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(2 200 20 200)

X^+ (), XX^0 (), X^0 (), X^- ()
 X^0 , XX^0 ()
 X^- , X^+ , XX^0 ()
 $J^{(hh)} > J^{(eh)} > J^{(ee)}$

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$\mathcal{E}^{(e)}$, $\mathcal{E}^{(h)}$ (e) e



$$\begin{aligned}
\Delta_{\parallel}(X^0) &= [\mathcal{E}_0^{(e)} - \mathcal{E}_0^{(h)}] - E(X^0), \\
\Delta_{\parallel}(X^-) &= [\mathcal{E}_0^{(e)} + E(X^0)] - E(X^-), \\
\Delta_{\parallel}(X^+) &= [-\mathcal{E}_0^{(h)} + E(X^0)] - E(X^+), \\
\Delta_{\parallel}(XX^0) &= 2E(X^0) - E(XX^0).
\end{aligned}
\tag{1}$$

由式(1)可得, 在 $\mu \ll 1$ 的近似下, 有

$$\begin{aligned}
\Delta_{\parallel}(X^0) &= J_{00}^{(eh)}, \\
\Delta_{\parallel}(X^-) &= J_{00}^{(eh)} - J_{00}^{(ee)}, \\
\Delta_{\parallel}(X^+) &= J_{00}^{(eh)} - J_{00}^{(hh)},
\end{aligned}
\tag{2}$$

$$\Delta_{\parallel}(XX^0) = 2J_{00}^{(eh)} - [J_{00}^{(ee)} + J_{00}^{(hh)}] = \Delta_{\parallel}(X^-) + \Delta_{\parallel}(X^+).$$

由式(2)可知, 在 $\mu \ll 1$ 的近似下, 有

$$\Delta_{\parallel}(\chi^q) = \Delta_{\parallel}(\chi^q)$$

$\delta(\chi^2)$. $\Delta a/a_0$ $(a-a_0)/a_0$,
 a a_0 $\Delta a/a_0$ $(a-a_0)/a_0$,
 $\Delta a/a_0$ $(a-a_0)/a_0$,
 $\Delta a/a_0$ $(a-a_0)/a_0$, $1()$ 22

