

G4PRISM

Graph of the angle of deviation for refraction on a prism depending on the angle of incidence

θ_1 is the angle of incidence with respect to the normal

δ is the angle of deviation

n is the refractive index and A is the apex angle.

$$\theta_1 := 0,001 \dots 1 \qquad n := 2 \qquad A := \left(\frac{2 \cdot \pi}{360} \right) \cdot 30$$

$$\delta(\theta_1) := \theta_1 + \arcsin\left(\sqrt{n^2 - \sin(\theta_1)^2} \cdot \sin(A) - \sin(\theta_1) \cdot \cos(A)\right) - A$$

