

Fresnel Equations

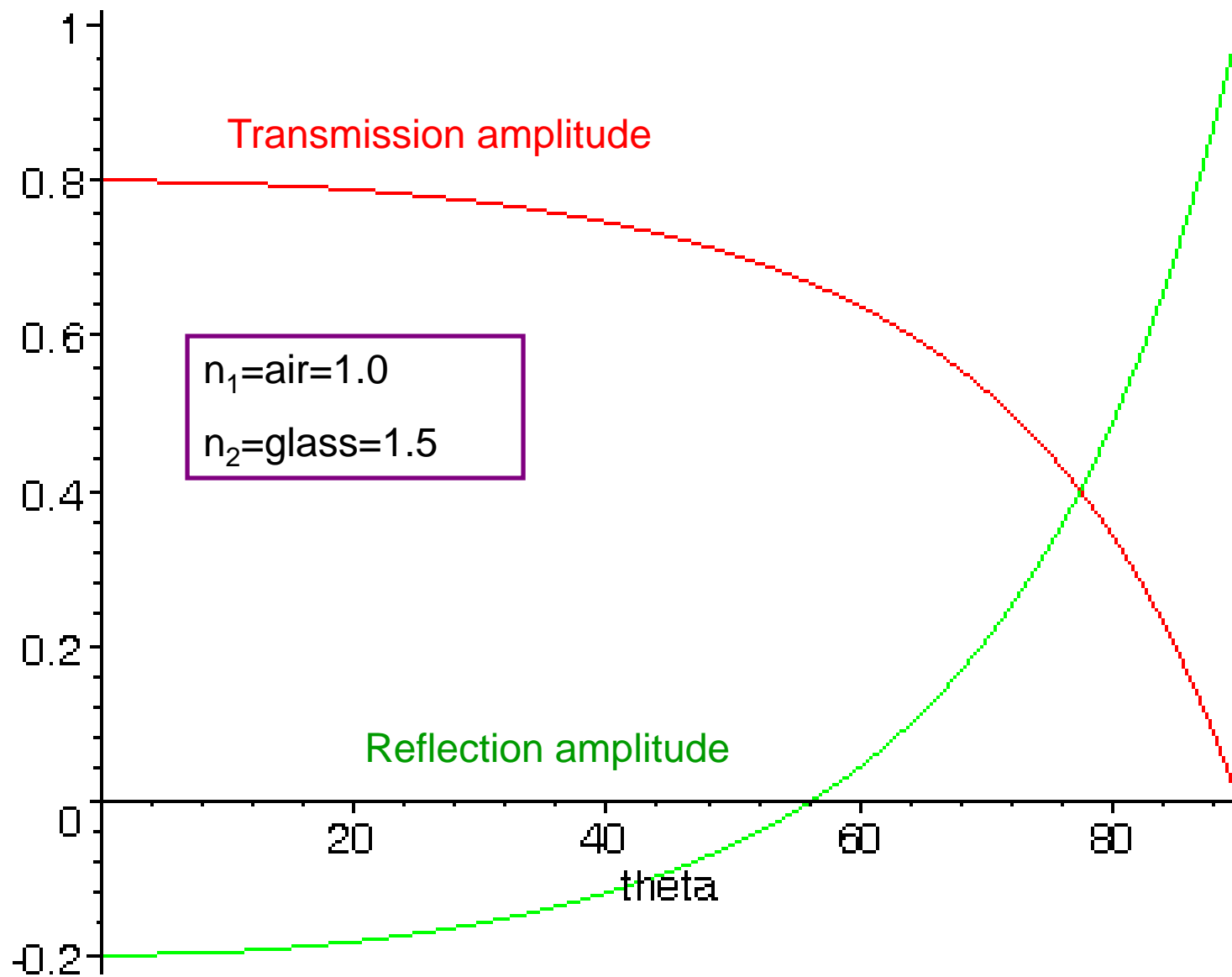
Transmission Amplitude:

$$t = \frac{2}{\frac{\sqrt{1 - \left(\frac{n_1}{n_2}\right)^2 \sin^2 \theta_i}{\cos \theta_i} + \frac{n_2}{n_1}}$$

