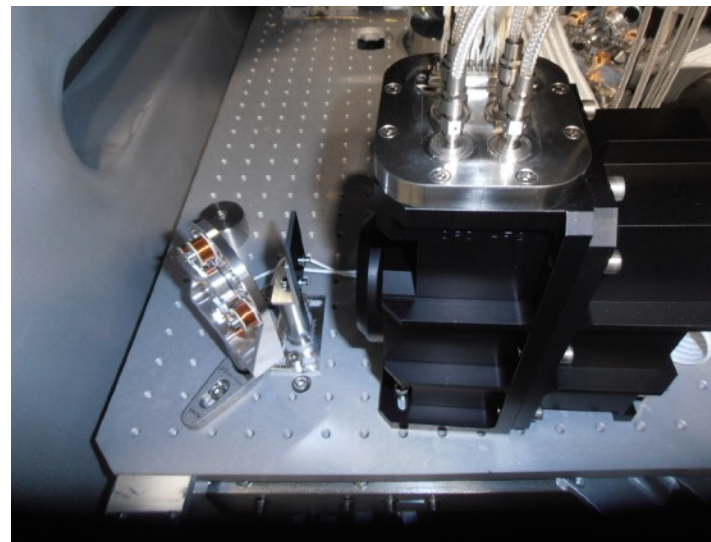
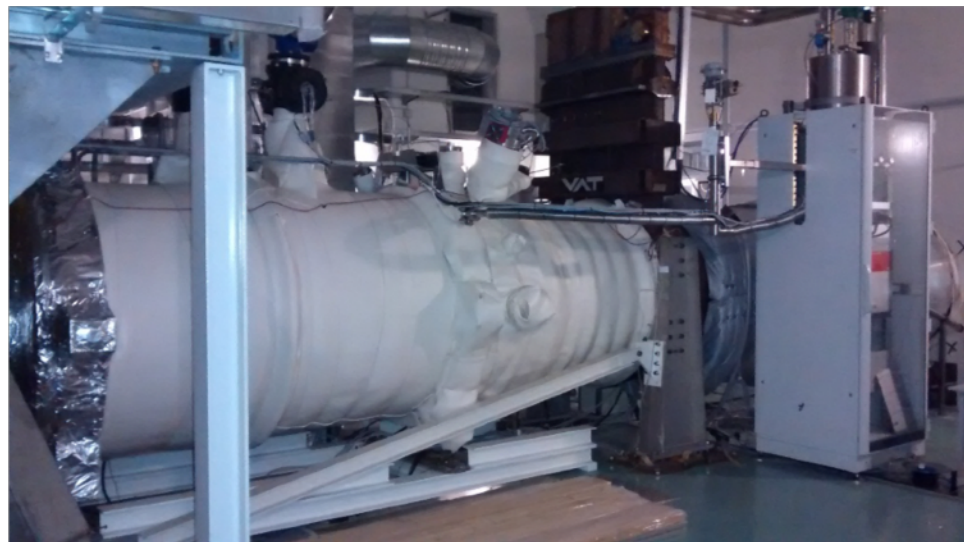
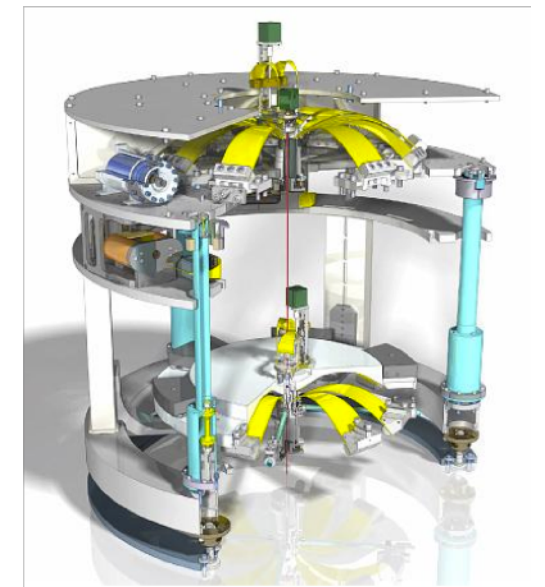
