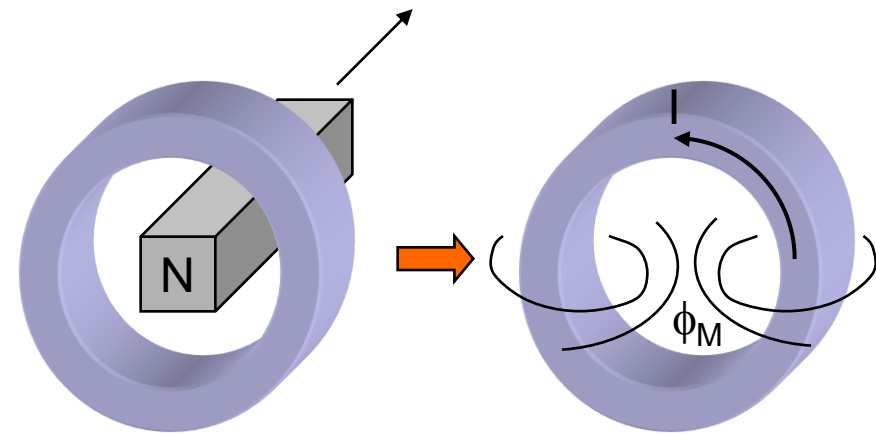


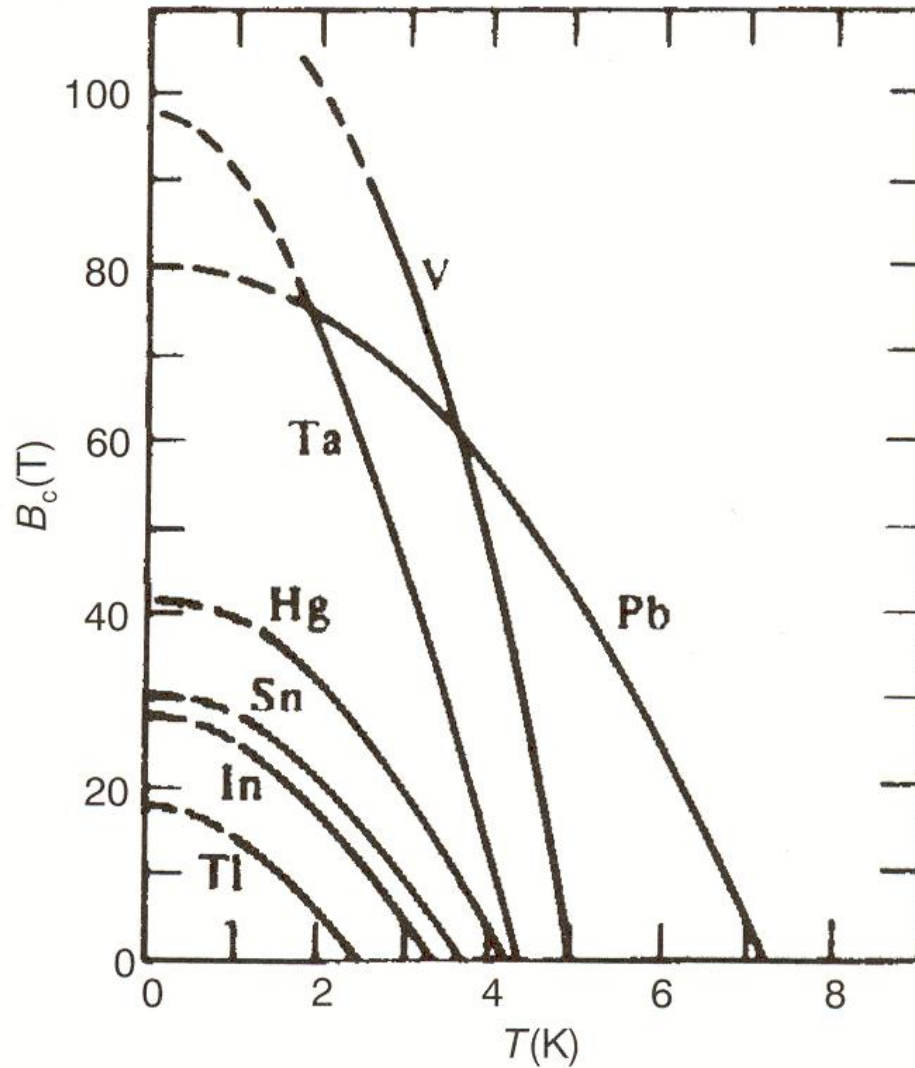
Präzisionsmessungen von ρ_{SL} über
Abklingen von Ringströmen:



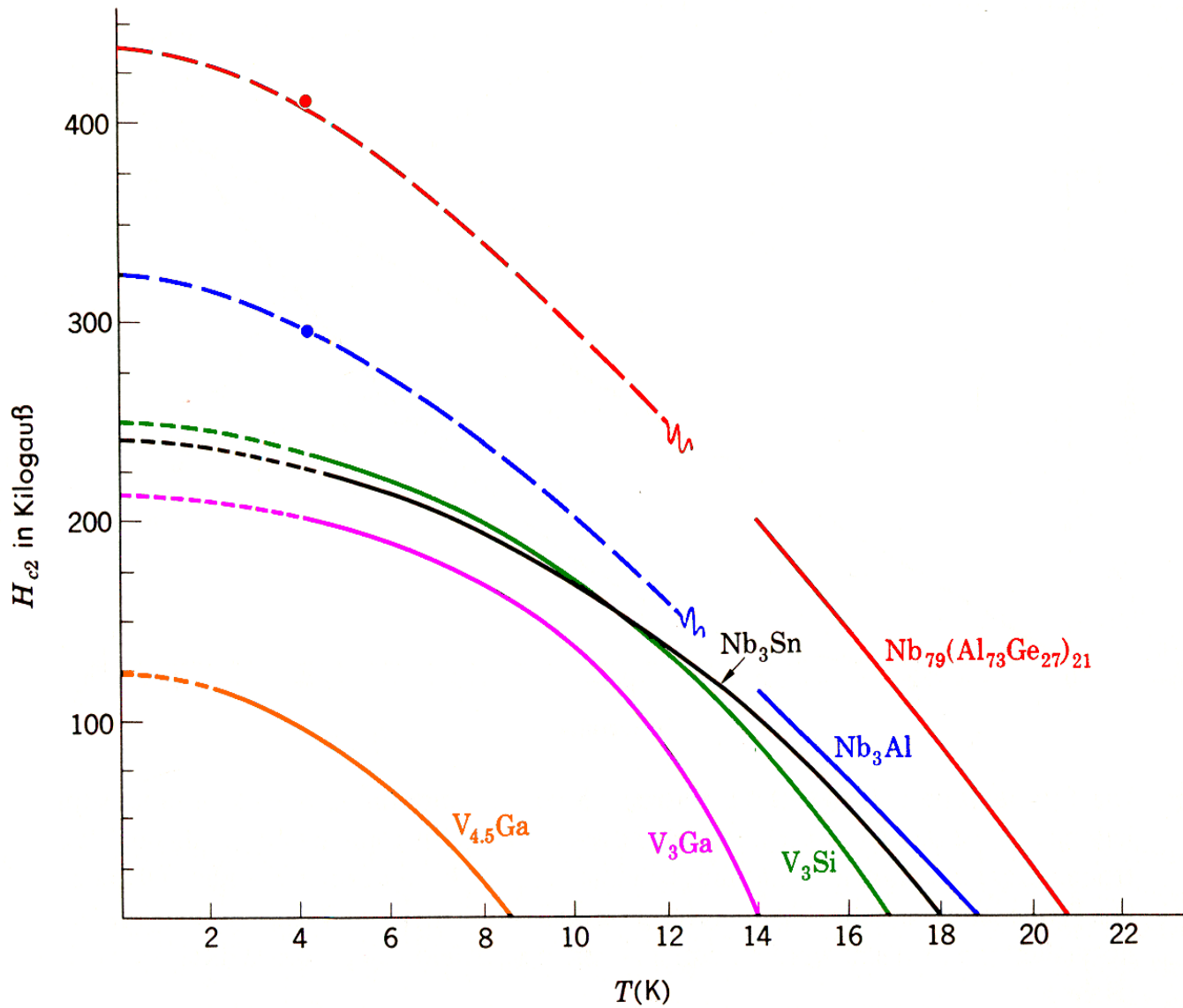
$$I(t) = I(0) \cdot \exp(-t / \tau); \quad \tau = R / L$$

