```
i1_{-}i2_{-}i3_{-}i4_{-} \rightarrow -s_{\gamma} c_{\gamma} \frac{1}{m_{\phi}^{2}} y_{d}^{i3i4} y_{u}^{i1i2} +
C_{quqd}
                                                           \left(1 + 2\;{c_{\gamma}}^2 + 5\;{s_{\gamma}}^2\right)\right) \; + \; 9\;{y_u}^{\text{ili2}}\;\left({y_d}^{\text{pi4}}\;{y_d}^{\text{i3r}}\;\left(1 + {s_{\gamma}}^2\right) \; + \; 4\;{s_{\gamma}}^2\;{y_d}^{\text{pr}}\;{y_d}^{\text{i3i4}}\right)\right) \; + \; 27\;\overline{y_u}^{\text{pr}}
                                                                                                                                                                                                                                                                                                                           \left(3\;{y_{d}}^{i3i4}\;\left({y_{u}}^{pi2}\;{y_{u}}^{i1r}\;\left(1+{c_{\chi}}^{2}\right)\;+4\;{c_{\chi}}^{2}\;{y_{u}}^{pr}\;{y_{u}}^{i1i2}\right)\;+\;{y_{d}}^{pi4}\;{y_{u}}^{i1i2}\;{y_{u}}^{i3r}\;\left(1+5\;{c_{\chi}}^{2}+2\;{s_{\chi}}^{2}\right)\right)\;+
                                                                                                                                                                                                                                                                                2 y_u^{i3i2} \left( y_d^{i1i4} \left( 5 g_1^2 + 27 g_2^2 - 192 g_3^2 \right) - 9 c_{\gamma}^2 y_d^{pi4} \overline{y_u}^{pr} y_u^{i1r} \right) \right) - 10 c_{\gamma}^2 y_d^{pi4} \overline{y_u}^{pr} y_u^{i1r} \right)
                                                                                                                                                                              \frac{1}{2} \, \sum_{p} \, g_{1}^{\, 2} \, \frac{1}{m_{_{0}}^{\, 4}} \, y_{d}^{\, \dot{1}\, \dot{3}\, \dot{1}\, \dot{4}} \, y_{u}^{\, \dot{1}\, \dot{1}\, \dot{1}\, \dot{2}} \, \left( s_{2\, \gamma} \, c_{\gamma}^{\, 2} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} - s_{2\, \gamma} \, s_{\gamma}^{\, 2} \right) \, LF_{1,0} \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, \right] \, + \, \left[ \, m_{\overset{.}{d}}^{\, p} \, 
                                                                                                                                                                                                            \frac{1}{{{m_0}^4}} \; \overline{y_d}^{\text{pr}} \; {y_d}^{\text{pr}} \; {y_d}^{\text{i3i4}} \; {y_u}^{\text{i1i2}} \; \left( {{s_2}_{\text{Y}}} \; {c_{\text{Y}}}^2 - {s_2}_{\text{Y}} \; {s_{\text{Y}}}^2 - 2 \; {c_{\text{Y}}} \; {s_{\text{Y}}}^3 \right) \; \text{LF}_{\text{1,0}} \left[ {m_{\tilde{d}}^{\text{-r}}} \right] - {m_{\tilde{d}}^{\text{-r}}} \; {m_{\tilde{d}}
                                                                                                                                                                              \frac{1}{2} \, \sum_{p} \, g_{1}^{\, 2} \, \frac{1}{m_{_{0}}^{\, 4}} \, y_{d}^{\, \dot{1}\, \dot{3}\, \dot{1}\, 4} \, y_{u}^{\, \dot{1}\, \dot{1}\, \dot{1}\, \dot{2}} \, \left( s_{2\, \gamma} \, c_{\gamma}^{\, 2} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} - s_{2\, \gamma} \, s_{\gamma}^{\, 2} \right) \, LF_{1,0} \left[ m_{_{\! e}}^{\, p} \right] \, + \, \left( s_{2\, \gamma} \, c_{\gamma}^{\, 2} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} - s_{2\, \gamma} \, s_{\gamma}^{\, 2} \right) \, LF_{1,0} \left[ m_{_{\! e}}^{\, p} \right] \, + \, \left( s_{2\, \gamma} \, c_{\gamma}^{\, 2} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} - s_{2\, \gamma} \, s_{\gamma}^{\, 2} \right) \, LF_{1,0} \left[ m_{_{\! e}}^{\, p} \right] \, + \, \left( s_{2\, \gamma} \, c_{\gamma}^{\, 2} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} + s_{\gamma} \, c_{2\, \gamma} \, s_{\gamma}^{\, 2} \right) \, LF_{1,0} \left[ m_{_{\! e}}^{\, p} \right] \, + \, \left( s_{2\, \gamma} \, c_{\gamma}^{\, 2} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} \right) \, LF_{1,0} \left[ m_{_{\! e}}^{\, p} \right] \, + \, \left( s_{2\, \gamma} \, c_{\gamma}^{\, 2} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} \right) \, LF_{1,0} \left[ m_{_{\! e}}^{\, p} \right] \, + \, \left( s_{2\, \gamma} \, c_{\gamma}^{\, 2} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} + s_{\gamma} \, c_{2\, \gamma} \, c_{\gamma} \right) \, LF_{1,0} \left[ m_{_{\! e}}^{\, p} \right] \, + \, \left( s_{2\, \gamma} \, c_{\gamma} \, c_{\gamma} + s_{\gamma} \, c_{\gamma} \, c_{\gamma} \right] \, .
                                                                                                                                                                              \frac{1}{2} \; \frac{1}{m_{_{0}}{}^{4}} \; y_{d}{}^{i3i4} \; \overline{y_{e}}{}^{pr} \; y_{e}{}^{pr} \; y_{u}{}^{i1i2} \; \left(s_{2}{_{\Upsilon}} \; c_{_{\Upsilon}}{}^{2} - s_{2}{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{2} - 2 \; c_{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{3}\right) \; LF_{1,0} \left[m_{\tilde{e}}{}^{r}\right] \; + \\ \frac{1}{2} \; \frac{1}{m_{_{0}}{}^{4}} \; y_{d}{}^{i3i4} \; y_{u}{}^{i1i2} \; \left(s_{2}{_{\Upsilon}} \; c_{_{\Upsilon}}{}^{2} - s_{2}{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{2} - 2 \; c_{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{3}\right) \; LF_{1,0} \left[m_{\tilde{e}}{}^{r}\right] \; + \\ \frac{1}{2} \; \frac{1}{m_{_{0}}{}^{4}} \; y_{d}{}^{i3i4} \; y_{u}{}^{i1i2} \; \left(s_{2}{_{\Upsilon}} \; c_{_{\Upsilon}}{}^{2} - s_{2}{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{2} - 2 \; c_{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{3}\right) \; LF_{1,0} \left[m_{\tilde{e}}{}^{r}\right] \; + \\ \frac{1}{2} \; \frac{1}{m_{_{0}}{}^{4}} \; y_{d}{}^{i3i4} \; y_{u}{}^{i1i2} \; \left(s_{2}{_{\Upsilon}} \; c_{_{\Upsilon}}{}^{2} - s_{2}{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{2} - 2 \; c_{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{3}\right) \; LF_{1,0} \left[m_{\tilde{e}}{}^{r}\right] \; + \\ \frac{1}{2} \; \frac{1}{m_{_{0}}{}^{4}} \; y_{d}{}^{i3i4} \; y_{u}{}^{i1i2} \; \left(s_{2}{_{\Upsilon}} \; c_{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{2} - s_{_{\Upsilon}} \; s_{_{\Upsilon}} \; s_{_{\Upsilon}}{}^{2}\right) \; LF_{1,0} \left[m_{\tilde{e}}{}^{r}\right] \; + \\ \frac{1}{2} \; \frac{1}{m_{_{0}}{}^{4}} \; y_{d}{}^{i3i4} \; y_{u}{}^{i1i2} \; s_{_{\Upsilon}} \; s_{_{
