

74. Using the relations of §36-7, we find that the (vertical) change between the center of one dark band and the next is

$$\Delta y = \lambda/2 = 2.5 \times 10^{-4} \text{ mm} .$$

Thus, with the (horizontal) separation of dark bands given by $\Delta x = 1.2 \text{ mm}$, we have

$$\theta \approx \tan \theta = \frac{\Delta y}{\Delta x} = 2.08 \times 10^{-4} \text{ rad} .$$

Converting this angle into degrees, we arrive at $\theta = 0.012^\circ$.