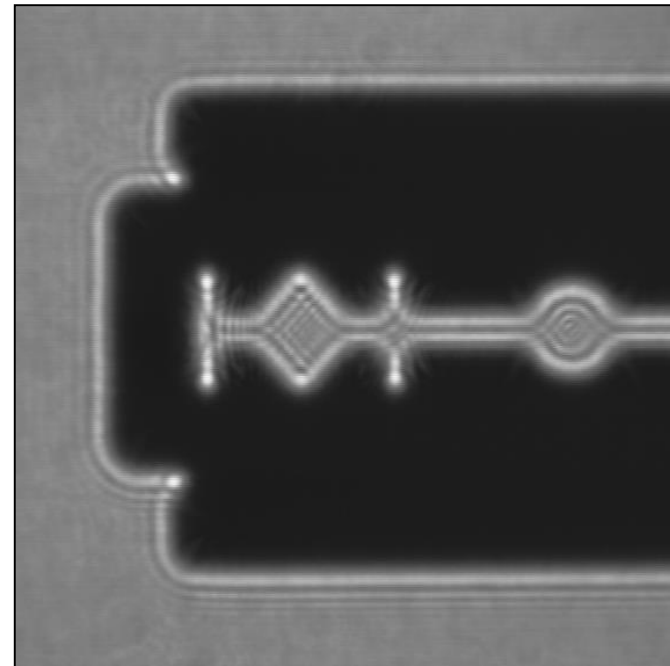
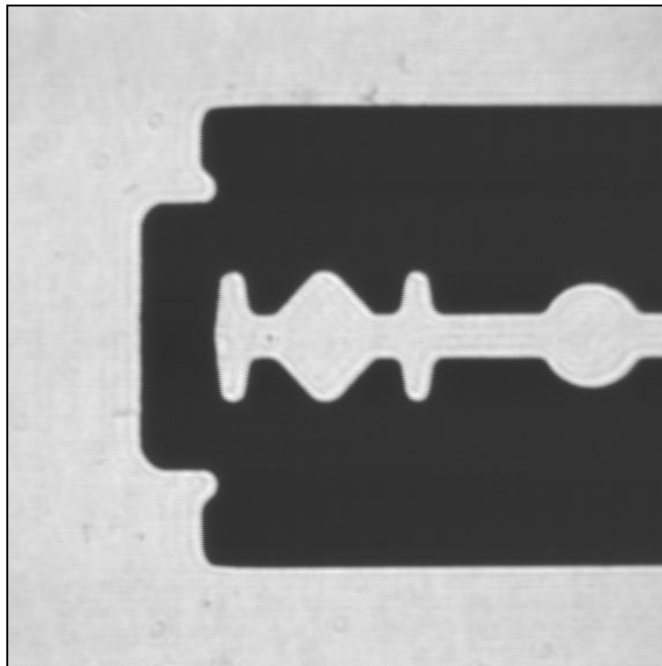