                                                                                                                                                                                                                \left(\overline{y_{e}}^{pr}\ y_{e}^{pr}\ \left(s_{2\,\gamma}\ c_{\gamma}^{\ 2}-s_{2\,\gamma}\ s_{\gamma}^{\ 2}-2\ c_{\gamma}\ s_{\gamma}^{\ 3}\right)\ +\sum_{p}g_{1}^{\ 2}\ \left(s_{2\,\gamma}\ c_{\gamma}^{\ 2}+s_{\gamma}\ c_{2\,\gamma}\ c_{\gamma}-s_{2\,\gamma}\ s_{\gamma}^{\ 2}\right)\right)\ LF_{1,0}\left[m_{\tilde{l}}^{\ p}\right]\ +\sum_{p}g_{1}^{\ 2}\left(s_{2\,\gamma}\ c_{\gamma}^{\ 2}+s_{\gamma}\ c_{2\,\gamma}\ c_{\gamma}-s_{2\,\gamma}\ s_{\gamma}^{\ 2}\right)
                                                                                                                                                                                  \frac{1}{2} \ \frac{1}{m_{\text{o}}^4} \ y_{\text{d}}^{\text{i3i4}} \ y_{\text{u}}^{\text{i1i2}} \ \left( 3 \ \overline{y_{\text{d}}}^{\text{pr}} \ y_{\text{d}}^{\text{pr}} \ \left( s_{2\,\text{y}} \ c_{\text{y}}^{2} - s_{2\,\text{y}} \ s_{\text{y}}^{2} - 2 \ c_{\text{y}} \ s_{\text{y}}^{3} \right) \ -
                                                                                                                                                                                                                                                                                3\;\overline{y_{u}}^{pr}\;y_{u}^{\;\;pr}\;\left(s_{2\;\gamma}\;c_{\gamma}^{\;\;2}+2\;s_{\gamma}\;c_{\gamma}^{\;\;3}-s_{2\;\gamma}\;s_{\gamma}^{\;\;2}\right)\;-\sum_{p}\;g_{1}^{\;\;2}\;\left(s_{2\;\gamma}\;c_{\gamma}^{\;\;2}+s_{\gamma}\;c_{2\;\gamma}\;c_{\gamma}^{\;\;-}\;s_{2\;\gamma}\;s_{\gamma}^{\;\;2}\right)\left)\;LF_{1,0}\left[m_{\tilde{q}}^{-p}\right]\;+3\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{
                                                                                                                                                                                                                                                                                                                                                                                                            \frac{1}{4} y_d^{1314} y_u^{1112} \left( s_{2\,\gamma} \, c_{\gamma}^{\,2} + s_{\gamma} \, c_{2\,\gamma} \, c_{\gamma} - s_{2\,\gamma} \, s_{\gamma}^{\,2} \right) \, \text{LF}_{1,0} \left[ m_{\tilde{u}}^{\,\,p} \right] - \frac{1}{4} \, \left[ m_{\tilde{u}}^{\,\,p} \, c_{\gamma} \,
                                                                                                                                                                              \frac{3}{2} \; \frac{1}{m_{_{0}}{^{4}}} \; y_{d}^{\; i3i4} \; \overline{y_{u}}^{pr} \; y_{u}^{\; pr} \; y_{u}^{\; i1i2} \; \left( s_{2 \, \gamma} \; c_{\gamma}^{\; 2} + 2 \; s_{\gamma} \; c_{\gamma}^{\; 3} - s_{2 \, \gamma} \; s_{\gamma}^{\; 2} \right) \; LF_{1,0} \left[ m_{\check{u}}^{\; r} \right] \; + \\ \frac{3}{2} \; m_{_{0}}^{\; 4} \; y_{d}^{\; i3i4} \; \overline{y_{u}}^{pr} \; y_{u}^{\; pr} \; y_{u}^{\; i1i2} \; \left( s_{2 \, \gamma} \; c_{\gamma}^{\; 2} + 2 \; s_{\gamma} \; c_{\gamma}^{\; 3} - s_{2 \, \gamma} \; s_{\gamma}^{\; 2} \right) \; LF_{1,0} \left[ m_{\check{u}}^{\; r} \right] \; + \\ \frac{3}{2} \; m_{_{0}}^{\; 7} \; m_{_{0
                                                                                                                                                                                  \frac{1}{8} \frac{1}{m_0^4} y_d^{1314} y_u^{1112} \left(-3 s_{4\gamma} c_{\gamma}^2 (g_1^2 + g_2^2) + \right.
