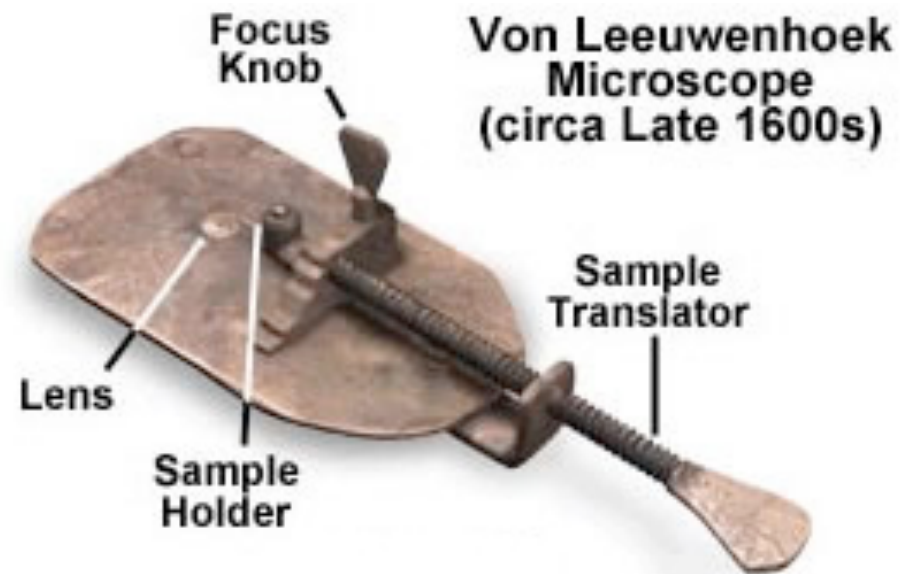
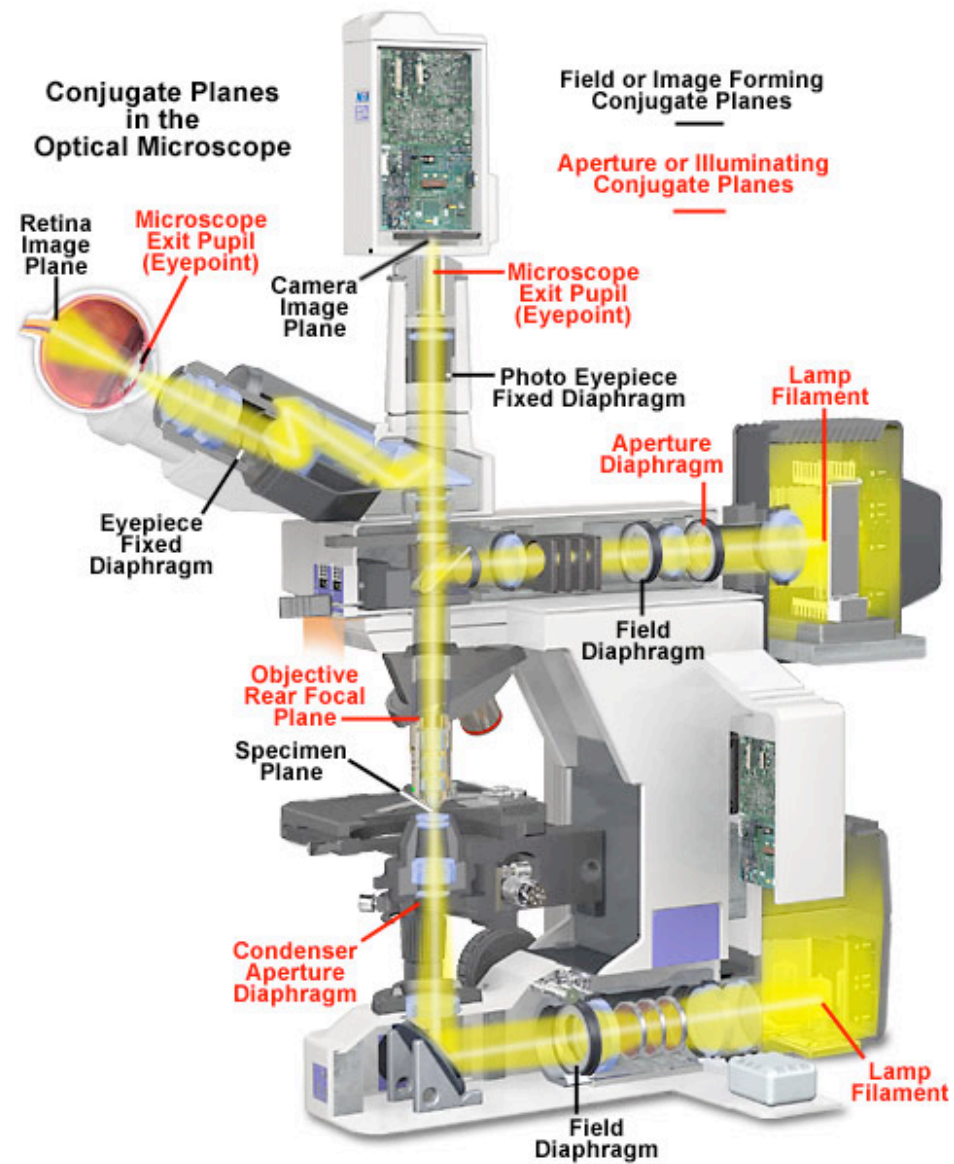