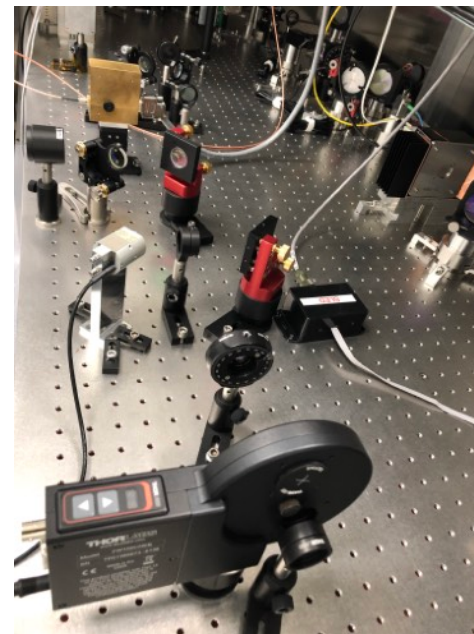
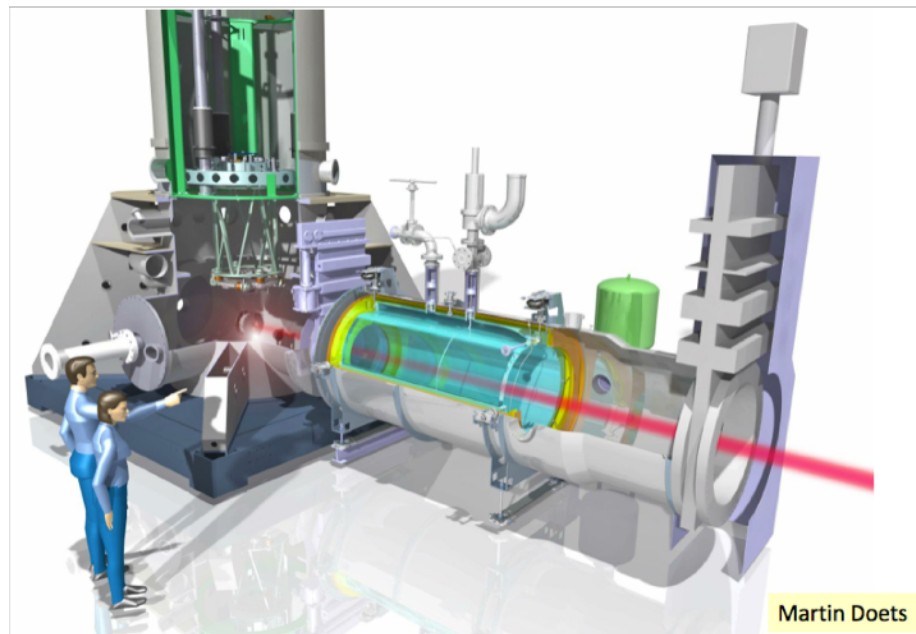


