```
\stackrel{(3)}{\text{il}} \stackrel{\text{il}}{\text{-i2}} - \rightarrow \text{$ \hbar$} \ \left( -\frac{1}{144} \ \frac{1}{m_\text{g}^2} \ \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \ \left( g_2^{\ 2} \ y_d^{\text{i1p}} + 12 \ c_\gamma^{\ 2} \ y_d^{\text{rp}} \ \left( \overline{y_d}^{\text{rs}} \ y_d^{\text{i1s}} + 3 \ \overline{y_u}^{\text{rs}} \ y_u^{\text{i1s}} \right) \right) + \frac{1}{3} \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \ \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \ \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \right) \right) \right) + \frac{1}{3} \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \ \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \right) \right) + \frac{1}{3} \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \ \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \right) \right) + \frac{1}{3} \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \right) \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \right) \right) + \frac{1}{3} \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \right) \right) + \frac{1}{3} \left( s_\gamma^{\ 2} \ \overline{y_d}^{\text{i2p}} \right) \left( s_\gamma^{\ 2} \ \overline{y_d}^{
C_{\mathsf{Hq}}
                                                                                                                                                                                                                                                                                c_{\gamma}^{\ 2} \ \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{d}}^{\text{pr}} \ y_{d}^{\ i1r} \ \overline{y_{u}}^{\text{i2s}} \ y_{u}^{\ ps} + \overline{y_{u}}^{\text{i2p}} \ \left(g_{2}^{\ 2} \ y_{u}^{\ i1p} + 12 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{rs}} \ y_{u}^{\text{rp}} \ y_{u}^{\ i1s}\right)\right)\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1r} \ y_{u}^{\ i1s}\right)\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1r} \ y_{u}^{\ i1s}\right)\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1r} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1r} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ i1s}\right) \ + \\ + \frac{1}{3} \left(36 \ s_{\gamma}^{\ 2} \ \overline{y_{u}}^{\text{pr}} \ y_{u}^{\ 2} \ y
                                                                                                                                              \frac{1}{9} \ {\rm g_2}^4 \ {\rm LF_{3,0}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{4,-1}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} - \frac{8}{45} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {\rm g_2}^4 \ {\rm LF_{5,-2}} \ [\,{\rm m_2}\,] \ \delta_{\rm ili2} + \frac{1}{6} \ {\rm g_2}^4 \ {
                                                                                                                                              \frac{2}{45} \, \sum_{p} \, g_{2}{}^{4} \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{1}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \mathsf{LF}_{3,0} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, - \, \frac{5}{16} \, \sum_{p} \, g_{2}{}^{4} \, \mathsf{LF}_{4,-1} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \mathsf{LF}_{4,-1} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \mathsf{LF}_{4,-1} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \mathsf{LF}_{4,-1} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{4} \, \, \mathsf{LF}_{5,-2} \big[ \, \mathsf{m}_{\bar{q}}{}^{p} \big] \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{2}{}^{p} \, \, \delta_{\mathtt{ili2}} \, + \, \frac{1}{6} \, \sum_{p} \, g_{
                                                                                                                                              \frac{2}{15} \sum_{p} g_{2}^{4} LF_{5,-2} \left[ m_{\tilde{q}}^{p} \right] \delta_{1112} - \frac{1}{24} g_{2}^{2} \left( s_{\gamma}^{2} \overline{y_{d}}^{12p} y_{d}^{11p} + c_{\gamma}^{2} \overline{y_{u}}^{12p} y_{u}^{11p} \right) LF_{2,1} \left[ m_{\Phi} \right] + c_{\gamma}^{2} \left[ m_{\tilde{q}}^{p} \right] \delta_{1112} - \frac{1}{24} g_{2}^{2} \left( s_{\gamma}^{2} \overline{y_{d}}^{12p} y_{d}^{11p} + c_{\gamma}^{2} \overline{y_{u}}^{12p} y_{u}^{11p} \right) LF_{2,1} \left[ m_{\Phi} \right] + c_{\gamma}^{2} \left[ m_{\tilde{q}}^{p} \right] \delta_{1112} - \frac{1}{24} g_{2}^{2} \left( s_{\gamma}^{2} \overline{y_{d}}^{12p} y_{d}^{11p} + c_{\gamma}^{2} \overline{y_{u}}^{12p} y_{u}^{11p} \right) LF_{2,1} \left[ m_{\Phi} \right] + c_{\gamma}^{2} \left[ m_{\tilde{q}}^{p} \right] \delta_{1112} - \frac{1}{24} g_{2}^{2} \left( s_{\gamma}^{2} \overline{y_{d}}^{12p} y_{d}^{11p} + c_{\gamma}^{2} \overline{y_{u}}^{12p} y_{u}^{11p} \right) LF_{2,1} \left[ m_{\Phi} \right] + c_{\gamma}^{2} \left[ m_{\tilde{q}}^{p} \right] \delta_{1112} + c_{
                                                                                                                                              \frac{1}{72} g_{2}^{2} \left(3 s_{\gamma}^{2} \overline{y_{d}}^{i2p} y_{d}^{i1p} + 3 c_{\gamma}^{2} \overline{y_{u}}^{i2p} y_{u}^{i1p} + 4 g_{2}^{2} \delta_{i1i2}\right) LF_{3,0}[m_{\tiny \oplus}] -
                                                                                                                                              \frac{1}{48} g_2^4 LF_{4,-1}[\mathsf{m}_{\bar{\oplus}}] \delta_{\mathsf{ili2}} + \frac{2}{45} g_2^4 LF_{5,-2}[\mathsf{m}_{\bar{\oplus}}] \delta_{\mathsf{ili2}} + \frac{1}{18} g_2^4 LF_{3,\theta}[\widetilde{\mu}] \delta_{\mathsf{ili2}} + \frac{1}{18} g_2^4 LF_{\mathsf{ili2}} + \frac{
                                                                                                                                          \frac{1}{12} \ g_2{}^4 \ \mathsf{LF_{4,-1}} [\, \tilde{\mu} \,] \ \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{4}{45} \ g_2{}^4 \ \mathsf{LF_{5,-2}} [\, \tilde{\mu} \,] \ \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{1}{18} \ g_1{}^2 \ c_\gamma{}^2 \ \overline{y_d}{}^{\dot{1}2p} \ y_d{}^{\dot{1}1p} \ \mathsf{LF_{2,1,0}} \big[\, m_1 \,, \, m_{\dot{d}}^{-p} \,\big] - \frac{1}{18} \ g_1{}^2 \ c_\gamma{}^2 \ \overline{y_d}{}^{\dot{1}2p} \ y_d{}^{\dot{1}2p} \ y_d{}^{\dot{1}2p} \ \mathsf{LF_{2,1,0}} \big[\, m_1 \,, \, m_{\dot{d}}^{-p} \,\big] - \frac{1}{18} \ g_1{}^2 \ c_\gamma{}^2 \ \overline{y_d}{}^{\dot{1}2p} \ y_d{}^{\dot{1}2p} \ \mathsf{LF_{2,1,0}} \big[\, m_1 \,, \, m_{\dot{d}}^{-p} \,\big] - \frac{1}{18} \ g_1{}^2 \ c_\gamma{}^2 \ \overline{y_d}{}^{\dot{1}2p} \ y_d{}^{\dot{1}2p} \ \mathsf{LF_{2,1,0}} \big[\, m_1 \,, \, m_{\dot{d}}^{-p} \,\big] - \frac{1}{18} \ g_1{}^2 \ c_\gamma{}^2 \ \overline{y_d}{}^{\dot{1}2p} \ y_d{}^{\dot{1}2p} \ \mathsf{LF_{2,1,0}} \big[\, m_1 \,, \, m_{\dot{d}}^{-p} \,\big] - \frac{1}{18} \ g_1{}^2 \ c_\gamma{}^2 \ \overline{y_d}{}^{\dot{1}2p} \ y_d{}^{\dot{1}2p} \ \mathsf{LF_{2,1,0}} \big[\, m_1 \,, \, m_{\dot{d}}^{-p} \,\big] - \frac{1}{18} \ g_1{}^2 \ c_\gamma{}^2 \ \overline{y_d}{}^{\dot{1}2p} \ y_d{}^{\dot{1}2p} \ \mathsf{LF_{2,1,0}} \big[\, m_1 \,, \, m_{\dot{d}}^{-p} \,\big] - \frac{1}{18} \ g_1{}^2 \ c_\gamma{}^2 \ \overline{y_d}{}^{\dot{1}2p} \ y_d{}^{\dot{1}2p} \ \mathsf{LF_{2,1,0}} \big[\, m_1 \,, \, m_{\dot{d}}^{\dot{1}2p} \,\big] - \frac{1}{18} \ g_1{}^2 \ c_\gamma{}^2 \ \overline{y_d}{}^{\dot{1}2p} \ y_d{}^{\dot{1}2p} \ \mathsf{LF_{2,1,0}} \big[\, m_1 \,, \, m_{\dot{d}}^{\dot{1}2p} \,\big] - \frac{1}{18} \ g_1{}^2 \ s_q{}^2 \
                                                                                                                                                                                 g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{3,1,-1}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,m_{1}\,,\,m_{d}^{-p}\,\big]\,+\,\frac{1}{18}\;g_{1}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}^{2}\;\overline{y_{d}}{}
                                                                                                                                              \frac{1}{432}\; {\rm g_1}^2\; {\rm g_2}^2\; {\rm LF_{2,1,0}} \big[\, {\rm m_1}\,,\, {\rm m_{\tilde{q}}}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} + \frac{1}{432}\; {\rm g_1}^2\; {\rm g_2}^2\; {\rm LF_{2,2,-1}} \big[\, {\rm m_1}\,,\, {\rm m_{\tilde{q}}}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{1}{2} \, {\rm m_2}^2 \, {\rm LF_{2,2,-1}} \big[\, {\rm m_2}\,,\, {\rm m_{\tilde{q}}}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{1}{2} \, {\rm m_2}^2 \, {\rm LF_{2,2,-1}} \big[\, {\rm m_2}\,,\, {\rm m_{\tilde{q}}}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{1}{2} \, {\rm m_2}^2 \, {\rm LF_{2,2,-1}} \big[\, {\rm m_2}\,,\, {\rm m_{\tilde{q}}}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{1}{2} \, {\rm m_2}^2 \, {\rm LF_{2,2,-1}} \big[\, {\rm m_2}\,,\, {\rm m_{\tilde{q}}}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{1}{2} \, {\rm m_2}^2 \, {\rm LF_{2,2,-1}} \big[\, {\rm m_2}\,,\, {\rm m_{\tilde{q}}}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}2} - \frac{1}{2} \, {\rm m_2}^2 \, {\rm LF_{2,2,-1}} \big[\, {\rm m_2}\,,\, {\rm m_{\tilde{q}}}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} - \frac{1}{2} \, {\rm m_2}^2 \, {\rm LF_{2,2,-1}} \big[\, {\rm m_2}\,,\, {\rm m_{\tilde{q}}}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} - \frac{1}{2} \, {\rm m_2}^2 \, {\rm LF_{2,2,-1}} \big[\, {\rm m_2}\,,\, {\rm m_2}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} - \frac{1}{2} \, {\rm m_2}^2 \, {\rm m_2}^2 \, {\rm LF_{2,2,-1}} \big[\, {\rm m_2}\,,\, {\rm m_2}^{\,i\,2}\, \big] \; \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} - \frac{1}{2} \, {\rm m_2}^2 
                                                                                                                                          \frac{1}{216}~g_{1}^{2}~g_{2}^{2}~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{1}\,,\,\mathsf{m}_{\tilde{q}}^{~i\,2}\,\big]~\delta_{\dot{1}\dot{1}\dot{1}2}\,+\,\frac{1}{432}~g_{1}^{2}~g_{2}^{2}~\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{1}\,,\,\mathsf{m}_{\tilde{q}}^{~i\,2}\,\big]~\delta_{\dot{1}\dot{1}\dot{1}2}\,+\,\frac{1}{432}\,g_{1}^{2}~g_{2}^{2}~\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{1}\,,\,\mathsf{m}_{\tilde{q}}^{~i\,2}\,\big]~\delta_{\dot{1}\dot{1}\dot{1}2}\,+\,\frac{1}{432}\,g_{1}^{2}~g_{2}^{2}\,\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{1}\,,\,\mathsf{m}_{\tilde{q}}^{~i\,2}\,\big]
                                                                                                                                              \frac{1}{3} \; {g_{2}}^{4} \; \left( {c_{\gamma}}^{2} + {s_{\gamma}}^{2} \right) \; \mathsf{LF}_{2,1,0} \left[ \, \mathsf{m}_{2} \, , \, \widetilde{\mu} \, \right] \; \delta_{\mathtt{ili}2} - \frac{1}{3} \; {g_{2}}^{4} \; \left( {c_{\gamma}}^{2} + {s_{\gamma}}^{2} \right) \; \mathsf{LF}_{2,2,-1} \left[ \, \mathsf{m}_{2} \, , \, \widetilde{\mu} \, \right] \; \delta_{\mathtt{ili}2} - \frac{1}{3} \; \mathsf{m}_{2} + \frac
                                                                                                                                          \frac{2}{3} \text{ m}_{2} \text{ s}_{\gamma} \, \tilde{\mu} \text{ c}_{\gamma} \text{ g}_{2}^{\text{ 4}} \text{ LF}_{2,2,0} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{s}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) \text{ LF}_{3,1,-1} [\text{m}_{2}, \, \tilde{\mu}] \, \delta_{\text{ili}2} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} \left(\text{c}_{\gamma}^{\text{ 2}} + \text{c}_{\gamma}^{\text{ 2}}\right) + \frac{1}{6} \text{ g}_{2}^{\text{ 2}} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} + \frac{1}{6} \text{ g}_{2}^{\text{ 4}} + \frac{1}{
                                                                                                                                              \frac{1}{6} \; {g_{2}}^{4} \; \left( {c_{\gamma}}^{2} + {s_{\gamma}}^{2} \right) \; \mathsf{LF}_{3,2,-2} \left[ \, \mathsf{m}_{2} \, , \, \widetilde{\mu} \, \right] \; \delta_{\mathsf{i} \, \mathsf{1} \, \mathsf{i} \, \mathsf{2}} + \frac{1}{3} \; \mathsf{m}_{2} \; {s_{\gamma}} \; \widetilde{\mu} \; {c_{\gamma}} \; {g_{2}}^{4} \; \mathsf{LF}_{3,2,-1} \left[ \, \mathsf{m}_{2} \, , \, \widetilde{\mu} \, \right] \; \delta_{\mathsf{i} \, \mathsf{1} \, \mathsf{i} \, \mathsf{2}} + \frac{1}{3} \; \mathsf{m}_{2} \; {s_{\gamma}} \; \widetilde{\mu} \; {c_{\gamma}} \; {g_{2}}^{4} \; \mathsf{LF}_{3,2,-1} \left[ \, \mathsf{m}_{2} \, , \, \widetilde{\mu} \, \right] \; \delta_{\mathsf{i} \, \mathsf{1} \, \mathsf{i} \, \mathsf{2}} + \frac{1}{3} \; \mathsf{m}_{2} \; {s_{\gamma}} \; \widetilde{\mu} \; {c_{\gamma}} \; {g_{2}}^{4} \; \mathsf{LF}_{3,2,-1} \left[ \, \mathsf{m}_{2} \, , \, \widetilde{\mu} \, \right] \; \delta_{\mathsf{i} \, \mathsf{1} \, \mathsf{i} \, \mathsf{2}} + \frac{1}{3} \; \mathsf{m}_{2} \; {s_{\gamma}} \; \widetilde{\mu} \; {c_{\gamma}} \; {g_{2}}^{4} \; \mathsf{LF}_{3,2,-1} \left[ \, \mathsf{m}_{2} \, , \, \widetilde{\mu} \, \right] \; \delta_{\mathsf{i} \, \mathsf{1} \, \mathsf{i} \, \mathsf{2}} \; \delta_{\mathsf{i} \, \mathsf{1} \, \mathsf{1} \, \mathsf{2}} \; \delta_{\mathsf{i} \, \mathsf{2}} \; \delta
                                                                                                                                              \frac{2}{3}\;g_{3}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{2,1,0}\left[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{d}}^{\;p}\,\right]\,-\,\frac{4}{3}\;g_{3}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{3,1,-1}\!\left[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{d}}^{\;p}\,\right]\,+\,\frac{4}{3}\,g_{3}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{3,1,-1}\!\left[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{d}}^{\;p}\,\right]\,+\,\frac{4}{3}\,g_{3}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{3,1,-1}\!\left[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{d}}^{\;p}\,\right]\,+\,\frac{4}{3}\,g_{3}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{3,1,-1}\!\left[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{d}}^{\;p}\,\right]\,+\,\frac{4}{3}\,g_{3}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i1p}\;\mathsf{LF}_{3,1,-1}\!\left[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{d}}^{\;p}\,\right]\,+\,\frac{4}{3}\,g_{3}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;\mathsf{LF}_{3,1,-1}\!\left[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{d}}^{\;p}\,\right]\,+\,\frac{4}{3}\,g_{3}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i2p}\;\mathsf{LF}_{3,1,-1}\!\left[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{d}}^{\;p}\,\right]\,+\,\frac{4}{3}\,g_{3}{}^{2}\;c_{\gamma}{}^{2}\;\overline{y_{d}}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}^{i2p}\;y_{d}{}
                                                                                                                                              \frac{2}{3}\; {g_{3}}^{2}\; {c_{\gamma}}^{2}\; \overline{y_{d}}^{i2p}\; {y_{d}}^{i1p}\; \mathsf{LF_{4,1,-2}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{d}}}^{p}\big] \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; {g_{3}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; \mathsf{LF_{2,1,0}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{q}}}^{i2}\big] \; \delta_{\text{ili2}} \; + \; \frac{1}{9}\; {g_{2}}^{2}\; + \; \frac{1}{9}\; {g_{2}}^{2}\; + \; \frac{1}{9}\; {g_{2}}^{2}\; + \; \frac{1}{9}\; + \; \frac{1}{9}\; {g_{2}}^{2}\; + \; \frac{1}{9}\; + \;
                                                                                                                                              \frac{1}{9}\; {\rm g_2}^2\; {\rm g_3}^2\; {\rm LF_{2,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big]\; \delta_{\rm i\,1i\,2} - \frac{2}{9}\; {\rm g_2}^2\; {\rm g_3}^2\; {\rm LF_{3,1,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big]\; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm m_3}^2\,\,{\rm LF_{3,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big] \; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm LF_{3,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big] \; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm LF_{3,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big] \; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm LF_{3,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big] \; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm LF_{3,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big] \; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm m_3}^2\,\,{\rm LF_{3,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big] \; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm m_3}^2\,\,{\rm LF_{3,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big] \; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm m_3}^2\,\,{\rm LF_{3,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big] \; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm m_3}^2\,\,{\rm m_3}^2\,\,{\rm LF_{3,2,-1}}\big[\,{\rm m_3}\,,\,\,{\rm m_{\tilde{q}}}^{\rm i\,2}\,\big] \; \delta_{\rm i\,1i\,2} + \frac{1}{9}\, {\rm m_3}^2\,\,{\rm m_3}^2\,\,{\rm
                                                                                                                                          \frac{4}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{i2p}\;y_{u}{}^{i1p}\;\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{u}}{}^{p}\,\big]\,+\,\frac{2}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{i2p}\;y_{u}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{u}}{}^{p}\,\big]\,+\,\frac{2}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{i2p}\;y_{u}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{u}}{}^{p}\,\big]\,+\,\frac{2}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{i2p}\;y_{u}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{u}}{}^{p}\,\big]\,+\,\frac{2}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{i2p}\;y_{u}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{u}}{}^{p}\,\big]\,+\,\frac{2}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{i2p}\;y_{u}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{u}}{}^{p}\,\big]\,+\,\frac{2}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{i2p}\;y_{u}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{u}}{}^{p}\,\big]\,+\,\frac{2}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{i2p}\;y_{u}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{u}}{}^{p}\,\big]\,+\,\frac{2}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{i2p}\;y_{u}{}^{i1p}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{u}}{}^{p}\,\big]\,+\,\frac{2}{3}\;g_{3}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{2}\;\overline{y_{u}}{}^{2}\,s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{2}\;s_{\gamma}{}^{2}\;\overline{y_{u}}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}{}^{2}\;s_{\gamma}
                                                                                                                                              \frac{1}{8} \ g_2{}^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}}}^p, \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \widetilde{\mu} \ \mathsf{m_{\tilde{e}}}^r \big] \ \delta_{\texttt{1112}} - s_\gamma \ \mathsf{m_{\tilde{e}}}^r \big] \ 
                                                                                                                                                                            \mathsf{g_2}^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_{5,1,-2}} \big[ \, \mathsf{m_{\tilde{l}}}^{\mathsf{p}} \, , \; \mathsf{m_{\tilde{e}}}^{\mathsf{r}} \big] \; \delta_{\mathsf{ili2}} + \mathsf{h_{\tilde{l}}}^{\mathsf{pr}} \, , \; 
                                                                                                                                              \frac{3}{8}\;g_2^{\;2}\;\left(c_{\curlyvee}\,\overline{a_d}^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;\overline{y_d}^{pr}\right)\;\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\!\left[\mathsf{m}_{\tilde{q}}^{\;\;p},\;\mathsf{m}_{\tilde{d}}^{\;\;r}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{\;\;p},\;\mathsf{m}_{\tilde{d}}^{\;\;r}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{\;\;p},\;\mathsf{m}_{\tilde{d}}^{\;\;r}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{\;\;p},\;\mathsf{m}_{\tilde{d}}^{\;\;r}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{\;\;p},\;\mathsf{m}_{\tilde{d}}^{\;\;r}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{\;\;p},\;\mathsf{m}_{\tilde{d}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{\;\;p},\;\mathsf{m}_{\tilde{d}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{d}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{d}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\curlyvee}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{d}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\curlyvee}\,a_d^{pr}-s_{\mathclap}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{d}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\Lsh}\,a_d^{pr}-s_{\mathclap}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{d}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\Lsh}\,a_d^{pr}-s_{\mathclap}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{d}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\backprime}\,a_d^{pr}-s_{\mathclap}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{q}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\backprime}\,a_d^{pr}-s_{\mathclap}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{q}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\backprime}\,a_d^{pr}-s_{\mathclap}\,\widetilde{\mu}\;y_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{q}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\mathclap}\,a_d^{pr}-s_{\mathclap}\,a_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{q}}^{pr}\right]\;\delta_{\text{ili2}}-\frac{1}{2}\left(c_{\mathclap}\,a_d^{pr}-s_{\mathclap}\,a_d^{pr}\right)\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m}_{\tilde{q}}^{pr},\;\mathsf{m}_{\tilde{q}}^{pr}\right]\;
                                                                                                                                                                                     \mathbf{g_2}^2 \; \left( \mathbf{c_{\gamma}} \; \overline{\mathbf{a_d}}^{\text{pr}} - \mathbf{s_{\gamma}} \, \widetilde{\boldsymbol{\mu}} \; \overline{\mathbf{y_d}}^{\text{pr}} \right) \; \left( \mathbf{c_{\gamma}} \; \mathbf{a_d}^{\text{pr}} - \mathbf{s_{\gamma}} \, \widetilde{\boldsymbol{\mu}} \; \mathbf{y_d}^{\text{pr}} \right) \; \mathsf{LF_{5,1,-2}} \left[ \mathbf{m_{\bar{q}}}^{\text{p}} , \; \mathbf{m_{\bar{d}}}^{\text{r}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{q}}}^{\text{p}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{q}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{q}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{q}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{q}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{q}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{q}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{q}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{q}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}}} \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{d}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} + \frac{1}{2} \left[ \mathbf{m_{\bar{d}}}^{\text{pr}} , \; \mathbf{m_{\bar{d}}}^{\text{pr}} \right] \; \delta_{\text{ili2}} \; \delta_{\text{ili2}} \; \delta_{\text{ili2}}} \; \delta_{\text{ili2}} \; \delta_{\text{ili2}}} \; \delta_{\text{ili2}} \; \delta_{\text{ili2}}} \; \delta_{\text{ili2}} \; \delta_{\text{ili2}} \; \delta_{\text{ili2}} \; \delta_{\text{ili2}} \; \delta_{\text{ili2}}} \; \delta_{\text{ili2}} \; \delta_{\text{i
                                                                                                                                              \frac{1}{4}~g_{2}^{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}_{2,2,0}\left[\mathsf{m}_{\bar{q}}^{~r},~\mathsf{m}_{\bar{u}}^{~r}\right]~\delta_{\texttt{ili}2}-C_{\mathsf{ili}2}
                                                                                                                                                                                     \mathbf{g_{2}}^{2} \; \left( \, \mathbf{s_{\scriptscriptstyle Y}} \; \overline{\mathbf{a_{u}}}^{\text{pr}} - \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\scriptscriptstyle Y}} \; \overline{\mathbf{y_{u}}}^{\text{pr}} \right) \; \left( \, \mathbf{s_{\scriptscriptstyle Y}} \; a_{u}^{\, \text{pr}} - \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\scriptscriptstyle Y}} \; \mathbf{y_{u}}^{\text{pr}} \right) \; \mathsf{LF_{3,2,-1}} \big[ \, \mathbf{m_{\tilde{q}}}^{\, \text{p}} \, , \; \mathbf{m_{\tilde{u}}}^{\, \text{r}} \big] \; \delta_{\text{ili2}} - \mathbf{m_{\tilde{u}}}^{\, \text{pr}} \, . 
