```
C_{\mathsf{qd}}^{\,\prime}
                                      ^{(1)} i1_i2_i3_i4_ 
ightarrow
                   -\frac{1}{6} \ \frac{1}{m_{\text{p}}^2} \ \text{S}_{\text{y}}^{\ 2} \ \overline{\text{y}_{\text{d}}}^{\text{i2i3}} \ \text{y}_{\text{d}}^{\text{i1i4}} + \text{h} \ \left(-\frac{1}{1296} \ \frac{1}{m_{\text{p}}^2} \ \left(81 \ \text{S}_{\text{y}}^{\ 2} \ \overline{\text{y}_{\text{d}}}^{\text{ri3}} \ \overline{\text{y}_{\text{d}}}^{\text{i2p}} \ \left(12 \ \text{C}_{\text{y}}^{\ 2} \ \text{y}_{\text{d}}^{\text{ri4}} \ \text{y}_{\text{d}}^{\text{i1p}} + \text{y}_{\text{d}}^{\text{rp}} \ \text{y}_{\text{d}}^{\text{i1i4}} \ \left(1 + \text{S}_{\text{y}}^{\ 2}\right)\right) + \frac{1}{1296} \ \frac{1}{m_{\text{p}}^2} \ \left(81 \ \text{S}_{\text{y}}^{\ 2} \ \overline{\text{y}_{\text{d}}}^{\text{ri3}} \ \overline{\text{y}_{\text{d}}}^{\text{i2p}} \ \left(12 \ \text{C}_{\text{y}}^{\ 2} \ \text{y}_{\text{d}}^{\text{ri4}} \ \text{y}_{\text{d}}^{\text{i1p}} + \text{y}_{\text{d}}^{\text{rp}} \ \text{y}_{\text{d}}^{\text{i1i4}} \ \left(1 + \text{S}_{\text{y}}^{\ 2}\right)\right) + \frac{1}{1296} \ \frac{1}{m_{\text{p}}^2} \ \ \frac{1}{m_{\text{p}}^2}} \ \frac{1}{m_{\text{p}}^2} \ \frac{1}{m_{\text{p}}^2}
                                                                                                                                                                                                                                                                                  {s_{\gamma}}^{2} \, \left( 81 \, \overline{y_d}^{pr} \, \overline{y_d}^{i2i3} \, \left( y_d^{pi4} \, y_d^{i1r} \, \left( 1 + {s_{\gamma}}^{2} \right) - 8 \, {c_{\gamma}}^{2} \, y_d^{pr} \, y_d^{i1i4} \right) \, + \\
                                                                                                                                                                                                                                                                                                                                                                                  3\;\overline{y_{d}}^{\text{i2i3}}\;\left(y_{d}^{\text{i1i4}}\;\left(5\;g_{1}^{\;2}+27\;g_{2}^{\;2}+96\;g_{3}^{\;2}\right)\;-9\;y_{d}^{\text{pi4}}\;\overline{y_{u}}^{\text{pr}}\;y_{u}^{\text{i1r}}\;\left(-1+c_{\gamma}^{\;2}\right)\right)\;+
                                                                                                                                                                                                                                                                                                                                                                              \overline{y_d}^{\text{pi3}} \, \left( 27 \, \overline{y_u}^{\text{i2r}} \, \left( -\, {y_d}^{\text{i1i4}} \, {y_u}^{\text{pr}} \, \left( -\, 1 \, + \, {c_{\gamma}}^2 \right) \, + \, 12 \, {c_{\gamma}}^2 \, {y_d}^{\text{pi4}} \, {y_u}^{\text{i1r}} \right) \, + \, 2 \, {g_1}^2 \, {y_d}^{\text{pi4}} \, \delta_{\text{i1i2}} \right) \, ) \, + \, 2 \, {g_2}^2 \, {y_d}^{\text{pi4}} \, \delta_{\text{i1i2}} \, \right) \, + \, 2 \, {g_2}^2 \, {y_d}^{\text{pi4}} \, \delta_{\text{i1i2}} \, \right) \, + \, 2 \, {g_2}^2 \, {y_d}^{\text{pi4}} \, \delta_{\text{i1i2}} \, \right) \, + \, 2 \, {g_2}^2 \, {y_d}^{\text{pi4}} \, \delta_{\text{i1i2}} \, \left( -\, {y_d}^{\text{i1i4}} \, {y_d}^{\text{pi4}} \, \delta_{\text{i1i2}} \, {y_d}^{\text{i1i2}} \, {y_d}^{\text{pi4}} \, \delta_{\text{i1i2}} \, {y_d}^{\text{pi4}}
                                                                                                                                                                                                                                                                                  2\;g_1^{\;2}\;\left(5\;s_\gamma^{\;2}\;\overline{y_d}^{i2p}\;y_d^{\;i1p}-13\;c_\gamma^{\;2}\;\overline{y_u}^{i2p}\;y_u^{\;i1p}\right)\;\delta_{i3i4}\right)\;-
                                                                                                                                                            \frac{1}{12} \sum_{p} s_{\gamma} g_{1}^{2} \frac{1}{m_{_{0}}^{4}} \overline{y_{d}}^{i2i3} y_{d}^{i1i4} \left(2 s_{2\gamma} c_{\gamma} + s_{\gamma} c_{2\gamma}\right) LF_{1,0} \left[m_{\bar{d}}^{-p}\right] - \frac{1}{12} \left[m_{\bar{d}}^{-p}\right] \left[m_{\bar{d}}^{-p}\right] + \frac{1}{12} \left[m_{\bar{d}}^{-p}\right] \left[m_{\bar{d}}
                                                                                                                                                            \frac{2}{243} \sum_{\mathbf{p}} \mathbf{g_1}^4 \, \mathsf{LF_{3,0}} \left[ \mathbf{m_{\tilde{d}}}^{\mathbf{p}} \right] \, \delta_{\mathsf{ili2}} \, \delta_{\mathsf{i3i4}} +
                                                                                                                                                            \frac{5}{324} \sum_{p} g_{1}^{\ 4} \ \mathsf{LF_{4,-1}} \big[ \mathsf{m_{\tilde{d}}}^{\ p} \big] \ \delta_{\mathtt{i1i2}} \ \delta_{\mathtt{i3i4}} -
                                                                                                                                                            \frac{8}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \left[ \mathbf{m_{\tilde{\mathbf{d}}}}^{\mathbf{p}} \right] \ \delta_{\mathsf{ili2}} \ \delta_{\mathsf{i3i4}} -
                                                                                                                                                            \frac{1}{12} \sum_{p} s_{\gamma} g_{1}^{2} \frac{1}{m_{0}^{4}} \overline{y_{d}}^{i2i3} y_{d}^{i1i4} \left(2 s_{2\gamma} c_{\gamma} + s_{\gamma} c_{2\gamma}\right) LF_{1,0} \left[m_{\tilde{e}}^{p}\right] - \frac{1}{12} \left[m_{\tilde{e}}^{p}\right] - \frac{1}{12} \left[m_{\tilde{e}}^{p}\right] \left[m_{\tilde{e}}^{p}\right] - \frac{1}{12} \left[m_{\tilde{e}}^{p}\right] \left[m_{
                                                                                                                                                            \frac{2}{81} \, \sum_{p} \, {g_{1}}^{4} \, \mathsf{LF}_{3,0} \left[ \, \mathsf{m}_{e}^{\, \, p} \, \right] \, \delta_{\mathsf{11i}2} \, \delta_{\mathsf{13i}4} \, + \, \frac{5}{108} \, \sum_{p} \, {g_{1}}^{4} \, \mathsf{LF}_{4,-1} \! \left[ \, \mathsf{m}_{e}^{\, \, p} \, \right] \, \delta_{\mathsf{11i}2} \, \delta_{\mathsf{13i}4} \, - \, \frac{1}{100} \, \delta_{\mathsf{13i}4} \, + 
                                                                                                                                                            \frac{8}{405} \sum_{p} g_{1}^{4} LF_{5,-2} [m_{e}^{-p}] \delta_{i1i2} \delta_{i3i4} -
                                                                                                                                                            \frac{1}{6} \; s_{\gamma} \; \frac{1}{m_{\text{o}}^4} \; \overline{y_d}^{\text{i2i3}} \; y_d^{\text{i1i4}} \; \overline{y_e}^{\text{pr}} \; y_e^{\text{pr}} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, c_{\gamma} + s_{\gamma}^{\; 3} \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, c_{\gamma} + s_{\gamma}^{\; 3} \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; r} \, c_{\gamma} + s_{\gamma}^{\; 3} \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; 7} \; c_{\gamma} + s_{\gamma}^{\; 3} \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; 7} \; c_{\gamma} + s_{\gamma}^{\; 3} \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; 7} \; c_{\gamma} + s_{\gamma}^{\; 3} \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma} \; c_{\gamma} + s_{\gamma}^{\; 3} \right) \; LF_{1,0} \left[ \, m_{\tilde{e}}^{\; 7} \; c_{\gamma} + s_{\gamma}^{\; 3} \right] \; + \; \frac{1}{2} \; \left( - \, s_{2 \, \gamma
                                                                                                                                                            \frac{1}{12} \; s_{\gamma} \; \frac{1}{m_{0}{}^{4}} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4} \; \left( 2 \; \overline{y_{e}}{}^{pr} \; y_{e}{}^{pr} \; \left( s_{2 \; \gamma} \; c_{\gamma} - s_{\gamma}{}^{3} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( 2 \; s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; \right) \; LF_{1,0} \left[ m_{\tilde{l}}{}^{p} \right] \; - \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{2 \; \gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{1}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{2}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{2}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{2}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{2}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{2}{}^{2} \; \left( s_{2 \; \gamma} \; c_{\gamma} + s_{\gamma} \; c_{\gamma} \right) \; + \\ \sum_{p} \; g_{2}{}^{2} \; \left( s_{2 \; \gamma} \; c_
                                                                                                                                                                \frac{1}{81} \sum_{p} g_{1}^{\ 4} \ \mathsf{LF}_{3,\theta} \left[ \mathsf{m}_{\bar{1}}^{\ p} \right] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{5}{216} \sum_{p} g_{1}^{\ 4} \ \mathsf{LF}_{\mathsf{4,-1}} \left[ \mathsf{m}_{\bar{1}}^{\ p} \right] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} - \frac{1}{2} \left[ \mathsf{m}_{\mathsf{1}}^{\ \mathsf{1}} \mathsf{m}_{\mathsf{1}}^{\ \mathsf{1}} \mathsf{m}_{\mathsf{1}}^{\ \mathsf{1}} \mathsf{m}_{\mathsf{1}}^{\ \mathsf{1}} \mathsf{m}_{\mathsf{1}}^{\ \mathsf{1}} \right] \ \delta_{\mathsf{1}3\mathsf{1}4} - \frac{1}{2} \left[ \mathsf{m}_{\mathsf{1}}^{\ \mathsf{1}} \mathsf{m}_{\mathsf{
                                                                                                                                                            \frac{4}{405} \, \sum_{p} \, {g_{1}}^{4} \, \, \mathsf{LF}_{5,-2} \left[ \, \mathsf{m}_{\tilde{l}}^{\,\, p} \, \right] \, \, \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} \, \, \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} \, - \, \frac{1}{12} \, \, \mathsf{S}_{\gamma} \, \, \frac{1}{\mathsf{m}_{\alpha}^{\,\, 4}} \, \, \overline{\mathsf{y}_{d}}^{\dot{1}\dot{2}\dot{1}\dot{3}} \, \, \mathsf{y}_{d}^{\,\, \dot{1}\dot{1}\dot{4}}
                                                                                                                                                                                           \left(6\;\overline{y_{d}}^{pr}\;y_{d}^{pr}\;\left(-\,s_{2\,\gamma}\;c_{\gamma}+\,s_{\gamma}^{\;3}\right)\,+\,6\;c_{\gamma}\;\overline{y_{u}}^{pr}\;y_{u}^{\;pr}\;\left(\,s_{2\,\gamma}+\,s_{\gamma}\;c_{\gamma}\right)\right.\\ \left.+\,\sum_{p}\;g_{1}^{\;2}\;\left(\,2\;s_{2\,\gamma}\;c_{\gamma}+\,s_{\gamma}\;c_{2\,\gamma}\right)\,\right)
                                                                                                                                                                                   \mathsf{LF_{1,0}}\!\left[\,m_{\tilde{q}}^{\,\,p}\,\right]\,-\,\frac{_1}{_{243}}\,\sum_{p}\,g_{1}^{\,\,4}\,\,\mathsf{LF_{3,0}}\!\left[\,m_{\tilde{q}}^{\,\,p}\,\right]\,\,\delta_{\,\text{ili2}}\,\,\delta_{\,\text{i3i4}}\,\,{}^{+}
                                                                                                                                                                \frac{5}{648} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{4,-1}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} - \frac{4}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_1}^4 \ \mathsf{LF_{5,-2}} \big[ \mathbf{m_{\tilde{q}}}^{\mathbf{p}} \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} + \frac{1}{1215} \sum_{\mathbf{p}} \mathbf{g_2} \ \delta
                                                                                                                                                                \frac{1}{6} \sum_{p} s_{\gamma} g_{1}^{2} \frac{1}{m_{\tilde{u}}^{4}} \overline{y_{d}}^{i2i3} y_{d}^{i1i4} \left(2 s_{2\gamma} c_{\gamma} + s_{\gamma} c_{2\gamma}\right) LF_{1,0} \left[m_{\tilde{u}}^{\ p}\right] - \frac{8}{243} \sum_{p} g_{1}^{\ 4} LF_{3,0} \left[m_{\tilde{u}}^{\ p}\right] \delta_{i1i2} \delta_{i3i4} + \frac{1}{2} \left[m_{\tilde{u}}^{\ p}\right] \delta_{i1i2} \delta_{i1i2} \delta_{i1i2} \delta_{i3i4} + \frac{1}{2} \left[m_{\tilde{u}}^{\ p}\right] \delta_{i1i2} \delta_{i1i2} \delta_{i1i4} \delta
                                                                                                                                                            \frac{1}{2} \, s_{\gamma} \, c_{\gamma} \, \frac{1}{m_{o}^{4}} \, \overline{y_{d}}^{\text{i2i3}} \, y_{d}^{\text{i1i4}} \, \overline{y_{u}}^{\text{pr}} \, y_{u}^{\text{pr}} \, (s_{2\,\gamma} + s_{\gamma} \, c_{\gamma}) \, LF_{1,0} \big[ m_{\tilde{u}}^{\,\,r} \big] - \frac{1}{24} \, s_{\gamma} \, \frac{1}{m_{o}^{4}} \, \overline{y_{d}}^{\text{i2i3}} \, y_{d}^{\text{i1i4}} \, y_{d}^{\,\,r} 
                                                                                                                                                                                           \left(3\;{s_{4}}_{\gamma}\;{c_{\gamma}}\;\left({g_{1}}^{2}+{g_{2}}^{2}\right)\;+\;{s_{\gamma}}\;\left({g_{1}}^{2}\;\left(-\,1\;+\;3\;{c_{2}}_{\gamma}^{\;2}\right)\;+\;3\;{g_{2}}^{2}\;\left(-\,1\;+\;{c_{2}}_{\gamma}^{\;2}\right)\right)\right)\;LF_{1,\theta}\left[\,{m_{\Phi}}\,\right]\;+\;2\;{s_{2}}_{\gamma}^{2}\left(-\,1\;+\;{c_{2}}_{\gamma}^{\;2}\right)\;+\;3\;{g_{2}}^{2}\;\left(-\,1\;+\;{c_{2}}_{\gamma}^{\;2}\right)\;
                                                                                                                                                            \frac{1}{24} \ \frac{1}{m_0^2} \ s_{\gamma}^2 \ \left( 3 \ s_{\gamma}^{\ 2} \ \overline{y_d}^{\text{pr}} \ \overline{y_d}^{\text{i2i3}} \ y_d^{\text{pi4}} \ y_d^{\text{i1r}} + 3 \ y_d^{\text{i1i4}} \ \left( s_{\gamma}^{\ 2} \ \overline{y_d}^{\text{ri3}} \ \overline{y_d}^{\text{i2p}} \ y_d^{\text{rp}} - c_{\gamma}^{\ 2} \ \overline{y_d}^{\text{pi3}} \ \overline{y_u}^{\text{i2r}} \ y_u^{\text{pr}} \right) - c_{\gamma}^{\ 2} \ \overline{y_d}^{\text{pi3}} \ \overline{y_u}^{\text{i2r}} \ y_u^{\text{pr}} + c_{\gamma}^{\ 2} \ \overline{y_d}^{\text{pi3}} \ \overline{y_u}^{\text{i2r}} \ y_u^{\text{pr}} \right) - c_{\gamma}^{\ 2} \ \overline{y_d}^{\text{pi3}} \ \overline{y_u}^{\text{i2r}} \ y_u^{\text{pr}} + c_{\gamma}^{\ 2} \ \overline{y_d}^{\text{pi3}} \ \overline{y_u}^{\text{i2r}} \ y_u^{\text{pr}} + c_{\gamma}^{\ 2} \ \overline{y_d}^{\text{pi3}} \ \overline{y_u}^{\text{i2r}} \ y_u^{\text{pr}} + c_{\gamma}^{\ 2} \ \overline{y_d}^{\text{pi3}} \ \overline{y_u}^{\text{pi3}} \ \overline{y_u}^{\text
                                                                                                                                                                                                                                                    \frac{1}{y_d}^{i2i3} \left( 2 y_d^{i1i4} \left( g_1^2 + 3 g_2^2 \right) + 3 c_{\chi}^2 y_d^{pi4} \overline{y_u}^{pr} y_u^{i1r} \right) \right) LF_{1,1}[m_{\bar{\Phi}}] + \frac{1}{216} \left( \frac{1}{2} + \frac{1}{2} \left( \frac{1}{2} + \frac{1}{2} \left( \frac{1}{2} + \frac{1}{2} + \frac{1}{2} \left( \frac{1}{2} + \frac{
                                                                                                                                                                                           \left(\,s_{\gamma}^{\,2}\,\left(-\,108\;c_{\gamma}^{\,2}\,\overline{y_{d}}^{\text{ri3}}\,\overline{y_{d}}^{\text{i2p}}\,y_{d}^{\,\text{ri4}}\,y_{d}^{\,\text{i1p}}\,+\,9\;\overline{y_{d}}^{\text{i2i3}}\,\left(\,y_{d}^{\,\text{i1i4}}\,\left(\,g_{1}^{\,2}\,+\,3\;g_{2}^{\,2}\,\right)\,+\,2\;c_{\gamma}^{\,2}\,y_{d}^{\,\text{pi4}}\,\overline{y_{u}}^{\text{pr}}\,y_{u}^{\,\text{i1r}}\,\right)\,+\,3\,\left(\,s_{\gamma}^{\,2}\,y_{d}^{\,\text{pi4}}\,\overline{y_{u}}^{\,\text{pr}}\,y_{d}^{\,\text{pi4}}\,\overline{y_{u}}^{\,\text{pr}}\,y_{u}^{\,\text{i1r}}\,\right)\,+\,3\,\left(\,s_{\gamma}^{\,2}\,y_{d}^{\,\text{pi4}}\,\overline{y_{u}}^{\,\text{pr}}\,y_{d}^{\,\text{pi4}}\,\overline{y_{u}}^{\,\text{pr}}\,y_{u}^{\,\text{i1r}}\,\right)\,+\,3\,\left(\,s_{\gamma}^{\,2}\,y_{d}^{\,\text{pi4}}\,\overline{y_{u}}^{\,\text{pr}}\,y_{d}^{\,\text{pi4}}\,\overline{y_{u}}^{\,\text{pr}}\,y_{u}^{\,\text{pi4}}\,\overline{y_{u}}^{\,\text{pr}}\,y_{u}^{\,\text{pi4}}\,\overline{y_{u}}^{\,\text{pr}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pr}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pr}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pr}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pr}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y_{u}^{\,\text{pi4}}\,y
                                                                                                                                                                                                                                                                                                                                               2\;\overline{y_{d}}^{\text{pi3}}\;\left(9\;c_{\gamma}^{\;2}\;\overline{y_{u}}^{\text{i2r}}\;\left(y_{d}^{\;\text{i1i4}}\;y_{u}^{\;\text{pr}}-6\;y_{d}^{\;\text{pi4}}\;y_{u}^{\;\text{i1r}}\right)\;-2\;g_{1}^{\;2}\;y_{d}^{\;\text{pi4}}\;\delta_{\text{i1i2}}\right)\right)\;-1
                                                                                                                                                                                                                                                    8\;{g_{1}}^{2}\;\left({s_{\gamma}}^{2}\;\overline{y_{d}}^{i2p}\;{y_{d}}^{i1p}-2\;{c_{\gamma}}^{2}\;\overline{y_{u}}^{i2p}\;{y_{u}}^{i1p}\right)\;\delta_{i3i4}\right)\;LF_{1,2}[\,{m_{\!\Phi}}\,]\;+
                                                                                                                                                                                                                                                                                                                                                                                      ^{4} \overline{y_{d}}^{ri3} \overline{y_{d}}^{i2p} y_{d}^{ri4} y_{d}^{i1p} + s_{\chi}^{2} \overline{y_{d}}^{pi3} y_{d}^{pi4} \left(9 c_{\chi}^{2} \overline{y_{u}}^{i2r} y_{u}^{i1r} + g_{1}^{2} \delta_{i1i2}\right) +
                                                                                                                                                                                                                                                    {g_1}^2 \, \left( {s_{_Y}}^2 \, \overline{y_d}^{i2p} \, {y_d}^{i1p} - {c_{_Y}}^2 \, \overline{y_u}^{i2p} \, {y_u}^{i1p} \right) \, \delta_{i3i4} \right) \, \mathsf{LF}_{2,1} [\, \mathsf{m}_{_{\! \scriptsize \oplus}}] \, - \,