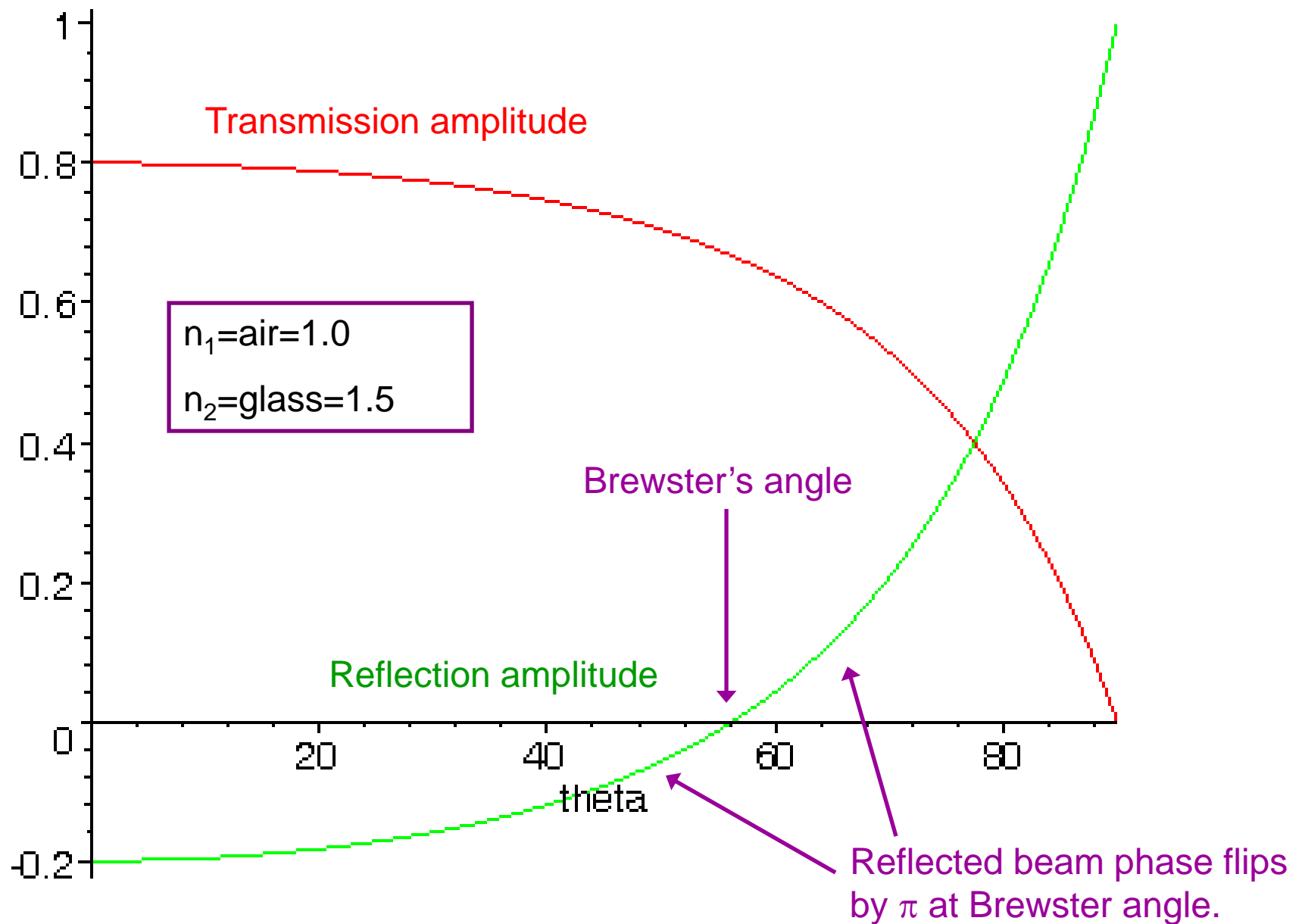
Reflection Amplitude:

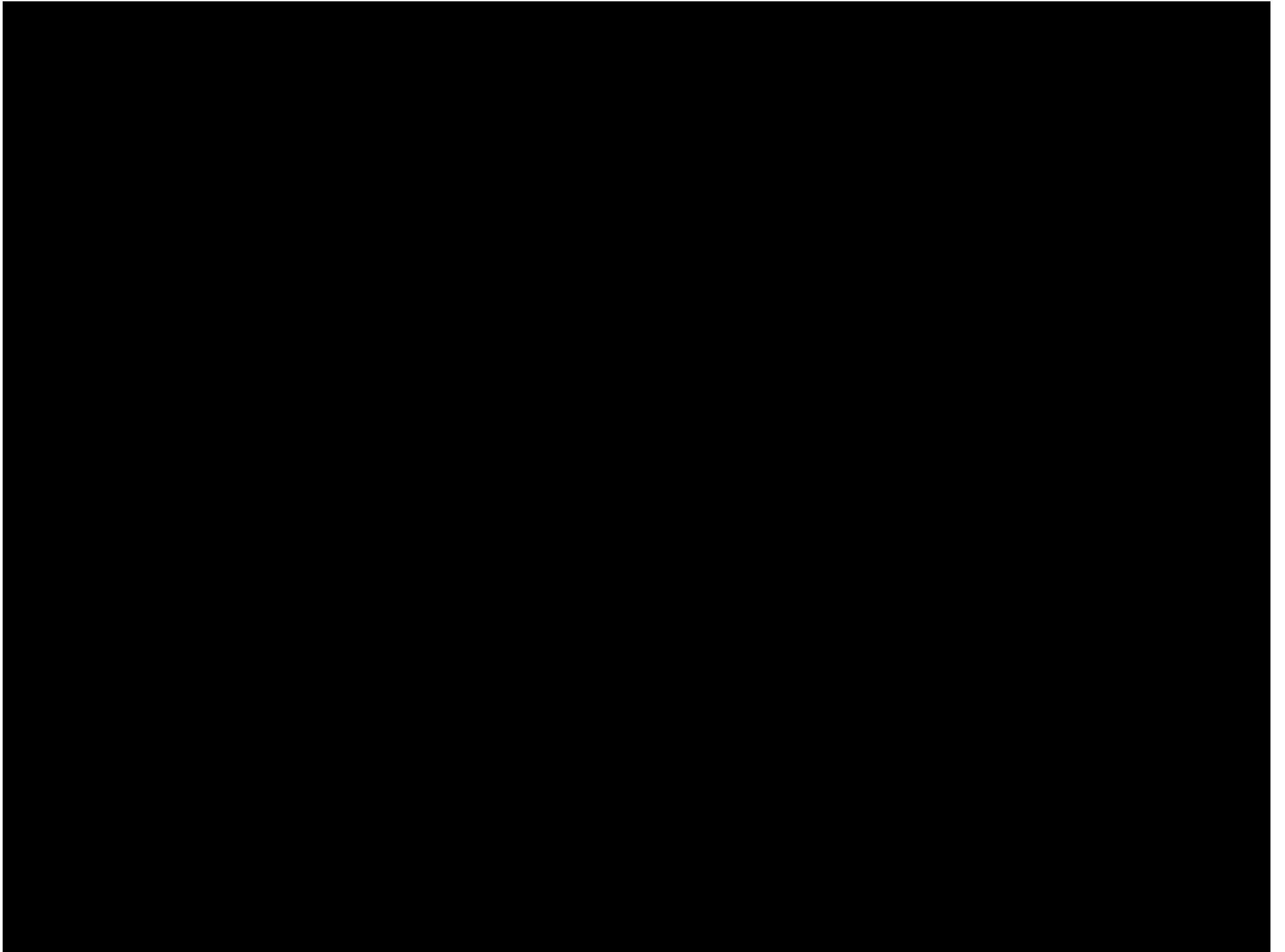
$$r = \frac{\frac{\sqrt{1 - \left(\frac{n_1}{n_2}\right)^2 \sin^2 \theta_i}{\cos \theta_i} - \frac{n_2}{n_1}}{\frac{\sqrt{1 - \left(\frac{n_1}{n_2}\right)^2 \sin^2 \theta_i}{\cos \theta_i} + \frac{n_2}{n_1}}$$

