```
C_{\mathsf{Hu}}^{\mathsf{il}_{\mathsf{-i2}}} \to \hbar \left( -\frac{\mathsf{1}}{\mathsf{216}} \ \frac{\mathsf{1}}{\mathsf{m}_{\scriptscriptstyle \oplus}^2} \right)
                                                                                                                                                                                                                                  \left(18\; {s_{_{Y}}}^{2}\; \overline{y_{d}}^{pr}\; y_{d}^{\; sr}\; \overline{y_{u}}^{si1}\; y_{u}^{\; pi2}\; \left(6\; {c_{_{Y}}}^{2}\; +\; {s_{_{Y}}}^{2}\right)\; +\; {c_{_{Y}}}^{2}\; \overline{y_{u}}^{pi1}\; \left(7\; {g_{1}}^{2}\; y_{u}^{\; pi2}\; +\; 18\; {s_{_{Y}}}^{2}\; \overline{y_{u}}^{rs}\; y_{u}^{\; ps}\; y_{u}^{\; ri2}\right)\right)\; +\; {c_{_{Y}}}^{2}\; \overline{y_{u}}^{pi1}\; \left(7\; {g_{1}}^{2}\; y_{u}^{\; pi2}\; +\; 18\; {s_{_{Y}}}^{2}\; \overline{y_{u}}^{rs}\; y_{u}^{\; ps}\; y_{u}^{\; ri2}\right)\right)\; +\; {c_{_{Y}}}^{2}\; \overline{y_{u}}^{pi1}\; \left(7\; {g_{1}}^{2}\; y_{u}^{\; pi2}\; +\; 18\; {s_{_{Y}}}^{2}\; \overline{y_{u}}^{rs}\; y_{u}^{\; ps}\; y_{u}^{\; ri2}\right)\right)\; +\; {c_{_{Y}}}^{2}\; \overline{y_{u}}^{pi1}\; \left(7\; {g_{1}}^{2}\; y_{u}^{\; pi2}\; +\; 18\; {s_{_{Y}}}^{2}\; \overline{y_{u}}^{rs}\; y_{u}^{\; ps}\; y_{u}^{\; pi2}\right)\; +\; {c_{_{Y}}}^{2}\; \overline{y_{u}}^{pi2}\; +\; {c_{_{Y}}}^{2}\; \overline{y_{u}}^{pi2}\; +\; 18\; {s_{_{Y}}}^{2}\; \overline{y_{u}}^{rs}\; y_{u}^{\; ps}\; y_{u}^{\; pi2}\right)\; +\; {c_{_{Y}}}^{2}\; \overline{y_{u}}^{pi2}\; +\; {c_{_{Y}}}^{2}\; \overline{y_{u}}^{pi2}\; +\; 18\; {s_{_{Y}}}^{2}\; \overline{y_{u}}^{rs}\; y_{u}^{\; ps}\; y_{u}^{\; pi2}
                                                                                                                                                    \frac{4}{81} \sum_{p} g_{1}{}^{4} \ \mathsf{LF}_{3,0} \left[ \mathsf{m}_{d}^{\cdot p} \right] \ \delta_{1112} - \frac{5}{54} \sum_{p} g_{1}{}^{4} \ \mathsf{LF}_{4,-1} \left[ \mathsf{m}_{d}^{\cdot p} \right] \ \delta_{1112} + \frac{16}{405} \sum_{p} g_{1}{}^{4} \ \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{d}^{\cdot p} \right] \ \delta_{1112} + \frac{1}{100} \left
                                                                                                                                                    \frac{4}{27} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{3,0} \left[ \mathsf{m}_{\bar{e}}^{\; p} \right] \; \delta_{\mathsf{1112}} - \frac{5}{18} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{4,-1} \left[ \mathsf{m}_{\bar{e}}^{\; p} \right] \; \delta_{\mathsf{1112}} + \frac{16}{135} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{e}}^{\; p} \right] \; \delta_{\mathsf{1112}} + \frac{1}{12} \left[ \mathsf{m}_{\bar{e}}^{\; p} \right] 
                                                                                                                                                    \frac{2}{27} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{3,0} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} - \frac{5}{36} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{4,-1} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{8}{135} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{12} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\tilde{l}}^{\; p} \right] \; \delta_{\dot{
                                                                                                                                                    \frac{2}{81} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{3,0} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, - \, \frac{5}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{4,-1} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{8}{405} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1}{}^{4} \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, p} \, \right] \, \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1} \, \mathsf{m}_{\bar{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1} \, \mathsf{m}_{\bar{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1} \, \mathsf{m}_{\bar{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1} \, \mathsf{m}_{\bar{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1} \, \mathsf{m}_{\bar{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1} \, \mathsf{m}_{\bar{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1} \, \mathsf{m}_{\bar{\mathsf{1}}\dot{\mathsf{1}} \dot{\mathsf{1}}\dot{\mathsf{1}} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1} \, \mathsf{m}_{\bar{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}2} \, + \, \frac{1}{108} \, \sum_{p} \, g_{1} \, + \, \frac{1}{108} \, \sum_
                                                                                                                                                    \frac{16}{81} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{3,0} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} - \frac{10}{27} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{4,-1} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{1}\dot{1}\dot{2}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1}{}^{4} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1}{}^{2} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1} \; \mathsf{LF}_{5,-2} \left[ \mathsf{m}_{\bar{\mathsf{u}}}{}^{p} \right] \; \delta_{\dot{\mathsf{u}}\dot{\mathsf{u}}} + \frac{64}{405} \sum_{p} g_{1} \; \mathsf{LF
                                                                                                                                                    \frac{1}{18} \left(9 \; {c_{\gamma}}^4 \; \overline{y_d}^{\text{pr}} \; y_d^{\text{sr}} \; \overline{y_u}^{\text{sil}} \; y_u^{\text{pi2}} - {c_{\gamma}}^2 \; \overline{y_u}^{\text{pi1}} \; \left(g_1^2 \; y_u^{\text{pi2}} + 9 \; s_{\gamma}^2 \; \overline{y_u}^{\text{rs}} \; y_u^{\text{ps}} \; y_u^{\text{ri2}}\right)\right) \; \text{LF}_{1,2} \left[m_{_{\! \oplus}}\right] \; - \left(g_1^2 \; y_u^{\text{pi2}} + 9 \; s_{\gamma}^2 \; \overline{y_u}^{\text{rs}} \; y_u^{\text{ps}} \; y_u^{\text{ri2}}\right) + \left(g_1^2 \; y_u^{\text{pi2}} + 9 \; s_{\gamma}^2 \; \overline{y_u}^{\text{rs}} \; y_u^{\text{ps}} \; y_u^{\text{ri2}}\right)\right) \; \text{LF}_{1,2} \left[m_{_{\! \oplus}}\right] \; - \left(g_1^2 \; y_u^{\text{pi2}} + 9 \; s_{\gamma}^2 \; \overline{y_u}^{\text{rs}} \; y_u^{\text{ps}} \; y_u^{\text{ri2}}\right) + \left(g_1^2 \; y_u^{\text{ps}} + 9 \; s_{\gamma}^2 \; \overline{y_u}^{\text{rs}} \; y_u^{\text{ps}} \; y_u^{\text{ri2}}\right) \; + \left(g_1^2 \; y_u^{\text{ps}} + 9 \; s_{\gamma}^2 \; \overline{y_u}^{\text{rs}} \; y_u^{\text{rs}} \; y_u^{\text{rs}} \; y_u^{\text{rs}}\right) \; + \left(g_1^2 \; y_u^{\text{rs}} + 9 \; s_{\gamma}^2 \; \overline{y_u^{\text{rs}}} \; y_u^{\text{rs}} \; y_u^{\text{rs}} \; y_u^{\text{rs}}\right) \; + \left(g_1^2 \; y_u^{\text{rs}} + 9 \; s_{\gamma}^2 \; \overline{y_u^{\text{rs}}} \; y_u^{\text{rs}} \; y_u^{\text{rs}} \; y_u^{\text{rs}}\right) \; + \left(g_1^2 \; y_u^{\text{rs}} + 9 \; s_{\gamma}^2 \; \overline{y_u^{\text{rs}}} \; y_u^{\text{rs}} \; y_u^{\text{rs}} \; y_u^{\text{rs}} \; y_u^{\text{rs}} \; y_u^{\text{rs}}\right) \; + \left(g_1^2 \; y_u^{\text{rs}} + 9 \; s_{\gamma}^2 \; \overline{y_u^{\text{rs}}} \; y_u^{\text{rs}} \; y_u^{\text{rs}} \; y_u^{\text{rs}} \; y_u^{\text{rs}}\right) \; + \left(g_1^2 \; y_u^{\text{rs}} + 9 \; s_{\gamma}^2 \; \overline{y_u^{\text{rs}}} \; y_u^{\text{rs}} \; y_u^{\text{
                                                                                                                                                    \frac{1}{12} \ g_1^2 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} \ y_u^{\text{pil}} \ \mathsf{LF}_{2,1} [\, \mathsf{m}_{\scriptscriptstyle{\oplus}}\,] \ + \\ \frac{1}{108} \ g_1^2 \ \left( 9 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} + 8 \ g_1^2 \ \delta_{\text{ili2}} \right) \ \mathsf{LF}_{3,0} [\, \mathsf{m}_{\scriptscriptstyle{\oplus}}\,] \ - \\ \frac{1}{108} \ g_1^2 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} + 8 \ g_1^2 \ \delta_{\text{ili2}} \right) \ \mathsf{LF}_{3,0} [\, \mathsf{m}_{\scriptscriptstyle{\oplus}}\,] \ - \\ \frac{1}{108} \ g_1^2 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} + 8 \ g_1^2 \ \delta_{\text{ili2}} \right) \ \mathsf{LF}_{3,0} [\, \mathsf{m}_{\scriptscriptstyle{\oplus}}\,] \ - \\ \frac{1}{108} \ g_1^2 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} + 8 \ g_1^2 \ \delta_{\text{ili2}} \right) \ \mathsf{LF}_{3,0} [\, \mathsf{m}_{\scriptscriptstyle{\oplus}}\,] \ - \\ \frac{1}{108} \ g_1^2 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} + 8 \ g_1^2 \ \delta_{\text{ili2}} \right) \ \mathsf{LF}_{3,0} [\, \mathsf{m}_{\scriptscriptstyle{\oplus}}\,] \ - \\ \frac{1}{108} \ g_1^2 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} + 8 \ g_1^2 \ \delta_{\text{ili2}} \right) \ \mathsf{LF}_{3,0} [\, \mathsf{m}_{\scriptscriptstyle{\oplus}}\,] \ - \\ \frac{1}{108} \ g_1^2 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} + 8 \ g_1^2 \ \delta_{\text{ili2}} \right) \ \mathsf{LF}_{3,0} [\, \mathsf{m}_{\scriptscriptstyle{\oplus}}\,] \ + \\ \frac{1}{108} \ g_1^2 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} + 8 \ g_1^2 \ \delta_{\text{ili2}} \right) \ \mathsf{LF}_{3,0} [\, \mathsf{m}_{\scriptscriptstyle{\oplus}}\,] \ + \\ \frac{1}{108} \ g_1^2 \ c_\gamma^2 \ \overline{y_u^{\text{pil}}} \ y_u^{\text{pil}} + 8 \ g_1^2 \ \delta_{\text{ili2}} \ y_u^{\text{pil}} + 8 \ g
                                                                                                                                                    \frac{5}{36} \ g_1^{\ 4} \ \mathsf{LF_{4,-1}} [ \ \mathsf{m_{\oplus}} ] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{8}{135} \ g_1^{\ 4} \ \mathsf{LF_{5,-2}} [ \ \mathsf{m_{\oplus}} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{2}{27} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ g_1^{\ 4} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}\dot{1}\dot{1}} + \frac{1}{2} \ \mathsf{LF_{3,0}} [ \ \widetilde{\mu} ] \ \delta_{\dot{1}
                                                                                                                                                                                           g_{1}{}^{4} \; \mathsf{LF_{4,-1}} [\, \tilde{\mu} \,] \; \; \delta_{\text{ili2}} - \frac{16}{135} \; g_{1}{}^{4} \; \mathsf{LF_{5,-2}} [\, \tilde{\mu} \,] \; \; \delta_{\text{ili2}} + \frac{1}{36} \; g_{1}{}^{2} \; s_{\gamma}{}^{2} \; \overline{y_{u}}{}^{\text{pil}} \; y_{u}{}^{\text{pi2}} \; \mathsf{LF_{2,1,0}} \big[\, m_{1} \,, \; m_{\tilde{q}}^{-\tilde{p}} \,] \; - \frac{1}{36} \; g_{1}{}^{2} \; s_{\gamma}{}^{2} \; \overline{y_{u}}{}^{\text{pil}} \; y_{u}{}^{\text{pi2}} \; \mathsf{LF_{2,1,0}} \big[\, m_{1} \,, \; m_{\tilde{q}}^{-\tilde{p}} \,] \; - \frac{1}{36} \; g_{1}{}^{2} \; s_{\gamma}{}^{2} \; \overline{y_{u}}{}^{\text{pi1}} \; y_{u}{}^{\text{pi2}} \; \mathsf{LF_{2,1,0}} \big[\, m_{1} \,, \; m_{\tilde{q}}^{-\tilde{p}} \,] \; - \frac{1}{36} \; g_{1}{}^{2} \; s_{\gamma}{}^{2} \; \overline{y_{u}}{}^{\text{pi1}} \; y_{u}{}^{\text{pi2}} \; \mathsf{LF_{2,1,0}} \big[\, m_{1} \,, \; m_{\tilde{q}}^{-\tilde{p}} \,] \; - \frac{1}{36} \; g_{1}{}^{2} \; s_{\gamma}{}^{2} \; \overline{y_{u}}{}^{\text{pi1}} \; y_{u}{}^{\text{pi2}} \; \mathsf{LF_{2,1,0}} \big[\, m_{1} \,, \; m_{\tilde{q}}^{-\tilde{p}} \,] \; - \frac{1}{36} \; g_{1}{}^{2} \; s_{\gamma}{}^{2} \; \overline{y_{u}}{}^{\text{pi1}} \; y_{u}{}^{\text{pi2}} \; \mathsf{LF_{2,1,0}} \big[\, m_{1} \,, \; m_{\tilde{q}}^{-\tilde{p}} \,] \; - \frac{1}{36} \; g_{1}{}^{2} \; s_{\gamma}{}^{2} \; \overline{y_{u}}{}^{\text{pi2}} \; s_{\gamma}{}^{\text{pi2}} \; s_{\gamma}{}^