Das Mikroskop

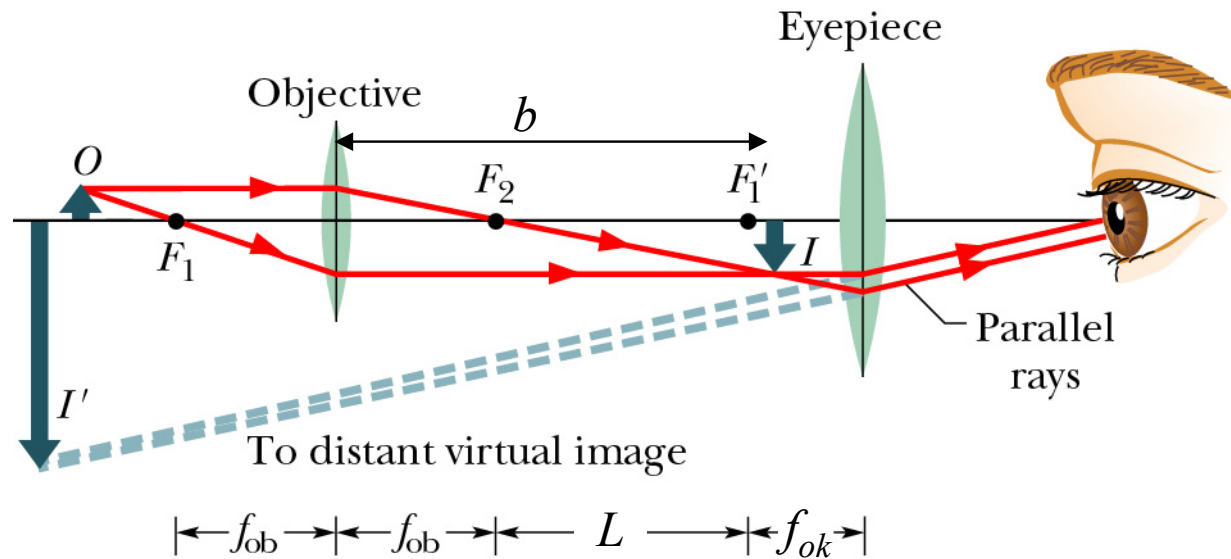
Das erste Mikroskop



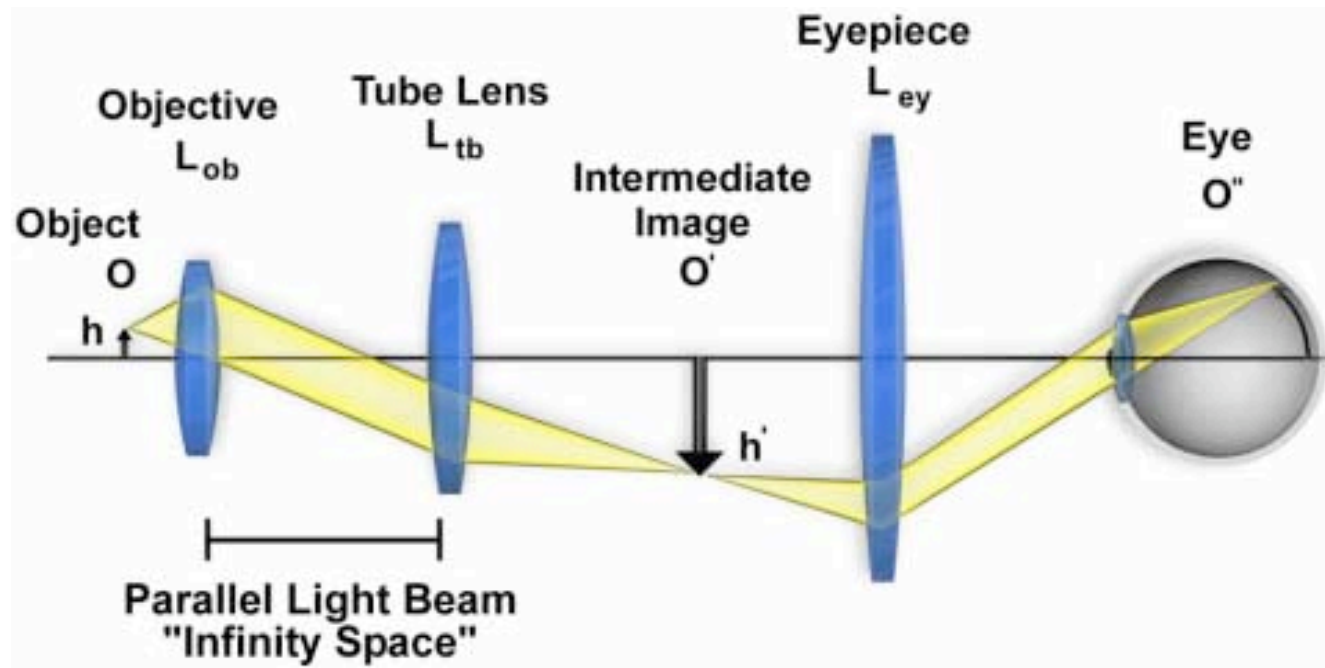
Luxusmikroskop



Funktionsprinzip Mikroskop

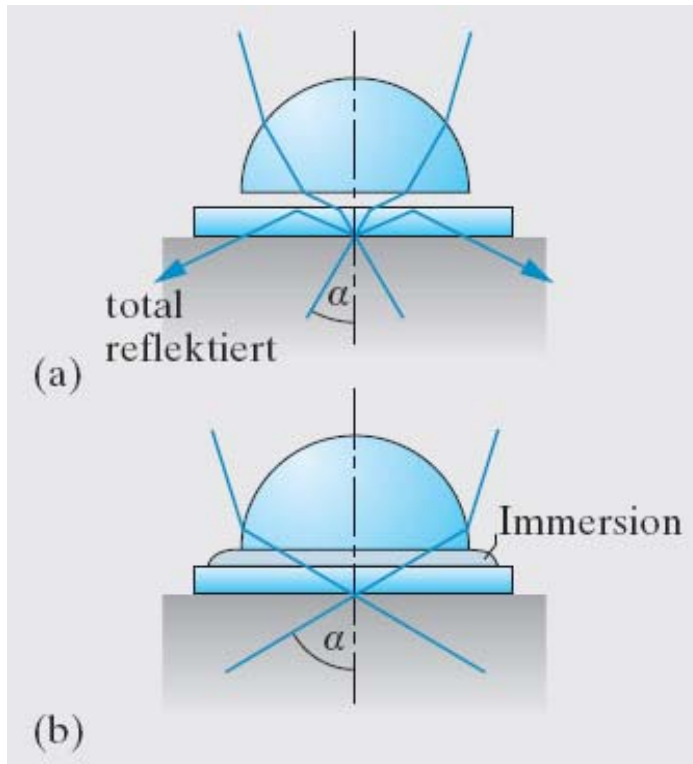


Microscope



Objektivtypen

Luftobjektiv



Immersionsobjektiv

Ein Immersionsöl (z.B. Zedernholzöl mit $n=1,5$) reduziert den Verlust von Teilstrahlen durch Totalreflexion an der Glas-Luft-Grenzfläche. Dadurch kann die NA größer als 1 (bis 1.4) werden.

