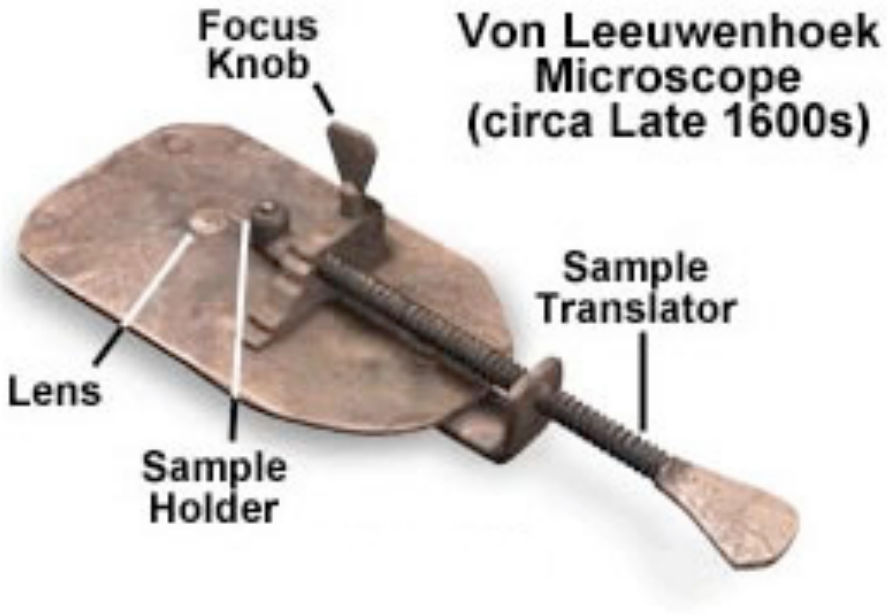
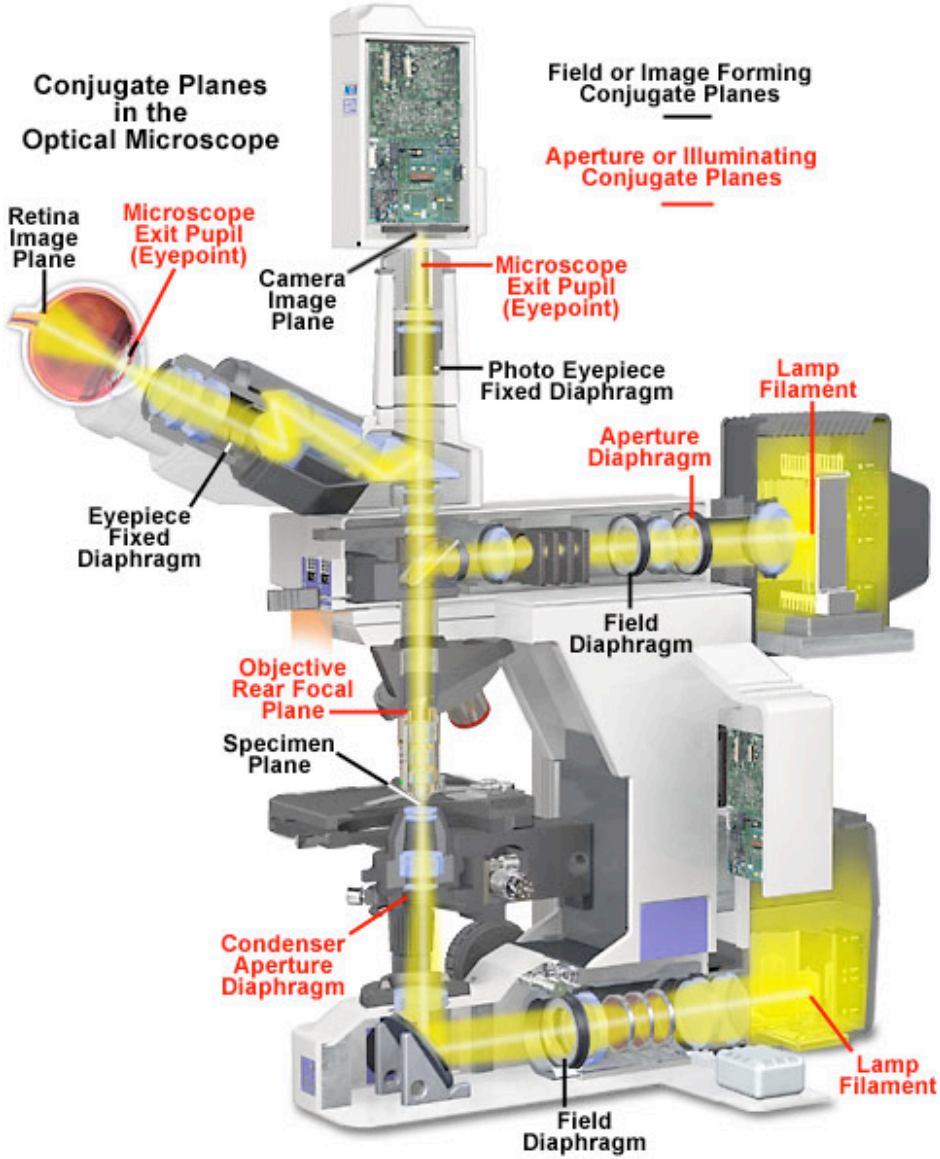
Das Mikroskop