# Gravitational-Wave Instrumentations View

A. Bertolini, H.J. Bulten, S. Hild, F. Linde, B. Swinkels,  
M. Tacca, N. v Bakel, M. v Beuzekom, J. vd Brand

# Past: what we did and learnt...



## Cryolinks

- designed, installed, working fine BUT
- Maintenance in the past: troubles last year, lack of support (labview expertise). Now Bas + EGO vacuum group

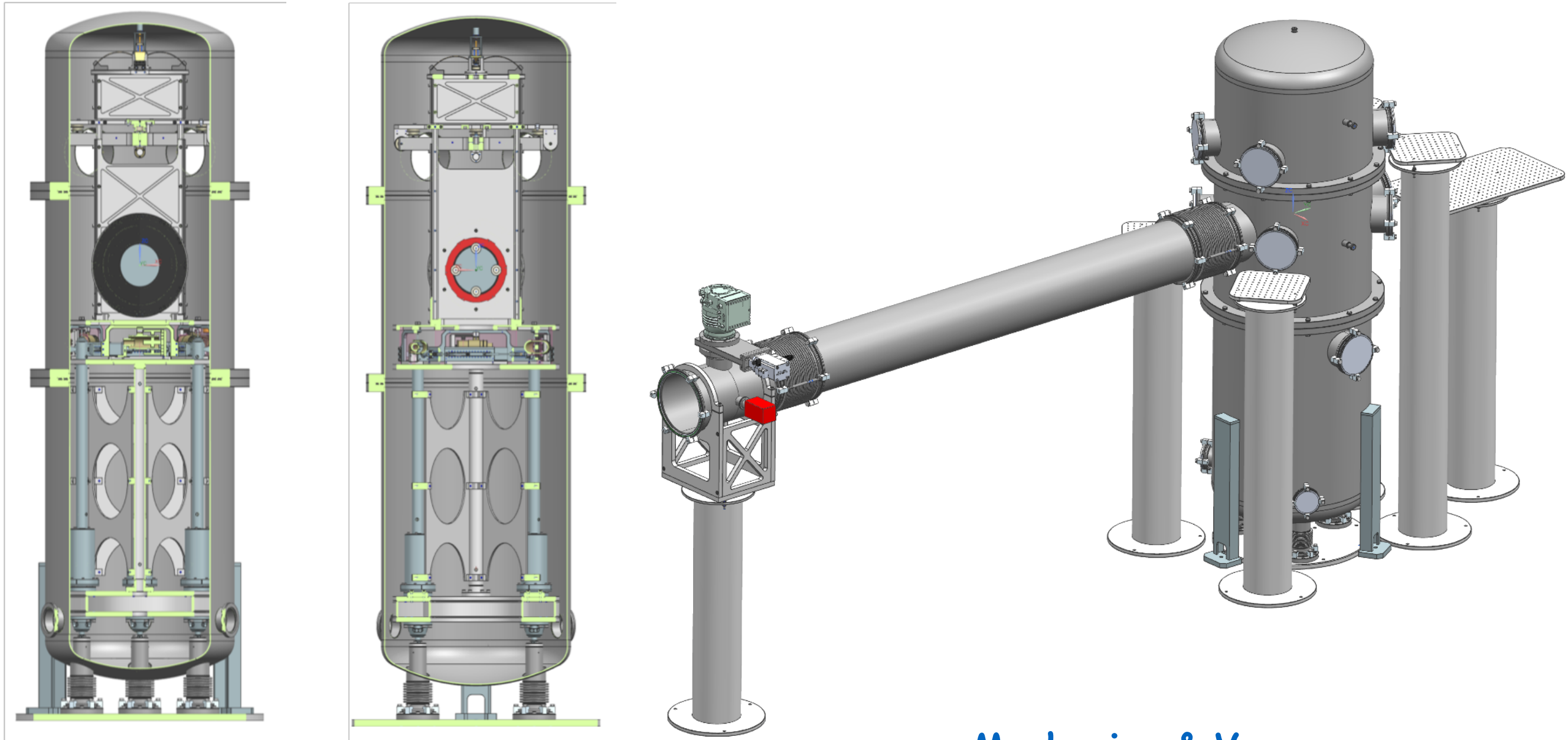
## QPDs & PCs

- designed, installed, working fine
- Maintenance: Guido, Martin vB, Matteo, Wim

## MultiSAS

- designed, installed, working fine
- Maintenance: Alessandro, Martin D and Eric

# Future (i): Filter Cavity for AdV



The design is done, we are waiting for prototype of the main components (should arrive by the end of February). We will have to test and install the system at the Virgo site

