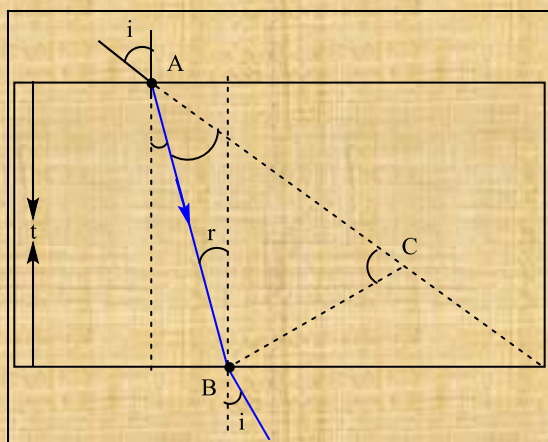


Chapter 10

REFLECTION AND REFRACTION

Refraction through a glass slab:



- a) The distance traveled by light ray inside the glass

$$\text{plate} \left[AB = \frac{t}{\cos r} \right]$$

r = angle of refraction in the glass plate.

- b) The lateral shift $\left[x = \frac{t \sin[i-r]}{\cos r} \right]$

$$BC = AB \sin(i - r)$$

$$= \frac{t}{\cos r} [\sin(i - r)]$$

- c) The time taken to cover the distance AB inside the

$$\text{slab is} = \frac{\text{Path length}}{\text{Speed}} = \frac{AB}{C_g}$$

$[C_g \rightarrow \text{speed of light in the glass slab}]$