P-polarized light on Glass, $n_2=1.5$

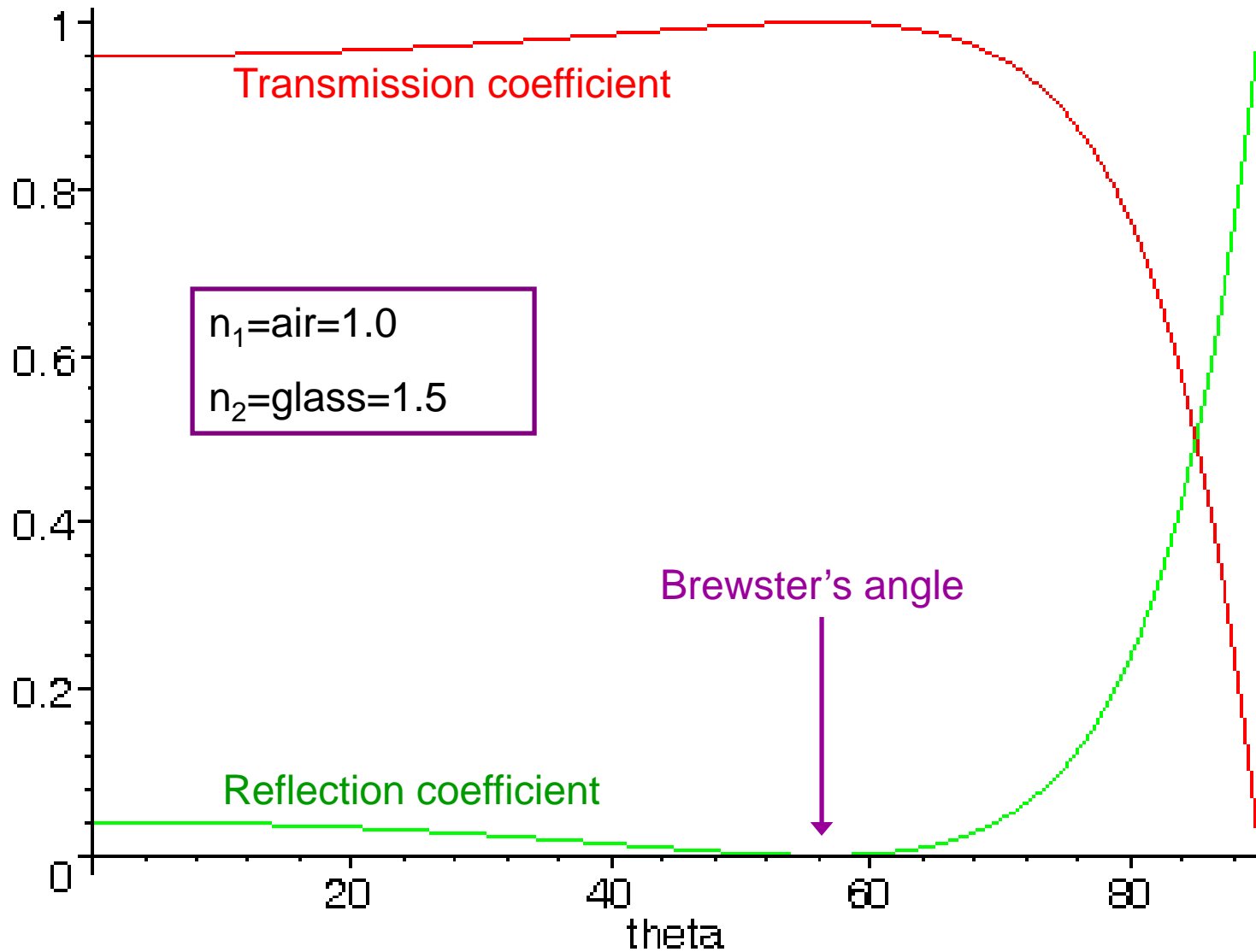