                                                                                                                                                \frac{1}{18} \ g_1{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{\text{pil}} \ y_u{}^{\text{pil}} \ LF_{3,1,-1} \big[ \ m_1 \, , \ m_{\bar{q}}{}^{\text{p}} \big] \ + \ \frac{1}{36} \ g_1{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{\text{pil}} \ y_u{}^{\text{pil}} \ LF_{4,1,-2} \big[ \ m_1 \, , \ m_{\bar{q}}{}^{\text{p}} \big] \ + \ \frac{1}{36} \ g_1{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{\text{pil}} \ y_u{}^{\text{pil}} \ LF_{4,1,-2} \big[ \ m_1 \, , \ m_{\bar{q}}{}^{\text{p}} \big] \ + \ \frac{1}{36} \ g_1{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{\text{pil}} \ y_u{}^{\text{pil}} \ y_u{}^{\text{pil}} \ LF_{4,1,-2} \big[ \ m_1 \, , \ m_{\bar{q}}{}^{\text{p}} \big] \ + \ \frac{1}{36} \ g_1{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{\text{pil}} \ y_u{}^{\text{pil}} \ y_u{}^{\text{
                                                                                                                                                \frac{4}{81} \; g_{1}{}^{4} \; \mathsf{LF}_{2,1,0} \left[ \, \mathsf{m}_{1} \, , \, \, \mathsf{m}_{\bar{\mathsf{u}}}^{\,\, \dot{\mathsf{1}} \, 2} \, \right] \; \delta_{\,\dot{\mathsf{1}}\,\dot{\mathsf{1}}\,\dot{\mathsf{1}}\,\dot{\mathsf{2}}} \, + \, \frac{4}{81} \; g_{1}{}^{4} \; \mathsf{LF}_{2,2,-1} \left[ \, \mathsf{m}_{1} \, , \, \, \mathsf{m}_{\bar{\mathsf{u}}}^{\,\, \dot{\mathsf{1}}\,\dot{\mathsf{2}}} \, \right] \; \delta_{\,\dot{\mathsf{1}}\,\dot{\mathsf{1}}\,\dot{\mathsf{1}}\,\dot{\mathsf{2}}} \, - \, \frac{1}{2} \; \mathsf{m}_{1} \, + \, \frac{1
                                                                                                                                                \frac{8}{81}\; {\rm g_1}^4\; {\rm LF_{3,1,-1}} \big[\, {\rm m_1},\; {\rm m_{\tilde{u}}}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{4}{81}\; {\rm g_1}^4\; {\rm LF_{4,1,-2}} \big[\, {\rm m_1},\; {\rm m_{\tilde{u}}}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{4}{81}\; {\rm m_1}^4 \; {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \big[\, {\rm m_2},\; {\rm m_2}^{\dot{1}\, 2} \, \big] \; \delta_{\dot{1}\dot{1}\dot{1}} + \frac{4}{81}\; {\rm m_2}^{\dot{1}\, 2} \, {\rm LF_{4,1,-2}} \, {\rm LF_{4,1,-2}} \, {\rm M_2} \, {\rm LF_{4,1,-2}} \, {\rm LF_{4,1,-2}} \, {\rm M_2} \, {\rm M_2} \, {\rm M_2} \, {\rm LF_{4,1,-2}} \, {\rm M_2} \, {\rm 
                                                                                                                                                \frac{3}{4} \ g_2{}^2 \ s_\gamma{}^2 \ \overline{y_u}^{\text{pil}} \ y_u{}^{\text{pil}} \ y_u{}^{\text{pil}} \ LF_{2,1,0} \big[ \, m_2 \, , \ m_{\tilde{q}}{}^{\text{p}} \big] \ - \frac{3}{2} \ g_2{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{\text{pil}} \ y_u{}^{\text{pil}} \ LF_{3,1,-1} \big[ \, m_2 \, , \ m_{\tilde{q}}{}^{\text{p}} \big] \ + \frac{3}{2} \ g_2{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{\text{pil}} \ y_u{}^{\text{pil}} \ y_u{}^{\text{pil}} \ LF_{3,1,-1} \big[ \, m_2 \, , \ m_{\tilde{q}}{}^{\text{p}} \big] \ + \frac{3}{2} \ g_2{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{\text{pil}} \ y_u{}^{\text{pil}} \ y_u{}^{\text{pil}} \ LF_{3,1,-1} \big[ \, m_2 \, , \ m_{\tilde{q}}{}^{\text{p}} \big] \ + \frac{3}{2} \ g_2{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{\text{pil}} \ y_u{}^{\text{pil}} \ y_u{}^{\text
                                                                                                                                                    \frac{3}{4} \; g_2^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u}^{\text{pil}} \; y_u^{\text{pi2}} \; \mathsf{LF_{4,1,-2}} \big[ \, \mathsf{m_2} \, , \; \mathsf{m_{\tilde{q}}}^{\, p} \, \big] \; + \; \frac{4}{3} \; g_3^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u}^{\text{pil}} \; y_u^{\text{pi2}} \; \mathsf{LF_{2,1,0}} \big[ \, \mathsf{m_3} \, , \; \mathsf{m_{\tilde{q}}}^{\, p} \, \big] \; - \; \frac{1}{3} \; g_3^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u}^{\, pi1} \; y_u^{\, pi2} \; \mathsf{LF_{2,1,0}} \big[ \, \mathsf{m_3} \, , \; \mathsf{m_{\tilde{q}}}^{\, p} \, \big] \; - \; \frac{1}{3} \; g_3^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u}^{\, pi1} \; y_u^{\, pi2} \; \mathsf{LF_{2,1,0}} \big[ \, \mathsf{m_3} \, , \; \mathsf{m_{\tilde{q}}}^{\, p} \, \big] \; - \; \frac{1}{3} \; g_3^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u}^{\, pi1} \; y_u^{\, pi2} \; \mathsf{LF_{2,1,0}} \big[ \, \mathsf{m_3} \, , \; \mathsf{m_{\tilde{q}}}^{\, p} \, \big] \; - \; \frac{1}{3} \; g_3^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u}^{\, pi1} \; y_u^{\, pi2} \; \mathsf{LF_{2,1,0}} \big[ \, \mathsf{m_3} \, , \; \mathsf{m_{\tilde{q}}}^{\, p} \, \big] \; - \; \frac{1}{3} \; g_3^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u}^{\, pi1} \; y_u^{\, pi2} \; \mathsf{LF_{2,1,0}} \big[ \, \mathsf{m_3} \, , \; \mathsf{m_{\tilde{q}}}^{\, p} \, \big] \; - \; \frac{1}{3} \; g_3^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u}^{\, pi1} \; y_u^{\, pi2} \; \mathsf{LF_{2,1,0}} \big[ \, \mathsf{m_3} \, , \; \mathsf{m_{\tilde{q}}}^{\, p} \, \big] \; - \; \frac{1}{3} \; g_3^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u^{\, pi2}} \; \mathsf{M_{\tilde{q}}} \, S_\gamma^{\; 2} \; S_\gamma^{\; 2} \; \overline{y_u^{\, pi2}} \; S_\gamma^{\; 2} \; \overline{y_u^
                                                                                                                                                    \frac{8}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pil}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{p}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi1}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{p}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi1}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{p}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi1}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{p}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi1}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{p}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi1}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{p}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi1}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{p}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi1}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{p}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi1}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{p}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi1}}\;y_{u}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{pi2}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{\text{pi2}}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}{}^{\text{pi2}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}\,\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}\,\big]\,+\,\frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}\,\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{q}}\,\big]\,
                                                                                                                                                    \frac{4}{27}\; {g_{1}}^2\; {g_{3}}^2\; LF_{2,1,0}\left[\,m_{3}\,,\, m_{\tilde{u}}^{\;\;\dot{1}\,2}\,\right]\; \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{4}{27}\; {g_{1}}^2\; {g_{3}}^2\; LF_{2,2,-1}\!\left[\,m_{3}\,,\, m_{\tilde{u}}^{\;\;\dot{1}\,2}\,\right]\; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{4}{27}\; {g_{1}}^2\; {g_{3}}^2\; LF_{2,2,-1}\left[\,m_{3}\,,\, m_{\tilde{u}}^{\;\;\dot{1}\,2}\,\right]\; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{4}{27}\; {g_{1}}^2\; {g_{3}}^2\; LF_{2,2,-1}\left[\,m_{3}\,,\, m_{\tilde{u}}^{\;\;\dot{1}\,2}\,\right]\; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{4}{27}\; {g_{1}}^2\; {g_{2}}^2\; LF_{2,2,-1}\left[\,m_{3}\,,\, m_{\tilde{u}}^{\;\;\dot{1}\,2}\,\right]\; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{4}{27}\; {g_{1}}^2\; {g_{2}}^2\; LF_{2,2,-1}\left[\,m_{3}\,,\, m_{\tilde{u}}^{\;\;\dot{1}\,2}\,\right]\; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{4}{27}\; {g_{1}}^2\; {g_{2}}^2\; LF_{2,2,-1}\left[\,m_{3}\,,\, m_{\tilde{u}}^{\;\;\dot{1}\,2}\,\right]\; \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} - \frac{4}{27}\; {g_{2}}^2\; LF_{2,2,-1}\left[\,m_{3}\,,\, m_{\tilde{u}}^{\;\;\dot{1}\,2}\,\right]\; \delta_{\dot{1}\dot{1}\dot{1}\dot{1}} + \frac{4}{27}\; {g_{2}}^2\; LF_{2,2,-1}\left[\,m_{3}\,,\, m_{\tilde{u}}^{\;\;\dot{1}\,2}\,\right]\; \delta_{\dot{1
                                                                                                                                                    \frac{8}{27}\; {\rm g_1}^2\; {\rm g_3}^2\; {\rm LF_{3,1,-1}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm g_1}^2\; {\rm g_3}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm g_1}^2\; {\rm g_3}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm g_1}^2\; {\rm g_3}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm g_1}^2\; {\rm g_3}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm g_1}^2\; {\rm g_3}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm g_1}^2\; {\rm g_3}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm g_1}^2\; {\rm g_3}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm g_1}^2\; {\rm g_3}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm g_1}^2\; {\rm g_2}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm m_3}^2\; {\rm m_3}^2\; {\rm LF_{4,1,-2}}\big[\, {\rm m_3}\,,\, {\rm m_{\tilde{u}}^{-\dot{1}\,2}} \,\big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} + \frac{4}{27}\; {\rm m_3}^2\; {\rm m_3}^2\;
                                                                                                                                                                                           g_{1}^{2}\left(c_{\gamma}\;\overline{a_{d}}^{pr}-s_{\gamma}\;\widetilde{\mu}\;\overline{y_{d}}^{pr}\right)\;\left(c_{\gamma}\;a_{d}^{pr}-s_{\gamma}\;\widetilde{\mu}\;y_{d}^{pr}\right)\;\mathsf{LF}_{2,2,0}\!\left[m_{d}^{-r},\;m_{\tilde{q}}^{-p}\right]\;\delta_{\text{ili2}}-m_{\tilde{q}}^{-r}
                                                                                                                                                                                           g_{1}^{2} \; \left( c_{\gamma} \; \overline{a_{d}}^{\text{pr}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_{d}}^{\text{pr}} \right) \; \left( c_{\gamma} \; a_{d}^{\text{pr}} - s_{\gamma} \; \widetilde{\mu} \; y_{d}^{\text{pr}} \right) \; \text{LF}_{3,2,-1} \left[ \textit{m}_{\bar{d}}^{\text{-r}} \, , \; \textit{m}_{\bar{q}}^{\text{-p}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}}^{\text{-r}} + \vec{a}_{\bar{d}}^{\text{-r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \vec{a}_{\bar{d}
                                                                                                                                                    \frac{2}{9} \; {\rm g_1}^2 \; \left( {\rm c_{\scriptscriptstyle Y}} \; \overline{{\rm a_e}}^{\rm pr} - {\rm s_{\scriptscriptstyle Y}} \; \widetilde{\mu} \; \overline{{\rm y_e}}^{\rm pr} \right) \; \left( {\rm c_{\scriptscriptstyle Y}} \; {\rm a_e}^{\rm pr} - {\rm s_{\scriptscriptstyle Y}} \; \widetilde{\mu} \; {\rm y_e}^{\rm pr} \right) \; {\rm LF_{2,2,0}} \left[ {\rm m_{\tilde e}}^{\rm r} \; , \; {\rm m_{\tilde l}}^{\rm p} \right] \; \delta_{\rm ili2} - {\rm m_{\tilde l}}^{\rm p} \; \delta_{\rm ili2} - {\rm m_{
