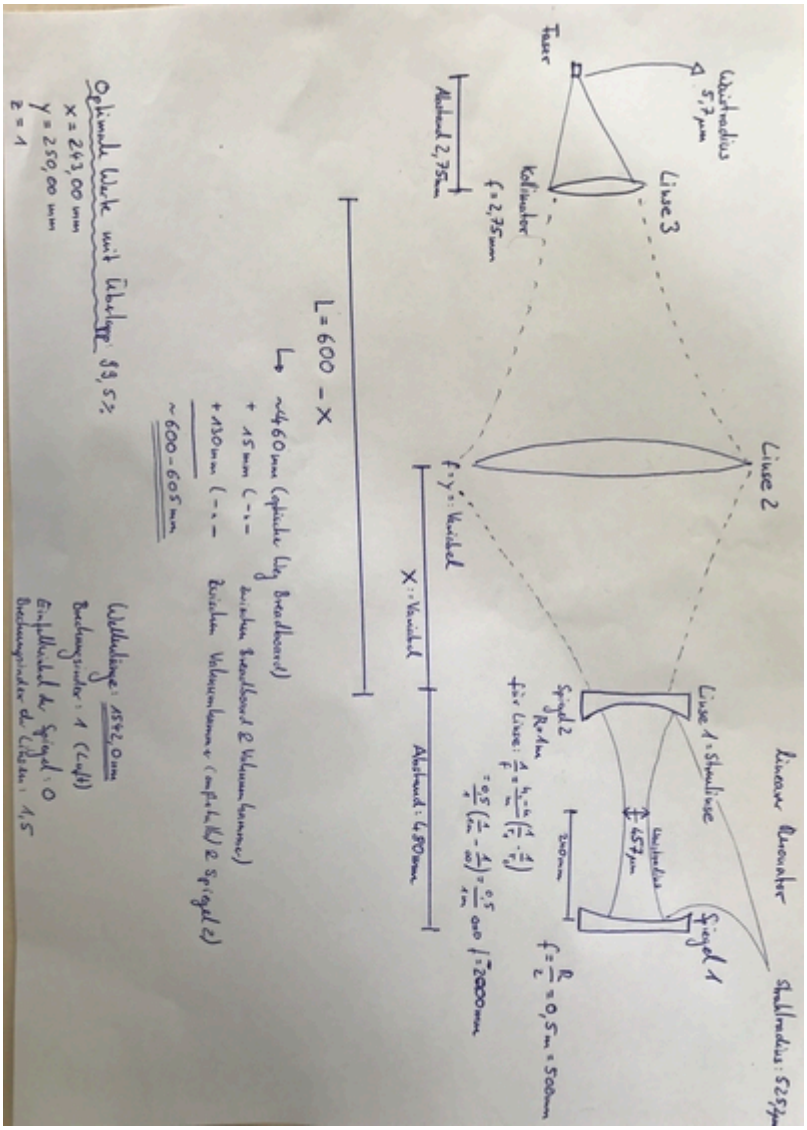
Mode Matching - second try

Mirror configuration



Parameter

- Radius of curvature of mirror R1: R1= 1 m
- Radius of curvature of mirror R2: R2= 1 m (Incoupling side)
- Wavelength: λ= 1542.0 nm
- Length between the resonator mirrors: L= 480 mm
- Beam radius at cavity-waist: w0
- Beam radius at mirror: w1, w2
- Distance between:
  - mirror R1 and mirror R2: L
  - mirror R2/lense 1 and lense 2: X

- mirror R2/lense 1 and collimatorlense: 600mm - X
  - 615mm = optical way of the incoupling breadboard (450mm) + thickness breadboard (10mm) + distance between breadboard and vacuumchamber (30mm) + distance between vacuumchamber and cavity mirror R2 (130mm)
- collimatorlense and fiber: 2.75 µm

We used the programm *Strahl.exe* (@IQ) or *STRAHLFP.EXE* (@PTB) (same software, but different names).

Step 1: Beam waist calculation from resonator

Step 2:

Step 3:

Step 4:

Step 4b