## Mechanics & Vacuum

- Martin, Eric + 1 more person

## Electronics

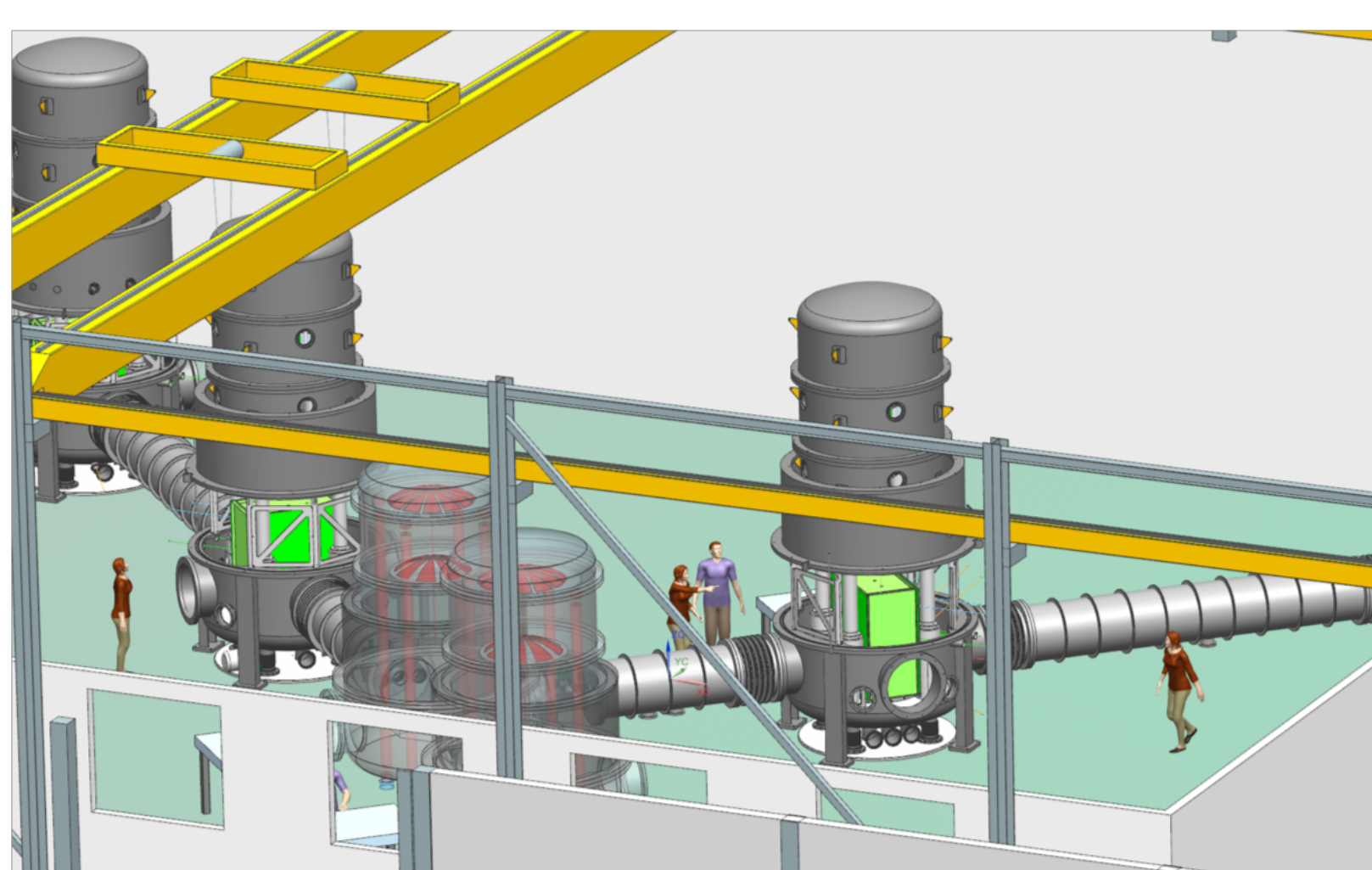
- Guido, Wim + ...

## Control & Data Acquisition

- ...



