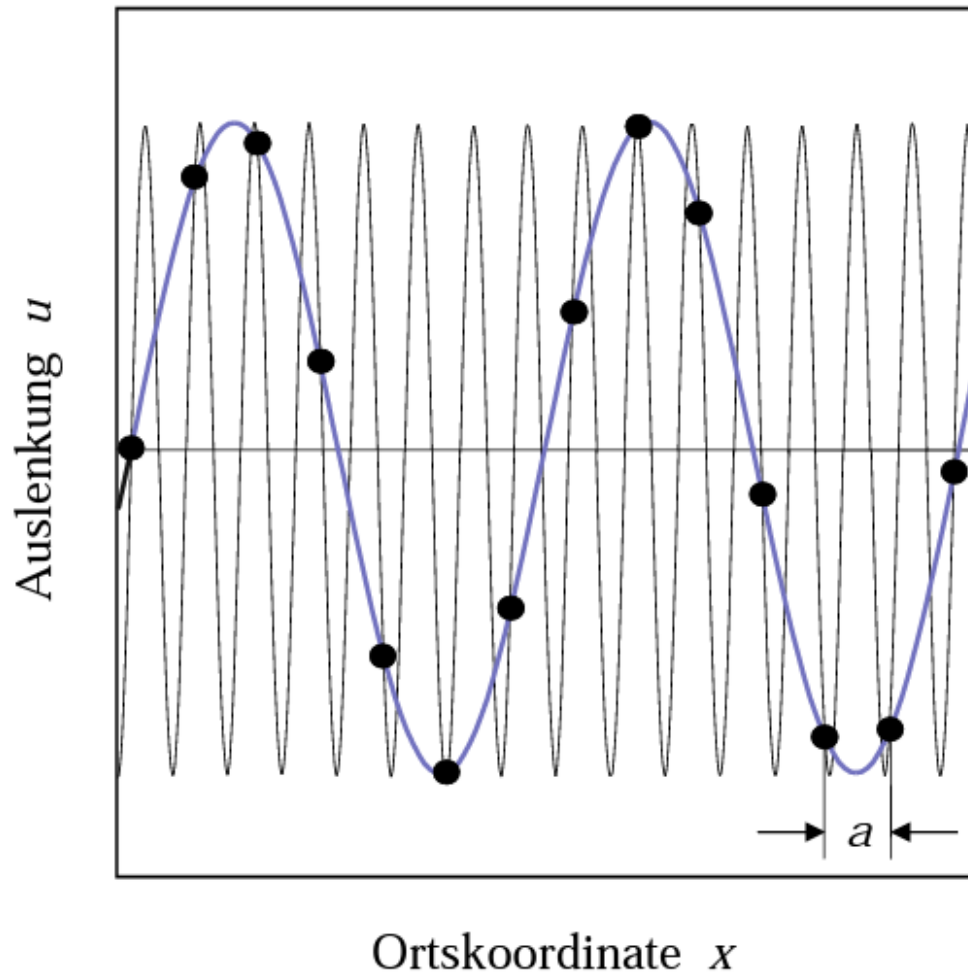


1. Gitter mit einatomiger Basis
2. Gitter mit zweiatomiger Basis
3. Gitterschwingungen => Phononen
4. Inelastische Neutronenstreuung
5. Experimentelle Bestimmung von Dispersionskurven

