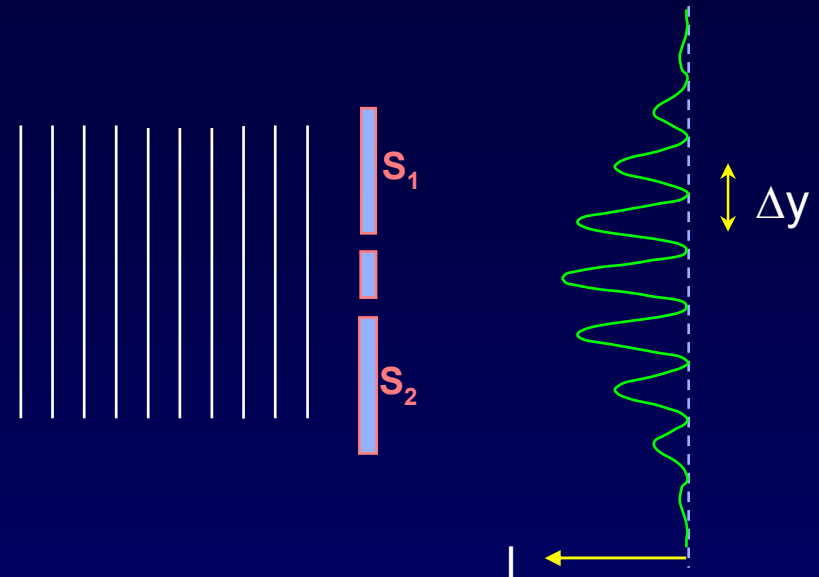


# Solution

A laser of wavelength 633 nm is incident on two slits separated by 0.125 mm.



1. If we increase the spacing between the slits, what will happen to  $\Delta y$ ?  
 a. decrease    b. stay the same    c. increase

$\Delta y \propto 1/d$ , so it decreases. This is a general phenomenon: the more spread out the sources are, the narrower the interference pattern is.

2. If we instead use a green laser (smaller  $\lambda$ ),  $\Delta y$  will?  
 a. decrease    b. stay the same    c. increase

$\Delta y \propto \lambda$ , so it decreases.