Das erste Mikroskop

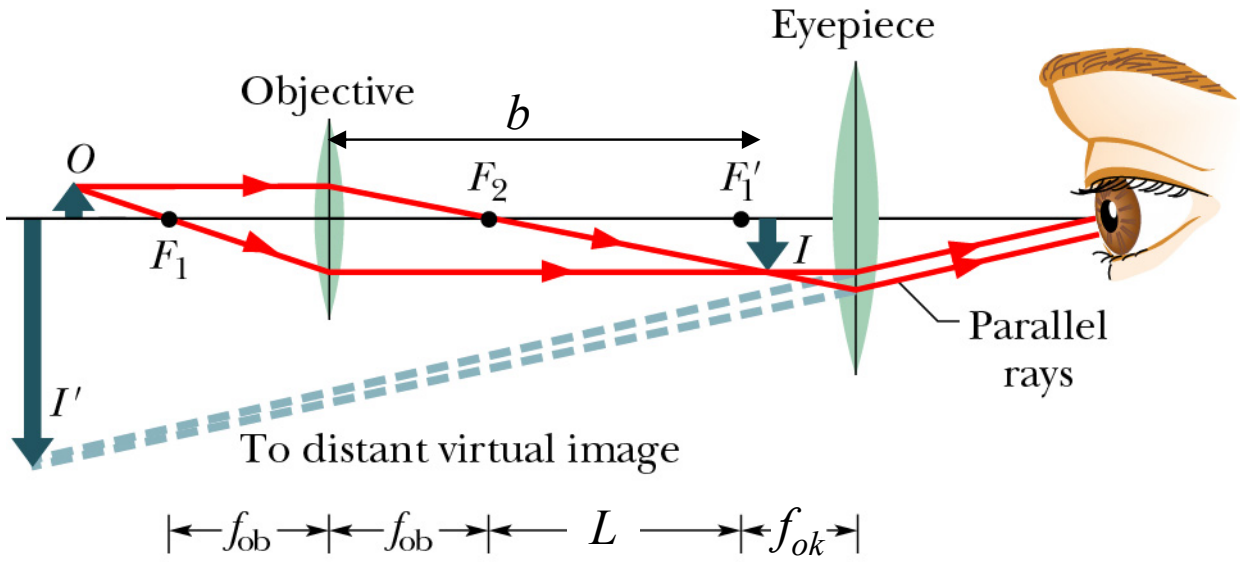


Luxusmikroskop

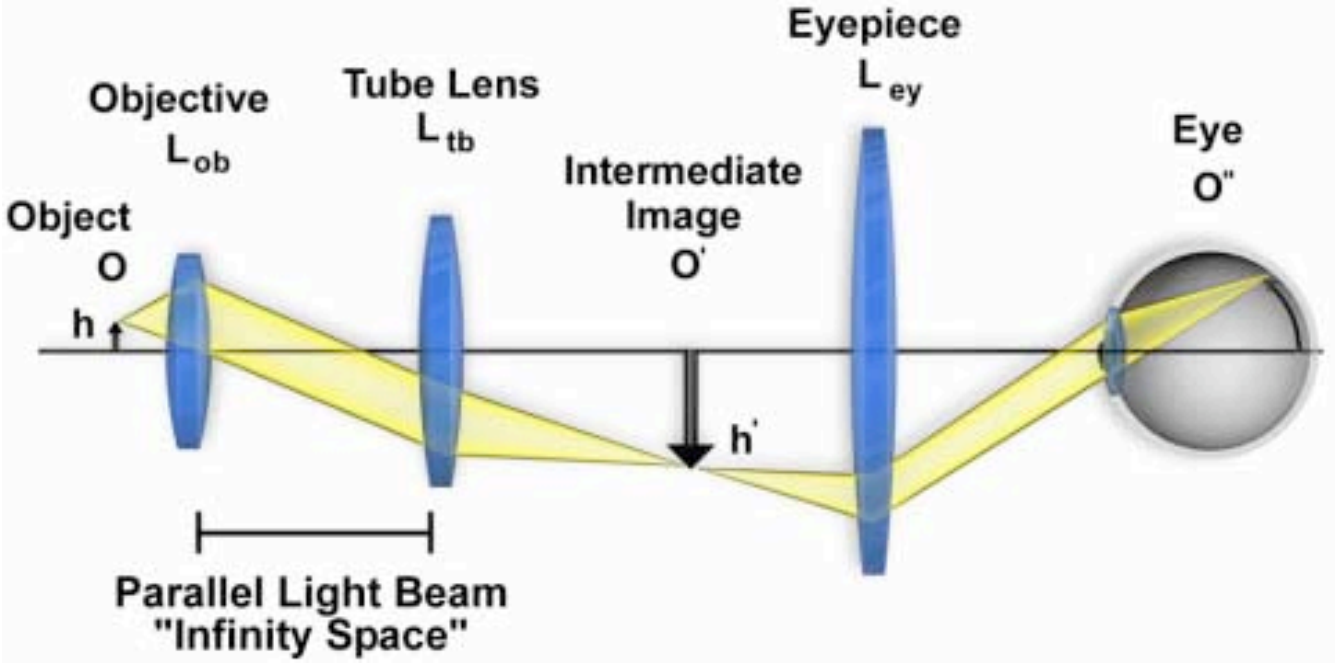


http://www.microscopyu.com/articles/formulas/conjugatemicroscope.html

Funktionsprinzip Mikroskop



Microscope


Eyepiece
L ey
Objective
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Tube Lens
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Eye
O"
Intermediate
Image
O'
Object
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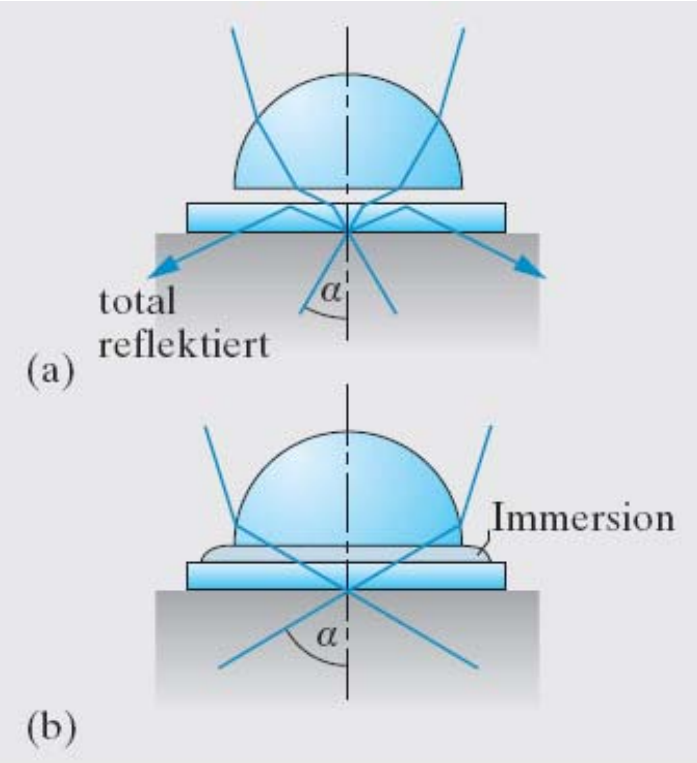
Parallel Light Beam
"Infinity Space"

