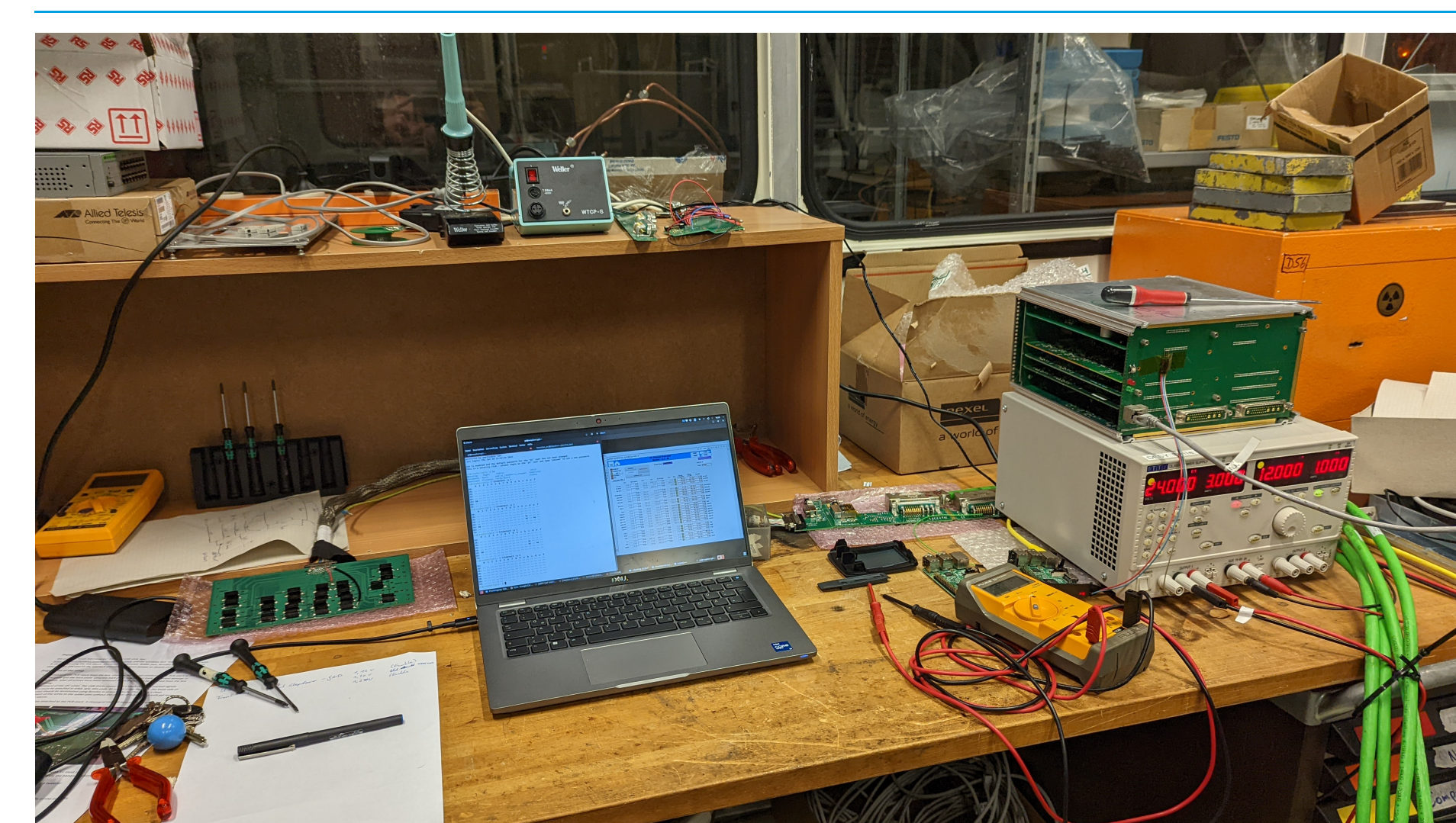
- Efficiency improve due to the source scan optimization
- Between the run only a subset of modules was updated

## Optimization of thermal and mechanical behavior



- Optimization of screw torque
- Consider thermal contact, gliding behavior and the possibility of torque loosening
- Study ladder bending of during operation
- Study SCB movement during operation

## Optimization of services



- Find necessary optimization for services
  - Optimize and modified at DESY if possible
  - Coordinate with experts other modifications