                                                                                                                                                                                                                                                                            2\; s_{\gamma}\; c_{\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)\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{4\; \gamma}\; s_{\gamma}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{2}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, \right]\; +\; 3\; s_{2}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, +\; g_{2}^{\;2}\right]\; +\; 3\; s_{2}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, +\; g_{2}^{\;2}\right]\; +\; 3\; s_{2}^{\;\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \right)\; LF_{1,0}\left[\, m_{_{\! D}}\, +\; g_{2}^{\;2}\right]\; +\; 3\; s_{2}^{\;2}\; \left(\; g_{1}^{\;2}\; +\; g_{2}^{\;2}\right)\; \left(\; g_{1}^{\;2}\; 
                                                                                                                                                                                       \frac{1}{4} \, \, s_{\gamma} \, \, c_{\gamma} \, \, \frac{1}{m_{\text{D}}^2} \, \, \left( -2 \, y_{\text{d}}^{\, \dot{1}3\dot{1}4} \, y_{\text{u}}^{\, \dot{1}1\dot{1}2} \, \left( g_{\text{1}}^2 + 3 \, g_{\text{2}}^2 \right) \, + \, 3 \, \, s_{\gamma}^{\, 2} \, \, \overline{y_{\text{d}}}^{\text{pr}} \, \left( -y_{\text{d}}^{\, \dot{1}1r} \, y_{\text{d}}^{\, \dot{1}3\dot{1}4} \, y_{\text{u}}^{\, \dot{p}\dot{1}2} + y_{\text{d}}^{\, \dot{p}\dot{1}4} \, y_{\text{d}}^{\, \dot{1}3\dot{1}2} \right) \, + \, 3 \, \, s_{\gamma}^{\, \dot{1}3\dot{1}4} \, \, y_{\text{d}}^{\, \dot{1}3\dot{1}4} \, y_{\text{d}}^{\, \dot{1}3\dot{1}4} \, y_{\text{d}}^{\, \dot{1}3\dot{1}4} \, y_{\text{d}}^{\, \dot{1}3\dot{1}2} \right) \, + \, 3 \, \, s_{\gamma}^{\, \dot{1}3\dot{1}4} \, y_{\text{d}}^{\, \dot{1}3\dot{1}4} \, y_{\text{d}
                                                                                                                                                                                                                                                                                3\;c_{\gamma}^{\;2}\overline{y_{u}}^{pr}\left(y_{d}^{\;13i4}\;y_{u}^{\;pi2}\;y_{u}^{\;i1r}-y_{d}^{\;pi4}\;y_{u}^{\;i1i2}\;y_{u}^{\;i3r}\right)\right)\;\mathsf{LF}_{1,1}[\,\mathsf{m}_{_{\!\Phi}}\,]\;+\frac{1}{54}\;s_{\gamma}\;c_{\gamma}
                                                                                                                                                                                                                \left(-\,27\;{c_{\gamma}}^{2}\,\overline{y_{d}}^{pr}\,{y_{d}}^{i1r}\,{y_{d}}^{i3i4}\,{y_{u}}^{pi2}\,+\,3\,{y_{u}}^{i1i2}\,\left({y_{d}}^{i3i4}\,\left(7\;{g_{1}}^{2}\,+\,27\;{g_{2}}^{2}\right)\,-\,9\;{s_{\gamma}}^{2}\,{y_{d}}^{pi4}\,\overline{y_{u}}^{pr}\,{y_{u}}^{i3r}\right)\,+\,3\,{y_{u}}^{i1}\,{y_{u}}^{i2}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,{y_{u}}^{i3}\,
                                                                                                                                                                                                                                                                                y_d^{i1i4} y_u^{i3i2} \left(-5 g_1^2 - 27 g_2^2 + 192 g_3^2\right)\right) LF_{1,2}[m_{\Phi}] +