Ergebnis: $\tau \geq 10^5$ Jahre
 $\rho_{SL} \leq 10^{-17} \rho_{Cu}$

- Legierungen
- intermetallische Verbindungen:
 - NbN (16.0 K)
 - Nb₃Al (17.5 K)
 - Nb₃Ge (23.2 K)
 - V₃Si (17.1 K)
 - MgB₂ (39 K)
- organische Verbindungen:
 - Polymere
 - Molekulkristalle
 - Fullerene
- keramische Materialien (H-T_c)

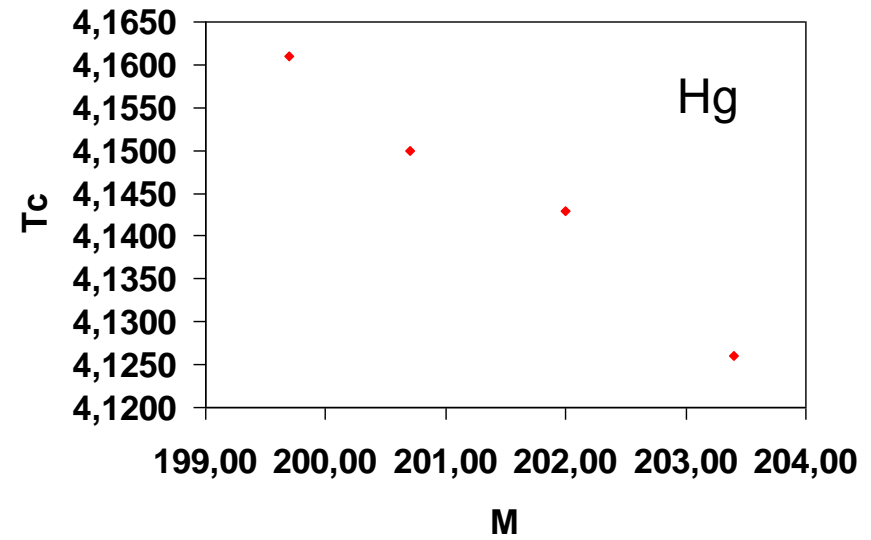


G. Burns, High Temperature superconductivity,
Academic Press, San Diego, 1992

