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Periodicity (Cyclicity), cyclicity repeats within lim (rotational, closed loop inside restricted band), transcendency passes only once (tangential, linear infinit):

$$\begin{aligned} 2\pi = k\lambda = \mathcal{T}\omega &= \frac{\omega}{\nu} = k\frac{c}{\nu} = \frac{\Delta\varphi}{\Delta s} \frac{c}{\nu} = \frac{\Delta\varphi}{n} = \frac{u}{r} = \frac{h}{\hbar} = 2\frac{\mathcal{M}_B}{\mathcal{L}_B} \\ &= \left(\frac{\pi}{2} - \alpha\right) + \alpha + \left(\frac{\pi}{2} - \beta\right) + \beta + \pi \\ &= 360^\circ = 12 \text{ hours (half day)} = 12 \text{ music notes (one octave)} \end{aligned} \tag{1}$$

where:

$\alpha$  := irradiation angle, incoming radiation direction, from source/sender (Einstrahlungswinkel zur Normalen auf Grenzfläche des Mediums)

$\beta$  := refraction angle for bent transmitted radiation  $A_t$  orientation in matter (Durchstrahlungswinkel zur Normalen aus Grenzfläche ins Medium)

$\mathcal{M}_B$  := Blackbody Radiant Exitance

$\mathcal{L}_B$  := Blackbody Radiance

Orientation of Radiation:

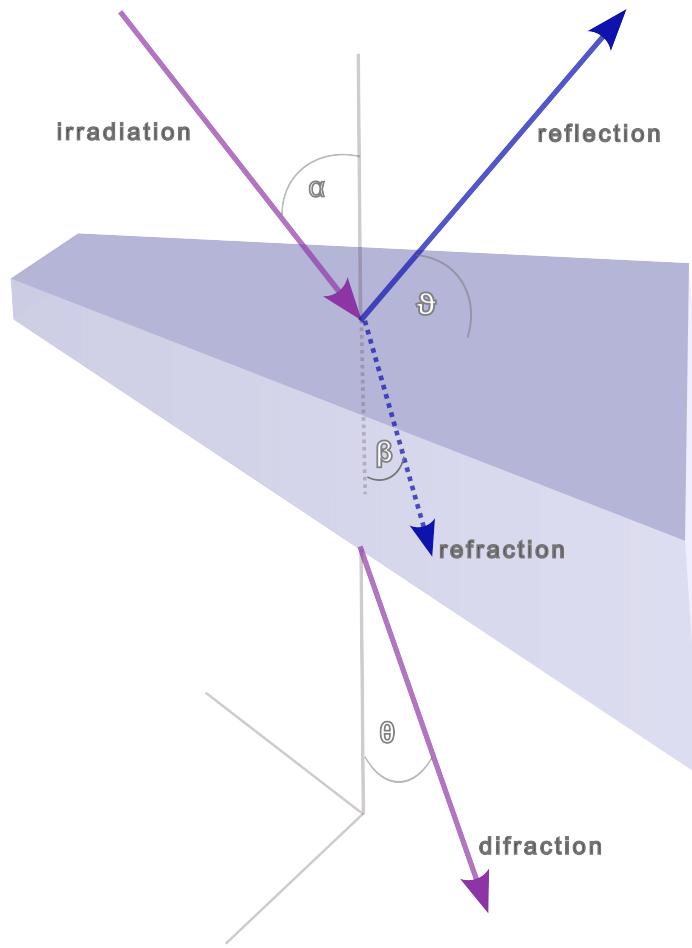


Figure 1: Radiation

$\vartheta$  = reflection angle for redirected radiation  $A_{r\parallel}$  parallel to  $\alpha$  from matter <sup>1</sup>

$\theta$  = diffraction angle for redirected radiation  $A_{r\perp}$  orthogonal to  $\alpha$  from matter <sup>2</sup>

$\varpi = \beta_1 + \beta_2$  = angle of converging body surfaces (point tip of prismatic medium), spread angle of prism

$\varsigma$  = deviation angle of redirected ray beam after refraction (transmission) and diffraction

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<sup>1</sup>Abstrahlwinkel zur Grenzfläche des Mediums

<sup>2</sup>Beugungswinkel durch Objekt ins Vakuum

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$u_g$  = aperture angle (acceptance) from sender source (at distance  $g$ )

$w_b$  = inclination angle at observer receiver (at distance  $b$ )

$\varepsilon$  = visual angle from observer/receiver (of eye)