                                                                                                                                                                              \frac{1}{9} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{i3i4} \; y_{u}^{i1i2} \; \mathsf{LF}_{1,1,9} \left[ \mathsf{m}_{1} \, , \; \mathsf{m}_{\bar{d}}^{i4} \right] \; - \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{i3i4} \; y_{u}^{i1i2} \; \mathsf{LF}_{2,1,-1} \left[ \mathsf{m}_{1} \, , \; \mathsf{m}_{\bar{d}}^{i4} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{i3i4} \; y_{u}^{i1i2} \; \mathsf{LF}_{2,1,-1} \left[ \mathsf{m}_{1} \, , \; \mathsf{m}_{\bar{d}}^{i4} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{i3i4} \; y_{u}^{i1i2} \; \mathsf{LF}_{2,1,-1} \left[ \mathsf{m}_{1} \, , \; \mathsf{m}_{\bar{d}}^{i4} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{i3i4} \; y_{u}^{i1i2} \; \mathsf{LF}_{2,1,-1} \left[ \mathsf{m}_{1} \, , \; \mathsf{m}_{\bar{d}}^{i4} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{i3i4} \; y_{u}^{i1i2} \; \mathsf{LF}_{2,1,-1} \left[ \mathsf{m}_{1} \, , \; \mathsf{m}_{\bar{d}}^{i4} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{i3i4} \; y_{u}^{i1i2} \; \mathsf{LF}_{2,1,-1} \left[ \mathsf{m}_{1} \, , \; \mathsf{m}_{\bar{d}}^{i4} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{i3i4} \; y_{u}^{i1i2} \; \mathsf{LF}_{2,1,-1} \left[ \mathsf{m}_{1} \, , \; \mathsf{m}_{\bar{d}}^{i4} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{i3i4} \; y_{u}^{i1i2} \; \mathsf{LF}_{2,1,-1} \left[ \mathsf{m}_{1} \, , \; \mathsf{m}_{1}^{i4} \, y_{u}^{i4} \; \mathsf{LF}_{2,1,-1} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; s_{\gamma} 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \frac{1}{m_{o}^{2}} y_{d}^{i3i4} y_{u}^{i1i2} LF_{1,1,0}[m_{1}, m_{\tilde{q}}^{i1}] -
                                                                                                                                                                              \frac{1}{72} \, s_{\gamma} \, c_{\gamma} \, g_{1}^{2} \, \frac{1}{m_{0}^{2}} \, y_{d}^{i3i4} \, y_{u}^{i1i2} \, LF_{2,1,-1}[m_{1}, \, m_{\tilde{q}}]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \frac{1}{m_{o}^{2}} y_{d}^{i3i4} y_{u}^{i1i2} LF_{1,1,0}[m_{1}, m_{\tilde{q}}^{i3}] -
                                                                                                                                                                              \frac{1}{36} s_{\gamma} c_{\gamma} g_1^2 \frac{1}{m}
                                                                                                                                                                              \frac{1}{72} \, s_{\gamma} \, c_{\gamma} \, g_{1}^{2} \, \frac{1}{m_{0}^{2}} \, y_{d}^{i3i4} \, y_{u}^{i1i2} \, LF_{2,1,-1}[m_{1}, m_{\tilde{q}}^{i3}] +
                                                                                                                                                                              rac{4}{9} \; {\sf S}_{\scriptscriptstyle Y} \; {\sf G}_{\scriptscriptstyle Y} \; {\sf g_1}^2 \; rac{1}{{\sf m_0}^2} \; {\sf y_d}^{i3i4} \; {\sf y_u}^{i1i2} \; {\sf LF_{1,1,0}} \left[ \, {\sf m_1} \, , \; {\sf m_{\tilde{u}}}^{i2} \, \right] \; - \;
                                                                                                                                                                              \frac{2}{9} \; \mathsf{S}_{\gamma} \; \mathsf{C}_{\gamma} \; \mathsf{g_{1}}^{2} \; \frac{1}{\mathsf{m_{0}}^{2}} \; \mathsf{y_{d}}^{\mathsf{i3i4}} \; \mathsf{y_{u}}^{\mathsf{i1i2}} \; \mathsf{LF_{2,1,-1}} \big[ \mathsf{m_{1}}, \; \mathsf{m_{\tilde{u}}}^{\mathsf{i2}} \big] \; + \; \mathsf{S}_{\gamma} \; \mathsf{C}_{\gamma} \; \mathsf{g_{1}}^{2} \; \frac{1}{\mathsf{m_{0}}^{4}} \; \mathsf{y_{d}}^{\mathsf{i3i4}} \; \mathsf{y_{u}}^{\mathsf{i1i2}} \; \mathsf{LF_{1,1,-1}} \big[ \; \mathsf{m_{1}}, \; \widetilde{\mu} \, \big] \; + \; \mathsf{F}_{\mathsf{i}} \; \mathsf{p_{1}}^{\mathsf{i3i4}} \; \mathsf{y_{u}}^{\mathsf{i3i4}} \; \mathsf{y_{u}}^{\mathsf{