                                                                                                                                                            \frac{1}{324} \ g_1{}^2 \ \left(9 \ s_{\gamma}{}^2 \ \overline{y_d}{}^{pi3} \ y_d{}^{pi4} \ \delta_{i1i2} + \ \left(9 \ s_{\gamma}{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} - 9 \ c_{\gamma}{}^2 \ \overline{y_u}{}^{i2p} \ y_u{}^{i1p} + 4 \ g_1{}^2 \ \delta_{i1i2}\right) \ \delta_{i3i4}\right)
                                                                                                                                                                               \frac{1}{81} \ {\sf g_1}^4 \ {\sf LF_{3,0}} \ [\tilde{\mu}] \ \delta_{\sf ili2} \ \delta_{\sf i3i4} - \frac{1}{54} \ {\sf g_1}^4 \ {\sf LF_{4,-1}} \ [\tilde{\mu}] \ \delta_{\sf ili2} \ \delta_{\sf i3i4} + \\
                                                                                                                                                            \frac{8}{405}~g_{1}^{~4}~\mathsf{LF}_{5,-2}\left[\,\widetilde{\mu}\,\right]~\delta_{\dot{1}\dot{1}\dot{1}2}~\delta_{\dot{1}\dot{3}\dot{1}\dot{4}} + \frac{1}{54}~g_{1}^{~2}~\frac{1}{\mathsf{m_{0}}^{2}}~s_{\gamma}^{~2}~\overline{\mathsf{y_{d}}}^{\dot{1}\dot{2}\dot{1}\dot{3}}~\mathsf{y_{d}}^{\dot{1}\dot{1}\dot{1}\dot{4}}~\mathsf{LF}_{1,1,0}\left[\,\mathsf{m_{1}},~\mathsf{m_{\tilde{d}}}^{\,\dot{1}\dot{3}}\,\right] - \frac{1}{3}\,\mathsf{v_{0}}^{\,\dot{1}\dot{1}\dot{1}\dot{1}\dot{1}}~\mathsf{LF}_{1,1,0}\left[\,\mathsf{m_{1}},~\mathsf{m_{\tilde{d}}}^{\,\dot{1}\dot{1}\dot{3}}\,\right] - \frac{1}{3}\,\mathsf{v_{0}}^{\,\dot{1}\dot{1}\dot{1}\dot{1}\dot{1}}~\mathsf{LF}_{1,1,0}\left[\,\mathsf{m_{1}},~\mathsf{m_{\tilde{d}}}^{\,\dot{1}\dot{1}\dot{1}\dot{1}}\,\right]
                                                                                                                                                            \frac{1}{108} \ g_1{}^2 \ \frac{1}{m_0{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{2,1,-1} \big[ \ m_1 \ , \ m_{\bar{d}}{}^{i3} \big] \ + \ \frac{1}{54} \ g_1{}^2 \ \frac{1}{m_0{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,0} \big[ \ m_1 \ , \ m_{\bar{d}}{}^{i4} \big] \ - \ \frac{1}{54} \ g_1{}^2 \ \frac{1}{m_0{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,0} \big[ \ m_1 \ , \ m_{\bar{d}}{}^{i4} \big] \ - \ \frac{1}{54} \ g_1{}^2 \ \frac{1}{m_0{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,0} \big[ \ m_1 \ , \ m_{\bar{d}}{}^{i4} \big] \ - \ \frac{1}{54} \ g_1{}^2 \ \frac{1}{m_0{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,0} \big[ \ m_1 \ , \ m_{\bar{d}}{}^{i4} \big] \ - \ \frac{1}{54} \ g_1{}^2 \ \frac{1}{m_0{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,0} \big[ \ m_1 \ , \ m_{\bar{d}}{}^{i4} \big] \ - \ \frac{1}{54} \ g_1{}^2 \ \frac{1}{m_0{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,0} \big[ \ m_1 \ , \ m_{\bar{d}}{}^{i4} \big] \ - \ \frac{1}{54} \ g_1{}^2 \ \frac{1}{m_0{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,0} \big[ \ m_1 \ , \ m_{\bar{d}}{}^{i4} \big] \ - \ \frac{1}{54} \ \frac{1}{54} \ \frac{1}{34} \ \frac{
                                                                                                                                                            \frac{1}{108}\;g_{1}^{2}\;\frac{1}{m_{_{0}}{}^{2}}\;s_{_{1}}^{2}\;\overline{y_{d}}^{i2i3}\;y_{d}^{i1i4}\;\mathsf{LF}_{2,1,_{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\overset{.}{d}}^{i4}\big]\;-\;\frac{1}{486}\;g_{1}^{\;4}\;\mathsf{LF}_{2,1,_{0}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\overset{.}{d}}^{i4}\big]\;\delta_{i1i2}\;\delta_{i3i4}\;-\;\frac{1}{486}\;g_{1}^{\;4}\;\mathsf{LF}_{2,1,_{0}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\overset{.}{d}}^{i4}\big]\;\delta_{i1i2}\;\delta_{i3i4}\;-\;\frac{1}{486}\;g_{1}^{\;4}\;\mathsf{LF}_{2,1,_{0}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\overset{.}{d}}^{i4}\big]\;\delta_{i1i2}\;\delta_{i3i4}\;-\;\frac{1}{486}\;g_{1}^{\;4}\;\mathsf{LF}_{2,1,_{0}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\overset{.}{d}}^{i4}\big]\;\delta_{i1i2}\;\delta_{i3i4}\;-\;\frac{1}{486}\;g_{1}^{\;4}\;\mathsf{LF}_{2,1,_{0}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\overset{.}{d}}^{i4}\big]\;\delta_{i1i2}\;\delta_{i3i4}\;-\;\frac{1}{486}\;g_{1}^{\;4}\;\mathsf{LF}_{2,1,_{0}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\overset{.}{d}}^{i4}\big]\;\delta_{i1i2}\;\delta_{i1i2}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1i4}\;\delta_{i1
                                                                                                                                                            \frac{1}{486} \ g_1^{\ 4} \ \mathsf{LF}_{2,2,-1} \big[ \ \mathsf{m}_1 \ , \ \ \mathsf{m}_{\bar{\mathsf{d}}}^{\ i\, 4} \, \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} \ + \ \frac{1}{243} \ g_1^{\ 4} \ \mathsf{LF}_{3,1,-1} \big[ \ \mathsf{m}_1 \ , \ \ \mathsf{m}_{\bar{\mathsf{d}}}^{\ i\, 4} \, \big] \ \delta_{\mathsf{i}1\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} \ - \ \mathsf{m}_{\mathsf{i}4} \ \delta_{\mathsf{i}3\mathsf{i}4} \ + \ \mathsf{m}_{\mathsf{i}4} \ \delta_{\mathsf{i}4} \ \mathsf{m}_{\mathsf{i}4} \ \mathsf{m}_{\mathsf{i}4} \, \big] \ \delta_{\mathsf{i}4\mathsf{i}4\mathsf{i}2} \ \delta_{\mathsf{i}3\mathsf{i}4} \ + \ \mathsf{m}_{\mathsf{i}4} \ \mathsf{m}_{\mathsf{i}4}
                                                                                                                                                            \frac{1}{486} \ g_1{}^4 \ \mathsf{LF_{4,1,-2}} \big[ \mathsf{m_1, \, m_{\tilde{d}}}^{\, \mathsf{i4}} \big] \ \delta_{\mathsf{i1i2}} \ \delta_{\mathsf{i3i4}} + \frac{1}{216} \ g_1{}^2 \ \frac{1}{\mathsf{m_{s}}^2} \ \mathsf{s_{\gamma}}^2 \ \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \ \mathsf{y_d}^{\mathsf{i1i4}} \ \mathsf{LF_{1,1,0}} \big[ \mathsf{m_1, \, m_{\tilde{q}}}^{\, \mathsf{i1}} \big] \ - \frac{1}{2} \ \mathsf{m_{s}}^{\, \mathsf{i2i}} \ \mathsf{m_{s}}^2 \ \mathsf{m_{s}
                                                                                                                                                            \frac{1}{432} \ g_1{}^2 \ \frac{1}{m_{_0}{}^2} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{2,1,_{^{-1}}} \big[ m_1, \ m_{\tilde{q}}{}^{i1} \big] \ + \\ \frac{1}{216} \ g_1{}^2 \ \frac{1}{m_{_0}{}^2} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,_0} \big[ m_1, \ m_{\tilde{q}}{}^{i2} \big] \ - \\ \frac{1}{216} \ g_1{}^2 \ \frac{1}{m_{_0}{}^2} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,_0} \big[ m_1, \ m_{\tilde{q}}{}^{i2} \big] \ - \\ \frac{1}{216} \ g_1{}^2 \ \frac{1}{m_{_0}{}^2} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,_0} \big[ m_1, \ m_{\tilde{q}}{}^{i2} \big] \ - \\ \frac{1}{216} \ g_1{}^2 \ \frac{1}{m_{_0}{}^2} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,_0} \big[ m_1, \ m_{\tilde{q}}{}^{i2} \big] \ - \\ \frac{1}{216} \ g_1{}^2 \ \frac{1}{m_{_0}{}^2} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,_0} \big[ m_1, \ m_{\tilde{q}}{}^{i2} \big] \ - \\ \frac{1}{216} \ g_1{}^2 \ \frac{1}{m_{_0}{}^2} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ y_d{}^{i1i4} \ \mathsf{LF}_{1,1,_0} \big[ m_1, \ m_{\tilde{q}}{}^{i2} \big] \ - \\ \frac{1}{216} \ g_1{}^2 \ \frac{1}{m_0} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ s_{_{Y}}{}^2 \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ s_{_{Y}}{}^2 \ \overline{y_d}{}^{i2i3} \ s_{_{Y}}{}^2 \
                                                                                                                                                            \frac{1}{432}\;g_{1}^{2}\;\frac{1}{m_{0}^{2}}\;s_{\gamma}^{2}\;\overline{y_{d}}^{\text{i2i3}}\;y_{d}^{\text{i1i4}}\;\mathsf{LF}_{2,1,-1}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{q}}^{\text{i2}}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{1}^{2}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i3i4}}\;-\;\frac{1}{1944}\;g_{1}^{4}\;\mathsf{LF}_{2,1,0}\big[\mathsf{m}_{1},\;\mathsf{m}_{1}^{2}\big]\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2}}\;\delta_{\text{i1i2
                                                                                                                                                            \frac{1}{1944}\;g_{1}{}^{4}\;\mathsf{LF}_{2,2,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{3}\dot{1}}^{4}\;+\;\frac{1}{972}\;g_{1}{}^{4}\;\mathsf{LF}_{3,1,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}\dot{3}\dot{1}}^{4}\;-\;\mathsf{LF}_{3,1,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{2}}^{2}\;\delta_{\dot{1}\dot{3}\dot{1}}^{4}\;-\;\mathsf{LF}_{3,1,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{3}\dot{1}}^{4}\;-\;\mathsf{LF}_{3,1,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{3}\dot{1}}^{4}\;-\;\mathsf{LF}_{3,1,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{3}\dot{1}}^{4}\;-\;\mathsf{LF}_{3,1,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{3}\dot{1}}^{4}\;-\;\mathsf{LF}_{3,1,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{3}\dot{1}}^{4}\;-\;\mathsf{LF}_{3,1,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{3}\dot{1}}^{4}\;-\;\mathsf{LF}_{3,1,^{-1}}\big[\mathsf{m}_{1},\;\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}}^{2}\;\delta_{\dot{1}
                                                                                                                                                            \frac{1}{1944} \; g_{1}{}^{4} \; LF_{4,1,-2} \left[ m_{1} , \; m_{\tilde{q}}{}^{\dot{1}2} \right] \; \delta_{\dot{1}\dot{1}\dot{1}2} \; \delta_{\dot{1}\dot{3}\dot{1}4} \; + \; \frac{1}{6} \; g_{1}{}^{2} \; \frac{1}{m_{0}{}^{4}} \; s_{\gamma}{}^{2} \; \overline{y_{d}}{}^{\dot{1}2\dot{1}3} \; y_{d}{}^{\dot{1}1\dot{1}4} \; \left( c_{\gamma}{}^{2} + s_{\gamma}{}^{2} \right) \; LF_{1,1,-1} \left[ m_{1} , \; \widetilde{\mu} \right] \; + \; \frac{1}{6} \; g_{1}{}^{2} \; \frac{1}{m_{0}{}^{4}} \; s_{\gamma}{}^{2} \; \overline{y_{d}}{}^{\dot{1}2\dot{1}3} \; y_{d}{}^{\dot{1}1\dot{1}4} \; \left( c_{\gamma}{}^{2} + s_{\gamma}{}^{2} \right) \; LF_{1,1,-1} \left[ m_{1} , \; \widetilde{\mu} \right] \; + \; \frac{1}{6} \; g_{1}{}^{2} \; \frac{1}{m_{0}{}^{4}} \; s_{\gamma}{}^{2} \; \overline{y_{d}}{}^{\dot{1}2\dot{1}3} \; y_{d}{}^{\dot{1}1\dot{1}4} \; \left( c_{\gamma}{}^{2} + s_{\gamma}{}^{2} \right) \; LF_{1,1,-1} \left[ m_{1} , \; \widetilde{\mu} \right] \; + \; \frac{1}{6} \; g_{1}{}^{2} \; \frac{1}{m_{0}{}^{4}} \; s_{\gamma}{}^{2} \; \overline{y_{d}}{}^{\dot{1}2\dot{1}3} \; y_{d}{}^{\dot{1}1\dot{1}4} \; \left( c_{\gamma}{}^{2} + s_{\gamma}{}^{2} \right) \; LF_{1,1,-1} \left[ m_{1} , \; \widetilde{\mu} \right] \; + \; \frac{1}{6} \; \frac{1}{m_{0}{}^{4}} \; \frac{1}{m_{0}{}^{
                                                                                                                                                            \frac{1}{8} \ g_2{}^2 \ \frac{1}{m_\text{g}{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i3}} \ y_d{}^{\text{i1i4}} \ \mathsf{LF}_{1,1,0} \left[ m_2 \, , \ m_{\tilde{q}}{}^{\text{i1}} \right] \ - \ \frac{1}{16} \ g_2{}^2 \ \frac{1}{m_\text{g}{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i3}} \ y_d{}^{\text{i1i4}} \ \mathsf{LF}_{2,1,-1} \left[ m_2 \, , \ m_{\tilde{q}}{}^{\text{i1}} \right] \ + \ \frac{1}{16} \ g_2{}^2 \ \frac{1}{m_\text{g}{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i3}} \ y_d{}^{\text{i1i4}} \ \mathsf{LF}_{2,1,-1} \left[ m_2 \, , \ m_{\tilde{q}}{}^{\text{i1}} \right] \ + \ \frac{1}{16} \ g_2{}^2 \ \frac{1}{m_\text{g}{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i3}} \ y_d{}^{\text{i1i4}} \ \mathsf{LF}_{2,1,-1} \left[ m_2 \, , \ m_{\tilde{q}}{}^{\text{i1}} \right] \ + \ \frac{1}{16} \ g_2{}^2 \ \frac{1}{m_\text{g}{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i3}} \ y_d{}^{\text{i1i4}} \ \mathsf{LF}_{2,1,-1} \left[ m_2 \, , \ m_{\tilde{q}}{}^{\text{i1}} \right] \ + \ \frac{1}{16} \ g_2{}^2 \ \frac{1}{m_\text{g}{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i3}} \ y_d{}^{\text{i1i4}} \ \mathsf{LF}_{2,1,-1} \left[ m_2 \, , \ m_{\tilde{q}}{}^{\text{i1}} \right] \ + \ \frac{1}{16} \ g_2{}^2 \ \frac{1}{m_\text{g}{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i3}} \ y_d{}^{\text{i1i4}} \ \mathsf{LF}_{2,1,-1} \left[ m_2 \, , \ m_{\tilde{q}}{}^{\text{i1i}} \right] \ + \ \frac{1}{16} \ g_2{}^2 \ \frac{1}{m_\text{g}{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i3}} \ y_d{}^{\text{i2i4}} \ \mathsf{LF}_{2,1,-1} \left[ m_2 \, , \ m_{\tilde{q}}{}^{\text{i2i}} \right] \ + \ \frac{1}{16} \ g_2{}^2 \ \frac{1}{m_\text{g}{}^2} \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i3}} \ y_d{}^{\text{i2i4}} \ \mathsf{LF}_{2,1,-1} \left[ m_2 \, , \ m_{\tilde{q}}{}^{\text{i2i4}} \right] \ + \ \frac{1}{16} \ g_2{}^2 \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i4}} \ s_\gamma{}^2 \ s_\gamma{}^2 \ \overline{y_d}{}^{\text{i2i4}} \ s_\gamma{}^2 \ s_\gamma{
                                                                                                                                                                                                                                                                                                  \frac{1}{m_{\text{o}}^{2}} \; \mathsf{S_{\gamma}}^{2} \; \overline{\mathsf{y_d}}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i1i4}} \; \mathsf{LF_{1,1,0}} \left[ \; \mathsf{m_{2}} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i2}} \; \right] \; - \; \frac{1}{16} \; \mathsf{g_{2}}^{2} \; \frac{1}{m_{\text{o}}^{2}} \; \mathsf{S_{\gamma}}^{2} \; \overline{\mathsf{y_d}}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i1i4}} \; \mathsf{LF_{2,1,-1}} \left[ \; \mathsf{m_{2}} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i2}} \; \right] \; - \; \frac{1}{16} \; \mathsf{g_{2}}^{2} \; \frac{1}{m_{\text{o}}^{2}} \; \mathsf{S_{\gamma}}^{2} \; \overline{\mathsf{y_d}}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i1i4}} \; \mathsf{LF_{2,1,-1}} \left[ \; \mathsf{m_{2}} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i2}} \; \right] \; - \; \frac{1}{16} \; \mathsf{g_{2}}^{2} \; \frac{1}{m_{\text{o}}^{2}} \; \mathsf{s_{\gamma}}^{2} \; \overline{\mathsf{y_d}}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i1i4}} \; \mathsf{LF_{2,1,-1}} \left[ \; \mathsf{m_{2}} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i2}} \; \right] \; - \; \frac{1}{16} \; \mathsf{g_{2}}^{2} \; \frac{1}{m_{\text{o}}^{2}} \; \mathsf{y_d}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i2i4}} \; \mathsf{LF_{2,1,-1}} \left[ \; \mathsf{m_{2}} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i2i2}} \; \right] \; - \; \frac{1}{16} \; \mathsf{g_{2}}^{2} \; \frac{1}{m_{\text{o}}^{2}} \; \mathsf{y_d}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i2i3}} \; \mathsf{y_d}^{\text{i2i4}} \; \mathsf{v_d}^{\text{i2i4}} 
                                                                                                                                                                \frac{1}{36} \ g_1{}^2 \ g_2{}^2 \ \mathsf{LF}_{3,1,-1} \big[ \ \mathsf{m}_2 \, , \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big] \ \delta_{\tilde{\mathsf{i}}\, 1\tilde{\mathsf{i}}\, 2} \ \delta_{\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} - \frac{1}{72} \ g_1{}^2 \ g_2{}^2 \ \mathsf{LF}_{4,1,-2} \big[ \ \mathsf{m}_2 \, , \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big] \ \delta_{\tilde{\mathsf{i}}\, 1\tilde{\mathsf{i}}\, 2} \ \delta_{\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big[ \ \mathsf{m}_2 \, , \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big] \ \delta_{\tilde{\mathsf{i}}\, 1\tilde{\mathsf{i}}\, 2} \ \delta_{\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big[ \ \mathsf{m}_2 \, , \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big] \ \delta_{\tilde{\mathsf{i}}\, 1\tilde{\mathsf{i}}\, 2} \ \delta_{\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big[ \ \mathsf{m}_2 \, , \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big] \ \delta_{\tilde{\mathsf{i}}\, 1\tilde{\mathsf{i}}\, 2} \ \delta_{\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big[ \ \mathsf{m}_2 \, , \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big] \ \delta_{\tilde{\mathsf{i}}\, 1\tilde{\mathsf{i}}\, 2} \ \delta_{\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big[ \ \mathsf{m}_2 \, , \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 2} \big] \ \delta_{\tilde{\mathsf{i}}\, 1\tilde{\mathsf{i}}\, 2} \ \delta_{\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}}{}^{\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}\, 3\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}\, 3\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}\, 3\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 3\tilde{\mathsf{i}}\, 4} + \frac{1}{72} \ \mathsf{m}_{\tilde{\mathsf{q}}\, 3\tilde{\mathsf{i}}\, 3\tilde{\mathsf{
                                                                                                                                                                \frac{1}{2} g_2^2 \frac{1}{m_0^4} s_y^2 \overline{y_d}^{12i3} y_d^{11i4} (c_y^2 + s_y^2) LF_{1,1,-1}[m_2, \widetilde{\mu}] +
                                                                                                                                                 \mathbf{m_2} \ \mathbf{s_{\gamma}} \ \widetilde{\mu} \ \mathbf{c_{\gamma}} \ \mathbf{g_2}^2 \ \frac{1}{\mathbf{m_0}^4} \ \overline{\mathbf{y_d}}^{\mathbf{i}2\mathbf{i}3} \ \mathbf{y_d}^{\mathbf{i}1\mathbf{i}4} \ \left(\mathbf{c_{\gamma}}^2 - 2 \ \mathbf{s_{\gamma}}^2\right) \ \mathbf{LF_{1,1,0}} \ [\mathbf{m_2,} \ \widetilde{\mu}] \ + \mathbf{v_{1,1,0}} \ [\mathbf{m_2,} 
                                                                                                                                                        \frac{2}{9} \; g_{3}^{2} \; \frac{1}{m_{_{0}}{}^{2}} \; s_{_{\gamma}}{}^{2} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4} \; \mathsf{LF}_{1,1,0} \left[ \, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{d}}{}^{i3} \, \right] \; - \; \frac{1}{9} \; g_{3}^{2} \; \frac{1}{m_{_{0}}{}^{2}} \; s_{_{\gamma}}{}^{2} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4} \; \mathsf{LF}_{2,1,-1} \left[ \, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{d}}{}^{i3} \, \right] \; + \; \frac{1}{9} \; g_{3}^{2} \; \frac{1}{m_{_{0}}{}^{2}} \; s_{_{\gamma}}{}^{2} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4} \; \mathsf{LF}_{2,1,-1} \left[ \, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{d}}{}^{i3} \, \right] \; + \; \frac{1}{9} \; g_{3}^{2} \; \frac{1}{m_{_{0}}{}^{2}} \; s_{_{\gamma}}{}^{2} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4} \; \mathsf{LF}_{2,1,-1} \left[ \, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{d}}{}^{i3} \, \right] \; + \; \frac{1}{9} \; g_{3}^{2} \; \frac{1}{m_{_{0}}{}^{2}} \; s_{_{\gamma}}{}^{2} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4} \; \mathsf{LF}_{2,1,-1} \left[ \, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{d}}{}^{i3} \, \right] \; + \; \frac{1}{9} \; g_{3}^{2} \; \frac{1}{m_{_{0}}{}^{2}} \; s_{_{\gamma}}{}^{2} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4} \; \mathsf{LF}_{2,1,-1} \left[ \, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{d}}{}^{i3} \, \right] \; + \; \frac{1}{9} \; g_{3}^{2} \; \frac{1}{m_{_{0}}{}^{2}} \; s_{_{\gamma}}{}^{2} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4} \; \mathsf{LF}_{2,1,-1} \left[ \, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{d}}{}^{i3} \, \right] \; + \; \frac{1}{9} \; g_{3}^{2} \; \frac{1}{m_{_{0}}{}^{2}} \; s_{_{\gamma}}{}^{2} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4} \; \mathsf{LF}_{2,1,-1} \left[ \, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{d}}{}^{i3} \, \right] \; + \; \frac{1}{9} \; g_{3}^{2} \; \frac{1}{m_{_{0}}{}^{2}} \; s_{_{\gamma}}{}^{2} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i2i3} \; y_{d}