                                                                                                                                                                                       \mathsf{g_1}^2 \; \left( \mathsf{c}_{\scriptscriptstyle{\Upsilon}} \, \overline{\mathsf{a_e}}^{\mathsf{pr}} - \mathsf{s}_{\scriptscriptstyle{\Upsilon}} \, \widetilde{\mu} \, \overline{\mathsf{y_e}}^{\mathsf{pr}} \right) \; \left( \mathsf{c}_{\scriptscriptstyle{\Upsilon}} \; \mathsf{a_e}^{\mathsf{pr}} - \mathsf{s}_{\scriptscriptstyle{\Upsilon}} \, \widetilde{\mu} \; \mathsf{y_e}^{\mathsf{pr}} \right) \; \mathsf{LF_{3,2,-1}} \big[ \, \mathsf{m_{\tilde{e}}}^{\mathsf{r}} \, , \; \mathsf{m_{\tilde{l}}}^{\mathsf{p}} \big] \; \delta_{\mathsf{11i2}} - \mathsf{m_{\tilde{l}}}^{\mathsf{p}} \, . \; \mathsf{m_{\tilde{l}}}^{\mathsf{p}} \, \mathsf{m_{
                                                                                                                                                                                       \mathsf{g_1}^2 \; \left( \mathsf{c}_{\mathsf{Y}} \, \overline{\mathsf{a_e}}^{\mathsf{pr}} \, - \, \mathsf{s}_{\mathsf{Y}} \, \widetilde{\mu} \, \overline{\mathsf{y_e}}^{\mathsf{pr}} \right) \; \left( \mathsf{c}_{\mathsf{Y}} \, \mathsf{a_e}^{\mathsf{pr}} \, - \, \mathsf{s}_{\mathsf{Y}} \, \widetilde{\mu} \; \mathsf{y_e}^{\mathsf{pr}} \right) \; \mathsf{LF_{3,1,0}} \left[ \, \mathsf{m_{\bar{l}}}^{\mathsf{p}} \, , \, \, \mathsf{m_{\bar{e}}}^{\mathsf{r}} \, \right] \; \delta_{\mathsf{11i2}} \, - \, \mathsf{m_{\bar{l}}}^{\mathsf{pr}} \, + \, \mathsf{m_{\bar{l}}}
                                                                                                                                                                                       \mathsf{g_1}^2 \; \left( \mathsf{c_{\scriptscriptstyle Y}} \; \overline{\mathsf{a_e}}^{\mathsf{pr}} - \mathsf{s_{\scriptscriptstyle Y}} \, \widetilde{\mu} \; \overline{\mathsf{y_e}}^{\mathsf{pr}} \right) \; \left( \mathsf{c_{\scriptscriptstyle Y}} \; \mathsf{a_e}^{\mathsf{pr}} - \mathsf{s_{\scriptscriptstyle Y}} \, \widetilde{\mu} \; \mathsf{y_e}^{\mathsf{pr}} \right) \; \mathsf{LF_{3,2,-1}} \big[ \, \mathsf{m_{\scriptscriptstyle \tilde{l}}}^{\mathsf{r}} \, \mathsf{,} \; \mathsf{m_{\scriptscriptstyle \tilde{e}}}^{\mathsf{r}} \big] \; \delta_{\mathsf{ili2}} + \mathsf{m_{\scriptscriptstyle \tilde{l}}}^{\mathsf{pr}} \, \mathsf{m_{\scriptscriptstyle \tilde{l}}}^{
                                                                                                                                                                                           g_{1}^{2} \, \left( c_{\gamma} \, \overline{a_{e}}^{pr} - s_{\gamma} \, \widetilde{\mu} \, \overline{y_{e}}^{pr} \right) \, \left( c_{\gamma} \, a_{e}^{pr} - s_{\gamma} \, \widetilde{\mu} \, y_{e}^{pr} \right) \, \mathsf{LF_{4,1,-1}} \big[ \, \mathsf{m_{\tilde{l}}}^{r} \, , \, \mathsf{m_{\tilde{e}}}^{r} \big] \, \, \delta_{\text{ili2}} - c_{\text{ili2}} \, + c_{\text{ili2}} \, c_{\text{il
                                                                                                                                                    \frac{2}{9}~g_{1}^{2}~\left(c_{\gamma}~\overline{a_{e}}^{pr}-s_{\gamma}~\widetilde{\mu}~\overline{y_{e}}^{pr}\right)~\left(c_{\gamma}~a_{e}^{pr}-s_{\gamma}~\widetilde{\mu}~y_{e}^{pr}\right)~LF_{5,1,-2}\big[m_{\tilde{l}}^{~p},~m_{\tilde{e}}^{~r}\big]~\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\gamma}~a_{e}^{pr}-s_{\gamma}~\widetilde{\mu}~y_{e}^{pr}\right)~LF_{5,1,-2}\left[m_{\tilde{l}}^{~p},~m_{\tilde{e}}^{~r}\right]~\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\gamma}~a_{e}^{pr}-s_{\gamma}~\widetilde{\mu}~y_{e}^{pr}\right)~LF_{5,1,-2}\left[m_{\tilde{l}}^{~p},~m_{\tilde{e}}^{~r}\right]~\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\gamma}~a_{e}^{pr}-s_{\gamma}~\widetilde{\mu}~y_{e}^{pr}\right)~LF_{5,1,-2}\left[m_{\tilde{l}}^{~p},~m_{\tilde{e}}^{~r}\right]~\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\gamma}~a_{e}^{pr}-s_{\gamma}~\widetilde{\mu}~y_{e}^{pr}\right)~LF_{5,1,-2}\left[m_{\tilde{l}}^{p},~m_{\tilde{e}}^{pr}\right]~\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\gamma}~a_{e}^{pr}-s_{\gamma}~\widetilde{\mu}~y_{e}^{pr}\right)~LF_{5,1,-2}\left[m_{\tilde{l}}^{p},~m_{\tilde{e}}^{pr}\right]~\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\gamma}~a_{e}^{pr}-s_{\gamma}~\widetilde{\mu}~y_{e}^{pr}\right)~LF_{5,1,-2}\left[m_{\tilde{l}}^{p},~m_{\tilde{e}}^{pr}\right]~\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\gamma}~a_{e}^{pr}-s_{\gamma}~\widetilde{\mu}~y_{e}^{pr}\right)~LF_{5,1,-2}\left[m_{\tilde{l}}^{p},~m_{\tilde{e}}^{pr}\right]~\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\gamma}~a_{e}^{pr}-s_{\gamma}~\widetilde{\mu}~y_{e}^{pr}\right)~LF_{5,1,-2}\left[m_{\tilde{l}}^{p},~m_{\tilde{e}}^{pr}\right]
                                                                                                                                                                                       g_{1}^{2} \, \left( c_{\gamma} \, \overline{a_{d}}^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, \overline{y_{d}}^{\text{pr}} \right) \, \left( c_{\gamma} \, a_{d}^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right) \, \text{LF}_{3,1,0} \big[ \, \textbf{m}_{\bar{q}}^{\text{p}} \, , \, \, \textbf{m}_{\bar{d}}^{\text{r}} \big] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} - \left[ c_{\gamma} \, a_{d}^{\text{pr}} + s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, \delta_{\text{ili}2} + \left[ c_{\gamma} \, a_{\alpha} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right] \, \, 
                                                                                                                                                                                                g_1^2 \left( c_{\gamma} \, \overline{a_d}^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, \overline{y_d}^{\text{pr}} \right) \, \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \text{LF}_{3,2,-1} \! \left[ \textbf{m}_{\bar{\textbf{q}}}^{\text{p}}, \, \textbf{m}_{\bar{\textbf{d}}}^{\text{r}} \right] \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{\gamma} \, a_d^{\text{pr}} - s_{\gamma} \, y_d^{\text{pr}} \right) \, \delta_{\text{ili}2} + \frac{1}{2} \left( c_{
                                                                                                                                                                                           g_{1}^{2} \, \left( c_{\gamma} \, \overline{a_{d}}^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, \overline{y_{d}}^{\text{pr}} \right) \, \left( c_{\gamma} \, a_{d}^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\text{pr}} \right) \, \text{LF}_{4,1,-1} \big[ \, m_{\tilde{q}}^{\,\, r} \, , \, m_{\tilde{d}}^{\,\, r} \, \big] \, \, \delta_{\text{ili2}} - c_{1}^{\,\, r} \, \, \delta_{\text{ili
                                                                                                                                                    \frac{2}{3} \; g_{1}^{\; 2} \; \left( c_{\gamma} \; \overline{a_{d}}^{pr} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_{d}}^{pr} \right) \; \left( c_{\gamma} \; a_{d}^{pr} - s_{\gamma} \; \widetilde{\mu} \; y_{d}^{pr} \right) \; \mathsf{LF}_{5,1,-2} \left[ \mathsf{m}_{\tilde{q}}^{\; p} , \; \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; p} + \mathsf{m}_{\tilde{d}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; r} + \mathsf{m}_{\tilde{q}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; r} + \mathsf{m}_{\tilde{q}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; r} + \mathsf{m}_{\tilde{q}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; r} + \mathsf{m}_{\tilde{q}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; r} + \mathsf{m}_{\tilde{q}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; r} + \mathsf{m}_{\tilde{q}}^{\; r} \right] \; \delta_{\texttt{ili}2} - \left[ \mathsf{m}_{\tilde{q}}^{\; r} + \mathsf{m}
                                                                                                                                                                                                \frac{1}{18} \ g_1^2 \ \left( s_\gamma \ \overline{a_u}^{pr} - \widetilde{\mu} \ c_\gamma \ \overline{y_u}^{pr} \right) \ \left( s_\gamma \ a_u^{pr} - \widetilde{\mu} \ c_\gamma \ y_u^{pr} \right) \ \mathsf{LF}_{3,2,-1} \! \left[ \mathsf{m}_{\tilde{\mathsf{q}}}^{\ p}, \ \mathsf{m}_{\tilde{\mathsf{u}}}^{\ r} \right] \ \delta_{\texttt{ili2}} - \delta_{\texttt{ili2}} + \delta_{\texttt{ili2}} - \delta_{\texttt{ili2}} + \delta_{\texttt{il
                                                                                                                                                    \frac{1}{18} \ g_1{}^2 \ \overline{y_u}^{\text{pil}} \ y_u{}^{\text{pil}} \ y_u{}^{\text{pil}} \ \mathsf{LF}_{2,1,0} \left[ \ \mathsf{m_q}^{\text{p}} \ , \ \widetilde{\mu} \ \right] \ + \ \frac{1}{36} \ g_1{}^2 \ \overline{y_u}^{\text{pil}} \ y_u{}^{\text{pil}} \ y_u{}^{\text{pil}} \ \mathsf{LF}_{2,2,-1} \left[ \ \mathsf{m_q}^{\text{p}} \ , \ \widetilde{\mu} \ \right] \ + \ \frac{1}{36} \ g_1{}^2 \ \overline{y_u}^{\text{pil}} \ y_u{}^{\text{pil}} \ y_u{}^{\text{pil}}
                                                                                                                                                                             \mathsf{LF_{3,1,-1}}\big[\mathsf{m}_{\tilde{\mathsf{q}}}^{\mathsf{p}},\,\tilde{\mu}\big] + \tfrac{1}{9}\;\mathsf{g_{1}}^{2}\;\big(\mathsf{s}_{\gamma}\;\overline{\mathsf{a_{u}}}^{\mathsf{pr}} - \tilde{\mu}\;\mathsf{c}_{\gamma}\;\overline{\mathsf{y_{u}}}^{\mathsf{pr}}\big)\;\left(\mathsf{s}_{\gamma}\;\mathsf{a_{u}}^{\mathsf{pr}} - \tilde{\mu}\;\mathsf{c}_{\gamma}\;\mathsf{y_{u}}^{\mathsf{pr}}\right)\;\mathsf{LF_{3,1,0}}\big[\mathsf{m}_{\tilde{\mathsf{u}}}^{\mathsf{r}},\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\mathsf{p}}\big]\;\delta_{\mathsf{11i2}} + \frac{1}{9}\;\mathsf{m}_{\mathsf{q}}^{\mathsf{p}},\,\mathsf{m}_{\mathsf{q}}^{\mathsf{p}}\big]
                                                                                                                                                    \frac{1}{9} \; \mathsf{g_1}^2 \; \left( \mathsf{s_{\scriptscriptstyle Y}} \, \overline{\mathsf{a_u}}^{\mathsf{pr}} - \widetilde{\mu} \; \mathsf{c_{\scriptscriptstyle Y}} \, \overline{\mathsf{y_u}}^{\mathsf{pr}} \right) \; \left( \mathsf{s_{\scriptscriptstyle Y}} \, \mathsf{a_u}^{\mathsf{pr}} - \widetilde{\mu} \; \mathsf{c_{\scriptscriptstyle Y}} \, \mathsf{y_u}^{\mathsf{pr}} \right) \; \mathsf{LF_{3,2,-1}} \left[ \mathsf{m_{\tilde{\mathsf{u}}}}^{\mathsf{r}} \, , \, \mathsf{m_{\tilde{\mathsf{q}}}}^{\mathsf{p}} \right] \; \delta_{\mathsf{ili2}} + \varepsilon_{\mathsf{pr}}^{\mathsf{pr}} \; \delta_{\mathsf{pr}}^{\mathsf{pr}} \; \delta_{\mathsf{pr}}^{\mathsf{pr}} \; \delta_{\mathsf{pr}}^{\mathsf{pr}} \; \delta_{\mathsf{pr}}^{\mathsf{pr}} \right] \; \delta_{\mathsf{pr}}^{\mathsf{pr}} \; \delta
