

In the HH basis

$$\Psi = \sum_{\mu} u_{\mu}(\rho) \sum_i \bar{\chi}_{\mu}(\Omega_i) \quad \mu = [d, \kappa]$$

In the AHH basis

$$\Psi = \sum_{\nu} u_{\nu}(\rho) \phi_{\nu}(\rho, \Omega)$$

$$\left[-\frac{\hbar^2}{m} \frac{L^2(\Omega)}{\rho^2} + V \right] \phi_{\nu}(\rho, \Omega) = \lambda_{\nu}(\rho) \phi_{\nu}(\rho, \Omega)$$

$$\phi_{\nu}(\rho, \Omega) = \sum_{\mu} A_{\mu}^{\nu}(\rho) \sum_i \chi_{\mu}(\Omega_i)$$

In the CHH basis

$$\Psi = \sum_{\mu} u_{\mu}(\rho) \sum_i \bar{\chi}_{\mu}(\rho, \Omega_i)$$

$$\bar{\chi}_{\mu}(\rho, \Omega_i) = F(r_{ij}) \chi_{\mu}(\Omega_i)$$

$$F(r_{ij}) = \begin{cases} \prod_j f(r_{ij}) \\ f(r_{ij}) \end{cases}$$

Jastrow

pair