# Future (ii): ETpathfinder in Maastricht



The design is progressing quick and well  
BUT we have to realize the facility

**Mechanics, Vacuum & Cryogenics**

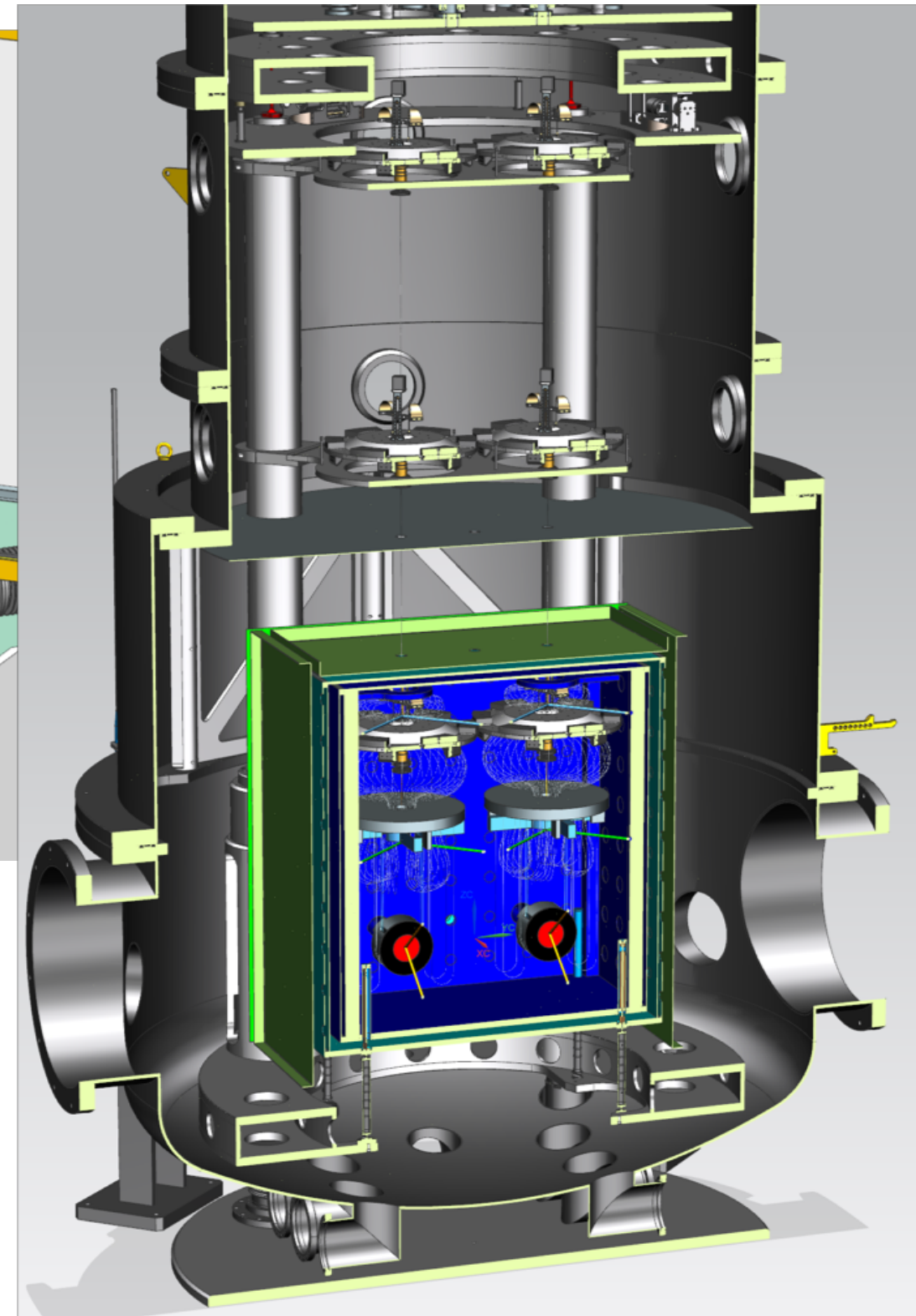
- Martin, Marco, Eric + ...

**Electronics**

- Guido, Wim + ...