                                                                                                                                                    \frac{1}{3} \; g_1^{\; 2} \; \left( s_\gamma \; \overline{a_u}^{pr} - \widetilde{\mu} \; c_\gamma \; \overline{y_u}^{pr} \right) \; \left( s_\gamma \; a_u^{\; pr} - \widetilde{\mu} \; c_\gamma \; y_u^{\; pr} \right) \; \mathsf{LF_{4,1,-1}} \big[ \mathsf{m}_{\widetilde{u}}^{\; r} \; , \; \mathsf{m}_{\widetilde{q}}^{\; p} \big] \; \delta_{1112} - \left( s_\gamma \; a_u^{\; pr} - \widetilde{\mu} \; c_\gamma \; y_u^{\; pr} \right) \; \mathsf{LF_{4,1,-1}} \big[ \mathsf{m}_{\widetilde{u}}^{\; r} \; , \; \mathsf{m}_{\widetilde{q}}^{\; p} \big] \; \delta_{1112} - \left( s_\gamma \; s_u^{\; pr} - \widetilde{\mu} \; c_\gamma \; y_u^{\; pr} \right) \; \mathsf{LF_{4,1,-1}} \big[ \mathsf{m}_{\widetilde{u}}^{\; r} \; , \; \mathsf{m}_{\widetilde{q}}^{\; p} \big] \; \delta_{1112} - \left( s_\gamma \; s_u^{\; pr} - \widetilde{\mu} \; c_\gamma \; y_u^{\; pr} \right) \; \mathsf{LF_{4,1,-1}} \big[ \mathsf{m}_{\widetilde{u}}^{\; r} \; , \; \mathsf{m}_{\widetilde{q}}^{\; p} \big] \; \delta_{1112} - \left( s_\gamma \; s_u^{\; pr} - \widetilde{\mu} \; c_\gamma \; y_u^{\; pr} \right) \; \mathsf{LF_{4,1,-1}} \big[ \mathsf{m}_{\widetilde{u}}^{\; r} \; , \; \mathsf{m}_{\widetilde{q}}^{\; p} \big] \; \delta_{1112} - \left( s_\gamma \; s_u^{\; pr} - \widetilde{\mu} \; c_\gamma \; y_u^{\; pr} \right) \; \mathsf{LF_{4,1,-1}} \big[ \mathsf{m}_{\widetilde{u}}^{\; r} \; , \; \mathsf{m}_{\widetilde{q}}^{\; p} \big] \; \delta_{1112} - \mathsf{m}_{\widetilde{u}}^{\; p} \; \mathsf{m}_{\widetilde{q}}^{\; p} \, \mathsf{m}_{\widetilde
                                                                                                                                                    \frac{2}{3} \; g_{1}^{\; 2} \; \left( s_{\gamma} \; \overline{a_{u}}^{pr} - \widetilde{\mu} \; c_{\gamma} \; \overline{y_{u}}^{pr} \right) \; \left( s_{\gamma} \; a_{u}^{\; pr} - \widetilde{\mu} \; c_{\gamma} \; y_{u}^{\; pr} \right) \; \mathsf{LF}_{5,1,-2} \left[ \mathsf{m}_{\widetilde{u}}^{\; r} \; , \; \mathsf{m}_{\widetilde{q}}^{\; p} \right] \; \delta_{\texttt{lli}2} - \mathcal{O}_{\mathsf{lli}2} \; \mathcal{O}_{\mathsf{llii}2} \; \mathcal{O}_{\mathsf{lliii}2} \; \mathcal{O}_{\mathsf{lliii}2} \; \mathcal{O}_{\mathsf{lliii}2} \; \mathcal{O}_{\mathsf{lliii}2
                                                                                                                                                    \frac{8}{81}\; {g_{1}}^{4}\; \mathsf{LF}_{2,1,0}\left[\mathsf{m}_{\bar{\mathsf{u}}}^{\;\;i2},\; \mathsf{m}_{1}\right]\; \delta_{\;i1i2}\; +\; \frac{4}{81}\; {g_{1}}^{4}\; \mathsf{LF}_{3,1,-1}\left[\mathsf{m}_{\bar{\mathsf{u}}}^{\;\;i2},\; \mathsf{m}_{1}\right]\; \delta_{\;i1i2}\; -\; \frac{1}{2}\; \mathsf{m}_{1}^{\;\;i2}\; \mathsf{m}_{2}^{\;\;i2}\; \mathsf{m}_{3}^{\;\;i2}\; \mathsf{m}_{1}^{\;\;i2}\; \mathsf{m}_{2}^{\;\;i2}\; \mathsf{m}_{3}^{\;\;i2}\; \mathsf{m}_
                                                                                                                                                    g_1^4 LF_{4,1,-2}[\tilde{\mu}, m_1] \delta_{1112} - \frac{1}{3} m_1 s_{\gamma} \tilde{\mu} c_{\gamma} g_1^4 LF_{4,1,-1}[\tilde{\mu}, m_1] \delta_{1112} + \frac{2}{9} g_1^4 LF_{5,1,-3}[\tilde{\mu}, m_1] \delta_{1112} + \frac{2}{9} g_1^4 L
                                                                                                                                                                                       \mathsf{m_1} \; \mathsf{s_{\gamma}} \; \tilde{\mu} \; \mathsf{c_{\gamma}} \; \mathsf{g_1}^4 \; \mathsf{LF_{5,1,-2}} [\, \tilde{\mu} \, , \, \mathsf{m_1} \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \mathsf{m_2} \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \mathsf{m_2} \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \mathsf{m_2} \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \mathsf{m_2} \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \, \, \mathsf{m_2} \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \, \, \, \, \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \, \, \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \, \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2}} [\, \tilde{\mu} \, , \, \, ] \; \delta_{\mathsf{ili_2}} - \frac{5}{6} \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-2
                                                                                                                                           \mathsf{m_2} \; \mathsf{s_7} \; \widetilde{\mu} \; \mathsf{c_7} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{4,1,-1}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_1}^2 \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}} [\, \widetilde{\mu} \,, \; \mathsf{m_2} \,] \; \delta_{\mathsf{ili2}} + \frac{2}{3} \; \mathsf{g_2}^2 \; \mathsf{LF_{5,1,-3}}
                                                                                                                                                                                           \textbf{m}_2 \; \textbf{S}_{\gamma} \; \widetilde{\boldsymbol{\mu}} \; \textbf{c}_{\gamma} \; \textbf{g}_{1}^{\; 2} \; \textbf{g}_{2}^{\; 2} \; \textbf{LF}_{5,1,-2} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \textbf{m}_{2} \right] \; \delta_{\textbf{i} \textbf{1} \textbf{i} 2} \; + \; \frac{1}{2} \; \textbf{S}_{\gamma}^{\; 2} \; \overline{\textbf{y}_{d}}^{\text{pr}} \; \textbf{y}_{d}^{\; \text{sr}} \; \overline{\textbf{y}_{u}}^{\text{si} 1} \; \textbf{y}_{u}^{\text{pi} 2} \; \textbf{LF}_{2,1,0} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \textbf{m}_{\bar{d}}^{\; r} \right] \; - \; \frac{1}{2} \; \boldsymbol{\sigma}_{1}^{\; 2} \; \boldsymbol{\sigma}_{1}^{\; 2
                                                                                                                                           s_{\gamma}^{2} \, \overline{y_{d}}^{\text{pr}} \, y_{d}^{\,\text{sr}} \, \overline{y_{u}}^{\text{sil}} \, y_{u}^{\,\text{pi2}} \, \mathsf{LF}_{3,1,-1} \big[ \widetilde{\mu} \, , \, \mathfrak{m}_{\bar{d}}^{\,\text{r}} \big] \, + \frac{1}{2} \, s_{\gamma}^{\,2} \, \overline{y_{d}}^{\text{pr}} \, y_{d}^{\,\text{sr}} \, \overline{y_{u}}^{\text{sil}} \, y_{u}^{\,\text{pi2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, \mathfrak{m}_{\bar{d}}^{\,\text{r}} \big] \, + \frac{1}{2} \, s_{\gamma}^{\,2} \, \overline{y_{d}}^{\,\text{pr}} \, y_{d}^{\,\text{sr}} \, \overline{y_{u}}^{\,\text{sil}} \, y_{u}^{\,\text{pi2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, \mathfrak{m}_{\bar{d}}^{\,\text{r}} \big] \, + \frac{1}{2} \, s_{\gamma}^{\,2} \, \overline{y_{d}}^{\,\text{pr}} \, y_{d}^{\,\text{sr}} \, \overline{y_{u}}^{\,\text{sil}} \, y_{u}^{\,\text{pi2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, \mathfrak{m}_{\bar{d}}^{\,\text{r}} \big] \, + \frac{1}{2} \, s_{\gamma}^{\,2} \, \overline{y_{d}}^{\,\text{pr}} \, y_{d}^{\,\text{sr}} \, \overline{y_{u}}^{\,\text{sil}} \, y_{u}^{\,\text{pi2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, \mathfrak{m}_{\bar{d}}^{\,\text{r}} \big] \, + \frac{1}{2} \, s_{\gamma}^{\,2} \, \overline{y_{d}}^{\,\text{pr}} \, y_{d}^{\,\text{sr}} \, \overline{y_{u}}^{\,\text{sil}} \, y_{u}^{\,\text{pi2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, \mathfrak{m}_{\bar{d}}^{\,\text{r}} \big] \, + \frac{1}{2} \, s_{\gamma}^{\,2} \, \overline{y_{d}}^{\,\text{pr}} \, y_{d}^{\,\text{sr}} \, \overline{y_{u}}^{\,\text{pi3}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, \mathfrak{m}_{\bar{d}}^{\,\text{r}} \big] \, + \frac{1}{2} \, s_{\gamma}^{\,2} \, \overline{y_{d}}^{\,\text{pr}} \, y_{d}^{\,\text{sr}} \, \overline{y_{u}}^{\,\text{pi3}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, \mathfrak{m}_{\bar{d}}^{\,\text{r}} \big] \, + \frac{1}{2} \, s_{\gamma}^{\,2} \, \overline{y_{d}}^{\,\text{pr}} \, y_{d}^{\,\text{pr}} \, y_{d}^{\,\text{pr}
                                                                                                                                                    \frac{1}{36} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{pi1} \ y_{u}{}^{pi2} \ \mathsf{LF}_{2,1,0} \big[ \widetilde{\mu} \, , \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] - \frac{11}{36} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{pi1} \ y_{u}{}^{pi2} \ \mathsf{LF}_{3,1,-1} \big[ \widetilde{\mu} \, , \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big[ + \frac{1}{36} \ \mathsf{m}_{\widetilde{q}}{}^{p} \big] + \frac{1}{36} \ \mathsf{m}_{\widetilde
                                                                                                                                                    \frac{1}{9} \; g_1^{\; 2} \; \overline{y_u^{\text{pil}}} \; y_u^{\text{pi2}} \; \mathsf{LF_{4,1,-2}} \left[ \, \widetilde{\mu} \, , \; \mathsf{m_{\widetilde{q}}^{\, p}} \, \right] \; + \; \frac{1}{2} \; \mathsf{S_{\gamma}}^{\; 2} \; \overline{y_u^{\text{pil}}} \; \overline{y_u^{\text{rs}}} \; y_u^{\text{rs}} \; y_u^{\text{ri2}} \; \mathsf{LF_{2,1,0}} \left[ \, \widetilde{\mu} \, , \; \mathsf{m_{\widetilde{u}}^{\, s}} \, \right] \; - \; \frac{1}{2} \; \mathsf{S_{\gamma}}^{\; 2} \; \overline{y_u^{\text{pil}}} \; \overline{y_u^{\text{rs}}} \; y_u^{\text{rs}} \; y_u^{\text{ri2}} \; \mathsf{LF_{2,1,0}} \left[ \, \widetilde{\mu} \, , \; \mathsf{m_{\widetilde{u}}^{\, s}} \, \right] \; - \; \frac{1}{2} \; \mathsf{S_{\gamma}}^{\; 2} \; \overline{y_u^{\text{pil}}} \; \overline{y_u^{\text{rs}}} \; y_u^{\text{rs}} \;
                                                                                                                                           s_{\gamma}^{2} \, \overline{y_{u}}^{\text{pil}} \, \overline{y_{u}}^{\text{rs}} \, y_{u}^{\text{ps}} \, y_{u}^{\text{ri2}} \, \mathsf{LF}_{3,1,-1} \big[ \widetilde{\mu} \, , \, m_{\tilde{u}}^{\, \, s} \big] \, + \frac{1}{2} \, s_{\gamma}^{2} \, \overline{y_{u}}^{\text{pil}} \, \overline{y_{u}}^{\text{rs}} \, y_{u}^{\text{ps}} \, y_{u}^{\text{ri2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, m_{\tilde{u}}^{\, \, s} \big] \, + \frac{1}{2} \, s_{\gamma}^{2} \, \overline{y_{u}}^{\text{pil}} \, \overline{y_{u}}^{\text{rs}} \, y_{u}^{\text{ps}} \, y_{u}^{\text{ri2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, m_{\tilde{u}}^{\, \, \, s} \big] \, + \frac{1}{2} \, s_{\gamma}^{2} \, \overline{y_{u}}^{\text{pil}} \, \overline{y_{u}}^{\text{rs}} \, y_{u}^{\text{ps}} \, y_{u}^{\text{ri2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, m_{\tilde{u}}^{\, \, \, s} \big] \, + \frac{1}{2} \, s_{\gamma}^{2} \, \overline{y_{u}}^{\text{pil}} \, \overline{y_{u}}^{\text{rs}} \, y_{u}^{\text{ps}} \, y_{u}^{\text{ri2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, m_{\tilde{u}}^{\, \, \, s} \big] \, + \frac{1}{2} \, s_{\gamma}^{2} \, \overline{y_{u}}^{\text{pil}} \, \overline{y_{u}}^{\text{rs}} \, y_{u}^{\text{ps}} \, y_{u}^{\text{ri2}} \, \mathsf{LF}_{4,1,-2} \big[ \widetilde{\mu} \, , \, m_{\tilde{u}}^{\, \, \, \, s} \big] \, + \frac{1}{2} \, s_{\gamma}^{2} \, \overline{y_{u}}^{\text{pil}} \, \overline{y_{u}}^{\text{pil}} \, \overline{y_{u}}^{\text{pil}} \, y_{u}^{\text{pil}} \, y_{u}^{\text{
                                                                                                                                                    \frac{1}{18} \; \mathsf{m_1} \; \mathsf{s_{\scriptscriptstyle Y}} \; \mathsf{g_1}^2 \; \mathsf{y_u}^{\mathsf{pi2}} \; \left( - \, \mathsf{s_{\scriptscriptstyle Y}} \; \overline{\mathsf{a_u}}^{\mathsf{pi1}} + \widetilde{\mu} \; \mathsf{c_{\scriptscriptstyle Y}} \; \overline{\mathsf{y_u}}^{\mathsf{pi1}} \right) \; \mathsf{LF_{2,1,1,0}} \left[ \, \mathsf{m_1} \, , \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \, , \; \mathsf{m_{\bar{u}}}^{\mathsf{i1}} \, \right] \; + \\
                                                                                                                                                    \frac{1}{36}~\text{m}_1~\text{s}_{\curlyvee}~\text{g}_1^{~2}~\text{y}_\text{u}^{~\text{pi2}}~\left(-~\text{s}_{\curlyvee}~\overline{\text{a}_\text{u}}^{~\text{pi1}} + \widetilde{\mu}~\text{c}_{\curlyvee}~\overline{\text{y}_\text{u}}^{~\text{pi1}}\right)~\text{LF}_{2,2,1,,-1}\left[\text{m}_1,~\text{m}_{\tilde{\text{q}}}^{~\text{p}},~\text{m}_{\tilde{\text{u}}}^{~\text{i1}}\right]~+