P-polarized light on Glass, $n_2=1.5$

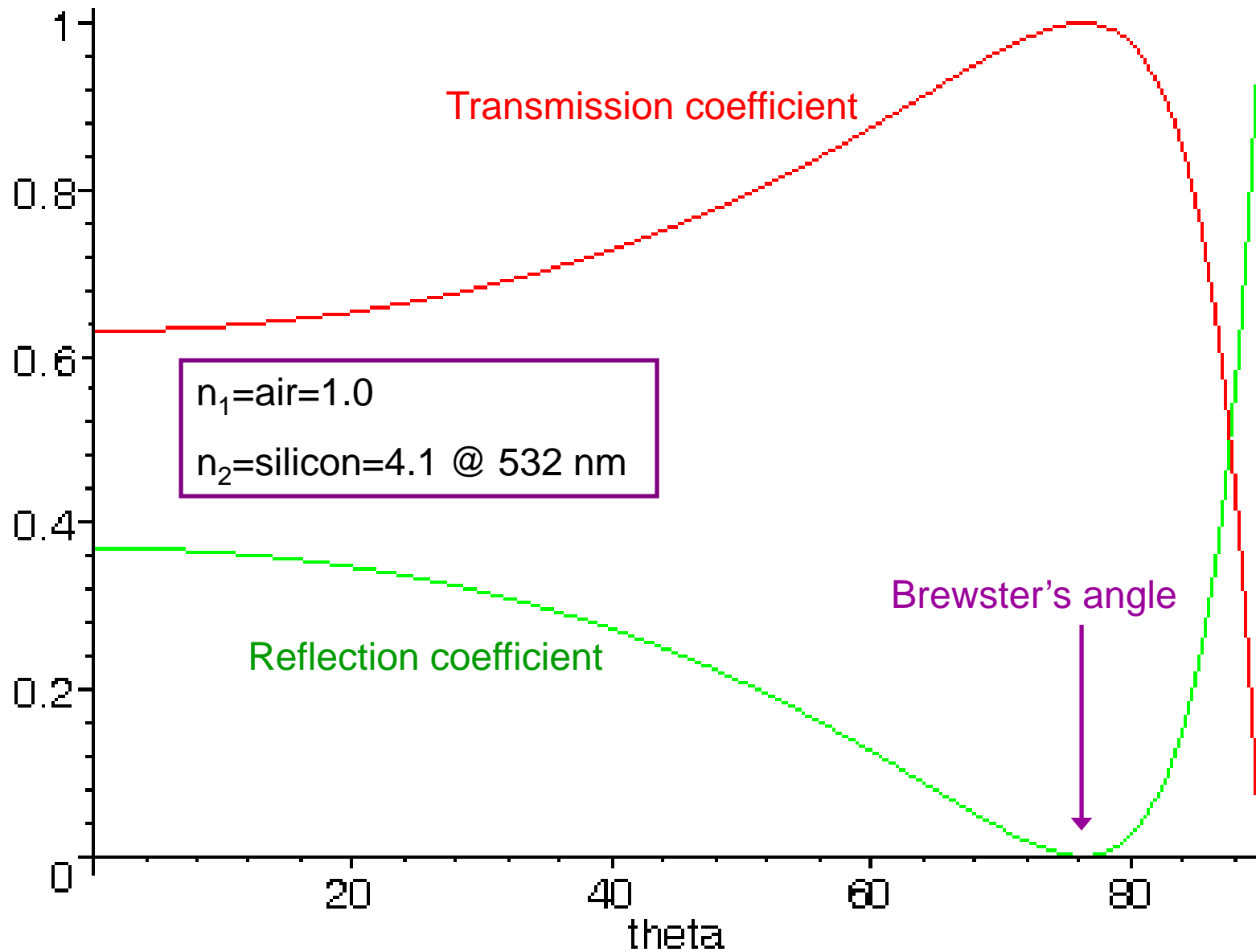