Moderne Objektive mit geringen Linsenfehlern (siehe 4.5) enthalten bis über 10 Einzellinsen. Dies ist erforderlich, da im Gegensatz zum Okular das gesamte Objektiv von Lichtstrahlen durchdrungen wird.

Objektivnomenklatur

Labeling of the Objective
Objective class, special designations are used for this, e.g. LD for Long Working Distance

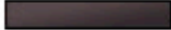


Magnification / Numerical Aperture
plus additional details on

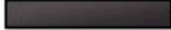
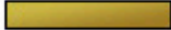







- immersion medium (Oil /W/ Glyc)
- adjustable cover glass correction (Korr.)
- contrast method


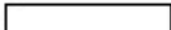


Tube Length / Cover Glass Thickness (mm)
ICS optics: ∞
Infinity Color Corrected System
standard cover glass: 0.17
without cover glass: 0
insensitive: -

Mechanical Correction Collar

- cover glass thickness correction
- different immersion
- different temperature
- adjusting an iris diaphragm

Color of writing
Contrast method
 Standard 
 Pol / DIC 
 Ph 0 1 2 3 

Color Coding of Magnification
 1.0/1.25 
 2.5 
 4/5 
 6.3 
 10 
 16/20/25/32 
 40/50 
 63 
 100/150 