Gitter mit einatomiger Basis

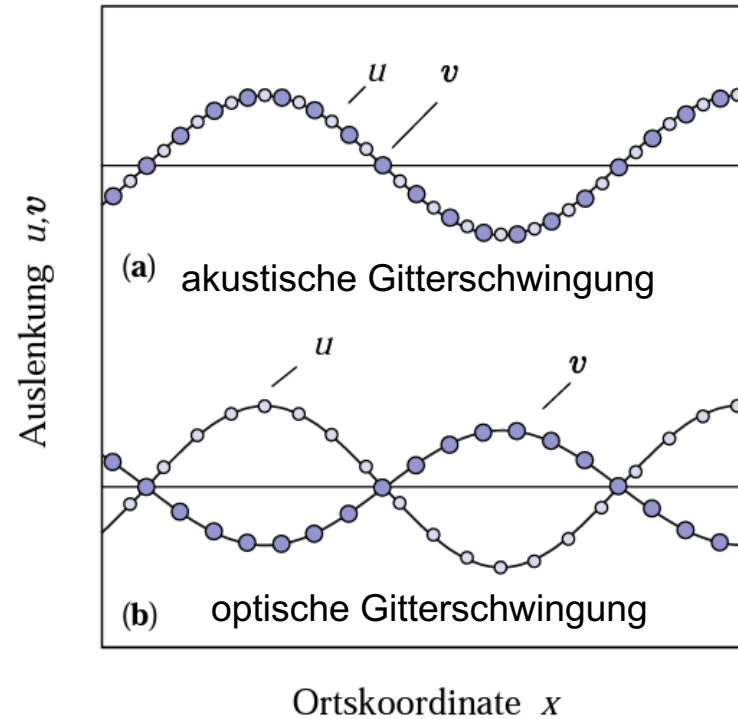
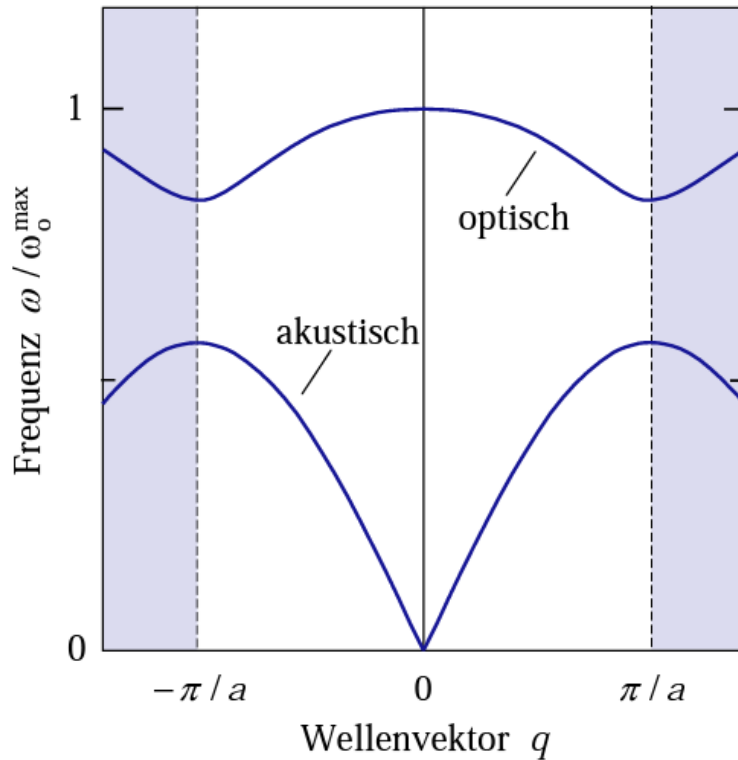


Reduktion auf die
1. Brillouin-Zone

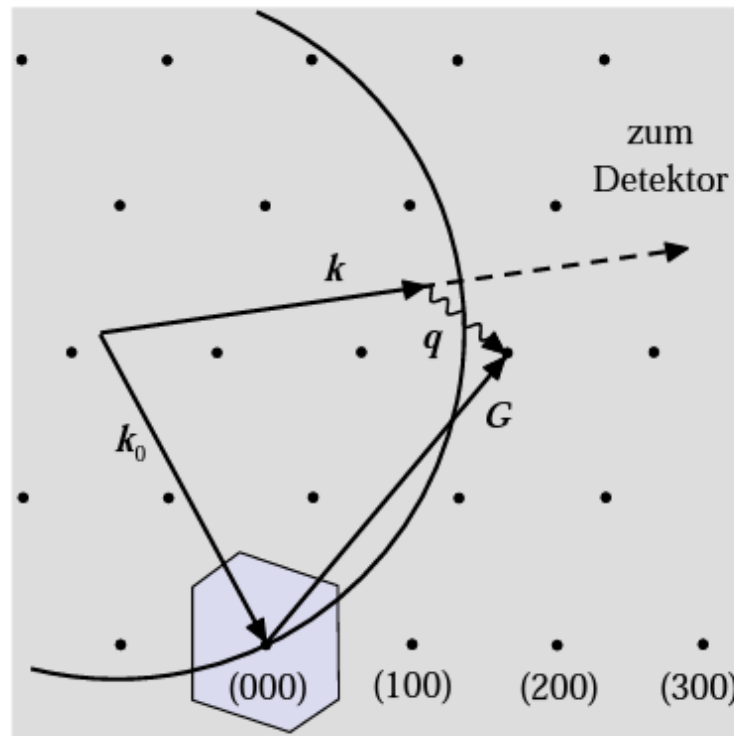
$$q' = q + \frac{2\pi p}{a}$$

($p = \text{ganze Zahl}$)

