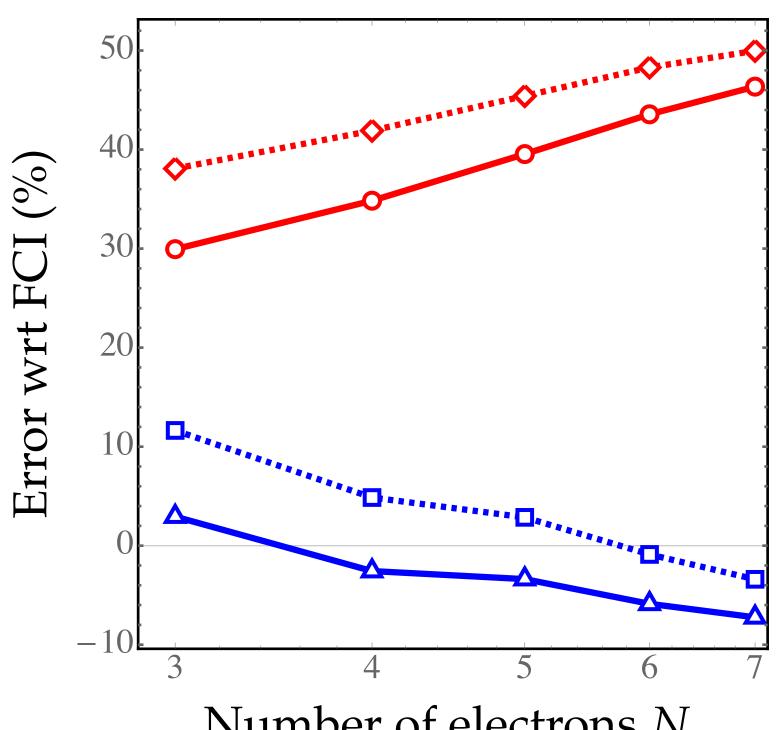
## Double excitation for $L = 8\pi$



-  $\Omega_{\text{eLDA}}^{(2)}$  with  $\mathbf{w} = (0,0)$ 

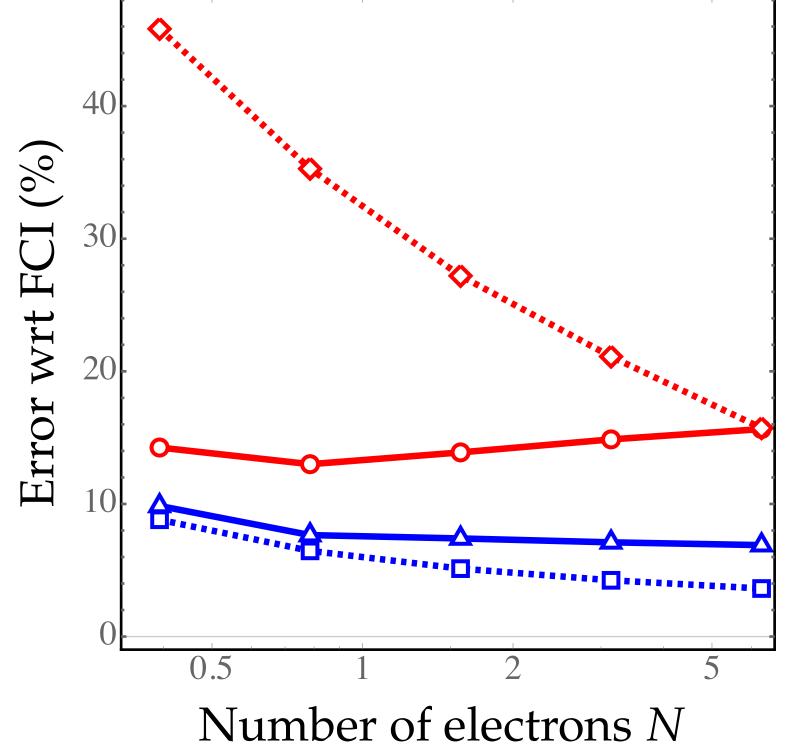
-  $\Omega_{eLDA}^{(2)}$  with  $\mathbf{w} = (1/3, 1/3)$ 

•••  $\Omega_{eLDA}^{(2)} - \Delta_c^{(2)}$  with  $\mathbf{w} = (0,0)$ 

•••  $\Omega_{\rm eLDA}^{(2)} - \Delta_{\rm c}^{(2)}$  with  $\mathbf{w} = (1/3, 1/3)$ 

Number of electrons N

Single excitation for  $L = 8\pi$ 



-  $\Omega_{eLDA}^{(1)}$  with  $\mathbf{w} = (0,0)$ 

-  $\Omega_{eLDA}^{(1)}$  with  $\mathbf{w} = (1/3, 1/3)$ 

-  $\Omega_{eLDA}^{(1)} - \Delta_c^{(1)}$  with  $\mathbf{w} = (0, 0)$ 

•••  $\Omega_{\text{eLDA}}^{(1)} - \Delta_{\text{c}}^{(1)} \text{ with } \mathbf{w} = (1/3, 1/3)$