                                                                                                                                                                 \mathsf{m_1}\,\widetilde{\mu}\;\mathsf{g_1}^2\;\tfrac{1}{\mathsf{m_s}^4}\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\left(c_{\gamma}^{\;4}-4\;s_{\gamma}^{\;2}\;c_{\gamma}^{\;2}+s_{\gamma}^{\;4}\right)\;\mathsf{LF_{1,1,0}}\left[\,\mathsf{m_1}\,,\;\widetilde{\mu}\,\right]\;+
                                                                                                                                                                                                            s_{\gamma} \; c_{\gamma} \; g_{2}^{\; 2} \; \frac{_{1}}{_{m_{0}}^{^{\; 2}}} \; y_{d}^{\; 1314} \; y_{u}^{\; 1112} \; LF_{1,1,0} \left[ \, m_{2} \, , \; m_{\tilde{q}}^{\; \, 11} \, \right] \; - \\
                                                                                                                                                                              \frac{3}{8} \; s_{\gamma} \; c_{\gamma} \; g_{2}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{2,1,-1} \big[ \mathsf{m}_{2} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{1}} \big] \; + \\ \frac{3}{4} \; s_{\gamma} \; c_{\gamma} \; g_{2}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{1,1,0} \big[ \, \mathsf{m}_{2} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \big] \; - \\ \frac{1}{8} \; s_{\gamma} \; c_{\gamma} \; g_{2}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{1,1,0} \big[ \, \mathsf{m}_{2} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \big] \; - \\ \frac{1}{8} \; s_{\gamma} \; c_{\gamma} \; g_{2}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{1,1,0} \big[ \, \mathsf{m}_{2} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \big] \; - \\ \frac{1}{8} \; s_{\gamma} \; c_{\gamma} \; g_{2}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{1,1,0} \big[ \, \mathsf{m}_{2} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \big] \; - \\ \frac{1}{8} \; s_{\gamma} \; c_{\gamma} \; g_{2}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{1,1,0} \big[ \, \mathsf{m}_{2} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \big] \; - \\ \frac{1}{8} \; s_{\gamma} \; c_{\gamma} \; g_{2}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{1,1,0} \big[ \, \mathsf{m}_{2} \, , \; \mathsf{m}_{2}^{\, \dot{1}\dot{1}\dot{1}} \, \big] \; + \\ \frac{1}{8} \; s_{\gamma} \; c_{\gamma} \; g_{2}^{2} \; \frac{1}{m_{0}^{2}} \; y_{d}^{\, \dot{1}\dot{1}\dot{1}\dot{1}\dot{1}} \; \mathsf{LF}_{1,1,0} \big[ \, \mathsf{m}_{2} \, , \; \mathsf{m}_{2}^{\, \dot{1}\dot{1}} \, \big] \; + \\ \frac{1}{8} \; s_{\gamma} \; c_{\gamma} \; s_{\gamma} \; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \frac{1}{m_{\text{o}}^{2}}\;\mathsf{y_{d}}^{\text{i3i4}}\;\mathsf{y_{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,\text{1,-1}}\big[\mathsf{m}_{2}\,,\,\mathsf{m_{\tilde{q}}}^{\text{i3}}\big]\;+\;3\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{2}}^{2}\;\frac{1}{m_{\text{o}}^{4}}\;\mathsf{y_{d}}^{\text{i3i4}}\;\mathsf{y_{u}}^{\text{i1i2}}\;\mathsf{LF}_{\text{1,1,-1}}\big[\mathsf{m}_{2}\,,\,\widetilde{\mu}\,]\;+\;3\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{2}}^{2}\;\frac{1}