Objektivtypen

Luftobjektiv

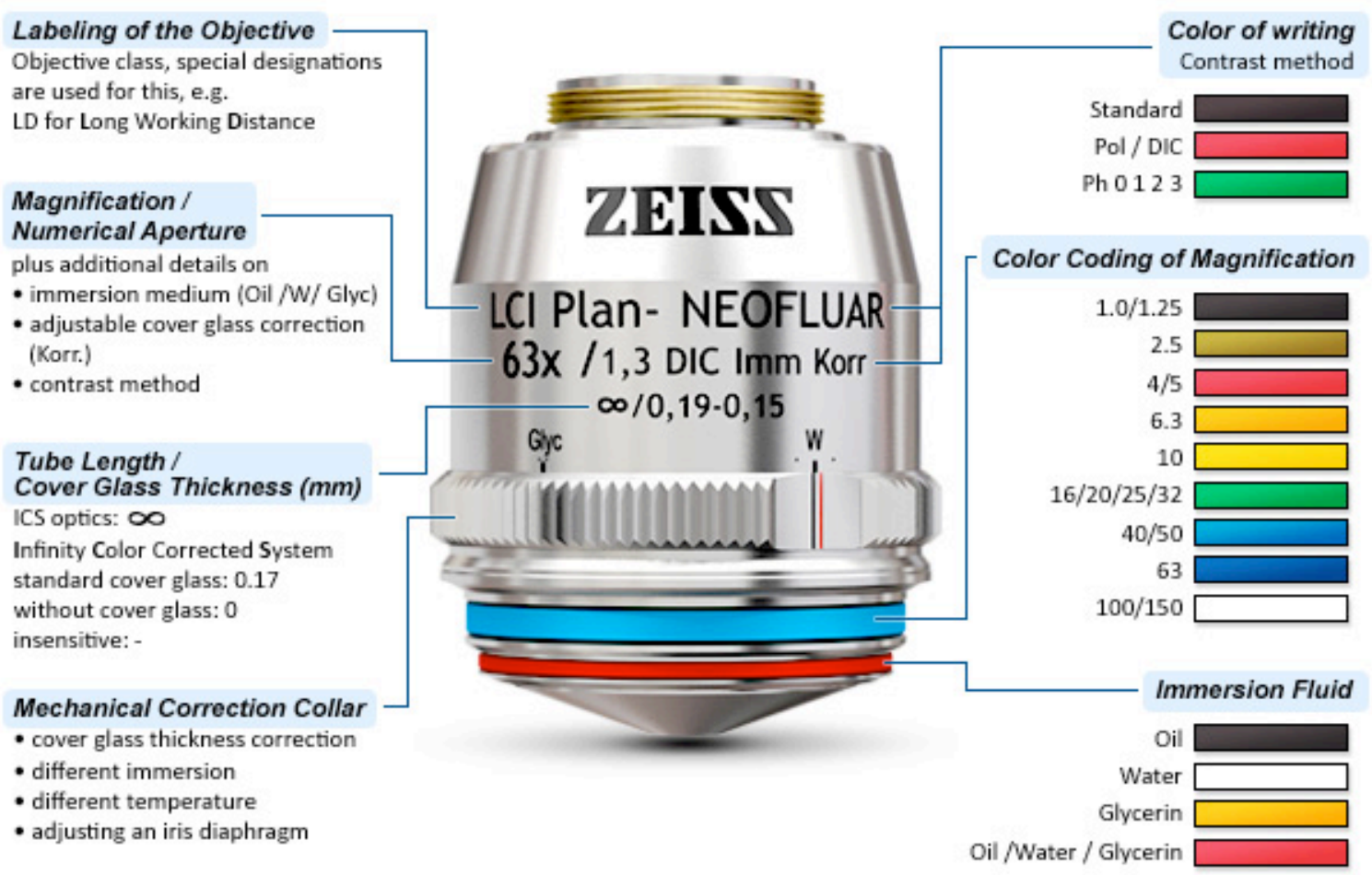


Immersionsobjektiv

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