                                                                                                                                          \tfrac{1}{216}~g_1{}^2~g_2{}^2~\mathsf{LF}_{2,1,0}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_2{}^2~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_2{}^2~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_2{}^2~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_2{}^2~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_2{}^2~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_2{}^2~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_2{}^2~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_2{}^2~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_2{}^2~\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\,,~\mathsf{m}_1\,\big]~\delta_{\dot{1}\dot{1}\dot{1}\dot{1}2}~+~\tfrac{1}{432}~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g_1{}^2~g
                                                                                                                                              \frac{1}{24} \; {g_{2}}^{4} \; \mathsf{LF}_{2,1,0} \left[ \, \mathsf{m}_{\bar{q}}^{\;\; i2} \, , \; \mathsf{m}_{2} \, \right] \; \delta_{\mathsf{ili2}} - \frac{1}{48} \; {g_{2}}^{4} \; \mathsf{LF}_{3,1,-1} \left[ \, \mathsf{m}_{\bar{q}}^{\;\; i2} \, , \; \mathsf{m}_{2} \, \right] \; \delta_{\mathsf{ili2}} - \frac{1}{48} \; {g_{2}}^{4} \; \mathsf{LF}_{3,1,-1} \left[ \, \mathsf{m}_{\bar{q}}^{\;\; i2} \, , \; \mathsf{m}_{2} \, \right] \; \delta_{\mathsf{ili2}} - \frac{1}{48} \; {g_{2}}^{4} \; \mathsf{LF}_{3,1,-1} \left[ \, \mathsf{m}_{\bar{q}}^{\;\; i2} \, , \; \mathsf{m}_{2} \, \right] \; \delta_{\mathsf{ili2}} - \frac{1}{48} \; {g_{2}}^{4} \; \mathsf{LF}_{3,1,-1} \left[ \, \mathsf{m}_{\bar{q}}^{\;\; i2} \, , \; \mathsf{m}_{2} \, \right] \; \delta_{\mathsf{ili2}} - \frac{1}{48} \; {g_{2}}^{4} \; \mathsf{LF}_{3,1,-1} \left[ \, \mathsf{m}_{\bar{q}}^{\;\; i2} \, , \; \mathsf{m}_{2} \, \right] \; \delta_{\mathsf{ili2}} - \frac{1}{48} \; {g_{2}}^{4} \; \mathsf{LF}_{\mathsf{ili2}} - \frac{1}{48} \; {g_{2}}^{
                                                                                                                                              \frac{2}{9}\; g_2{}^2\; g_3{}^2\; \mathsf{LF}_{2,1,0} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, + \, \frac{1}{9} \; g_2{}^2 \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \, - \, \frac{1}{9} \; g_3{}^2 \; \mathsf{LF}_{3,1,-1} \big[ \, \mathsf{m}_{\bar{\mathsf{q}}}^{\,\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3 \, \big] \; \delta_{\, i\, 1\, i\, 2} \,, \, \, \mathsf{m}_3
                                                                                                                                              \frac{1}{4}~g_{2}^{~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_{3,1,0}}\left[\mathsf{m_{\tilde{u}}}^{r},~\mathsf{m_{\tilde{q}}}^{p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}
                                                                                                                                              \frac{1}{4} \; {g_2}^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) \; LF_{3,2,-1} \left[ \textbf{m}_{\tilde{u}}^{\; r} \; , \; \textbf{m}_{\tilde{q}}^{\; p} \right] \; \delta_{\text{ili2}} \; + \\ \frac{1}{4} \; g_2^2 \; \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) \; LF_{3,2,-1} \left[ \textbf{m}_{\tilde{u}}^{\; r} \; , \; \textbf{m}_{\tilde{q}}^{\; p} \right] \; \delta_{\text{ili2}} \; + \\ \frac{1}{4} \; g_2^2 \; \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) \; LF_{3,2,-1} \left[ \textbf{m}_{\tilde{u}}^{\; r} \; , \; \textbf{m}_{\tilde{q}}^{\; p} \right] \; \delta_{\text{ili2}} \; + \\ \frac{1}{4} \; g_2^2 \; \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) \; LF_{3,2,-1} \left[ \textbf{m}_{\tilde{u}}^{\; r} \; , \; \textbf{m}_{\tilde{q}}^{\; p} \right] \; \delta_{\text{ili2}} \; + \\ \frac{1}{4} \; g_2^2 \; \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) \; LF_{3,2,-1} \left[ \textbf{m}_{\tilde{u}}^{\; r} \; , \; \textbf{m}_{\tilde{q}}^{\; p} \right] \; \delta_{\text{ili2}} \; + \\ \frac{1}{4} \; g_2^2 \; \left( s_\gamma \; \overline{a_u}^{pr} + \overline{\mu} \; c_\gamma \; \overline{y_u}^{pr} \right) \; \left( s_\gamma \; a_u^{pr} + \overline{\mu} \; c_\gamma \; y_u^{pr} \right) \; LF_{3,2,-1} \left[ \textbf{m}_{\tilde{u}}^{\; r} \; , \; \textbf{m}_{\tilde{q}}^{p} \right] \; \delta_{\text{ili2}} \; + \\ \frac{1}{4} \; g_2^2 \; \left( s_\gamma \; \overline{a_u}^{pr} + \overline{\mu} \; c_\gamma \; \overline{y_u}^{pr} \right) \; \left( s_\gamma \; \overline{a_u}^{pr} + \overline{\mu} \; c_\gamma \; \overline{y_u}^{pr} \right) \; \delta_{\text{ili2}} \; + \\ \frac{1}{4} \; g_2^2 \; \left( s_\gamma \; \overline{a_u}^{pr} + \overline{\mu} \; \overline{y_u}^{pr} + \overline{\mu} \; \overline{y_u}^{pr} + \overline{\mu} \; \overline{y_u}^{pr} \right) \; \delta_{\text{ili2}} \; + \\ \frac{1}{4} \; g_2^2 \; \overline{y_u}^{pr} + \overline{\mu} \; \overline{y_
                                                                                                                                              \frac{3}{4}~g_2^{~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)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{~r},~\mathfrak{m}_{\tilde{q}}^{~p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{~r},~\mathfrak{m}_{\tilde{q}}^{~p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{~r},~\mathfrak{m}_{\tilde{q}}^{~p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{~r},~\mathfrak{m}_{\tilde{q}}^{~p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{~r},~\mathfrak{m}_{\tilde{q}}^{~p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{~r},~\mathfrak{m}_{\tilde{q}}^{~p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{~r},~\mathfrak{m}_{\tilde{q}}^{~p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{~r},~\mathfrak{m}_{\tilde{q}}^{~p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{~r},~\mathfrak{m}_{\tilde{q}}^{~p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{pr},~\mathfrak{m}_{\tilde{q}}^{p}\right]~\delta_{\texttt{ili2}}-\frac{1}{2}\left(s_\gamma~a_u^{pr}-\widetilde{\mu}~c_\gamma~y_u^{pr}\right)~LF_{4,1,-1}\!\left[\mathfrak{m}_{\tilde{u}}^{pr},~\mathfrak{m}_{\tilde{q}}^{p}\right]
                                                                                                                                                                                 g_2^2 \; \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}_{\tilde{u}}^{\; r} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \right] \; \delta_{\text{11i2}} - \widetilde{h}_{\tilde{u}}^{\; r} \; , \; \widetilde{h}_{\tilde{q}}^{\; p} \; \widetilde{h}_{\tilde{q}}^{
                                                                                                                                          \frac{1}{6}\;g_{1}^{2}\;g_{2}^{2}\;\left(c_{\gamma}^{\;2}+s_{\gamma}^{\;2}\right)\;\mathsf{LF}_{5,1,-3}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;+\;\frac{1}{3}\;\mathsf{m}_{1}\;s_{\gamma}\;\widetilde{\mu}\;c_{\gamma}\;g_{1}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;+\;\frac{1}{3}\;\mathsf{m}_{1}^{\;2}\;s_{\gamma}^{\;2}\;\widetilde{\mu}\;c_{\gamma}^{\;2}\;g_{1}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;+\;\frac{1}{3}\;\mathsf{m}_{1}^{\;2}\;s_{\gamma}^{\;2}\;\widetilde{\mu}\;c_{\gamma}^{\;2}\;g_{1}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;+\;\frac{1}{3}\;\mathsf{m}_{1}^{\;2}\;s_{\gamma}^{\;2}\;\widetilde{\mu}\;c_{\gamma}^{\;2}\;g_{1}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;+\;\frac{1}{3}\;\mathsf{m}_{1}^{\;2}\;g_{1}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;+\;\frac{1}{3}\;\mathsf{m}_{1}^{\;2}\;g_{1}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;+\;\frac{1}{3}\;\mathsf{m}_{1}^{\;2}\;g_{1}^{\;2}\;g_{1}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;+\;\frac{1}{3}\;\mathsf{m}_{1}^{\;2}\;g_{1}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;+\;\frac{1}{3}\;\mathsf{m}_{1}^{\;2}\;g_{1}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;\delta_{\mathsf{ili}2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\;,\;\mathsf{m}_{1}\right]\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}
                                                                                                                                              \frac{2}{3} \; {\rm g_2}^4 \; \left( {\rm c_{\gamma}}^2 + {\rm s_{\gamma}}^2 \right) \; {\rm LF_{3,1,-1}} \left[ \widetilde{\mu} \; , \; {\rm m_2} \right] \; \delta_{\rm ili_2} \; + \; \frac{2}{3} \; {\rm m_2} \; {\rm s_{\gamma}} \, \widetilde{\mu} \; {\rm c_{\gamma}} \; {\rm g_2}^4 \; {\rm LF_{3,1,0}} \left[ \widetilde{\mu} \; , \; {\rm m_2} \right] \; \delta_{\rm ili_2} \; + \; \frac{2}{3} \; {\rm m_2} \; {\rm s_{\gamma}} \, \widetilde{\mu} \; {\rm c_{\gamma}} \; {\rm g_2}^4 \; {\rm LF_{3,1,0}} \left[ \widetilde{\mu} \; , \; {\rm m_2} \right] \; \delta_{\rm ili_2} \; + \; \frac{2}{3} \; {\rm m_2} \; {\rm s_{\gamma}} \, \widetilde{\mu} \; {\rm c_{\gamma}} \; {\rm g_2}^4 \; {\rm LF_{3,1,0}} \left[ \widetilde{\mu} \; , \; {\rm m_2} \right] \; \delta_{\rm ili_2} \; + \; \frac{2}{3} \; {\rm m_2} \; {\rm s_{\gamma}} \, \widetilde{\mu} \; {\rm c_{\gamma}} \; {\rm g_2}^4 \; {\rm LF_{3,1,0}} \left[ \widetilde{\mu} \; , \; {\rm m_2} \right] \; \delta_{\rm ili_2} \; + \; \frac{2}{3} \; {\rm m_2} \; {\rm s_{\gamma}} \, \widetilde{\mu} \; {\rm c_{\gamma}} \; {\rm g_2}^4 \; {\rm LF_{3,1,0}} \left[ \widetilde{\mu} \; , \; {\rm m_2} \right] \; \delta_{\rm ili_2} \; + \; \frac{2}{3} \; {\rm m_2} \; {\rm s_{\gamma}} \, \widetilde{\mu} \; {\rm c_{\gamma}} \; {\rm g_2}^4 \; {\rm LF_{3,1,0}} \left[ \widetilde{\mu} \; , \; {\rm m_2} \right] \; \delta_{\rm ili_2} \; + \; \frac{2}{3} \; {\rm m_2} \; {\rm c_{\gamma}} \; {\rm c_
                                                                                                                                              \frac{1}{3} \; {\rm g_2}^4 \; \left( {\rm c_\gamma}^2 + {\rm s_\gamma}^2 \right) \; {\rm LF_{3,2,-2}} \left[ \tilde{\mu} \;, \; {\rm m_2} \right] \; \delta_{\rm ili2} + \frac{2}{3} \; {\rm m_2} \; {\rm s_\gamma} \, \tilde{\mu} \; {\rm c_\gamma} \; {\rm g_2}^4 \; {\rm LF_{3,2,-1}} \left[ \tilde{\mu} \;, \; {\rm m_2} \right] \; \delta_{\rm ili2} - {\rm in_2} \; {\rm c_\gamma} \; {\rm
                                                                                                                                          \frac{9}{8}\;{g_{2}}^{4}\;\left({c_{\gamma}}^{2}+{s_{\gamma}}^{2}\right)\;\mathsf{LF_{4,1,-2}}[\tilde{\mu}\,,\,\mathsf{m_{2}}]\;\;\delta_{\mathsf{1112}}-\frac{7}{4}\;\mathsf{m_{2}}\;s_{\gamma}\,\tilde{\mu}\;c_{\gamma}\;{g_{2}}^{4}\;\mathsf{LF_{4,1,-1}}[\tilde{\mu}\,,\,\mathsf{m_{2}}]\;\;\delta_{\mathsf{1112}}+\frac{7}{4}\;\mathsf{m_{2}}\;s_{\gamma}\,\tilde{\mu}\;c_{\gamma}\;g_{2}
                                                                                                                                          \frac{1}{2}\;g_{2}^{\;4}\;\left(c_{\gamma}^{\;2}+s_{\gamma}^{\;2}\right)\;\mathsf{LF}_{5,1,-3}\left[\widetilde{\mu}\,,\;\mathsf{m}_{2}\right]\;\delta_{\mathsf{1112}}+\mathsf{m}_{2}\;s_{\gamma}\;\widetilde{\mu}\;c_{\gamma}\;g_{2}^{\;4}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\,,\;\mathsf{m}_{2}\right]\;\delta_{\mathsf{1112}}-\mathsf{m}_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\,,\;\mathsf{m}_{2}\right]\;\delta_{\mathsf{1112}}+\mathsf{m}_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\,,\;\mathsf{m}_{2}\right]\;\delta_{\mathsf{1112}}-\mathsf{m}_{2}^{\;2}\;\mathsf{LF}_{5,1,-2}\left[\widetilde{\mu}\,,\;\mathsf{m}_{2}\right]\;\delta_{\mathsf{1112}}-\mathsf{m}_{2}^{\;2}\;\mathsf{LF}_{\mathsf{1112}}+\mathsf{m}_{\mathsf{1112}}\;\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112}}+\mathsf{LF}_{\mathsf{1112
                                                                                                                                              \frac{1}{8} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF_{3,1,-1}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i2p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i2p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{m_{\tilde{d}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_d}{}^{i2p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{LF_{4,1,-2}} \big] \, + \, \frac{1}{24} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{LF_{4,1,-2}} \big] \, + \, \frac{1}{24} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \,, \ \mathsf{LF_{4,1,-2}} \big[ \widetilde
                                                                                                                                              \frac{1}{2} \left( c_{\gamma}^{2} \ \overline{y_{d}}^{\text{rs}} \ \overline{y_{d}}^{\text{i2p}} \ y_{d}^{\text{rp}} \ y_{d}^{\text{i1s}} + s_{\gamma}^{2} \ \overline{y_{u}}^{\text{rs}} \ \overline{y_{u}}^{\text{i2p}} \ y_{u}^{\text{rp}} \ y_{u}^{\text{i1s}} \right) \ \mathsf{LF}_{2,1,0} \left[ \widetilde{\mu} \, , \ \mathfrak{m}_{\widetilde{q}}^{\text{r}} \right] + c_{\gamma}^{2} \left[ \widetilde{\mu}_{q} \right] + c
