

$$S_{x_0}^{(2)}(\overrightarrow{x}_T, \overrightarrow{y}_T) = \frac{1}{N_c} \left\langle \text{Tr} \left[ V(\overrightarrow{x}_T) V^\dagger(\overrightarrow{y}_T) \right] \right\rangle_{x_0}$$