                                                                                                                                                                   \frac{1}{18} \; \mathsf{m_1} \; \mathsf{s_{\scriptscriptstyle Y}} \; \mathsf{g_1}^2 \; \mathsf{y_u}^{\mathsf{pi2}} \; \left( \mathsf{s_{\scriptscriptstyle Y}} \; \overline{\mathsf{a_u}}^{\mathsf{pi1}} - \widetilde{\mu} \; \mathsf{c_{\scriptscriptstyle Y}} \; \overline{\mathsf{y_u}}^{\mathsf{pi1}} \right) \; \mathsf{LF_{3,1,1,-1}} \big[ \, \mathsf{m_1} \, , \; \mathsf{m_{\tilde{q}}}^{\, \mathsf{p}} \, , \; \mathsf{m_{\tilde{u}}} \, , \; \mathsf{m_{\tilde{u}}}^{\, \mathsf{p}} \, , \; \mathsf{m_{\tilde{u}}}^
                                                                                                                                                    \frac{1}{18} \; \mathsf{m_1} \; \mathsf{s_{Y}} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}}^{\mathsf{pil}} \; \left( - \, \mathsf{s_{Y}} \; \mathsf{a_u}^{\mathsf{pi2}} + \widetilde{\mu} \; \mathsf{c_{Y}} \; \mathsf{y_u}^{\mathsf{pi2}} \right) \; \mathsf{LF_{2,1,1,0}} \big[ \, \mathsf{m_1} \, , \; \mathsf{m_{\tilde{q}}}^{\, \mathsf{p}} \, , \; \mathsf{m_{\tilde{u}}}^{\mathsf{i2}} \big] \; + \\
                                                                                                                                                    \mathsf{m_1} \; \mathsf{s_{Y}} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}}^{\mathsf{pil}} \; \left( \mathsf{s_{Y}} \; \mathsf{a_u}^{\mathsf{pi2}} - \widetilde{\mu} \; \mathsf{c_{Y}} \; \mathsf{y_u}^{\mathsf{pi2}} \right) \; \mathsf{LF_{3,1,1,-1}} \big[ \mathsf{m_1}, \; \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \; \mathsf{m_{\tilde{u}}}^{\mathsf{i2}} \big] \; + \\
                                                                                                                                                    \frac{1}{4} \; g_{1}{}^{2} \; s_{\gamma}{}^{2} \; \overline{y_{u}}{}^{\text{pil}} \; y_{u}{}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,-1} \big[ \, \mathsf{m}_{1} \, , \, \, \mathsf{m}_{\tilde{q}}{}^{\text{p}} \, , \, \, \widetilde{\mu} \, \big] \; + \; \frac{1}{6} \; \, \mathsf{m}_{1} \; s_{\gamma} \; \widetilde{\mu} \; c_{\gamma} \; g_{1}{}^{2} \; \overline{y_{u}}{}^{\text{pil}} \; y_{u}{}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \, \mathsf{m}_{1} \, , \, \, \mathsf{m}_{\tilde{q}}{}^{\text{p}} \, , \, \, \widetilde{\mu} \, \big] \; - \; \mathsf{m}_{1} \; \mathsf{m}_{2} \; \mathsf{m
                                                                                                                                                    \frac{1}{6} \ g_{1}{}^{2} \ s_{\gamma}{}^{2} \ \overline{y_{u}}{}^{pi1} \ y_{u}{}^{pi2} \ \mathsf{LF}_{3,1,1,-2} \big[ \mathsf{m}_{1} , \ \mathsf{m}_{\tilde{q}}{}^{p} , \ \widetilde{\mu} \, \big] - \frac{1}{6} \ \mathsf{m}_{1} \ s_{\gamma} \ \widetilde{\mu} \ c_{\gamma} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{pi1} \ y_{u}{}^{pi2} \ \mathsf{LF}_{3,1,1,-1} \big[ \mathsf{m}_{1} , \ \mathsf{m}_{\tilde{q}}{}^{p} , \ \widetilde{\mu} \, \big] + \frac{1}{6} \ \mathsf{m}_{1} \ \mathsf{m}_{2} \ \mathsf{m}_{2} \ \mathsf{m}_{3} \ \mathsf{m}_{3
                                                                                                                                                                   \frac{1}{26} \, m_1 \, s_{\gamma} \, g_1^2 \, y_u^{\, pi2} \, \left( s_{\gamma} \, \overline{a_u}^{\, pi1} - \widetilde{\mu} \, c_{\gamma} \, \overline{y_u}^{\, pi1} \right) \, \mathsf{LF}_{2,2,1,-1} \big[ m_1, \, m_u^{\, i1}, \, m_{\widetilde{a}}^{\, p} \big] +
                                                                                                                                                                                                               \mathbf{m_{1}} \; \mathbf{s_{\gamma}} \; \mathbf{g_{1}}^{2} \; \overline{\mathbf{y_{u}}}^{\text{pil}} \; \left( \mathbf{s_{\gamma}} \; a_{u}^{\text{pi2}} - \widetilde{\mu} \; \mathbf{c_{\gamma}} \; \mathbf{y_{u}}^{\text{pi2}} \right) \; \mathbf{LF_{2,2,1,-1}} \big[ \mathbf{m_{1}} \; , \; \mathbf{m_{\tilde{u}}}^{\text{i2}} \; , \; \mathbf{m_{\tilde{q}}}^{\text{p}} \big] \; + \\
                                                                                                                                                    \frac{1}{9} g_1^4 \left( -c_{\gamma}^2 + s_{\gamma}^2 \right) LF_{2,1,1,-1} \left[ m_1, m_{\tilde{u}}^{i2}, \tilde{\mu} \right] \delta_{i1i2} +
                                                                                                                                                    \frac{2}{9} \; g_{1}^{\; 4} \; m_{1}^{\; 2} \; \left( - \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \; \mathsf{LF}_{2,1,1,0} \left[ \, m_{1} , \; m_{\tilde{\mathsf{u}}}^{\; i2} \, , \; \tilde{\mu} \, \right] \; \delta_{\mathsf{i}1\dot{\mathsf{i}}2} + \frac{1}{24} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{\mathsf{u}}}^{\mathsf{p}i1} \; y_{\mathsf{u}}^{\; \mathsf{p}i2} \; \mathsf{LF}_{2,2,1,-2} \left[ \, m_{1} \, , \; \tilde{\mu} \, , \; m_{\tilde{\mathsf{q}}}^{\; \mathsf{p}} \, \right] \; + \frac{1}{24} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{\mathsf{u}}}^{\mathsf{p}i1} \; y_{\mathsf{u}}^{\; \mathsf{p}i2} \; \mathsf{LF}_{2,2,1,-2} \left[ \, m_{1} \, , \; \tilde{\mu} \, , \; m_{\tilde{\mathsf{q}}}^{\; \mathsf{p}} \, \right] \; + \frac{1}{24} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{\mathsf{u}}}^{\mathsf{p}i1} \; y_{\mathsf{u}}^{\; \mathsf{p}i2} \; \mathsf{LF}_{2,2,1,-2} \left[ \, m_{1} \, , \; \tilde{\mu} \, , \; m_{\tilde{\mathsf{q}}}^{\; \mathsf{p}} \, \right] \; + \frac{1}{24} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{\mathsf{u}}}^{\mathsf{p}i1} \; y_{\mathsf{u}}^{\; \mathsf{p}i2} \; \mathsf{LF}_{2,2,1,-2} \left[ \, m_{1} \, , \; \tilde{\mu} \, , \; m_{\tilde{\mathsf{q}}}^{\; \mathsf{p}} \, \right] \; + \frac{1}{24} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{\mathsf{u}}}^{\mathsf{p}i1} \; y_{\mathsf{u}}^{\; \mathsf{p}i2} \; \mathsf{LF}_{2,2,1,-2} \left[ \, m_{1} \, , \; \tilde{\mu} \, , \; m_{\tilde{\mathsf{q}}}^{\; \mathsf{p}} \, \right] \; + \frac{1}{24} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{\mathsf{u}}}^{\; \mathsf{p}i2} \; \mathsf{LF}_{2,2,1,-2} \left[ \, m_{1} \, , \; \tilde{\mu} \, , \; m_{\tilde{\mathsf{q}}}^{\; \mathsf{p}} \, \right] \; + \frac{1}{24} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{\mathsf{u}}}^{\; \mathsf{p}i2} \; \mathsf{LF}_{2,2,1,-2} \left[ \, m_{1} \, , \; \tilde{\mu} \, , \; m_{\tilde{\mathsf{q}}}^{\; \mathsf{p}} \, \right] \; + \frac{1}{24} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{\mathsf{u}}}^{\; \mathsf{p}i2} \; \mathsf{LF}_{2,2,1,-2} \left[ \, m_{1} \, , \; \tilde{\mu} \, , \; \tilde{\mu} \, , \; \tilde{\mu} \, , \; \tilde{\mu} \, \right] \; + \frac{1}{24} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{\mathsf{u}}}^{\; \mathsf{p}i2} \; \mathsf{LF}_{2,2,1,-2} \left[ \, m_{1} \, , \; \tilde{\mu} \, , \; \tilde
                                                                                                                                                    \frac{1}{24} \; \widetilde{\mu} \; c_{\gamma} \; g_{1}^{2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\text{pil}} \; (4 \; m_{1} \; s_{\gamma} + 3 \; \widetilde{\mu} \; c_{\gamma}) \; \; \mathsf{LF}_{2,2,1,-1} \big[ m_{1} \; , \; \widetilde{\mu} \; , \; m_{q}^{\; p} \big] \; + \; \frac{1}{6} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\; pil} \; y_{u}^{\; pil
                                                                                                                                                                                  \mathsf{LF_{2,2,1,-2}}\big[\,\mathsf{m_{1}}\,,\,\,\widetilde{\mu}\,,\,\,\mathsf{m_{\tilde{u}}}^{\,\mathsf{i}\,\mathsf{1}}\,\big]\,+\,\frac{1}{6}\,\,\mathsf{m_{1}}\,\,\mathsf{s_{\gamma}}\,\,\widetilde{\mu}\,\,\mathsf{c_{\gamma}}\,\,\mathsf{g_{1}}^{2}\,\,\overline{\mathsf{y_{u}}}^{\mathsf{pil}}\,\,\mathsf{y_{u}}^{\mathsf{pil}}\,\,\mathsf{LF_{2,2,1,-1}}\big[\,\mathsf{m_{1}}\,,\,\,\widetilde{\mu}\,,\,\,\mathsf{m_{\tilde{u}}}^{\,\mathsf{i}\,\mathsf{1}}\,\big]\,+\,\frac{1}{6}\,\,\mathsf{m_{1}}\,\,\mathsf{s_{1}}\,\,\widetilde{\mu}\,\,\mathsf{c_{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{1}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i}\,\mathsf{i}}\,\,\mathsf{m_{1}}^{\,\mathsf{i
                                                                                                                                                         \left(\frac{1}{6}~g_{1}^{2}~s_{\gamma}^{2}~\overline{y_{u}}^{\text{pil}}~y_{u}^{\text{pi2}}~+~\frac{1}{9}~g_{1}^{4}~\left(-~c_{\gamma}^{2}~+~s_{\gamma}^{2}\right)~\delta_{\text{ili2}}\right)~\mathsf{LF}_{2,2,1,-2}\!\left[\,\mathsf{m}_{1}\,,~\widetilde{\mu}\,,~\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,i\,2}\,\right]~+~2\,\left(\,-~c_{\gamma}^{2}~+~s_{\gamma}^{2}~\right)~\delta_{\text{ili2}}\right)
                                                                                                                                                         \frac{1}{18}\;\mathsf{m_1}\;\mathsf{g_1}^2\;\left(\mathsf{3}\;\mathsf{s_{\scriptscriptstyle Y}}\,\widetilde{\mu}\;\mathsf{c_{\scriptscriptstyle Y}}\,\overline{\mathsf{y_u}}^{\mathsf{pil}}\,\mathsf{y_u}^{\mathsf{pil}}+\mathsf{2}\;\mathsf{m_1}\;\mathsf{g_1}^2\;\left(\mathsf{c_{\scriptscriptstyle Y}}^2-\mathsf{s_{\scriptscriptstyle Y}}^2\right)\;\delta_{\mathsf{ili2}}\right)\;\mathsf{LF_{2,2,1,-1}}\!\left[\mathsf{m_1},\,\widetilde{\mu},\,\mathsf{m_{\tilde{u}}}^{\mathsf{i2}}\right]-\mathsf{m_1}^2\left(\mathsf{m_1},\,\widetilde{\mu},\,\mathsf{m_{\tilde{u}}}^{\mathsf{i2}}\right)
                                                                                                                                                    \frac{9}{4} g_2^2 s_\gamma^2 \overline{y_u}^{pi1} y_u^{pi2} LF_{2,1,1,-1}[m_2,m_{\tilde{q}}^p,\widetilde{\mu}] -
                                                                                                                                                    \frac{3}{2} \; \mathsf{m}_2 \; \mathsf{s}_{\gamma} \; \widetilde{\mu} \; \mathsf{c}_{\gamma} \; \mathsf{g}_2^{\, 2} \; \overline{\mathsf{y}_{\mathsf{u}}}^{\mathsf{pil}} \; \mathsf{y}_{\mathsf{u}}^{\, \mathsf{pil}} \; \mathsf{LF}_{2,1,1,9} \left[ \mathsf{m}_2 \; , \; \mathsf{m}_{\widetilde{\mathsf{q}}}^{\, \, \mathsf{p}} \; , \; \widetilde{\mu} \right] \; + \; \frac{3}{2} \; \mathsf{g}_2^{\, 2} \; \mathsf{s}_{\gamma}^{\, \, 2} \; \overline{\mathsf{y}_{\mathsf{u}}}^{\mathsf{pil}} \; \mathsf{y}_{\mathsf{u}}^{\, \mathsf{pil}} \; \mathsf{LF}_{3,1,1,-2} \left[ \mathsf{m}_2 \; , \; \mathsf{m}_{\widetilde{\mathsf{q}}}^{\, \, \mathsf{p}} \; , \; \widetilde{\mu} \right] \; + \; \frac{3}{2} \; \mathsf{g}_2^{\, 2} \; \mathsf{s}_{\gamma}^{\, \, 2} \; \overline{\mathsf{y}_{\mathsf{u}}}^{\mathsf{pil}} \; \mathsf{y}_{\mathsf{u}}^{\, \mathsf{pil}} \; \mathsf{LF}_{3,1,1,-2} \left[ \mathsf{m}_2 \; , \; \mathsf{m}_{\widetilde{\mathsf{q}}}^{\, \, \mathsf{p}} \; , \; \widetilde{\mu} \right] \; + \; \frac{3}{2} \; \mathsf{m}_2^{\, 2} \; \mathsf{m}_2^{\,
                                                                                                                                                                                                \widetilde{\mu}~c_{\gamma}~g_{2}^{~2}~\overline{y_{u}}^{\text{pil}}~y_{u}^{~\text{pil}}~(4~\text{m}_{2}~s_{\gamma}^{~}+\widetilde{\mu}~c_{\gamma}^{~})~\text{LF}_{2,2,1,-1}^{~}\big[\,\text{m}_{2}^{~},~\widetilde{\mu}^{~},~\text{m}_{\bar{q}}^{-\bar{p}}\,\big]~+