andere Objektivtypen

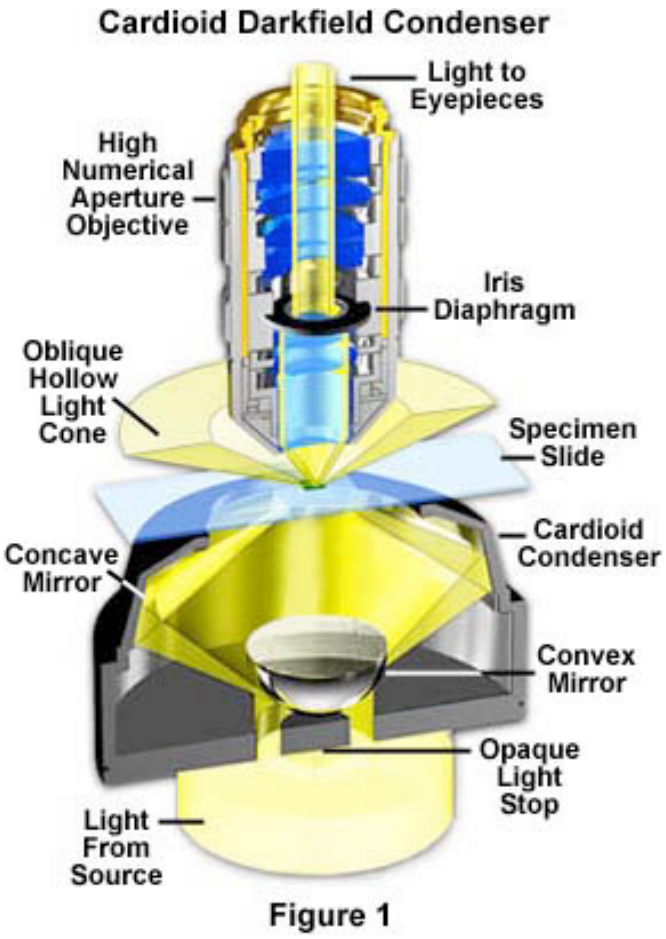
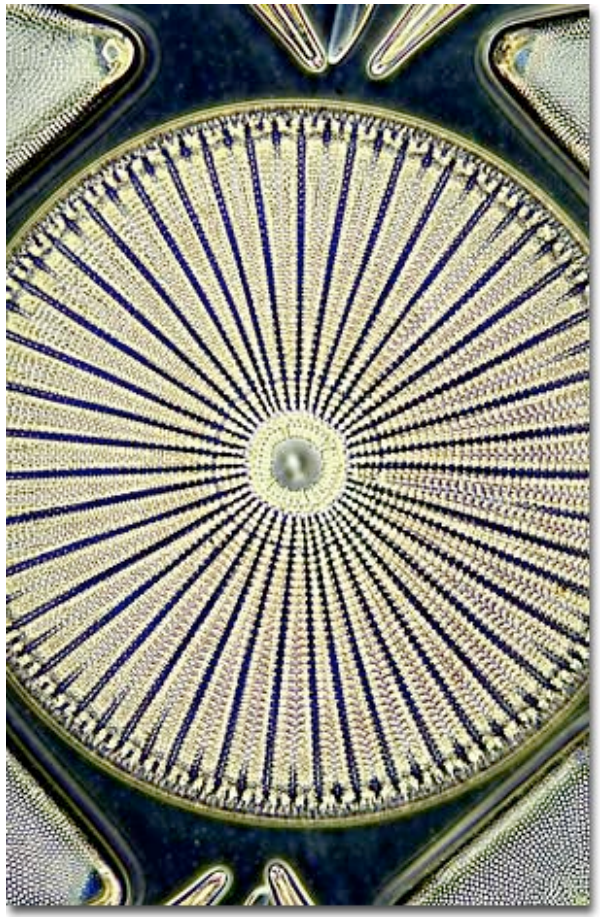
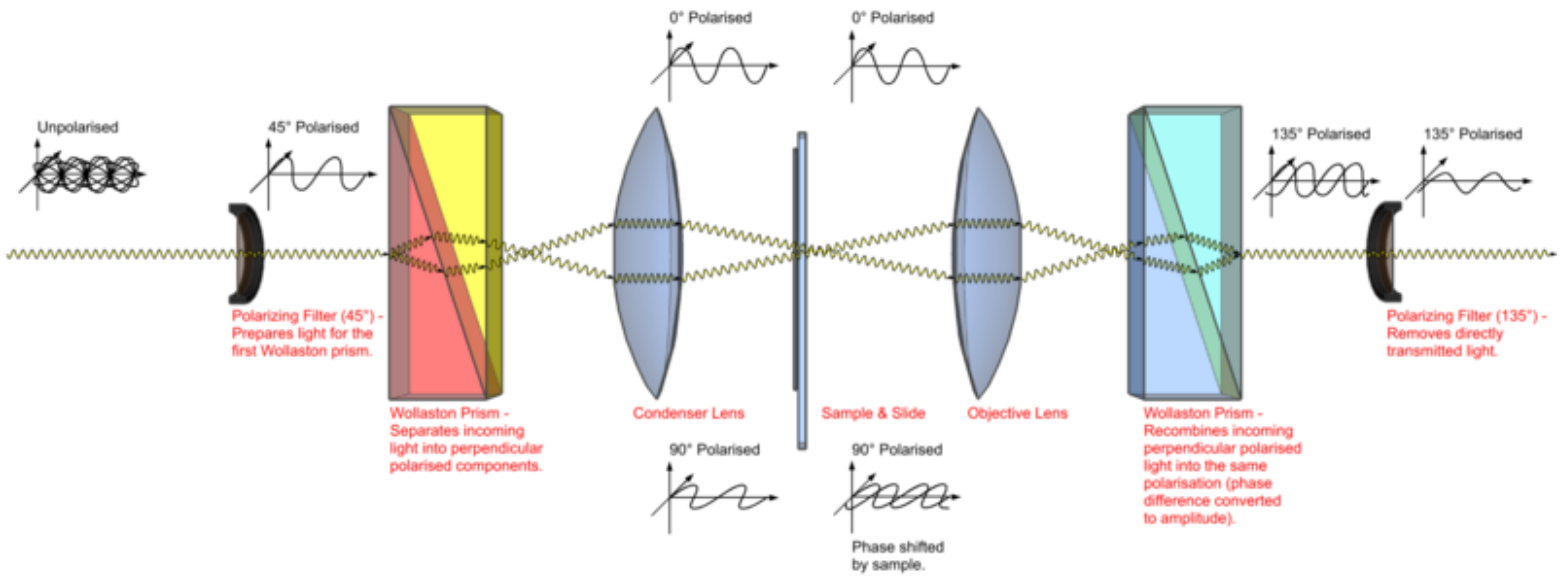


