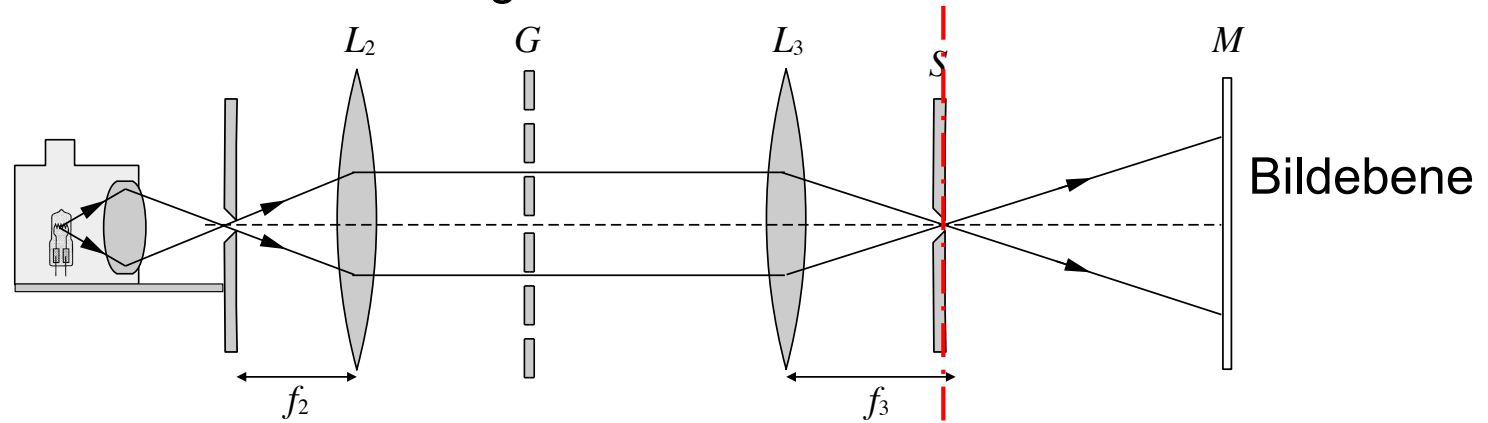


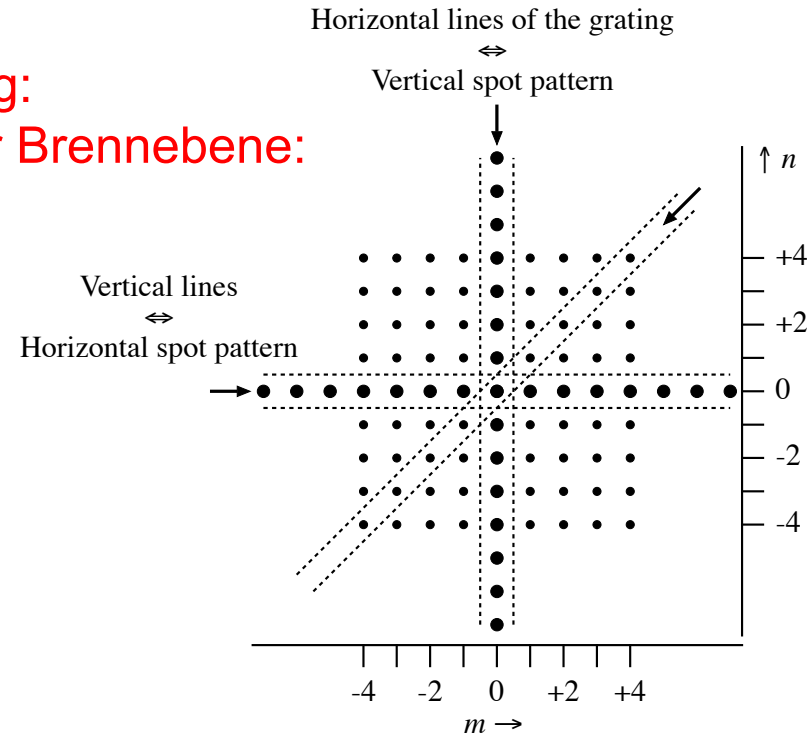
Der Versuch von Ernst Abbe

Beugungsobjekt:
2D Kreuzgitter

Brennebene

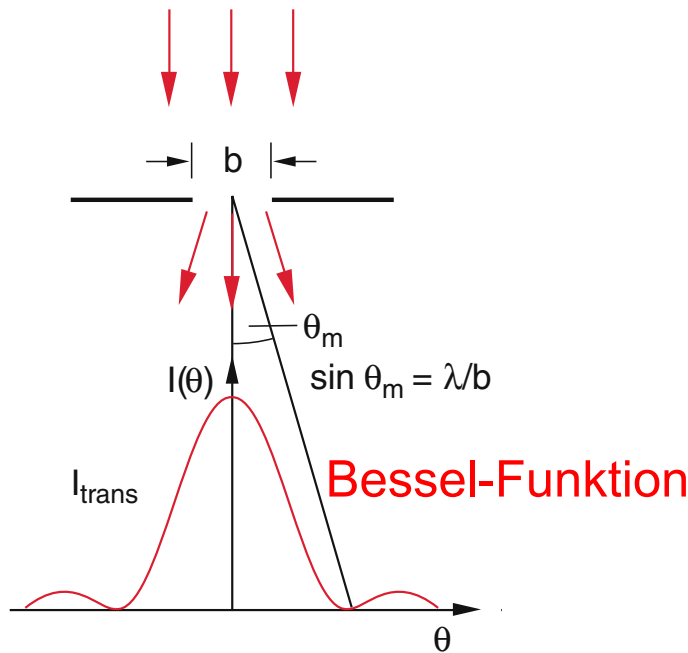


Fraunhofer Beugung:
Beugungsbild in der Brennebene:

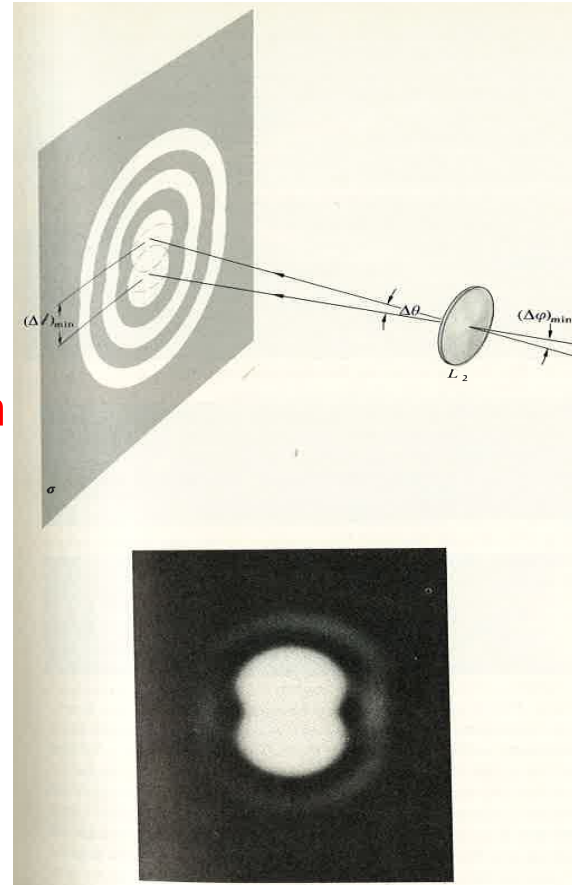
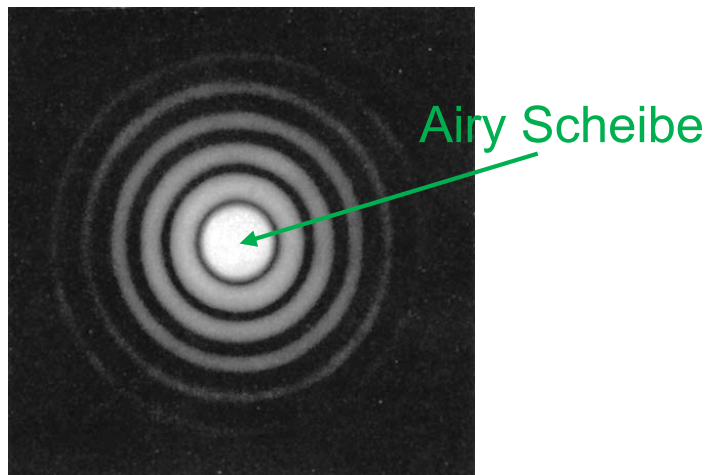


Kreisblende und Auflösungsvermögen

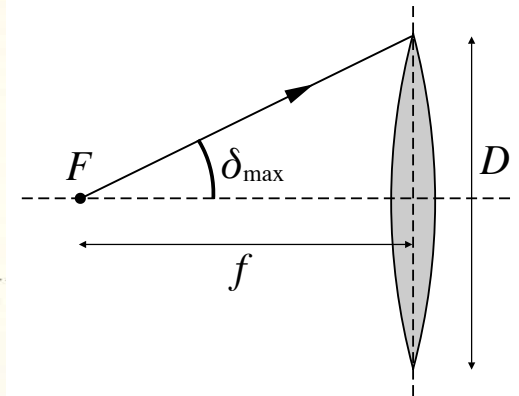
Auflösungsvermögen: kleinstes b ?



1. Minimum: $\sin \Theta = 1.22 \lambda/b$



Hecht, Optics, Addison Wesley



Linse:

$$NA = n \sin \Theta_{\text{max}}$$

$$b_{\text{min}} = 1.22 \lambda / NA$$

In der Photographie:

$$NA = \sin \Theta_{\text{max}} = D/(2f) \text{ bzw. } f/\# = f/D$$