                                                                                                                                              \left[-c_{\gamma}^{2}\,\overline{y_{d}}^{rs}\,\overline{y_{d}}^{i2p}\,y_{d}^{rp}\,y_{d}^{i1s}-s_{\gamma}^{2}\,\overline{y_{u}}^{rs}\,\overline{y_{u}}^{i2p}\,y_{u}^{rp}\,y_{u}^{i1s}\right)\,\mathsf{LF}_{3,1,-1}\!\left[\widetilde{\mu}\,,\,\mathfrak{m}_{\widetilde{\mathfrak{q}}}^{\,r}\right]+
                                                                                                                                                                                 \left(c_{\gamma}^{2}\,\overline{y_{d}}^{\text{rs}}\,\overline{y_{d}}^{\text{i2p}}\,y_{d}^{\text{rp}}\,y_{d}^{\text{i1s}}+s_{\gamma}^{2}\,\overline{y_{u}}^{\text{rs}}\,\overline{y_{u}}^{\text{i2p}}\,y_{u}^{\text{rp}}\,y_{u}^{\text{i1s}}\right)\,\mathsf{LF_{4,1,-2}}\left[\widetilde{\mu}\,,\,\mathfrak{m}_{\widetilde{q}}^{\text{-r}}\right]-\left(c_{\gamma}^{2}\,\overline{y_{u}}^{\text{rs}}\,\overline{y_{u}}^{\text{i2p}}\,y_{u}^{\text{i2p}}\,y_{u}^{\text{i1s}}\right)\,\mathsf{LF_{4,1,-2}}\left[\widetilde{\mu}\,,\,\mathfrak{m}_{\widetilde{q}}^{\text{-r}}\right]-\left(c_{\gamma}^{2}\,\overline{y_{u}}^{\text{rs}}\,\overline{y_{u}}^{\text{i2p}}\,y_{u}^{\text{i2p}}\,y_{u}^{\text{i2p}}\right)\,\mathsf{LF_{4,1,-2}}\left[\widetilde{\mu}\,,\,\mathfrak{m}_{\widetilde{q}}^{\text{-r}}\right]-\left(c_{\gamma}^{2}\,\overline{y_{u}}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_{u}^{\text{-r}}\,y_
                                                                                                                                              \frac{1}{8} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{3,1,-1}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i2p} \ y_u{}^{i2p} \ \mathsf{LF_{4,1,-2}} \big[ \widetilde{\mu} \, , \ \mathsf{m_{\tilde{u}}}^p \big] \, + \, \frac{1}{24} \ g_2{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i2p} \ y_u
                                                                                                                                                                                                  \mathsf{m_{1}}\;c_{\gamma}\;g_{1}^{\;2}\;\overline{y_{d}}^{i2p}\;\left(c_{\gamma}\;a_{d}^{\;i1p}-s_{\gamma}\;\widetilde{\mu}\;y_{d}^{\;i1p}\right)\;\mathsf{LF_{2,1,1,0}}\!\left[\mathsf{m_{1}}\;,\;\mathsf{m_{\tilde{d}}}^{p}\;,\;\mathsf{m_{\tilde{q}}}^{i1}\right]\;+
                                                                                                                                          \frac{1}{144} \; m_1 \; c_{\gamma} \; g_1^{\; 2} \; \overline{y_d}^{i2p} \; \left( c_{\gamma} \; a_d^{\; i1p} - s_{\gamma} \; \widetilde{\mu} \; y_d^{\; i1p} \right) \; \mathsf{LF}_{2,2,1,-1} \big[ m_1 \, , \; m_{\bar{d}}^{\; p} \, , \; m_{\bar{q}}^{\; i1} \big] \; + \\
                                                                                                                                                                                                  m_1 c_{\gamma} g_1^2 \overline{y_d}^{i2p} \left(-c_{\gamma} a_d^{i1p} + s_{\gamma} \widetilde{\mu} y_d^{i1p}\right) LF_{3,1,1,-1}[m_1, m_{\bar{d}}^{-p}, m_{\bar{q}}^{i1}] +
                                                                                                                                                               \stackrel{1}{\pi_{1}} m_{1} c_{\gamma} g_{1}^{2} y_{d}^{i1p} \left( c_{\gamma} \overline{a_{d}}^{i2p} - s_{\gamma} \widetilde{\mu} \overline{y_{d}}^{i2p} \right) LF_{2,1,1,0} \left[ m_{1}, m_{\tilde{d}}^{p}, m_{\tilde{q}}^{i2} \right] +
                                                                                                                                                                                                           _{ar{4}} \mathsf{m_1} \mathsf{c_{\gamma}} \mathsf{g_1}^2 \mathsf{y_d}^{\mathsf{ilp}} \left(\mathsf{c_{\gamma}} \overline{\mathsf{a_d}}^{\mathsf{i2p}} - \mathsf{s_{\gamma}} \widetilde{\mu} \overline{\mathsf{y_d}}^{\mathsf{i2p}}\right) \mathsf{LF_{2,2,1,-1}}\left[\mathsf{m_1},\,\mathsf{m_{\tilde{d}}}^\mathsf{p},\,\mathsf{m_{\tilde{q}}}^{\mathsf{i2}}\right] +
                                                                                                                                              \frac{1}{72} \; \mathsf{m_1} \; \mathsf{c_{Y}} \; \mathsf{g_1}^2 \; \mathsf{y_d}^{\mathsf{ilp}} \; \left( - \, \mathsf{c_{Y}} \; \overline{\mathsf{a_d}}^{\mathsf{i2p}} + \, \mathsf{s_{Y}} \; \widetilde{\mu} \; \overline{\mathsf{y_d}}^{\mathsf{i2p}} \right) \; \mathsf{LF_{3,1,1,-1}} \left[ \, \mathsf{m_1} \, , \; \mathsf{m_{\tilde{d}}}^p \, , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2}} \, \right] \; - \; \mathsf{m_{\tilde{d}}}^{\mathsf{i2p}} \; \mathsf{m_{\tilde{d}}}^{\mathsf{i2p}} + \, \mathsf{s_{\tilde{d}}}^{\mathsf{i2p}} \, \right] \; \mathsf{m_{\tilde{d}}}^{\mathsf{i2p}} \; \mathsf{m_{\tilde{d}}}^{\mathsf
                                                                                                                                              \frac{1}{4} \; g_{1}{}^{2} \; c_{\gamma}{}^{2} \; \overline{y_{d}}{}^{i2p} \; y_{d}{}^{i1p} \; \mathsf{LF}_{2,1,1,-1} \big[ \mathsf{m}_{1} \,, \, \mathsf{m}_{\tilde{d}}{}^{p} \,, \, \widetilde{\mu} \, \big] - \frac{1}{6} \; \mathsf{m}_{1} \; s_{\gamma} \, \widetilde{\mu} \; c_{\gamma} \; g_{1}{}^{2} \; \overline{y_{d}}{}^{i2p} \; y_{d}{}^{i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \mathsf{m}_{1} \,, \, \mathsf{m}_{\tilde{d}}{}^{p} \,, \, \widetilde{\mu} \, \big] \; + \frac{1}{6} \; \mathsf{m}_{1} \; s_{\gamma} \, \widetilde{\mu} \; c_{\gamma} \; g_{1}{}^{2} \; \overline{y_{d}}{}^{i2p} \; y_{d}{}^{i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \mathsf{m}_{1} \,, \, \mathsf{m}_{\tilde{d}}{}^{p} \,, \, \widetilde{\mu} \, \big] \; + \frac{1}{6} \; \mathsf{m}_{1} \; s_{\gamma} \, \widetilde{\mu} \; c_{\gamma} \; g_{1}{}^{2} \; \overline{y_{d}}{}^{i2p} \; y_{d}{}^{i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \mathsf{m}_{1} \,, \, \mathsf{m}_{\tilde{d}}{}^{p} \,, \, \widetilde{\mu} \, \big] \; + \frac{1}{6} \; \mathsf{m}_{1} \; s_{\gamma} \, \widetilde{\mu} \; c_{\gamma} \; g_{1}{}^{2} \; \overline{y_{d}}{}^{i2p} \; y_{d}{}^{i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \mathsf{m}_{1} \,, \, \mathsf{m}_{\tilde{d}}{}^{p} \,, \, \widetilde{\mu} \, \big] \; + \frac{1}{6} \; \mathsf{m}_{1} \; s_{\gamma} \, \widetilde{\mu} \; c_{\gamma} \; g_{1}{}^{2} \; \overline{y_{d}}{}^{i2p} \; y_{d}{}^{i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \mathsf{m}_{1} \,, \, \mathsf{m}_{\tilde{d}}{}^{p} \,, \, \widetilde{\mu} \, \big] \; + \frac{1}{6} \; \mathsf{m}_{1} \; s_{\gamma} \, \widetilde{\mu} \; c_{\gamma} \; \widetilde{\mu} \; 
                                                                                                                                              \frac{1}{6} \ g_{1}{}^{2} \ c_{\gamma}{}^{2} \ \overline{y_{d}}{}^{i2p} \ y_{d}{}^{i1p} \ \mathsf{LF}_{3,1,1,-2} \big[ \, \mathsf{m}_{1} , \ \mathsf{m}_{\bar{d}}{}^{p} , \ \widetilde{\mu} \, \big] \ + \\ \frac{1}{6} \ \mathsf{m}_{1} \ \mathsf{s}_{\gamma} \ \widetilde{\mu} \ \mathsf{c}_{\gamma} \ g_{1}{}^{2} \ \overline{y_{d}}{}^{i2p} \ y_{d}{}^{i1p} \ \mathsf{LF}_{3,1,1,-1} \big[ \, \mathsf{m}_{1} , \ \mathsf{m}_{\bar{d}}{}^{p} , \ \widetilde{\mu} \, \big] \ + \\ \frac{1}{6} \ \mathsf{m}_{1} \ \mathsf{s}_{\gamma} \ \widetilde{\mu} \ \mathsf{c}_{\gamma} \ \mathsf{g}_{1}{}^{2} \ \overline{y_{d}}{}^{i2p} \ \mathsf{y}_{d}{}^{i1p} \ \mathsf{LF}_{3,1,1,-1} \big[ \, \mathsf{m}_{1} , \ \mathsf{m}_{\bar{d}}{}^{p} , \ \widetilde{\mu} \, \big] \ + \\ \frac{1}{6} \ \mathsf{m}_{1} \ \mathsf{s}_{\gamma} \ \widetilde{\mu} \ \mathsf{c}_{\gamma} \ \mathsf{g}_{1}{}^{2} \ \overline{y_{d}}{}^{i2p} \ \mathsf{y}_{d}{}^{i1p} \ \mathsf{LF}_{3,1,1,-1} \big[ \, \mathsf{m}_{1} , \ \mathsf{m}_{\bar{d}}{}^{p} , \ \widetilde{\mu} \, \big] \ + \\ \frac{1}{6} \ \mathsf{m}_{1} \ \mathsf{s}_{\gamma} \ \widetilde{\mu} \ \mathsf{c}_{\gamma} \ \mathsf{g}_{1}{}^{2} \ \mathsf{g}_{1}{}^{2p} \ \mathsf{g}_{1
                                                                                                                                              \frac{1}{144}\;\mathsf{m_1}\;\mathsf{c_{\scriptscriptstyle \gamma}}\;\mathsf{g_{\scriptscriptstyle 1}}^2\;\overline{\mathsf{y_d}}^{\mathsf{i2p}}\;\left(-\,\mathsf{c_{\scriptscriptstyle \gamma}}\;\mathsf{a_d}^{\mathsf{i1p}}\,+\,\mathsf{s_{\scriptscriptstyle \gamma}}\;\widetilde{\mu}\;\mathsf{y_d}^{\mathsf{i1p}}\right)\;\mathsf{LF_{2,2,1,-1}}\!\left[\,\mathsf{m_1}\,,\;\mathsf{m_{\bar{q}}}^{\mathsf{i1}}\,,\;\mathsf{m_{\bar{d}}}^{\mathsf{-p}}\,\right]\;+\;\mathsf{m_{\bar{q}}}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}^{\mathsf{-p}}\;\mathsf{a_d}
                                                                                                                                              \frac{1}{36} \ \mathsf{m_1} \ \mathsf{s_{Y}} \ \mathsf{g_1}^2 \ \overline{\mathsf{y_u}}^{12p} \ \left( - \, \mathsf{s_{Y}} \ \mathsf{a_u}^{11p} + \widetilde{\mu} \ \mathsf{c_{Y}} \ \mathsf{y_u}^{11p} \right) \ \mathsf{LF_{2,1,1,0}} \left[ \, \mathsf{m_1} \, , \ \mathsf{m_{\tilde{q}}}^{11} \, , \ \mathsf{m_{\tilde{u}}}^{\tilde{u}} \, \right] \ +
                                                                                                                                                           \frac{1}{36} \, \, \mathsf{m_1} \, \, \mathsf{s_Y} \, \, \mathsf{g_1}^2 \, \, \overline{\mathsf{y_u}}^{\mathsf{i2p}} \, \left( \mathsf{s_Y} \, \mathsf{a_u}^{\mathsf{i1p}} - \widetilde{\mu} \, \, \mathsf{c_Y} \, \mathsf{y_u}^{\mathsf{i1p}} \right) \, \mathsf{LF_{3,1,1,-1}} \big[ \, \mathsf{m_1} \, , \, \, \mathsf{m_q}^{\mathsf{-i1}} \, , \, \, \mathsf{m_u}^{\mathsf{-p}} \big] \, + \, \\
                                                                                                                                              \frac{1}{144} \; \mathsf{m_1} \; \mathsf{c_{\scriptscriptstyle Y}} \; \mathsf{g_1}^2 \; \mathsf{y_d}^{\mathsf{ilp}} \; \left( - \, \mathsf{c_{\scriptscriptstyle Y}} \; \overline{\mathsf{a_d}}^{\mathsf{i2p}} + \, \mathsf{s_{\scriptscriptstyle Y}} \; \widetilde{\mu} \; \overline{\mathsf{y_d}}^{\mathsf{i2p}} \right) \; \mathsf{LF_{2,2,1,-1}} \left[ \, \mathsf{m_1} \, , \; \mathsf{m_{\bar{q}}}^{\, \mathsf{i2}} \, , \; \mathsf{m_{\bar{d}}}^{\mathsf{p}} \, \right] \; + \; \mathsf{m_{\bar{q}}}^{\mathsf{i2p}} \; \mathsf{m_{\bar{q}}}^{\mathsf{i2p}} \; \mathsf{LF_{2,2,1,-1}} \left[ \, \mathsf{m_1} \, , \; \mathsf{m_{\bar{q}}}^{\, \mathsf{i2p}} \, , \; \mathsf{m_{\bar{d}}}^{\, \mathsf{p}} \, \right] \; + \; \mathsf{m_{\bar{q}}}^{\mathsf{i2p}} \; \mathsf{m_{\bar{q}}}^{\mathsf{i2p}} \; \mathsf{LF_{2,2,1,-1}} \left[ \, \mathsf{m_1} \, , \; \mathsf{m_{\bar{q}}}^{\, \mathsf{i2p}} \, , \; \mathsf{m_{\bar{d}}}^{\, \mathsf{p}} \, \right] \; + \; \mathsf{m_{\bar{q}}}^{\mathsf{i2p}} \; \mathsf{LF_{2,2,2,1,-1}} \left[ \, \mathsf{m_1} \, , \; \mathsf{m_{\bar{q}}}^{\, \mathsf{i2p}} \, , \; \mathsf{m_{\bar{q}}}^{\, \mathsf{p}} \, \right] \; + \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m_{\bar{q}}}^{\mathsf{p}} \; \mathsf{m_{\bar{q}}} \; \mathsf{m
                                                                                                                                                                                              \left[ m_{1} \, s_{\gamma} \, g_{1}^{2} \, y_{u}^{\, i \, 1p} \, \left( - \, s_{\gamma} \, \overline{a_{u}}^{\, i \, 2p} + \widetilde{\mu} \, c_{\gamma} \, \overline{y_{u}}^{\, i \, 2p} \right) \, LF_{2,1,1,0} \left[ m_{1} \, , \, m_{\tilde{q}}^{\, i \, 2} \, , \, m_{\tilde{u}}^{\, i \, 2} \right] + \widetilde{\mu} \, c_{\gamma} \, \overline{y_{u}}^{\, i \, 2p} \right] + \widetilde{\mu} \, c_{\gamma} \, \overline{y_{u}}^{\, i \, 2p} \, C_{\gamma} \, \overline{y_{u}}^{\, 2p} \, C_{\gamma} \, \overline{y_{u}}^{\, i \, 2p} \, C_{\gamma} \, \overline{y_{u}}^{\, i \, 2p}
                                                                                                                                                                                                  \mathsf{m_{1}} \; \mathsf{s_{\gamma}} \; \mathsf{g_{1}}^{2} \; \overline{\mathsf{y_{u}}}^{\mathsf{i2p}} \; \left( - \, \mathsf{s_{\gamma}} \; \mathsf{a_{u}}^{\mathsf{i1p}} + \widetilde{\mu} \; \mathsf{c_{\gamma}} \; \mathsf{y_{u}}^{\mathsf{i1p}} \right) \; \mathsf{LF_{2,2,1,-1}} \big[ \, \mathsf{m_{1}} \, , \; \mathsf{m_{\tilde{u}}}^{\mathsf{p}} \, , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i1}} \big] \; + \\
                                                                                                                                                                                                  \mathsf{m_1} \; \mathsf{s_{\gamma}} \; \mathsf{g_1}^2 \; \mathsf{y_u^{i1p}} \; \left( - \, \mathsf{s_{\gamma}} \; \overline{\mathsf{a_u}}^{i2p} + \widetilde{\mu} \; \mathsf{c_{\gamma}} \; \overline{\mathsf{y_u}}^{i2p} \right) \; \mathsf{LF_{2,2,1,-1}} \left[ \, \mathsf{m_1} \, , \; \mathsf{m_{\bar{u}}}^p \, , \; \mathsf{m_{\bar{q}}}^{i2} \, \right] \; - \, \widetilde{\mathsf{a_u}}^{i2p} \; .