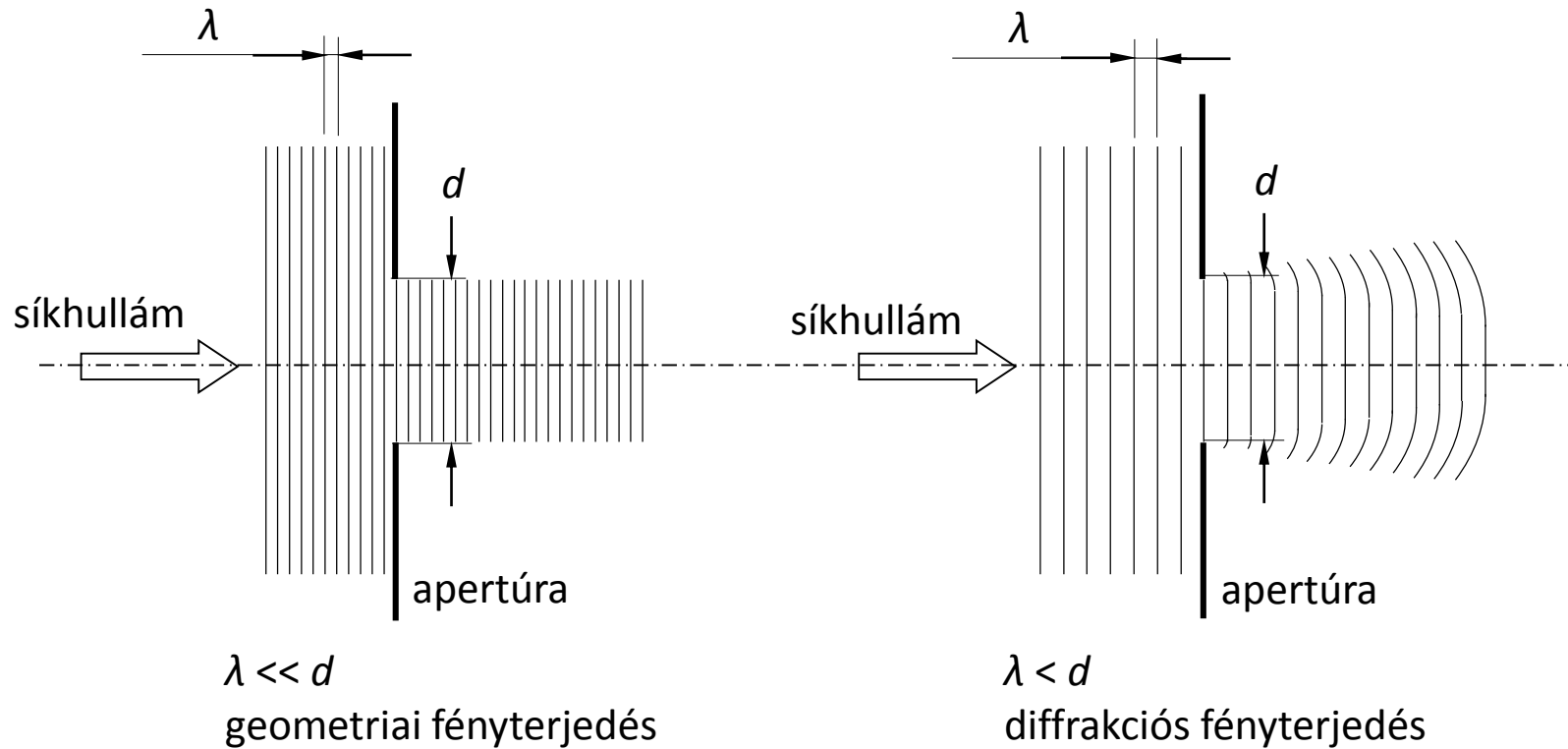


diffrakció: (magyarul fényelhajlás) minden olyan jelenség, amikor a fény terjedési iránya a geometriailag meghatározható iránytól jelentősen eltér.



