

$$1. \langle C | H | \Phi_i^a \rangle = \langle i | f | a \rangle$$

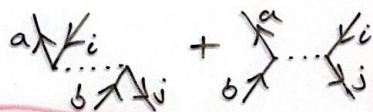


$$\langle \Phi_i^a | H | \Phi_j^b \rangle = \delta_{ij} \delta_{ab} E_0^{\text{Ref}} + \langle a | f | b \rangle \delta_{ij} - \langle j | f | i \rangle \delta_{ab} + \langle a | v | i b \rangle_{\text{AS}}$$

$$E_0^{\text{Ref}}: \sum_i \langle i | h_0 | i \rangle + \frac{1}{2} \sum_{ij} \langle ij | v | ij \rangle_{\text{AS}}$$

$$2. \sum_i \text{diagram}_1 + \sum_{ij} \text{diagram}_2 + \text{diagram}_3$$

$$\langle a | v | i b \rangle_{\text{AS}} \quad 5.$$



$$\langle a | f | b \rangle: \langle a | h_0 | b \rangle + \sum_j \langle a | v | b_j \rangle_{\text{AS}}$$

$$3. \text{diagram}_1 + \text{diagram}_2 + \text{diagram}_3$$

$$\langle j | f | i \rangle: \langle j | h_0 | i \rangle + \sum_k \langle jk | v | ik \rangle_{\text{AS}}$$

$$4. \text{diagram}_1 + \text{diagram}_2 + \text{diagram}_3$$