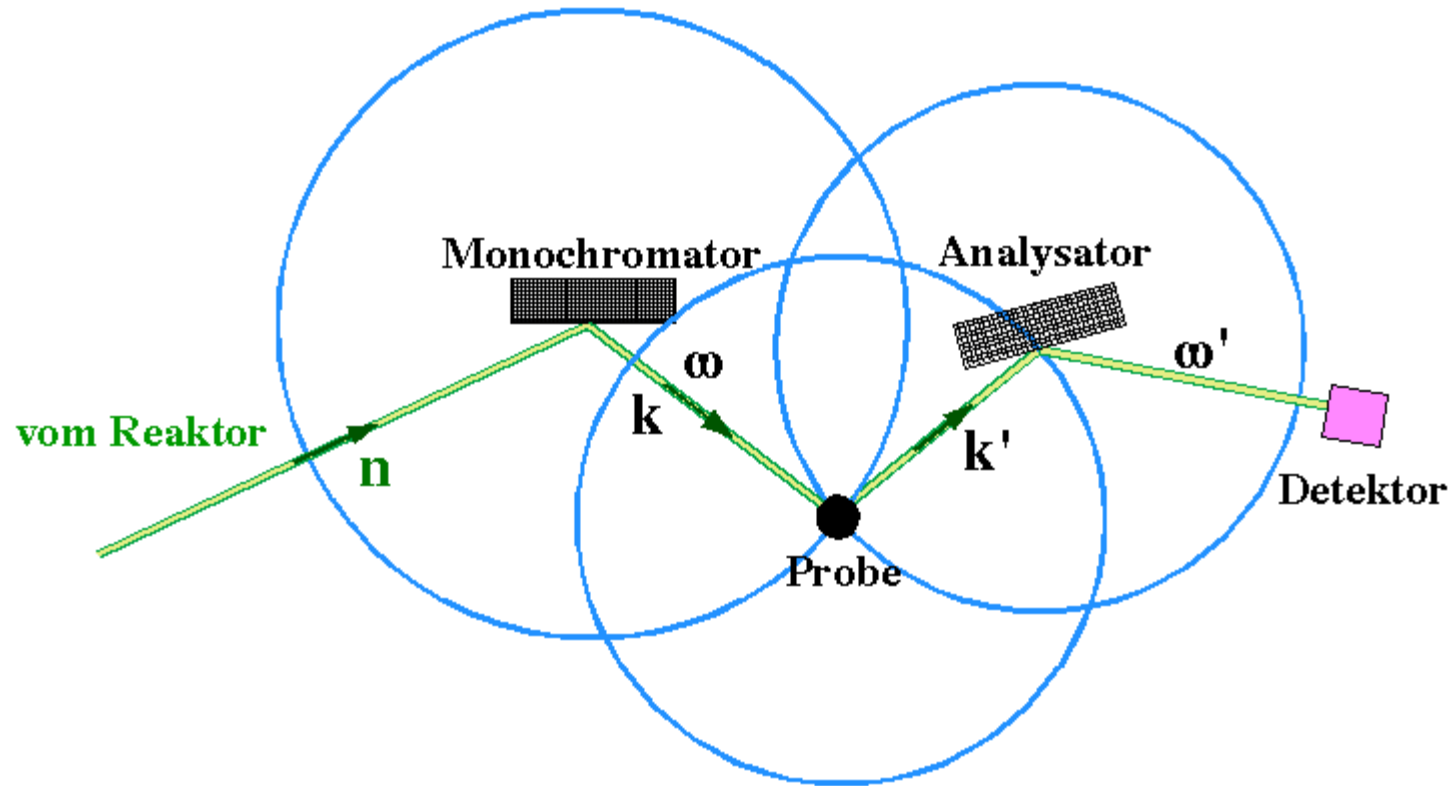
© S.Hunklinger



Inelastische Neutronenstreuung



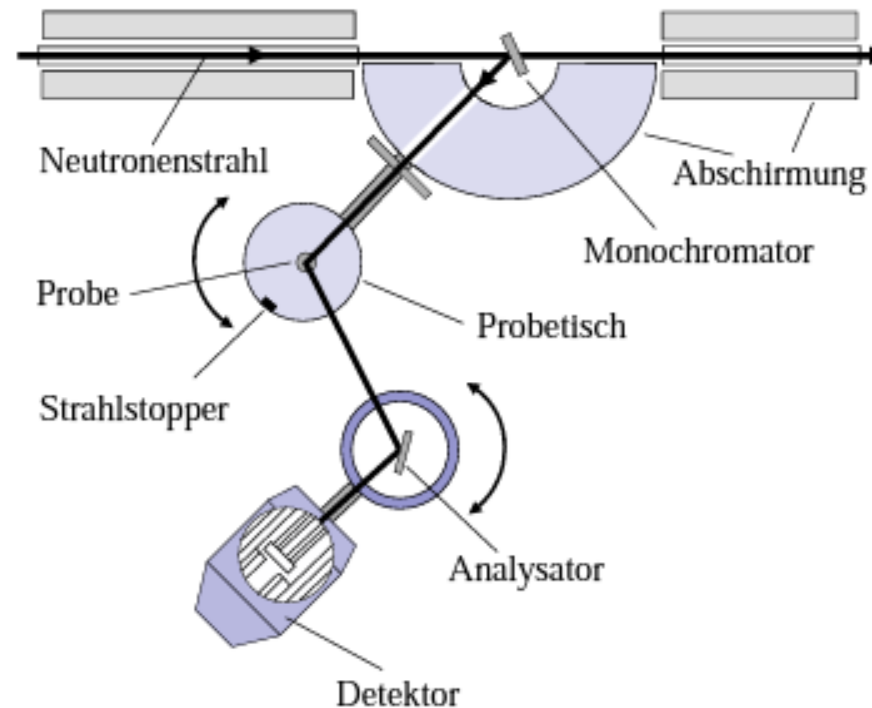
Experimentelle Bestimmung von Dispersionskurven