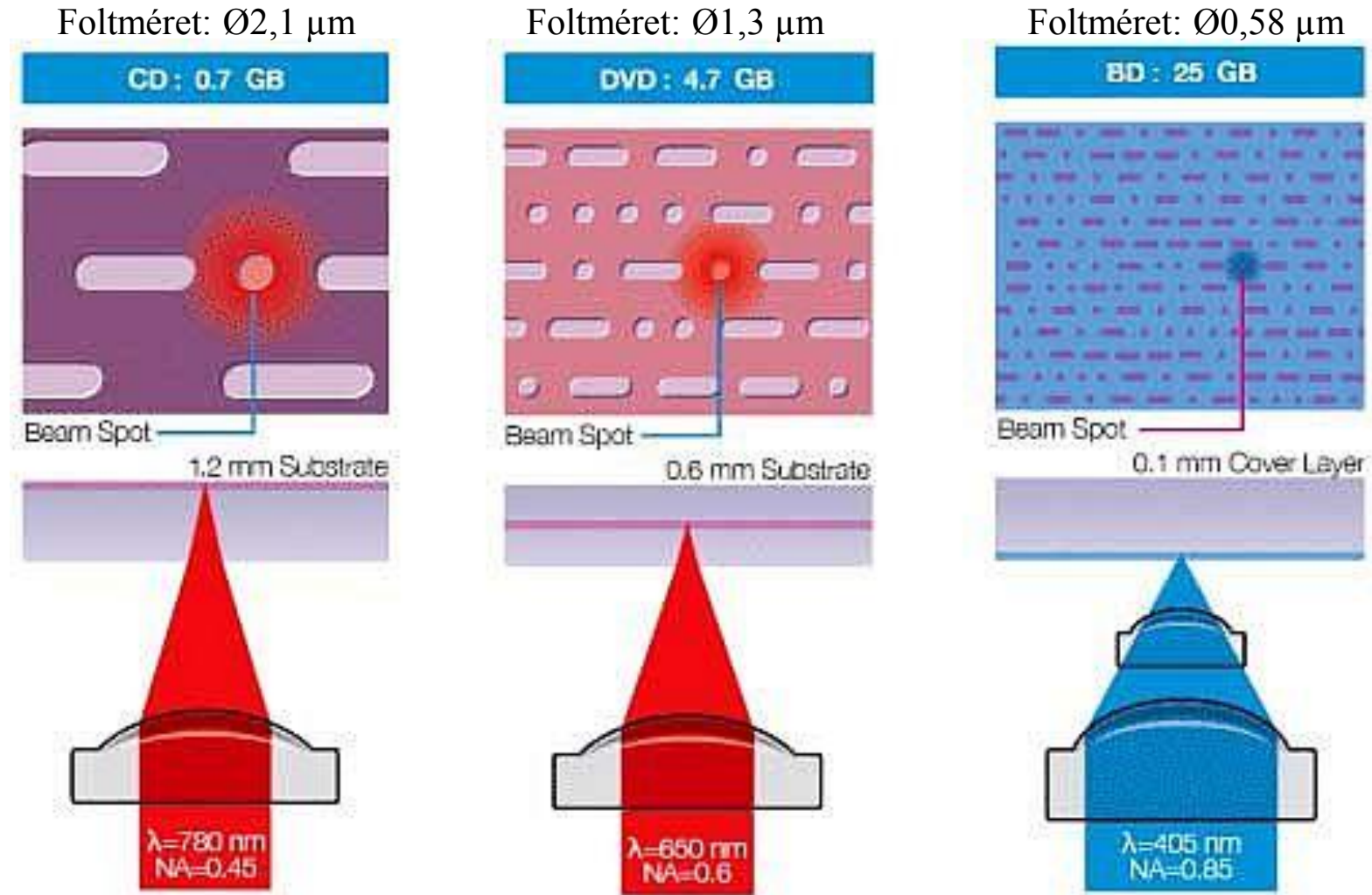


▪ A hullámhossz szerepe ▪



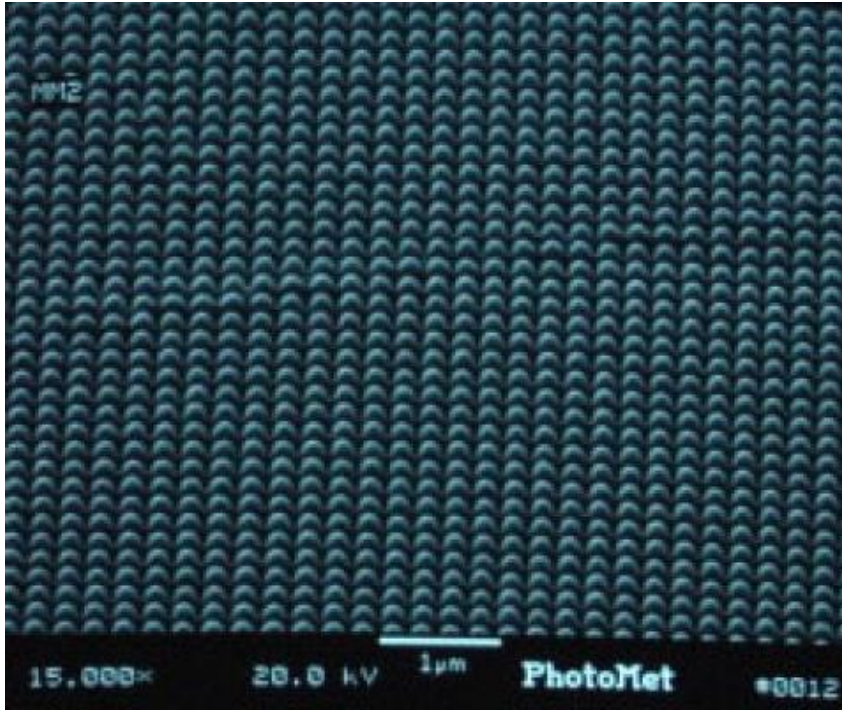


▪ Vektor-diffrakció 1. ▪



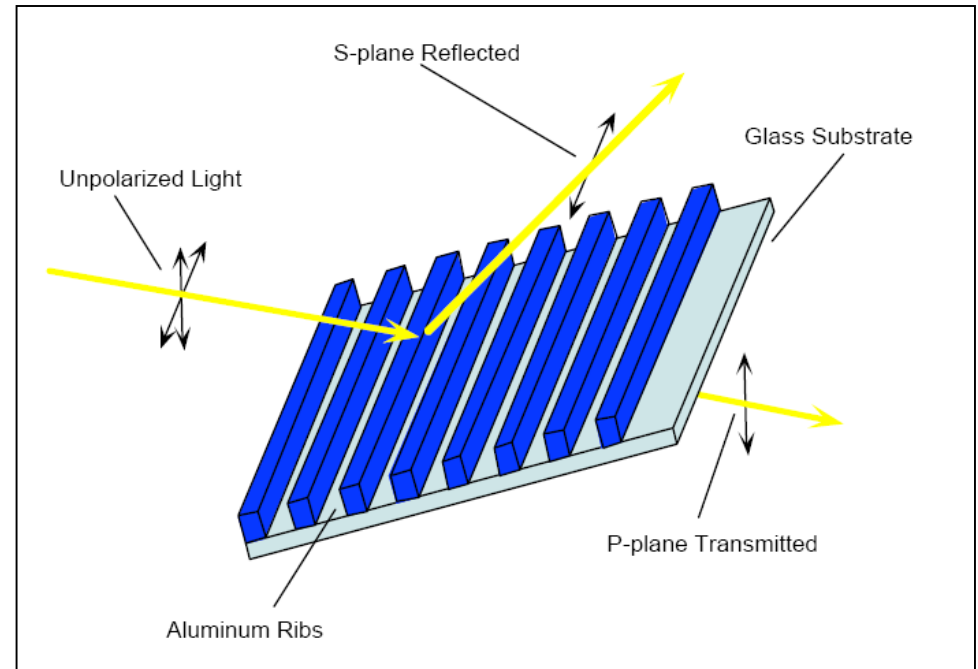
$\text{NA} < 0,6$: skalár diffrakció

$\text{NA} > 0,6$: vektor diffrakció