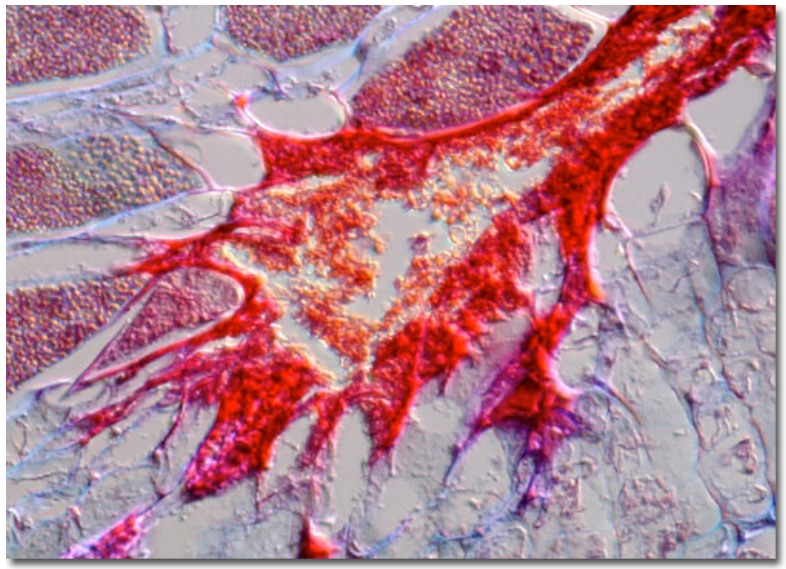
Figure 1

dark field image of a silicified cell

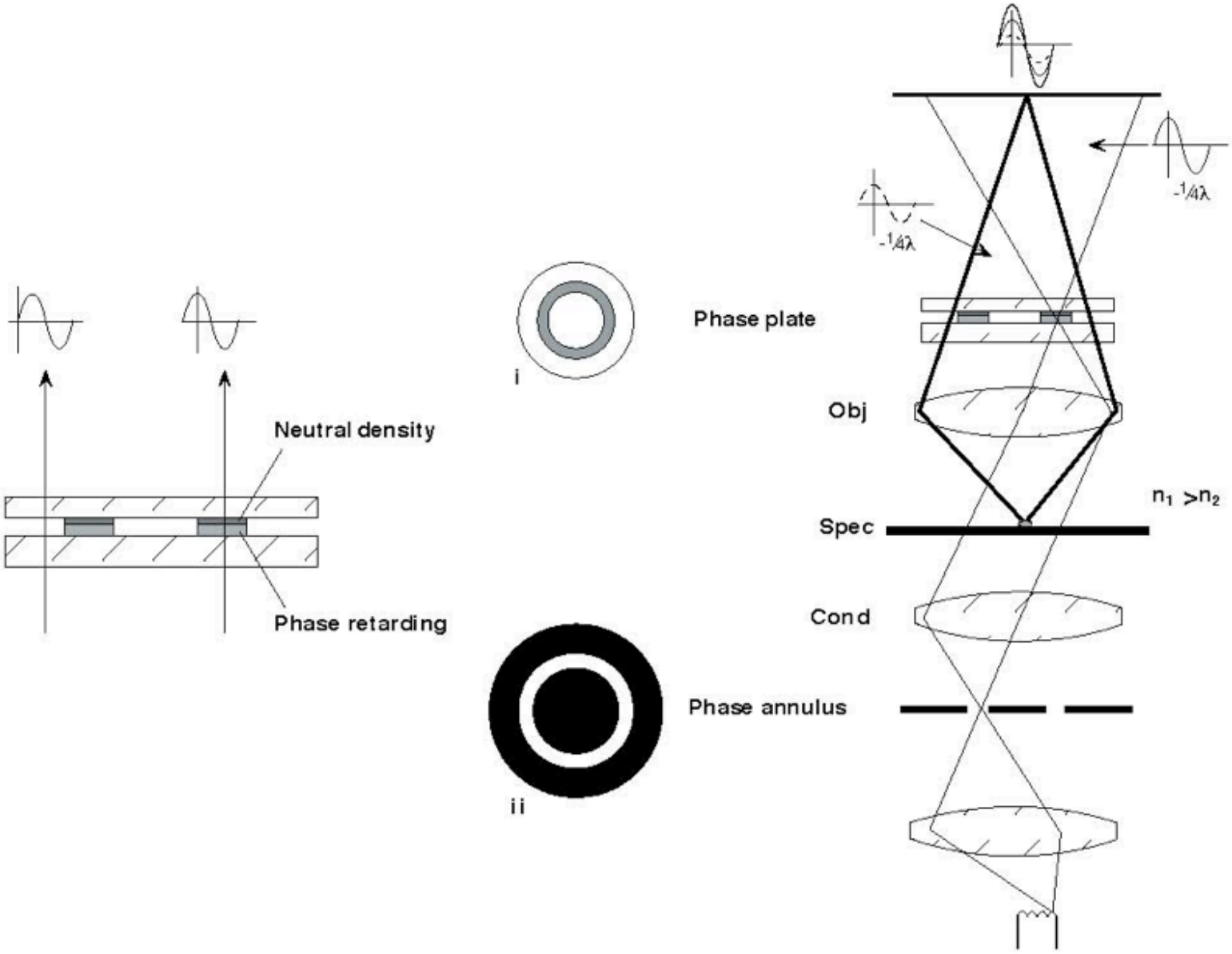


differential interference contrast

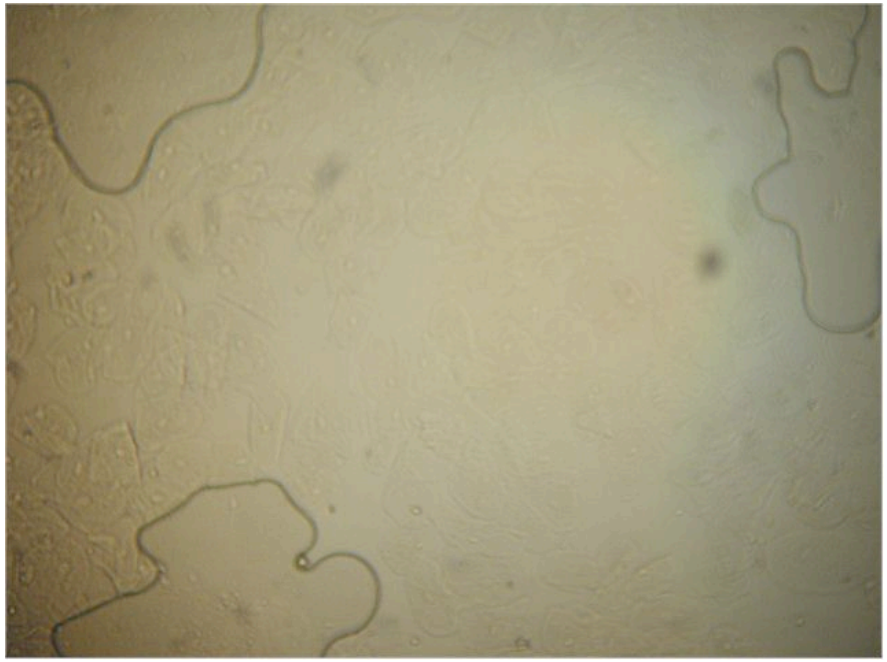


