

LECTURE 6 THE HYDROGEN ATOM

I. Binding energy of e⁻ to nucleus

- A. Quantized
- B. n quantum number
- C. Binding energy, E_n

II. Verification of Energy Levels for H Atom

- A. Photon emission
- B. λ of transitions between two states
- C. Photon absorption

III. Wavefunctions for H Atom

- A. Stationary state wavefunction
- B. Three quantum numbers to describe a wave in 3D
 - 1. Principle quantum number, n
 - 2. Angular momentum quantum number, ℓ
 - 3. Magnetic quantum number, m