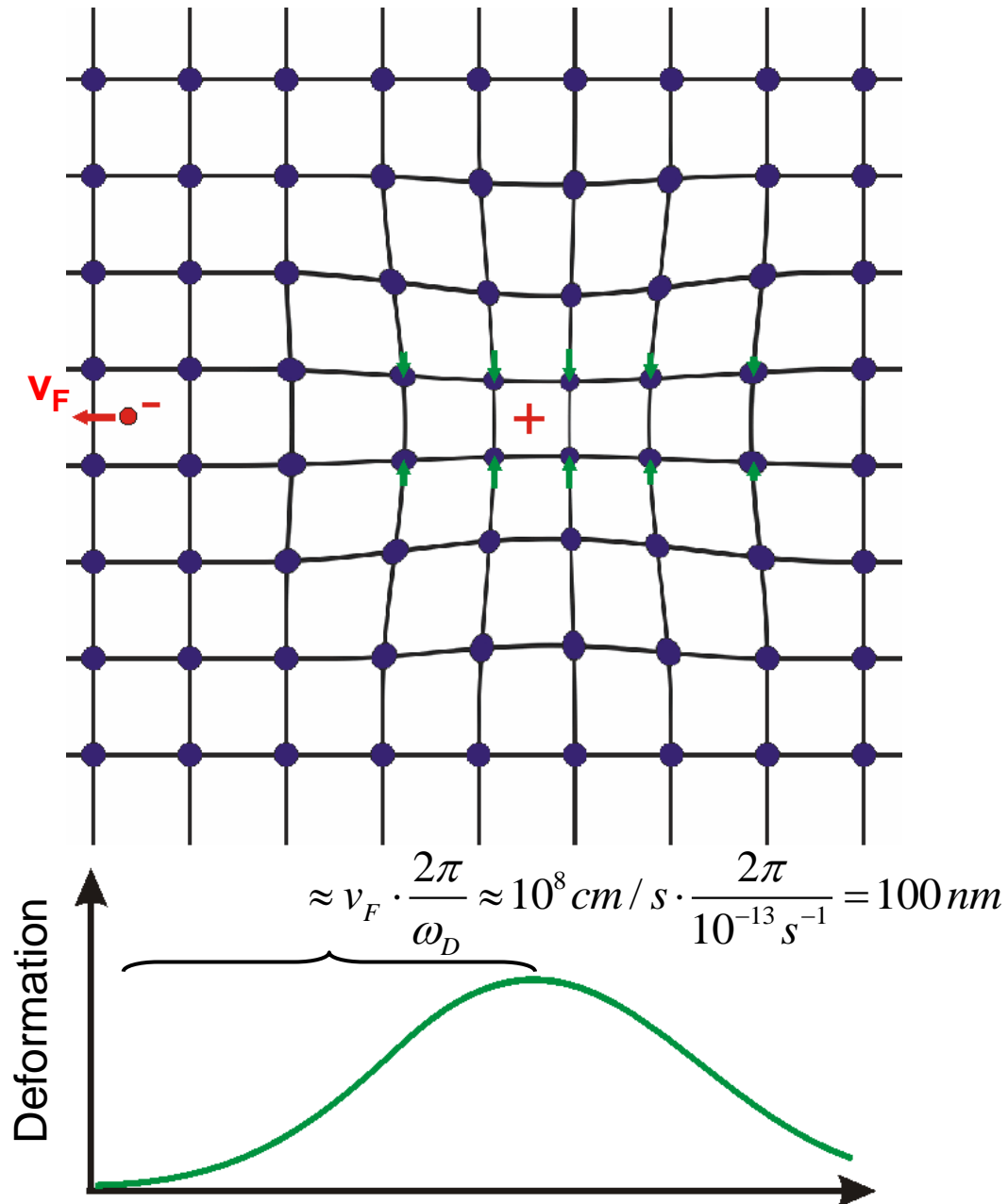


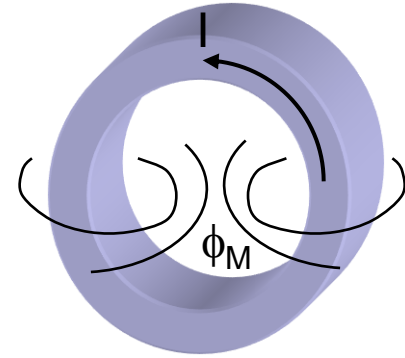
$$T_c \propto M^{-\alpha}$$

$$\alpha \approx 0.5$$

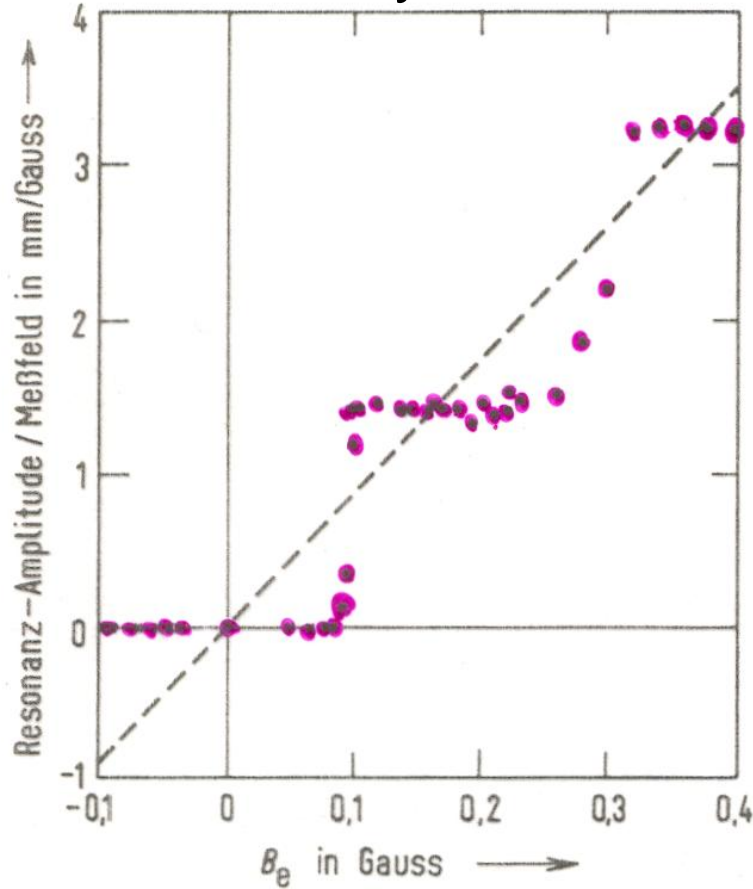


Substanz	α	Substanz	α
Zn	$0,45 \pm 0,05$	Ru	$0,00 \pm 0,05$
Cd	$0,32 \pm 0,07$	Os	$0,15 \pm 0,05$
Sn	$0,47 \pm 0,02$	Mo	$0,33$
Hg	$0,50 \pm 0,03$	Nb ₃ Sn	$0,08 \pm 0,02$
Pb	$0,49 \pm 0,02$	Mo ₃ Ir	$0,33 \pm 0,03$
Tl	$0,61 \pm 0,10$	Zr	$0,00 \pm 0,05$



