

* Variation Theorem no approximate wavefunction can give an energy lower than the true energy.

The best coefficients are found by varying their values until a minimum energy is found.

$$\Psi = c_A \Psi_A + c_B \Psi_B + \dots$$

$$E = \frac{\int \Psi^* H \Psi d\tau}{\int \Psi^* \Psi d\tau}$$

← since not normalized at this point

vary coefficient so that

$$\frac{\partial E}{\partial c_A} = 0$$