{m_{\text{o}}^{4}}\;\mathsf{y_{d}}^{\text{i3i4}}\;\mathsf{y_{u}}^{\text{i1i2}}\;\mathsf{LF}_{\text{1,1,-1}}\big[\mathsf{m}_{2}\,,\,\widetilde{\mu}\,]\;+\;3\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{2}}^{2}\;\frac{1}{m_{\text{o}}^{4}}\;\mathsf{y_{d}}^{\text{i3i4}}\;\mathsf{y_{u}}^{\text{i1i2}}\;\mathsf{LF}_{\text{1,1,-1}}\big[\mathsf{m}_{2}\,,\,\widetilde{\mu}\,]\;+\;3\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{2}}^{2}\;\frac{1}{m_{\text{o}}^{4}}\;\mathsf{y_{d}}^{\text{i3i4}}\;\mathsf{y_{u}}^{\text{i1i2}}\;\mathsf{LF}_{\text{1,1,-1}}\big[\mathsf{m}_{2}\,,\,\widetilde{\mu}\,]\;+\;3\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{2}}^{2}\;\frac{1}{m_{\text{o}}^{4}}\;\mathsf{y_{d}}^{\text{i3i4}}\;\mathsf{y_{u}}^{\text{i1i2}}\;\mathsf{LF}_{\text{1,1,-1}}\big[\mathsf{m}_{2}\,,\,\widetilde{\mu}\,]\;+\;3\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{2}}^{2}\;\frac{1}{m_{\text{o}}^{4}}\;\mathsf{y_{d}}^{\text{i3i4}}\;\mathsf{y_{u}}^{\text{i1i2}}\;\mathsf{LF}_{\text{1,1,-1}}\big[\mathsf{m}_{2}\,,\,\widetilde{\mu}\,]\;+\;3\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{2}}^{2}\;\mathsf{d_{\gamma}}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d_{\gamma}}^{2}\;\mathsf{d
                                                                                                                                                                 3\;m_{2}\;\widetilde{\mu}\;g_{2}^{2}\;\frac{1}{m_{s}^{4}}\;y_{d}^{13i4}\;y_{u}^{11i2}\;\left(\,c_{\gamma}^{\;4}-4\;s_{\gamma}^{\;2}\;c_{\gamma}^{\;2}+s_{\gamma}^{\;4}\right)\;LF_{1,1,0}\left[\,m_{2}\,,\;\widetilde{\mu}\,\right]\;+
                                                                                                                                                                              \frac{4}{3} \; \mathsf{S}_{\gamma} \; \mathsf{C}_{\gamma} \; \mathsf{g_{3}}^{2} \; \frac{1}{\mathsf{m_{0}}^{2}} \; \mathsf{y_{d}}^{\mathsf{i3i4}} \; \mathsf{y_{u}}^{\mathsf{i1i2}} \; \mathsf{LF_{1,1,0}} \left[ \mathsf{m_{3}}, \; \mathsf{m_{\tilde{q}}}^{\mathsf{i1}} \right] \; - \; \frac{2}{3} \; \mathsf{S}_{\gamma} \; \mathsf{C}_{\gamma} \; \mathsf{g_{3}}^{2} \; \frac{1}{\mathsf{m_{0}}^{2}} \; \mathsf{y_{d}}^{\mathsf{i3i4}} \; \mathsf{y_{u}}^{\mathsf{i1i2}} \; \mathsf{LF_{2,1,-1}} \left[ \mathsf{m_{3}}, \; \mathsf{m_{\tilde{q}}}^{\mathsf{i1}} \right] \; + \; \mathsf{m_{0}}^{\mathsf{i1}} \; \mathsf{m_{0}}^{\mathsf{i1}}
                                                                                                                                                                              \frac{4}{3} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{2} \; \frac{1}{m_{_{0}}^{2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{1,1,0} \left[\, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \right] \; - \; \frac{2}{3} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{\, 2} \; \frac{1}{m_{_{0}}^{\, 2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{2,1,-1} \left[\, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \right] \; + \; \frac{2}{3} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{\, 2} \; \frac{1}{m_{_{0}}^{\, 2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{2,1,-1} \left[\, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \right] \; + \; \frac{2}{3} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{\, 2} \; \frac{1}{m_{_{0}}^{\, 2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{2,1,-1} \left[\, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \right] \; + \; \frac{2}{3} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{\, 