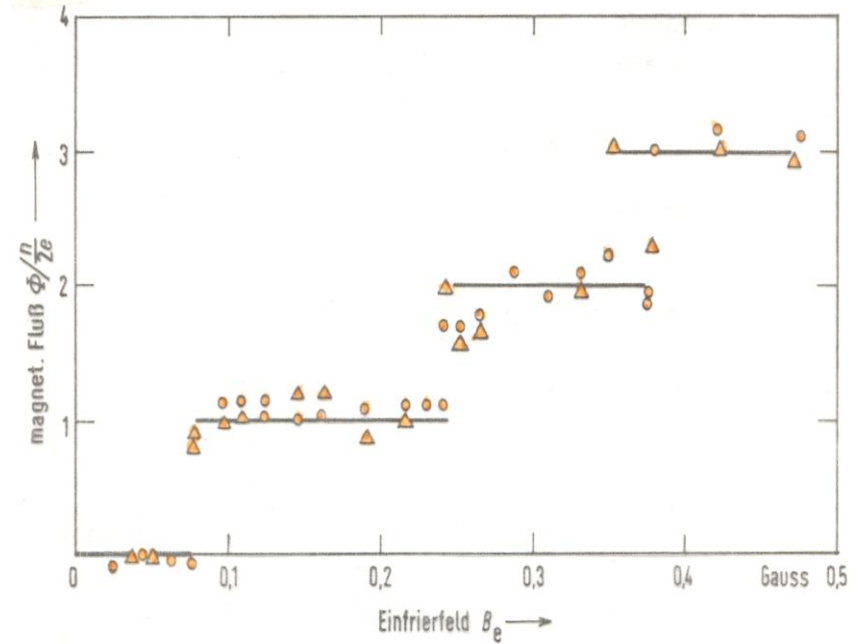


Pb-Zylinder

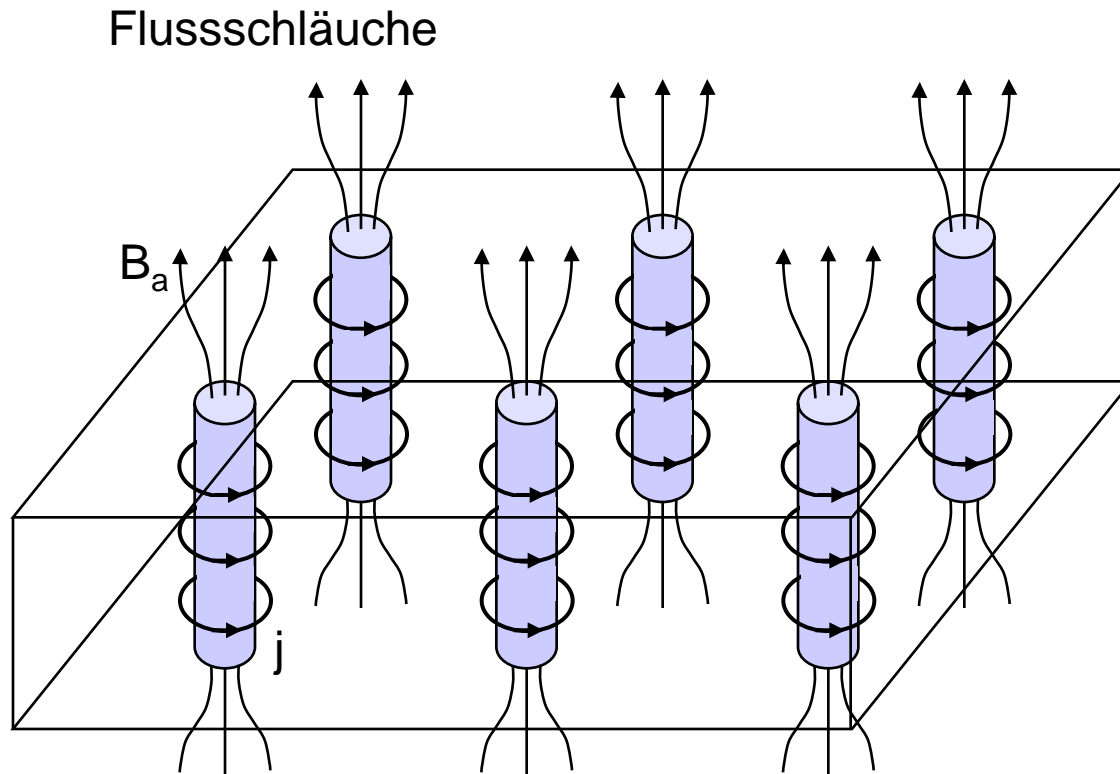


Doll & Nähbauer, 1961

