Physics 202, Lecture 26

Today's Topics

- Wave Nature of Waves: Interference
  - The Huygens' Principle
    - Derivation of the Law of Refraction
  - Light as Waves
  - Double-Slit Interference
  - Multi-Slit Interference

Reminder: Light and Optics

- Nature of Lights
  - Lights as rays
  - Lights as EM waves: f, λ, ϕ, v, A, interference …
  - Lights as group of photons

- Optics: Physics of lights
  - Geometric Optics: Treat light as rays (Ch. 32,33)
    → Ray approximation.

  - Wave Optics: Wave properties becomes important
    Interferences, diffraction…(Ch. 34,35)

The Huygens' Principle

- Every point on a wave front can be considered as a secondary source of waves that spread out in the forward direction. The new wave is the result of the superposition of these secondary waves