Hullámhossz alatti rácsok:
„légyszem” AR bevonat

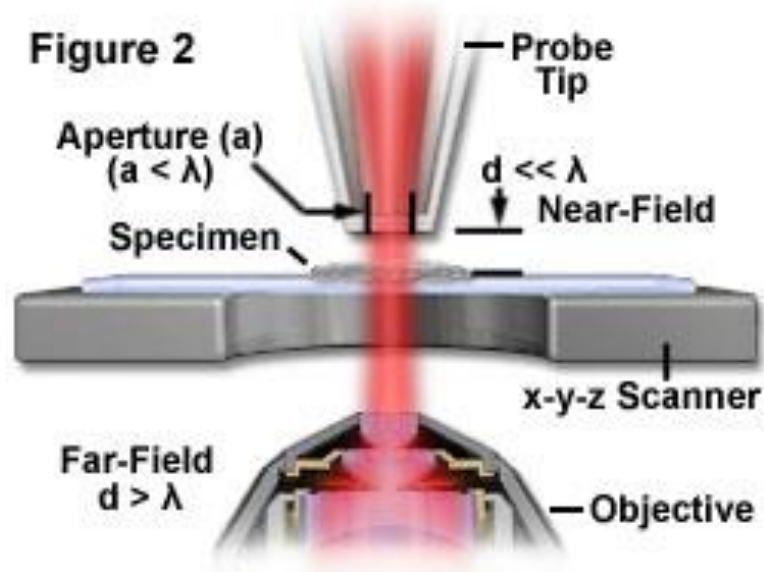
Hullámhossz alatti rácsok: polarizátor





Near-Field Imaging Scheme

Figure 2

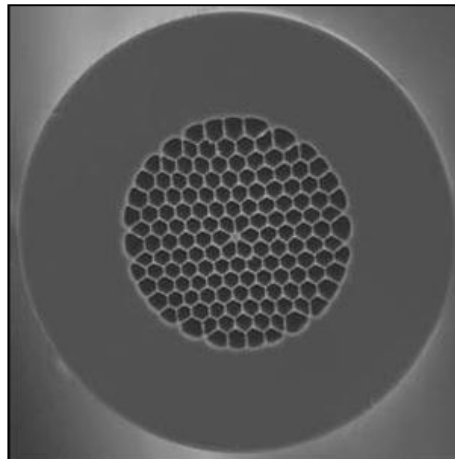