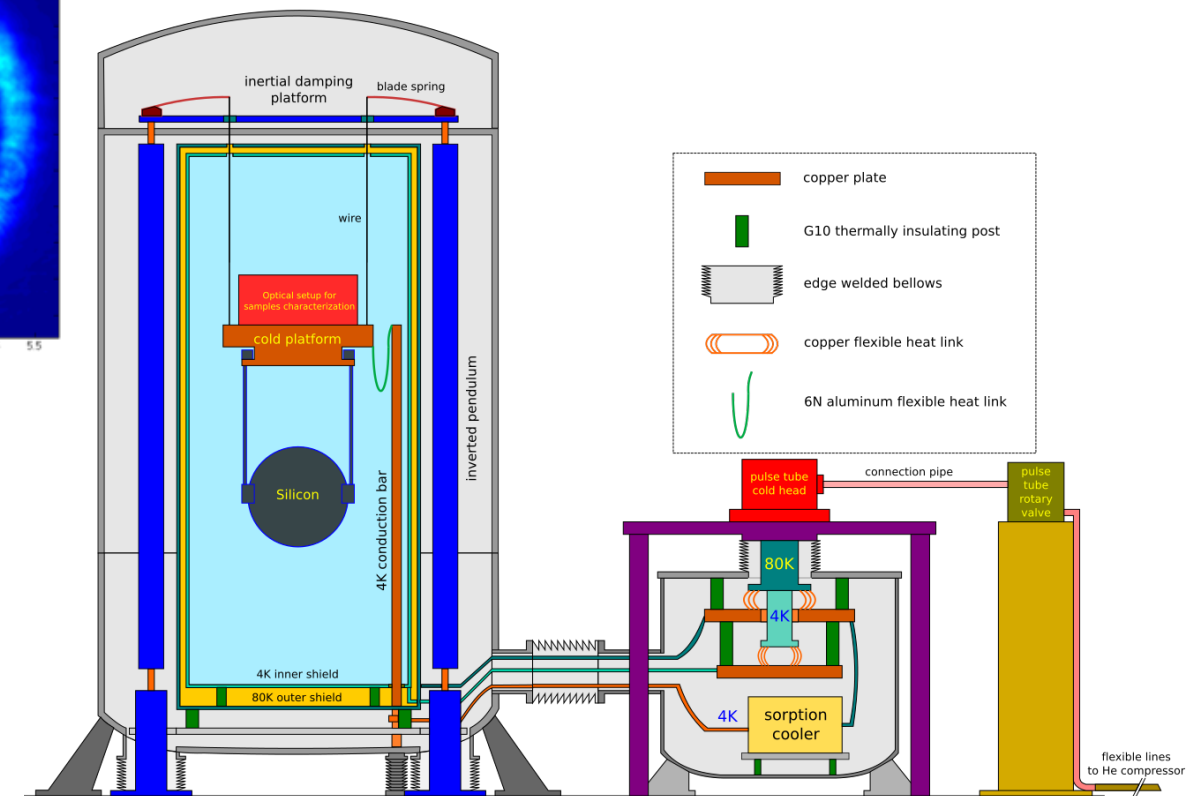
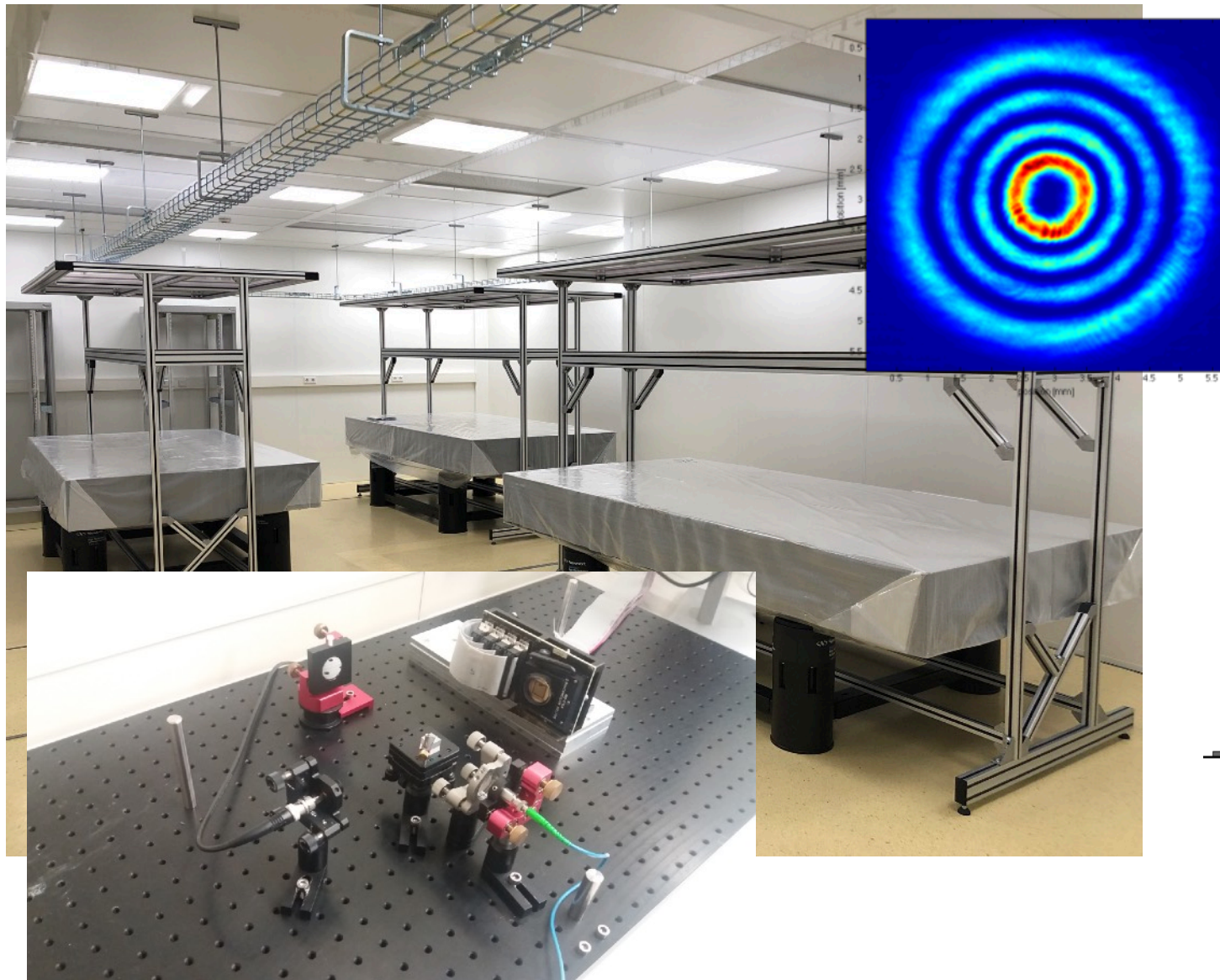
**Control & Data Acquisition**

- ...



We would need more people: we  
expect to grow to 5-10 FTE

# Future (iii): GW R&D @ Nikhef



## R&D in optics and related topics:

- HOM interferometry & squeezing
- interferometer advanced controls
- new sensors for AdV, ET and LISA
- characterization of materials for ET
- ...

## Mechanics, Vacuum & Cryogenics

- Someone to design (and produce) components

## Electronics

- Someone to design and produce components

## Control & Data Acquisition

- Someone to implement a Data Acquisition System



# Conclusions & Inputs

- We did many things and we are going to do more: it is **mandatory** also to feel responsible for the maintenance
- **Mechanics, Vacuum & Cryogenics:** Martin and Eric are involved in all our projects but they will retire in few years...shall we clone them? (or finding someone with their expertises)
- **Electronics:** Guido and Wim are involved in all our projects but they are involved in many projects...shall we clone them? (or finding someone with their expertises)
- **Electronics & Computing:** we would need someone expert in Data Acquisition and Control Systems
- **Connections:** Twente University (cryogenics), Technical University Eindhoven (advanced controls), TNO (optics)