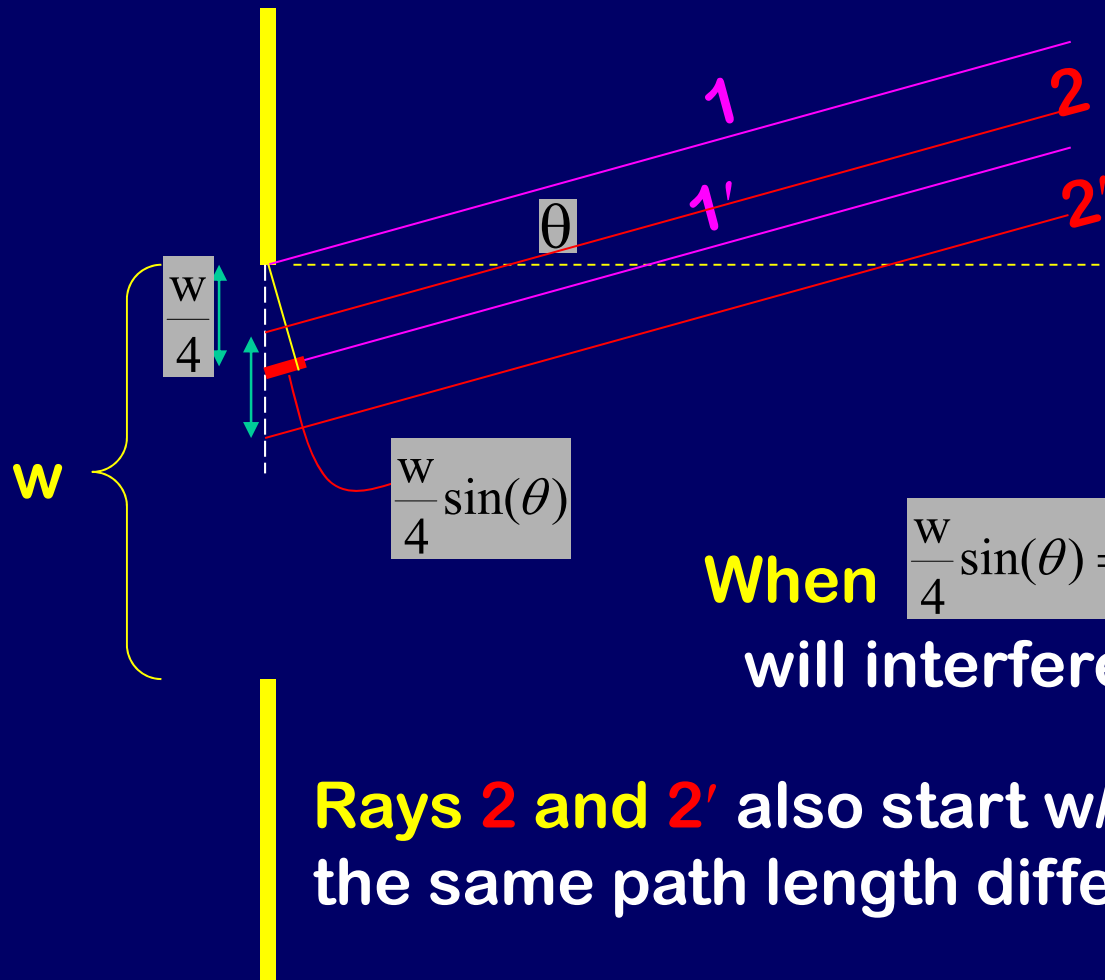


Single Slit Diffraction



When $\frac{w}{4} \sin(\theta) = \frac{\lambda}{2}$ rays 1 and 1' will interfere destructively.

Rays 2 and 2' also start $w/4$ apart and have the same path length difference.

Under this condition, every ray originating in top quarter of slit interferes destructively with the corresponding ray originating in second quarter.