

Stuff for Thursday, April 26, 2012

- PS#9 due up front; PS#8 back (1094 session back on Monday)
- Stop at 4pm for Quiz #5 on Q9–Q11. Questions?
- Midterm: Any 2 hours from 6:30pm to 10:00pm on Wed., May 2.
 - Additional copies of midterm review under “General handouts”

Summary:

- Local wavelength: $[2\pi/\lambda(x)]^2 = -\frac{d^2 f/dx^2}{f(x)}$
- Schrödinger equation from $K = p^2/2m = [(2\pi\hbar)/\lambda]^2/2m = E - V(x)$:

$$-\frac{\hbar^2}{2m} \frac{d^2 \psi_E(x)}{dx^2} + V(x)\psi_E(x) = E\psi_E(x)$$

numerical: $\psi_E(x_{i+1}) = 2\psi_E(x_i) - \psi_E(x_{i-1}) - \frac{8\pi^2 mc^2 \Delta x^2}{(hc)^2} [E - V(x_i)]\psi_E(x_i)$