Fotonikus kristályok: opál



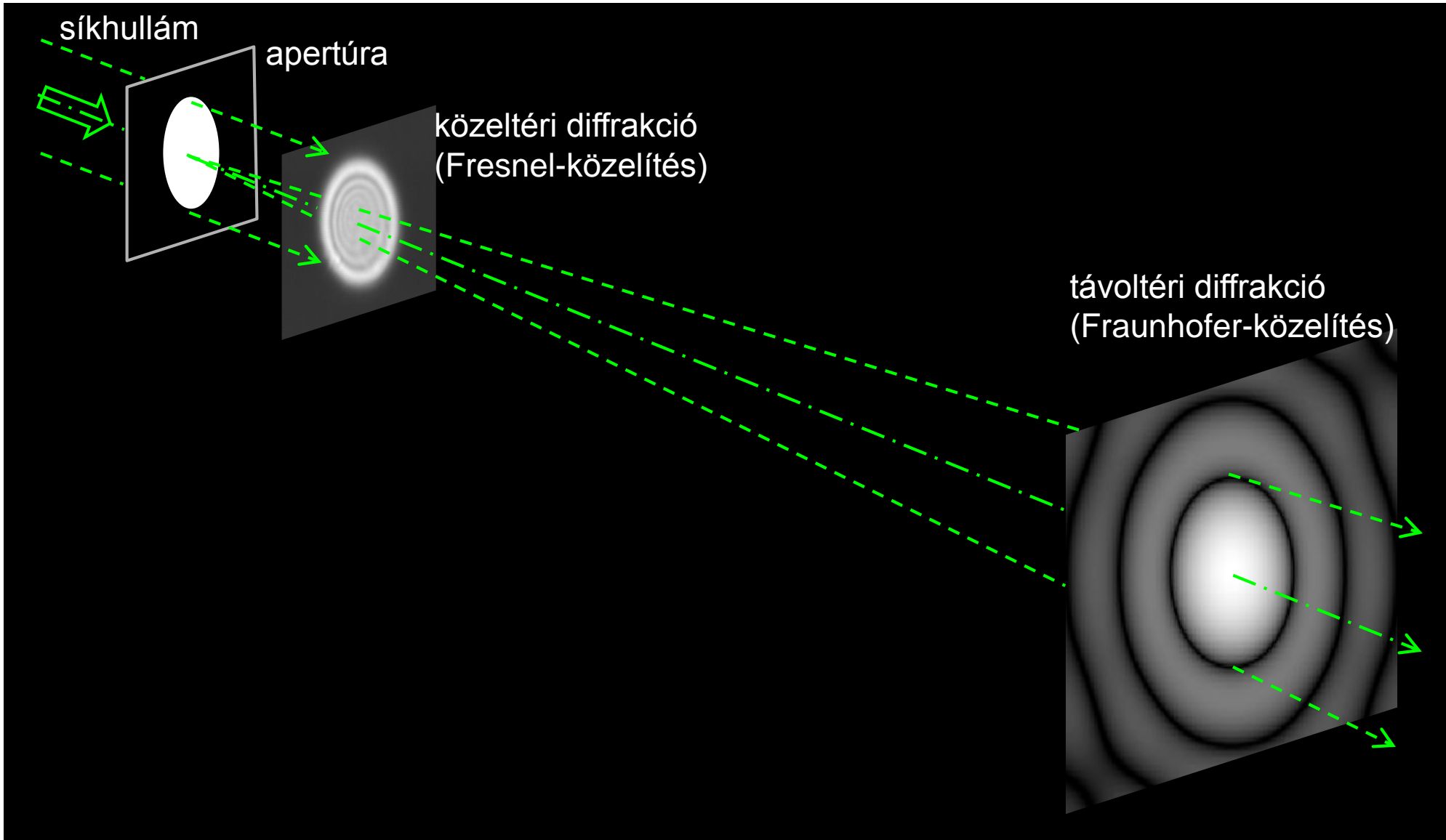
Fotonikus kristályok: Morpho



Fotonikus kristályok: száloptika

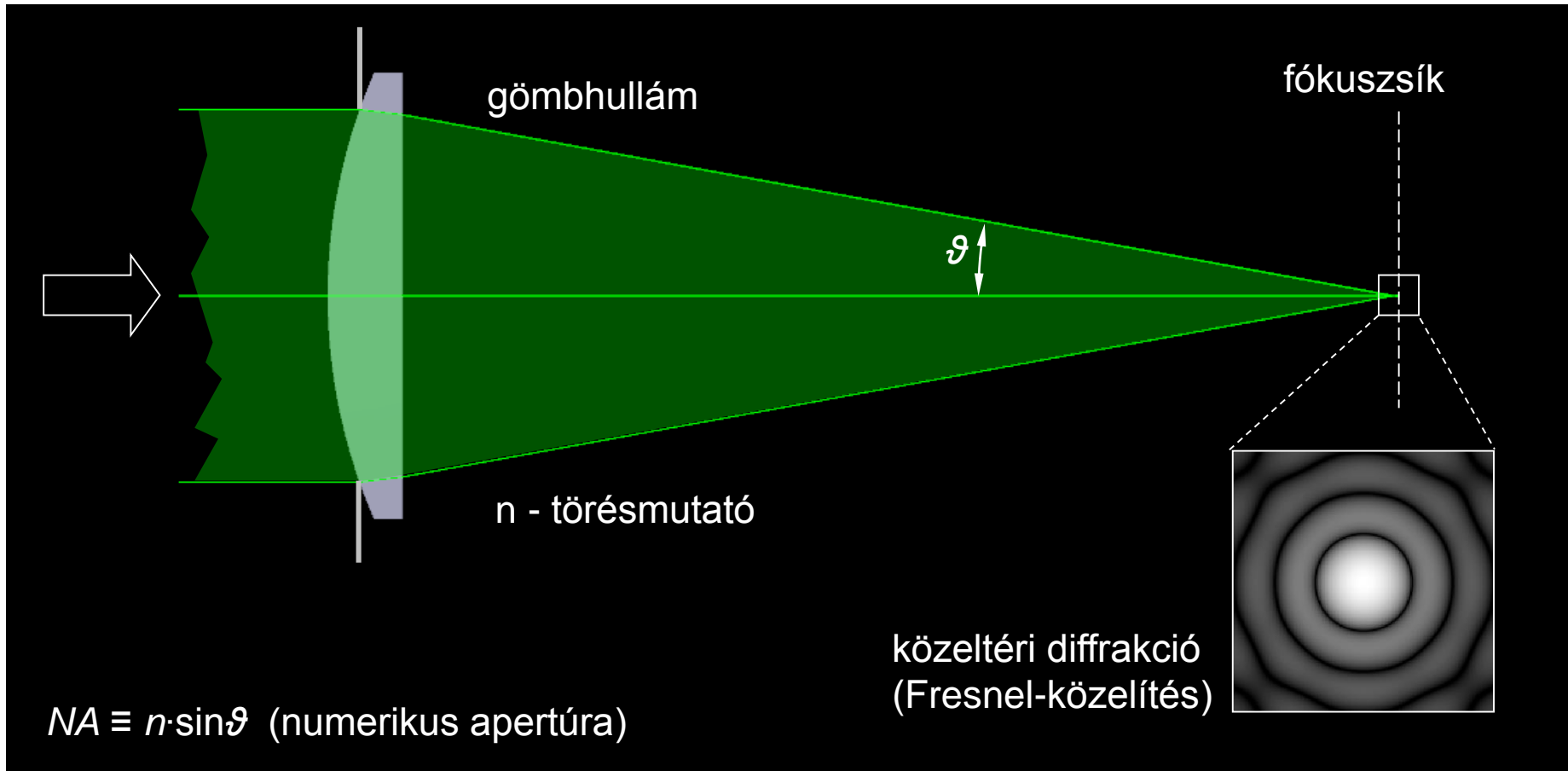


▪ Diffrakciós alapprobléma 1. ▪



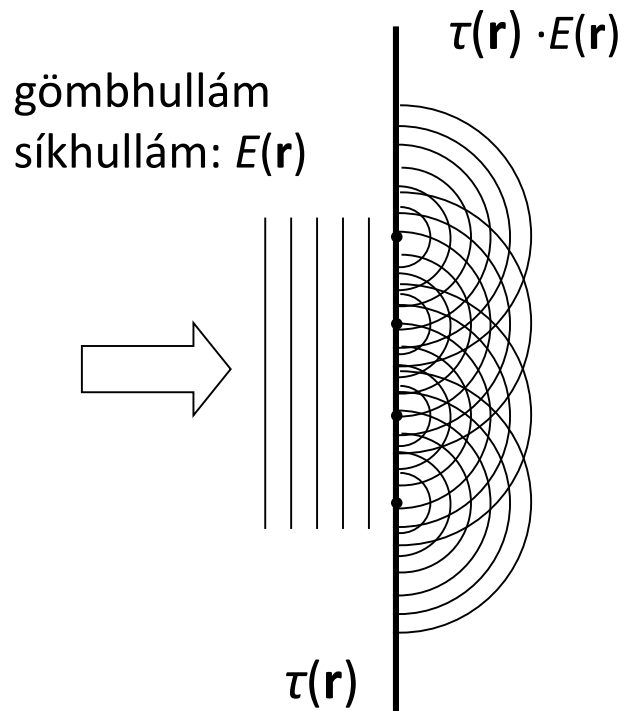