                                                                                                                                                            \frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{2,1,0}\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{i}\mathsf{2}}\;\delta_{\mathsf{i}\mathsf{3}\mathsf{i}\mathsf{4}}\,-\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{i}\mathsf{2}}\;\delta_{\mathsf{i}\mathsf{3}\mathsf{i}\mathsf{4}}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{i}\mathsf{2}}\;\delta_{\mathsf{i}\mathsf{3}\mathsf{i}\mathsf{4}}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{i}\mathsf{2}}\;\delta_{\mathsf{i}\mathsf{3}\mathsf{i}\mathsf{4}}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{i}\mathsf{2}}\;\delta_{\mathsf{i}\mathsf{3}\mathsf{i}\mathsf{4}}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{2}^{2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{1}\mathsf{2}}\;\delta_{\mathsf{i}\mathsf{3}\mathsf{1}\mathsf{4}}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{2}^{2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{1}\mathsf{2}}\;\delta_{\mathsf{i}\mathsf{3}\mathsf{1}\mathsf{4}}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{2}^{2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{1}\mathsf{2}}\;\delta_{\mathsf{i}\mathsf{3}\mathsf{1}\mathsf{4}}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{2}^{2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{1}\mathsf{2}}\;g_{\mathsf{i}\mathsf{3}\mathsf{1}\mathsf{3}}\,+\,\frac{2}{81}\;g_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{3}}\;g_{\mathsf{i}\mathsf{3}}\,+\,\frac{2}{81}\;g_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{1}\mathsf{3}}\;g_{\mathsf{i}\mathsf{3}}\,+\,\frac{2}{81}\;g_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,i\,4}\right]\;\delta_{\mathsf{i}\mathsf{3}}\;\mathsf{LF}_{2,2,-1}\!\left
                                                                                                                                                            \frac{4}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{3,1,-1}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\text{-}\mathrm{i}\,4}\,\big]\;\,\delta_{\mathsf{i}\,1\,\mathsf{i}\,2}\;\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,-\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,\mathrm{i}\,4}\,\big]\;\,\delta_{\mathsf{i}\,1\,\mathsf{i}\,2}\;\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,\mathrm{i}\,4}\,\big]\;\,\delta_{\mathsf{i}\,1\,\mathsf{i}\,2}\;\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,\mathrm{i}\,4}\,\big]\,\,\delta_{\mathsf{i}\,1\,\mathsf{i}\,2}\;\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,\mathrm{i}\,4}\,\big]\,\,\delta_{\mathsf{i}\,1\,\mathsf{i}\,2}\,\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,\mathrm{i}\,4}\,\big]\,\,\delta_{\mathsf{i}\,1\,\mathsf{i}\,2}\,\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,\mathrm{i}\,4}\,\big]\,\,\delta_{\mathsf{i}\,1\,\mathsf{i}\,2}\,\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,\mathrm{i}\,4}\,\big]\,\,\delta_{\mathsf{i}\,1\,\mathsf{i}\,2}\,\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{4,1,-2}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{d}}}^{\,\,\mathrm{i}\,4}\,\big]\,\,\delta_{\mathsf{i}\,1\,\mathsf{i}\,2}\,\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{2}{81}\;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
                                                                                                                                                                                                                                                                                                     \frac{2}{9}\;g_{3}^{2}\;\frac{1}{m_{_{0}}{}^{2}}\;s_{_{\gamma}}{}^{2}\;\overline{y_{d}}^{\text{i2i3}}\;y_{d}^{\;\text{i1i4}}\;\mathsf{LF}_{1,1,0}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\;\text{i2}}\,\big]\,-\,\frac{1}{9}\;g_{3}^{2}\;\frac{1}{m_{_{0}}{}^{2}}\;s_{_{\gamma}}{}^{2}\;\overline{y_{d}}^{\text{i2i3}}\;y_{d}^{\;\text{i1i4}}\;\mathsf{LF}_{2,1,-1}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\;\text{i2}}\,\big]\,-\,\frac{1}{9}\;g_{3}^{2}\,m_{_{0}}^{2}\,s_{_{\gamma}}{}^{2}\;\overline{y_{d}}^{\text{i2i3}}\;y_{d}^{\;\text{i1i4}}\;\mathsf{LF}_{2,1,-1}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\;\text{i2}}\,\big]\,-\,\frac{1}{9}\;g_{3}^{2}\,m_{_{0}}^{2}\,s_{_{\gamma}}{}^{2}\;\overline{y_{d}}^{\text{i2i3}}\;y_{d}^{\;\text{i1i4}}\;\mathsf{LF}_{2,1,-1}\big[\,\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\;\text{i2}}\,\big]\,-\,\frac{1}{9}\;g_{3}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}\,m_{_{0}}^{2}
                                                                                                                                                            \frac{2}{81}\;g_{1}^{2}\;g_{3}^{2}\;\mathsf{LF}_{2,1,0}\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,i\,2}\right]\;\delta_{\dot{1}\dot{1}\dot{1}2}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,-\,\frac{2}{81}\;g_{1}^{\,\,2}\;g_{3}^{\,\,2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{1}\,2}\right]\;\delta_{\dot{1}\dot{1}\dot{1}2}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,+\,\frac{2}{81}\;g_{1}^{\,\,2}\;g_{3}^{\,\,2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{1}\,2}\right]\;\delta_{\dot{1}\dot{1}\dot{1}2}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,+\,\frac{2}{81}\;g_{1}^{\,\,2}\;g_{3}^{\,\,2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{1}\,2}\right]\;\delta_{\dot{1}\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,+\,\frac{2}{81}\;g_{1}^{\,\,2}\;g_{3}^{\,\,2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{1}\,2}\right]\;\delta_{\dot{1}\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,+\,\frac{2}{81}\;g_{1}^{\,\,2}\;g_{3}^{\,\,2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{1}\,2}\right]\;\delta_{\dot{1}\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,+\,\frac{2}{81}\;g_{1}^{\,\,2}\;g_{3}^{\,\,2}\;\mathsf{LF}_{2,2,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{1}\,2}\right]\;\delta_{\dot{1}\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,+\,\frac{2}{81}\;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}^
                                                                                                                                                            \frac{4}{81}\;g_{1}{}^{2}\;g_{3}{}^{2}\;\mathsf{LF}_{3,1,-1}\big[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}3\dot{1}4}\,-\,\frac{2}{81}\;g_{1}{}^{2}\;g_{3}{}^{2}\;\mathsf{LF}_{4,1,-2}\big[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}3\dot{1}4}\,+\,\frac{2}{81}\;g_{1}{}^{2}\;g_{3}{}^{2}\;\mathsf{LF}_{4,1,-2}\big[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}3\dot{1}4}\,+\,\frac{2}{81}\;g_{1}{}^{2}\;g_{3}{}^{2}\;\mathsf{LF}_{4,1,-2}\big[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}3\dot{1}\dot{4}}\,+\,\frac{2}{81}\;g_{1}{}^{2}\;g_{3}{}^{2}\;\mathsf{LF}_{4,1,-2}\big[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,+\,\frac{2}{81}\;g_{1}{}^{2}\;g_{3}{}^{2}\;\mathsf{LF}_{4,1,-2}\big[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,+\,\frac{2}{81}\;g_{1}{}^{2}\;g_{3}{}^{2}\;\mathsf{LF}_{4,1,-2}\big[\mathsf{m}_{3}\,,\,\mathsf{m}_{\tilde{q}}{}^{\dot{1}2}\big]\;\delta_{\dot{1}\dot{1}\dot{1}\dot{2}}\;\delta_{\dot{1}\dot{3}\dot{1}\dot{4}}\,+\,\frac{2}{81}\;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
                                                                                                                                                                \frac{1}{12} \ \frac{1}{m_{\text{g}}^2} \ \textbf{S}_{\text{Y}}^{\ 2} \ \overline{\textbf{y}_{\text{d}}}^{\text{ri3}} \ \overline{\textbf{y}_{\text{d}}}^{\text{i2p}} \ \textbf{y}_{\text{d}}^{\text{rp}} \ \textbf{y}_{\text{d}}^{\text{i1i4}} \ \textbf{LF}_{1,1,0} \left[ \textbf{m}_{\tilde{\text{d}}}^{\text{p}}, \ \tilde{\mu} \right] - \frac{1}{27} \ \textbf{g}_{\text{1}}^2 \ \overline{\textbf{y}_{\text{d}}}^{\text{i2p}} \ \textbf{y}_{\text{d}}^{\text{i1p}} \ \textbf{LF}_{2,1,0} \left[ \textbf{m}_{\tilde{\text{d}}}^{\text{p}}, \ \tilde{\mu} \right] \ \delta_{\text{i3i4}} + \frac{1}{27} \ \delta_{\text{i3i4}} + \frac{
                                                                                                                                                            \frac{1}{54} \ g_1{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF}_{2,2,-1} \big[ \ \mathsf{m}_d^{-p} \ , \ \widetilde{\mu} \, \big] \ \delta_{i3i4} + \frac{1}{54} \ g_1{}^2 \ \overline{y_d}{}^{i2p} \ y_d{}^{i1p} \ \mathsf{LF}_{3,1,-1} \big[ \ \mathsf{m}_d^{-p} \ , \ \widetilde{\mu} \, \big] \ \delta_{i3i4} + \frac{1}{54} \ \mathsf{m}_d^{-p} \ , \ \widetilde{\mu} \, \big] 
                                                                                                                                                                                              s_{\gamma} \, \tfrac{1}{m_{o}^{\, 4}} \, \overline{y_{d}}^{\text{i2i3}} \, y_{d}^{\, \text{i1i4}} \, \left( \widetilde{\mu} \, \, c_{\gamma} \, \overline{y_{d}}^{\text{pr}} \, \left( a_{d}^{\, \text{pr}} \, \left( c_{\gamma}^{\, 2} - 2 \, s_{\gamma}^{\, 2} \right) \, - 3 \, s_{\gamma} \, \widetilde{\mu} \, c_{\gamma} \, y_{d}^{\, \text{pr}} \right) \, + \, \left( a_{d}^{\, \text{pr}} \, \left( a_{d}^{\, \text{pr}
                                                                                                                                                                                                                                                \frac{1}{12} \ \frac{1}{{\rm m_s}^2} \ {\rm s_{\gamma}}^2 \ \overline{{\rm y_d}^{\rm pr}} \ \overline{{\rm y_d}^{\rm i2i3}} \ {\rm y_d}^{\rm pi4} \ {\rm y_d}^{\rm i1r} \ {\rm LF_{1,1,0}} \left[ {\rm m_{\tilde{\rm d}}^{\rm r}}, \ \widetilde{\mu} \right] + \frac{1}{243} \ {\rm g_1}^4 \ {\rm LF_{2,1,0}} \left[ {\rm m_{\tilde{\rm d}}^{\rm i4}}, \ {\rm m_1} \right] \ \delta_{\rm i1i2} \ \delta_{\rm i3i4} - {\rm m_{\tilde{\rm d}}^{\rm i3}} + {\rm m_{\tilde{\rm d}}^{\rm i3}} \right] \ {\rm LF_{2,1,0}} \left[ {\rm m_{\tilde{\rm d}}^{\rm i4}}, \ {\rm m_1} \right] \ \delta_{\rm i1i2} \ \delta_{\rm i3i4} - {\rm m_{\tilde{\rm d}}^{\rm i3}} + {\rm m_{\tilde{\rm d}}^{\rm i3}} + {\rm m_{\tilde{\rm d}}^{\rm i3}} \right] \ \delta_{\rm i1i2} \ \delta_{\rm i3i4} - {\rm m_{\tilde{\rm d}}^{\rm i3}} + {\rm m_{\tilde{\rm d}}^{\rm i3
                                                                                                                                                            \frac{1}{486} \ g_1{}^4 \ \mathsf{LF}_{3,1,-1} \big[ \ \mathsf{m_{\bar{d}}}^{\dot{1}4}, \ \mathsf{m_1} \big] \ \delta_{\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} + \frac{4}{81} \ g_1{}^2 \ g_3{}^2 \ \mathsf{LF}_{2,1,0} \big[ \ \mathsf{m_{\bar{d}}}^{\dot{-}\dot{1}\dot{4}}, \ \mathsf{m_3} \big] \ \delta_{\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} - \frac{4}{81} \ \mathsf{m_{\bar{d}}}^{\dot{1}\dot{4}} + \frac{4}{81} \ \mathsf{m_{\bar{d}}}^{\dot{4}\dot{4}} + \frac{4}{81} \ \mathsf{m_{\bar{d}}^{\dot{4}\dot{4}} + \frac{4}{81} \ \mathsf{m_{\bar{d}}}^{\dot{4}\dot{4}} + \frac{4}{81} \ \mathsf{m_{\bar{d}}^{\dot{4}\dot{4}} + \frac{4}{81} \ \mathsf{m_{\bar{d}}^{\dot{4}} + \frac{4}{81} \ \mathsf{m_{\bar{d}}^{\dot{4}\dot{4}} + \frac{4}{81} \ \mathsf{m_{\bar{d}}^{\dot{4}} + \frac{4}{81} \ \mathsf{m_{\bar{d}}^{\dot{4}} + \frac{4}{81} \ \mathsf{m_{\bar{d}}^{\dot{4}} + \frac{4}{81} \ \mathsf{m
                                                                                                                                                            \frac{2}{81} \; {g_{1}}^2 \; {g_{3}}^2 \; \mathsf{LF_{3,1,-1}} \big[ \, \mathsf{m_{\bar{d}}^{-i\,4}} \,, \; \mathsf{m_{3}} \, \big] \; \delta_{i\,1\,i\,2} \; \delta_{i\,3\,i\,4} \; +
                                                                                                                                                                    \frac{1}{6} \, s_{\gamma} \, \frac{1}{m_{0}^{4}} \, \overline{y_{d}}^{i2i3} \, y_{d}^{i1i4} \, \left( \widetilde{\mu} \, c_{\gamma} \, \overline{y_{e}}^{pr} \, \left( a_{e}^{pr} \, \left( c_{\gamma}^{2} - 2 \, s_{\gamma}^{2} \right) - 3 \, s_{\gamma} \, \widetilde{\mu} \, c_{\gamma} \, y_{e}^{pr} \right) + \\
                                                                                                                                                                                                                                                \overline{a_{e}}^{pr} \left( a_{e}^{\; pr} \; \left( 2 \; s_{\gamma} \; c_{\gamma}^{\; 2} - s_{\gamma}^{\; 3} \right) \; + \; \widetilde{\mu} \; c_{\gamma} \; y_{e}^{\; pr} \; \left( c_{\gamma}^{\; 2} - 2 \; s_{\gamma}^{\; 2} \right) \right) \right) \; LF_{1,1,\theta} \left[ \, m_{\tilde{e}}^{\; r} \; , \; m_{\tilde{l}}^{\; p} \, \right] \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \overline{y_{d}}^{\; 12\dot{1}3} \; + \; \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\theta}^{\; 2}} \; \frac{1}
                                                                                                                                                                                   y_{d}^{\text{ili4}} \, \left( \widetilde{\mu} \, \overline{y_{e}}^{\text{pr}} \, \left( a_{e}^{\, \text{pr}} \, \left( - \, c_{\gamma}^{\, 2} + \, s_{\gamma}^{\, 2} \right) \, + \, 2 \, \, s_{\gamma} \, \widetilde{\mu} \, \, c_{\gamma} \, \, y_{e}^{\, \text{pr}} \right) \, + \, \overline{a_{e}}^{\text{pr}} \, \left( - \, 2 \, \, s_{\gamma} \, \, c_{\gamma} \, \, a_{e}^{\, \text{pr}} \, + \, \widetilde{\mu} \, \, y_{e}^{\, \text{pr}} \, \left( - \, c_{\gamma}^{\, 2} + \, s_{\gamma}^{\, 2} \right) \right) \right) \, d_{q}^{\, \text{pr}} \, \left( - \, c_{\gamma}^{\, 2} + \, s_{\gamma}^{\, 2} \right) \, d_{q}^{\, \text{pr}} \, \left( - \, c_{\gamma}^{\, 2} + \, s_{\gamma}^{\, 2} \right) \, d_{q}^{\, \text{pr}} \, \left( - \, c_{\gamma}^{\, 2} + \, s_{\gamma}^{\, 2} \right) \, d_{q}^{\, \text{pr}} \, d_{q}^{\, \text{pr}} \, \left( - \, c_{\gamma}^{\, 2} + \, s_{\gamma}^{\, 2} \right) \, d_{q}^{\, \text{pr}} \, d
                                                                                                                                                                                   LF_{2,1,\theta}\left[\,m_{\tilde{l}}^{\phantom{\tilde{l}}p}\,,\,m_{\tilde{e}}^{\phantom{\tilde{e}}r}\,\right]\,+\,\frac{1}{6}\,\,s_{\gamma}\,\,c_{\gamma}\,\,\frac{1}{m_{\text{o}}^2}\,\,\overline{y_d}^{\text{i2i3}}\,\,y_d^{\,\text{i1i4}}\,\,\left(\widetilde{\mu}\,\,\overline{y_e}^{\text{pr}}\,\,\left(\,a_e^{\,\text{pr}}\,\,\left(\,c_{\gamma}^{\,\,2}\,-\,s_{\gamma}^{\,\,2}\right)\,-\,2\,\,s_{\gamma}\,\widetilde{\mu}\,\,c_{\gamma}\,\,y_e^{\,\text{pr}}\right)\,+\,3\,\,c_{\gamma}^2\,\,y_e^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}^{\,\,2}\,\,A_{\phi}
                                                                                                                                                                                                                                                    \overline{a_{e}}^{\text{pr}}\left(2\;s_{\gamma}\;c_{\gamma}\;a_{e}^{\;\text{pr}}+\widetilde{\mu}\;y_{e}^{\;\text{pr}}\left(c_{\gamma}^{\;2}-s_{\gamma}^{\;2}\right)\right)\right)\;\mathsf{LF_{3,1,-1}}\!\left[\mathsf{m}_{\widetilde{\mathsf{l}}}^{\;\mathsf{p}},\;\mathsf{m}_{\widetilde{\mathsf{e}}}^{\;\mathsf{r}}\right]-
                                                                                                                                                            \frac{1}{\epsilon} \; c_{\gamma}^{\; 2} \; \overline{y_{d}}^{i2i3} \; y_{d}^{\; i1i4} \; \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}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; p} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; p} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; p} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{l}}^{\; p} \, , \; \mathsf{m}_{\tilde{e}}^{\; p} \, , 
                                                                                                                                                                    \frac{1}{2} \; c_{\gamma}^{\; 2} \; \overline{y_{d}}^{i2i3} \; y_{d}^{\; i1i4} \; \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{\mathsf{L}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{e}}}^{\; r} \, \big] \; - \, \mathsf{m}_{\tilde{\mathsf{L}}}^{\; p} \, , \; \mathsf{m}
                                                                                                                                                            \frac{1}{3} \; c_{\gamma}^{\; 2} \; \overline{y_{d}}^{i\, 2\, i\, 3} \; y_{d}^{\; i\, 1\, i\, 4} \; \left(c_{\gamma} \; \overline{a_{e}}^{pr} - s_{\gamma} \, \widetilde{\mu} \; \overline{y_{e}}^{pr}\right) \; \left(c_{\gamma} \; a_{e}^{\; pr} - s_{\gamma} \, \widetilde{\mu} \; y_{e}^{\; pr}\right) \; LF_{5,1,-2}\left[m_{\widetilde{l}}^{\; p}, \; m_{\widetilde{e}}^{\; r}\right] \; + \; c_{\gamma}^{\; 2} \; \overline{y_{d}}^{\; 1\, 2\, i\, 3} \; y_{d}^{\; 1\, 2\, i\, 3} \; y_{d}^{\; 1\, 1\, i\, 4} \; \left(c_{\gamma} \; \overline{a_{e}}^{\; pr} - s_{\gamma} \, \widetilde{\mu} \; \overline{y_{e}}^{pr}\right) \; LF_{5,1,-2}\left[m_{\widetilde{l}}^{\; p}, \; m_{\widetilde{e}}^{\; r}\right] \; + \; c_{\gamma}^{\; 2\, p} \; \overline{y_{d}}^{\; p} \; \overline{y_
                                                                                                                                                            \frac{1}{2} s_{\gamma} c_{\gamma} \frac{1}{m_{\varpi}^2} \overline{y_d}^{i2i3} y_d^{i1i4}