Immersion Fluid
 Oil 
 Water 
 Glycerin 
 Oil /Water / Glycerin 

andere Objektivtypen

dark field image of a silicified cell

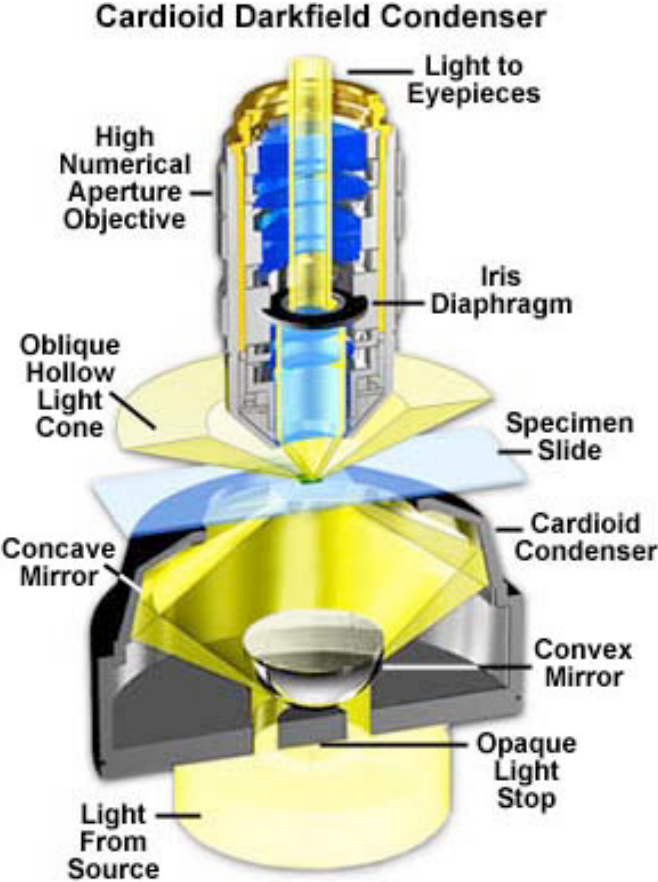
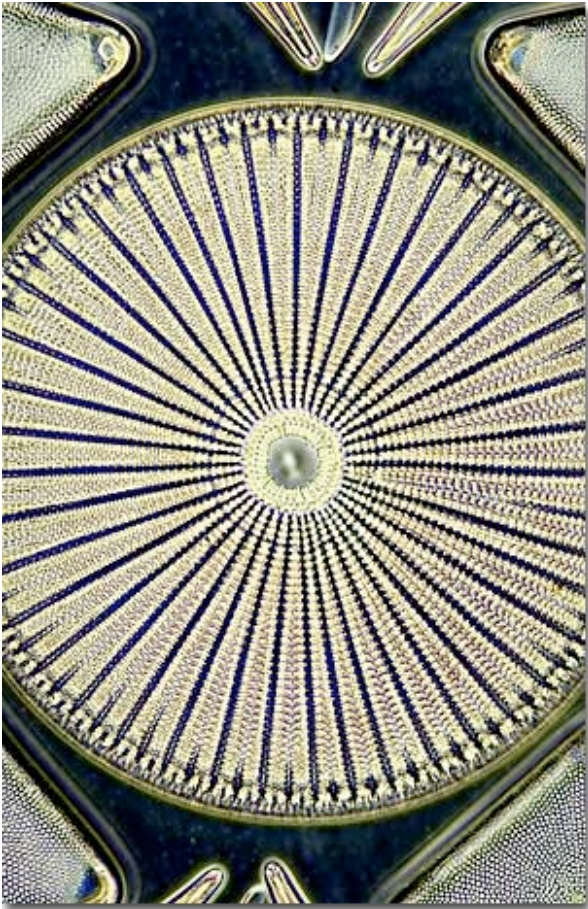
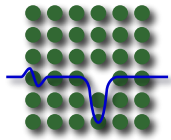
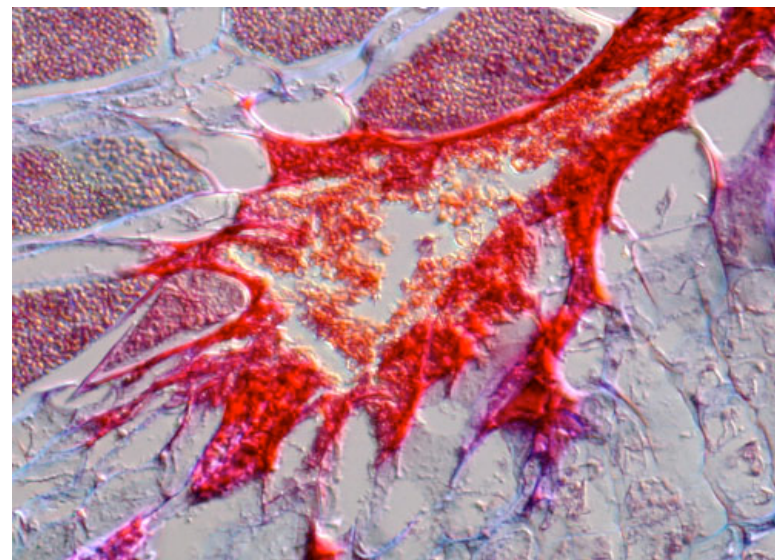
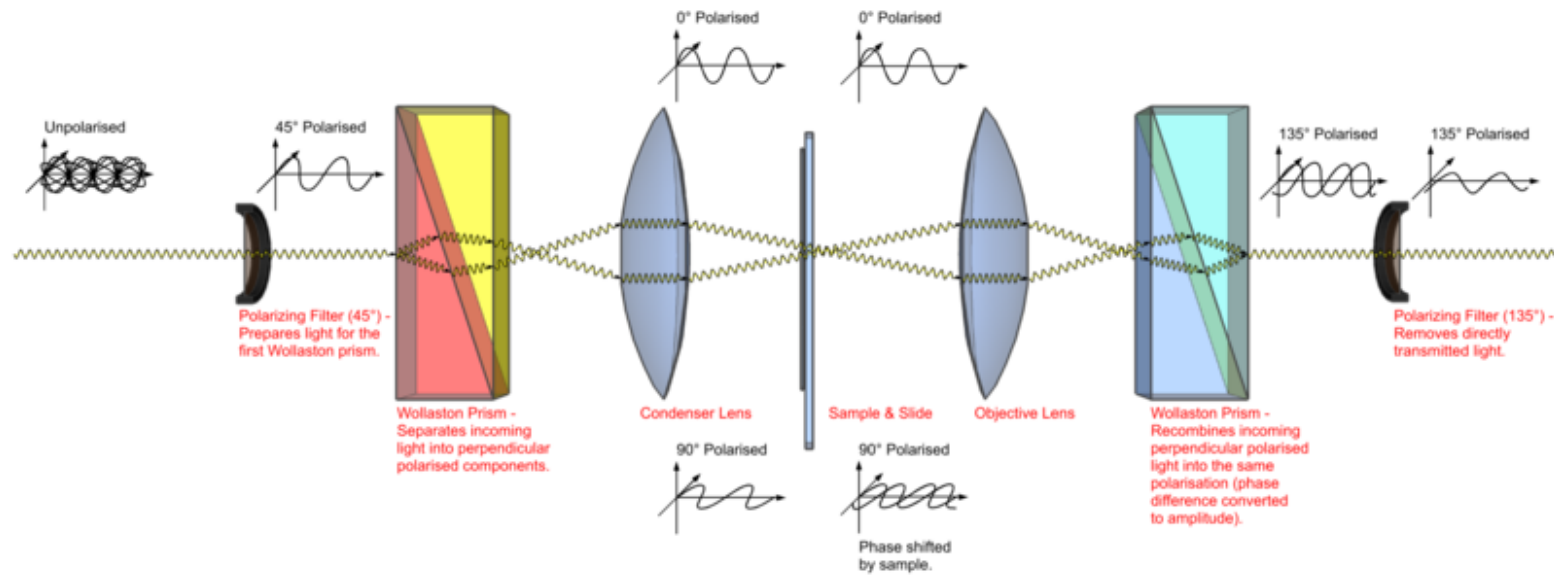