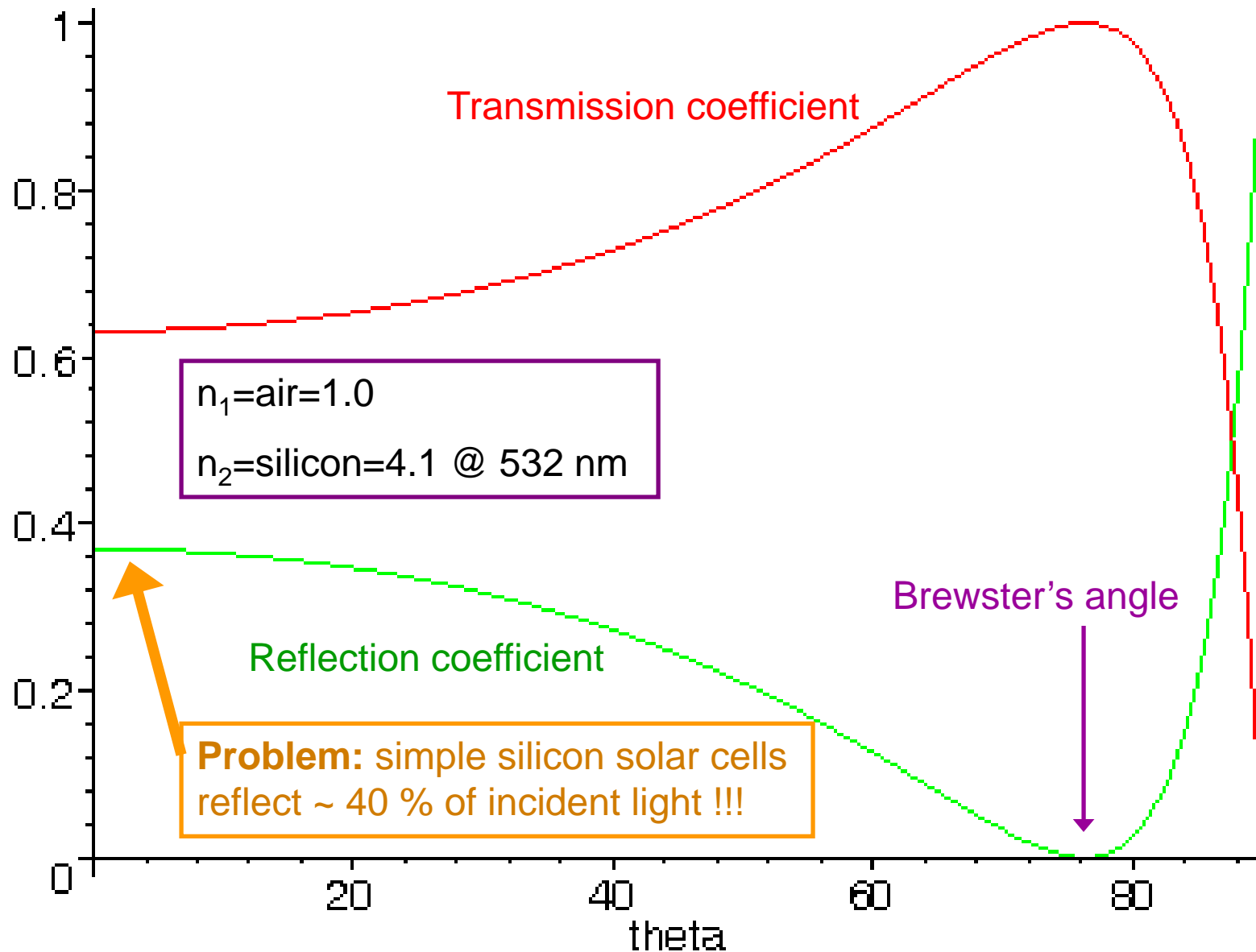
Glass: $n_2=1.5$

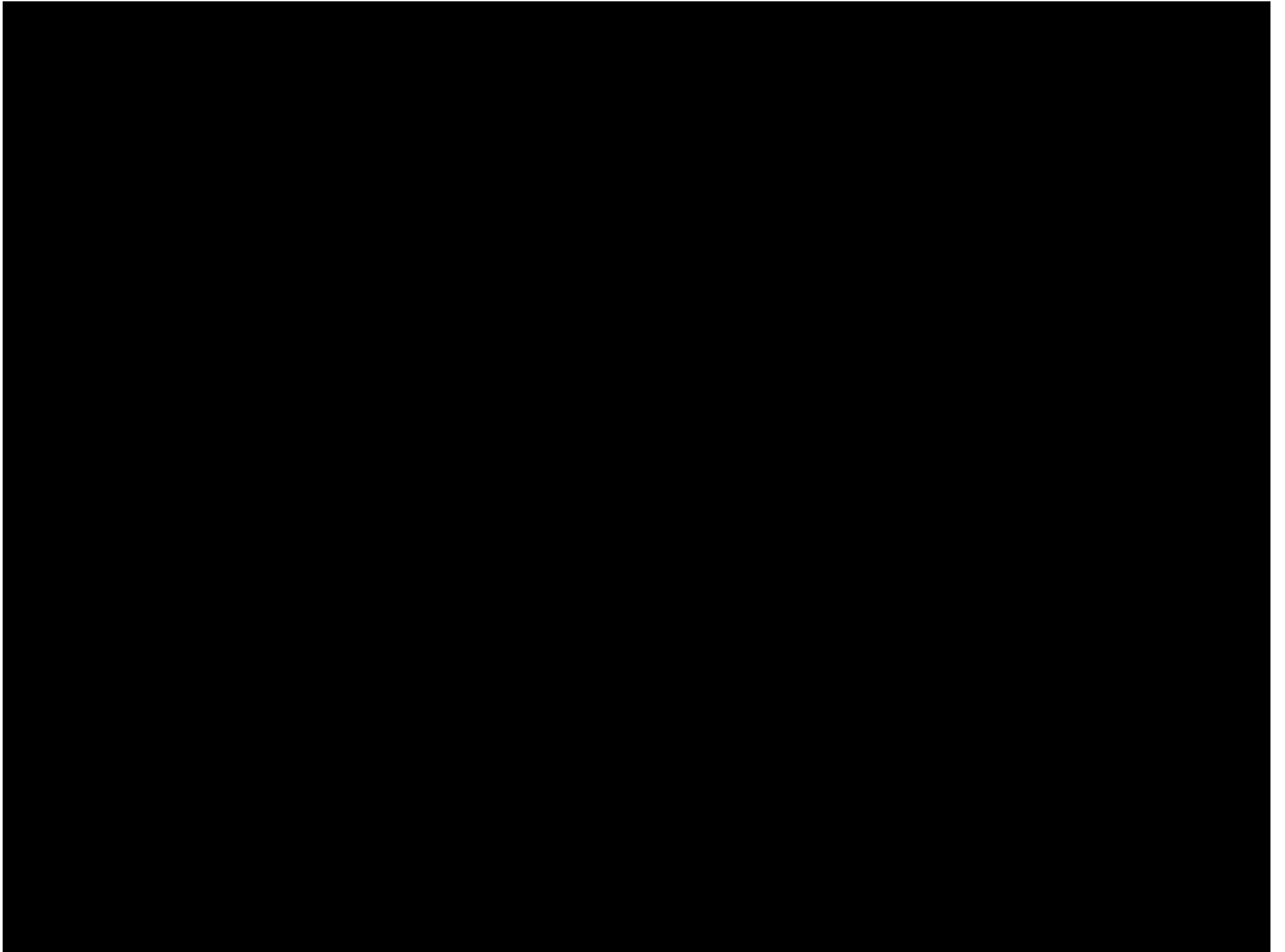