                                                                                                                                                                                           \left(\widetilde{\mu}\;\overline{y_d}^{pr}\;\left(\left.a_d^{\;pr}\;\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right.\right.\right.\\ \left.+\left.2\left.s_{_{Y}}\;\widetilde{\mu}\;c_{_{Y}}\;y_d^{pr}\right)\right.\\ \left.+\left.\overline{a_d}^{pr}\;\left(-\left.2\left.s_{_{Y}}\;c_{_{Y}}\;a_d^{\;pr}\right.\right.\\ \left.\left.\left.\left.\left.\left.\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right.\right)\right.\right)\right.\\ \left.\left.\left.\left(\left.\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right.\right)\right.\right.\\ \left.\left(\left.\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right.\right)\right.\\ \left.\left(\left.\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right)\right.\right)\right.\\ \left.\left(\left.\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right.\right)\right.\\ \left.\left(\left.\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right.\right)\right)\right.\\ \left.\left(\left.\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right.\right)\right.\\ \left.\left(\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right)\right.\\ \left.\left(\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right)\right.\\ \left.\left(\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right)\right.\\ \left.\left(\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right)\right.\\ \left.\left(\left(-\left.c_{_{Y}}^{\;2}+s_{_{Y}}^{\;2}\right)\right)\right.\right)\right]
                                                                                                                                                                                   LF_{2,1,9}\left[\,m_{\tilde{q}}^{\phantom{\tilde{q}}p}\,,\,m_{\tilde{d}}^{\phantom{\tilde{d}}\,r}\,\right]\,+\,\frac{1}{2}\,\,s_{\gamma}\,\,c_{\gamma}\,\,\frac{1}{m_{\sigma}^{2}}\,\,\overline{y_{d}}^{i2i3}\,\,y_{d}^{\phantom{d}i2i3}\,\,y_{d}^{\phantom{d}i1i4}\,\,\left(\widetilde{\mu}\,\,\overline{y_{d}}^{pr}\,\,\left(\,a_{d}^{\phantom{d}pr}\,\,\left(\,c_{\gamma}^{\phantom{\gamma}2}\,-\,s_{\gamma}^{\phantom{\gamma}2}\right)\,-\,2\,\,s_{\gamma}\,\widetilde{\mu}\,\,c_{\gamma}\,\,y_{d}^{\phantom{d}pr}\right)\,+\,3\,\,c_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,\left(\,a_{d}^{\phantom{d}pr}\,\,\left(\,c_{\gamma}^{\phantom{\tilde{q}}\,p}\,-\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\right)\,-\,2\,\,s_{\gamma}\,\widetilde{\mu}\,\,c_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,y_{d}^{\phantom{\tilde{q}}\,pr}\right)\,+\,3\,\,c_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom{\tilde{q}}\,p}\,\,s_{\gamma}^{\phantom
                                                                                                                                                                                                                                                    \overline{a_d}^{pr} \left( 2 s_{\gamma} c_{\gamma} a_d^{pr} + \widetilde{\mu} y_d^{pr} \left( c_{\gamma}^2 - s_{\gamma}^2 \right) \right) \right) LF_{3,1,-1} \left[ m_{\tilde{q}}^p, m_{\tilde{d}}^{-r} \right] -
                                                                                                                                                            \frac{1}{2} \; c_{\gamma}^{\; 2} \; \overline{y_{d}}^{i2i3} \; y_{d}^{\; i1i4} \; \left( c_{\gamma} \; \overline{a_{d}}^{pr} - s_{\gamma} \, \widetilde{\mu} \; \overline{y_{d}}^{pr} \right) \; \left( c_{\gamma} \; a_{d}^{\; pr} - s_{\gamma} \, \widetilde{\mu} \; y_{d}^{\; pr} \right) \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{d}}}^{\; r} \, \right] \; + \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; pr} \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; r} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, \right] \; + \; \mathsf{LF}_{3,1,0} \left[ \, \mathsf{m}_{\tilde{\mathsf{q}}}^{\; p} \, , \; \mathsf{m}_{\tilde{\mathsf{q}}}^{
                                                                                                                                                                                       c_{\gamma}^{2} \, \overline{y_{d}}^{\text{i2i3}} \, y_{d}^{\, \text{i1i4}} \, \left( c_{\gamma} \, \overline{a_{d}}^{\text{pr}} - s_{\gamma} \, \widetilde{\mu} \, \overline{y_{d}}^{\text{pr}} \right) \, \left( c_{\gamma} \, a_{d}^{\, \text{pr}} - s_{\gamma} \, \widetilde{\mu} \, y_{d}^{\, \text{pr}} \right) \, \text{LF}_{4,1,-1} \left[ m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \right] - \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{d}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{q}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{q}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, p} \, , \, m_{\tilde{q}}^{\, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, p} \, , \, m_{\tilde{q}}^{\, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, p} \, , \, m_{\tilde{q}}^{\, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, r} \, , \, m_{\tilde{q}}^{\, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, r} \, , \, m_{\tilde{q}}^{\, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, r} \, , \, m_{\tilde{q}}^{\, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, r} \, , \, m_{\tilde{q}}^{\, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, \, r} \, , \, m_{\tilde{q}}^{\, \, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, \, r} \, , \, m_{\tilde{q}}^{\, \, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, \, r} \, , \, m_{\tilde{q}}^{\, \, \, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, \, \, r} \, \right) \, \left( m_{\tilde{q}}^{\, \, \, 
                                                                                                                                                    c_{\text{Y}}^{2}\,\overline{y_{\text{d}}}^{\text{i2i3}}\,y_{\text{d}}^{\text{i1i4}}\,\left(c_{\text{Y}}\,\overline{a_{\text{d}}}^{\text{pr}}-s_{\text{Y}}\,\widetilde{\mu}\,\overline{y_{\text{d}}}^{\text{pr}}\right)\,\left(c_{\text{Y}}\,a_{\text{d}}^{\text{pr}}-s_{\text{Y}}\,\widetilde{\mu}\,y_{\text{d}}^{\text{pr}}\right)\,\text{LF}_{5,1,-2}\!\left[\boldsymbol{m}_{\tilde{\textbf{q}}}^{\text{p}},\,\boldsymbol{m}_{\tilde{\textbf{d}}}^{\text{r}}\right]+\left(c_{\text{Y}}\,a_{\text{d}}^{\text{pr}}-s_{\text{Y}}\,\widetilde{\mu}\,y_{\text{d}}^{\text{pr}}\right)\,\left(c_{\text{Y}}\,a_{\text{d}}^{\text{pr}}-s_{\text{Y}}\,\widetilde{\mu}\,y_{\text{d}}^{\text{pr}}\right)\right]
                                                                                                                                                            \frac{1}{2} \; s_{\gamma} \; \frac{1}{m_{s}^{4}} \; \overline{y_{d}}^{12i3} \; y_{d}^{\; 11i4} \; \left( c_{\gamma} \; \overline{a_{u}}^{pr} \; \left( -3 \; s_{\gamma} \; c_{\gamma} \; a_{u}^{\; pr} \; + \widetilde{\mu} \; y_{u}^{\; pr} \; \left( c_{\gamma}^{\; 2} - 2 \; s_{\gamma}^{\; 2} \right) \right) \right) + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{u}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_{\alpha}^{\; 2} \right) \; + C_{s}^{\; 2} \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \; a_
                                                                                                                                                                                                                                                \frac{1}{6} \ \frac{1}{m_{_{0}}^{2}} \ S_{\gamma}^{2} \ \overline{y_{d}}^{pr} \ \overline{y_{d}}^{i2i3} \ y_{d}^{pi4} \ y_{d}^{i1r} \ \mathsf{LF}_{1,1,0} \left[ \ \mathsf{m}_{\bar{q}}^{\ p} \ , \ \widetilde{\mu} \ \right] - \frac{1}{54} \ g_{1}^{2} \ \overline{y_{d}}^{pi3} \ y_{d}^{pi4} \ \mathsf{LF}_{2,1,0} \left[ \ \mathsf{m}_{\bar{q}}^{\ p} \ , \ \widetilde{\mu} \ \right] \ \delta_{i1i2} + \frac{1}{54} \ \mathsf{m}_{1}^{2} \ \mathsf{m}_{1}^{2} \ \mathsf{m}_{2}^{2} \ \mathsf{m}_{3}^{2} 
                                                                                                                                                            \frac{1}{108} \ g_1{}^2 \ \overline{y_d}{}^{pi3} \ y_d{}^{pi4} \ \mathsf{LF}_{2,2,-1} \big[ \ \mathsf{m}_{\bar{q}}{}^p \ , \ \widetilde{\mu} \, \big] \ \delta_{\mathsf{11i}2} + \frac{1}{108} \ g_1{}^2 \ \overline{y_d}{}^{pi3} \ y_d{}^{pi4} \ \mathsf{LF}_{3,1,-1} \big[ \ \mathsf{m}_{\bar{q}}{}^p \ , \ \widetilde{\mu} \, \big] \ \delta_{\mathsf{11i}2} + \frac{1}{108} \ g_1{}^2 \ \overline{y_d}{}^{pi3} \ y_d{}^{pi4} \ \mathsf{LF}_{3,1,-1} \big[ \ \mathsf{m}_{\bar{q}}{}^p \ , \ \widetilde{\mu} \, \big] \ \delta_{\mathsf{11i}2} + \frac{1}{108} \ \mathsf{m}_{\mathsf{11i}2} +
                                                                                                                                                                \frac{1}{6} \frac{1}{\mathsf{m_o}^2} \mathsf{s_y}^2 \overline{\mathsf{y_d}}^{\mathsf{ri3}} \overline{\mathsf{y_d}}^{\mathsf{i2p}} \mathsf{y_d}^{\mathsf{rp}} \mathsf{y_d}^{\mathsf{i1i4}} \mathsf{LF_{1,1,0}} \big[ \mathsf{m_{\bar{q}}}^{\mathsf{r}}, \widetilde{\mu} \big] +
                                                                                                                                                            \frac{1}{972} \ g_1{}^4 \ \mathsf{LF}_{2,1,0} \left[ \ \mathsf{m_{\tilde{q}}}^{\dot{1}2}, \ \mathsf{m_1} \right] \ \delta_{\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} - \frac{1}{1944} \ g_1{}^4 \ \mathsf{LF}_{3,1,-1} \left[ \ \mathsf{m_{\tilde{q}}}^{\dot{\dot{1}}2}, \ \mathsf{m_1} \right] \ \delta_{\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} + \frac{1}{1944} \ g_1{}^4 \ \mathsf{LF}_{3,1,-1} \left[ \ \mathsf{m_{\tilde{q}}}^{\dot{\dot{1}}2}, \ \mathsf{m_1} \right] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} + \frac{1}{1944} \ g_1{}^4 \ \mathsf{LF}_{3,1,-1} \left[ \ \mathsf{m_{\tilde{q}}}^{\dot{\dot{1}}2}, \ \mathsf{m_1} \right] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} + \frac{1}{1944} \ g_1{}^4 \ \mathsf{LF}_{3,1,-1} \left[ \ \mathsf{m_{\tilde{q}}}^{\dot{\dot{1}}2}, \ \mathsf{m_1} \right] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} + \frac{1}{1944} \ g_1{}^4 \ \mathsf{LF}_{3,1,-1} \left[ \ \mathsf{m_{\tilde{q}}}^{\dot{\dot{1}}2}, \ \mathsf{m_1} \right] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} + \frac{1}{1944} \ g_1{}^4 \ \mathsf{LF}_{3,1,-1} \left[ \ \mathsf{m_{\tilde{q}}}^{\dot{\dot{1}}2}, \ \mathsf{m_1} \right] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} + \frac{1}{1944} \ g_1{}^4 \ \mathsf{LF}_{3,1,-1} \left[ \ \mathsf{m_{\tilde{q}}}^{\dot{\dot{1}}2}, \ \mathsf{m_1} \right] \ \delta_{\dot{1}\dot{1}\dot{1}\dot{2}} \ \delta_{\dot{1}\dot{3}\dot{1}\dot{4}} + \frac{1}{1944} \ g_1{}^4 \ \mathsf{m_1} \ \mathsf{m_2} \ \mathsf{m_1} \ \mathsf{m_2} \ \mathsf{m_2} \ \mathsf{m_3} \ \mathsf
                                                                                                                                                            \frac{1}{36}\ g_1{}^2\ g_2{}^2\ \mathsf{LF}_{2,1,0}\left[\,\mathsf{m}_{\bar{\mathsf{q}}}^{\,\,\bar{\mathsf{i}}\,2}\,,\ \mathsf{m}_2\,\right]\ \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{2}}}\ \delta_{\dot{\mathsf{1}}\dot{\mathsf{3}}\dot{\mathsf{1}}\dot{\mathsf{4}}} - \frac{1}{72}\ g_1{}^2\ g_2{}^2\ \mathsf{LF}_{3,1,-1}\left[\,\mathsf{m}_{\bar{\mathsf{q}}}^{\,\,\,\bar{\mathsf{i}}\,2}\,,\ \mathsf{m}_2\,\right]\ \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{2}}}\ \delta_{\dot{\mathsf{1}}\dot{\mathsf{3}}\dot{\mathsf{1}}\dot{\mathsf{4}}} + \frac{1}{72}\ \mathsf{m}_{\mathsf{1}}^{\,\,\bar{\mathsf{1}}\,2}\ \mathsf{m}_{\mathsf{1}}^{\,\,\bar{\mathsf{1}}\,2}\left[\,\mathsf{m}_{\bar{\mathsf{q}}}^{\,\,\,\bar{\mathsf{1}}\,2}\,,\ \mathsf{m}_{\mathsf{2}}\,\right]\ \delta_{\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{1}}\dot{\mathsf{2}}}\ \delta_{\dot{\mathsf{1}}\dot{\mathsf{3}}\dot{\mathsf{1}}\dot{\mathsf{4}}} + \frac{1}{72}\ \mathsf{m}_{\mathsf{2}}^{\,\,\bar{\mathsf{1}}\,2}\ \mathsf{m}_{\mathsf{2}}^{\,\,\bar{\mathsf{1}}\,2}\ \mathsf{m}_{\mathsf{2}}^{\,\,\bar{\mathsf{1}}\,2}\ \delta_{\dot{\mathsf{1}}\dot{\mathsf{3}}\dot{\mathsf{1}}\dot{\mathsf{4}}} + \frac{1}{72}\ \mathsf{m}_{\mathsf{2}}^{\,\,\bar{\mathsf{1}}\,2}\ \delta_{\dot{\mathsf{1}}\dot{\mathsf{3}}\dot{\mathsf{1}}\dot{\mathsf{4}}} + \frac{1}{72}\ \mathsf{m}_{\mathsf{2}}^{\,\,\bar{\mathsf{1}}\,2}\ \mathsf{m}_{\mathsf{2}}^{\,\,\bar{\mathsf{1}}\,2}\ \mathsf{m}_{\mathsf{2}}^{\,\,\bar{\mathsf{1}}\,2}\ \mathsf{m}_{\mathsf{2}}^{\,\,\bar{\mathsf{1}}\,2}\ \delta_{\dot{\mathsf{1}}\dot{\mathsf{3}}\dot{\mathsf{1}}\dot{\mathsf{4}}} + \frac{1}{72}\ \mathsf{m}_{\mathsf{2}}^{\,\,\bar{\mathsf{1}}\,2}\ \mathsf{m}_{\mathsf{2}}^{\,\bar{\mathsf{2}}\,2}\ \mathsf{m}_{\mathsf{2}}^{\,\bar{\mathsf{1}}\,2}\ \mathsf{m}_{\mathsf{2}}^{\,\bar{\mathsf{2}}\,2}\ \mathsf
                                                                                                                                                                \frac{4}{81}\; {g_{1}}^{2}\; {g_{3}}^{2}\; \mathsf{LF}_{2,1,0}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{12}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{14}}} - \frac{2}{81}\; {g_{1}}^{2}\; {g_{3}}^{2}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{12}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{14}}} + \frac{2}{81}\; {g_{1}}^{2}\; {g_{3}}^{2}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{12}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{14}}} + \frac{2}{81}\; {g_{1}}^{2}\; {g_{3}}^{2}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{12}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{14}}} + \frac{2}{81}\; {g_{1}}^{2}\; {g_{3}}^{2}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{12}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{14}}} + \frac{2}{81}\; {g_{1}}^{2}\; {g_{3}}^{2}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{12}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{14}}} + \frac{2}{81}\; {g_{1}}^{2}\; {g_{3}}^{2}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{12}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{13}}} + \frac{2}{81}\; {g_{1}}^{2}\; {g_{2}}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{13}}} + \frac{2}{81}\; {g_{1}}\; {g_{2}}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{12}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{13}}} + \frac{2}{81}\; {g_{2}}\; {g_{3}}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{12}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{13}}} + \frac{2}{81}\; {g_{3}}\; {g_{3}}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{13}}} + \frac{2}{81}\; {g_{3}}\; {g_{3}}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\dot{\mathsf{12}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{13}}} + \frac{2}{81}\; {g_{3}}\; {g_{3}}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{13}}}^{\,\,\dot{\mathsf{13}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{11}}\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{13}}} + \frac{2}{81}\; {g_{3}}\; {g_{3}}\; \mathsf{LF}_{3,1,-1}\left[\, \mathsf{m}_{\tilde{\mathsf{13}}}^{\,\,\dot{\mathsf{13}}},\; \mathsf{m}_{3}\,\right]\; \delta_{\dot{\mathsf{13}}\dot{\mathsf{13}}} + \frac{2}{81}\; {g_{3}}\; \delta_{\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}}\; \delta_{\dot{\mathsf{13}}}} + \frac{2}{81}\; 
                                                                                                                                                            \frac{2}{27} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i1p} \ \mathsf{LF}_{2,1,0} \big[ \ m_{\tilde{u}}{}^{p} \ , \ \tilde{\mu} \, \big] \ \delta_{i3i4} - \frac{1}{27} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i1p} \ \mathsf{LF}_{2,2,-1} \big[ \ m_{\tilde{u}}{}^{p} \ , \ \tilde{\mu} \, \big] \ \delta_{i3i4} - \frac{1}{27} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i1p} \ \mathsf{LF}_{2,2,-1} \big[ \ m_{\tilde{u}}{}^{p} \ , \ \tilde{\mu} \, \big] \ \delta_{i3i4} - \frac{1}{27} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i1p} \ \mathsf{LF}_{2,2,-1} \big[ \ m_{\tilde{u}}{}^{p} \ , \ \tilde{\mu} \, \big] \ \delta_{i3i4} - \frac{1}{27} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i2p} \ y_{u}{}^{i2p} \ \mathsf{LF}_{2,2,-1} \big[ \ m_{\tilde{u}}{}^{p} \ , \ \tilde{\mu} \, \big] \ \delta_{i3i4} - \frac{1}{27} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i2p} \ y_{u}{}^{i2p} \ \mathsf{LF}_{2,2,-1} \big[ \ m_{\tilde{u}}{}^{p} \ , \ \tilde{\mu} \, \big] \ \delta_{i3i4} - \frac{1}{27} \ g_{1}{}^{2} \ \overline{y_{u}}{}^{i2p} \ y_{u}{}^{i2p} \ y_{u}{}^{i2p} \ \mathsf{LF}_{2,2,-1} \big[ \ m_{\tilde{u}}{}^{p} \ , \ \tilde{\mu} \, \big] \ \delta_{i3i4} - \frac{1}{27} \ g_{1}{}^{2} 
                                                                                                                                                                \frac{1}{27} \; g_{1}{}^{2} \; \overline{y_{u}}{}^{i2p} \; y_{u}{}^{i1p} \; \mathsf{LF_{3,1,-1}} \big[ m_{u}^{\; p} , \; \widetilde{\mu} \, \big] \; \delta_{i3i4} + \frac{1}{2} \; \mathsf{s_{\gamma}} \; \mathsf{c_{\gamma}} \; \frac{1}{m_{\text{p}}^{\; 2}} \; \overline{y_{d}}{}^{i2i3} \; y_{d}{}^{i1i4}
                                                                                                                                                                                           \left(\widetilde{\mu}\,\overline{y_u}^{pr}\,\left(a_u^{\,pr}\,\left(-\,c_{\gamma}^{\,\,2}+\,s_{\gamma}^{\,\,2}\right)\,-\,2\,\,s_{\gamma}\,\widetilde{\mu}\,\,c_{\gamma}\,y_u^{\,\,pr}\right)\,+\,\overline{a_u}^{pr}\,\left(2\,\,s_{\gamma}\,\,c_{\gamma}\,\,a_u^{\,\,pr}\,+\,\widetilde{\mu}\,\,y_u^{\,\,pr}\,\left(-\,c_{\gamma}^{\,\,2}+\,s_{\gamma}^{\,\,2}\right)\right)\right)
                                                                                                                                                                                   \text{LF}_{2,1,\theta}\left[\,m_{\tilde{u}}^{\,\,r}\,,\,m_{\tilde{q}}^{\,\,p}\,\right]\,+\,\frac{1}{2}\,\,s_{\gamma}\,\,c_{\gamma}\,\,\frac{1}{m_{\sigma}^{\,2}}\,\,\overline{y_{d}}^{\,i2i3}\,\,y_{d}^{\,\,i1i4}\,\,\left(\widetilde{\mu}\,\,\overline{y_{u}}^{pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,c_{\gamma}^{\,\,2}\,-\,s_{\gamma}^{\,\,2}\,\right)\,+\,2\,\,s_{\gamma}\,\,\widetilde{\mu}\,\,c_{\gamma}\,\,y_{u}^{\,\,pr}\,\right)\,+\,2\,\,s_{\gamma}\,\,\widetilde{\mu}\,\,c_{\gamma}\,\,y_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,\left(\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,a_{u}^{\,pr}\,\,a_{u}^{\,pr}\,a
                                                                                                                                                                                                                                                \overline{a_u}^{\text{pr}} \left( -2 \; \textbf{s}_{\gamma} \; \textbf{c}_{\gamma} \; \textbf{a}_u^{\; \text{pr}} \; + \widetilde{\mu} \; \textbf{y}_u^{\; \text{pr}} \; \left( \textbf{c}_{\gamma}^{\; 2} - \textbf{s}_{\gamma}^{\; 2} \right) \right) \right) \; \textbf{LF}_{\textbf{3,1,-1}} \big[ \textbf{m}_{\tilde{\textbf{u}}}^{\; \text{r}} \textbf{,} \; \textbf{m}_{\tilde{\textbf{q}}}^{\; \text{p}} \big] \; - \; \textbf{m}_{\tilde{\textbf{q}}}^{\; \text{pr}} \, \textbf{m}_{\tilde{\textbf{q}}}^{\; \text{pr}} \big] \; .