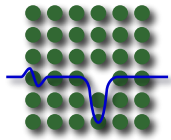
Figure 1



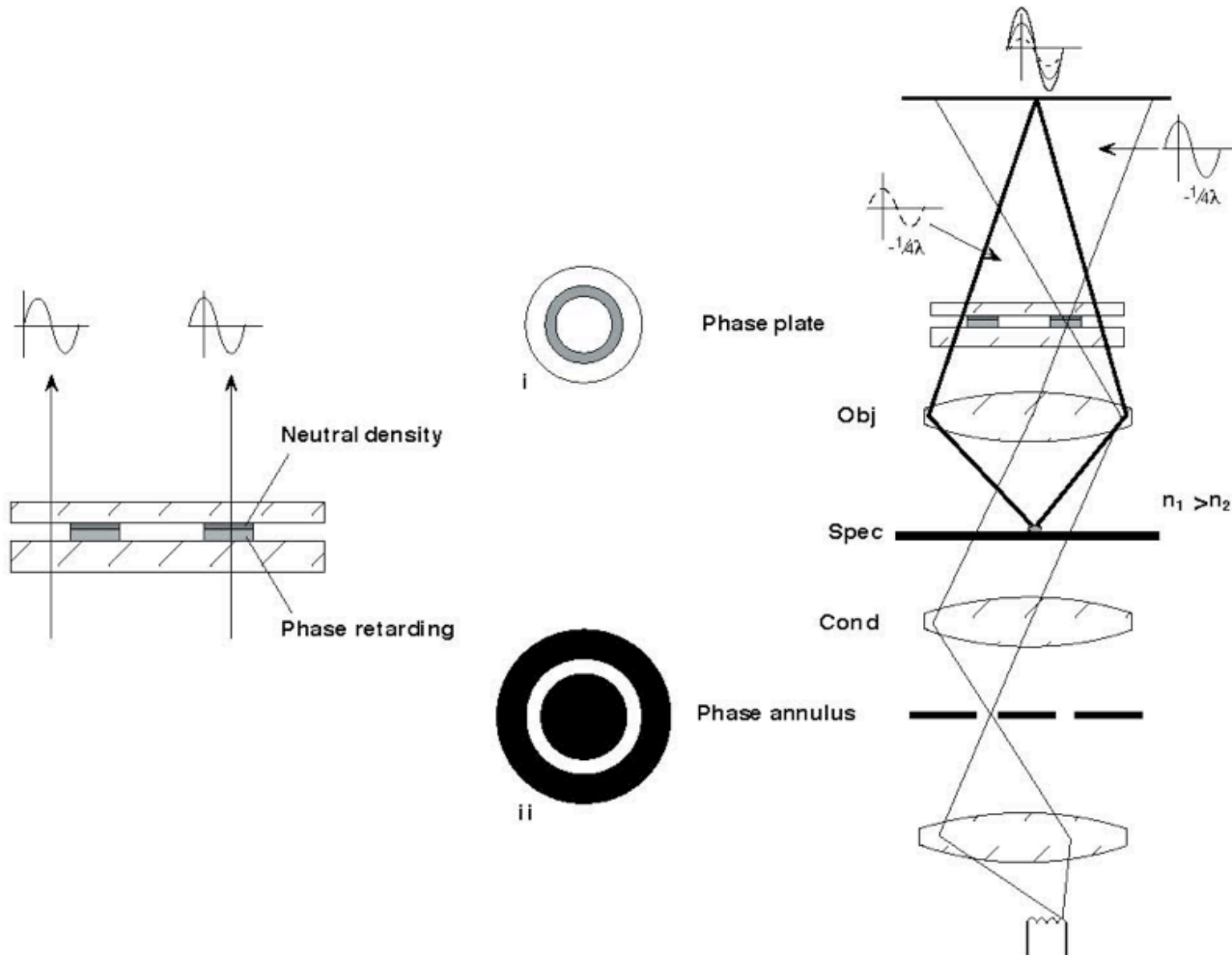


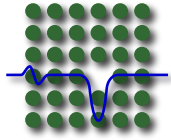
differential interference contrast



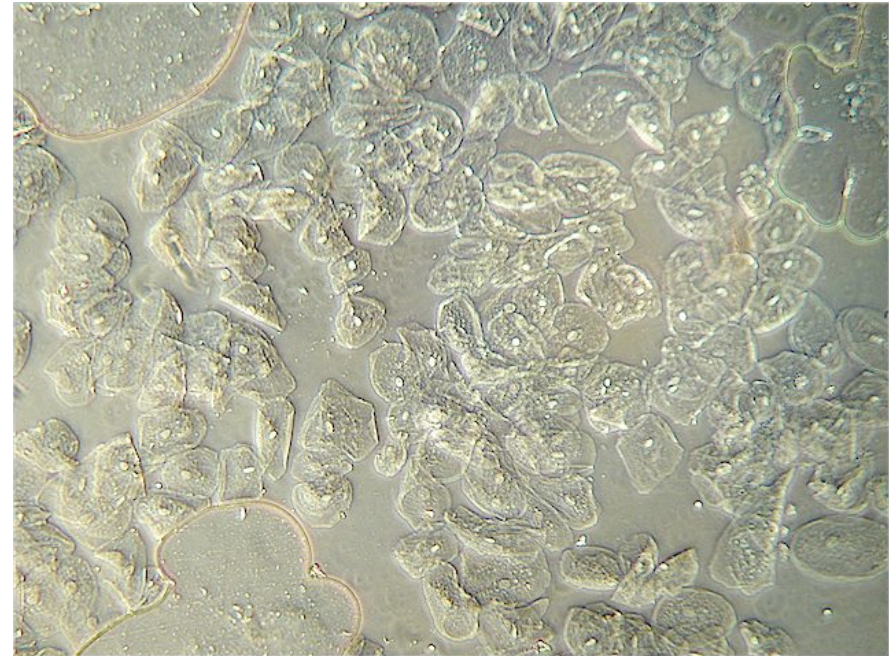
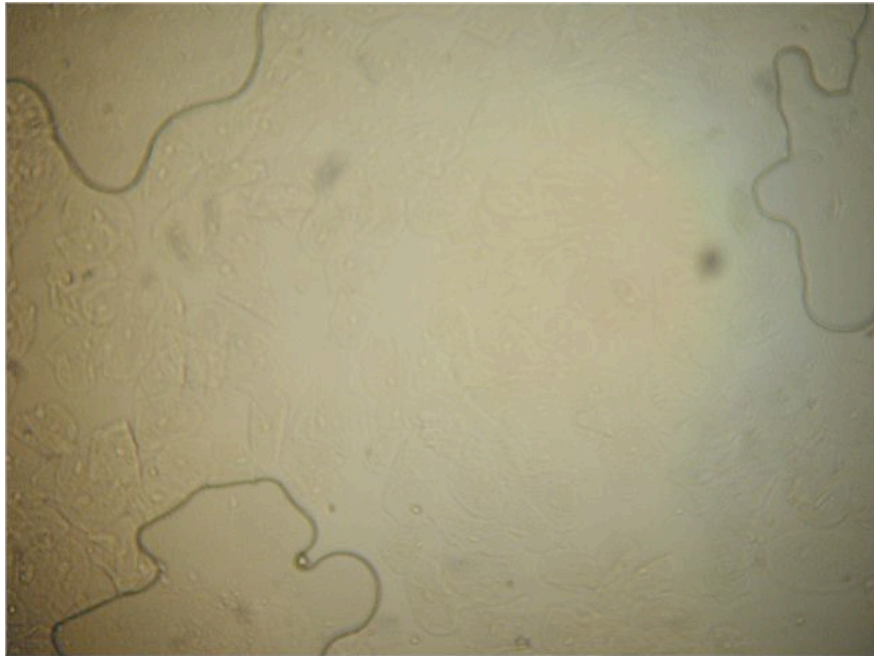