▪ Diffrakciós alapprobléma 2. ▪

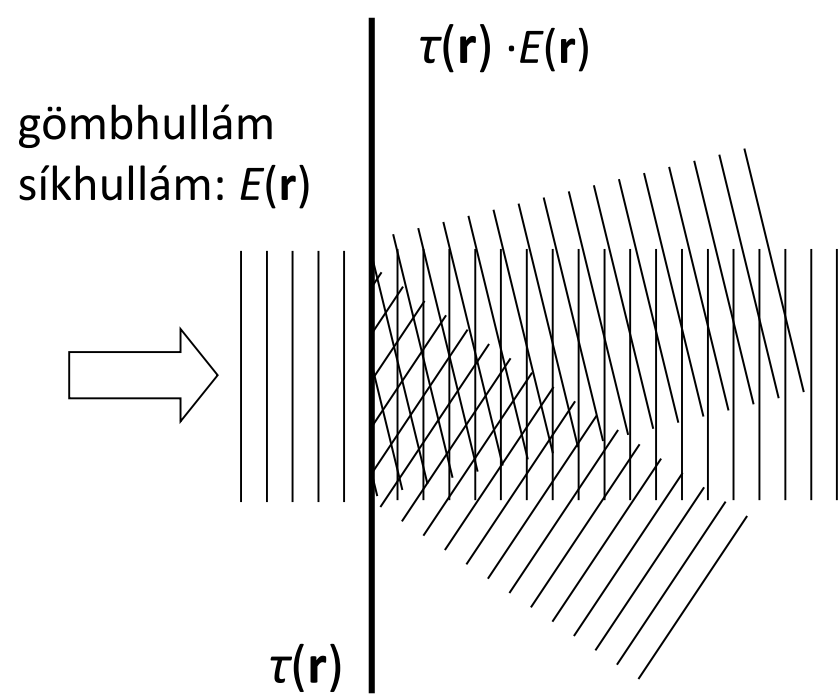




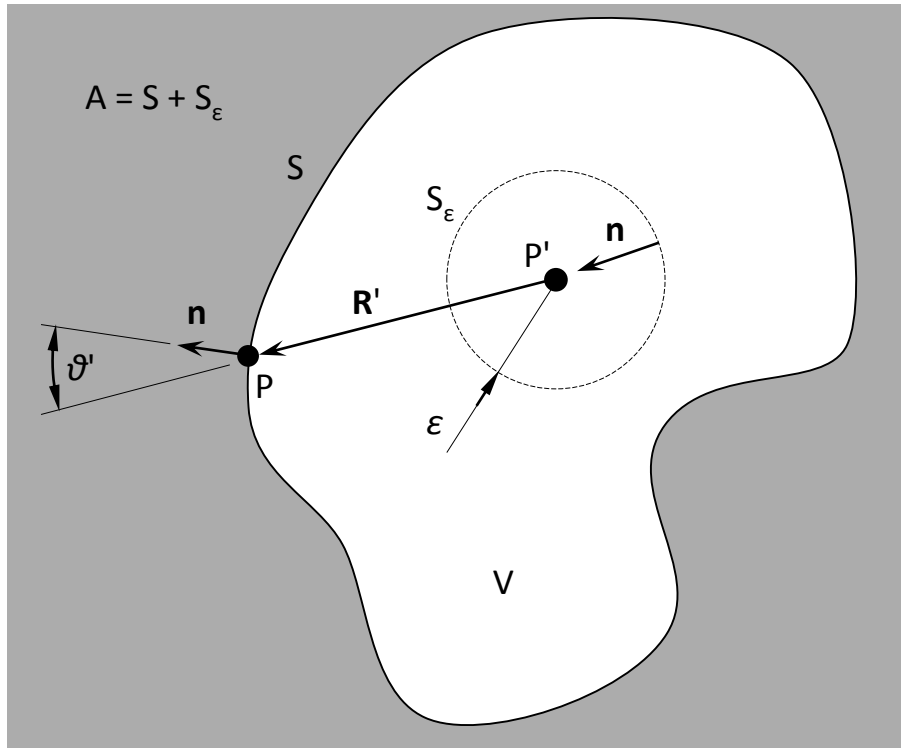
Pontforrásokra bontás (Huygens-Fresnel elv)



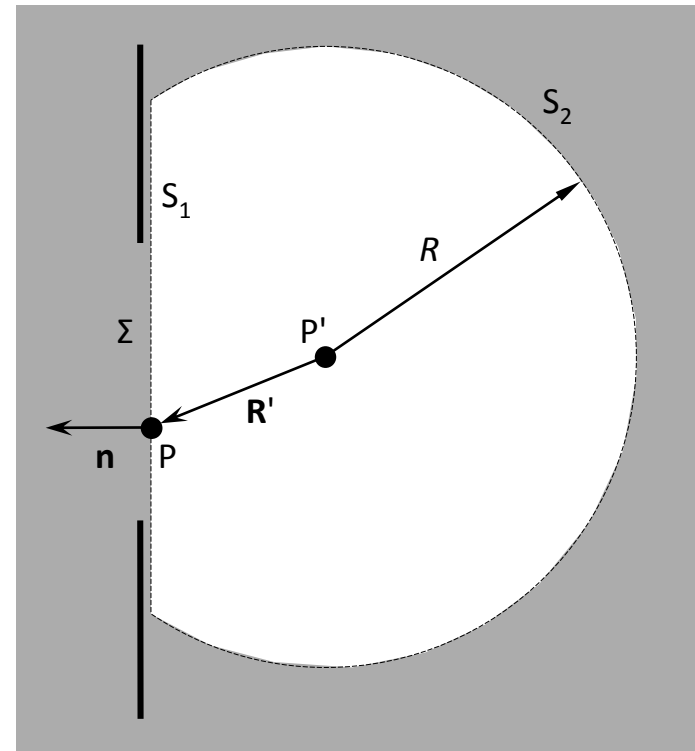
Síkhullámokra bontás (Fourier-optika)



