RRR measurement setup at CERN

Konrad Eiler



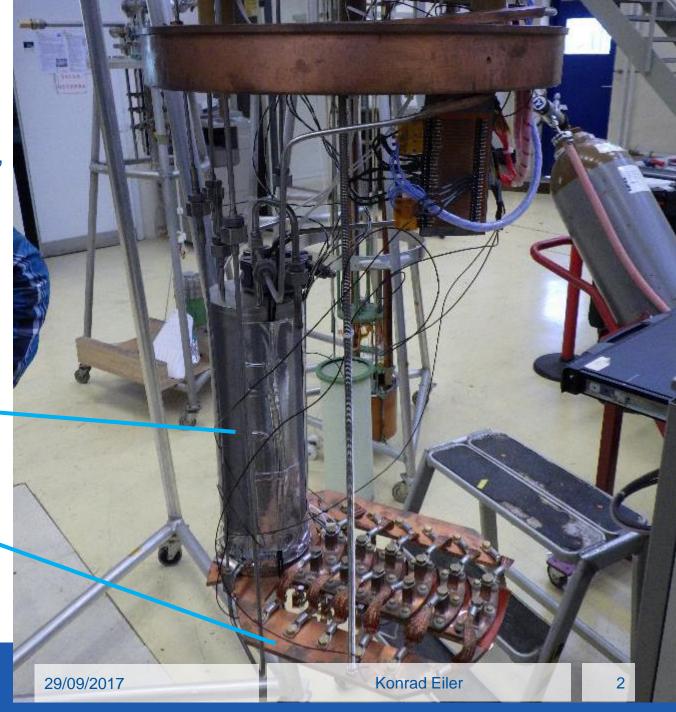
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Overview

Samples are in vacuum, cooled by through LHe and copper plate

LHe supply

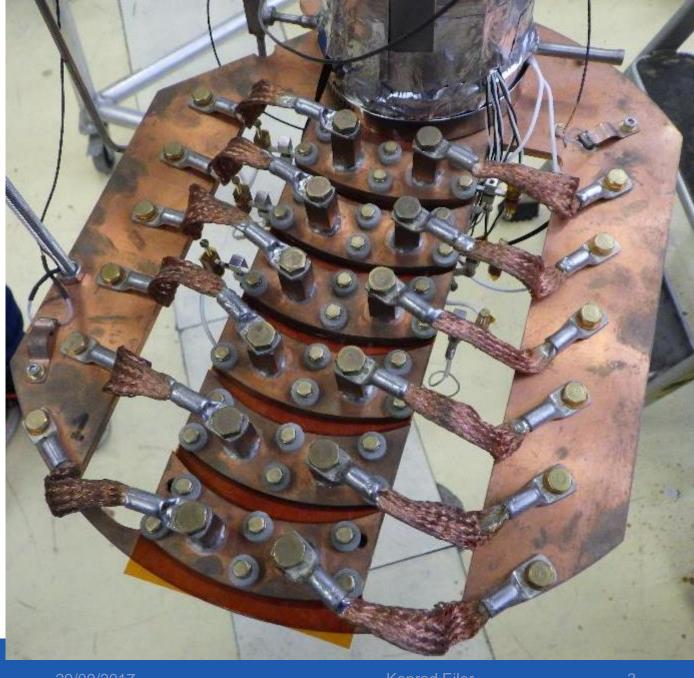
Cold mass (Cu plate) as sample holder



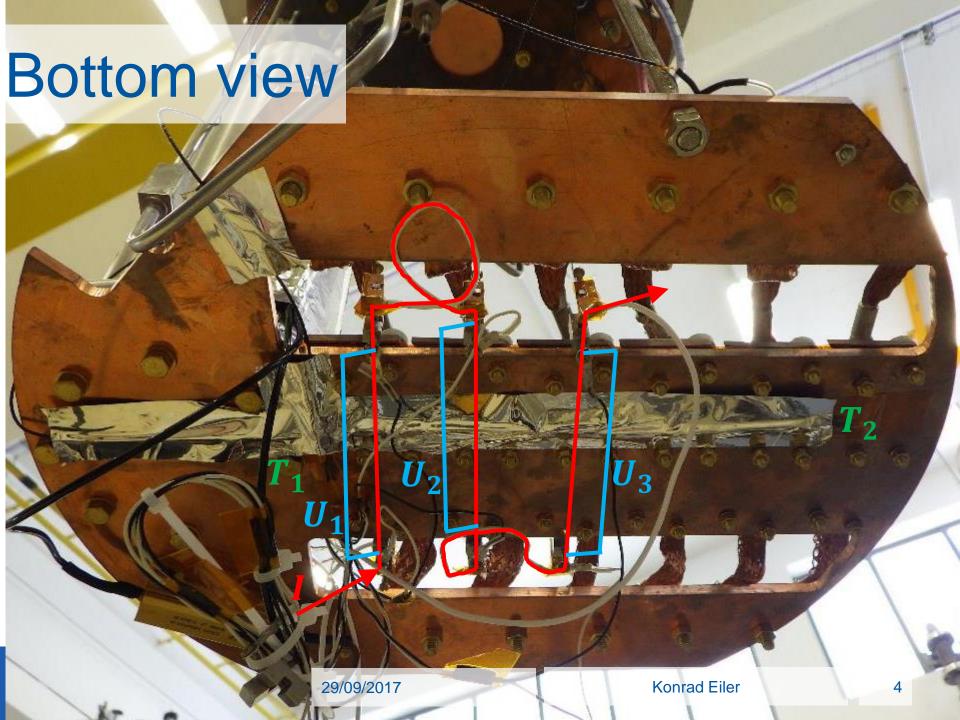


Top view

This setup allows us to measure both straight as well as bent samples (e.g. cut from cavities)









Setup data

- Sample size: 120 mm x 2 mm x 2 mm
- Max 6 samples in setup
- Series connection, current: 5 A
- 2 Temperature sensors type TVO
- Kapton foil for isolation
- Acquisition of U_i(T) between 6 and 20 K without heating



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Results

$$RRR = \frac{\rho(300 \text{ K})}{\rho(4.2 \text{ K})}$$

 $\rho(T)$ at cold exponential fite-10 ho(T) at 300 K $^{ ext{\tiny 8E-10}}$ 7E-10 6E-10 **E** 5E-10 4E-10 3E-10 2E-10 1E-10 0

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