                                                                                                                                                            \frac{1}{2} c_{\gamma}^{2} \overline{y_{d}}^{i2i3} y_{d}^{i1i4} \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_{3,1,0} \left[m_{\widetilde{u}}^{r}, m_{\widetilde{q}}^{r}\right] + \widetilde{\mu} c_{\gamma} \overline{y_{u}}^{pr} + \widetilde{\mu} c_{\gamma} y_{u}^{pr}\right] + \widetilde{\mu} c_{\gamma} \overline{y_{u}}^{pr} + \widetilde{\mu} c_{\gamma} y_{u}^{pr}
                                                                                                                                                            \frac{3}{2}\;c_{\gamma}^{\;2}\;\overline{y_{d}^{\;1213}}\;y_{d}^{\;1114}\;\left(-\,s_{\gamma}\;\overline{a_{u}}^{pr}\,+\,\widetilde{\mu}\;c_{\gamma}\;\overline{y_{u}}^{pr}\right)\;\left(-\,s_{\gamma}\;a_{u}^{\;pr}\,+\,\widetilde{\mu}\;c_{\gamma}\;y_{u}^{\;pr}\right)\;\mathsf{LF_{4,1,-1}}\!\left[\mathsf{m_{\tilde{u}}}^{\;r}\,,\;\mathsf{m_{\tilde{q}}}^{\;p}\right]\;-\,\mathsf{m_{\tilde{q}}}^{\;p}\;\left(-\,s_{\gamma}^{\;2}\,a_{u}^{\;pr}\,+\,\widetilde{\mu}\;c_{\gamma}^{\;p}\,y_{u}^{\;pr}\right)\;\mathsf{LF_{4,1,-1}}\!\left[\mathsf{m_{\tilde{u}}}^{\;r}\,,\;\mathsf{m_{\tilde{q}}}^{\;p}\right]\;-\,\mathsf{m_{\tilde{q}}}^{\;p}\;\mathsf{LF_{4,1,-1}}\left[\mathsf{m_{\tilde{u}}}^{\;r}\,,\;\mathsf{m_{\tilde{q}}}^{\;p}\right]\;
                                                                                                                                                        c_{\gamma}^{2} \overline{y_{d}}^{i2i3} y_{d}^{i1i4} \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_{5,1,-2} \left[m_{\widetilde{u}}^{r}, m_{\widetilde{q}}^{r}\right] + \widetilde{\mu} c_{\gamma} y_{u}^{pr}
                                                                                                                                                                \frac{1}{12} \; \frac{1}{m_0^2} \; {\rm S_{\chi}}^2 \; \left( \overline{{\rm y_d}}^{\rm pi3} \; {\rm y_d}^{\rm ili4} \; \overline{{\rm y_u}}^{\rm i2r} \; {\rm y_u}^{\rm pr} + \overline{{\rm y_d}}^{\rm i2i3} \; {\rm y_d}^{\rm pi4} \; \overline{{\rm y_u}}^{\rm pr} \; {\rm y_u}^{\rm ilr} \right) \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \; \widetilde{\mu} \, \right] \; + \; {\rm LF_{1,1,0}} \left[ \, m_{\tilde{\rm u}}^{\,\, r} \, , \;
                                                                                                                                                            \frac{1}{3} \text{ m}_{1} \text{ s}_{\gamma} \, \widetilde{\mu} \text{ c}_{\gamma} \, g_{1}^{2} \, \frac{1}{m_{\text{m}}^{2}} \, \overline{\text{yd}}^{\text{i2i3}} \, \text{yd}^{\text{i1i4}} \, \left(-\, c_{\gamma}^{2} + s_{\gamma}^{\, 2}\right) \, \text{LF}_{2,\text{1,0}} \left[\, \widetilde{\mu} \, , \, \, \text{m}_{1} \, \right] \, + \\
                                                                                                                                                            \frac{1}{3} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{e}^{2}} \; \overline{y_{d}}^{\text{i2i3}} \; y_{d}^{\, \text{i1i4}} \; \left( c_{\gamma} \; m_{\bar{\Phi}}^{\, \, 2} \; \left( c_{\gamma}^{\, \, 2} + s_{\gamma}^{\, \, 2} \right) \; + \; m_{1} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \right) \; \text{LF}_{3,1,-1} \left[ \, \widetilde{\mu} \, , \; m_{1} \, \right] \; + \; m_{1} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{2} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; + \; m_{3} \;
                                                                                                                                                            \frac{1}{3} \, m_1 \, s_{\gamma} \, \tilde{\mu} \, g_1^2 \, c_{\gamma}^3 \, \overline{y_d}^{i2i3} \, y_d^{i1i4} \, LF_{3,1,0} [\tilde{\mu}, m_1] -
                                                                                                                                                                                           g_1^2 c_{\gamma}^2 \overline{y_d}^{i2i3} y_d^{i1i4} (c_{\gamma}^2 + s_{\gamma}^2) LF_{4,1,-2} [\widetilde{\mu}, m_1] -
                                                                                                                                                 \mathsf{m_1} \; \mathsf{s_{\gamma}} \; \tilde{\mu} \; \mathsf{g_1}^2 \; \mathsf{c_{\gamma}}^3 \; \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \; \mathsf{y_d}^{\mathsf{i1i4}} \; \mathsf{LF_{4,1,-1}} \left[ \tilde{\mu} \; , \; \mathsf{m_1} \right] \; + \\ \frac{1}{3} \; \mathsf{g_1}^2 \; \mathsf{c_{\gamma}}^2 \; \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \; \mathsf{y_d}^{\mathsf{i1i4}} \; \left( \mathsf{c_{\gamma}}^2 \; + \; \mathsf{s_{\gamma}}^2 \right) \; \mathsf{LF_{5,1,-3}} \left[ \tilde{\mu} \; , \; \mathsf{m_1} \right] \; + \\ \frac{1}{3} \; \mathsf{g_1}^2 \; \mathsf{c_{\gamma}}^2 \; \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \; \mathsf{y_d}^{\mathsf{i1i4}} \; \left( \mathsf{c_{\gamma}}^2 \; + \; \mathsf{s_{\gamma}}^2 \right) \; \mathsf{LF_{5,1,-3}} \left[ \tilde{\mu} \; , \; \mathsf{m_1} \right] \; + \\ \frac{1}{3} \; \mathsf{g_1}^2 \; \mathsf{c_{\gamma}}^2 \; \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \; \mathsf{y_d}^{\mathsf{i1i4}} \; \left( \mathsf{c_{\gamma}}^2 \; + \; \mathsf{s_{\gamma}}^2 \right) \; \mathsf{LF_{5,1,-3}} \left[ \tilde{\mu} \; , \; \mathsf{m_1} \right] \; + \\ \frac{1}{3} \; \mathsf{g_1}^2 \; \mathsf{c_{\gamma}}^2 \; \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \; \mathsf{y_d}^{\mathsf{i1i4}} \; \mathsf{LF_{4,1,-1}} \left[ \tilde{\mu} \; , \; \mathsf{m_1} \right] \; + \\ \frac{1}{3} \; \mathsf{g_1}^2 \; \mathsf{c_{\gamma}}^2 \; \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \; \mathsf{y_d}^{\mathsf{i1i4}} \; \mathsf{LF_{4,1,-1}} \left[ \tilde{\mu} \; , \; \mathsf{m_1} \right] \; + \\ \frac{1}{3} \; \mathsf{g_1}^2 \; \mathsf{c_{\gamma}}^2 \; \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \; \mathsf{y_d}^{\mathsf{i1i4}} \; \mathsf{LF_{4,1,-1}} \left[ \tilde{\mu} \; , \; \mathsf{m_1} \right] \; + \\ \frac{1}{3} \; \mathsf{g_1}^2 \; \mathsf{c_{\gamma}}^2 \; \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \; \mathsf{y_d}^{\mathsf{i1i4}} \; \mathsf{LF_{4,1,-1}} \left[ \tilde{\mu} \; , \; \mathsf{m_1} \right] \; + \\ \frac{1}{3} \; \mathsf{g_1}^2 \; \mathsf{q_1}^2 \; \mathsf{q_1}^2 \; \mathsf{q_2}^2 \; \mathsf{q_2}^2 \; \mathsf{q_2}^2 \; \mathsf{q_2}^2 \; \mathsf{q_3}^2 \; \mathsf{q
                                                                                                                                                            \frac{2}{3} \, m_1 \, s_{\gamma} \, \widetilde{\mu} \, g_1^2 \, c_{\gamma}^3 \, \overline{y_d}^{i2i3} \, y_d^{i1i4} \, LF_{5,1,-2} [\widetilde{\mu}, m_1] +
                                                                                                                                                 \text{m}_2 \text{ s}_{\gamma} \; \widetilde{\mu} \; \text{c}_{\gamma} \; \text{g}_2^2 \; \tfrac{1}{\text{m}_\text{o}^2} \; \overline{\text{y}_\text{d}}^\text{i2i3} \; \text{y}_\text{d}^\text{i1i4} \; \left(-\,\text{c}_{\gamma}^{\,\,2} + \text{s}_{\gamma}^{\,\,2}\right) \; \text{LF}_{2,\text{1},\text{0}} \left[\,\widetilde{\mu}\,,\;\text{m}_2\,\right] \; + \\
                                                                                                                                                    c_{\gamma} \; g_{2}^{2} \; \frac{_{1}}{_{m_{0}}^{2}} \; \overline{y_{d}}^{i2i3} \; y_{d}^{i1i4} \; \left( c_{\gamma} \; m_{_{\overline{0}}}^{2} \; \left( c_{\gamma}^{2} + s_{\gamma}^{2} \right) \; + \; m_{2} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \right) \; \text{LF}_{3,1,-1} \left[ \widetilde{\mu} \; , \; m_{2} \right] \; + \; m_{2} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; s_{\gamma} \; \widetilde{\mu} \; + \; m_{3} \; \widetilde{\mu} \; \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) \; + \; m_{3} \; \widetilde{\mu} \; + \;
                                                                                                                                                 \mathsf{m}_2 \; \mathsf{s}_{\gamma} \; \widetilde{\mu} \; \mathsf{g_2}^2 \; \mathsf{c}_{\gamma}^{\; 3} \; \overline{y_{\mathsf{d}}}^{\mathsf{i} \, \mathsf{i} \, \mathsf{i} \, \mathsf{3}} \; \mathsf{y_{\mathsf{d}}}^{\mathsf{i} \, \mathsf{i} \, \mathsf{i} \, \mathsf{4}} \; \mathsf{LF}_{\mathsf{3}, \mathsf{1}, \mathsf{0}} \left[ \, \widetilde{\mu} \, , \; \mathsf{m}_2 \, \right] \; - \; 2 \; \mathsf{g_2}^2 \; \mathsf{c}_{\gamma}^{\; 2} \; \overline{y_{\mathsf{d}}}^{\mathsf{i} \, \mathsf{2} \, \mathsf{i} \, \mathsf{3}} \; \mathsf{y_{\mathsf{d}}}^{\mathsf{i} \, \mathsf{1} \, \mathsf{i} \, \mathsf{4}} \; \left( \mathsf{c}_{\gamma}^{\; 2} + \mathsf{s}_{\gamma}^{\; 2} \right) \; \mathsf{LF}_{\mathsf{4}, \mathsf{1}, -2} \left[ \, \widetilde{\mu} \, , \; \mathsf{m}_2 \, \right] \; - \; \mathsf{m}_2 \; \mathsf{m}
                                                                                                                                                    3 m<sub>2</sub> s<sub>\gamma</sub> \tilde{\mu} g<sub>2</sub><sup>2</sup> c<sub>\gamma</sub><sup>3</sup> \overline{y_d}<sup>i2i3</sup> y<sub>d</sub><sup>i1i4</sup> LF<sub>4,1,-1</sub>[\tilde{\mu}, m<sub>2</sub>] +
                                                                                                                                                    g_{2}^{2} \; c_{\gamma}^{2} \; \overline{y_{d}}^{i2i3} \; y_{d}^{i1i4} \; \left(c_{\gamma}^{2} + s_{\gamma}^{2}\right) \; \mathsf{LF}_{5,1,-3} \left[\widetilde{\mu} \,,\, \mathsf{m}_{2}\right] \; + \; 2 \; \mathsf{m}_{2} \; s_{\gamma} \; \widetilde{\mu} \; g_{2}^{2} \; c_{\gamma}^{3} \; \overline{y_{d}}^{i2i3} \; y_{d}^{i1i4} \; \mathsf{LF}_{5,1,-2} \left[\widetilde{\mu} \,,\, \mathsf{m}_{2}\right] \; - \; 2 \; \mathsf{m}_{2} \; s_{\gamma} \; \widetilde{\mu} \; g_{2}^{2} \; c_{\gamma}^{3} \; \overline{y_{d}}^{i2i3} \; y_{d}^{i1i4} \; \mathsf{LF}_{5,1,-2} \left[\widetilde{\mu} \,,\, \mathsf{m}_{2}\right] \; - \; 2 \; \mathsf{m}_{2} \; s_{\gamma} \; \widetilde{\mu} \; s_{\gamma}^{2} \;
                                                                                                                                                            \frac{1}{24} \; \frac{1}{m_{\text{g}}^2} \; \text{S}_{\text{Y}}^2 \; \overline{\text{y}_{\text{d}}}^{\text{12p}} \; \text{y}_{\text{d}}^{\text{12p}} \; \text{y}_{\text{d}}^{\text{11i4}} \; \text{LF}_{2,1,-1} \big[ \tilde{\mu} \; , \; \text{m}_{\text{d}}^{\text{p}} \big] \; + \; \frac{1}{54} \; \text{g}_{\text{1}}^2 \; \overline{\text{y}_{\text{d}}}^{\text{12p}} \; \text{y}_{\text{d}}^{\text{11p}} \; \text{LF}_{2,1,0} \big[ \tilde{\mu} \; , \; \text{m}_{\text{d}}^{\text{p}} \big] \; \delta_{\text{13i4}} \; + \; \frac{1}{54} \; \text{g}_{\text{1}}^2 \; \overline{\text{y}_{\text{d}}}^{\text{12p}} \; \text{y}_{\text{d}}^{\text{11p}} \; \text{LF}_{2,1,0} \big[ \tilde{\mu} \; , \; \text{m}_{\text{d}}^{\text{p}} \big] \; \delta_{\text{13i4}} \; + \; \frac{1}{54} \; \text{g}_{\text{1}}^2 \; \overline{\text{y}_{\text{d}}}^{\text{12p}} \; \overline{\text{y}_{\text{d}}}^{\text{12p}} \; \overline{\text{LF}}_{2,1,0} \big[ \tilde{\mu} \; , \; \text{m}_{\text{d}}^{\text{p}} \big] \; \delta_{\text{13i4}} \; + \; \frac{1}{54} \; \overline{\text{M}}_{\text{d}}^{\text{p}} \, + \; \frac{1}{54} \; \overline{\text{M}}_{\text{d}}^{\text{p}} \, + \; \frac{1}{54} \; \overline{\text{M}}_{\text{d}}^{\text{p}} \big[ \tilde{\mu} \; , \; \tilde{\mu}_{\text{d}}^{\text{p}} \big] \; \delta_{\text{13i4}} \; + \; \frac{1}{54} \; \overline{\text{M}}_{\text{d}}^{\text{p}} \, + \; \frac{1}{54} 
                                                                                                                                                            \frac{1}{m_{\text{d}}^2} \; \mathsf{S}_{\text{Y}}^{\; 2} \; \overline{\mathsf{y}_{\text{d}}}^{\text{pr}} \; \overline{\mathsf{y}_{\text{d}}}^{\text{i2i3}} \; \mathsf{y}_{\text{d}}^{\, \text{pi4}} \; \mathsf{y}_{\text{d}}^{\, \text{i1r}} \; \mathsf{LF}_{2,1,-1} \big[ \, \widetilde{\boldsymbol{\mu}} \, , \; \boldsymbol{m}_{\tilde{\text{d}}}^{\, -r} \, \big] \; - \;
                                                                                                                                                            \frac{1}{12} \ \frac{1}{m_{e}^{2}} \ s_{\gamma}^{\ 2} \ \overline{y_{d}}^{pr} \ \overline{y_{d}}^{i2i3} \ y_{d}^{pi4} \ y_{d}^{i1r} \ \mathsf{LF}_{2,1,-1} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ + \\ \frac{1}{108} \ g_{1}^{\ 2} \ \overline{y_{d}}^{pi3} \ y_{d}^{pi4} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ 2} \ \overline{y_{d}}^{pi3} \ y_{d}^{pi4} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ 2} \ \overline{y_{d}}^{pi3} \ y_{d}^{pi4} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ 2} \ \overline{y_{d}}^{pi3} \ y_{d}^{pi4} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ 2} \ \overline{y_{d}}^{pi3} \ y_{d}^{pi4} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ 2} \ \overline{y_{d}}^{pi3} \ y_{d}^{pi4} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ 2} \ \overline{y_{d}}^{pi3} \ y_{d}^{pi4} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ 2} \ \overline{y_{d}}^{pi4} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ 2} \ \overline{y_{d}}^{pi4} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ p} \ s_{1}^{\ p} \ s_{1}^{\ p} \ \mathsf{LF}_{2,1,0} \Big[ \widetilde{\mu} \ , \ \mathsf{m}_{\bar{q}}^{\ p} \Big] \ \delta_{i1i2} \ + \\ \frac{1}{108} \ s_{1}^{\ p} \ 
                                                                                                                                                            \frac{7}{108} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi3}} \; y_d{}^{\text{pi4}} \; \mathsf{LF_{3,1,-1}} \big[ \tilde{\mu} \,, \; \mathsf{m_{\tilde{q}}}^{\text{p}} \big] \; \delta_{\text{ili2}} - \frac{1}{54} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi3}} \; y_d{}^{\text{pi4}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \,, \; \mathsf{m_{\tilde{q}}}^{\text{p}} \big] \; \delta_{\text{ili2}} - \frac{1}{54} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi3}} \; y_d{}^{\text{pi4}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \,, \; \mathsf{m_{\tilde{q}}}^{\text{p}} \big] \; \delta_{\text{ili2}} - \frac{1}{54} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi3}} \; y_d{}^{\text{pi4}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \,, \; \mathsf{m_{\tilde{q}}}^{\text{p}} \big] \; \delta_{\text{ili2}} - \frac{1}{54} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi3}} \; y_d{}^{\text{pi4}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \,, \; \mathsf{m_{\tilde{q}}}^{\text{p}} \big] \; \delta_{\text{ili2}} - \frac{1}{54} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi3}} \; y_d{}^{\text{pi4}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \,, \; \mathsf{m_{\tilde{q}}}^{\text{p}} \big] \; \delta_{\text{ili2}} - \frac{1}{54} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi3}} \; y_d{}^{\text{pi4}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \,, \; \mathsf{m_{\tilde{q}}}^{\text{p}} \big] \; \delta_{\text{ili2}} - \frac{1}{54} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi3}} \; y_d{}^{\text{pi4}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \,, \; \mathsf{m_{\tilde{q}}}^{\text{p}} \big] \; \delta_{\text{ili2}} - \frac{1}{54} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi4}} \; y_d{}^{\text{pi4}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \,, \; \mathsf{m_{\tilde{q}}}^{\text{p}} \big] \; \delta_{\text{ili2}} - \frac{1}{54} \; g_1{}^2 \; \overline{y_d}{}^{\text{pi4}} \; y_d{}^{\text{pi4}} \; y_
                                                                                                                                                            \frac{1}{12}\,\frac{1}{\,{\rm m_{\rm g}}^2}\,\,{\rm S_{\rm Y}}^2\,\,\overline{{\rm y_d}}^{\rm i29}\,\,{\rm y_d}^{\rm i2p}\,\,{\rm y_d}^{\rm i1i4}\,\,{\rm LF_{2,1,-1}}\big[\,\widetilde{\mu}\,,\,\,{\rm m_{\tilde{\rm q}}}^{\rm r}\,\big]\,-\,\frac{1}{27}\,\,{\rm g_1}^2\,\,\overline{{\rm y_u}}^{\rm i2p}\,\,{\rm y_u}^{\rm i1p}\,\,{\rm LF_{2,1,0}}\big[\,\widetilde{\mu}\,,\,\,{\rm m_{\tilde{\rm u}}}^{\rm p}\,\big]\,\,\delta_{\rm i3i4}\,-\,{\rm i}\,\,{\rm i}\,