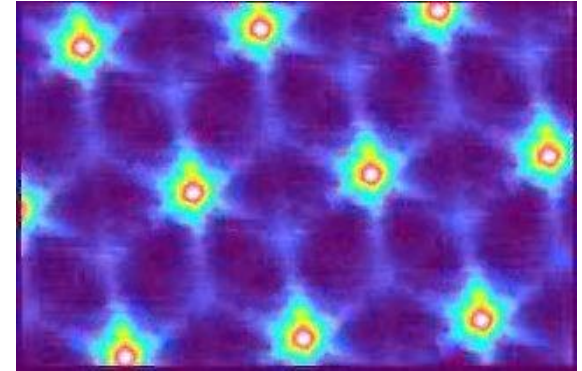
Sn-Zylinder



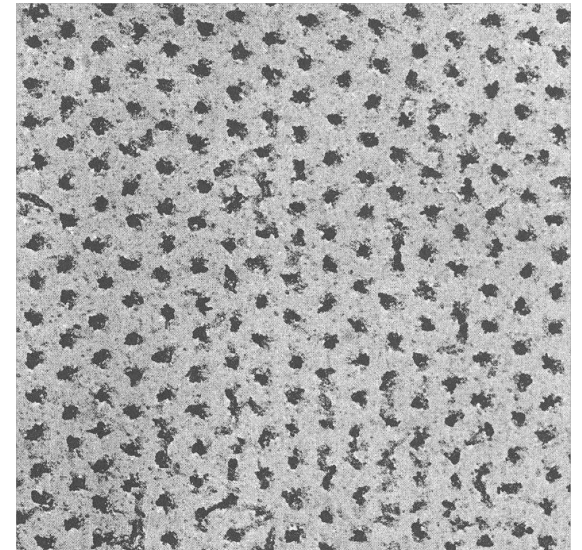
Deaver & Fairbank, 1961