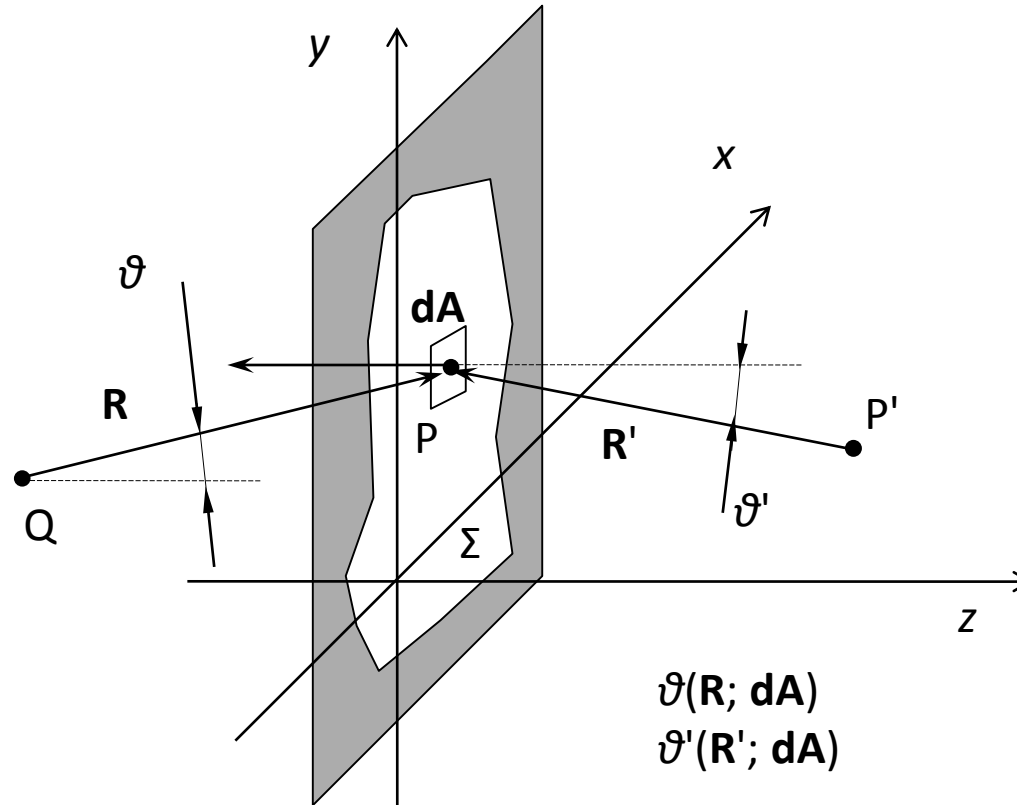
$\tau(\mathbf{r})$ – a felületen értelmezett komplex transzmittancia függvény



Green-tételhez

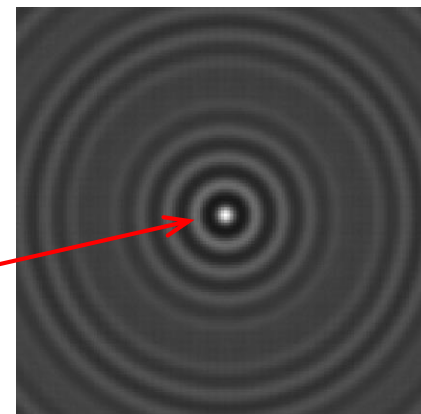
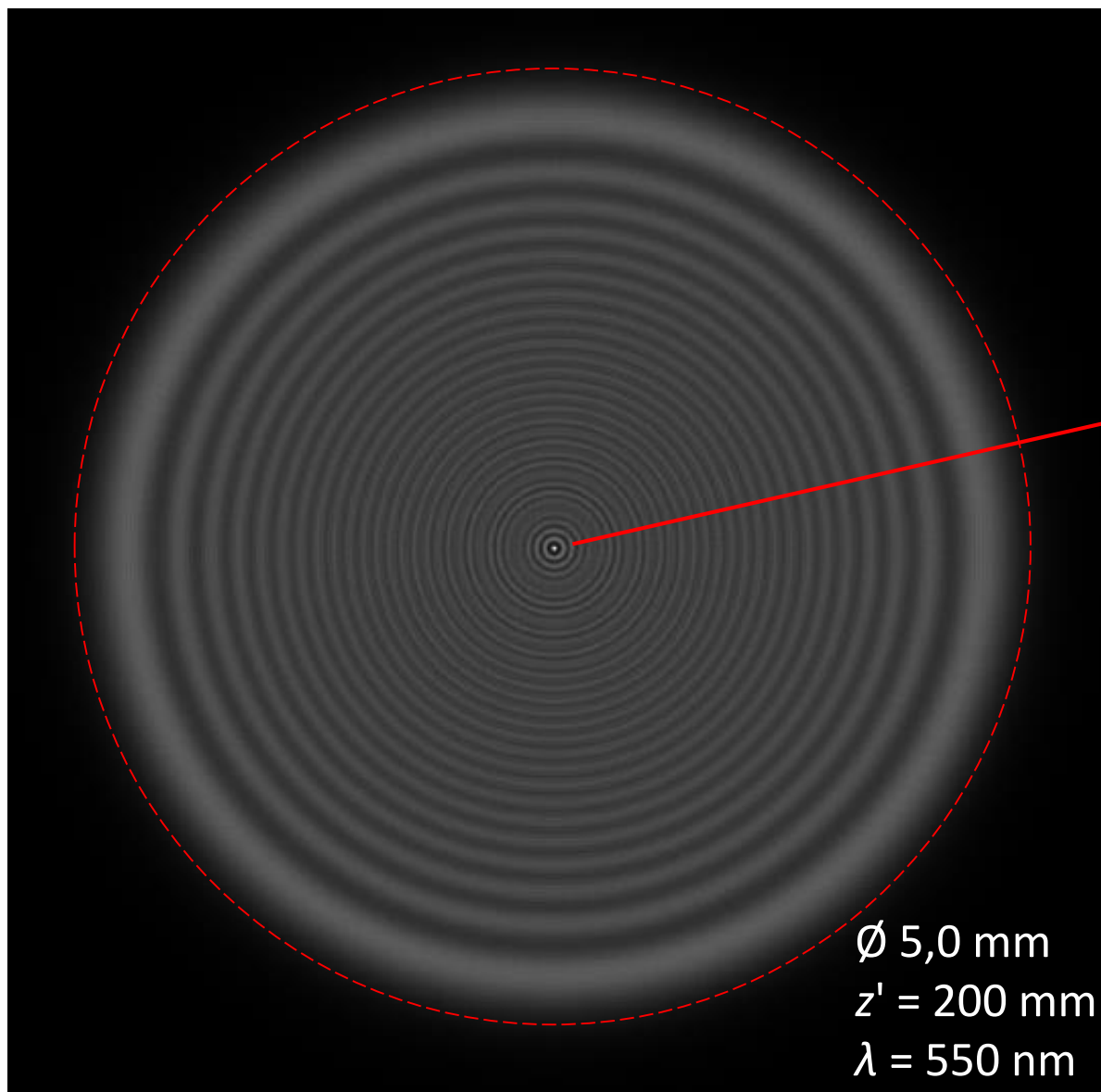