                                                                                                                                                            \frac{1}{108} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}}^{\mathsf{i2p}} \; \mathsf{y_u}^{\mathsf{i1p}} \; \mathsf{LF_{3,1,-1}} \big[ \tilde{\mu} \text{, } \mathsf{m_{\tilde{u}}}^{\mathsf{p}} \big] \; \delta_{\mathsf{i3i4}} - \frac{1}{108} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}}^{\mathsf{i2p}} \; \mathsf{y_u}^{\mathsf{i1p}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \text{, } \mathsf{m_{\tilde{u}}}^{\mathsf{p}} \big] \; \delta_{\mathsf{i3i4}} - \frac{1}{108} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}}^{\mathsf{i2p}} \; \mathsf{y_u}^{\mathsf{i1p}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \text{, } \mathsf{m_{\tilde{u}}}^{\mathsf{p}} \big] \; \delta_{\mathsf{i3i4}} - \frac{1}{108} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}}^{\mathsf{i2p}} \; \mathsf{y_u}^{\mathsf{i3p}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \text{, } \mathsf{m_{\tilde{u}}}^{\mathsf{p}} \big] \; \delta_{\mathsf{i3i4}} - \frac{1}{108} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}}^{\mathsf{i2p}} \; \mathsf{y_u}^{\mathsf{i3p}} \; \mathsf{LF_{4,1,-2}} \big[ \tilde{\mu} \text{, } \mathsf{m_{\tilde{u}}}^{\mathsf{p}} \big] \; \delta_{\mathsf{i3i4}} - \frac{1}{108} \; \mathsf{g_1}^2 \; \overline{\mathsf{y_u}}^{\mathsf{i3p}} \; \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \; \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \big[ \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \; \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \big] \; \delta_{\mathsf{i3i4}} - \frac{1}{108} \; \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \; \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \; \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \, \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \big[ \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \; \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \big] \; \delta_{\mathsf{i3i4}} \; \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \; \mathsf{h_{\tilde{u}}}^{\mathsf{p}} \, \mathsf{h_{
                                                                                                                                                            \frac{1}{24} \ \frac{1}{m_{\text{g}}^2} \ \text{S}_{\gamma}^{\ 2} \ \left( \overline{y_{\text{d}}}^{\text{pi3}} \ y_{\text{d}}^{\text{i1i4}} \ \overline{y_{\text{u}}}^{\text{i2r}} \ y_{\text{u}}^{\text{pr}} + \overline{y_{\text{d}}}^{\text{i2i3}} \ y_{\text{d}}^{\text{pi4}} \ \overline{y_{\text{u}}}^{\text{pr}} \ y_{\text{u}}^{\text{i1r}} \right) \ \text{LF}_{2,1,-1} \left[ \widetilde{\mu} \ , \ m_{\widetilde{\textbf{u}}}^{\text{r}} \right] + \overline{y_{\text{d}}}^{\text{i2i3}} \ y_{\text{d}}^{\text{pi4}} \ \overline{y_{\text{u}}}^{\text{pr}} \ y_{\text{u}}^{\text{i1r}} \right) \ \text{LF}_{2,1,-1} \left[ \widetilde{\mu} \ , \ m_{\widetilde{\textbf{u}}}^{\text{r}} \right] + \overline{y_{\text{d}}}^{\text{i2i3}} \ y_{\text{d}}^{\text{pi4}} \ \overline{y_{\text{u}}}^{\text{pr}} \ y_{\text{u}}^{\text{i1r}} \right] + \overline{y_{\text{d}}}^{\text{i2i3}} \ y_{\text{d}}^{\text{pi4}} \ \overline{y_{\text{u}}}^{\text{pr}} \ y_{\text{u}}^{\text{i1r}} \right] + \overline{y_{\text{d}}}^{\text{i2i3}} \ y_{\text{d}}^{\text{i2i4}} \ \overline{y_{\text{u}}}^{\text{pr}} \ y_{\text{u}}^{\text{i2i7}} \ y_{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}} \ y_{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}} \ y_{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u}}^{\text{u
                                                                                                                                                        \frac{1}{54} \; m_1 \; s_{\gamma} \; g_1^{\; 2} \; \frac{1}{m_0^{\; 2}} \; y_d^{\; \text{ili4}} \; \left( s_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} + \widetilde{\mu} \; c_{\gamma} \; \overline{y_d}^{\; \text{i2i3}} \right) \; \mathsf{LF_{1,1,1,0}} \left[ m_1 \, , \; m_{\tilde{d}}^{\; \text{i3}} \, , \; m_{\tilde{q}}^{\; \text{i2}} \right] \; + \\ \frac{1}{54} \; m_1 \; s_{\gamma} \; g_1^{\; 2} \; \frac{1}{m_0^{\; 2}} \; y_d^{\; \text{ili4}} \; \left( s_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} + \widetilde{\mu} \; c_{\gamma} \; \overline{y_d}^{\; \text{i2i3}} \right) \; \mathsf{LF_{1,1,1,0}} \left[ m_1 \, , \; m_{\tilde{d}}^{\; \text{i3}} \, , \; m_{\tilde{q}}^{\; \text{i2i3}} \right] \; + \\ \frac{1}{54} \; m_1 \; s_{\gamma} \; g_1^{\; 2} \; \frac{1}{m_0^{\; 2}} \; y_d^{\; \text{i1i4}} \; \left( s_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} + \widetilde{\mu} \; c_{\gamma} \; \overline{y_d}^{\; \text{i2i3}} \right) \; \mathsf{LF_{1,1,1,0}} \left[ m_1 \, , \; m_{\tilde{d}}^{\; \text{i3i}} \, , \; m_{\tilde{q}}^{\; \text{i2i3}} \right] \; + \\ \frac{1}{54} \; m_1 \; m_1 \; m_2 \; 
                                                                                                                                                            \frac{1}{216} \; m_1 \; c_{\gamma} \; g_1^2 \; y_d^{\; \text{ili4}} \; \left( - \, c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} + s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; \mathsf{LF}_{2,2,1,-1} \big[ \, m_1 \, , \; m_{\tilde{d}}^{\; \text{i3}} \, , \; m_{\tilde{q}}^{\; \text{i2}} \big] \; - \; c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} + s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} + s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \big] \; \mathsf{LF}_{2,2,1,-1} \big[ \, m_1 \, , \; m_{\tilde{d}}^{\; \text{i3}} \, , \; m_{\tilde{q}}^{\; \text{i2i3}} \, \big] \; - \; c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} + s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} + s_{\gamma} \; \overline{y_d}^{\; \text{i2i3}} + 
                                                                                                                                                            \frac{1}{18} g_1^2 \frac{1}{m_0^2} s_{\gamma}^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{1,1,1,-1}[m_1, m_{\bar{d}}^{-i3}, \tilde{\mu}] +
                                                                                                                                                                \frac{1}{18} m_1 s_\gamma \tilde{\mu} c_\gamma g_1^2 \frac{1}{m_0^2} \overline{y_d}^{i2i3} y_d^{i1i4} LF_{1,1,1,0}[m_1, m_{\bar{d}}^{i3}, \tilde{\mu}] +
                                                                                                                                                                \frac{1}{54} \,\, \mathsf{m_1} \,\, \mathsf{s_{\gamma}} \,\, \mathsf{g_1}^2 \,\, \frac{1}{\mathsf{m_0}^2} \,\, \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \,\, \left(\mathsf{s_{\gamma}} \,\, \mathsf{a_d}^{\mathsf{i1i4}} + \widetilde{\mu} \,\, \mathsf{c_{\gamma}} \,\, \mathsf{y_d}^{\mathsf{i1i4}}\right) \,\, \mathsf{LF_{1,1,1,0}} \left[\mathsf{m_1} \,, \,\, \mathsf{m_{\tilde{d}}}^{\mathsf{i4}} \,, \,\, \mathsf{m_{\tilde{q}}}^{\mathsf{i1}}\right] \,\, + \,\, \mathsf{m_{\tilde{d}}}^{\mathsf{i1}} \,\, \mathsf
                                                                                                                                                                \frac{1}{216}\;\mathsf{m_1}\;\mathsf{c_{\gamma}}\;\mathsf{g_1}^2\;\overline{\mathsf{y_d}}^{\mathsf{i2i3}}\;\left(-\,\mathsf{c_{\gamma}}\;\mathsf{a_d}^{\mathsf{i1i4}} + \,\mathsf{s_{\gamma}}\;\widetilde{\mu}\;\mathsf{y_d}^{\mathsf{i1i4}}\right)\;\mathsf{LF_{2,2,1,-1}}\!\left[\,\mathsf{m_1}\,,\,\,\mathsf{m_{\tilde{d}}}^{\mathsf{i4}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{i1}}\,\right]\;-
                                                                                                                                                                \frac{1}{18} g_1^2 \frac{1}{m_0^2} s_{\gamma}^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{1,1,1,-1}[m_1, m_{\tilde{d}}^{i4}, \tilde{\mu}] +
                                                                                                                                                                    \frac{1}{18} \, m_1 \, s_{\gamma} \, \widetilde{\mu} \, c_{\gamma} \, g_1^2 \, \frac{1}{m_0^2} \, \overline{y_d}^{\dot{1}2\dot{1}3} \, y_d^{\dot{1}1\dot{1}4} \, \mathsf{LF}_{1,1,1,0} \big[ m_1, \, m_{\tilde{d}}^{\dot{1}4}, \, \widetilde{\mu} \big] +
                                                                                                                                                            \frac{1}{216}\;\mathsf{m_1}\;\mathsf{c_{_{Y}}}\;\mathsf{g_{_{1}}}^2\;\overline{\mathsf{y_{_{d}}}}^{\mathsf{i2i3}}\;\left(-\,\mathsf{c_{_{Y}}}\;\mathsf{a_{_{d}}}^{\mathsf{i1i4}}\,+\,\mathsf{s_{_{Y}}}\;\widetilde{\boldsymbol{\mu}}\;\mathsf{y_{_{d}}}^{\mathsf{i1i4}}\right)\;\mathsf{LF_{2,2,1,^{-1}}}\!\left[\,\mathsf{m_{_{1}}}\;,\,\mathsf{m_{_{\tilde{q}}}}^{\mathsf{-i1}}\;,\,\mathsf{m_{_{\tilde{d}}}}^{\mathsf{-i4}}\,\right]\,-\,\mathsf{m_{_{\tilde{q}}}}^{\mathsf{-i2i3}}\;\left(-\,\mathsf{c_{_{Y}}}\;\mathsf{a_{_{d}}}^{\mathsf{-i1i4}}\,+\,\mathsf{s_{_{Y}}}\;\widetilde{\boldsymbol{\mu}}\;\mathsf{y_{_{d}}}^{\mathsf{-i1i4}}\right)\;\mathsf{LF_{2,2,1,^{-1}}}\!\left[\,\mathsf{m_{_{1}}}\;,\,\mathsf{m_{_{\tilde{q}}}}^{\mathsf{-i1}}\;,\,\mathsf{m_{_{\tilde{d}}}}^{\mathsf{-i4}}\,\right]\,-\,\mathsf{m_{_{1}}}^{\mathsf{-i2i3}}\;\left(-\,\mathsf{c_{_{Y}}}\;\mathsf{a_{_{d}}}^{\mathsf{-i1i4}}\,+\,\mathsf{s_{_{Y}}}\;\widetilde{\boldsymbol{\mu}}\;\mathsf{y_{_{d}}}^{\mathsf{-i1i4}}\right)\,\mathsf{LF_{2,2,1,^{-1}}}\!\left[\,\mathsf{m_{_{1}}}\;,\,\mathsf{m_{_{\tilde{q}}}}^{\mathsf{-i1}}\;,\,\mathsf{m_{_{\tilde{q}}}}^{\mathsf{-i1i4}}\,+\,\mathsf{s_{_{Y}}}\;\widetilde{\boldsymbol{\mu}}\;\mathsf{y_{_{d}}}^{\mathsf{-i1i4}}\right]
                                                                                                                                                                                                                                                                                                                     \frac{1}{{{{{\bf{m}}_0}}^2}} {{\bf{S}_{\chi}}^2} \overline{{{\bf{y}_d}}^{i2i3}} {{\bf{y}_d}^{i1i4}} {{\bf{LF}_{1,1,1,-1}}}{\left[ {{{\bf{m}}_1},\,{{\bf{m}}_{	ilde{{\bf{q}}}}}^{i1}},\,\widetilde{\mu}} \right]} +
                                                                                                                                                                \frac{1}{36} m_1 s_\gamma \tilde{\mu} c_\gamma g_1^2 \frac{1}{m_o^2} \overline{y_d}^{i2i3} y_d^{i1i4} LF_{1,1,1,0}[m_1, m_{\tilde{q}}^{i1}, \tilde{\mu}] +
                                                                                                                                                            \frac{1}{216}\;\mathsf{m_1}\;\mathsf{c_{\gamma}}\;\mathsf{g_1}^2\;\mathsf{y_d}^{\text{ili4}}\;\left(-\,\mathsf{c_{\gamma}}\;\overline{\mathsf{a_d}}^{\text{i2i3}} + \,\mathsf{s_{\gamma}}\;\widetilde{\mu}\;\overline{\mathsf{y_d}}^{\text{i2i3}}\right)\;\mathsf{LF_{2,2,1,-1}}\!\left[\,\mathsf{m_1}\,,\,\mathsf{m_{\tilde{q}}}^{\text{i2}}\,,\,\mathsf{m_{\tilde{d}}}^{\text{i3}}\,\right]\;-
                                                                                                                                                            \frac{1}{36} g_1^2 \frac{1}{m_0^2} s_{\gamma}^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{1,1,1,-1}[m_1, m_{\tilde{q}}^{i2}, \tilde{\mu}] +
                                                                                                                                                            \frac{1}{36}~\text{m}_1~\text{s}_{\curlyvee}~\widetilde{\mu}~\text{c}_{\curlyvee}~\text{g}_{\text{l}}^2~\frac{1}{\text{m}_{\text{s}}^2}~\overline{\text{y}_{\text{d}}}^{\text{i2i3}}~\text{y}_{\text{d}}^{\text{i1i4}}~\text{LF}_{\text{l,1,1,0}}\big[\,\text{m}_{\text{l}}\,,~\text{m}_{\tilde{\text{q}}}^{\text{i2}}\,,~\widetilde{\mu}\,\big]~-
                                                                                                                                                                    \frac{1}{36} \, g_1^2 \, c_{\gamma}^2 \, \overline{y_d}^{i2i3} \, y_d^{i1i4} \, LF_{2,2,1,-2} [m_1, \, \tilde{\mu}, \, m_{\tilde{d}}^{i3}] -
                                                                                                                                                            \frac{1}{36} m_1 s_\gamma \tilde{\mu} c_\gamma g_1^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{2,2,1,-1}[m_1, \tilde{\mu}, m_{\tilde{d}}^{i3}] -
                                                                                                                                                            \frac{1}{36} g_1^2 c_{\gamma}^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{2,2,1,-2}[m_1, \tilde{\mu}, m_{\tilde{d}}^{i4}] -
                                                                                                                                                            \frac{1}{72} g_1^2 c_{\gamma}^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{2,2,1,-2}[m_1, \tilde{\mu}, m_{\tilde{q}}^{-i1}] -
                                                                                                                                                            \frac{1}{72} \, \, \mathsf{m_1} \, \, \mathsf{s_Y} \, \widetilde{\mu} \, \, \mathsf{c_Y} \, \, \mathsf{g_1}^2 \, \, \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \, \, \mathsf{y_d}^{\mathsf{i1i4}} \, \, \mathsf{LF_{2,2,1,-1}} \big[ \, \mathsf{m_1} \, , \, \, \widetilde{\mu} \, , \, \, \mathsf{m_{\tilde{q}}}^{\mathsf{i1}} \big] \, - \\
                                                                                                                                                            \frac{1}{72} g_1^2 c_{\gamma}^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{2,2,1,-2}[m_1, \tilde{\mu}, m_{\tilde{q}}^{i2}] -
                                                                                                                                                            \frac{1}{72} m_1 s_\gamma \tilde{\mu} c_\gamma g_1^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{2,2,1,-1}[m_1, \tilde{\mu}, m_{\tilde{q}}^{i2}] -
                                                                                                                                                        \frac{1}{4} \; g_2^2 \; \frac{1}{m_{_{\mathbb{D}}}^2} \; s_{_{Y}}^{\; \; 2} \; \overline{y_d}^{i2i3} \; y_d^{\; i1i4} \; \mathsf{LF}_{1,1,1,-1} \big[ \, \mathsf{m}_2 \, , \; \mathsf{m}_{_{\tilde{q}}}^{\; \; i1} \, , \; \widetilde{\mu} \, \big] \; + \\
                                                                                                                                                            \frac{1}{4}~\text{m}_2~\text{S}_{\gamma}~\widetilde{\mu}~\text{c}_{\gamma}~\text{g}_2^{2}~\frac{1}{\text{m}_\text{o}^{2}}~\overline{\text{y}_\text{d}}^\text{i2i3}~\text{y}_\text{d}^\text{i1i4}~\text{LF}_\text{1,1,1,0}\left[\text{m}_2\,,~\text{m}_{\tilde{q}}^\text{i1},~\widetilde{\mu}\right]~-
                                                                                                                                                    \frac{1}{4}~g_2^2~\frac{1}{m_0^2}~s_\gamma^2~\overline{y_d}^{i2i3}~y_d^{i1i4}~LF_{1,1,1,-1}\big[m_2\,,~m_{\tilde{q}}^{i2}\,,~\widetilde{\mu}\,\big] +
                                                                                                                                                            \frac{1}{4}\;\mathsf{m}_2\;\mathsf{s}_{\gamma}\;\tilde{\mu}\;\mathsf{c}_{\gamma}\;\mathsf{g}_2^{\,2}\;\frac{1}{\mathsf{m}_{\scriptscriptstyle 0}^{\,2}}\;\overline{\mathsf{y}_{\scriptscriptstyle d}}^{i2i3}\;\mathsf{y}_{\scriptscriptstyle d}^{\,i1i4}\;\mathsf{LF}_{1,1,1,\varrho}\left[\mathsf{m}_2\,,\,\mathsf{m}_{\tilde{q}}^{\,i2}\,,\,\tilde{\mu}\right]\;-