                                                                                                                                                                                 \frac{1}{3} \; g_{1}^{\; 2} \; s_{\gamma}^{\; 2} \; \overline{y_{u}}^{i \, 2p} \; y_{u}^{\; i \, 1p} \; \mathsf{LF}_{3,1,1,-2} \big[ \mathsf{m}_{1} , \; \mathsf{m}_{\bar{u}}^{\; p} , \; \widetilde{\mu} \, \big] \; + \\ \frac{1}{3} \; \mathsf{m}_{1} \; s_{\gamma} \; \widetilde{\mu} \; c_{\gamma} \; g_{1}^{\; 2} \; \overline{y_{u}}^{i \, 2p} \; y_{u}^{\; i \, 1p} \; \mathsf{LF}_{3,1,1,-1} \big[ \mathsf{m}_{1} , \; \mathsf{m}_{\bar{u}}^{\; p} , \; \widetilde{\mu} \, \big] \; + \\ \frac{1}{3} \; \mathsf{m}_{1} \; s_{\gamma} \; \widetilde{\mu} \; c_{\gamma} \; g_{1}^{\; 2p} \; y_{u}^{\; i \, 1p} \; \mathsf{LF}_{3,1,1,-1} \big[ \mathsf{m}_{1} , \; \mathsf{m}_{\bar{u}}^{\; p} , \; \widetilde{\mu} \, \big] \; + \\ \frac{1}{3} \; \mathsf{m}_{2} \; s_{\gamma} \; \widetilde{\mu} \; c_{\gamma} \; g_{1}^{\; 2p} \; y_{u}^{\; i \, 1p} \; \mathsf{LF}_{3,1,1,-1} \big[ \mathsf{m}_{1} , \; \mathsf{m}_{\bar{u}}^{\; p} , \; \widetilde{\mu} \, \big] \; + \\ \frac{1}{3} \; \mathsf{m}_{2} \; s_{\gamma} \; \widetilde{\mu} \; c_{\gamma} \; g_{1}^{\; 2p} \; y_{u}^{\; i \, 1p} \; \mathsf{LF}_{3,1,1,-1} \big[ \mathsf{m}_{1} , \; \mathsf{m}_{\bar{u}}^{\; p} , \; \widetilde{\mu} \, \big] \; + \\ \frac{1}{3} \; \mathsf{m}_{1} \; s_{\gamma} \; \widetilde{\mu} \; c_{\gamma} \; g_{1}^{\; 2p} \; y_{u}^{\; i \, 1p} \; \mathsf{LF}_{3,1,1,-1} \big[ \mathsf{m}_{1} , \; \mathsf{m}_{\bar{u}}^{\; p} , \; \widetilde{\mu} \, \big] \; + \\ \frac{1}{3} \; \mathsf{m}_{1} \; s_{\gamma} \; \widetilde{\mu} \; c_{\gamma} \; g_{1}^{\; 2p} \; y_{u}^{\; i \, 1p} \; \mathsf{LF}_{3,1,1,-1} \big[ \mathsf{m}_{1} , \; \mathsf{m}_{\bar{u}}^{\; p} , \; \widetilde{\mu} \, \big] \; + \\ \frac{1}{3} \; \mathsf{m}_{1} \; s_{\gamma} \; \widetilde{\mu} \; c_{\gamma} \; g_{1}^{\; 2p} \; y_{u}^{\; i \, 1p} \; \mathsf{LF}_{3,1,1,1,-1} \big[ \mathsf{m}_{1} , \; \mathsf{m}_{\bar{u}}^{\; p} , \; \widetilde{\mu} \, \big] \; + \\ \frac{1}{3} \; \mathsf{m}_{1} \; s_{\gamma} \; \widetilde{\mu} \; \widetilde{\mu} \; s_{\gamma} \; \widetilde{\mu} \; \widetilde{\mu} \; s_{\gamma} \; \widetilde{\mu} \; \widetilde{\mu} \; s_{\gamma} \; \widetilde{\mu} \; s_{\gamma} \; \widetilde{\mu} \; s_{\gamma} \; \widetilde{\mu} \; s_{\gamma} \; \widetilde{
                                                                                                                                              \frac{7}{48} g_1^2 c_{\gamma}^2 \overline{y_d}^{i2p} y_d^{i1p} LF_{2,2,1,-2}[m_1, \widetilde{\mu}, m_{\widetilde{d}}^{-p}] +
                                                                                                                                                                                                      \mathsf{s_{\gamma}}\,\tilde{\mu}\;\mathsf{g_{1}}^{2}\;\overline{\mathsf{y_{d}}}^{\mathsf{i2p}}\;\mathsf{y_{d}}^{\mathsf{i1p}}\;\left(\mathsf{10}\;\mathsf{m_{1}}\;\mathsf{c_{\gamma}}\,+\,\mathsf{3}\;\mathsf{s_{\gamma}}\,\tilde{\mu}\right)\;\mathsf{LF_{2,2,1,-1}}\!\left[\mathsf{m_{1}}\,,\,\tilde{\mu}\,,\,\mathsf{m_{\tilde{d}}^{-p}}\right]\,+\,\mathsf{m_{1}}^{-p}
                                                                                                                                              \frac{1}{48} \ g_{1}^{2} \ \left(c_{\gamma}^{2} \ \overline{y_{d}}^{i2p} \ y_{d}^{i1p} - s_{\gamma}^{2} \ \overline{y_{u}}^{i2p} \ y_{u}^{i1p}\right) \ \mathsf{LF}_{2,2,1,-2}\big[\mathsf{m}_{1}, \ \widetilde{\mu}, \ \mathsf{m}_{\widetilde{q}}^{i1}\big] \ +
                                                                                                                                                                                              \left\{ \mathbf{m_1} \, \mathbf{s_Y} \, \widetilde{\mu} \, \mathbf{c_Y} \, \mathbf{g_1}^2 \, \left( \overline{\mathbf{y_d}}^{i2p} \, \mathbf{y_d}^{i1p} - \overline{\mathbf{y_u}}^{i2p} \, \mathbf{y_u}^{i1p} \right) \, \mathsf{LF_{2,2,1,-1}} \left[ \mathbf{m_1}, \, \widetilde{\mu}, \, \mathbf{m_{\tilde{q}}}^{i1} \right] + \left[ \mathbf{m_1}, \, \widetilde{\mu}, \, \widetilde{\mu}, \, \mathbf{m_{\tilde{q}}}^{i1} \right] + \left[ \mathbf{m_1}, \, \widetilde{\mu}, \, 
                                                                                                                                              \frac{1}{48} \ g_{1}{}^{2} \ \left(c_{\gamma}{}^{2} \ \overline{y_{d}}^{i2p} \ y_{d}{}^{i1p} - s_{\gamma}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i1p}\right) \ \mathsf{LF}_{2,2,1,-2}\big[\mathsf{m}_{1}, \ \widetilde{\mu}, \ \mathsf{m}_{\widetilde{q}}{}^{i2}\big] \ + \\
                                                                                                                                                                                                  \mathsf{m_1} \; \mathsf{s_{\gamma}} \; \widetilde{\mu} \; \mathsf{c_{\gamma}} \; \mathsf{g_1}^2 \; \left( \overline{y_d}^{i2p} \; y_d^{i1p} - \overline{y_u}^{i2p} \; y_u^{i1p} \right) \; \mathsf{LF_{2,2,1,-1}} \big[ \mathsf{m_1}, \; \widetilde{\mu}, \; \mathsf{m_{\tilde{q}}}^{i2} \big] \; + \; \mathsf{m_{\tilde{q}}}^{i2} \; \mathsf{m_{\tilde{q}
                                                                                                                                              \frac{11}{48} \ g_{1}{}^{2} \ s_{\gamma}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i1p} \ LF_{2,2,1,-2} \left[ \ m_{1} \ , \ \tilde{\mu} \ , \ m_{\tilde{u}}{}^{p} \ \right] \ + \ \frac{1}{48} \ \tilde{\mu} \ c_{\gamma} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i1p} \ (14 \ m_{1} \ s_{\gamma} \ + \ 3 \ \tilde{\mu} \ c_{\gamma}) \ s_{\gamma} \ s_{\gamma
                                                                                                                                                                    \mathsf{LF_{2,2,1,-1}}\big[\,\mathsf{m_{1}}\,,\,\,\widetilde{\mu}\,,\,\,\mathsf{m_{\tilde{u}}}^{\,\mathsf{p}}\,\big]\,+\,\tfrac{1}{8}\,\,\mathsf{g_{2}}^{\,\mathsf{4}}\,\,\left(\,\mathsf{c_{\gamma}}^{\,\mathsf{2}}\,+\,\mathsf{s_{\gamma}}^{\,\mathsf{2}}\,\right)\,\,\mathsf{LF_{2,1,1,-1}}\big[\,\mathsf{m_{2}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{2}}\,,\,\,\widetilde{\mu}\,\big]\,\,\,\delta_{\,\mathsf{i}\,\mathsf{1}\,\mathsf{i}\,\mathsf{2}}\,-\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{2}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{2}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{2}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{2}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{i}\,\mathsf{3
                                                                                                                                              \frac{1}{4}\;g_{2}^{\;4}\;m_{2}^{\;2}\;\left(c_{\gamma}^{\;2}+s_{\gamma}^{\;2}\right)\;\mathsf{LF}_{2,1,1,9}\!\left[m_{2}\,,\,m_{\tilde{q}}^{\;\;12}\,,\,\tilde{\mu}\right]\;\delta_{1112}-\frac{1}{16}\;g_{2}^{\;2}\;c_{\gamma}^{\;2}\;\overline{y_{d}}^{12p}\;y_{d}^{\;11p}\;\mathsf{LF}_{2,2,1,-2}\!\left[m_{2}\,,\,\tilde{\mu}\,,\,m_{\tilde{d}}^{\;\;p}\right]-\frac{1}{4}\;g_{2}^{\;2}\;m_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^{\;2}\;g_{2}^
                                                                                                                                              \frac{1}{16} \, \, \mathbf{S}_{\mathrm{Y}} \, \widetilde{\boldsymbol{\mu}} \, \, \mathbf{g_2}^2 \, \, \overline{\mathbf{y_d}}^{\mathrm{i2p}} \, \, \mathbf{y_d}^{\mathrm{i1p}} \, \, (2 \, \mathbf{m_2} \, \, \mathbf{c_{\mathrm{Y}}} + \mathbf{s_{\mathrm{Y}}} \, \widetilde{\boldsymbol{\mu}}) \, \, \mathbf{LF_{2,2,1,-1}} \big[ \, \mathbf{m_2} \, , \, \, \widetilde{\boldsymbol{\mu}} \, , \, \, \mathbf{m_{\widetilde{d}}}^{\mathrm{p}} \big] \, + \\
                                                                                                                                                   \frac{3}{16} \; g_{2}^{\; 2} \; \left( c_{\gamma}^{\; 2} \; \overline{y_{d}}^{i2p} \; y_{d}^{\; i1p} + s_{\gamma}^{\; 2} \; \overline{y_{u}}^{i2p} \; y_{u}^{\; i1p} \right) \; \mathsf{LF}_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} \right] \; + \; c_{2,2,1,-2} \left[ \mathsf{m}_{2} \; , \; \mathsf{m}_{\tilde{q}}^{\; i1} 
                                                                                                                                                                                                      \mathsf{m_2} \; \mathsf{s_{Y}} \; \widetilde{\mu} \; \mathsf{c_{Y}} \; \mathsf{g_2}^2 \; \left( \overline{y_d}^{\texttt{i2p}} \; y_d^{\texttt{i1p}} + \overline{y_u}^{\texttt{i2p}} \; y_u^{\texttt{i1p}} \right) \; \mathsf{LF_{2,2,1,-1}} \big[ \mathsf{m_2} \, , \; \widetilde{\mu} \, , \; \mathsf{m_{\tilde{q}}}^{\texttt{i1}} \big] \; + \\
                                                                                                                                              \mathsf{m_2}\; \mathsf{g_2}^2 \; \left( \mathsf{3}\; \mathsf{s_\gamma} \; \widetilde{\boldsymbol{\mu}}\; \mathsf{c_\gamma} \; \left( \overline{\mathsf{y_d}}^{\mathsf{i2p}} \; \mathsf{y_d}^{\mathsf{i1p}} + \overline{\mathsf{y_u}}^{\mathsf{i2p}} \; \mathsf{y_u}^{\mathsf{i1p}} \right) \; + \; 2\; \mathsf{g_2}^2 \; \left( \mathsf{m_2} \; \left( \mathsf{c_\gamma}^2 + \mathsf{s_\gamma}^2 \right) \; + \; 4\; \mathsf{s_\gamma} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_\gamma} \right) \; \delta_{\mathsf{i1i2}} \right) \; \delta_{\mathsf{i1i2}} \left( \mathsf{s_\gamma}^2 + \mathsf{s_\gamma}^2 \right) \; + \; 4\; \mathsf{s_\gamma} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_\gamma} \right) \; \delta_{\mathsf{i1i2}} \left( \mathsf{s_\gamma}^2 + \mathsf{s_\gamma}^2 \right) \; + \; 4\; \mathsf{s_\gamma} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_\gamma} \right) \; \delta_{\mathsf{i1i2}} \left( \mathsf{s_\gamma}^2 + \mathsf{s_\gamma}^2 \right) \; + \; 4\; \mathsf{s_\gamma} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_\gamma} \right) \; \delta_{\mathsf{i1i2}} \left( \mathsf{s_\gamma}^2 + \mathsf{s_\gamma}^2 \right) \; + \; 4\; \mathsf{s_\gamma} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_\gamma} \right) \; \delta_{\mathsf{i1i2}} \left( \mathsf{s_\gamma}^2 + \mathsf{s_\gamma}^2 \right) \; 
                                                                                                                                                                    \mathsf{LF_{2,2,1,-1}}\big[\,\mathsf{m_2}\,,\,\,\widetilde{\mu}\,,\,\,\mathsf{m_{\tilde{q}}}^{\,i\,2}\,\big]\,-\,\tfrac{1}{16}\,\,\mathsf{g_2}^2\,\,\mathsf{s_{\gamma}}^2\,\,\overline{y_u}^{i\,2p}\,\,\mathsf{y_u}^{\,i\,2p}\,\,\mathsf{LF_{2,2,1,-2}}\big[\,\mathsf{m_2}\,,\,\,\widetilde{\mu}\,,\,\,\mathsf{m_{\tilde{u}}}^p\,\big]\,\,-\,\,\mathsf{m_{\tilde{u}}}^p\,\big]\,\,-\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}^p\,\,\mathsf{m_{\tilde{u}}}
                                                                                                                                              \frac{1}{16} \; \tilde{\mu} \; c_{\gamma} \; g_{2}^{2} \; \overline{y_{u}}^{i2p} \; y_{u}^{i1p} \; (2 \; m_{2} \; s_{\gamma} + \tilde{\mu} \; c_{\gamma}) \; LF_{2,2,1,-1} [m_{2}, \; \tilde{\mu}, \; m_{\tilde{u}}^{\; p}] \; + \\
                                                                                                                                              \frac{1}{3}\,\,m_{3}\,\,c_{\gamma}\,\,g_{3}^{\,2}\,\,\overline{y_{d}}^{\,i2p}\,\left(-\,c_{\gamma}\,\,a_{d}^{\,i1p}\,+\,s_{\gamma}\,\widetilde{\mu}\,\,y_{d}^{\,i1p}\right)\,\,\mathsf{LF}_{2,1,1,0}\left[\,m_{3}\,,\,\,m_{\bar{d}}^{\,\,p}\,,\,\,m_{\bar{q}}^{\,\,i1}\,\right]\,+\,\,c_{\gamma}\,\,\mu_{d}^{\,\,i1p}\,\,.
                                                                                                                                                                                 \textbf{m}_{3}\;\textbf{c}_{\gamma}\;\textbf{g}_{3}^{\;2}\;\overline{\textbf{y}_{d}}^{\text{i2p}}\;\left(-\,\textbf{c}_{\gamma}\;\textbf{a}_{d}^{\;\text{i1p}}\,+\,\textbf{s}_{\gamma}\;\tilde{\mu}\;\textbf{y}_{d}^{\;\text{i1p}}\right)\;\textbf{LF}_{2,2,1,-1}\!\left[\,\textbf{m}_{3}\,,\;\textbf{m}_{\bar{d}}^{\;\text{p}}\,,\;\textbf{m}_{\bar{q}}^{\;\text{i1}}\,\right]\,+\,\textbf{m}_{\bar{d}}^{\;\text{i1p}}\left(-\,\textbf{c}_{\gamma}\;\textbf{a}_{d}^{\;\text{i1p}}\,+\,\textbf{s}_{\gamma}\;\tilde{\mu}\;\textbf{y}_{d}^{\;\text{i1p}}\right)
                                                                                                                                                                            \mathsf{m_{3}}\; c_{\gamma}\; g_{3}{}^{2}\; \overline{y_{d}}{}^{i2p}\; \left(c_{\gamma}\; {a_{d}}^{i1p} - s_{\gamma}\; \widetilde{\mu}\; {y_{d}}^{i1p}\right)\; \mathsf{LF_{3,1,1,-1}}\big[\mathsf{m_{3}}\;,\; \mathsf{m_{\tilde{d}}}^{p}\;,\; \mathsf{m_{\tilde{q}}}^{i1}\big]\; + \\
                                                                                                                                                                                 \text{m}_{3}\;c_{\gamma}\;g_{3}^{\;2}\;y_{d}^{\;i1p}\;\left(-\,c_{\gamma}\;\overline{a_{d}}^{\;i2p}\,+\,s_{\gamma}\;\widetilde{\mu}\;\overline{y_{d}}^{\;i2p}\right)\;LF_{2,\text{1,1,0}}\!\left[\,\text{m}_{3}\,,\;\text{m}_{\tilde{d}}^{\;p}\,,\;\text{m}_{\tilde{q}}^{\;i2}\,\right]\,+\,c_{1}^{\;2}\left[\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3}^{\;2}\,\sigma_{3
                                                                                                                                                                                 \textbf{m}_{3}\;\textbf{c}_{\gamma}\;\textbf{g}_{3}^{\;2}\;\textbf{y}_{d}^{\;i1p}\;\left(-\,\textbf{c}_{\gamma}\;\overline{\textbf{a}_{d}}^{\;i2p}\,+\,\textbf{s}_{\gamma}\;\widetilde{\mu}\;\overline{\textbf{y}_{d}}^{\;i2p}\right)\;\textbf{LF}_{2,2,1,-1}\!\left[\,\textbf{m}_{3}\,,\,\textbf{m}_{\bar{d}}^{\;p}\,,\,\textbf{m}_{\bar{q}}^{\;i2}\,\right]\,+\,\textbf{m}_{2}^{\;i2p}\left(-\,\textbf{c}_{\gamma}\;\overline{\textbf{a}_{d}}^{\;i2p}\,+\,\textbf{s}_{\gamma}\;\widetilde{\mu}\;\overline{\textbf{y}_{d}}^{\;i2p}\right)
                                                                                                                                                                                 \mathsf{m_{3}}\; \mathsf{c_{\gamma}}\; \mathsf{g_{3}}^{2}\; \mathsf{y_{d}}^{\text{ilp}}\; \left(\mathsf{c_{\gamma}}\; \overline{\mathsf{a_{d}}}^{\text{i2p}} - \mathsf{s_{\gamma}}\; \widetilde{\mu}\; \overline{\mathsf{y_{d}}}^{\text{i2p}}\right)\; \mathsf{LF_{3,1,1,-1}}\big[\mathsf{m_{3}}\; ,\; \mathsf{m_{\tilde{d}}}^{\mathsf{p}}\; ,\; \mathsf{m_{\tilde{q}}}^{\text{i2}}\big]\; + \\
                                                                                                                                                                                 \mathsf{m_{3}}\;c_{\gamma}\;g_{3}{}^{2}\;\overline{y_{d}}{}^{i2p}\;\left(c_{\gamma}\;a_{d}{}^{i1p}-s_{\gamma}\;\widetilde{\mu}\;y_{d}{}^{i1p}\right)\;\mathsf{LF_{2,2,1,-1}}\big[\mathsf{m_{3}}\;,\;\mathsf{m_{\tilde{q}}}{}^{i1}\;,\;\mathsf{m_{\tilde{d}}}{}^{p}\big]\;+
                                                                                                                                              \frac{\text{i}}{\epsilon} \; \text{m}_{3} \; \text{s}_{\gamma} \; g_{3}^{\; 2} \; \overline{y_{u}}^{\text{i}2p} \; \left( \, \text{s}_{\gamma} \; a_{u}^{\; \text{i}1p} - \widetilde{\mu} \; \text{c}_{\gamma} \; y_{u}^{\; \text{i}1p} \right) \; \text{LF}_{2,2,1,-1} \big[ \, \text{m}_{3} \, , \; \text{m}_{\bar{q}}^{\; \text{i}1} \, , \; \text{m}_{\bar{u}}^{\; \text{p}} \, \big] \; + \\
                                                                                                                                                                                 \mathsf{m_{3}}\;\mathsf{s_{\gamma}}\;\mathsf{g_{3}}^{2}\;\overline{\mathsf{y_{u}}}^{\mathtt{i2p}}\;\left(\mathsf{s_{\gamma}}\;\mathsf{a_{u}}^{\mathtt{i1p}}-\widetilde{\mu}\;\mathsf{c_{\gamma}}\;\mathsf{y_{u}}^{\mathtt{i1p}}\right)\;\mathsf{LF_{3,1,1,-1}}\big[\mathsf{m_{3}}\;,\;\mathsf{m_{\tilde{q}}}^{\mathtt{i1}}\;,\;\mathsf{m_{\tilde{u}}}^{\mathtt{p}}\big]\;+\;
                                                                                                                                              \frac{1}{6} \; m_{3} \; c_{\gamma} \; g_{3}^{\; 2} \; y_{d}^{\; 11p} \; \left( c_{\gamma} \; \overline{a_{d}}^{\; 12p} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_{d}}^{\; 12p} \right) \; LF_{2,2,1,-1} \big[ m_{3} \; , \; m_{\tilde{q}}^{\; 12} \; , \; m_{\tilde{d}}^{\; p} \big] \; + \\
                                                                                                                                                                                     \text{m}_{3} \; \text{s}_{\gamma} \; \text{g}_{3}^{\; 2} \; \text{y}_{u}^{\; \text{ilp}} \; \left( - \, \text{s}_{\bar{\gamma}} \; \overline{a_{u}}^{\text{i}2p} + \widetilde{\mu} \; \text{c}_{\gamma} \; \overline{y_{u}}^{\text{i}2p} \right) \; \text{LF}_{2,\text{1,1,0}} \left[ \, \text{m}_{3} \, , \; \text{m}_{\bar{q}}^{\; \text{i}2} \, , \; \text{m}_{\bar{u}}^{\; \text{p}} \, \right] \; + \; \widetilde{\mu} \; \text{c}_{\gamma} \; \overline{y_{u}}^{\text{i}2p} \right) \; \text{LF}_{2,\text{1,1,0}} \left[ \, \text{m}_{3} \, , \; \text{m}_{\bar{q}}^{\; \text{i}2} \, , \; \text{m}_{\bar{u}}^{\; \text{p}} \, \right] \; + \; \widetilde{\mu} \; \text{c}_{\gamma} \; \overline{y_{u}}^{\text{i}2p} \right] \; \text{LF}_{2,\text{1,1,0}} \left[ \, \text{m}_{3} \, , \; \text{m}_{\bar{q}}^{\; \text{i}2} \, , \; \text{m}_{\bar{u}}^{\; \text{p}} \, \right] \; + \; \widetilde{\mu} \; \text{c}_{\gamma} \; \overline{y_{u}}^{\text{i}2p} \right] \; \text{LF}_{2,\text{1,1,0}} \left[ \, \text{m}_{3} \, , \; \text{m}_{\bar{q}}^{\; \text{i}2} \, , \; \text{m}_{\bar{u}}^{\; \text{p}} \, \right] \; + \; \widetilde{\mu} \; \text{c}_{\gamma} \; \overline{y_{u}}^{\text{i}2p} \right] \; \text{LF}_{2,\text{1,1,0}} \left[ \, \text{m}_{3} \, , \; \text{m}_{\bar{q}}^{\; \text{i}2} \, , \; \text{m}_{\bar{u}}^{\; \text{p}} \, \right] \; + \; \widetilde{\mu} \; \text{c}_{\gamma} \; \overline{y_{u}}^{\text{i}2p} \; + \; \widetilde{\mu} \; \overline{y_{u}}^{\text{i}2p} \; , \; \overline{y_{u}}^{\text{i}2p} \, , \; \overline{y_{u}}^{\text{i}2p} \; \right] \; + \; \widetilde{\mu} \; \overline{y_{u}}^{\text{i}2p} \; + \; 
                                                                                                                                                                                     \textbf{m}_{3} \; \textbf{s}_{\gamma} \; \textbf{g}_{3}^{\; 2} \; \textbf{y}_{u}^{\; \textbf{i} \, \textbf{1p}} \; \left( \, \textbf{s}_{\gamma} \; \overline{\textbf{a}_{u}}^{\; \textbf{i} \, \textbf{2p}} \, - \, \widetilde{\boldsymbol{\mu}} \; \textbf{c}_{\gamma} \; \overline{\textbf{y}_{u}}^{\; \textbf{i} \, \textbf{2p}} \right) \; \textbf{LF}_{\textbf{2},\textbf{2},\textbf{1},\textbf{-1}} \big[ \, \textbf{m}_{3} \, , \; \textbf{m}_{\tilde{\textbf{q}}}^{\; \; \textbf{i} \, \textbf{2}} \, , \; \textbf{m}_{\tilde{\textbf{u}}}^{\; \; \textbf{p}} \, \big] \; + \, \left( \, \textbf{s}_{\gamma} \; \overline{\textbf{a}_{u}}^{\; \; \textbf{i} \, \textbf{2p}} \, - \, \widetilde{\boldsymbol{\mu}} \; \, \overline{\textbf{c}}_{\gamma} \; \overline{\textbf{y}_{u}}^{\; \; \textbf{i} \, \textbf{2p}} \right) \; \boldsymbol{LF}_{\textbf{2},\textbf{2},\textbf{1},\textbf{-1}} \big[ \, \textbf{m}_{3} \, , \; \textbf{m}_{\tilde{\textbf{q}}}^{\; \; \boldsymbol{i} \, \textbf{2p}} \, , \; \textbf{m}_{\tilde{\textbf{u}}}^{\; \; \boldsymbol{p}} \, \big] \; + \, \left( \, \textbf{s}_{\gamma} \; \overline{\textbf{a}_{u}}^{\; \; \boldsymbol{i} \, \textbf{2p}} \, - \, \widetilde{\boldsymbol{\mu}} \; \overline{\textbf{c}}_{\gamma} \; \overline{\textbf{y}_{u}}^{\; \; \boldsymbol{i} \, \textbf{2p}} \right) \; \boldsymbol{LF}_{\textbf{2},\textbf{2},\textbf{1},\textbf{1},\textbf{-1}} \big[ \, \textbf{m}_{3} \, , \; \textbf{m}_{\tilde{\textbf{q}}}^{\; \; \boldsymbol{i} \, \textbf{2p}} \, , \; \boldsymbol{m}_{\tilde{\textbf{u}}}^{\; \; \boldsymbol{p}} \, \big] \; + \, \boldsymbol{LF}_{\textbf{2},\textbf{2},\textbf{2},\textbf{1},\textbf{1},\textbf{-1}} \big[ \, \boldsymbol{m}_{\textbf{3}} \, , \; \boldsymbol{m}_{\tilde{\textbf{q}}}^{\; \; \boldsymbol{i} \, \boldsymbol{2p}} \, , \; \boldsymbol{m}_{\tilde{\textbf{u}}}^{\; \; \boldsymbol{p}} \, \big] \; + \, \boldsymbol{LF}_{\textbf{2},\textbf{2},\textbf{2},\textbf{1},\textbf{1},\textbf{-1}} \big[ \, \boldsymbol{m}_{\textbf{3}} \, , \; \boldsymbol{m}_{\tilde{\textbf{q}}}^{\; \; \boldsymbol{i} \, \boldsymbol{2p}} \, , \; \boldsymbol{m}_{\tilde{\textbf{u}}}^{\; \; \boldsymbol{p}} \, \big] \; + \, \boldsymbol{LF}_{\textbf{2},\textbf{2},\textbf{2},\textbf{2},\textbf{2p}} \, , \; \boldsymbol{m}_{\tilde{\textbf{q}}} \, \boldsymbol{p}_{\tilde{\textbf{q}}} \, \big] \; \boldsymbol{m}_{\tilde{\textbf{q}}} \; \boldsymbol{p}_{\tilde{\textbf{q}}} \; \boldsymbol{p}_{\tilde{\textbf{q}}} \; \boldsymbol{p}_{\tilde{\textbf{q}}} \; \boldsymbol{p}_{\tilde{\textbf{q}}} \; \boldsymbol{p}_{\tilde{\textbf{q}}} \; \boldsymbol{p}_{\tilde{\textbf{q}}} \, \boldsymbol{p
                                                                                                                                                                                 \textbf{m}_{3} \; \textbf{s}_{\gamma} \; \textbf{g}_{3}^{\; 2} \; \textbf{y}_{u}^{\; \text{ilp}} \; \left( \textbf{s}_{\gamma} \; \overline{\textbf{a}_{u}}^{\; \text{i2p}} - \widetilde{\mu} \; \textbf{c}_{\gamma} \; \overline{\textbf{y}_{u}}^{\; \text{i2p}} \right) \; \textbf{LF}_{\textbf{3,1,1,-1}} \big[ \, \textbf{m}_{\textbf{3}} \, , \; \textbf{m}_{\tilde{\textbf{q}}}^{\; \; \text{i2}} \, , \; \textbf{m}_{\tilde{\textbf{u}}}^{\; \; \text{p}} \big] \; + \; \textbf{m}_{\tilde{\textbf{q}}}^{\; \; \text{i2p}} \; . 