                                                                                                                                                                                           \text{m}_{3} \text{ s}_{\gamma} \text{ } g_{3}^{\text{ 2}} \text{ } y_{u}^{\text{ pi2}} \text{ } \left( - \text{ s}_{\gamma} \text{ } \overline{a_{u}}^{\text{ pi1}} + \widetilde{\mu} \text{ } c_{\gamma} \text{ } \overline{y_{u}}^{\text{ pi1}} \right) \text{ } \text{LF}_{2,\text{l,1,0}} \big[ \text{m}_{3} \text{ , } \text{m}_{\tilde{q}}^{\text{ p}} \text{ , } \text{m}_{\tilde{u}}^{\text{ i1}} \big] \text{ } +
                                                                                                                                                                                                \textbf{m}_{3} \text{ s}_{\gamma} \text{ } \textbf{g}_{3}^{2} \text{ } \textbf{y}_{u}^{\text{ pi2}} \text{ } \left( - \text{ s}_{\gamma} \text{ } \overline{\textbf{a}_{u}}^{\text{pi1}} + \widetilde{\mu} \text{ } \textbf{c}_{\gamma} \text{ } \overline{\textbf{y}_{u}}^{\text{pi1}} \right) \text{ } \textbf{LF}_{2,2,1,-1} \big[ \text{ } \textbf{m}_{3} \text{ , } \textbf{m}_{\tilde{\textbf{q}}}^{\text{ p}} \text{ , } \textbf{m}_{\tilde{\textbf{u}}}^{\text{ i1}} \big] \text{ } + \widetilde{\mu} \text{ } \textbf{c}_{\gamma} \text{ } \overline{\textbf{y}_{u}}^{\text{pi1}} \\
                                                                                                                                                                                       \textbf{m}_{3} \, \textbf{s}_{\gamma} \, \textbf{g}_{3}^{\, 2} \, \textbf{y}_{u}^{\, \text{pi2}} \, \left( \textbf{s}_{\gamma} \, \overline{\textbf{a}_{u}}^{\, \text{pi1}} - \widetilde{\mu} \, \textbf{c}_{\gamma} \, \overline{\textbf{y}_{u}}^{\, \text{pi1}} \right) \, \textbf{LF}_{\textbf{3,1,1,-1}} \big[ \, \textbf{m}_{\textbf{3}} \, , \, \, \textbf{m}_{\tilde{\textbf{q}}}^{\, \, \textbf{p}} \, , \, \, \textbf{m}_{\tilde{\textbf{u}}}^{\, \, \, \textbf{i1}} \big] \, + \, 
                                                                                                                                                                                       \text{m}_{3} \; \text{s}_{\gamma} \; \text{g}_{3}{}^{2} \; \overline{\text{y}_{u}}{}^{\text{pil}} \; \left( - \, \text{s}_{\gamma} \; a_{u}{}^{\text{pil}} + \widetilde{\mu} \; \text{c}_{\gamma} \; \text{y}_{u}{}^{\text{pil}} \right) \; \text{LF}_{2,\text{1,1,0}} \big[ \, \text{m}_{3} \, , \; \text{m}_{\bar{q}}{}^{\, p} \, , \; \text{m}_{\bar{u}}{}^{\, i2} \big] \; + \\
                                                                                                                                                                                                \mathsf{m_{3}}\;\mathsf{s_{\gamma}}\;\mathsf{g_{3}}^{2}\;\overline{\mathsf{y_{u}}}^{\text{pil}}\;\left(-\,\mathsf{s_{\gamma}}\;\mathsf{a_{u}}^{\text{pi2}}\,+\,\widetilde{\mu}\;\mathsf{c_{\gamma}}\;\mathsf{y_{u}}^{\text{pi2}}\right)\;\mathsf{LF_{2,2,1,-1}}\!\left[\,\mathsf{m_{3}}\,,\;\mathsf{m_{\bar{q}}}^{\text{-p}}\,,\;\mathsf{m_{\bar{u}}}^{\text{-i2}}\right]\,+\,\widetilde{\mathsf{p_{3}}}^{\mathrm{pi2}}
                                                                                                                                                                                                \text{m}_{3} \; \text{s}_{\gamma} \; \text{g}_{3}^{\; 2} \; \overline{\text{y}_{u}}^{\text{pi1}} \; \left( \text{s}_{\gamma} \; \text{a}_{u}^{\; \text{pi2}} - \widetilde{\mu} \; \text{c}_{\gamma} \; \text{y}_{u}^{\; \text{pi2}} \right) \; \text{LF}_{3,1,1,-1} \big[ \text{m}_{3} \, , \; \text{m}_{\tilde{q}}^{\; p} \, , \; \text{m}_{\tilde{u}}^{\; \text{i2}} \big] \; + \\
                                                                                                                                                                                                \textbf{m}_{3} \textbf{ s}_{\gamma} \textbf{ g}_{3}^{2} \textbf{ y}_{u}^{\textbf{pi2}} \left(\textbf{s}_{\gamma} \overline{\textbf{a}_{u}}^{\textbf{pi1}} - \widetilde{\mu} \textbf{ c}_{\gamma} \overline{\textbf{ y}_{u}}^{\textbf{pi1}}\right) \textbf{ LF}_{\textbf{2,2,1,-1}} \big[\textbf{m}_{3}\textbf{, m}_{\tilde{u}}^{\textbf{ii}}\textbf{, m}_{\tilde{q}}^{\textbf{p}}\big] + \\
                                                                                                                                                    \frac{\mathsf{J}}{\mathsf{g}} \; \mathsf{S}_{\mathsf{Y}} \, \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\mathsf{sr}} \, \overline{\mathsf{y_u}}^{\mathsf{sil}} \; \mathsf{y_u}^{\mathsf{pi2}} \; \left( \mathsf{c}_{\mathsf{Y}} \; \overline{\mathsf{a_d}}^{\mathsf{pr}} - \mathsf{S}_{\mathsf{Y}} \, \widetilde{\boldsymbol{\mu}} \, \overline{\mathsf{y_d}}^{\mathsf{pr}} \right) \; \mathsf{LF_{2,2,1,-1}} \big[ \boldsymbol{\mathsf{m_d}}^{\mathsf{r}} , \; \widetilde{\boldsymbol{\mu}} , \; \boldsymbol{\mathsf{m_{\tilde{q}}}}^{\mathsf{p}} \big] \; + \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \, \mathsf{pr} 
                                                                                                                                                                                                     s_{\scriptscriptstyle Y}\,\widetilde{\mu}\,\overline{y_d}^{\text{pr}}\,\overline{y_u}^{\text{sil}}\,y_u^{\text{pi2}}\,\left(c_{\scriptscriptstyle Y}\,a_d^{\text{sr}}-s_{\scriptscriptstyle Y}\,\widetilde{\mu}\,y_d^{\text{sr}}\right)\,\mathsf{LF_{2,2,1,-1}}\big[{m_{\bar{d}}^{\text{r}}}^{\text{r}},\,\widetilde{\mu},\,m_{\bar{q}}^{\text{s}}\big]\,+\,
                                                                                                                                                                                           s_{\text{Y}}\,\widetilde{\mu}\,\,y_{d}^{\,\text{sr}}\,\overline{y_{u}}^{\,\text{sil}}\,\,y_{u}^{\,\text{pil}}\,\left(-\,c_{\text{Y}}\,\,\overline{a_{d}}^{\,\text{pr}}\,+\,s_{\text{Y}}\,\widetilde{\mu}\,\,\overline{y_{d}}^{\,\text{pr}}\right)\,\,\text{LF}_{2,2,1,-1}\!\left[\,\text{m}_{\bar{q}}^{\,\text{p}}\,,\,\,\widetilde{\mu}\,,\,\,\text{m}_{\bar{d}}^{\,\text{r}}\,\right]\,+\,\,\text{constant}
                                                                                                                                                                                           s_{\gamma}\,\widetilde{\mu}\,\overline{y_{d}}^{\text{pr}}\,\overline{y_{u}}^{\text{sil}}\,y_{u}^{\,\text{pi2}}\,\left(-\,c_{\gamma}\,\,a_{d}^{\,\text{sr}}\,+\,s_{\gamma}\,\widetilde{\mu}\,\,y_{d}^{\,\text{sr}}\right)\,LF_{2,2,1,-1}\big[\,m_{\tilde{q}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,r}\,\big]\,+\,c_{1}^{\,\,s}\,\left(-\,c_{\gamma}\,\,a_{d}^{\,\,\text{sr}}\,+\,s_{\gamma}\,\widetilde{\mu}\,\,y_{d}^{\,\,\text{sr}}\right)\,LF_{2,2,1,-1}\big[\,m_{\tilde{q}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,r}\,\big]\,+\,c_{1}^{\,\,s}\,\left(-\,c_{\gamma}\,\,a_{d}^{\,\,\text{sr}}\,+\,s_{\gamma}\,\widetilde{\mu}\,\,y_{d}^{\,\,\text{sr}}\right)\,LF_{2,2,1,-1}\big[\,m_{\tilde{q}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,r}\,\big]\,+\,c_{1}^{\,\,s}\,\left(-\,c_{\gamma}\,\,a_{d}^{\,\,\text{sr}}\,+\,s_{\gamma}\,\widetilde{\mu}\,\,y_{d}^{\,\,\text{sr}}\right)\,LF_{2,2,2,1,-1}\big[\,m_{\tilde{q}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,r}\,\big]\,+\,c_{1}^{\,\,s}\,\left(-\,c_{\gamma}\,\,a_{d}^{\,\,\text{sr}}\,+\,s_{\gamma}\,\widetilde{\mu}\,\,y_{d}^{\,\,\text{sr}}\right)\,LF_{2,2,2,1,-1}\big[\,m_{\tilde{q}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,s}\,\big]\,+\,c_{1}^{\,\,s}\,\left(-\,c_{\gamma}\,\,a_{d}^{\,\,s}\,+\,s_{\gamma}\,\widetilde{\mu}\,\,y_{d}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\,s}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,\widetilde{\mu}\,,\,
                                                                                                                                                                                                g_{1}^{2} \; s_{\gamma}^{2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,-1} \big[ \widetilde{\mu} \,, \; \mathsf{m}_{1} \,, \; \mathsf{m}_{\bar{q}}^{\text{p}} \big] \; - \; \frac{1}{4} \; g_{1}^{2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,, \; \mathsf{m}_{1} \,, \; \mathsf{m}_{\bar{q}}^{\text{p}} \big] \; - \; \frac{1}{4} \; g_{1}^{2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,, \; \mathsf{m}_{1} \,, \; \mathsf{m}_{\bar{q}}^{\text{p}} \big] \; - \; \frac{1}{4} \; g_{1}^{2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,, \; \mathsf{m}_{1} \,, \; \mathsf{m}_{\bar{q}}^{\text{p}} \big] \; - \; \frac{1}{4} \; g_{1}^{2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{2} \; \overline{y_{u}}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,, \; \mathsf{m}_{1} \,, \; \mathsf{m}_{\bar{q}}^{\text{p}} \big] \; - \; \frac{1}{4} \; g_{1}^{2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{2} \; \overline{y_{u}}^{\text{pi1}} \; y_{u}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,, \; \mathsf{m}_{1} \,, \; \mathsf{m}_{\bar{q}}^{\text{p}} \big] \; - \; \frac{1}{4} \; g_{1}^{2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{2} \; \overline{y_{u}}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,, \; \mathsf{m}_{1} \,, \; \mathsf{m}_{\bar{q}}^{\text{p}} \big] \; - \; \frac{1}{4} \; g_{1}^{2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{2} \; \overline{y_{u}}^{\text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,, \; \mathsf{m}_{1} \,, \; \mathsf{m}_{2}^{\text{pi2}} \,, \; \mathsf{m}_{2}^{2} \; \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,, \; \mathsf{m}_{1} \,, \; \mathsf{m}_{2}^{2} \,, \; \mathsf{m}_{2}^{
                                                                                                                                                                                           \mathsf{g_1}^2 \; \mathsf{s_7}^2 \; \overline{\mathsf{y_u}^{\mathsf{pil}}} \; \mathsf{y_u}^{\mathsf{pil}} \; \mathsf{LF_{2,1,1,-1}} \big[ \widetilde{\mu} \; , \; \mathsf{m_1} \; , \; \mathsf{m_{\tilde{u}}^{il}} \big] \; - \; \frac{1}{3} \; \mathsf{m_1} \; \mathsf{s_7} \; \widetilde{\mu} \; \mathsf{c_7} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}^{\mathsf{pil}}} \; \mathsf{y_u}^{\mathsf{pil}} \; \mathsf{LF_{2,1,1,0}} \big[ \widetilde{\mu} \; , \; \mathsf{m_1} \; , \; \mathsf{m_{\tilde{u}}^{il}} \big] \; + \; \frac{1}{3} \; \mathsf{m_1} \; \mathsf{s_7} \; \widetilde{\mu} \; \mathsf{c_7} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}^{\mathsf{pil}}} \; \mathsf{y_u}^{\mathsf{pil}} \; \mathsf{LF_{2,1,1,0}} \big[ \widetilde{\mu} \; , \; \mathsf{m_1} \; , \; \mathsf{m_{\tilde{u}}^{il}} \big] \; + \; \frac{1}{3} \; \mathsf{m_1} \; \mathsf{s_7} \; \widetilde{\mu} \; \mathsf{c_7} \; \mathsf{g_1}^2 \; \mathsf{v_2}^{\mathsf{pil}} \; \mathsf{v_1} \; \mathsf{v_2}^{\mathsf{pil}} \; \mathsf{v_2}^{\mathsf{pil}} \; \mathsf{v_3}^{\mathsf{pil}} \; \mathsf{v_2}^{\mathsf{pil}} \; \mathsf{v_3}^{\mathsf{pil}} \; \mathsf{v_3}^{\mathsf{p
                                                                                                                                                    \frac{1}{2} \; \mathsf{g_1}^2 \; \mathsf{s_\gamma}^2 \; \overline{\mathsf{y_u}}^{\mathsf{pil}} \; \mathsf{y_u}^{\mathsf{pil}} \; \mathsf{LF_{2,1,1,-1}} \big[ \, \widetilde{\boldsymbol{\mu}} \,, \; \mathsf{m_1} \,, \; \mathsf{m_{\tilde{u}}}^{\mathsf{i2}} \big] \; - \; \frac{1}{3} \; \mathsf{m_1} \; \mathsf{s_\gamma} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_\gamma} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}}^{\mathsf{pil}} \; \mathsf{y_u}^{\mathsf{pil}} \; \mathsf{LF_{2,1,1,0}} \big[ \, \widetilde{\boldsymbol{\mu}} \,, \; \mathsf{m_1} \,, \; \mathsf{m_{\tilde{u}}}^{\mathsf{i2}} \big] \; + \; \mathbf{m_{\tilde{u}}}^{\mathsf{pil}} \; \mathsf{v_1} \, \mathsf{v_2}^{\mathsf{pil}} \; \mathsf{v_3} \, \mathsf{v_4}^{\mathsf{pil}} \; \mathsf{v_5}^{\mathsf{pil}} \; \mathsf{v_6}^{\mathsf{pil}} \; \mathsf{v_6}^{\mathsf{pil}} \; \mathsf{v_7}^{\mathsf{pil}} \; \mathsf{v_8}^{\mathsf{pil}} \; \mathsf{v_8}^{\mathsf{