                                                                                                                                                        \tfrac{1}{8}\;g_2^2\;c_{\gamma}^{\;2}\,\overline{y_d}^{i2i3}\;y_d^{\,i1i4}\;\mathsf{LF}_{2,2,1,-2}\big[\,\mathsf{m}_2\,,\,\widetilde{\mu}\,,\,\mathsf{m}_{\bar{\mathsf{q}}}^{\,\,i1}\big]\;-
                                                                                                                                                                                           \mathbf{m_2} \; \mathbf{s_{\gamma}} \; \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\gamma}} \; \mathbf{g_2}^2 \; \overline{\mathbf{y_d}}^{\mathsf{i2i3}} \; \mathbf{y_d}^{\mathsf{i1i4}} \; \mathsf{LF_{2,2,1,-1}} \big[ \, \mathbf{m_2} \, , \; \widetilde{\boldsymbol{\mu}} \, , \; \mathbf{m_{\tilde{q}}} \,
                                                                                                                                                                                              {\rm g_2}^2 \; {\rm c_{_Y}}^2 \; \overline{{\rm y_d}}^{\rm i2i3} \; {\rm y_d}^{\rm i1i4} \; {\rm LF_{2,2,1,-2}} \big[ \, {\rm m_2} \, , \, \widetilde{\mu} \, , \, {\rm m_{\tilde{q}}}^{\rm i2} \, \big]
                                                                                                                                                                                           \mathbf{m_2} \; \mathbf{s_{\gamma}} \; \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\gamma}} \; \mathbf{g_2}^2 \; \overline{\mathbf{y_d}}^{\text{i2i3}} \; \mathbf{y_d}^{\text{i1i4}} \; \mathbf{LF_{2,2,1,-1}} \big[ \mathbf{m_2} \text{, } \widetilde{\boldsymbol{\mu}} \text{, } \mathbf{m_{\tilde{q}}}^{\text{i2}} \big] \; - \; \mathbf{m_{\tilde{q}}}^{\text{i2}} \; \mathbf{m_{\tilde{q}}}^{\text{i2}} \, \mathbf{m_{\tilde{q}}}^{\text{i2}}} \, \mathbf{m_{\tilde{q}}}^{\text{i2}} \, \mathbf{m_
                                                                                                                                                            \text{m}_{3}\;c_{\gamma}\;g_{3}^{\;2}\;y_{d}^{\;\textrm{ili4}}\;\left(c_{\gamma}\;\overline{a_{d}}^{\;\textrm{i2i3}}-s_{\gamma}\;\widetilde{\mu}\;\overline{y_{d}}^{\;\textrm{i2i3}}\right)\;\textrm{LF}_{2,2,1,-1}\big[m_{3}\,,\;m_{\tilde{d}}^{\;\;\textrm{opt}}(m_{3},m_{\tilde{d}}^{\;\;\textrm{opt}})]
                                                                                                                                                                                           \text{m}_{3} \; \text{s}_{\text{Y}} \; \text{g}_{\text{3}}^{\; 2} \; \frac{1}{\text{m}_{\text{o}}^{\; 2}} \; \overline{\text{y}_{\text{d}}}^{\text{12i3}} \; \left( \text{s}_{\text{Y}} \; \text{a}_{\text{d}}^{\text{11i4}} + \widetilde{\mu} \; \text{c}_{\text{Y}} \; \text{y}_{\text{d}}^{\text{11i4}} \right) \; \text{LF}_{\text{1,1,1,0}} \left[ \text{m}_{\text{3}} \; , \; \text{m}_{\tilde{\text{d}}}^{\text{i4}} \; , \; \text{m}_{\tilde{\text{q}}}^{\text{i4}} \; , \; \text{m}_{\tilde{\text{d}}}^{\text{i4}} \; , \; \text{m}_{\tilde{\text{d}}}^{\text{i
                                                                                                                                                            \frac{1}{9} \; m_{3} \; c_{\gamma} \; g_{3}^{\; 2} \; \overline{y_{d}}^{i\, 2\, i\, 3} \; \left( c_{\gamma} \; a_{d}^{\; i\, 1\, i\, 4} - s_{\gamma} \; \widetilde{\mu} \; y_{d}^{\; i\, 1\, i\, 4} \right) \; LF_{2\,,\, 2\,,\, 1\,,\, -1} \left[ \, m_{3} \,, \; m_{\bar{d}}^{\; i\, 4} \,, \; m_{\bar{q}}^{\; i\, 1} \, \right] \; - \, c_{\gamma} \; m_{3}^{\; i\, 1\, i\, 4} \; .
                                                                                                                                                            \frac{2}{9}\;g_{3}{}^{4}\;\mathsf{LF}_{2,1,1,-1}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{\mathsf{d}}}{}^{\mathsf{i}\,4}\,,\,\mathsf{m}_{\bar{\mathsf{q}}}{}^{\mathsf{i}\,2}\right]\;\delta_{\mathsf{i}\,\mathsf{1}\,\mathsf{i}\,2}\;\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,-\,\frac{4}{9}\;g_{3}{}^{4}\;\mathsf{m}_{3}{}^{2}\;\mathsf{LF}_{2,1,1,0}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{\mathsf{d}}}{}^{\mathsf{i}\,4}\,,\,\mathsf{m}_{\bar{\mathsf{q}}}{}^{\mathsf{i}\,2}\right]\;\delta_{\mathsf{i}\,\mathsf{1}\,\mathsf{i}\,2}\;\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{4}\;\mathsf{m}_{3}{}^{2}\;\mathsf{LF}_{2,1,1,0}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{\mathsf{d}}}{}^{\mathsf{i}\,4}\,,\,\mathsf{m}_{\bar{\mathsf{q}}}{}^{\mathsf{i}\,2}\right]\;\delta_{\mathsf{i}\,\mathsf{1}\,\mathsf{i}\,2}\;\delta_{\mathsf{i}\,3\,\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{4}\;\mathsf{m}_{3}{}^{2}\;\mathsf{LF}_{2,1,1,0}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{\mathsf{d}}}{}^{\mathsf{i}\,4}\,,\,\mathsf{m}_{\bar{\mathsf{q}}}{}^{\mathsf{i}\,2}\right]\;\delta_{\mathsf{i}\,\mathsf{1}\,\mathsf{i}\,2}\;\delta_{\mathsf{i}\,\mathsf{3}\,\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{4}\;\mathsf{m}_{3}{}^{2}\;\mathsf{LF}_{2,1,1,0}\!\left[\mathsf{m}_{3}\,,\,\mathsf{m}_{\bar{\mathsf{d}}}{}^{\mathsf{i}\,4}\,,\,\mathsf{m}_{\bar{\mathsf{q}}}{}^{\mathsf{i}\,2}\right]\;\delta_{\mathsf{i}\,\mathsf{1}\,\mathsf{i}\,2}\;\delta_{\mathsf{i}\,\mathsf{3}\,\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{9}\;g_{3}{}^{\mathsf{i}\,4}\,+\,\frac{1}{
                                                                                                                                                            \frac{1}{9} \; m_{3} \; c_{\gamma} \; g_{3}^{\; 2} \; \overline{y_{d}}^{i\, 2\, i\, 3} \; \left( c_{\gamma} \; a_{d}^{\; i\, 1\, i\, 4} - s_{\gamma} \; \widetilde{\mu} \; y_{d}^{\; i\, 1\, i\, 4} \right) \; LF_{2\,,\, 2\,,\, 1\,,\, -1} \left[ \, m_{3} \,, \; m_{\bar{q}}^{\; i\, 1} \,, \; m_{\bar{d}}^{\; i\, 4} \, \right] \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} \; + \; c_{\gamma} \; \mu_{3}^{\; i\, 1\, i\, 4} 
                                                                                                                                                        \frac{1}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{ili4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{2,2,1,-1} \left[ m_3 \; , \; m_{\bar{q}}^{\; \text{i2}} \; , \; m_{\bar{d}}^{\; \text{i3}} \right] \; + \\ \frac{1}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{ili4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{2,2,1,-1} \left[ m_3 \; , \; m_{\bar{q}}^{\; \text{i2i}} \; , \; m_{\bar{d}}^{\; \text{i3i}} \right] \; + \\ \frac{1}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{ili4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{2,2,1,-1} \left[ m_3 \; , \; m_{\bar{q}}^{\; \text{i2i}} \; , \; m_{\bar{d}}^{\; \text{i3i}} \right] \; + \\ \frac{1}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i1i4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{2,2,1,-1} \left[ m_3 \; , \; m_{\bar{q}}^{\; \text{i2i}} \; , \; m_{\bar{d}}^{\; \text{i3i}} \right] \; + \\ \frac{1}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i1i4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{2,2,1,-1} \left[ m_3 \; , \; m_{\bar{q}}^{\; \text{i2i3}} \; , \; m_{\bar{q}}^{\; \text{i2i3}} \; \right] \; + \\ \frac{1}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i2i3}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \overline{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{2,2,1,1} \left[ m_3 \; , \; m_{\bar{q}}^{\; \text{i2i3}} \; , \; m_{\bar{q}}^{\; \text{i2i3}} \right] \; + \\ \frac{1}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i2i3}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \overline{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{2,2,1,1} \left[ m_3 \; , \; m_{\bar{q}}^{\; \text{i2i3}} \; , \; m_{\bar{q}}^{\; \text{i2i3}} \right] \; + \\ \frac{1}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i2i3}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} \right) \; LF_{2,2,2,1} \left[ m_3 \; , \; m_{\bar{q}}^{\; \text{i2i3}} \; , \; m_{\bar{q}}^{\; \text{i2i3}} \right] \; + \\ \frac{1}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i2i3}} \; , \; m_{\bar{q}}^{\; \text{i2i
                                                                                                                                                            \frac{1}{108} \; m_1 \; c_{\gamma} \; g_1^2 \; y_d^{\; \text{ili4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; \text{LF}_{2,1,1,0} \left[ \, m_{\bar{d}}^{\; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \text{i2}} \, \right] \; + \; \left( \, m_{\bar{d}}^{\; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \text{i2}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i2}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i2}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i3}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i3}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i3}} \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i3}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \; \text{i3}} \, , \; m_1 \, , \; m_1 \, , \; m_{\bar{q}}^{\; \; \; \text{i3}} \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \; \text{i3}} \, , \; m_1 \, , \; m_2 \, \right) \; + \; \left( \, m_{\bar{d}}^{\; \; \; \; \text{i3}} \, , \; m_1 \, , \; m_2 \, 
                                                                                                                                                                \frac{1}{108}\;\mathsf{m_1}\;\mathsf{c_{\gamma}}\;\mathsf{g_1}^2\;\mathsf{y_d}^{\text{ili4}}\;\left(-\,\mathsf{c_{\gamma}}\;\overline{\mathsf{a_d}}^{\text{i2i3}}\,+\,\mathsf{s_{\gamma}}\;\widetilde{\mu}\;\overline{\mathsf{y_d}}^{\text{i2i3}}\right)\;\mathsf{LF_{3,1,1,-1}}\!\left[\mathsf{m_{\tilde{d}}}^{\text{i3}}\,,\;\mathsf{m_1},\;\mathsf{m_{\tilde{q}}}^{\text{i2}}\right]\,+\,\mathsf{m_{\tilde{q}}}^{\text{i2}}
                                                                                                                                                            \frac{2}{9} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{ili4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{3,1,1,-1} \left[ m_{\bar{d}}^{\; \text{i3}}, \; m_3, \; m_{\bar{q}}^{\; \text{i2}} \right] \; + \\
                                                                                                                                                                                                                             \mathsf{m_1} \; \mathsf{c_{Y}} \; \mathsf{g_{1}}^2 \; \overline{\mathsf{y_d}}^{\mathsf{i2i3}} \; \left( \mathsf{c_{Y}} \; \mathsf{a_d}^{\mathsf{i1i4}} - \mathsf{s_{Y}} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\mathsf{i1i4}} \right) \; \mathsf{LF_{2,1,1,0}} \left[ \mathsf{m_{\tilde{d}}}^{\mathsf{i4}}, \; \mathsf{m_{1}}, \; \mathsf{m_{\tilde{q}}}^{\mathsf{i1}} \right] \; + \; \mathsf{a_{1}}^{\mathsf{i1}} \; \mathsf{a_{2}}^{\mathsf{i1}} \; \mathsf{a_{3}}^{\mathsf{i1}} \; \mathsf{a_{3}}^{\mathsf{i1}} \; \mathsf{a_{3}}^{\mathsf{i1}} \right] \; + \; \mathsf{a_{3}}^{\mathsf{i1}} \;
                                                                                                                                                            \frac{1}{108}\;\mathsf{m_1}\;\mathsf{c_{\scriptscriptstyle \gamma}}\;\mathsf{g_{\scriptscriptstyle 1}}^2\;\overline{\mathsf{y_d}}^{\mathsf{i2i3}}\;\left(-\,\mathsf{c_{\scriptscriptstyle \gamma}}\;\mathsf{a_d}^{\,\mathsf{i1i4}}\,+\,\mathsf{s_{\scriptscriptstyle \gamma}}\;\widetilde{\boldsymbol{\mu}}\;\mathsf{y_d}^{\,\mathsf{i1i4}}\right)\;\mathsf{LF_{3,1,1,-1}}\!\left[\,\mathsf{m_{\scriptscriptstyle \tilde{d}}}^{\,\mathsf{i4}}\,,\;\mathsf{m_1},\;\mathsf{m_{\scriptscriptstyle \tilde{q}}}^{\,\mathsf{i1}}\,\right]\,+\,\mathsf{m_{\scriptscriptstyle \tilde{q}}}^{\,\mathsf{i1i4}}
                                                                                                                                                            \frac{1}{9} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,i1i4} + \, s_{\gamma} \, \widetilde{\mu} \, y_d^{\,i1i4} \right) \, \mathsf{LF}_{2,1,1,0} \left[ \, m_{\tilde{d}}^{\,\,i4} \, , \, m_3 \, , \, m_{\tilde{q}}^{\,\,i1} \, \right] \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i1i4} + \, s_{\gamma} \, \widetilde{\mu} \, y_d^{\,\,i1i4} \right) \, \mathsf{LF}_{2,1,1,0} \left[ \, m_{\tilde{d}}^{\,\,i4} \, , \, m_3 \, , \, m_{\tilde{q}}^{\,\,i1} \, \right] \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i1i4} + \, s_{\gamma} \, \widetilde{\mu} \, y_d^{\,\,i1i4} \right) \, \mathsf{LF}_{2,1,1,0} \left[ \, m_{\tilde{d}}^{\,\,i4} \, , \, m_3 \, , \, m_{\tilde{q}}^{\,\,i1} \, \right] \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i1i4} + \, s_{\gamma} \, \widetilde{\mu} \, y_d^{\,\,i1i4} \right) \, \mathsf{LF}_{2,1,1,0} \left[ \, m_{\tilde{d}}^{\,\,i4} \, , \, m_3 \, , \, m_{\tilde{q}}^{\,\,i1} \, \right] \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i1i4} + \, s_{\gamma} \, \widetilde{\mu} \, y_d^{\,\,i1i4} \right) \, \mathsf{LF}_{2,1,1,0} \left[ \, m_{\tilde{d}}^{\,\,i2i} \, , \, m_3 \, , \, m_{\tilde{q}}^{\,\,i1i} \, \right] \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i1i4} + \, s_{\gamma} \, \widetilde{\mu} \, y_d^{\,\,i1i4} \right) \, \mathsf{LF}_{2,1,1,0} \left[ \, m_{\tilde{d}}^{\,\,i2i} \, , \, m_3 \, , \, m_{\tilde{q}}^{\,\,i1i} \, \right] \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i1i4} + \, s_{\gamma} \, \widetilde{\mu} \, y_d^{\,\,i1i4} \right) \, \mathsf{LF}_{2,1,1,1,0} \left[ \, m_{\tilde{d}}^{\,\,i2i} \, , \, m_3 \, , \, m_{\tilde{q}}^{\,\,i2i} \, \right] \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i2i3} \, , \, m_3 \, , \, m_{\tilde{q}}^{\,\,i2i3} \, \right) \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i2i3} \, , \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3} \, \right) \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i2i3} \, , \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3} \, \right) \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i2i3} \, , \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3} \, \right) \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3} \, \left( - \, c_{\gamma} \, a_d^{\,\,i2i3} \, , \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3} \, \right) \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3} \, + \, \frac{1}{9} \, m_3 \, c_{\gamma} \, \overline{y_d}^{\,\,i2i3
                                                                                                                                                        \overset{2}{\overset{\circ}{a}} \; m_{3} \; c_{\gamma} \; g_{3}^{\; 2} \; \overline{y_{d}}^{i\, 2\, i\, 3} \; \left( \, c_{\gamma} \; a_{d}^{\; i\, 1\, i\, 4} \, - \, s_{\gamma} \; \widetilde{\mu} \; y_{d}^{\; i\, 1\, i\, 4} \right) \; LF_{3,1,1,-1} \big[ \, m_{\overset{\circ}{d}}^{\; i\, 4} \, , \; m_{3} \, , \; m_{\overset{\circ}{q}}^{\; -1} \, \big] \; m_{\overset{\circ}{d}}^{\; -1} \; , \; m_{\overset{\circ}{d
                                                                                                                                                                                           s_{_{Y}}\,\tilde{\mu}\,\frac{1}{m_{_{S}}{^{2}}}\,\left(\overline{y_{d}}^{\text{i2i3}}\,y_{d}^{\text{pi4}}\,y_{u}^{\text{i1r}}\,\left(c_{_{Y}}\,\overline{a_{u}}^{\text{pr}}+s_{_{Y}}\,\tilde{\mu}\,\overline{y_{u}}^{\text{pr}}\right)+\overline{y_{d}}^{\text{pi3}}\,y_{d}^{\text{i1i4}}\,\overline{y_{u}}^{\text{i2r}}\left(c_{_{Y}}\,a_{u}^{\text{pr}}+s_{_{Y}}\,\tilde{\mu}\,y_{u}^{\text{pr}}\right)\right)
                                                                                                                                                                                   \mathsf{LF_{1,1,1,0}}\!\left[\,\boldsymbol{m_{\tilde{q}}}^{\mathsf{p}}\,,\;\boldsymbol{m_{\tilde{u}}}^{\mathsf{r}}\,,\;\widetilde{\boldsymbol{\mu}}\,\right]\,+\,\frac{1}{12}\;\widetilde{\boldsymbol{\mu}}\;\boldsymbol{c_{\gamma}}\;\left(\,\overline{\boldsymbol{y_{d}}}^{\mathsf{i2i3}}\,\,\boldsymbol{y_{d}}^{\mathsf{pi4}}\,\,\boldsymbol{y_{u}}^{\mathsf{i1r}}\;\left(\,\boldsymbol{s_{\gamma}}\;\overline{\boldsymbol{a_{u}}}^{\mathsf{pr}}\,-\,\widetilde{\boldsymbol{\mu}}\;\boldsymbol{c_{\gamma}}\;\overline{\boldsymbol{y_{u}}}^{\mathsf{pr}}\boldsymbol{r}\,\right)\,+\,\frac{1}{12}\;\widetilde{\boldsymbol{\mu}}\;\boldsymbol{c_{\gamma}}\;\left(\,\overline{\boldsymbol{y_{d}}}^{\mathsf{i2i3}}\,\,\boldsymbol{y_{d}}^{\mathsf{pi4}}\,\,\boldsymbol{y_{u}}^{\mathsf{i1r}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}^{\mathsf{pr}}\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}\,\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{a_{u}}\,\boldsymbol{