                                                                                                                                                                                 \text{m}_{3} \; \text{s}_{\gamma} \; \text{g}_{3}^{\; 2} \; \overline{\text{y}_{u}}^{\text{i2p}} \; \left( - \, \text{s}_{\gamma} \; \text{a}_{u}^{\; \text{i1p}} + \widetilde{\mu} \; \text{c}_{\gamma} \; \text{y}_{u}^{\; \text{i1p}} \right) \; \text{LF}_{\text{2,2,1,-1}} \big[ \, \text{m}_{3} \, , \; \text{m}_{\tilde{u}}^{\; p} \, , \; \text{m}_{\tilde{q}}^{\; p} \, , \; \text{m}_{\tilde{q}}
                                                                                                                                                                                     \text{m}_{3} \text{ s}_{\gamma} \text{ g}_{3}^{2} \text{ y}_{u}^{\text{ilp}} \left( - \text{s}_{\gamma} \overline{\text{a}_{u}}^{\text{i2p}} + \widetilde{\mu} \text{ c}_{\gamma} \overline{\text{y}_{u}}^{\text{i2p}} \right) \text{ LF}_{2,2,1,-1} \big[ \text{m}_{3} \text{, m}_{\bar{u}}^{\text{-p}} \text{, m}_{\bar{q}}^{\text{-p}} \right.
                                                                                                                                                                                                  s_{\gamma}\;\widetilde{\mu}\;\overline{y_{d}}^{\text{i2p}}\;\overline{y_{u}}^{\text{rs}}\;y_{u}^{\text{i1s}}\;\left(-\,c_{\gamma}\;a_{d}^{\,\text{rp}}\,+\,s_{\gamma}\;\widetilde{\mu}\;y_{d}^{\,\text{rp}}\right)\;\mathsf{LF}_{2,2,1,-1}\!\left[\,\mathsf{m}_{\bar{d}}^{\,\text{-p}}\,,\;\widetilde{\mu}\,,\;\mathsf{m}_{\bar{q}}^{\,\text{r}}\,\right]\,+\,s_{\gamma}^{\,\text{-p}}\left(\,-\,c_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,+\,s_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,\right)\;\mathsf{LF}_{2,2,1,-1}\left[\,\mathsf{m}_{\bar{d}}^{\,\text{-p}}\,,\;\widetilde{\mu}\,,\;\mathsf{m}_{\bar{q}}^{\,\text{-p}}\,\right]\,+\,s_{\gamma}^{\,\text{-p}}\left(\,-\,c_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,+\,s_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,\right)\,\mathsf{LF}_{2,2,1,-1}\left[\,\mathsf{m}_{\bar{d}}^{\,\text{-p}}\,,\;\widetilde{\mu}\,,\;\mathsf{m}_{\bar{q}}^{\,\text{-p}}\,\right]\,+\,s_{\gamma}^{\,\text{-p}}\left(\,-\,c_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,+\,s_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,\right)\,\mathsf{LF}_{2,2,1,-1}\left[\,\mathsf{m}_{\bar{d}}^{\,\text{-p}}\,,\;\widetilde{\mu}\,,\;\mathsf{m}_{\bar{q}}^{\,\text{-p}}\,\right]\,+\,s_{\gamma}^{\,\text{-p}}\left(\,-\,c_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,+\,s_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,\right)\,\mathsf{LF}_{2,2,1,-1}\left[\,\mathsf{m}_{\bar{d}}^{\,\text{-p}}\,,\;\widetilde{\mu}\,,\;\mathsf{m}_{\bar{q}}^{\,\text{-p}}\,\right]\,+\,s_{\gamma}^{\,\text{-p}}\left(\,-\,c_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,+\,s_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,\right)\,\mathsf{LF}_{2,2,1,-1}\left[\,\mathsf{m}_{\bar{d}}^{\,\text{-p}}\,,\;\widetilde{\mu}\,,\;\mathsf{m}_{\bar{q}}^{\,\text{-p}}\,\right]\,+\,s_{\gamma}^{\,\text{-p}}\left(\,-\,c_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,+\,s_{\gamma}^{\,\text{-p}}\,a_{d}^{\,\text{-p}}\,\right)\,\mathsf{LF}_{2,2,1,-1}\left[\,\mathsf{m}_{\bar{d}}^{\,\text{-p}}\,,\;\widetilde{\mu}\,,\;\mathsf{m}_{\bar{q}}^{\,\text{-p}}\,,\;\mathsf{m}_{\bar{q}}^{\,\text{-p}}\,\right]\,
                                                                                                                                              \frac{1}{16} \; \mathsf{S}_{\Upsilon} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\mathsf{ilr}} \; \overline{\mathsf{y_u}}^{\mathsf{i2S}} \; \mathsf{y_u}^{\mathsf{pS}} \; \left( - \, \mathsf{c}_{\Upsilon} \; \overline{\mathsf{a_d}}^{\mathsf{pr}} + \, \mathsf{s}_{\Upsilon} \; \widetilde{\boldsymbol{\mu}} \; \overline{\mathsf{y_d}}^{\mathsf{pr}} \right) \; \mathsf{LF_{2,2,1,-1}} \left[ \boldsymbol{\mathsf{m_{\bar{d}}}^{\mathsf{r}}} \; , \; \widetilde{\boldsymbol{\mu}} \; , \; \boldsymbol{\mathsf{m_{\bar{q}}}^{\mathsf{p}}} \right] \; + \; \mathsf{a_{\bar{q}}}^{\mathsf{pr}} \; + \; \mathsf{a_{\bar{q}}}^{\mathsf{pr}} \; \right] \; \mathsf{F_{2,2,1,-1}} \left[ \boldsymbol{\mathsf{m_{\bar{d}}}^{\mathsf{r}}} \; , \; \widetilde{\boldsymbol{\mu}} \; , \; \boldsymbol{\mathsf{m_{\bar{q}}}^{\mathsf{p}}} \right] \; + \; \mathsf{a_{\bar{q}}}^{\mathsf{pr}} \; + \; \mathsf{a_{\bar{q}}}^{\mathsf{pr}} \; \right] \; + \; \mathsf{a_{\bar{q}}}^{\mathsf{pr}} \; + \; \mathsf{a_{\bar{q}}}^{\mathsf{pr
                                                                                                                                                                                                               \textbf{s}_{\textrm{Y}}\,\tilde{\mu}\,\,\textbf{y}_{\textrm{d}}^{\textrm{ilr}}\,\,\overline{\textbf{y}_{\textrm{u}}^{\textrm{i2s}}}\,\,\textbf{y}_{\textrm{u}}^{\textrm{ps}}\,\,\left(\textbf{c}_{\textrm{Y}}\,\,\overline{\textbf{a}_{\textrm{d}}}^{\textrm{pr}}\,-\,\textbf{s}_{\textrm{Y}}\,\tilde{\mu}\,\,\overline{\textbf{y}_{\textrm{d}}}^{\textrm{pr}}\right)\,\,\textbf{LF}_{\textrm{2,2,1,-1}}\big[\,\textbf{m}_{\textrm{q}}^{\textrm{-p}}\,,\,\,\tilde{\mu}\,,\,\,\textbf{m}_{\textrm{d}}^{\textrm{-r}}\,\big]\,\,+\,\,\text{N}_{\textrm{d}}^{\textrm{-p}}\,\,,\,\,\text{LF}_{\textrm{2,2,1,-1}}\big[\,\textbf{m}_{\textrm{q}}^{\textrm{-p}}\,,\,\,\tilde{\mu}\,,\,\,\textbf{m}_{\textrm{d}}^{\textrm{-r}}\,\big]\,\,+\,\,\text{N}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}^{\textrm{-p}}\,,\,\,\tilde{\mu}_{\textrm{d}}
                                                                                                                                              \frac{1}{16} \; \widetilde{\mu} \; c_{\gamma} \, \overline{y_d}^{pr} \; y_d^{\; i1r} \; \overline{y_u}^{i2s} \; \left( s_{\gamma} \; a_u^{\; ps} - \widetilde{\mu} \; c_{\gamma} \; y_u^{\; ps} \right) \; LF_{2,2,1,-1} \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, \right] \; + \; \left[ \, m_{\tilde{q}}^{\; p} \, , \; \widetilde{\mu} \, , \; m_{\tilde{u}}^{\; s} \, , \; \widetilde{\mu} \,
                                                                                                                                              \frac{1}{16} \ \widetilde{\mu}^2 \ \mathbf{c_{\gamma}}^2 \ \overline{\mathbf{y_d}}^{\mathbf{i2p}} \ \mathbf{y_d}^{\mathsf{rp}} \ \overline{\mathbf{y_u}}^{\mathsf{rs}} \ \mathbf{y_u}^{\mathsf{i1s}} \ \mathsf{LF}_{\mathbf{2,2,1,-1}} \big[ \mathbf{m_{\tilde{q}}}^{\mathsf{r}}, \ \widetilde{\mu}, \ \mathbf{m_{\tilde{u}}}^{\mathsf{s}} \big] \ -
                                                                                                                                                                                              \{ s_{\gamma} \, \widetilde{\mu} \, c_{\gamma} \, \overline{y_d}^{i2s} \, y_d^{ps} \, y_u^{i1r} \, \overline{a_u}^{pr} \, LF_{2,2,1,-1} [m_{\widetilde{u}}^{r}, \, \widetilde{\mu}, \, m_{\widetilde{q}}^{p}] + 1 \} \}
                                                                                                                                                                                                      \widetilde{\mu} \; c_{_{Y}} \, \overline{y_{d}}^{\text{pr}} \; y_{d}^{\; \text{ilr}} \; \overline{y_{u}}^{\text{i2s}} \; \left( - \, s_{_{Y}} \, a_{u}^{\; \text{ps}} + \widetilde{\mu} \; c_{_{Y}} \, y_{u}^{\; \text{ps}} \right) \; \mathsf{LF}_{2,2,1,-1} \left[ \, \mathsf{m}_{\tilde{u}}^{\; \text{s}} \, , \; \widetilde{\mu} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{p}} \, \right] \; + \; \widetilde{\mu} \; c_{_{Y}} \, y_{u}^{\; \text{ps}} \right) \; \mathsf{LF}_{2,2,1,-1} \left[ \, \mathsf{m}_{\tilde{u}}^{\; \text{s}} \, , \; \widetilde{\mu} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{p}} \, \right] \; + \; \widetilde{\mu} \; c_{_{Y}} \, y_{u}^{\; \text{ps}} \right] \; \mathsf{LF}_{2,2,1,-1} \left[ \, \mathsf{m}_{\tilde{u}}^{\; \text{s}} \, , \; \widetilde{\mu} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{p}} \, \right] \; + \; \widetilde{\mu} \; c_{_{Y}} \, y_{u}^{\; \text{ps}} \right] \; \mathsf{LF}_{2,2,1,-1} \left[ \, \mathsf{m}_{\tilde{u}}^{\; \text{s}} \, , \; \widetilde{\mu} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{p}} \, \right] \; + \; \widetilde{\mu} \; c_{_{Y}} \, y_{u}^{\; \text{ps}} \right] \; \mathsf{LF}_{2,2,1,-1} \left[ \, \mathsf{m}_{\tilde{u}}^{\; \text{s}} \, , \; \widetilde{\mu} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{p}} \, \right] \; + \; \widetilde{\mu} \; c_{_{Y}} \, y_{u}^{\; \text{ps}} \right] \; \mathsf{LF}_{2,2,1,-1} \left[ \, \mathsf{m}_{\tilde{u}}^{\; \text{s}} \, , \; \widetilde{\mu} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{p}} \, \right] \; \mathsf{LF}_{2,2,1,-1} \left[ \, \mathsf{m}_{\tilde{u}}^{\; \tilde{q}} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{p}} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{q}} \, \right] \; \mathsf{LF}_{2,2,1,-1} \left[ \, \mathsf{m}_{\tilde{u}}^{\; \tilde{q}} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{q}} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{q}} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{q}} \, \right] \; \mathsf{LF}_{2,2,1,-1} \left[ \, \mathsf{m}_{\tilde{u}}^{\; \tilde{q}} \, , \; \mathsf{m}_{\tilde{q}}^{\; \tilde{q}} \, , \; \mathsf{
                                                                                                                                                                                              \widetilde{\mu}^2 \, c_{\gamma}^2 \, \overline{y_d}^{i2p} \, y_d^{rp} \, \overline{y_u}^{rs} \, y_u^{i1s} \, LF_{2,2,1,-1} [m_{\widetilde{u}}^s, \, \widetilde{\mu}, \, m_{\widetilde{q}}^{r}] +
                                                                                                                                              \frac{1}{16} \ g_1^2 \ c_\gamma^2 \ \overline{y_d}^{i2p} \ y_d^{i1p} \ \mathsf{LF}_{2,1,1,-1} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] - \frac{1}{8} \ g_1^2 \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ g_1^2 \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ g_1^2 \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ g_1^2 \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ g_1^2 \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ g_1^2 \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_{\bar{d}}^{\, p} \big] + \frac{1}{8} \ s_\gamma^2 \ \widetilde{\mu}^2 \ \overline{y_d}^{\, i2p} \ y_d^{\, i1p} \ \mathsf{LF}_{2,1,1,\theta} \big[ \widetilde{\mu} \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_1 \,, \, \mathsf{m}_2 \,, \, \mathsf{m}_2 \,, \, \mathsf{m}_2 \,, \, \mathsf{m}_2 \,, \, \mathsf{m}_3 \,
                                                                                                                                              \frac{1}{16} \ g_{1}^{\ 2} \ \left(-\, c_{\gamma}^{\ 2} \ \overline{y_{d}}^{i\, 2p} \ y_{d}^{\ i1p} + s_{\gamma}^{\ 2} \ \overline{y_{u}}^{i\, 2p} \ y_{u}^{\ i1p}\right) \ \mathsf{LF}_{2,1,1,-1} \big[\, \widetilde{\mu} \, , \ \mathsf{m}_{1} \, , \ \mathsf{m}_{\tilde{q}}^{\ i\, 1} \big] \ + \\
                                                                                                                                              g_1^2 g_1^2 (c_{\gamma}^2 \overline{y_d}^{i2p} y_d^{i1p} - s_{\gamma}^2 \overline{y_u}^{i2p} y_u^{i1p}) LF_{3,1,1,-2} [\widetilde{\mu}, m_1, m_{\tilde{q}}^{i1}] +
                                                                                                                                              \frac{1}{24} \,\, \mathbf{m_1} \,\, \mathbf{s_{\scriptscriptstyle Y}} \, \widetilde{\boldsymbol{\mu}} \,\, \mathbf{c_{\scriptscriptstyle Y}} \,\, \mathbf{g_1}^2 \,\, \left( \overline{\mathbf{y_d}}^{\, \mathbf{i2p}} \,\, \mathbf{y_d}^{\, \mathbf{i1p}} - \overline{\mathbf{y_u}}^{\, \mathbf{i2p}} \,\, \mathbf{y_u}^{\, \mathbf{i1p}} \right) \,\, \mathbf{LF_{3,1,1,-1}} \big[ \, \widetilde{\boldsymbol{\mu}} \,, \,\, \mathbf{m_1} \,, \,\, \mathbf{m_{\tilde{q}}}^{\, \mathbf{i1}} \big] \,\, + \,\, \mathbf{m_{\tilde{q}}}^{\, \mathbf{i1}} \,\, \mathbf{m_{\tilde{q}}} \,\, \mathbf{m_{\tilde{q}}}^{\, \mathbf{i1p}} \,\, + \,\, \mathbf{m_{\tilde{q}}}^{\, \mathbf{i1p}} \,\, \mathbf{m_{\tilde{q
                                                                                                                                                                                              g_1^2 \left(-c_{\gamma}^2 \overline{y_d}^{i2p} y_d^{i1p} + s_{\gamma}^2 \overline{y_u}^{i2p} y_u^{i1p}\right) LF_{2,1,1,-1}[\widetilde{\mu}, m_1, m_{\tilde{q}}^{i2}] + c_{\gamma}^2 \overline{y_u}^{i2p}
                                                                                                                                              \mathsf{g_{1}}^{2} \; \left( c_{\mathsf{Y}}^{2} \, \overline{\mathsf{y_{d}}}^{\mathsf{i2p}} \; \mathsf{y_{d}}^{\mathsf{i1p}} - \mathsf{s_{\mathsf{Y}}}^{2} \, \overline{\mathsf{y_{u}}}^{\mathsf{i2p}} \; \mathsf{y_{u}}^{\mathsf{i1p}} \right) \; \mathsf{LF_{3,1,1,-2}} \big[ \widetilde{\mu} \text{, m_{1}, m_{\tilde{q}}}^{\mathsf{i2}} \big] \; + \; \mathsf{m_{1}, m_{\tilde{q}}}^{\mathsf{i2p}} \, \mathsf{m_{2}, m_{3,1,1,2}} \big[ \widetilde{\mu} \text{, m_{1}, m_{\tilde{q}}}^{\mathsf{i2p}} \big] \; + \; \mathsf{m_{1}, m_{\tilde{q}}}^{\mathsf{i2p}} \, \mathsf{m_{2}, m_{3,1,1,2}} \big[ \widetilde{\mu} \text{, m_{1}, m_{\tilde{q}}}^{\mathsf{i2p}} \big] \; + \; \mathsf{m_{1}, m_{\tilde{q}}}^{\mathsf{i2p}} \, \mathsf{m_{2}, m_{3,1,1,2}} \big[ \widetilde{\mu} \text{, m_{1}, m_{\tilde{q}}}^{\mathsf{i2p}} \big] \; + \; \mathsf{m_{2}, m_{3}, m_{3}, m_{3}} \big[ \mathsf{m_{2}, m_{3}, m_{3
