O8ARDELS **Fresnel's Formulas with Absorption**

Calculation of real part and argument of parallel zrp and perpendicular zrs case of Fresnel's formulas with absorption. We assume zrs = rs exp ids and zrp = rp exp idp and the argument as function of q.
The difference of the angle of the two components of the reflected light is plotted.
This angle is the angle discussed in chapter 5 for light elliptically polarized by reflection.

$$\theta := 0, 1 .. 89.9 \qquad i := \sqrt{-1}$$

$$zrp(\theta) := \frac{\left(\frac{n2 - i\cdot K}{n1}\right)\cdot\cos\left(2\cdot\frac{\pi}{360}\cdot\theta\right) - \sqrt{1 - \left[\left(\frac{n1}{n2 - i\cdot K}\right)\cdot\sin\left(2\cdot\frac{\pi}{360}\cdot\theta\right)\right]^2}}{\frac{n2 - i\cdot K}{n1}\cdot\cos\left(2\cdot\frac{\pi}{360}\cdot\theta\right) + \sqrt{1 - \left[\left(\frac{n1}{n2 - i\cdot K}\right)\cdot\sin\left(2\cdot\frac{\pi}{360}\cdot\theta\right)\right]^2}}$$

$$zrs(\theta) := \frac{\cos\left(2\cdot\frac{\pi}{360}\cdot\theta\right) - \left(\frac{n2 - i\cdot K}{n1}\right)\cdot\sqrt{1 - \left[\left(\frac{n1}{n2 - i\cdot K}\right)\cdot\sin\left(2\cdot\frac{\pi}{360}\cdot\theta\right)\right]^2}}{\cos\left(2\cdot\frac{\pi}{360}\cdot\theta\right) + \left(\frac{n2 - i\cdot K}{n1}\right)\cdot\sqrt{1 - \left[\left(\frac{n1}{n2 - i\cdot K}\right)\cdot\sin\left(2\cdot\frac{\pi}{360}\cdot\theta\right)\right]^2}}$$

$n1 \equiv 1 \qquad n2 \equiv 3 \qquad K \equiv 5$

$$\arg\Delta(\theta) := \arg(zrs(\theta)) - \arg(zrp(\theta)) - \pi$$