

$$\langle \Psi | V_c + V_T | \Psi \rangle = \langle \psi_{sh} | V_c | \psi_{sh} \rangle + \langle \psi_{sh} | V_T | \psi_{sh} \rangle + 2 \langle \psi_{sh} | V_T | \psi_{2p-2h} \rangle + \langle \psi_{2p-2h} | V | \psi_{2p-2h} \rangle$$