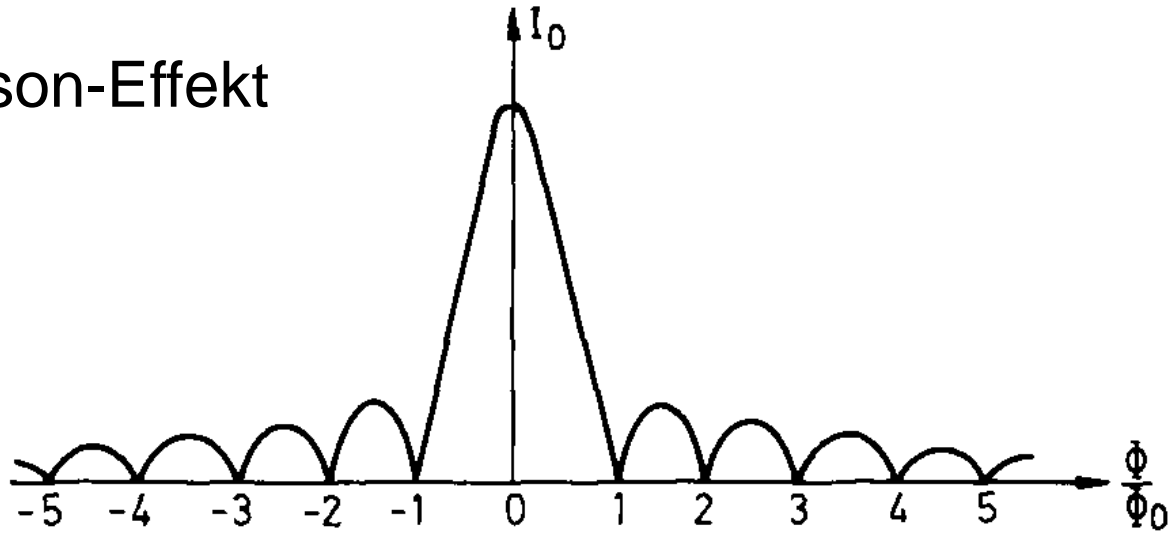
STM



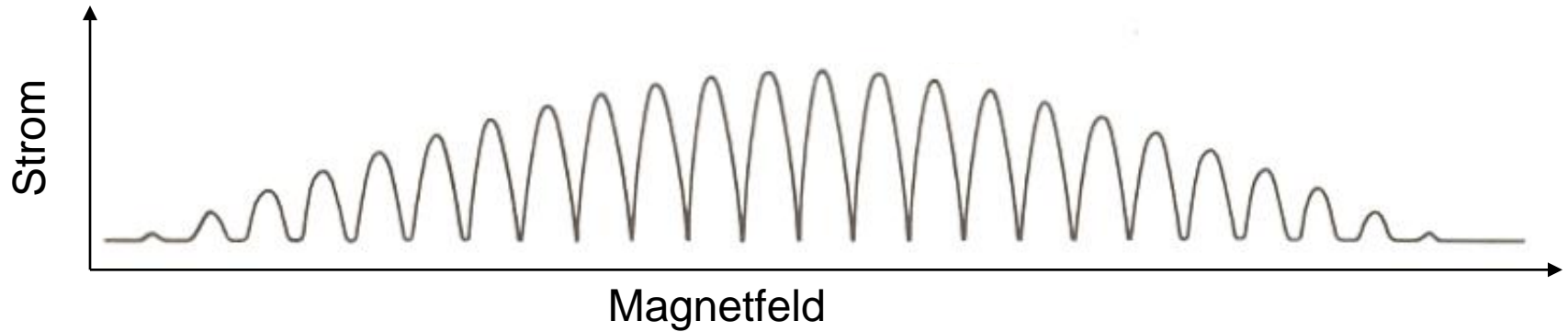
SEM

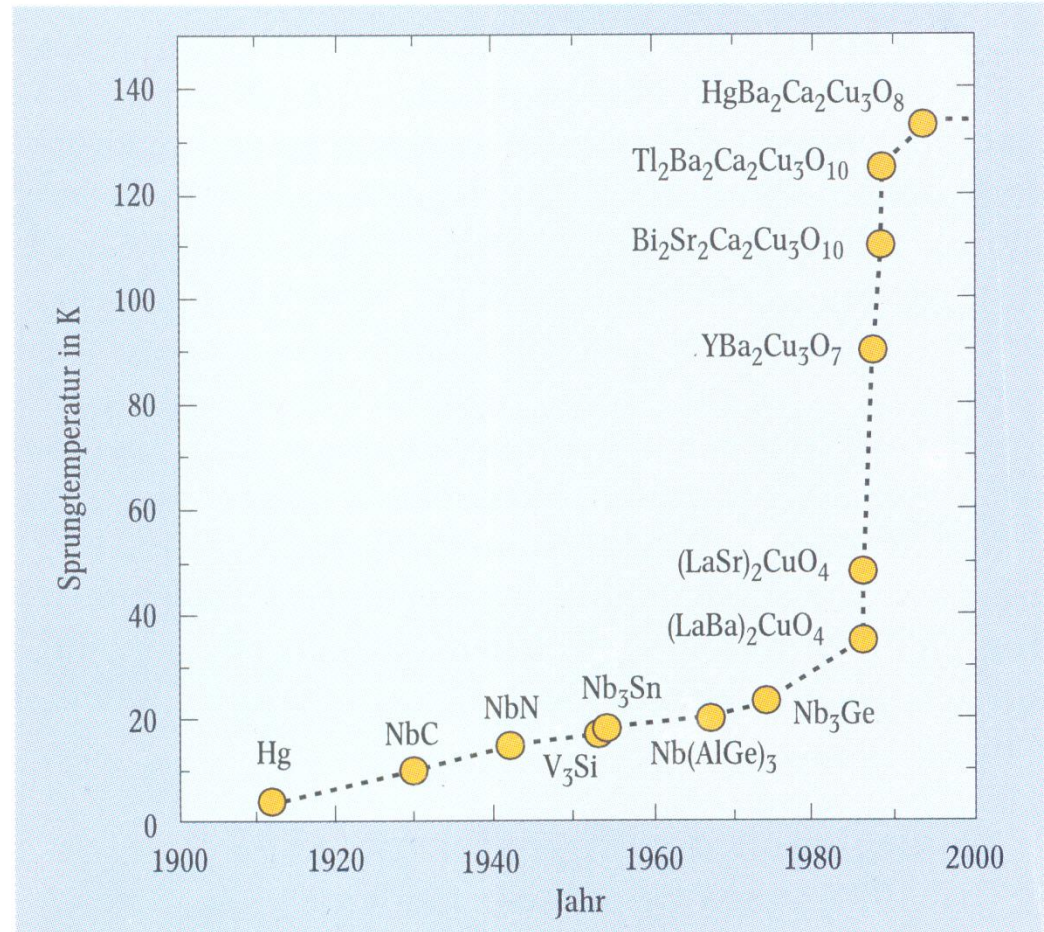