phase contrast microscopy

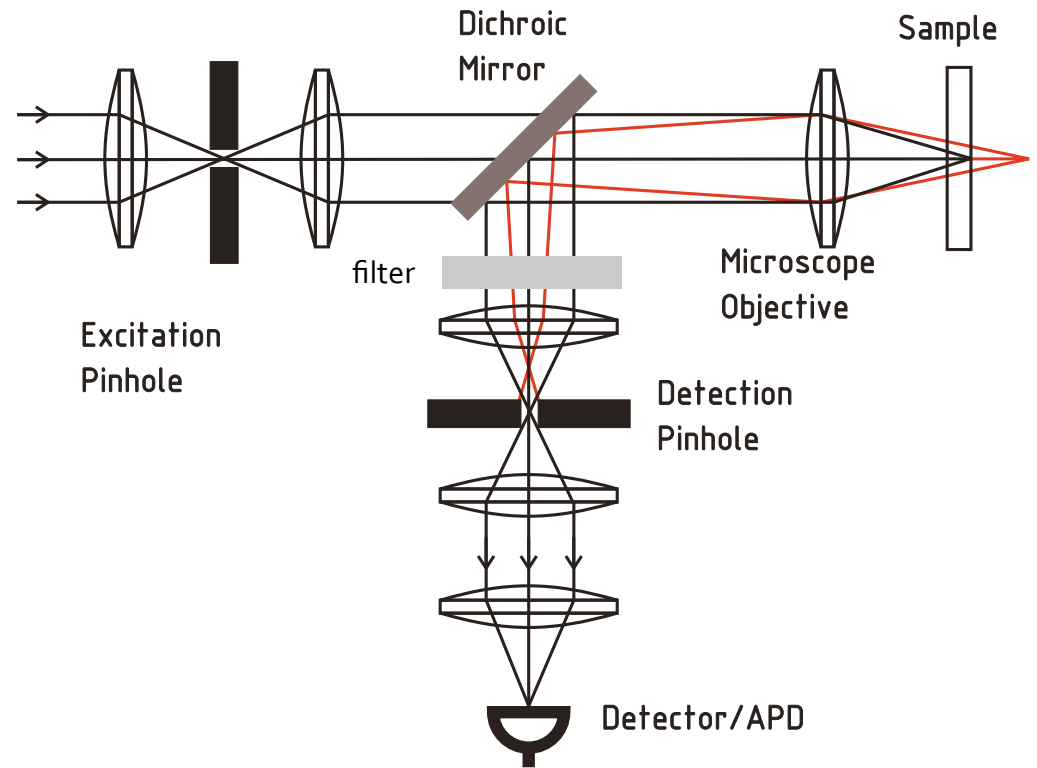
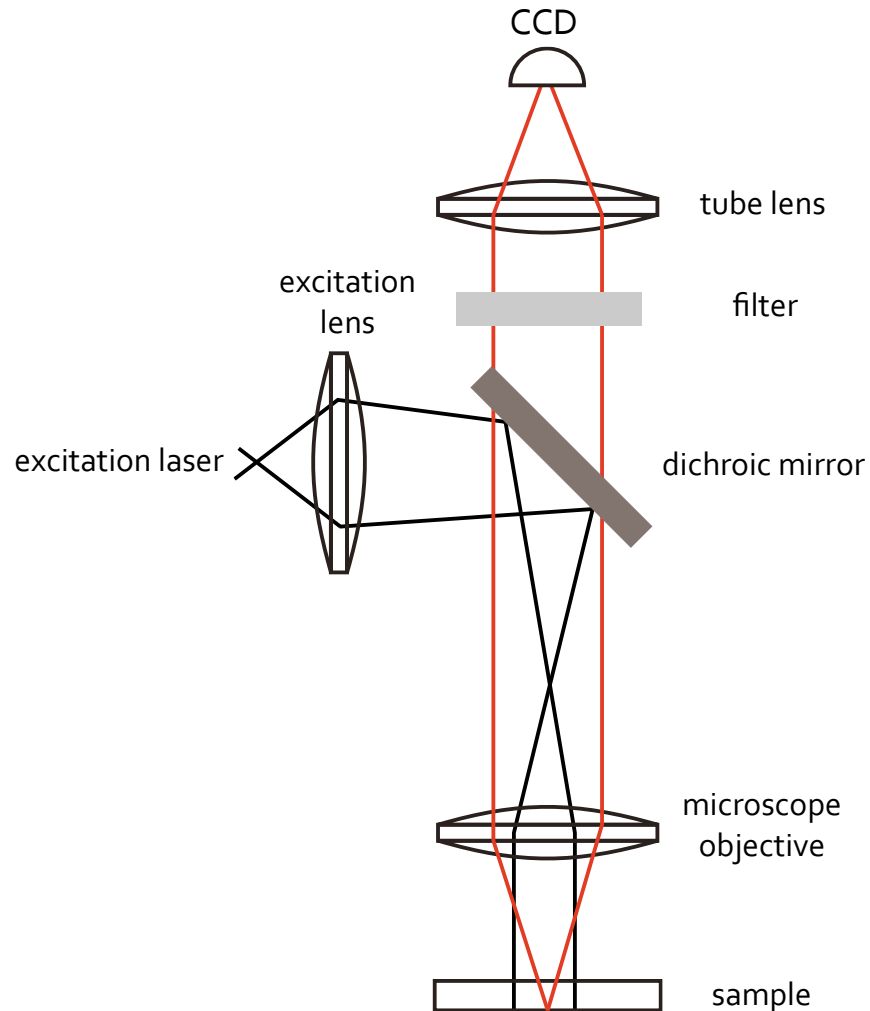