                                                                                                                                                                                                                                                    \overline{y_d}^{pi3} y_d^{i1i4} \overline{y_u}^{i2r} \left( s_{\gamma} a_u^{pr} - \widetilde{\mu} c_{\gamma} y_u^{pr} \right) \right) LF_{2,1,1,0} \left[ m_{\tilde{q}}^{p}, m_{\tilde{u}}^{r}, \widetilde{\mu} \right] +
                                                                                                                                                                \frac{1}{12} \; \widetilde{\mu} \; \mathbf{c}_{\mathrm{Y}} \; \left( \overline{\mathbf{y}_{\mathrm{d}}}^{\mathrm{i2i3}} \; \mathbf{y}_{\mathrm{d}}^{\mathrm{pi4}} \; \mathbf{y}_{\mathrm{u}}^{\mathrm{i1r}} \; \left( - \, \mathbf{s}_{\mathrm{Y}} \; \overline{\mathbf{a}_{\mathrm{u}}}^{\mathrm{pr}} + \widetilde{\mu} \; \mathbf{c}_{\mathrm{Y}} \; \overline{\mathbf{y}_{\mathrm{u}}}^{\mathrm{pr}} \right) \; + \; \overline{\mathbf{y}_{\mathrm{d}}}^{\mathrm{pi3}} \; \mathbf{y}_{\mathrm{d}}^{\mathrm{i1i4}} \; \overline{\mathbf{y}_{\mathrm{u}}}^{\mathrm{i2r}} \; \left( - \, \mathbf{s}_{\mathrm{Y}} \; \mathbf{a}_{\mathrm{u}}^{\mathrm{pr}} + \widetilde{\mu} \; \mathbf{c}_{\mathrm{Y}} \; \mathbf{y}_{\mathrm{u}}^{\mathrm{pr}} \right) \right)
                                                                                                                                                                                   \mathsf{LF_{3,1,1,-1}}\big[\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\mathsf{p}}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,\mathsf{r}}\,,\,\,\widetilde{\mu}\,\big]\,+\,\frac{1}{24}\,\,\widetilde{\mu}\,\,c_{\gamma}\,\,\big(\,\overline{y_{\mathsf{d}}}^{\,\mathsf{i}\,\mathsf{2}\,\mathsf{i}\,\mathsf{3}}\,\,y_{\mathsf{d}}^{\,\,\mathsf{p}\,\mathsf{i}\,\mathsf{4}}\,\,y_{\mathsf{u}}^{\,\,\mathsf{i}\,\mathsf{1}\,\mathsf{r}}\,\,\big(\,-\,s_{\gamma}\,\,\overline{a_{\mathsf{u}}}^{\,\,\mathsf{p}\,\mathsf{r}}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\,\overline{y_{\mathsf{u}}}^{\,\,\mathsf{p}\,\mathsf{r}}\,\big)\,\,+\,\frac{1}{24}\,\,\widetilde{\mu}\,\,c_{\gamma}\,\,\overline{y_{\mathsf{u}}}^{\,\,\mathsf{p}\,\mathsf{r}}\,\,
                                                                                                                                                                                                                                                    \overline{y_d}^{\text{pi3}} \ y_d^{\text{iii4}} \ \overline{y_u}^{\text{i2r}} \ \left( - \, s_{\scriptscriptstyle Y} \, a_u^{\, \text{pr}} + \widetilde{\mu} \ c_{\scriptscriptstyle Y} \, y_u^{\, \text{pr}} \right) \right) \ \mathsf{LF}_{2,2,1,-1} \big[ \, \mathsf{m}_{\tilde{q}}^{\, \, p} \, , \ \widetilde{m}_{\tilde{u}}^{\, \, \, r} \big] \, + \, \\
                                                                                                                                                            \frac{1}{108}\; m_1\; c_\gamma\; g_1^{\;2}\; \overline{y_d}^{i2i3}\; \left(c_\gamma\; a_d^{\;i1i4} - s_\gamma\; \widetilde{\mu}\; y_d^{\;i1i4}\right)\; \mathsf{LF}_{2,1,1,0}\left[m_{\tilde{q}}^{\;i1}\; ,\; m_1\; ,\; m_{\tilde{d}}^{\;i4}\right]\; + \left(m_{\tilde{q}}^{\;i1}\; ,\; m_1\; ,\; m_{\tilde{d}}^{\;i4}\right)\; + \left(m_{\tilde{q}}^{\;i1}\; ,\; m_1\; ,
                                                                                                                                                            \frac{1}{108}\; m_1\; c_\gamma\; g_1^{\;2}\; \overline{y_d}^{i2i3}\; \left(-\, c_\gamma\; a_d^{\;i1i4}\, +\, s_\gamma\; \widetilde{\mu}\; y_d^{\;i1i4}\right)\; \mathsf{LF}_{3,1,1,-1}\!\left[\, m_{\tilde{q}}^{\;\;i1}\, ,\; m_1^{\;\; ,}\; m_{\tilde{d}}^{\;\;i4}\,\right]\; +\, c_\gamma\; \widetilde{\mu}\; y_d^{\;\;i1i4}
                                                                                                                                                                \frac{1}{q} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{12\dot{1}3} \, \left( - \, c_{\gamma} \, a_d^{\,\dot{1}1\dot{1}4} + \, s_{\gamma} \, \widetilde{\mu} \, y_d^{\,\dot{1}1\dot{1}4} \right) \, \mathsf{LF}_{2,1,1,0} \left[ \, \mathsf{m}_{\tilde{q}}^{\,\,\dot{1}1} \, , \, \mathsf{m}_3 \, , \, \mathsf{m}_{\tilde{d}}^{\,\,\dot{1}4} \, \right] \, + \, c_{\gamma} \, \widetilde{\mu} \, \mathsf{m}_{\tilde{q}}^{\,\,\dot{1}1\dot{1}4} + \, c_{\gamma} \, \widetilde{\mu} \, \mathsf{m}_{\tilde{q}}^{\,
                                                                                                                                                                \frac{2}{9} \, m_3 \, c_{\gamma} \, g_3^2 \, \overline{y_d}^{i2i3} \, \left( c_{\gamma} \, a_d^{\,i1i4} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\,i1i4} \right) \, LF_{3,1,1,-1} \left[ m_{\tilde{q}}^{\,i1}, \, m_3, \, m_{\tilde{d}}^{\,i4} \right] + c_{\gamma}^{\,i1} \, m_{\gamma}^{\,i2} \, m
                                                                                                                                                                                                                                 \mathsf{m_1} \; \mathsf{c_{Y}} \; \mathsf{g_1}^2 \; \mathsf{y_d}^{\text{ili4}} \; \left(\mathsf{c_{Y}} \; \overline{\mathsf{a_d}}^{\text{i2i3}} - \mathsf{s_{Y}} \; \widetilde{\mu} \; \overline{\mathsf{y_d}}^{\text{i2i3}}\right) \; \mathsf{LF_{2,1,1,0}} \left[ \, \mathsf{m_{\tilde{q}}}^{\text{i2}}, \; \mathsf{m_1}, \; \mathsf{m_{\tilde{d}}}^{\text{i3}} \right] \; + \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \; \mathsf{m_{\tilde{q}}}^{\text{i3}} + \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \right] \; + \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \; \mathsf{m_{\tilde{q}}}^{\text{i3}} + \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \; \mathsf{m_{\tilde{q}}}^{\text{i3}} + \; \mathsf{m_{\tilde{q}}}^{\text{i3}} + \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \right] \; + \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \; \mathsf{m_{\tilde{q}}}^{\text{i3}} + \; \mathsf{m_{\tilde{q}}
                                                                                                                                                            \frac{1}{108}\; m_1\; c_\gamma\; g_1^{\;2}\; y_d^{\;11i4}\; \left(-\,c_\gamma\; \overline{a_d}^{\;i2i3}\, +\, s_\gamma\; \widetilde{\mu}\; \overline{y_d}^{\;i2i3}\right)\; \mathsf{LF}_{3,1,1,-1}\!\left[\,m_{\tilde{q}}^{\;\;i2}\, ,\; m_1,\; m_{\tilde{d}}^{\;\;i3}\,\right]\; +\, c_\gamma\; \widetilde{\mu}^{\;\;i2} +\, c_\gamma\; \widetilde{\mu}^{\;\;i
                                                                                                                                                            \frac{2}{9} \; m_{3} \; c_{\gamma} \; g_{3}^{\; 2} \; y_{d}^{\; \text{ili4}} \; \left( - \, c_{\gamma} \; \overline{a_{d}}^{\; \text{i2i3}} \, + \, s_{\gamma} \; \widetilde{\mu} \; \overline{y_{d}}^{\; \text{i2i3}} \right) \; \mathsf{LF}_{2,1,1,0} \left[ \, \mathsf{m_{\tilde{q}}}^{\; \text{i2}} \, , \; \mathsf{m_{3}} \, , \; \mathsf{m_{\tilde{d}}}^{\; \text{i3}} \, \right] \; + \; \mathsf{m_{3}} \; 
                                                                                                                                                            \frac{2}{q} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{ili4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{3,1,1,-1} \left[ m_{\tilde{q}}^{\; \text{i2}}, \; m_3, \; m_{\tilde{d}}^{\; \text{i3}} \right] \; + \\ \frac{2}{q} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{ili4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{3,1,1,-1} \left[ m_{\tilde{q}}^{\; \text{i2}}, \; m_3, \; m_{\tilde{d}}^{\; \text{i3i3}} \right] \; + \\ \frac{2}{q} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i1i4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{3,1,1,-1} \left[ m_{\tilde{q}} \; \overline{a_d}^{\; \text{i2i3}}, \; m_3, \; m_{\tilde{d}}^{\; \text{i3i3}} \right] \; + \\ \frac{2}{q} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i2i4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_d}^{\; \text{i2i3}} \right) \; LF_{3,1,1,-1} \left[ m_{\tilde{q}} \; \overline{a_d}^{\; \text{i2i3}}, \; m_3, \; m_{\tilde{d}}^{\; \text{i3i3}} \right] \; + \\ \frac{2}{q} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i2i4}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}}, \; \overline{a_d}^{\; \text{i2i3}}, \; \overline{a_d}^{\; \text{i2i3}} \right) \; LF_{3,1,1,1} \; + \\ \frac{2}{q} \; m_3 \; c_{\gamma} \; g_3^2 \; y_d^{\; \text{i2i3}} \; \left( c_{\gamma} \; \overline{a_d}^{\; \text{i2i3}}, \; \overline{a_d}^{\; \text{i2i3}}, \; \overline{a_d}^{\; \text{i2i3}} \right) \; LF_{3,1,1} \; + \\ \frac{2}{q} \; m_3 \; c_{\gamma} \; g_3^2 \; \overline{a_d}^{\; \text{i2i3}} \; \overline{a_d}^
                                                                                                                                                                \frac{1}{12} \ \widetilde{\mu} \ c_{\gamma} \ \left( \overline{y_d}^{\text{i2i3}} \ y_d^{\text{pi4}} \ y_u^{\text{i1r}} \ \left( s_{\gamma} \ \overline{a_u}^{\text{pr}} - \widetilde{\mu} \ c_{\gamma} \ \overline{y_u}^{\text{pr}} \right) + \overline{y_d}^{\text{pi3}} \ y_d^{\text{i1i4}} \ \overline{y_u}^{\text{i2r}} \ \left( s_{\gamma} \ a_u^{\text{pr}} - \widetilde{\mu} \ c_{\gamma} \ y_u^{\text{pr}} \right) \right)
                                                                                                                                                                                   \mathsf{LF}_{2,1,1,0}\!\left[\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,\mathsf{r}}\,,\,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\mathsf{p}}\,,\,\,\widetilde{\mu}\,\right]\,+\,\frac{1}{12}\,\,\widetilde{\mu}\,\,\mathbf{c}_{\gamma}\,\left(\,\overline{y_{\mathsf{d}}}^{\,\,\mathsf{i}\,2\,\mathsf{i}\,3}\,\,y_{\mathsf{d}}^{\,\,\mathsf{p}\,\mathsf{i}\,4}\,\,y_{\mathsf{u}}^{\,\,\,\mathsf{i}\,\mathsf{l}\,\mathsf{r}}\,\left(\,-\,\mathsf{s}_{\gamma}\,\,\overline{\mathsf{a}_{\mathsf{u}}}^{\,\,\mathsf{p}\,\mathsf{r}}\,+\,\widetilde{\mu}\,\,\mathsf{c}_{\gamma}\,\,\overline{y_{\mathsf{u}}}^{\,\,\mathsf{p}\,\mathsf{r}}\,\right)\,+\,2\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,\mathsf{n}\,\,
                                                                                                                                                                                                                                                    \frac{1}{24} \; \widetilde{\mu} \; \mathbf{c}_{\mathrm{Y}} \; \left( \overline{\mathbf{y}_{\mathrm{d}}}^{\mathrm{i2i3}} \; \mathbf{y}_{\mathrm{d}}^{\mathrm{pi4}} \; \mathbf{y}_{\mathrm{u}}^{\mathrm{i1r}} \; \left( - \, \mathbf{s}_{\mathrm{Y}} \; \overline{\mathbf{a}_{\mathrm{u}}}^{\mathrm{pr}} + \widetilde{\mu} \; \mathbf{c}_{\mathrm{Y}} \; \overline{\mathbf{y}_{\mathrm{u}}}^{\mathrm{pr}} \right) \; + \; \overline{\mathbf{y}_{\mathrm{d}}}^{\mathrm{pi3}} \; \mathbf{y}_{\mathrm{d}}^{\mathrm{i1i4}} \; \overline{\mathbf{y}_{\mathrm{u}}}^{\mathrm{i2r}} \; \left( - \, \mathbf{s}_{\mathrm{Y}} \; \mathbf{a}_{\mathrm{u}}^{\mathrm{pr}} + \widetilde{\mu} \; \mathbf{c}_{\mathrm{Y}} \; \mathbf{y}_{\mathrm{u}}^{\mathrm{pr}} \right) \right)
                                                                                                                                                                                   \mathsf{LF_{2,2,1,-1}}\big[\mathsf{m_{\tilde{u}}}^\mathsf{r}\,,\,\tilde{\mu}\,,\,\mathsf{m_{\tilde{q}}}^\mathsf{p}\big] \,-\, \tfrac{1}{4}\,\,\overline{y_d}^\mathsf{ri3}\,\,\overline{y_d}^\mathsf{i2p}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{i1p}\,\,\mathsf{LF_{2,1,1,-1}}\big[\,\tilde{\mu}\,,\,\mathsf{m_{\tilde{q}}}^\mathsf{p}\,,\,\mathsf{m_{\tilde{q}}}^\mathsf{r}\,\big] \,-\, \frac{1}{4}\,\,\overline{y_d}^\mathsf{ri3}\,\,\overline{y_d}^\mathsf{i2p}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{i1p}\,\,\mathsf{LF_{2,1,1,-1}}\big[\,\tilde{\mu}\,,\,\mathsf{m_{\tilde{q}}}^\mathsf{p}\,,\,\mathsf{m_{\tilde{q}}}^\mathsf{p}\,\big] \,-\, \frac{1}{4}\,\,\overline{y_d}^\mathsf{ri3}\,\,\overline{y_d}^\mathsf{ri3}\,\,\overline{y_d}^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,\overline{y_d}^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,y_d^\mathsf{ri4}\,\,
                                                                                                                                                            \frac{1}{2}\;\widetilde{\mu}^2\;\overline{y_d}^{\text{pi3}}\;y_d^{\text{pi4}}\;\overline{y_u}^{\text{i2r}}\;y_u^{\text{i1r}}\;\mathsf{LF}_{2,1,1,9}\big[\widetilde{\mu}\,,\,\mathsf{m_{\tilde{q}}}^{\text{p}},\,\mathsf{m_{\tilde{u}}}^{\text{r}}\big]\;+
                                                                                                                                                            _{\bar{108}}^{\underline{1}}\;g_{1}^{2}\,\bar{y_{d}}^{i2i3}\;y_{d}^{\,i1i4}\;LF_{1,1,1,1,-1}\big[\,m_{1}^{},\,m_{\bar{d}}^{\,\,i3}^{},\,m_{\bar{q}}^{\,\,i1}
                                                                                                                                                            \frac{1}{54}~g_1^{~2}~\overline{y_d}^{i2i3}~y_d^{~i1i4}~\mathsf{LF_{1,1,1,1,-1}}\big[\mathsf{m_1,\,m_{\tilde{d}}}^{i4},\,\mathsf{m_{\tilde{d}}}^{i3},\,\widetilde{\mu}\big]~+
                                                                                                                                                            \frac{1}{108} g_1^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{1,1,1,1,-1}[m_1, m_{\bar{d}}^{-i4}, m_{\bar{q}}^{-i2}, \widetilde{\mu}] +
                                                                                                                                                        \frac{1}{216}~g_1^{~2}~\overline{y_d}^{i\,2\,i\,3}~y_d^{~i\,1\,i\,4}~\mathsf{LF}_{1,1,1,1,-1}\big[\,\mathsf{m}_1\,,\,\mathsf{m}_{\bar{q}}^{~i\,2}\,,\,\mathsf{m}_{\bar{q}}^{~i\,1}\,,\,\widetilde{\mu}\,\big] +
                                                                                                                                                            \frac{1}{8}~g_2^{~2}~\overline{y_d}^{i2i3}~y_d^{i1i4}~\mathsf{LF_{1,1,1,1,-1}}\big[\,\mathsf{m_2}\,,\,\mathsf{m_{\tilde{q}}}^{i2}\,,\,\mathsf{m_{\tilde{q}}}^{i1}\,,\,\widetilde{\mu}\,\big]~-
                                                                                                                                                            \frac{2}{9} g_3^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{1,1,1,1,-1}[m_3, m_{\tilde{d}}^{-i3}, m_{\tilde{q}}^{-i1}, \tilde{\mu}] +
                                                                                                                                                            \frac{2}{9}~g_3^{2}~\overline{y_d}^{i2i3}~y_d^{i1i4}~\mathsf{LF_{1,1,1,1,-1}}\big[\,\mathsf{m_3}\,,~\mathsf{m_d^{-i4}}\,,~\mathsf{m_{\tilde{d}}^{-i3}}\,,~\widetilde{\mu}\,\big]~-
                                                                                                                                                            \frac{2}{9} g_3^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{1,1,1,1,-1}[m_3,m_{\tilde{d}}^{i4},m_{\tilde{q}}^{i2},\tilde{\mu}] +
                                                                                                                                                                                           g_3^2 \overline{y_d}^{i2i3} y_d^{i1i4} LF_{1,1,1,1,-1}[m_3, m_{\tilde{q}}^{i2}, m_{\tilde{q}}^{i1}, \tilde{\mu}]
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