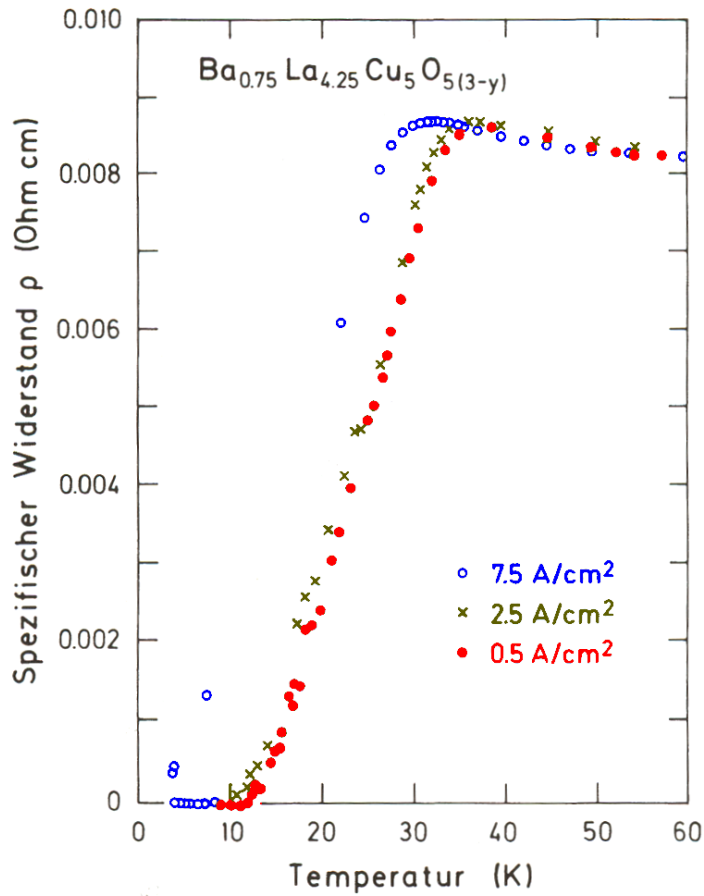


dc-Josephson-Effekt



SQUID





J.G. Bednorz, K.A. Müller,
Z. Phys. B 64, 189 (1986)