                                                                                                                                                    \frac{3}{8} \; g_{2}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\; \text{pi2}} \; \mathsf{LF}_{2,1,1,-1} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\; p} \big] \; - \; \frac{3}{4} \; g_{2}^{\; 2} \; \tilde{\mu}^{2} \; c_{\gamma}^{\; 2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\; \text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\; p} \big] \; + \; \frac{3}{4} \; g_{2}^{\; 2} \; \tilde{\mu}^{2} \; c_{\gamma}^{\; 2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\; \text{pi2}} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\; p} \big] \; + \; \frac{3}{4} \; g_{2}^{\; 2} \; \tilde{\mu}^{2} \; c_{\gamma}^{\; 2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\; pi2} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\; p} \big] \; + \; \frac{3}{4} \; g_{2}^{\; 2} \; \tilde{\mu}^{2} \; c_{\gamma}^{\; 2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\; pi2} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\; p} \big] \; + \; \frac{3}{4} \; g_{2}^{\; 2} \; \tilde{\mu}^{2} \; c_{\gamma}^{\; 2} \; \overline{y_{u}}^{\text{pil}} \; y_{u}^{\; pi2} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\; p} \big] \; + \; \frac{3}{4} \; g_{2}^{\; 2} \; \tilde{\mu}^{2} \; c_{\gamma}^{\; 2} \; \overline{y_{u}}^{\; pi2} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\; p} \big] \; + \; \frac{3}{4} \; g_{2}^{\; 2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{\; 2} \; \overline{y_{u}}^{\; pi2} \; \mathsf{LF}_{2,1,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\; p} \big] \; + \; \frac{3}{4} \; g_{2}^{\; 2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{\; 2} \; \overline{y_{u}}^{\; pi2} \; \mathsf{LF}_{2,1,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{2}^{\; p} \big] \; + \; \frac{3}{4} \; g_{2}^{\; 2} \; \widetilde{\mu}^{2} \; c_{\gamma}^{\; 2} \; \overline{y_{u}}^{\; pi2} \; \mathsf{LF}_{2,1,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_{2} \,, \; \mathsf{m}_{2}^{\; pi2} \,, \; \mathsf{m}_{2}^{\; p} \big] \; + \; \frac{3}{4} \; g_{2}^{\; 2} \; \widetilde{\mu}^{2} \; g_{2}^{\; 2} \; \widetilde{\mu}^{2} \; \widetilde{\mu}^{2}
                                                                                                                                                    s_{\text{Y}}\,\widetilde{\mu}\,\,y_{d}^{\,\text{sr}}\,\overline{y_{u}}^{\,\text{sil}}\,\,y_{u}^{\,\text{pil}}\,\left(-\,c_{\text{Y}}\,\,\overline{a_{d}}^{\,\text{pr}}\,+\,s_{\text{Y}}\,\widetilde{\mu}\,\,\overline{y_{d}}^{\,\text{pr}}\right)\,\,\text{LF}_{3,1,1,-1}\!\left[\widetilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{q}}^{\,\,\text{p}}\right]\,+\,\left(-\,c_{\text{Y}}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,+\,s_{\text{Y}}\,\,\widetilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{3,1,1,-1}\!\left[\widetilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{q}}^{\,\,\text{p}}\right]\,+\,\left(-\,c_{\text{Y}}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,+\,s_{\text{Y}}\,\,\widetilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{3,1,1,-1}\!\left[\widetilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{q}}^{\,\,\text{p}}\right]\,+\,\left(-\,c_{\text{Y}}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,+\,s_{\text{Y}}\,\,\widetilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{3,1,1,-1}\!\left[\widetilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{q}}^{\,\,\text{p}}\right]\,+\,\left(-\,c_{\text{Y}}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,+\,s_{\text{Y}}\,\,\widetilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{3,1,1,-1}\!\left[\widetilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{q}}^{\,\,\text{p}}\right]\,+\,\left(-\,c_{\text{Y}}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,+\,s_{\text{Y}}\,\,\widetilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{3,1,1,-1}\!\left[\widetilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{q}}^{\,\,\text{p}}\right]\,+\,\left(-\,c_{\text{Y}}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,+\,s_{\text{Y}}\,\,\widetilde{\mu}_{d}^{\,\,\text{pr}}\right)\,\,\text{LF}_{3,1,1,1,-1}\!\left[\widetilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{pr}}\,,\,\,m_{\tilde{q}}^{\,\,\text{pr}}\right]\,+\,\left(-\,c_{\text{Y}}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,+\,s_{\text{Y}}\,\,\widetilde{\mu}_{d}^{\,\,\text{pr}}\right)\,\,\text{LF}_{3,1,1,1,-1}\!\left[\widetilde{\mu}\,,\,\,m_{\tilde{q}}^{\,\,\text{pr}}\,+\,s_{\tilde{q}}\,\,\widetilde{\mu}_{d}^{\,\,\text{pr}}\right]\,
                                                                                                                                                                                       s_{\gamma}\,\widetilde{\mu}\,\overline{y_{d}}^{\text{pr}}\,\overline{y_{u}}^{\text{sil}}\,y_{u}^{\text{pi2}}\,\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\!\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{r}},\,\mathsf{m}_{\widetilde{q}}^{\text{s}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{r}},\,\mathsf{m}_{\widetilde{q}}^{\text{s}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{r}},\,\mathsf{m}_{\widetilde{q}}^{\text{s}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{r}},\,\mathsf{m}_{\widetilde{q}}^{\text{sr}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{r}},\,\mathsf{m}_{\widetilde{d}}^{\text{sr}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{r}},\,\mathsf{m}_{\widetilde{d}}^{\text{r}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{sr}},\,\mathsf{m}_{\widetilde{d}}^{\text{sr}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{sr}},\,\mathsf{m}_{\widetilde{d}}^{\text{sr}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{sr}},\,\mathsf{m}_{\widetilde{d}}^{\text{sr}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{sr}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{sr}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}-s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{sr}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)\,\mathsf{LF}_{2,1,1,0}\left[\widetilde{\mu}\,,\,\mathsf{m}_{\widetilde{d}}^{\text{sr}}\right]+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^{\text{sr}}\right)+c_{\gamma}^{2}\left(c_{\gamma}\,a_{d}^
                                                                                                                                                                                           s_{\scriptscriptstyle \gamma}\,\widetilde{\mu}\,\overline{y_{\scriptscriptstyle d}}^{\text{pr}}\,\overline{y_{\scriptscriptstyle u}}^{\text{sil}}\,y_{\scriptscriptstyle u}^{\,\text{pi2}}\,\left(-\,c_{\scriptscriptstyle \gamma}\,a_{\scriptscriptstyle d}^{\,\text{sr}}\,+\,s_{\scriptscriptstyle \gamma}\,\widetilde{\mu}\,y_{\scriptscriptstyle d}^{\,\text{sr}}\right)\,\mathsf{LF}_{3,1,1,-1}\!\left[\widetilde{\mu}\,,\,\mathfrak{m}_{\scriptscriptstyle \tilde{d}}^{\,\text{r}}\,,\,\mathfrak{m}_{\scriptscriptstyle \tilde{q}}^{\,\text{s}}\right]\,-\,s_{\scriptscriptstyle q}^{\,\text{sp}}
                                                                                                                                                    \frac{1}{6}~g_1^{~2}~y_u^{~pi2}~(m_1~s_\gamma-\widetilde{\mu}~c_\gamma)~\left(s_\gamma~\overline{a_u}^{pi1}-\widetilde{\mu}~c_\gamma~\overline{y_u}^{pi1}\right)~\mathsf{LF_{1,1,1,1,0}}\left[m_1,~m_{\tilde{q}}^{~p},~m_{\tilde{u}}^{~i1},~\widetilde{\mu}\right]~-
                                                                                                                                                         \frac{1}{12} \ \mathbf{g_1}^2 \ \mathbf{y_u^{pi2}} \ (\mathbf{m_1} \ \mathbf{s_{\gamma}} + \widetilde{\boldsymbol{\mu}} \ \mathbf{c_{\gamma}}) \ \left(\mathbf{s_{\gamma}} \ \overline{\mathbf{a_u}}^{pi1} - \widetilde{\boldsymbol{\mu}} \ \mathbf{c_{\gamma}} \ \overline{\mathbf{y_u}}^{pi1}\right) \ \mathsf{LF_{2,1,1,1,-1}} \big[\mathbf{m_1}, \ \mathbf{m_{\tilde{q}}}^p, \ \mathbf{m_{\tilde{u}}}^{i1}, \ \widetilde{\boldsymbol{\mu}}\big] - \widetilde{\boldsymbol{\mu}} \ \mathbf{m_{\tilde{q}}}^p, \ \mathbf{m_{\tilde{q}}}^{i1}, \ \widetilde{\boldsymbol{\mu}} \ \mathbf{m_{\tilde{q}}}^p, \ \mathbf{m_{\tilde{q}}}^p, \ \mathbf{m_{\tilde{q}}}^{i1}, \ \widetilde{\boldsymbol{\mu}} \ \mathbf{m_{\tilde{q}}}^p, \ \mathbf{m_{\tilde{q}}}^p
                                                                                                                                                    \frac{1}{6} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{\text{pil}} \ (\text{m}_{1} \ s_{\gamma} - \widetilde{\mu} \ c_{\gamma}) \ \left(s_{\gamma} \ a_{u}{}^{\text{pi2}} - \widetilde{\mu} \ c_{\gamma} \ y_{u}{}^{\text{pi2}}\right) \ \mathsf{LF}_{1,1,1,1,0} \left[\,\mathsf{m}_{1} \, , \ \mathsf{m}_{\check{q}}{}^{\text{p}} \, , \ \mathsf{m}_{\check{u}}{}^{\text{i2}} \, , \ \widetilde{\mu}\,\right] \ - \ \mathsf{m}_{\check{q}}{}^{\text{pi2}} + \ \mathsf{m}_{\check{q}}{}^{\text{pi3}} \, , \ \mathsf{m}_{\check{q}}{}^{\text{pi3}} \, 
                                                                                                                                                         \frac{1}{12} \ g_1^{\ 2} \ \overline{y_u^{\text{pil}}} \ (\text{m}_1 \ \text{s}_{\curlyvee} + \widetilde{\mu} \ \text{c}_{\curlyvee}) \ \left(\text{s}_{\curlyvee} \ a_u^{\text{pil}} - \widetilde{\mu} \ \text{c}_{\curlyvee} \ y_u^{\text{pil}}\right) \ \text{LF}_{2,1,1,1,-1} \big[ \ \text{m}_1 \ , \ \text{m}_{\widetilde{q}}^{\ p} \ , \ \text{m}_{\widetilde{u}}^{\ i2} \ , \ \widetilde{\mu} \big] - \widetilde{\mu} \ \text{m}_{\widetilde{q}}^{\ p} \ , \ \text{m}_{\widetilde{q}}^{\ i2} \ , \ \widetilde{\mu} \big] - \widetilde{\mu} \ \text{m}_{\widetilde{q}}^{\ p} \ , \ \ \text{m}_{\widetilde{q}}^{\ 
                                                                                                                                                         \frac{1}{4} \; \overline{y_u}^{\text{sil}} \; y_u^{\text{pi2}} \; \left( c_{\gamma} \; \overline{a_d}^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \; \overline{y_d}^{\text{pr}} \right) \; \left( c_{\gamma} \; a_d^{\text{sr}} - s_{\gamma} \, \widetilde{\mu} \; y_d^{\text{sr}} \right) \; \mathsf{LF}_{2,1,1,1,-1} \big[ \, \mathsf{m}_{\widetilde{\mathsf{d}}}^{\; \mathsf{r}} \, , \; \mathsf{m}_{\widetilde{\mathsf{q}}}^{\; \mathsf{p}} \, , \; \widetilde{\mu}_{\widetilde{\mathsf{q}}}^{\; \mathsf{s}} \, , \; \widetilde{\mu} \, \big] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \, \mathsf{m}_{\widetilde{\mathsf{d}}}^{\; \mathsf{r}} \, , \; \mathsf{m}_{\widetilde{\mathsf{q}}}^{\; \mathsf{p}} \, , \; \mathsf{m}_{\widetilde{\mathsf{q}}}^{\; \mathsf{s}} \, , \; \widetilde{\mu}_{\widetilde{\mathsf{q}}}^{\; \mathsf{s}} \, , \; \widetilde{\mu}_{\widetilde{\mathsf{q}}}^{\;
                                                                                                                                                    \frac{1}{12} \; g_1^{\; 2} \; y_u^{\; pi2} \; \left( \; m_1 \; s_\gamma \; + \; \widetilde{\mu} \; c_\gamma \right) \; \left( \; s_\gamma \; \overline{a_u}^{\; pi1} \; - \; \widetilde{\mu} \; c_\gamma \; \overline{y_u}^{\; pi1} \right) \; \mathsf{LF}_{2,1,1,1,-1} \left[ \; m_{\bar{q}}^{\; \; p} \; , \; m_1 \; , \; m_{\bar{u}}^{\; \; i1} \; , \; \widetilde{\mu} \; \right] \; - \; \widetilde{\mu} \; c_\gamma \; \overline{y_u}^{\; pi1} \; , \; \widetilde{\mu} \; .