                                                                                                                                              \frac{1}{16} \ g_1{}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF}_{2,1,1,-1} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ c_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ c_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ c_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ c_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} \ \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ c_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i2p} \ y_u{}^{i2p} \ \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i2p} \ y_u{}^{i2p} \ y_u{}^{i2p} \ \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i2p} \ y_u{}^{i2p} \ \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i2p} \ y_u{}^{i2p} \ \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ s_\gamma{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i2p} \ y_u{}^{i2p} \ y_u{}^{i2p} \ \mathsf{LF}_{2,1,1,0} \big[ \widetilde{\mu} \,,\, \mathsf{m}_1 \,,\, \mathsf{m}_{\tilde{u}}{}^p \big] - \frac{1}{8} \ g_1{}^2 \ \widetilde{\mu}^2 \ s_\gamma{}^2 \ \widetilde{\mu}^2 \ \widetilde{
                                                                                                                                                   \frac{1}{16} \; g_2^2 \; c_\gamma^2 \; \overline{y_d}^{i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,-1} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; + \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; - \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; - \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; - \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{\;i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; - \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{\;i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; - \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{\;i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; - \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{\;i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; - \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{\;i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; - \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{\;i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}_{\bar{d}}^{\;p} \big] \; - \; \frac{1}{8} \; g_2^2 \; s_\gamma^2 \; \tilde{\mu}^2 \; \overline{y_d}^{\;i2p} \; y_d^{\;i1p} \; \mathsf{LF}_{2,1,1,0} \big[ \tilde{\mu} \,, \; \mathsf{m}_2 \,, \; \mathsf{m}
                                                                                                                                                                                                      \mathsf{m}_2 \; \mathsf{s}_{\scriptscriptstyle Y} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c}_{\scriptscriptstyle Y} \; \mathsf{g_2}^2 \; \left( \overline{\mathsf{y_d}}^{\mathsf{i2p}} \; \mathsf{y_d}^{\mathsf{i1p}} + \overline{\mathsf{y_u}}^{\mathsf{i2p}} \; \mathsf{y_u}^{\mathsf{i1p}} \right) \; \mathsf{LF}_{\mathsf{2,1,1,0}} \big[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \big] \; \mathsf{LF}_{\mathsf{2,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \widetilde{\boldsymbol{\mu}} \; , \; \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,0}} \left[ \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right] \; \mathsf{LF}_{\mathsf{2,1,1,1,1,0}} \left[ \mathsf{m_2} \; , \; \mathsf{m_2}^{\mathsf{i2p}} \right
                                                                                                                                                                                 g_{2}{}^{2}\,\left(\,c_{\gamma}{}^{2}\,\overline{y_{d}}^{i\,2p}\,\,y_{d}{}^{i\,1p}\,+\,s_{\gamma}{}^{2}\,\overline{y_{u}}^{i\,2p}\,\,y_{u}{}^{i\,1p}\,\right)\,\,LF_{3,1,1,-2}\!\left[\,\widetilde{\mu}\,,\,m_{2}\,,\,m_{\tilde{q}}{}^{i\,1}\,\right]\,+\,c_{\gamma}{}^{2}\,\overline{y_{d}}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,A_{3,1,1,-2}\left[\,\widetilde{\mu}\,,\,m_{2}\,,\,m_{\tilde{q}}{}^{i\,1}\,\right]\,+\,c_{\gamma}{}^{2}\,\overline{y_{d}}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,
                                                                                                                                                                                     \text{m}_{2} \; \text{s}_{\gamma} \; \widetilde{\mu} \; \text{c}_{\gamma} \; \text{g}_{2}^{\; 2} \; \left( \overline{y_{d}}^{\text{i2p}} \; y_{d}^{\; \text{i1p}} + \overline{y_{u}}^{\text{i2p}} \; y_{u}^{\; \text{i1p}} \right) \; \text{LF}_{3,1,1,-1} \big[ \widetilde{\mu} \text{, m}_{2} \text{, m}_{\tilde{q}}^{\; \text{i1}} \big] \; - \; \text{m}_{\tilde{q}}^{\; \text{i1}} \big] \; - \; \text{m}_{\tilde{q}}^{\; \text{i1p}} \; + \; \text{m}_{\tilde{q}}^{\; \text{i1p}} \; + \; \text{m}_{\tilde{q}}^{\; \text{i1p}} \big] \; - \; \text{m}_{\tilde{q}}^{\; \text{i1p}} \; + \; \text{
                                                                                                                                                                                                      g_{2}{}^{2}\,\left(c_{\gamma}{}^{2}\,\overline{y_{d}}^{i2p}\,y_{d}{}^{i1p}+s_{\gamma}{}^{2}\,\overline{y_{u}}^{i2p}\,y_{u}{}^{i1p}\right)\,LF_{2,1,1,-1}\big[\tilde{\mu}\,,\,m_{2}\,,\,m_{\tilde{q}}{}^{i2}\big]\,-
                                                                                                                                                                                     \mathsf{m_2} \; \mathsf{s_{_{Y}}} \; \widetilde{\mu} \; \mathsf{c_{_{Y}}} \; \mathsf{g_2}^2 \; \left( \overline{y_d}^{\texttt{i2p}} \; y_d^{\; \texttt{i1p}} + \overline{y_u}^{\texttt{i2p}} \; y_u^{\; \texttt{i1p}} \right) \; \mathsf{LF_{2,1,1,0}} \big[ \widetilde{\mu} \,, \; \mathsf{m_2} \,, \; \mathsf{m_{\tilde{q}}}^{\texttt{i2}} \big] \; + \\
                                                                                                                                                                                     g_{2}{}^{2}\,\left(\,c_{\gamma}{}^{2}\,\overline{y_{d}}^{i\,2p}\,\,y_{d}{}^{i\,1p}\,+\,s_{\gamma}{}^{2}\,\overline{y_{u}}^{i\,2p}\,\,y_{u}{}^{i\,1p}\right)\,LF_{3,1,1,-2}\!\left[\,\widetilde{\mu}\,,\,m_{2}\,,\,m_{\tilde{q}}{}^{i\,2}\,\right]\,+\,c_{\gamma}{}^{2}\,\overline{y_{d}}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}\,\,y_{u}{}^{i\,2p}
                                                                                                                                                                                     \text{m}_{2} \; \text{s}_{\gamma} \; \widetilde{\mu} \; \text{c}_{\gamma} \; \text{g}_{2}^{\; 2} \; \left( \overline{y_{d}}^{\text{i2p}} \; y_{d}^{\text{i1p}} + \overline{y_{u}}^{\text{i2p}} \; y_{u}^{\text{i1p}} \right) \; \text{LF}_{3,1,1,-1} \big[ \widetilde{\mu} \text{, m}_{2} \text{, m}_{\tilde{q}}^{\text{i2}} \big] \; - \; \text{m}_{\tilde{q}}^{\text{i2p}} \; \text{c}_{\tilde{q}}^{\text{i2p}} \; \text{c}_{\tilde{q}}^{\text{i2p}} \, 
                                                                                                                                                                                                      \mathsf{s}_{\scriptscriptstyle \Upsilon}\,\widetilde{\mu}\,\overline{\mathsf{y}_{\mathsf{d}}}^{\mathsf{i2p}}\,\overline{\mathsf{y}_{\mathsf{u}}}^{\mathsf{rs}}\,\mathsf{y}_{\mathsf{u}}^{\,\,\mathsf{i1s}}\,\left(\mathsf{c}_{\scriptscriptstyle \Upsilon}\,\mathsf{a}_{\mathsf{d}}^{\,\mathsf{rp}}-\mathsf{s}_{\scriptscriptstyle \Upsilon}\,\widetilde{\mu}\,\mathsf{y}_{\mathsf{d}}^{\,\mathsf{rp}}\right)\,\mathsf{LF}_{\mathsf{2,1,1,0}}\!\left[\widetilde{\mu}\,,\,\mathsf{m}_{\bar{\mathsf{d}}}^{\,\,\mathsf{p}},\,\mathsf{m}_{\bar{\mathsf{q}}}^{\,\,\mathsf{r}}\right]\,+\,\mathsf{m}_{\bar{\mathsf{d}}}^{\,\,\mathsf{r}}\,\mathsf{m}_{\bar{\mathsf{d}}}^{\,\,\mathsf{r}}\,\mathsf{m}_{\bar{\mathsf{d}}}^{\,\,\mathsf{r}}\,\mathsf{m}_{\bar{\mathsf{d}}}^{\,\,\mathsf{r}}\right]
                                                                                                                                                                                 s_{\gamma}\,\widetilde{\mu}\,\overline{y_{d}}^{\text{i2p}}\,\overline{y_{u}}^{\text{rs}}\,y_{u}^{\text{i1s}}\,\left(-\,c_{\gamma}\,a_{d}^{\,\text{rp}}\,+\,s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\,\text{rp}}\right)\,LF_{3,1,1,-1}\!\left[\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\text{p}},\,m_{\tilde{q}}^{\,\text{r}}\right]\,+\,c_{1}^{\,\text{r}}\left(-\,c_{\gamma}\,a_{d}^{\,\text{rp}}\,+\,s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\,\text{rp}}\right)\,LF_{3,1,1,-1}\left[\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\text{p}},\,m_{\tilde{q}}^{\,\text{r}}\right]\,+\,c_{1}^{\,\text{r}}\left(-\,c_{\gamma}\,a_{d}^{\,\text{rp}}\,+\,s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\,\text{rp}}\right)\,LF_{3,1,1,-1}\left[\widetilde{\mu}\,,\,m_{\tilde{d}}^{\,\text{r}}\,,\,m_{\tilde{q}}^{\,\text{r}}\right]
                                                                                                                                                                                     s_{\scriptscriptstyle Y}\,\tilde{\mu}\,\,y_{d}^{\,\,\text{ilr}}\,\,\overline{y_{u}}^{\,\,\text{i2s}}\,\,y_{u}^{\,\,\text{ps}}\,\,\left(c_{\scriptscriptstyle Y}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,-\,s_{\scriptscriptstyle Y}\,\tilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{2,1,1,\theta}\left[\tilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{q}}^{\,\,\text{r}}\right]\,+\,\,c_{\scriptscriptstyle Y}^{\,\,\text{pr}}\,\,\left(c_{\scriptscriptstyle Y}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,-\,s_{\scriptscriptstyle Y}\,\tilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{2,1,1,\theta}\left[\tilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{q}}^{\,\,\text{r}}\right]\,+\,c_{\scriptscriptstyle Y}^{\,\,\text{pr}}\,\,\left(c_{\scriptscriptstyle Y}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,-\,s_{\scriptscriptstyle Y}\,\tilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{2,1,1,\theta}\left[\tilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{q}}^{\,\,\text{r}}\right]\,+\,c_{\scriptscriptstyle Y}^{\,\,\text{pr}}\,\,\left(c_{\scriptscriptstyle Y}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,-\,s_{\scriptscriptstyle Y}\,\tilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{2,1,1,\theta}\left[\tilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\right]\,+\,c_{\scriptscriptstyle Y}^{\,\,\text{pr}}\,\,\left(c_{\scriptscriptstyle Y}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,-\,s_{\scriptscriptstyle Y}\,\tilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{2,1,1,\theta}\left[\tilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\right]\,+\,c_{\scriptscriptstyle Y}^{\,\,\text{pr}}\,\,\left(c_{\scriptscriptstyle Y}\,\,\overline{a_{d}}^{\,\,\text{pr}}\,-\,s_{\scriptscriptstyle Y}\,\tilde{\mu}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,\text{LF}_{2,1,1,\theta}\left[\tilde{\mu}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\,,\,\,m_{\tilde{d}}^{\,\,\text{r}}\right]\,+\,c_{\scriptscriptstyle Y}^{\,\,\text{pr}}\,\,\left(c_{\scriptscriptstyle Y}\,\,\overline{a_{d}}\,-\,s_{\scriptscriptstyle Y}\,\,\overline{y_{d}}^{\,\,\text{pr}}\right)\,\,c_{\scriptscriptstyle Y}^{\,\,\text{pr}}\,\,c_{\scriptscriptstyle Y}^{\,\,\text{pr}}\,\,c_
                                                                                                                                              \frac{1}{8} \; \mathsf{s}_{\mathsf{Y}} \, \widetilde{\mu} \; \mathsf{c}_{\mathsf{Y}} \, \overline{\mathsf{y}_{\mathsf{d}}}^{\mathsf{i2s}} \; \mathsf{y}_{\mathsf{d}}^{\; \mathsf{ps}} \; \mathsf{y}_{\mathsf{u}}^{\; \mathsf{i1r}} \; \overline{\mathsf{a}_{\mathsf{u}}}^{\mathsf{pr}} \; \mathsf{LF}_{\mathsf{2,1,1,0}} \big[ \widetilde{\mu} \, , \, \mathsf{m}_{\widetilde{\mathsf{q}}}^{\; \mathsf{p}} \, , \, \mathsf{m}_{\widetilde{\mathsf{u}}}^{\; \mathsf{r}} \big] \; - \; \mathsf{m}_{\widetilde{\mathsf{u}}}^{\; \mathsf{r}} \, , \, \, \, \mathsf{m}_{\widetilde{\mathsf
                                                                                                                                              \frac{1}{s} \; s_{\gamma} \, \widetilde{\mu} \; c_{\gamma} \, \overline{y_d}^{i2s} \, y_d^{ps} \, y_u^{i1r} \, \overline{a_u}^{pr} \, LF_{3,1,1,-1} \big[ \widetilde{\mu} \, , \, m_{\widetilde{q}}^{\; p} \, , \, m_{\widetilde{u}}^{\; r} \big] \; + \\
                                                                                                                                              \stackrel{\circ}{\underset{\circ}{\circ}} \widetilde{\mu} \; c_{\gamma} \; \overline{y_{d}}^{pr} \; y_{d}^{i1r} \; \overline{y_{u}}^{i2s} \; \left(s_{\gamma} \; a_{u}^{ps} - \widetilde{\mu} \; c_{\gamma} \; y_{u}^{ps}\right) \; \mathsf{LF}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{u}}^{\; s}\right] \; + \; \widetilde{\mathsf{LF}}_{2,1,1,0} \left[\widetilde{\mu} \; , \; \mathsf{m}_{\tilde{q}}^{\; p} \; , \; \mathsf{m}_{\tilde{q}
                                                                                                                                                                                     \widetilde{\mu} \; c_{\gamma} \; \overline{y_{d}}^{\text{pr}} \; y_{d}^{\text{ilr}} \; \overline{y_{u}}^{\text{i2s}} \; \left( - \, s_{\gamma} \; a_{u}^{\; \text{ps}} + \widetilde{\mu} \; c_{\gamma} \; y_{u}^{\; \text{ps}} \right) \; \mathsf{LF_{3,1,1,-1}} \big[ \widetilde{\mu} \, , \; \mathsf{m_{\tilde{q}}}^{\; \text{p}} \, , \; \mathsf{m_{\tilde{u}}}^{\text{s}} \big] \; - \; \mathsf{m_{\tilde{u}}}^{\; \text{pr}} \, .
