

or

$$\beta = \frac{\lambda D}{d} \dots\dots\dots (7)$$

Since, β doesn't depend upon m , it is constant i.e. width of all the bright bands is same on the screen.

By equation (5) and equation (7) we get that, $\beta = \beta' = \frac{\lambda D}{d} \dots\dots\dots(8)$

Thus in interference pattern every fringe is of equal width and present at equal separation.

Intensity variation on screen

If I_0 represent intensity of each wavelet on the screen, then, the resultant intensity at a point on the screen corresponding to the angular position θ , is given by

$$I = 4I_0 \cos^2 \frac{\phi}{2} \dots\dots\dots(9)$$

Where $\phi = \frac{2\pi(d \sin \theta)}{\lambda} \dots\dots\dots(10)$