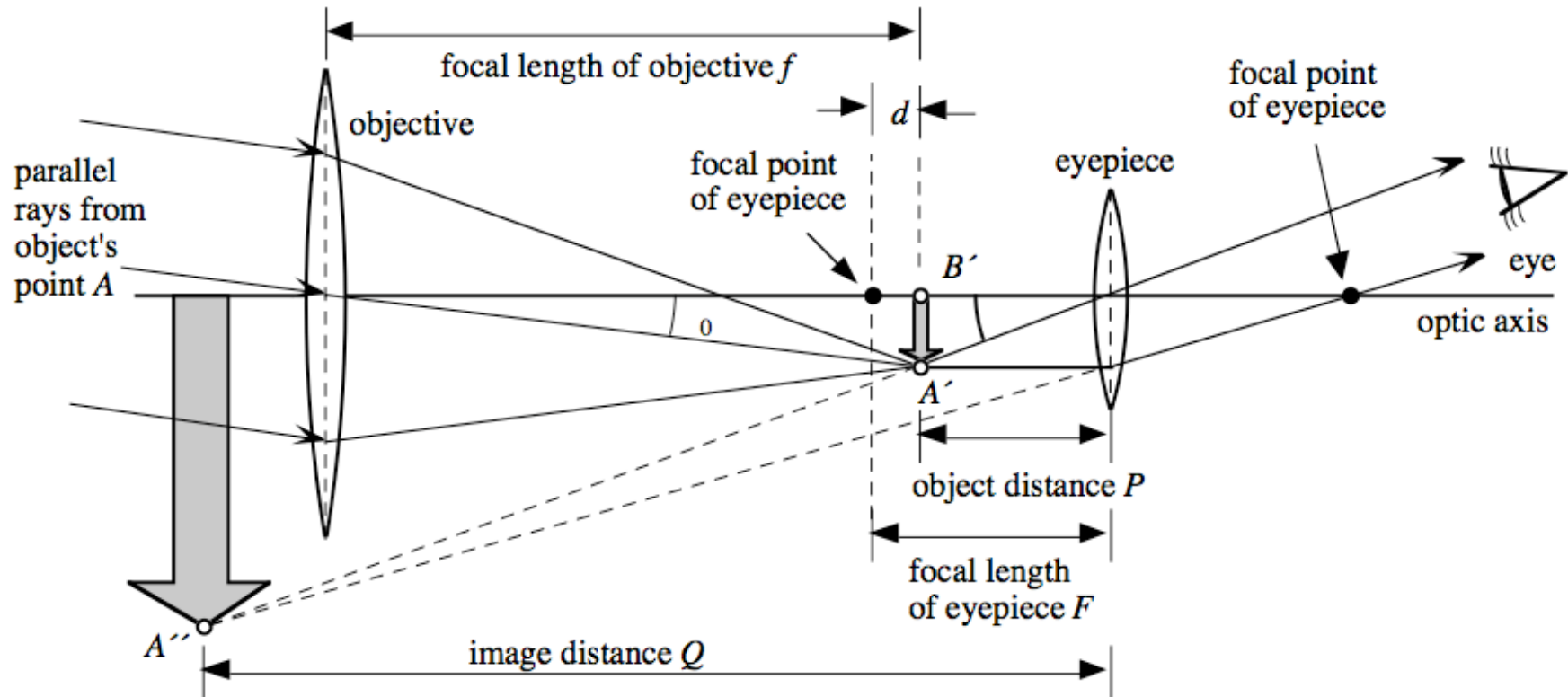
phase contrast microscopy



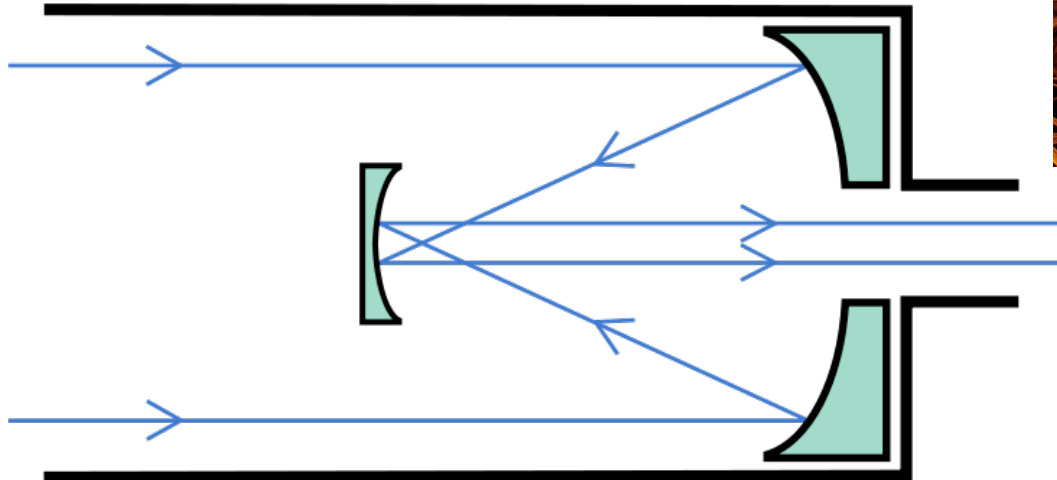
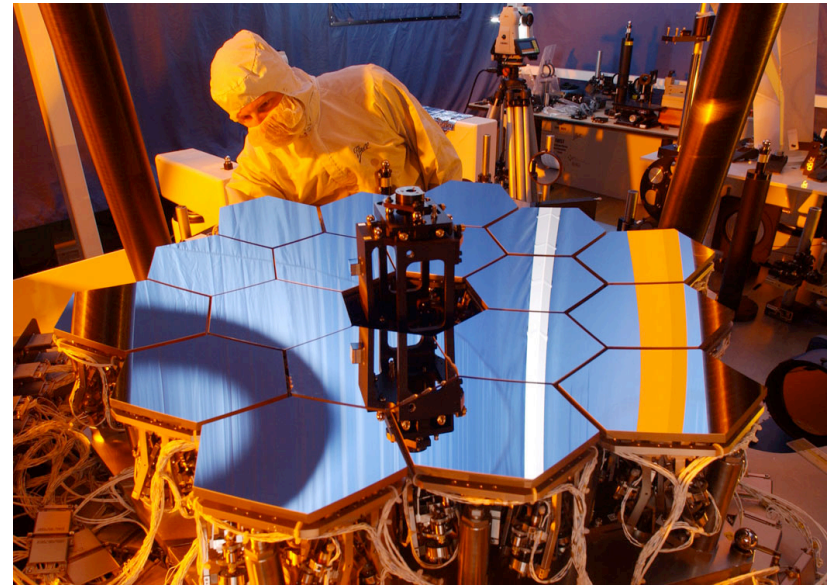