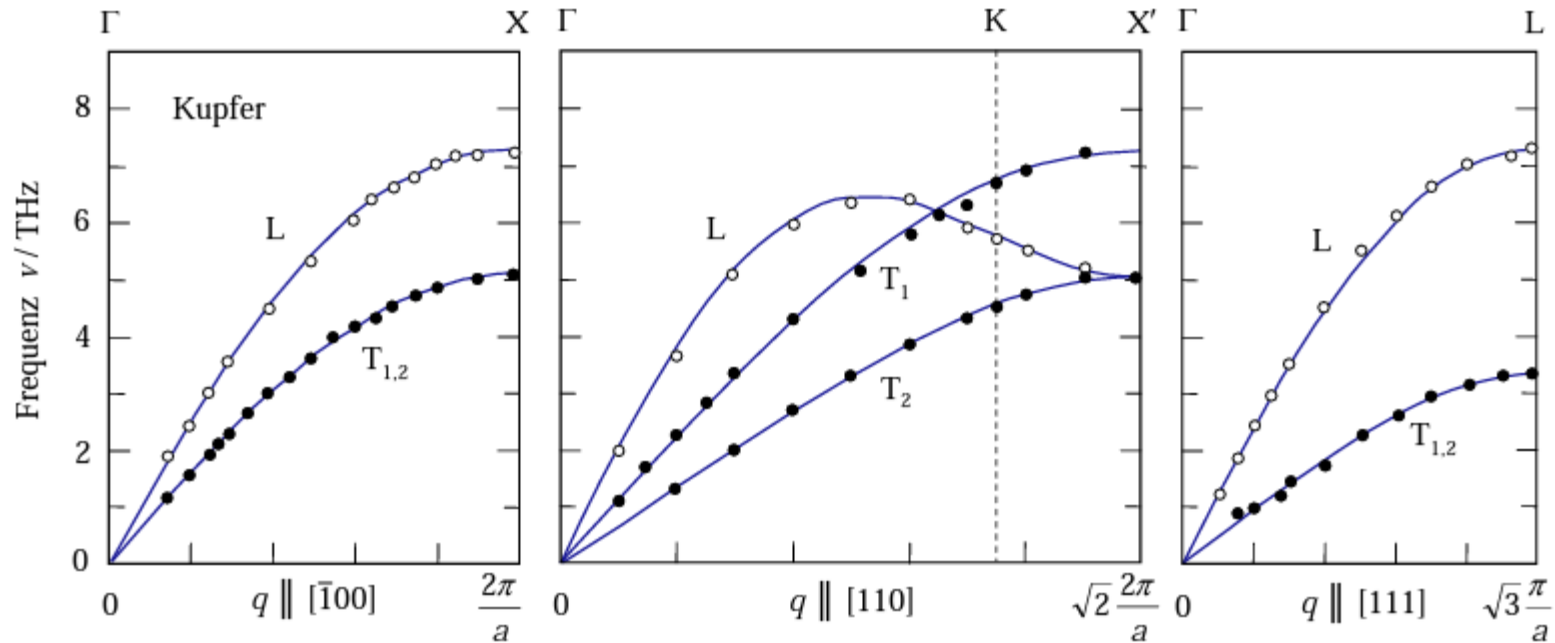


© D. Suter

Experimentelle Bestimmung von Dispersionskurven

Neutronenspektrometer





Phononen-Dispersionskurven von Kupfer