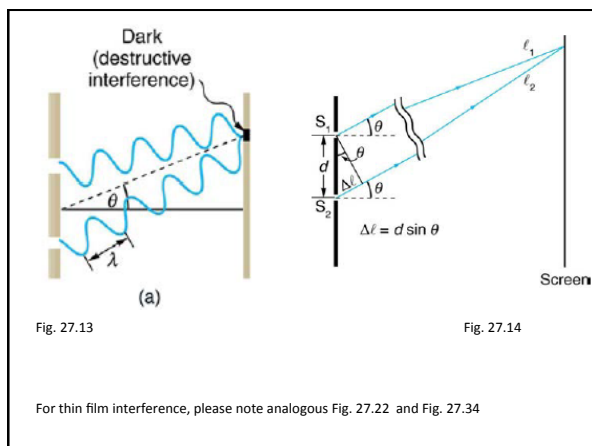Week 4 – Monday
Power in a Wave

1) Discussion of whatever is on your mind.
2) Office Hours: M(10, 3), T(2)
3) Solutions Posted for Practice MT#1, 122
4) 2-D wave interference from yesterday
5) Power in a Wave Today
6) Thin Film Interference (bubbles) for tomorrow – no video, but reading.
7) Hand Back papers.

Dark (destructive interference)

$\Delta \ell = d \sin \theta$

Screen

(a)

Fig. 27.13   Fig. 27.14

For thin film interference, please note analogous Fig. 27.22 and Fig. 27.34

I am oscillating the end of a string up and down at a constant frequency and amplitude as the wave travels away. Then, suddenly, the tension in the string is Tripled: $T => \underline{3} \, T_o$, what happens to the… how would it look different?:

1) Wavelength: $\lambda => \underline{} \lambda_o$
2) Power I put out: $P => \underline{} P_o$
3) Angle that the string makes: $\theta => \underline{} \theta_o$
4) Force necessary to pull string: $F => \underline{} F_o$
5) Acceleration of a piece of string : $a => \underline{} a_o$

*What if the **mass density** is Tripled: $\mu => \underline{3} \, \mu_o$, what happens to these values? Did you draw it?*

I am oscillating the end of a string up and down at a constant frequency and amplitude as the wave travels away. Then, suddenly, the mass density is Tripled: $\mu => \underline{3} \, \mu_o$, what happens to the:

1) Wavelength: $\lambda => \underline{} \lambda_o$
2) Power I put out: $P => \underline{} P_o$
3) Angle that the string makes: $\theta => \underline{} \theta_o$
4) Force necessary to pull string: $F => \underline{} F_o$
5) Acceleration of a piece of string : $a => \underline{} a_o$