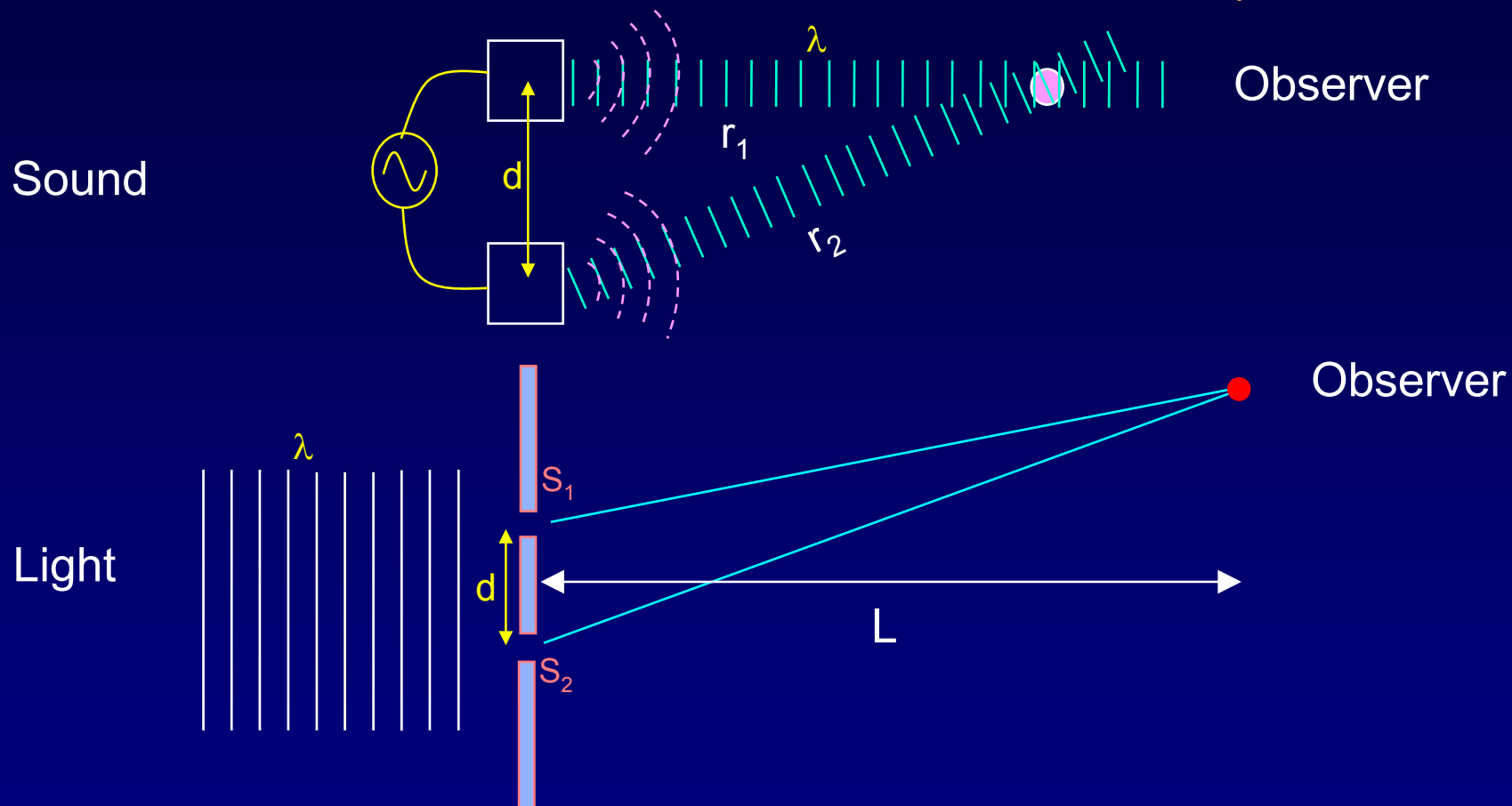# Sound and Light Waves Interfere the Same Way

In both cases, $I = 4 I_1 \cos^2(\phi/2)$ with $\phi = 2\pi(\delta/\lambda)$, $\delta = r_2 - r_1$

However, for light, the distance L is generally much greater than the wavelength λ and the slit spacing d: L >> λ, L >> d.