

$$\left\{ \mathbb{E} \left[ -\frac{\hbar \mathbf{a}_2 \mathbf{t}_1}{\gamma}, \hbar \mathbf{x}_2 \mathbf{y}_1, \mathbf{1} + \left( \frac{\hbar \mathbf{a}_1 \mathbf{a}_2}{\gamma} - \frac{\mathbf{1}}{4} \gamma \hbar^3 \mathbf{x}_2^2 \mathbf{y}_1^2 \right) \epsilon + \mathbf{0} [\epsilon]^2 \right], \right.$$

$$\mathbb{E} \left[ \frac{\hbar \mathbf{a}_2 \mathbf{t}_1}{\gamma}, -\frac{\hbar \mathbf{x}_2 \mathbf{y}_1}{T_1}, \mathbf{1} + \frac{\mathbf{1}}{4 \gamma T_1^2} \right.$$

$$\left. \left( -4 \hbar \mathbf{a}_1 \mathbf{a}_2 T_1^2 - 4 \gamma \hbar^2 \mathbf{a}_1 T_1 \mathbf{x}_2 \mathbf{y}_1 - 4 \gamma \hbar^2 \mathbf{a}_2 T_1 \mathbf{x}_2 \mathbf{y}_1 - 3 \gamma^2 \hbar^3 \mathbf{x}_2^2 \mathbf{y}_1^2 \right) \right.$$

$$\left. \left. \epsilon + \mathbf{0} [\epsilon]^2 \right] \right\}$$