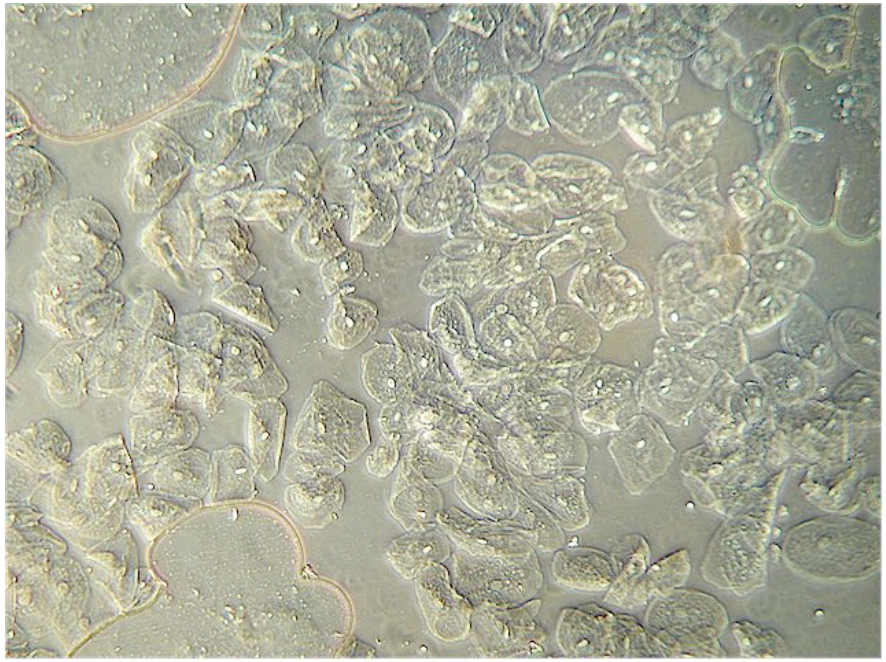


phase contrast microscopy

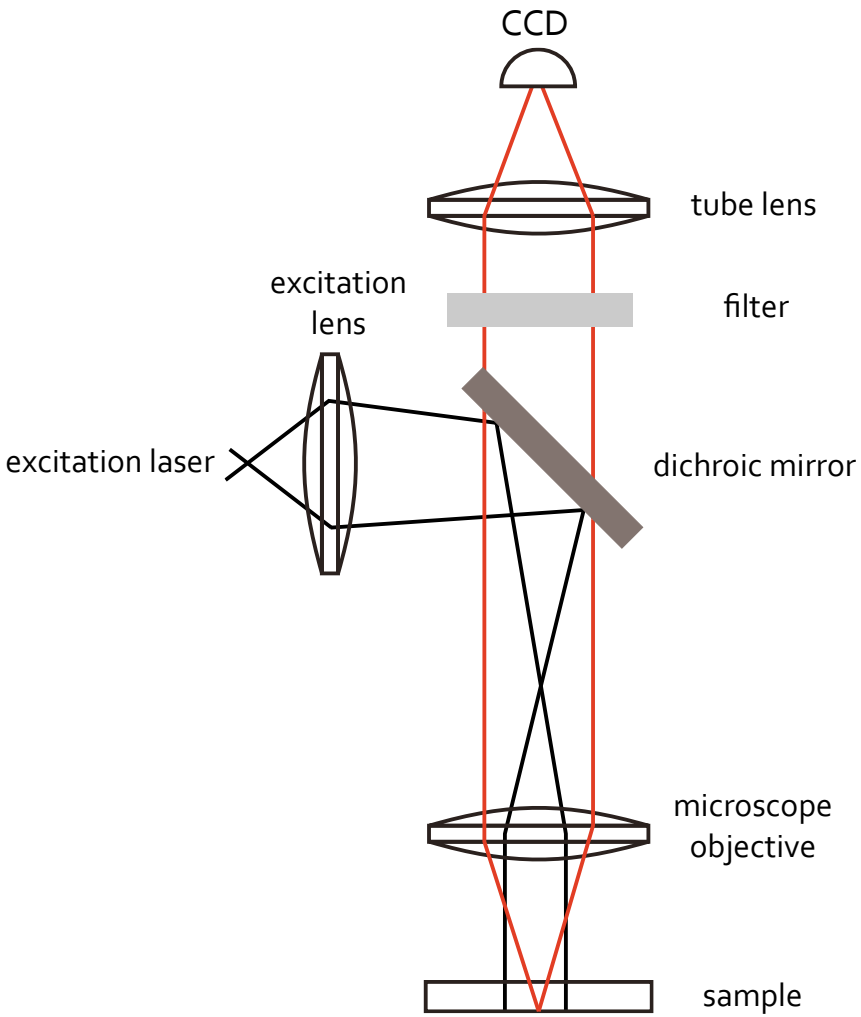


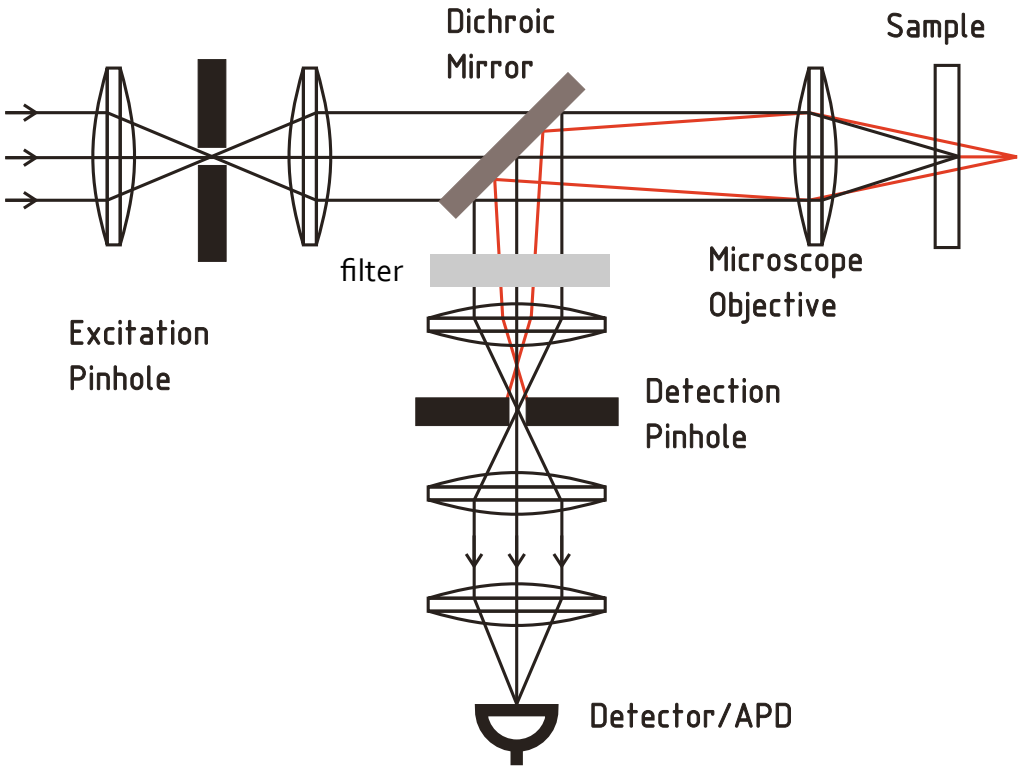
phase contrast microscopy



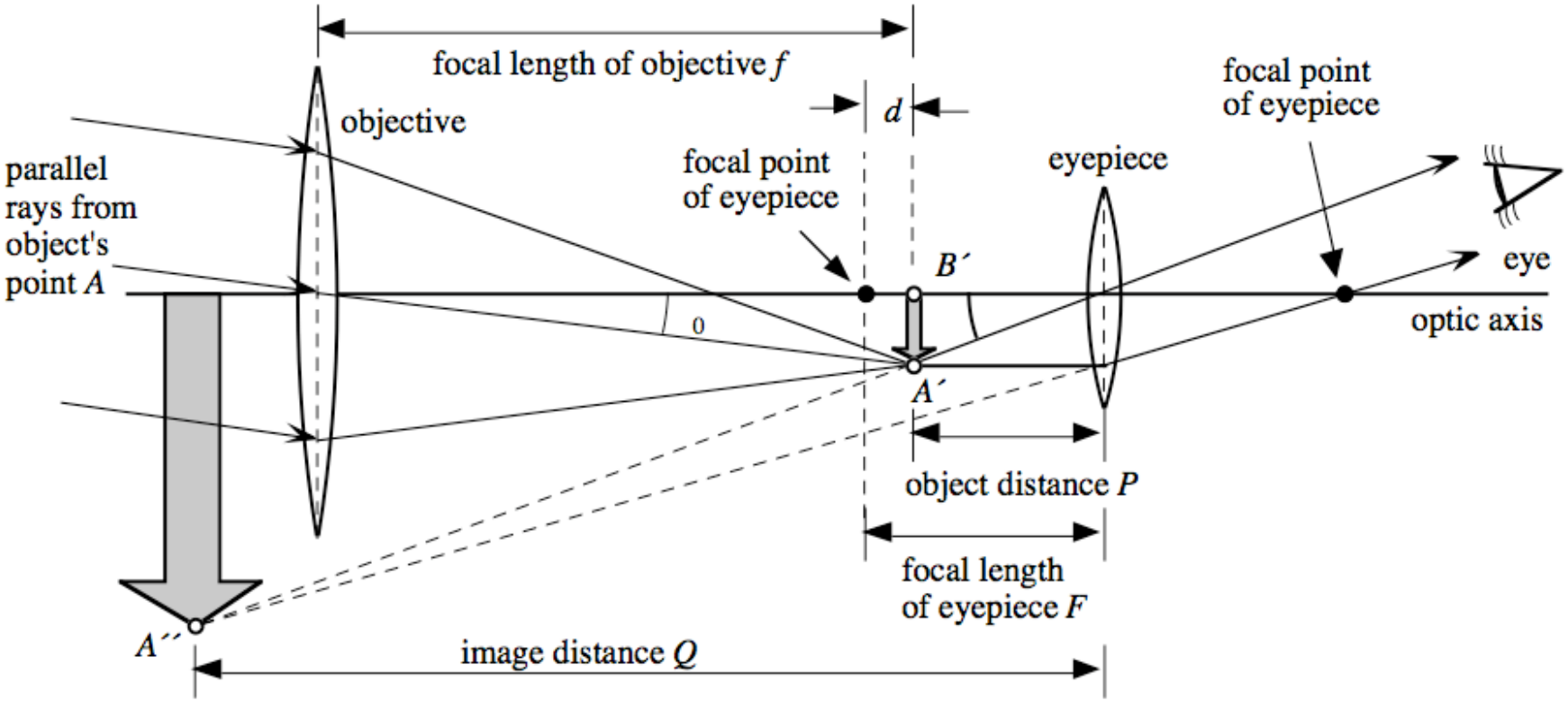