Silicon: $n_2=4.1$

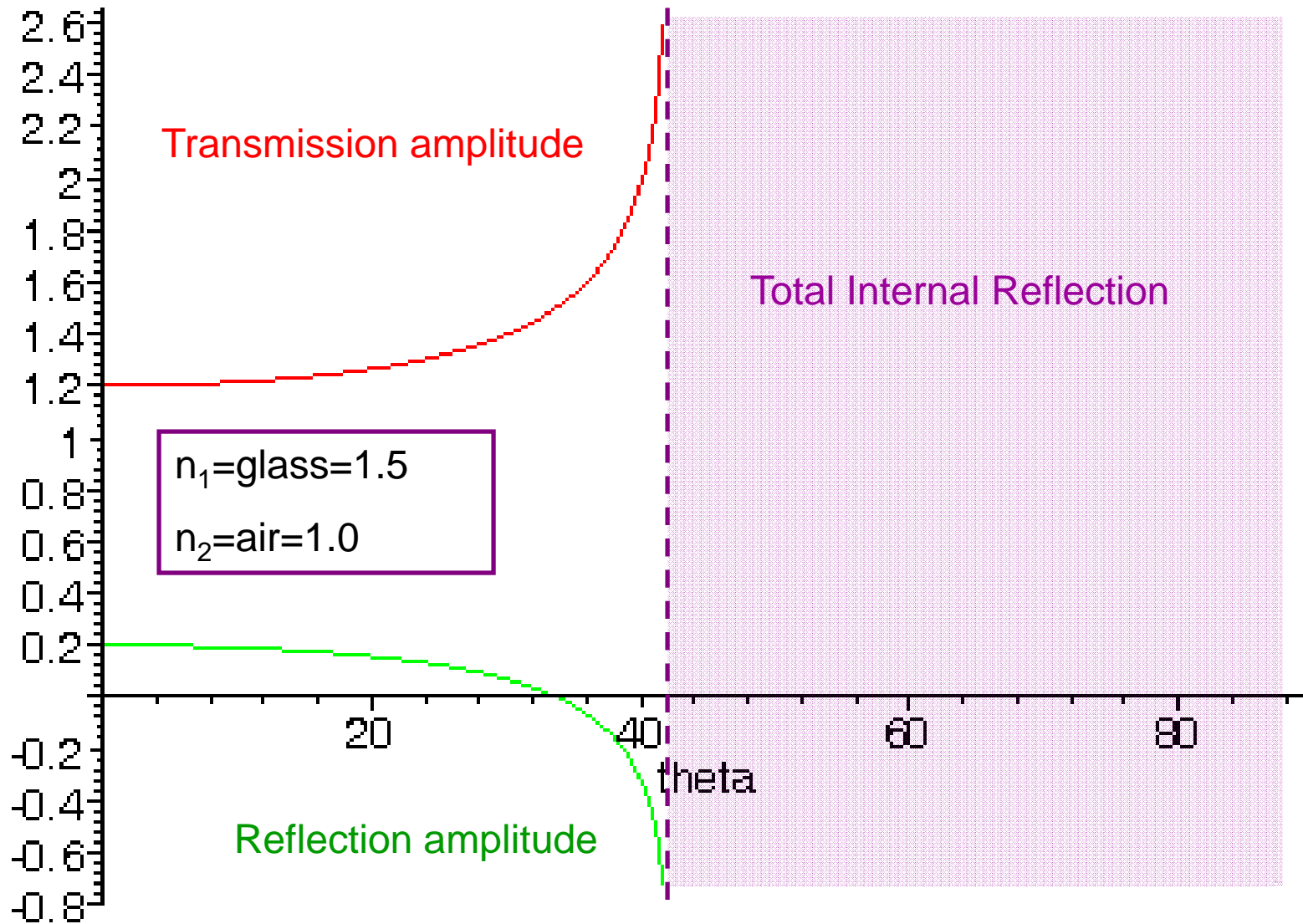


Silicon: $n_2=4.1$





Total internal reflection: Glass: $n_1=1.5$



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