$$\begin{split} & \frac{1}{12} \left(-\frac{1}{12} \frac{1}{m^2} s_*^2 \sum_{p}^{e^{+1}} \left(9 \, c_*^2 \sum_{p}^{e^{+1}} \left(y_p^{e^{+4}} y_e^{e^{+2}} + y_e^{p^{+2}} y_e^{e^{+4}} \right) + 5 \, g_1^2 \left(y_e^{p^{+4}} \delta_{123} + y_e^{p^{+2}} \delta_{1344} \right) \right) + \\ & \frac{1}{27} \sum_{p} g_1^{4} \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) L F_{3,p} \left[m_p^4 \right] - \frac{5}{22} \sum_{p} g_1^{4} \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) \\ & L F_{4,-1} \left[m_p^4 \right] + \frac{4}{135} \sum_{p} g_1^{4} \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) L F_{3,p} \left[m_e^9 \right] - \frac{5}{22} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) \\ & L F_{4,-1} \left[m_p^6 \right] + \frac{4}{45} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) L F_{3,p} \left[m_e^9 \right] - \frac{5}{24} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) \\ & L F_{4,-1} \left[m_p^6 \right] + \frac{4}{45} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) L F_{3,p} \left[m_e^9 \right] - \frac{5}{24} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) \\ & L F_{4,-1} \left[m_p^6 \right] + \frac{2}{45} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) L F_{3,p} \left[m_e^9 \right] - \frac{5}{144} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) \\ & L F_{4,-1} \left[m_p^6 \right] + \frac{2}{135} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) L F_{3,p} \left[m_p^9 \right] - \frac{5}{18} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) \\ & L F_{4,-1} \left[m_p^9 \right] + \frac{13}{125} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1112} \delta_{1344} \right) L F_{5,-2} \left[m_p^9 \right] \\ & \frac{4}{17} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1142} \delta_{1344} \right) L F_{3,p} \left[m_p^9 \right] - \frac{5}{18} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1142} \delta_{1344} \right) \\ & L F_{4,-1} \left[m_p^9 \right] + \frac{135}{125} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1122} \delta_{1344} \right) L F_{5,-2} \left[m_p^9 \right] \\ & \frac{4}{17} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1142} \delta_{1344} \right) L F_{3,p} \left[m_p^9 \right] - \frac{5}{18} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1142} \delta_{1344} \right) \\ & L F_{4,-1} \left[m_p^9 \right] + \frac{1}{125} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1142} \delta_{1344} \right) L F_{3,p} \left[m_p^9 \right] - \frac{1}{24} \sum_{p} g_1^4 \left(\delta_{1144} \delta_{123} + \delta_{1142} \delta_{1344} \right) L F_{3,p} \left[m_p^9 \right] \\ & \frac{1}$$