                                                                                                                                              \frac{1}{8} \widetilde{\mu}^2 c_{\gamma}^2 \overline{y_d}^{i2p} y_d^{rp} \overline{y_u}^{rs} y_u^{i1s} LF_{2,1,1,0} [\widetilde{\mu}, m_{\tilde{q}}{}^r, m_{\tilde{u}}{}^s] +
                                                                                                                                                                                     \tilde{\mu}^2 \; c_{\gamma}{}^2 \; \overline{y_d}^{i2p} \; y_d{}^{rp} \; \overline{y_u}{}^{rs} \; y_u{}^{i1s} \; LF_{3,1,1,-1} \big[ \, \tilde{\mu} \, , \; m_{\tilde{q}}{}^r \, , \; m_{\tilde{u}}{}^s \, \big] \; + \\
                                                                                                                                                                                                  \mathsf{g_1}^2 \, \mathsf{g_2}^2 \, \left(\mathsf{c_{\scriptscriptstyle Y}}^2 - \mathsf{s_{\scriptscriptstyle Y}}^2\right) \, \mathsf{LF_{1,1,1,1,-1}} \big[ \mathsf{m_1, m_2, m_{\bar{\mathsf{q}}}}^{i2}, \, \tilde{\mu} \big] \, \delta_{i1i2} + 
                                                                                                                                                                                              \left[\mathbf{m_{1}\,m_{2}\,g_{1}}^{2}\,g_{2}^{2}\,\left(\mathbf{c_{\gamma}}^{2}-\mathbf{s_{\gamma}}^{2}\right)\,\mathsf{LF_{1,1,1,1,0}}\left[\mathbf{m_{1},\,m_{2},\,m_{\tilde{q}}}^{\,i2},\,\tilde{\mu}\right]\,\delta_{i1i2}-\mathbf{s_{\gamma}}^{\,i}\right]
                                                                                                                                              \frac{1}{48}~g_{1}^{2}~\overline{y_{d}}^{i2p}~(m_{1}~c_{\gamma}-s_{\gamma}~\widetilde{\mu})~\left(c_{\gamma}~a_{d}^{~i1p}-s_{\gamma}~\widetilde{\mu}~y_{d}^{~i1p}\right)~\mathsf{LF}_{1,1,1,1,0}\left[m_{1},~m_{\tilde{d}}^{~p},~m_{\tilde{q}}^{~i1},~\widetilde{\mu}\right]-\frac{1}{48}~g_{1}^{2}~\overline{y_{d}}^{i2p}
                                                                                                                                              \frac{1}{96} \ g_{1}{}^{2} \ \overline{y_{d}}{}^{12p} \ (m_{1} \ c_{\gamma} + s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ a_{d}{}^{11p} - s_{\gamma} \ \widetilde{\mu} \ y_{d}{}^{11p}\right) \ LF_{2,1,1,1,-1} \big[m_{1}, \ m_{\bar{d}}^{\ p}, \ m_{\bar{q}}{}^{11}, \ \widetilde{\mu}\big] - c_{\gamma} \ \widetilde{\mu} \ 
                                                                                                                                              \frac{1}{48} \ g_{1}{}^{2} \ y_{d}{}^{i1p} \ (m_{1} \ c_{\gamma} - s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ \overline{a_{d}}{}^{i2p} - s_{\gamma} \ \widetilde{\mu} \ \overline{y_{d}}{}^{i2p}\right) \ \mathsf{LF}_{1,1,1,1,0} \left[m_{1} \ , \ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{q}}^{\ i2} \ , \ \widetilde{\mu}\right] - c_{\gamma} \ \widetilde{a_{d}}{}^{i2p} + c_{\gamma} \ \widetilde{\mu} \ \widetilde{\mu} \ \widetilde{a_{d}}{}^{i2p} + c_{\gamma} \ \widetilde{\mu} \ \widetilde{\mu} \ \widetilde{a_{d}}{}^{i2p} + c_{\gamma} \ \widetilde{\mu} \ \widetilde
                                                                                                                                              \frac{1}{96} \ g_{1}^{\ 2} \ y_{d}^{\ i1p} \ (m_{1} \ c_{\gamma} + s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ \overline{a_{d}}^{\ i2p} - s_{\gamma} \ \widetilde{\mu} \ \overline{y_{d}}^{\ i2p}\right) \ \mathsf{LF}_{2,1,1,1,-1} \big[m_{1}, \ m_{\tilde{d}}^{\ p}, \ m_{\tilde{q}}^{\ i2}, \ \widetilde{\mu}\big] \ + c_{1} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ i2}, \ \widetilde{\mu}) \ + c_{2} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ i2}, \ \widetilde{\mu}) \ + c_{2} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ i2}, \ \widetilde{\mu}) \ + c_{2} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ i2}, \ \widetilde{\mu}) \ + c_{2} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ i2}, \ \widetilde{\mu}) \ + c_{2} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ i2}, \ \widetilde{\mu}) \ + c_{2} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ i2}, \ \widetilde{\mu}) \ + c_{2} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ i2}, \ \widetilde{\mu}) \ + c_{2} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ p}, m_{\tilde{q}}^{\ p}, m_{\tilde{q}}^{\ p}, \ \widetilde{\mu}) \ + c_{2} \ (m_{1}, m_{\tilde{d}}^{\ p}, m_{\tilde{q}}^{\ p},
                                                                                                                                              \frac{1}{48} \ g_{1}^{2} \ \overline{y_{u}^{i2p}} \ (m_{1} \ s_{\gamma} - \widetilde{\mu} \ c_{\gamma}) \ \left(s_{\gamma} \ a_{u}^{i1p} - \widetilde{\mu} \ c_{\gamma} \ y_{u}^{i1p}\right) \ LF_{1,1,1,1,0} \left[m_{1} \ , \ m_{\bar{q}}^{-i1} \ , \ m_{\bar{u}}^{-p} \ , \ \widetilde{\mu}\right] + \frac{1}{48} \ g_{1}^{2} \ \overline{y_{u}^{i1p}} \left(m_{1} \ , \ m_{\bar{q}}^{-i1} \ , \ m_{\bar{u}}^{-p} \ , \ \widetilde{\mu}\right) + \frac{1}{48} \ g_{1}^{2} \ \overline{y_{u}^{i1p}} \left(m_{1} \ , \ m_{\bar{q}}^{-i1} \ , \ m_{\bar{u}}^{-p} \ , \ \widetilde{\mu}\right) + \frac{1}{48} \ g_{1}^{2} \ \overline{y_{u}^{i1p}} \left(m_{1} \ , \ m_{\bar{q}}^{-i1} \ , \ m_{\bar{u}}^{-p} \ , \ \widetilde{\mu}\right) + \frac{1}{48} \ g_{1}^{2} \ \overline{y_{u}^{i1p}} \left(m_{1} \ , \ m_{\bar{q}}^{-i1} \ , \ m_{\bar{u}}^{-p} \ , \ \widetilde{\mu}\right) + \frac{1}{48} \ g_{1}^{2} \ \overline{y_{u}^{i1p}} \left(m_{1} \ , \ m_{\bar{q}}^{-i1} \ , \ m_{\bar{u}}^{-p} \ , \ \widetilde{\mu}\right) + \frac{1}{48} \ g_{1}^{2} \ \overline{y_{u}^{i1p}} \left(m_{1} \ , \ m_{\bar{q}}^{-i1} 
                                                                                                                                              \frac{1}{96} \ g_{1}^{2} \ \overline{y_{u}^{12p}} \ (m_{1} \ s_{\gamma} + \widetilde{\mu} \ c_{\gamma}) \ \left(s_{\gamma} \ a_{u}^{11p} - \widetilde{\mu} \ c_{\gamma} \ y_{u}^{11p}\right) \ LF_{2,1,1,1,-1} \left[m_{1}, \ m_{\tilde{q}}^{11}, \ m_{\tilde{u}}^{p}, \ \widetilde{\mu}\right] + c_{\gamma} \ c_{\gamma} \
                                                                                                                                              \frac{1}{48} \ g_{1}^{\ 2} \ y_{u}^{\ i1p} \ (m_{1} \ s_{\gamma} - \widetilde{\mu} \ c_{\gamma}) \ \left(s_{\gamma} \ \overline{a_{u}}^{i2p} - \widetilde{\mu} \ c_{\gamma} \ \overline{y_{u}}^{i2p}\right) \ \mathsf{LF}_{1,1,1,1,0} \big[m_{1}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{u}}^{\ p}, \ \widetilde{\mu}\big] \ + \\ \frac{1}{48} \ g_{1}^{\ 2} \ y_{u}^{\ i1p} \ \left(m_{1}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{u}}^{\ p}, \ \widetilde{\mu}\right) \ + \\ \frac{1}{48} \ g_{1}^{\ 2} \ y_{u}^{\ i1p} \ \left(m_{1}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{u}}^{\ p}, \ \widetilde{\mu}\right) \ + \\ \frac{1}{48} \ g_{1}^{\ 2} \ y_{u}^{\ i1p} \ \left(m_{1}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{u}}^{\ p}, \ \widetilde{\mu}\right) \ + \\ \frac{1}{48} \ g_{1}^{\ 2} \ y_{u}^{\ i1p} \ \left(m_{1}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{u}}^{\ p}, \ \widetilde{\mu}\right) \ + \\ \frac{1}{48} \ g_{1}^{\ 2} \ y_{u}^{\ i1p} \ \left(m_{1}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i2p}, \ m_{\tilde{q}}^{\ 
                                                                                                                                              \frac{1}{96} \ g_1^2 \ y_u^{\ i1p} \ (m_1 \ s_{\gamma} + \widetilde{\mu} \ c_{\gamma}) \ \left( s_{\gamma} \ \overline{a_u}^{\ i2p} - \widetilde{\mu} \ c_{\gamma} \ \overline{y_u}^{\ i2p} \right) \ LF_{2,1,1,1,-1} \big[ m_1, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{u}}^{\ p}, \ \widetilde{\mu} \big] + \frac{1}{96} \ g_1^2 \ y_u^{\ i1p} \ \left( m_1, m_{\tilde{q}}^{\ i2p}, m_{\tilde{u}}^{\ p}, m_{\tilde{u}}^{\ p}, \right) + \frac{1}{96} \ g_1^2 \ y_u^{\ i1p} \ \left( m_1, m_{\tilde{q}}^{\ i2p}, m_{\tilde{u}}^{\ p}, m_{\tilde{u}}^{\ p}, \right) + \frac{1}{96} \ g_1^2 \ y_u^{\ i1p} \ \left( m_1, m_{\tilde{q}}, m_{\tilde{u}}^{\ p}, m_{\tilde{u}}^{\ p}, m_{\tilde{u}}^{\ p}, \right) + \frac{1}{96} \ g_1^2 \ y_u^{\ i1p} \ \left( m_1, m_{\tilde{q}}, m_{\tilde{u}}^{\ p}, m_{\tilde{u}}^
                                                                                                                                              \frac{1}{16} \ g_{2}^{2} \ \overline{y_{d}}^{12p} \ (m_{2} \ c_{\gamma} - s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ a_{d}^{11p} - s_{\gamma} \ \widetilde{\mu} \ y_{d}^{11p}\right) \ LF_{1,1,1,1,0} \left[m_{2} \ , \ m_{\tilde{d}}^{-p} \ , \ m_{\tilde{q}}^{-11} \ , \ \widetilde{\mu}\right] + c_{11} \ (m_{11} \ , m_{12} \ , m_{\tilde{d}}^{-p} \ , \ m_{\tilde{
                                                                                                                                              \frac{1}{32} \ g_2^{\ 2} \ \overline{y_d}^{12p} \ (m_2 \ c_{\gamma} + s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ a_d^{\ 11p} - s_{\gamma} \ \widetilde{\mu} \ y_d^{\ 11p}\right) \ LF_{2,1,1,1,-1} \left[m_2 \ , \ m_{\bar{d}}^{\ p} \ , \ m_{\bar{q}}^{\ 11} \ , \ \widetilde{\mu}\right] + c_{2,1,1,1,-1} \left[m_2 \ , \ m_{\bar{d}}^{\ p} \ , \ m_{\bar{q}}^{\ 11} \ , \ \widetilde{\mu}\right] + c_{2,1,1,1,-1} \left[m_2 \ , \ m_{\bar{d}}^{\ p} \ , \ m_{\bar{q}}^{\ 11} \ , \ \widetilde{\mu}\right] + c_{2,1,1,1,-1} \left[m_2 \ , \ m_{\bar{d}}^{\ p} \ , \ m_{\bar{q}}^{\ 11} \ , \ \widetilde{\mu}\right] + c_{2,1,1,1,-1} \left[m_2 \ , \ m_{\bar{d}}^{\ p} \ , \ m_{\bar{q}}^{\ p} \ , \ m
                                                                                                                                              \frac{1}{16} \ g_2^2 \ y_d^{\ i1p} \ (m_2 \ c_{\gamma} - s_{\gamma} \ \widetilde{\mu}) \ \left( c_{\gamma} \ \overline{a_d}^{\ i2p} - s_{\gamma} \ \widetilde{\mu} \ \overline{y_d}^{\ i2p} \right) \ \mathsf{LF}_{1,1,1,1,0} \big[ \ m_2 \ , \ m_{\check{d}}^{\ p} \ , \ m_{\check{q}}^{\ i2} \ , \ \widetilde{\mu} \, \big] \ + \ c_{\gamma} \ \widetilde{a_d}^{\ i2p} + c_{\gamma} \ \widetilde{\mu} \, \big[ \ m_2 \ , \ m_{\check{d}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ \widetilde{\mu} \, \big] \ + \ c_{\gamma} \ \widetilde{\mu} \, \big[ \ m_2 \ , \ m_{\check{q}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ \widetilde{\mu} \, \big] \ + \ c_{\gamma} \ \widetilde{\mu} \, \big[ \ m_2 \ , \ m_{\check{q}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ \widetilde{\mu} \, \big] \ + \ c_{\gamma} \ \widetilde{\mu} \, \big[ \ m_2 \ , \ m_{\check{q}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ \widetilde{\mu} \, \big] \ + \ c_{\gamma} \ \widetilde{\mu} \, \big[ \ m_2 \ , \ m_{\check{q}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ \widetilde{\mu} \, \big] \ + \ c_{\gamma} \ \widetilde{\mu} \, \big[ \ m_2 \ , \ m_{\check{q}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ \widetilde{\mu} \, \big] \ + \ c_{\gamma} \ \widetilde{\mu} \, \big[ \ m_2 \ , \ m_{\check{q}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ \widetilde{\mu} \, \big] \ + \ c_{\gamma} \ \widetilde{\mu} \, \big[ \ m_2 \ , \ m_{\check{q}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ m_{\check{q}}^{\ i2p} \ , \ \widetilde{\mu} \, \big] \ + \ c_{\gamma} \ \widetilde{\mu} \, \big[ \ m_2 \ , \ m_{\check{q}}^{\ i2p} \ , \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       + \; s_{\scriptscriptstyle Y} \; \widetilde{\mu} ) \; \; \left( c_{\scriptscriptstyle Y} \; \overline{a_d}^{i\, 2p} \; - \; s_{\scriptscriptstyle Y} \; \widetilde{\mu} \; \overline{y_d}^{i\, 2p} \right) \; \mathsf{LF}_{2,1,1,1},
                                                                                                                                                                                                               g_2^2 y_d^{i1p} (m_2
                                                                                                                                              \frac{1}{16} \ g_2^2 \ \overline{y_u^{12p}} \ (m_2 \ s_{\gamma} - \widetilde{\mu} \ c_{\gamma}) \ \left(s_{\gamma} \ a_u^{11p} - \widetilde{\mu} \ c_{\gamma} \ y_u^{11p}\right) \ \mathsf{LF_{1,1,1,1,0}[m_2, m_{\tilde{q}}^{-11}, m_{\tilde{u}}^{-p}, \widetilde{\mu}]} + \\
                                                                                                                                              \frac{1}{32} \; g_{2}^{\; 2} \; \overline{y_{u}}^{12p} \; \left( \mathsf{m}_{2} \; \mathsf{s}_{\curlyvee} + \widetilde{\mu} \; \mathsf{c}_{\curlyvee} \right) \; \left( \mathsf{s}_{\curlyvee} \; \mathsf{a}_{u}^{\; 11p} - \widetilde{\mu} \; \mathsf{c}_{\curlyvee} \; \mathsf{y}_{u}^{\; 11p} \right) \; \mathsf{LF}_{2,1,1,1,-1} \big[ \, \mathsf{m}_{2} \; , \; \mathsf{m}_{\tilde{q}}^{\; 11} \; , \; \mathsf{m}_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \, \big] \; + \; \mathsf{m}_{\tilde{q}}^{\; 11p} \; , \; \mathsf{m}_{\tilde{q}}
                                                                                                                                              \frac{1}{16} \; g_2^2 \; y_u^{\; i1p} \; (m_2 \; s_\gamma - \widetilde{\mu} \; c_\gamma) \; \left( s_\gamma \; \overline{a_u}^{i2p} - \widetilde{\mu} \; c_\gamma \; \overline{y_u}^{i2p} \right) \; \mathsf{LF}_{1,1,1,1,0} \big[ \, m_2 \, , \; m_{\tilde{q}}^{\; i2} \, , \; m_{\tilde{u}}^{\; p} \, , \; \widetilde{\mu} \, \big] \; + \; c_\gamma \; \overline{a_u}^{\; i2p} \; , \; c
                                                                                                                                              \frac{1}{32} \; g_2^{\; 2} \; y_u^{\; i1p} \; \left( \; m_2 \; s_\gamma \; + \; \widetilde{\mu} \; c_\gamma \; \right) \; \left( \; s_\gamma \; \overline{a_u}^{\; i2p} \; - \; \widetilde{\mu} \; c_\gamma \; \overline{y_u}^{\; i2p} \right) \; \mathsf{LF}_{2,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \; \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \; \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \; \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \; \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \; \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \; \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \; \right] \; + \; \mathsf{LF}_{2,1,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \; \right] \; + \; \mathsf{LF}_{2,1,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{u}}^{\; p} \; , \; \widetilde{\mu} \; \right] \; + \; \mathsf{LF}_{2,1,1,1,1,-1} \left[ \; m_2 \; , \; m_{\tilde{q}}^{\; i2} \; , \; m_{\tilde{q}}^{\; i2
                                                                                                                                              \frac{1}{96} \ g_{1}^{2} \ \overline{y_{d}}^{12p} \ (m_{1} \ c_{\gamma} + s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ a_{d}^{11p} - s_{\gamma} \ \widetilde{\mu} \ y_{d}^{11p}\right) \ LF_{2,1,1,1,-1} \left[m_{\bar{d}}^{-p}, \ m_{1}, \ m_{\bar{q}}^{-11}, \ \widetilde{\mu}\right] - m_{\bar{q}}^{11} \ , \ \widetilde{\mu} = 0
                                                                                                                                              \frac{1}{144} \ g_1^2 \ \left( c_{\Upsilon} \ \overline{a_d}^{i2p} - s_{\Upsilon} \ \widetilde{\mu} \ \overline{y_d}^{i2p} \right) \ \left( c_{\Upsilon} \ a_d^{i1p} - s_{\Upsilon} \ \widetilde{\mu} \ y_d^{i1p} \right) \ \mathsf{LF}_{2,1,1,1,-1} \left[ \ \mathsf{m}_d^{-p} \ , \ \mathsf{m}_1 \ , \ \mathsf{m}_{\tilde{q}}^{-i2} \ , \ \mathsf{m}_{\tilde{q}}^{-i1} \right] \ + \ \mathsf{m}_{\tilde{q}}^{i1} \ \mathsf
                                                                                                                                              \frac{1}{96} \ g_{1}^{\ 2} \ y_{d}^{\ 11p} \ (m_{1} \ c_{\gamma} + s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ \overline{a_{d}}^{\ 12p} - s_{\gamma} \ \widetilde{\mu} \ \overline{y_{d}}^{\ 12p}\right) \ LF_{2,1,1,1,-1} \left[m_{\bar{d}}^{\ p}, \ m_{1}, \ m_{\bar{q}}^{\ 12}, \ \widetilde{\mu}\right] - m_{1}^{\ 2p} \left(m_{1} \ m_{2}^{\ p}, \ m_{2} \ m_{2}^{\ p}, \ m_{3} \right) \ \left(m_{1} \ m_{2}^{\ p}, \ m_{3} \ m_{3} \right) \ \left(m_{1} \ m_{2} \ m_{3} \ m_{3} \right) \ \left(m_{1} \ m_{2} \ m_{3} \ m_{3} \ m_{3} \right) \ \left(m_{1} \ m_{2} \ m_{3} \right) \ \left(m_{1} \ m_{2} \ m_{3} \ m_{
                                                                                                                                                                                                      g_{2}^{2} \; \overline{y_{d}}^{i2p} \; \left( m_{2} \; c_{\gamma} + s_{\gamma} \; \widetilde{\mu} \right) \; \left( c_{\gamma} \; a_{d}^{\; i1p} - s_{\gamma} \; \widetilde{\mu} \; y_{d}^{\; i1p} \right) \; LF_{2,1,1,1,-1} \left[ m_{\tilde{d}}^{\; p}, \; m_{2}, \; m_{\tilde{q}}^{\; i1}, \; \widetilde{\mu} \right] \; + \; c_{\gamma} \; \widetilde{\mu} \; \widetilde{\mu
                                                                                                                                              \frac{1}{16} \ g_{2}^{2} \ \left(c_{\gamma} \ \overline{a_{d}}^{i2p} - s_{\gamma} \ \widetilde{\mu} \ \overline{y_{d}}^{i2p}\right) \ \left(c_{\gamma} \ a_{d}^{i1p} - s_{\gamma} \ \widetilde{\mu} \ y_{d}^{i1p}\right) \ LF_{2,1,1,1,-1} \left[m_{\tilde{d}}^{-p}, \ m_{2}, \ m_{\tilde{q}}^{-i2}, \ m_{\tilde{q}}^{-i1}\right] - c_{\gamma} \ m_{\tilde{q}}^{-1} \ m_{\tilde{q}}
                                                                                                                                                                                                      g_{2}{}^{2}\;y_{d}{}^{i1p}\;\left(m_{2}\;c_{\gamma}+s_{\gamma}\;\widetilde{\mu}\right)\;\left(c_{\gamma}\;\overline{a_{d}}{}^{i2p}-s_{\gamma}\;\widetilde{\mu}\;\overline{y_{d}}{}^{i2p}\right)\;\mathsf{LF}_{2,1,1,1,-1}\!\left[m_{d}^{-p},\;m_{2},\;m_{\tilde{q}}^{-i2},\;\widetilde{\mu}\right]-m_{d}{}^{i2}
                                                                                                                                                                                     g_{3}^{2}\left(c_{\gamma}\;\overline{a_{d}}^{i2p}-s_{\gamma}\,\widetilde{\mu}\;\overline{y_{d}}^{i2p}\right)\;\left(c_{\gamma}\;a_{d}^{\;i1p}-s_{\gamma}\,\widetilde{\mu}\;y_{d}^{\;i1p}\right)\;\mathsf{LF}_{2,1,1,1,-1}\big[\mathsf{m}_{\bar{d}}^{\;p},\;\mathsf{m}_{3},\;\mathsf{m}_{\bar{q}}^{\;i2},\;\mathsf{m}_{\bar{q}}^{\;i1}\big]\;-
                                                                                                                                              \frac{1}{96} \ g_{1}^{2} \ \overline{y_{d}}^{12p} \ (m_{1} \ c_{\gamma} + s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ a_{d}^{\ 11p} - s_{\gamma} \ \widetilde{\mu} \ y_{d}^{\ 11p}\right) \ LF_{2,1,1,1,-1} \left[m_{\tilde{q}}^{\ 11}, \ m_{1}, \ m_{\tilde{d}}^{\ p}, \ \widetilde{\mu}\right] + c_{1} \ (m_{1} \ m_{1}, \ m_{2} \ m_{2}
