



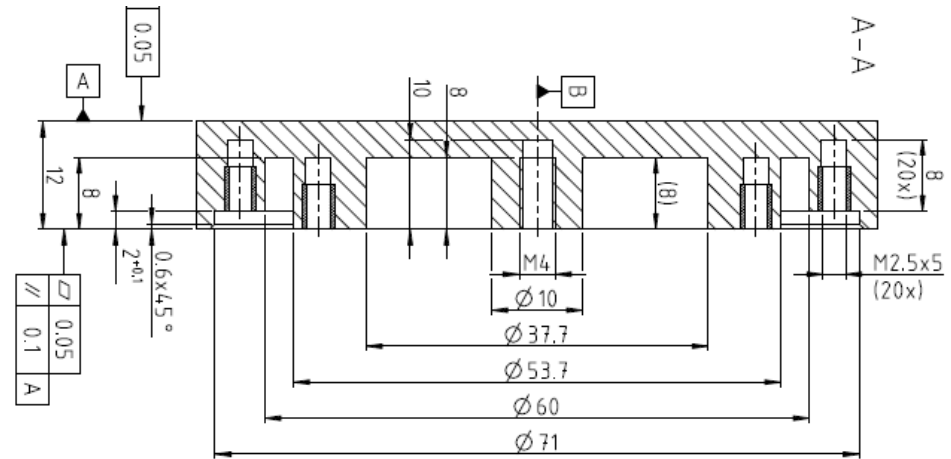
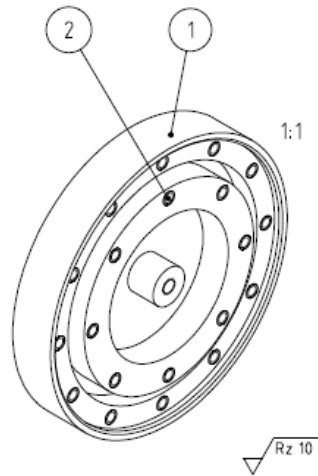
## New QPR sample design

**Sebastian Keckert**

# Task: New QPR sample design

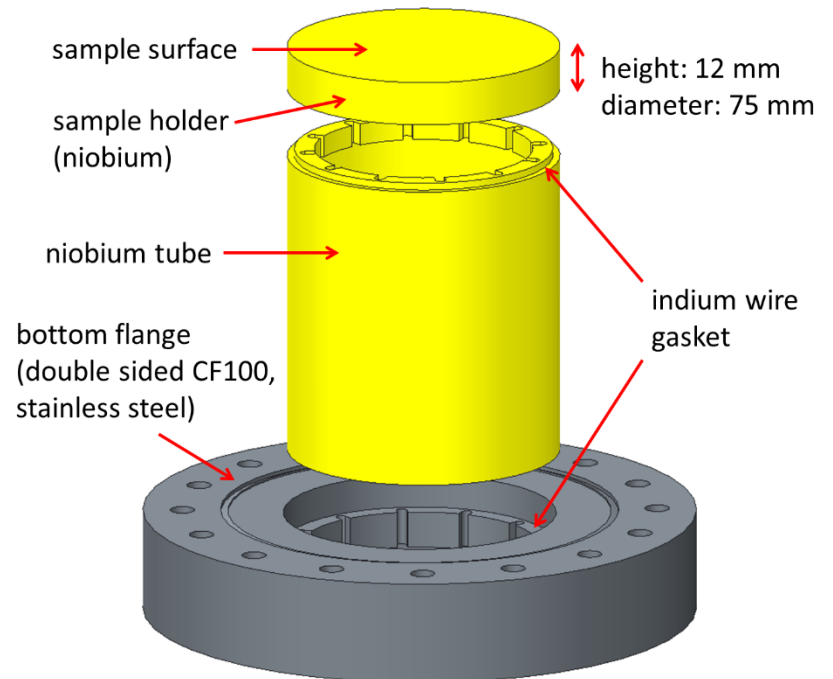
So far:

- Too high  $R_s$
- Upper indium „visible“ for RF



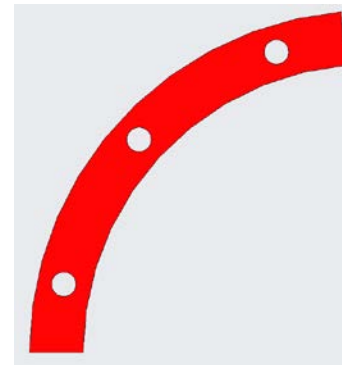
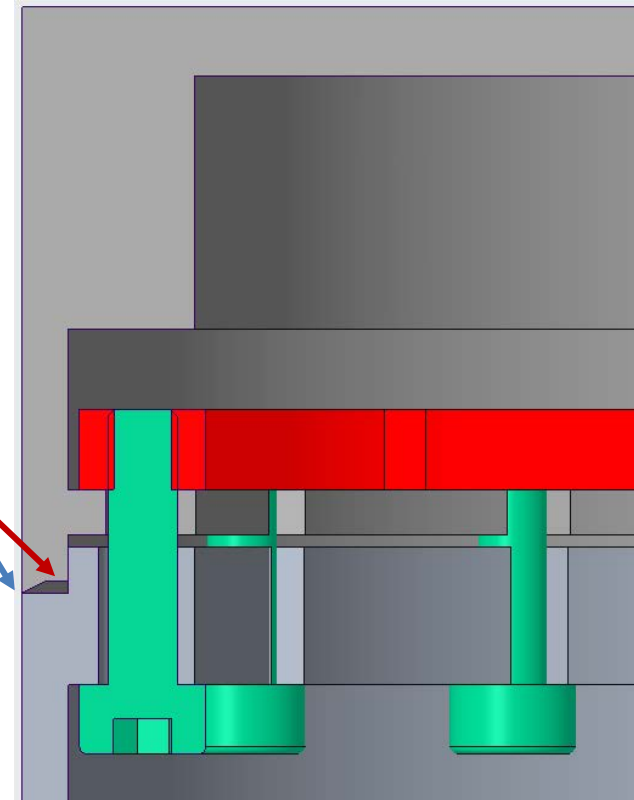
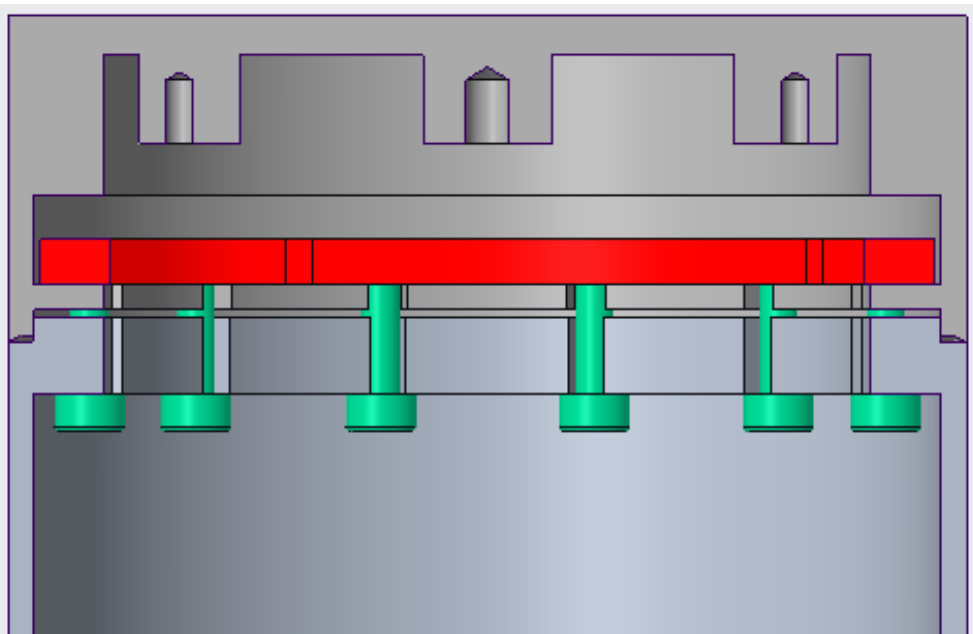
Idea:

- No „gap“ between niobium parts
- Improved contact resistance



# New design: Draft for discussion

- Nb knife edge: „no“ gap between Nb parts
- Indium gasket still possible  
→ Better thermal contact + vacuum seal
- Increasing the contact force
  - Titan ring with threads
  - M2.5 → M3



- Height of existing Nb sample:  $h=12$  mm
- Existing Nb material:  $\varnothing=80$  mm  $h=30$  mm
- Height budget:  
+15 mm without touching the Nb tube, +5mm when trimming at the bottom