                                                                                                                                                    \frac{2}{9}\,g_{1}^{\,2}\,\left(s_{\gamma}\,\overline{a_{u}}^{\text{pil}}-\widetilde{\mu}\,c_{\gamma}\,\overline{y_{u}}^{\text{pil}}\right)\,\left(s_{\gamma}\,a_{u}^{\,\text{pil}}-\widetilde{\mu}\,c_{\gamma}\,y_{u}^{\,\text{pil}}\right)\,\mathsf{LF}_{2,1,1,1,-1}\!\left[\mathfrak{m}_{\tilde{q}}^{\,\,p},\,\mathfrak{m}_{1},\,\mathfrak{m}_{\tilde{u}}^{\,\,i2},\,\mathfrak{m}_{\tilde{u}}^{\,\,i1}\right]+\frac{1}{9}\,\left(s_{\gamma}\,a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,\,p}+a_{u}^{\,
                                                                                                                                                    \frac{1}{12} \ g_{1}^{\ 2} \ \overline{y_{u}}^{pi1} \ (m_{1} \ s_{\gamma} + \widetilde{\mu} \ c_{\gamma}) \ \left(s_{\gamma} \ a_{u}^{\ pi2} - \widetilde{\mu} \ c_{\gamma} \ y_{u}^{\ pi2}\right) \ LF_{2,1,1,1,-1} \left[m_{\bar{q}}^{\ p}, \ m_{1}, \ m_{\bar{u}}^{\ i2}, \ \widetilde{\mu}\right] - \widetilde{\mu} \ c_{\gamma} \ y_{u}^{\ pi2}
                                                                                                                                                    \frac{2}{3}\,g_{3}^{\,2}\,\left(s_{\gamma}\,\overline{a_{u}}^{p\,i\,1}-\widetilde{\mu}\,c_{\gamma}\,\overline{y_{u}}^{p\,i\,1}\right)\,\left(s_{\gamma}\,a_{u}^{\,p\,i\,2}-\widetilde{\mu}\,c_{\gamma}\,y_{u}^{\,p\,i\,2}\right)\,\mathsf{LF}_{2,1,1,1,-1}\big[\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,p}\,,\,\,\mathsf{m}_{3}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,i\,1}\big]\,+\,2\,(s_{\gamma}\,a_{u}^{\,\,p\,i\,2})\,\mathsf{LF}_{2,1,1,1,-1}\big[\,s_{\gamma}\,s_{u}^{\,\,p}\,,\,\,\,\mathsf{m}_{3}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,i\,1}\big]\,+\,2\,(s_{\gamma}\,a_{u}^{\,\,p\,i\,2}\,,\,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,p\,i\,2}\,,\,\,
                                                                                                                                                \frac{\mathsf{J}}{\mathsf{A}} \; \mathsf{S}_{\mathsf{Y}} \; \overline{\mathsf{y}_{\mathsf{u}}}^{\mathsf{sil}} \; \mathsf{y}_{\mathsf{u}}^{\mathsf{pil}} \; \overline{\mathsf{a}_{\mathsf{u}}}^{\mathsf{pr}} \; \left( \mathsf{S}_{\mathsf{Y}} \; \mathsf{a}_{\mathsf{u}}^{\mathsf{sr}} - \widetilde{\mu} \; \mathsf{c}_{\mathsf{Y}} \; \mathsf{y}_{\mathsf{u}}^{\mathsf{sr}} \right) \; \mathsf{LF}_{\mathsf{2},\mathsf{1},\mathsf{1},\mathsf{1},\mathsf{1},\mathsf{1}} \left[ \mathsf{m}_{\widetilde{\mathsf{u}}}^{\mathsf{r}}, \; \mathsf{m}_{\widetilde{\mathsf{q}}}^{\mathsf{p}}, \; \mathsf{m}_{\widetilde{\mathsf{q}}}^{\mathsf{s}}, \; \widetilde{\mu} \right] \; + \\ \frac{\mathsf{J}}{\mathsf{A}} \; \mathsf{J}_{\mathsf{u}} \; \mathsf
                                                                                                                                                                                                \widetilde{\mu} \; c_{\gamma} \; \overline{y_{u}}^{\text{pil}} \; \overline{y_{u}}^{\text{rs}} \; y_{u}^{\text{ri2}} \; \left( - \, s_{\gamma} \; a_{u}^{\text{ps}} + \widetilde{\mu} \; c_{\gamma} \; y_{u}^{\text{ps}} \right) \; \mathsf{LF}_{2,1,1,1,-1} \big[ \, \mathsf{m}_{\tilde{u}}^{\text{ s}} \, , \; \mathsf{m}_{\tilde{q}}^{\text{ p}} \, , \; \mathsf{m}_{\tilde{q}}^{\text{ r}} \, , \; \widetilde{\mu} \, \big] \; - \; \mathsf{m}_{\tilde{q}}^{\text{ r}} \, , \; \mathsf{m}_{\tilde{q}}^{\text{ p}} \, , \; \mathsf{m}_{\tilde{q}}^{\text{ r}} \, 
                                                                                                                                                         \frac{1}{12} \; \mathbf{g_1}^2 \; \mathbf{y_u}^{\text{pi2}} \; \left( \mathbf{m_1} \; \mathbf{s_{\gamma}} + \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\gamma}} \right) \; \left( \mathbf{s_{\gamma}} \; \overline{\mathbf{a_u}}^{\text{pi1}} - \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\gamma}} \; \overline{\mathbf{y_u}}^{\text{pi1}} \right) \; \mathsf{LF_{2,1,1,1,-1}} \left[ \, \mathbf{m_{\tilde{u}}} \; \mathbf{m_{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [\mathsf{m_1},\mathsf{m_{	ilde{\mathsf{q}}}}^\mathsf{p},	ilde{\mu}]
                                                                                                                                                    \frac{1}{12} \ g_1^{\ 2} \ \overline{y_u^{\ pil}} \ (m_1 \ s_\gamma + \widetilde{\mu} \ c_\gamma) \ \left(s_\gamma \ a_u^{\ pil} - \widetilde{\mu} \ c_\gamma \ y_u^{\ pil}\right) \ LF_{2,1,1,1,-1} \big[m_{\widetilde{u}}^{\ il}, \ m_1, \ m_{\widetilde{q}}^{\ p}, \ \widetilde{\mu}\big] + \frac{1}{12} \ (m_1 \ s_\gamma + \widetilde{\mu} \ c_\gamma) \ \left(s_\gamma \ a_u^{\ pil} - \widetilde{\mu} \ c_\gamma \ y_u^{\ pil}\right) \ LF_{2,1,1,1,-1} \big[m_{\widetilde{u}}^{\ il}, \ m_1, \ m_{\widetilde{q}}^{\ p}, \ \widetilde{\mu}\big] + \frac{1}{12} \ (m_1 \ s_\gamma + \widetilde{\mu} \ c_\gamma) \ \left(s_\gamma \ a_u^{\ pil} - \widetilde{\mu} \ c_\gamma \ y_u^{\ pil}\right) \ LF_{2,1,1,1,-1} \big[m_{\widetilde{u}}^{\ il}, \ m_1, \ m_{\widetilde{q}}^{\ p}, \ \widetilde{\mu}\big] + \frac{1}{12} \ (m_1 \ s_\gamma + \widetilde{\mu} \ c_\gamma) \ \left(s_\gamma \ a_u^{\ pil} - \widetilde{\mu} \ c_\gamma \ y_u^{\ pil}\right) \ LF_{2,1,1,1,-1} \big[m_{\widetilde{u}}^{\ il}, \ m_1, \ m_{\widetilde{q}}^{\ p}, \ \widetilde{\mu}\big] + \frac{1}{12} \ (m_1 \ s_\gamma + \widetilde{\mu} \ c_\gamma) \ \left(s_\gamma \ a_u^{\ pil} - \widetilde{\mu} \ c_\gamma \ y_u^{\ pil}\right) \ LF_{2,1,1,1,-1} \big[m_{\widetilde{u}}^{\ il}, \ m_1, \ m_1, \ m_{\widetilde{q}}^{\ p}, \ \widetilde{\mu}\big] + \frac{1}{12} \ (m_1 \ s_\gamma + \widetilde{\mu} \ c_\gamma) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}\right) \ \left(s_\gamma \ a_u^{\ p} - \widetilde{\mu} \ c_\gamma \ y_u^{\ p}
                                                                                                                                                                                                          \left\{ \left. \mathsf{g_1}^2 \, \mathsf{y_u}^{\mathsf{pi2}} \, \left( \mathsf{m_1} \, \mathsf{s_Y} + \widetilde{\mu} \, \mathsf{c_Y} \right) \right. \left( \mathsf{s_Y} \, \overline{\mathsf{a_u}}^{\mathsf{pi1}} - \widetilde{\mu} \, \mathsf{c_Y} \, \overline{\mathsf{y_u}}^{\mathsf{pi1}} \right) \right. \\ \left. \mathsf{LF_{2,1,1,1,-1}} \left[ \widetilde{\mu}, \, \mathsf{m_1}, \, \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{i1}} \right] + \left. \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{pi1}} \right] \right\} \\ \left. \mathsf{LF_{2,1,1,1,-1}} \left[ \widetilde{\mu}, \, \mathsf{m_1}, \, \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{i1}} \right] \right. \\ \left. \mathsf{LF_{2,1,1,1,-1}} \left[ \widetilde{\mu}, \, \mathsf{m_1}, \, \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{i1}} \right] \right] \\ \left. \mathsf{LF_{2,1,1,1,-1}} \left[ \widetilde{\mu}, \, \mathsf{m_1}, \, \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{i1}} \right] \right. \\ \left. \mathsf{LF_{2,1,1,1,-1}} \left[ \widetilde{\mu}, \, \mathsf{m_1}, \, \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{i1}} \right] \right] \\ \left. \mathsf{LF_{2,1,1,1,-1}} \left[ \widetilde{\mu}, \, \mathsf{m_1}, \, \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}} \right] \right] \\ \left. \mathsf{LF_{2,1,1,1,-1}} \left[ \widetilde{\mu}, \, \mathsf{m_1}, \, \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}} \right] \right] \\ \left. \mathsf{LF_{2,1,1,1,-1}} \left[ \widetilde{\mu}, \, \mathsf{m_1}, \, \mathsf{m_{\tilde{q}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u}}^{\mathsf{p}}, \, \mathsf{m_{\tilde{u
                                                                                                                                                    \frac{1}{12} \; g_{1}^{\; 2} \; \overline{y_{u}}^{\text{pil}} \; \left( \, m_{1} \; s_{\gamma} + \widetilde{\mu} \; c_{\gamma} \, \right) \; \left( \, s_{\gamma} \; a_{u}^{\; \text{pi2}} - \widetilde{\mu} \; c_{\gamma} \; y_{u}^{\; \text{pi2}} \, \right) \; \mathsf{LF}_{2,1,1,1,-1} \! \left[ \, \widetilde{\mu} \, , \; m_{1} \, , \; m_{\tilde{q}}^{\; p} \, , \; m_{\tilde{u}}^{\; \tilde{1}^{\; 2}} \, \right] \right)
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