                                                                                                                                              \frac{1}{96} \ g_{1}^{\ 2} \ \overline{y_{u}}^{12p} \ (m_{1} \ s_{\gamma} + \widetilde{\mu} \ c_{\gamma}) \ \left(s_{\gamma} \ a_{u}^{\ 11p} - \widetilde{\mu} \ c_{\gamma} \ y_{u}^{\ 11p}\right) \ LF_{2,1,1,1,-1} \left[m_{\tilde{q}}^{\ 11}, \ m_{1}, \ m_{\tilde{u}}^{\ p}, \ \widetilde{\mu}\right] + c_{\gamma} \left(s_{\tilde{q}}^{\ 11p} + \widetilde{\mu} \ c_{\tilde{q}}^{\ 11p}\right) \ c_{\gamma} \ s_{\tilde{q}} \ c_{\tilde{q}} \ s_{\tilde{q}} \ c_{\tilde{q}} \ c_{\tilde{q}} \ s_{\tilde{q}} \ c_{\tilde{q}} \ c_{
                                                                                                                                              \frac{1}{32} \ g_2^2 \ \overline{y_d}^{12p} \ (m_2 \ c_{\Upsilon} + s_{\Upsilon} \ \widetilde{\mu}) \ \left(c_{\Upsilon} \ a_d^{11p} - s_{\Upsilon} \ \widetilde{\mu} \ y_d^{11p}\right) \ LF_{2,1,1,1,-1} \left[m_{\bar{q}}^{-11}, \ m_2, \ m_{\bar{d}}^{-p}, \ \widetilde{\mu}\right] + c_{\bar{q}}^{-1} \ ,
                                                                                                                                              \frac{1}{32} \; g_2{}^2 \; \overline{y_u}{}^{i2p} \; (m_2 \; s_\gamma + \widetilde{\mu} \; c_\gamma) \; \left( s_\gamma \; a_u{}^{i1p} - \widetilde{\mu} \; c_\gamma \; y_u{}^{i1p} \right) \; \mathsf{LF}_{2,1,1,1,-1} \big[ \, \mathsf{m}_{\tilde{q}}{}^{i1}, \; \mathsf{m}_2, \; \mathsf{m}_{\tilde{u}}{}^p, \; \widetilde{\mu} \, \big] \; - \; \widetilde{\mu} \; c_\gamma \; y_u{}^{i1p} + \; \widetilde{\mu} \; c_\gamma \; v_u{}^{i1p} + \; \widetilde{\mu} \; c
                                                                                                                                              \frac{1}{96} \ g_{1}{}^{2} \ y_{d}{}^{11p} \ (m_{1} \ c_{\gamma} + s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ \overline{a_{d}}{}^{12p} - s_{\gamma} \ \widetilde{\mu} \ \overline{y_{d}}{}^{12p}\right) \ LF_{2,1,1,1,-1} \left[m_{\tilde{q}}{}^{12}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{12}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{12}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{12}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{q}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ \widetilde{\mu}\right] + c_{1} \left[m_{\tilde{d}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ m_{1}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ m_{1}, \ m_{\tilde{d}}{}^{p}, \ m_{1}, \ m_{1},
                                                                                                                                                                                                      g_{1}^{2}\;y_{u}^{\;i1p}\;\left(m_{1}\;s_{\gamma}+\widetilde{\mu}\;c_{\gamma}\right)\;\left(s_{\gamma}\;\overline{a_{u}}^{i2p}-\widetilde{\mu}\;c_{\gamma}\;\overline{y_{u}}^{i2p}\right)\;LF_{2,1,1,1,-1}\!\left[m_{\tilde{q}}^{\;i2},\;m_{1},\;m_{\tilde{u}}^{\;p},\;\widetilde{\mu}\right]\;+
                                                                                                                                              \frac{1}{32} \; g_2^{\; 2} \; y_d^{\; 11p} \; \left( m_2 \; c_{\gamma} + s_{\gamma} \; \widetilde{\mu} \right) \; \left( c_{\gamma} \; \overline{a_d}^{\; 12p} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; 12p} \right) \; \mathsf{LF}_{2,1,1,1,-1} \left[ \, m_{\bar{q}}^{\; \; 12} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1,1,-1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1,1,1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1,1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_2 \, , \; m_{\bar{d}}^{\; \; p} \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1} \left[ \, m_{\bar{q}}^{\; \; 12p} \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1} \left[ \, m_2 \, , \; m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1,1} \left[ \, m_2 \, , \; m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1} \left[ \, m_2 \, , \; m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1} \left[ \, m_2 \, , \; m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1} \left[ \, m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1} \left[ \, m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1} \left[ \, m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1} \left[ \, m_2 \, , \; m_2 \, , \; m_2 \, , \; \widetilde{\mu} \, \right] \; + \; \mathsf{LF}_{2,1} \left[ \, m_2 \, 
                                                                                                                                              \frac{1}{32} \; g_2^{\; 2} \; y_u^{\; i1p} \; \left( \mathsf{m}_2 \; \mathsf{s}_{\curlyvee} + \widetilde{\mu} \; \mathsf{c}_{\curlyvee} \right) \; \left( \mathsf{s}_{\curlyvee} \; \overline{\mathsf{a}_u}^{\; i2p} - \widetilde{\mu} \; \mathsf{c}_{\curlyvee} \; \overline{\mathsf{y}_u}^{\; i2p} \right) \; \mathsf{LF}_{2,1,1,1,-1} \big[ \, \mathsf{m}_{\bar{q}}^{\; \; i2} \, , \; \mathsf{m}_2 \, , \; \mathsf{m}_{\bar{u}}^{\; \; p} \, , \; \widetilde{\mu} \, \big] \; - \; \mathsf{m}_{\bar{u}}^{\; \; p} \; , \; \mathsf{m}_{\bar{u}}^{\;
                                                                                                                                                                                                      g_{1}^{2} \, \overline{y_{u}}^{\text{i2p}} \, \left( \, m_{1} \, s_{\gamma} + \widetilde{\mu} \, c_{\gamma} \right) \, \left( \, s_{\gamma} \, a_{u}^{\, \, \text{i1p}} - \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, \text{i1p}} \right) \, LF_{2,1,1,1,-1} \big[ \, m_{\widetilde{u}}^{\, \, p} \, , \, \, m_{1} \, , \, \, m_{\widetilde{q}}^{\, \, \, \text{i1}} \, , \, \, \widetilde{\mu} \, \big] \, - \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, \, \text{i1p}} \, , \, \, \widetilde{\mu} \, c_{\gamma} \, , \, \, \widetilde{\mu} \,
                                                                                                                                              \frac{1}{144} \ g_1^2 \ \left(s_\gamma \ \overline{a_u}^{i2p} - \widetilde{\mu} \ c_\gamma \ \overline{y_u}^{i2p}\right) \ \left(s_\gamma \ a_u^{i1p} - \widetilde{\mu} \ c_\gamma \ y_u^{i1p}\right) \ \mathsf{LF}_{2,1,1,1,-1} \big[ \mathsf{m}_{\bar{u}}^{\ p}, \ \mathsf{m}_1, \ \mathsf{m}_{\bar{q}}^{\ i2}, \ \mathsf{m}_{\bar{q}}^{\ i1} \big] \ - \widetilde{\mu} \ c_\gamma \ y_u^{i1p}
                                                                                                                                          \frac{1}{96} \ g_{1}{}^{2} \ y_{u}{}^{i1p} \ (m_{1} \ s_{\gamma} + \widetilde{\mu} \ c_{\gamma}) \ \left(s_{\gamma} \ \overline{a_{u}}{}^{i2p} - \widetilde{\mu} \ c_{\gamma} \ \overline{y_{u}}{}^{i2p}\right) \ LF_{2,1,1,1,-1} \big[m_{\widetilde{u}}{}^{p}, \ m_{1}, \ m_{\widetilde{q}}{}^{i2}, \ \widetilde{\mu}\big] - \widetilde{\mu} \left(s_{\gamma} \ \overline{y_{u}}{}^{i2p}\right) \ LF_{2,1,1,1,-1} \left[m_{\widetilde{u}}{}^{p}, \ m_{1}, \ m_{\widetilde{q}}{}^{i2}, \ \widetilde{\mu}\right] - \widetilde{\mu} \left(s_{\gamma} \ \overline{y_{u}}{}^{i2p}\right) \ LF_{2,1,1,1,-1} \left[m_{\widetilde{u}}{}^{p}, \ m_{1}, \ m_{\widetilde{q}}{}^{i2}, \ \widetilde{\mu}\right] - \widetilde{\mu} \left(s_{\gamma} \ \overline{y_{u}}{}^{i2p}\right) \ LF_{2,1,1,1,-1} \left[m_{\widetilde{u}}{}^{p}, \ m_{1}, \ m_{2} \ m_{2} \right] - \widetilde{\mu} \left(s_{\gamma} \ \overline{y_{u}}{}^{i2p}\right) \ LF_{2,1,1,1,-1} \left[m_{\widetilde{u}}{}^{p}, \ m_{1}, \ m_{2} \ m_{2} \right] - \widetilde{\mu} \left(s_{\gamma} \ \overline{y_{u}}{}^{i2p}\right) \ LF_{2,1,1,1,-1} \left[m_{\widetilde{u}}{}^{p}, \ m_{1}, \ m_{2} \ m_{2} \right] - \widetilde{\mu} \left(s_{\gamma} \ \overline{y_{u}}{}^{i2p}\right) \ LF_{2,1,1,1,1,-1} \left[m_{2} \ m_{2} \ m_{2} \ m_{2} \ m_{2} \right] - \widetilde{\mu} \left(s_{\gamma} \ m_{2} \ m_{2} \ m_{2} \right) \ \widetilde{\mu} \left(s_{\gamma} \ m_{2} \ m_{2} \ m_{2} \ m_{2} \right) \ \widetilde{\mu} \left(s_{\gamma} \ m_{2} \ m_{2} \ m_{2} \ m_{2} \right) \ \widetilde{\mu} \left(s_{\gamma} \ m_{2} \ m_{2} \ m_{2} \ m_{2} \ m_{2} \right) \ \widetilde{\mu} \left(s_{\gamma} \ m_{2} \ m_{2} \ m_{2} \ m_{2} \ m_{2} \right) \ \widetilde{\mu} \left(s_{\gamma} \ m_{2} 
                                                                                                                                                                                                  {\rm g_2}^2 \; \overline{{\rm y_u}}^{\rm i\, 2p} \; \left( {\rm m_2 \; s_{\rm Y}} + \widetilde{\mu} \; {\rm c_{\rm Y}} \right) \; \left( {\rm s_{\rm Y} \; a_u}^{\rm i\, 1p} - \widetilde{\mu} \; {\rm c_{\rm Y} \; y_u}^{\rm i\, 1p} \right) \; {\rm LF_{2,1,1,1,-1}} \left[ {\rm m_{\tilde{u}}}^{\rm p}, \; {\rm m_2}, \; {\rm m_{\tilde{q}}}^{\rm p}, \; {\rm m_2}, \; {\rm m_2}
                                                                                                                                              \frac{1}{16} \ g_2^2 \ \left( s_\gamma \ \overline{a_u}^{i2p} - \widetilde{\mu} \ c_\gamma \ \overline{y_u}^{i2p} \right) \ \left( s_\gamma \ a_u^{i1p} - \widetilde{\mu} \ c_\gamma \ y_u^{i1p} \right) \ LF_{2,1,1,1,-1} \left[ m_{\tilde{u}}^{\ p}, \ m_2, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i1} \right] - \frac{1}{16} \left[ m_{\tilde{u}}^{\ p}, \ m_2, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i1} \right] - \frac{1}{16} \left[ m_{\tilde{u}}^{\ p}, \ m_2, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i2} \right] - \frac{1}{16} \left[ m_{\tilde{u}}^{\ p}, \ m_2, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i2} \right] - \frac{1}{16} \left[ m_{\tilde{u}}^{\ p}, \ m_2, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{\ i2} \right] - \frac{1}{16} \left[ m_{\tilde{u}}^{\ p}, \ m_2, \ m_{\tilde{q}}^{\ i2}, \ m_{\tilde{q}}^{
                                                                                                                                              \frac{1}{32} \; g_2^{\; 2} \; y_u^{\; 11p} \; \left( \; m_2 \; s_\gamma \; + \; \widetilde{\mu} \; c_\gamma \; \right) \; \left( \; s_\gamma \; \overline{a_u}^{\; 12p} \; - \; \widetilde{\mu} \; c_\gamma \; \overline{y_u}^{\; 12p} \right) \; LF_{2,1,1,1,-1} \left[ \; m_{\bar{u}}^{\; p} \; , \; m_2 \; , \; m_{\bar{q}}^{\; 12} \; , \; \widetilde{\mu} \; \right] \; - \; \widetilde{\mu} \; c_\gamma \; \overline{y_u}^{\; 12p} \; .
                                                                                                                                                                                     g_{3}^{2} \left( s_{\gamma} \, \, \overline{a_{u}^{\text{i}2p}} \, - \, \widetilde{\mu} \, \, c_{\gamma} \, \, \overline{y_{u}^{\text{i}2p}} \right) \, \left( s_{\gamma} \, \, a_{u}^{\text{i}1p} \, - \, \widetilde{\mu} \, \, c_{\gamma} \, \, y_{u}^{\text{i}1p} \right) \, LF_{2,1,1,1,-1} \! \left[ m_{\tilde{u}}^{\text{ }p} \, , \, m_{\tilde{q}}^{\text{ }i2} \, , \, m_{\tilde{q}}^{\text{ }i1} \right] \, + \, \left( m_{\tilde{u}}^{\text{ }p} \, , \, m_{\tilde{q}}^{\text{ }i2} \, , \, m_{\tilde{q}}^{\text{ }i2} \, , \, m_{\tilde{q}}^{\text{ }i2} \, \right) \, \left( s_{\gamma} \, \, a_{u}^{\text{ }i1p} \, - \, \widetilde{\mu} \, \, c_{\gamma} \, \, y_{u}^{\text{ }i1p} \right) \, LF_{2,1,1,1,-1} \left[ m_{\tilde{u}}^{\text{ }p} \, , \, m_{\tilde{q}}^{\text{ }i2} \, , \, m_{\tilde{q}}^{\text
                                                                                                                                                                                                      {g_{1}}^{2} \; {g_{2}}^{2} \; \left({c_{\gamma}}^{2} - {s_{\gamma}}^{2}\right) \; \mathsf{LF_{2,1,1,1,-2}} \! \left[\widetilde{\mu} \,, \, \mathsf{m_{1}} \,, \, \mathsf{m_{2}} \,, \, \mathsf{m_{\tilde{q}}}^{;12}\right] \; \delta_{1112} \; + \\
                                                                                                                                                                                                  g_{1}^{2} \, \overline{y_{d}}^{i2p} \, \left( m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu} \right) \, \left( c_{\gamma} \, a_{d}^{\, i1p} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, LF_{2,1,1,1,-1} \big[ \widetilde{\mu} \, , \, m_{1} \, , \, m_{\tilde{d}}^{\, p} \, , \, m_{\tilde{q}}^{\, i1} \big] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \left( c_{\gamma} \, a_{d}^{\, i1p} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, LF_{2,1,1,1,-1} \big[ \widetilde{\mu} \, , \, m_{1} \, , \, m_{\tilde{d}}^{\, p} \, , \, m_{\tilde{q}}^{\, i1} \big] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \left( c_{\gamma} \, a_{d}^{\, i1p} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, LF_{2,1,1,1,-1} \big[ \widetilde{\mu} \, , \, m_{1} \, , \, m_{\tilde{d}}^{\, p} \, , \, m_{\tilde{q}}^{\, i1} \big] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \left( c_{\gamma} \, a_{d}^{\, i1p} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, LF_{2,1,1,1,1} \big[ \widetilde{\mu} \, , \, m_{1} \, , \, m_{\tilde{d}}^{\, p} \, , \, m_{\tilde{q}}^{\, i1p} \big] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \left( c_{\gamma} \, a_{d}^{\, i1p} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, LF_{2,1,1,1} \big[ \widetilde{\mu} \, , \, m_{1} \, , \, m_{\tilde{d}}^{\, p} \, , \, m_{\tilde{q}}^{\, i1p} \big] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \left( c_{\gamma} \, a_{d}^{\, i1p} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, LF_{2,1,1,1} \big[ \widetilde{\mu} \, , \, m_{1} \, , \, m_{1} \, , \, m_{\tilde{q}}^{\, i1p} \big] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \left( c_{\gamma} \, a_{d}^{\, i1p} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, LF_{2,1,1} \big[ \widetilde{\mu} \, , \, m_{1} \, , \, m_{1} \, , \, m_{2} \, \widetilde{\mu} \, y_{d}^{\, i1p} \big] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \left( c_{\gamma} \, a_{d}^{\, i1p} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, LF_{2,1,1} \big[ \widetilde{\mu} \, , \, m_{1} \, , \, m_{2} \, \widetilde{\mu} \, y_{d}^{\, i1p} \big] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \left( c_{\gamma} \, a_{d}^{\, i1p} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, LF_{2,1,1} \big[ \widetilde{\mu} \, , \, m_{1} \, , \, m_{2} \, \widetilde{\mu} \, y_{d}^{\, i1p} \big] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \right] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \left( c_{\gamma} \, a_{\alpha} \, \widetilde{\mu} \, y_{d}^{\, i1p} \right) \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, \right] \, + \, c_{1} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, + \, c_{2} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, + \, c_{2} \, (m_{1} \, c_{\gamma} + s_{\gamma} \, \widetilde{\mu}) \, + \, c_{2} \, (m_{1} \, c_{\gamma} +
                                                                                                                                              \frac{1}{96} \ g_{1}{}^{2} \ y_{d}{}^{11p} \ (m_{1} \ c_{\gamma} + s_{\gamma} \ \widetilde{\mu}) \ \left(c_{\gamma} \ \overline{a_{d}}{}^{12p} - s_{\gamma} \ \widetilde{\mu} \ \overline{y_{d}}{}^{12p}\right) \ LF_{2,1,1,1,-1} \big[\widetilde{\mu} \ , \ m_{1} \ , \ m_{\overset{-}{d}}^{\ p} \ , \ m_{\overset{-}{q}}{}^{12} \big] - m_{\overset{-}{q}} \ m_{\overset{-}{q}
                                                                                                                                                                                                      g_{1}^{2} \, \overline{y_{u}}^{i2p} \, \left( \, m_{1} \, s_{\gamma} + \widetilde{\mu} \, c_{\gamma} \, \right) \, \left( \, s_{\gamma} \, a_{u}^{\, \, i1p} - \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} \right) \, LF_{2,1,1,1,-1} \! \left[ \, \widetilde{\mu} \, , \, m_{1} \, , \, m_{\tilde{q}}^{\, \, i1} \, , \, m_{\tilde{u}}^{\, \, p} \, \right] \, - \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, \, i1p} + \, \widetilde{\mu} \, c_{\gamma} \, y_{u}^{\, 
                                                                                                                                              \frac{1}{96} \ g_{1}^{\ 2} \ y_{u}^{\ i1p} \ (m_{1} \ s_{\gamma} + \widetilde{\mu} \ c_{\gamma}) \ \left(s_{\gamma} \ \overline{a_{u}}^{i2p} - \widetilde{\mu} \ c_{\gamma} \ \overline{y_{u}}^{i2p}\right) \ LF_{2,1,1,1,-1} \big[\widetilde{\mu} \ , \ m_{1} \ , \ m_{\tilde{q}}^{\ i2} \ , \ m_{\tilde{u}}^{\ p}\big] \ - \widetilde{\mu} \ c_{\gamma} \ \overline{y_{u}}^{i2p} + \widetilde
                                                                                                                                                                                                      g_{2}{}^{2}\,\overline{y_{d}}{}^{i\,2p}\,\left(m_{2}\,\,c_{\gamma}+s_{\gamma}\,\widetilde{\mu}\right)\,\left(c_{\gamma}\,\,a_{d}{}^{i\,1p}-s_{\gamma}\,\widetilde{\mu}\,\,y_{d}{}^{i\,1p}\right)\,\mathsf{LF}_{2,1,1,1,-1}\!\left[\,\widetilde{\mu}\,,\,m_{2}\,,\,m_{\bar{d}}^{-p}\,,\,m_{\bar{q}}^{-p}\right]
                                                                                                                                                                                                      g_{2}{}^{2}\;y_{d}{}^{i1p}\;\left(\text{m}_{2}\;c_{\gamma}+s_{\gamma}\;\widetilde{\mu}\right)\;\left(c_{\gamma}\;\overline{a_{d}}{}^{i2p}-s_{\gamma}\;\widetilde{\mu}\;\overline{y_{d}}{}^{i2p}\right)\;\text{LF}_{2,1,1,1,-1}\!\left[\,\widetilde{\mu}\,,\;\text{m}_{2}\,,\;\text{m}_{\widetilde{d}}^{-p}\,,\;\text{m}_{\widetilde{q}}^{-p}\right]
                                                                                                                                                                                                      g_{2}^{2} \, \overline{y_{u}}^{\text{i2p}} \, \left( \, \text{m}_{2} \, \, \text{s}_{\gamma} \, + \, \widetilde{\mu} \, \, \text{c}_{\gamma} \, \right) \, \, \left( \, \text{s}_{\gamma} \, \, \text{a}_{u}^{\, \, \text{i1p}} \, - \, \widetilde{\mu} \, \, \text{c}_{\gamma} \, \, \text{y}_{u}^{\, \, \text{i1p}} \right) \, \, \text{LF}_{2,\text{1,1,1,-1}} \big[ \, \widetilde{\mu} \, , \, \, \text{m}_{2} \, , \, \, \text{m}_{\tilde{q}}^{\, \, \text{i1}} \, , \, \, \text{m}_{\tilde{u}}^{\, \, \, \tilde{p}} \, \big] \, - \, \widetilde{\mu} \, \, \text{c}_{\gamma} \, \, \text{J}_{u} \, \, \text{c}_{\gamma} \, \, \, \text{c}_{\gamma} \, \, \text{c
                                                                                                                                              \frac{1}{32} \; g_{2}^{\; 2} \; y_{u}^{\; i1p} \; \left( \mathsf{m}_{2} \; \mathsf{s}_{\gamma} + \widetilde{\mu} \; \mathsf{c}_{\gamma} \right) \; \left( \mathsf{s}_{\gamma} \; \overline{\mathsf{a}_{u}}^{\; i2p} - \widetilde{\mu} \; \mathsf{c}_{\gamma} \; \overline{y_{u}}^{\; i2p} \right) \; \mathsf{LF}_{2,1,1,1,-1} \! \left[ \widetilde{\mu} \; , \; \mathsf{m}_{2} \; , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; i2} \; , \; \mathsf{m}_{\tilde{\mathsf{u}}}^{\; p} \right] \right)
```