

$$(\mu\nu|\lambda\sigma)\equiv\int\phi_\mu^*(\mathbf{r}_1)\phi_\nu(\mathbf{r}_1)r_{12}^{-1}\phi_\lambda^*(\mathbf{r}_2)\phi_\sigma(\mathbf{r}_2)d\mathbf{r}_1d\mathbf{r}_2$$