Fresnel-Kirchhoff diffrakciós integrálhoz





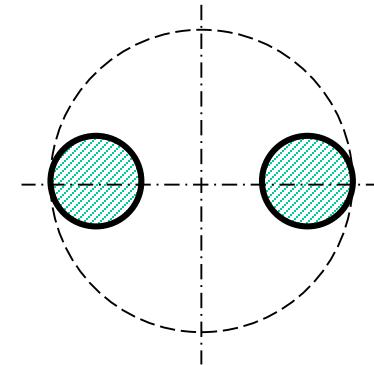
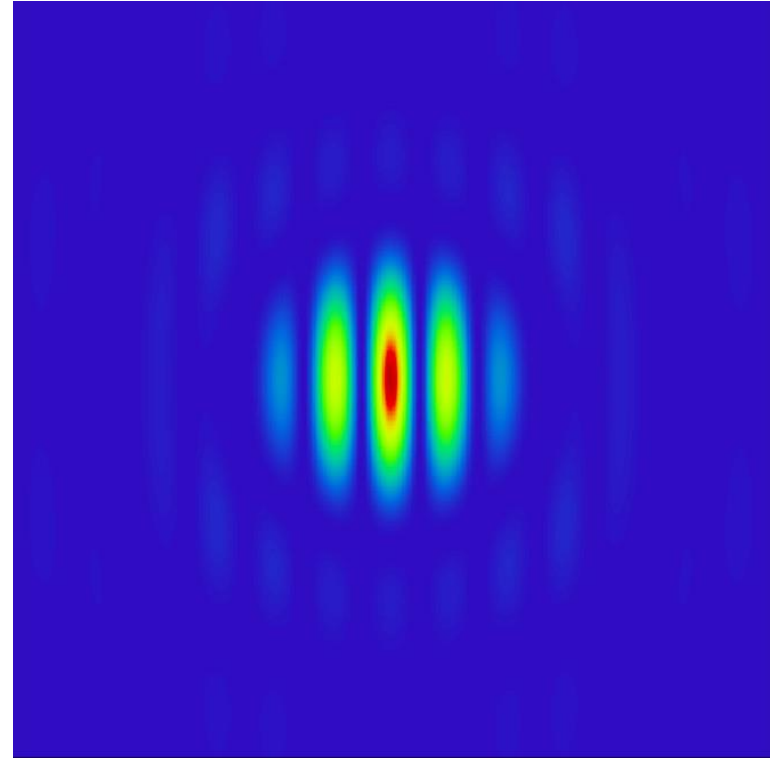
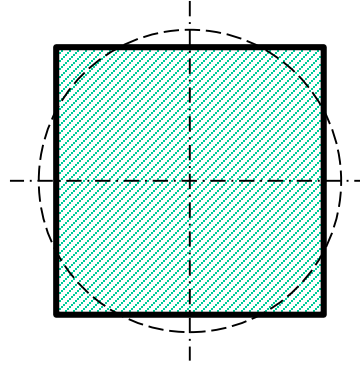
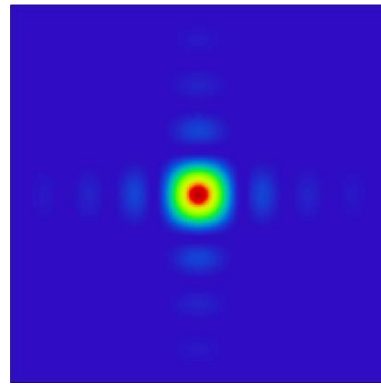
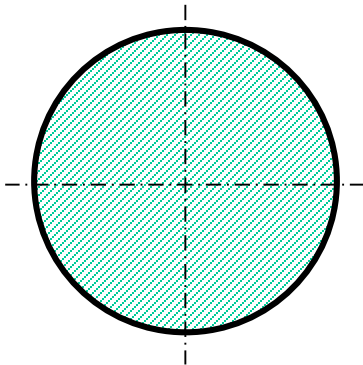
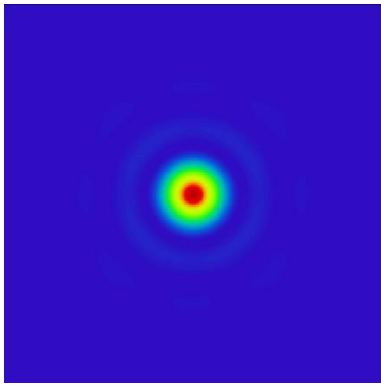
▪ Körapertúra Fresnel-diffrakciója ▪



Poisson- (Arago-) folt



▪ Példák Fraunhofer-diffrakcióra ▪





■ Gömbhullám diffrakciója ■