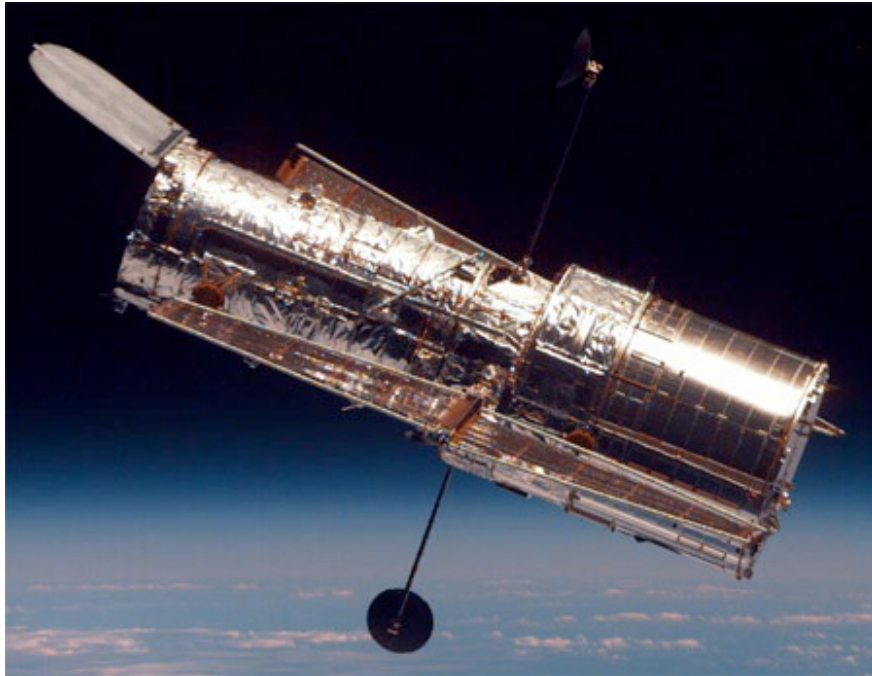
Konfokales und Weitfeldmikroskop



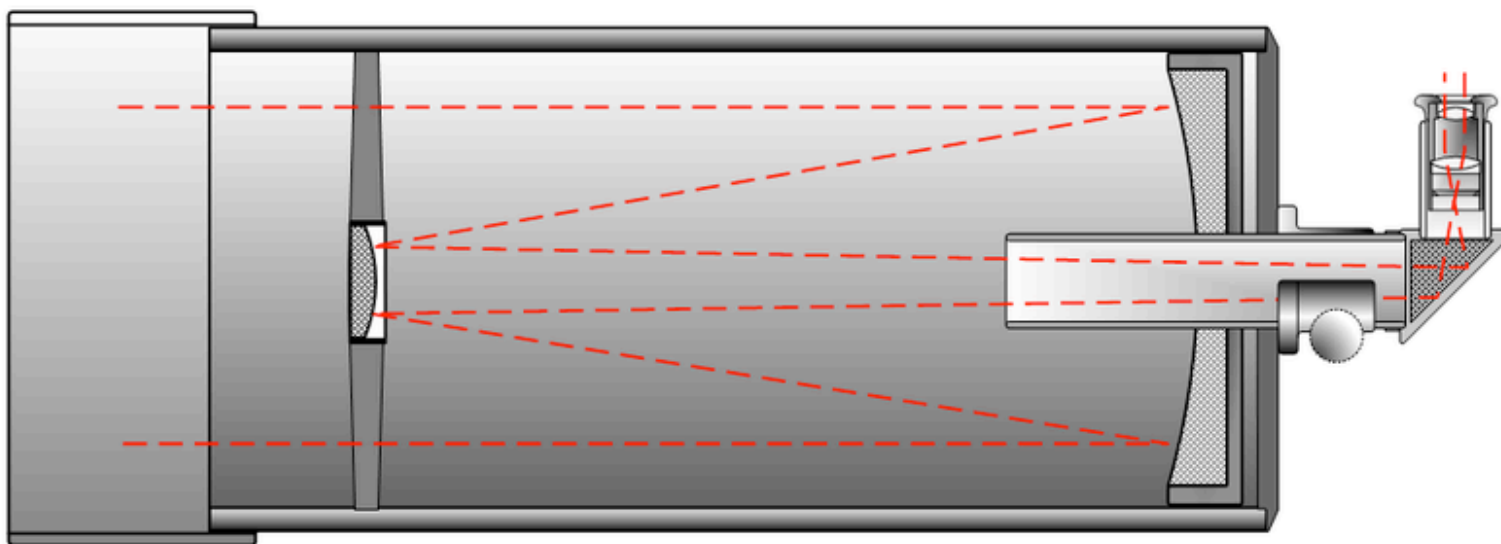
Teleskop



Teleskop



Cassegrain Teleskop



Newton Teleskop