Konfokales und Weitfeldmikroskop

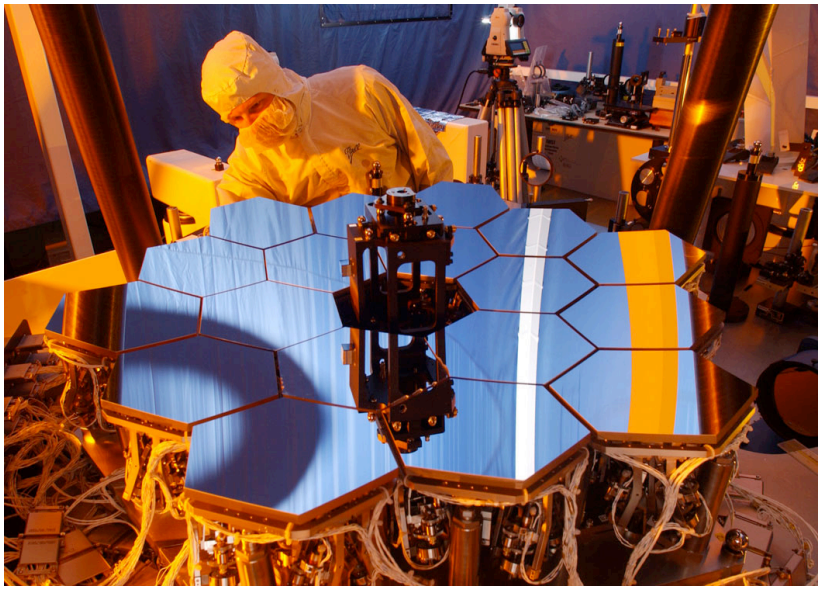


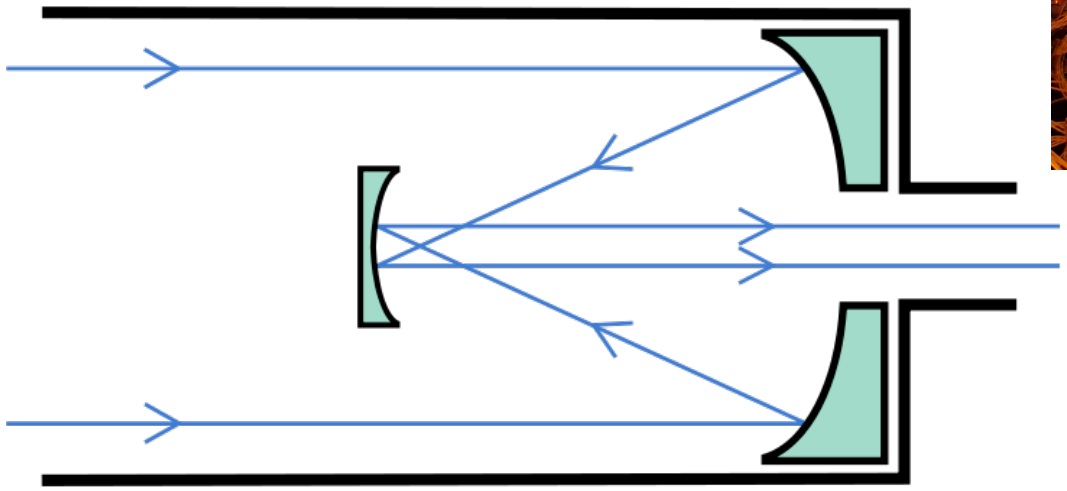


Teleskop

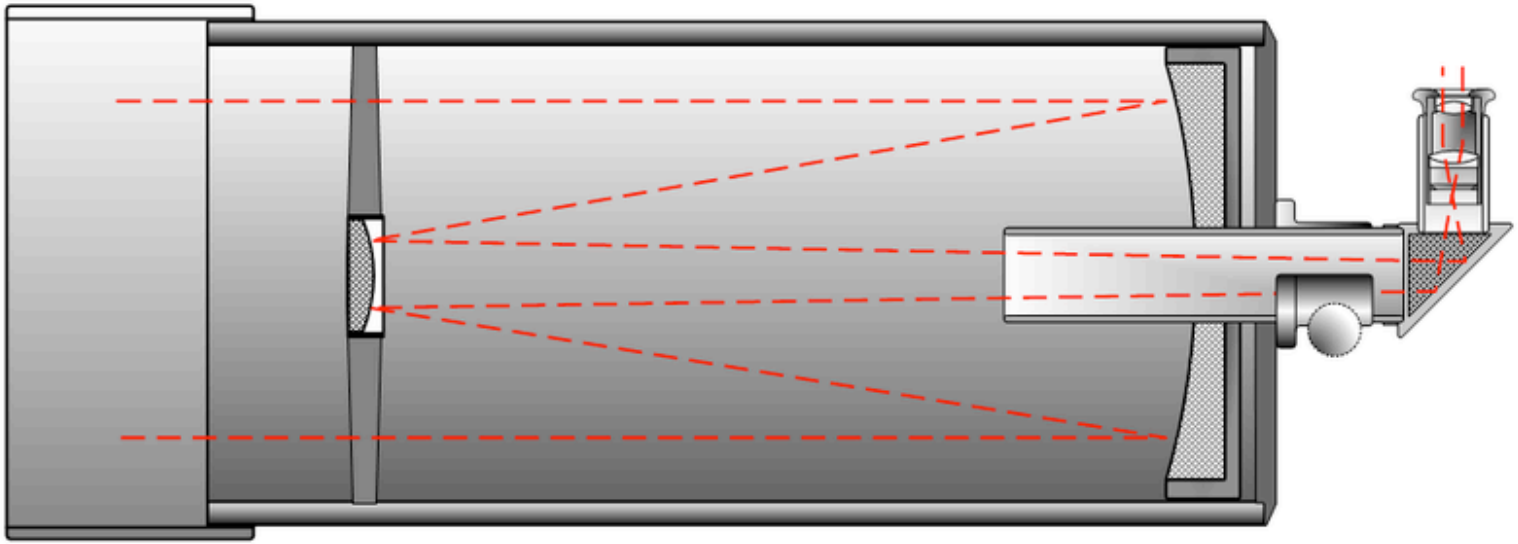

focal length of objective f
objective
d
focal point
of eyepiece
eyepiece
focal point
of eyepiece
parallel
rays from
object's
point A
B´
eye
optic axis
0
A´
object distance P
focal length
of eyepiece F
A´´
image distance Q

Teleskop





Cassegrain Teleskop



Newton Teleskop