2} \; \frac{1}{m_{_{0}}^{\, 2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{2,1,-1} \left[\, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \right] \; + \; \frac{2}{3} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{\, 2} \; \frac{1}{m_{_{0}}^{\, 2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{3,1,-1} \left[\, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \right] \; + \; \frac{2}{3} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{\, 2} \; \frac{1}{m_{_{0}}^{\, 2}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \mathsf{LF}_{3,1,-1} \left[\, \mathsf{m}_{3} \, , \; \mathsf{m}_{\bar{q}}^{\, \dot{1}\dot{3}} \, \right] \; + \; \frac{2}{3} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{\, 2} \; \frac{1}{m_{_{0}}^{\, 2}} \; y_{d}^{\, 2} \; s_{\gamma} \; s_{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{1,1,0}\!\left[\,m_{3}\,,\,m_{\tilde{\text{u}}}^{\,\,\text{i2}}\,\right]\,-\,\frac{2}{3}\;s_{\text{y}}\;c_{\text{y}}\;g_{\text{3}}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\,\,\text{i3i4}}\;y_{\text{u}}^{\,\,\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{3}\,,\,m_{\tilde{\text{u}}}^{\,\,\text{i2}}\,\right]\,+\,\frac{2}{3}\,s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{\,\,\text{c}}\;s_{\text{v}}^{
                                                                                                                                                                      3\ \frac{1}{m_{_{0}}{^{4}}}\ y_{d}{^{i3i4}}\ y_{u}{^{i1i2}}\ \left(s_{_{Y}}\ \widetilde{\mu}\ c_{_{Y}}\ \overline{y_{d}}{^{pr}}\ \left(-3\ s_{_{Y}}\ c_{_{Y}}\ a_{d}{^{pr}}+\widetilde{\mu}\ y_{d}{^{pr}}\ \left(-2\ c_{_{Y}}^{^{2}}{^{2}}+s_{_{Y}}{^{2}}\right)\right)\ +
                                                                                                                                                                                                                                                                            \overline{a_d}^{\text{pr}} \left( s_{\gamma} \; c_{\gamma} \; a_d^{\text{pr}} \; \left( c_{\gamma}^{\ 2} - 2 \; s_{\gamma}^{\ 2} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 2} \; c_{\gamma}^{\ 2} + s_{\gamma}^{\ 4} \right) \right) \right) \; \text{LF}_{\text{1,1,0}} \left[ \, m_{\tilde{d}}^{-r} \, , \; m_{\tilde{q}}^{-p} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 2} \; c_{\gamma}^{\ 2} + s_{\gamma}^{\ 4} \right) \right) \; \text{LF}_{\text{1,1,0}} \left[ \, m_{\tilde{d}}^{-r} \, , \; m_{\tilde{q}}^{-p} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 2} \; c_{\gamma}^{\ 2} + s_{\gamma}^{\ 4} \right) \; \right) \; \text{LF}_{\text{1,1,0}} \left[ \, m_{\tilde{d}}^{-r} \, , \; m_{\tilde{q}}^{-p} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 2} \; c_{\gamma}^{\ 2} + s_{\gamma}^{\ 4} \right) \; \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 2} \; c_{\gamma}^{\ 2} + s_{\gamma}^{\ 4} \right) \; \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 2} \; c_{\gamma}^{\ 2} + s_{\gamma}^{\ 4} \right) \; \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 2} \; c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 4} \; c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 4} \; c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 4} \; c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 4} \; c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 4} \; c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 4} \; c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 4} \; c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} - s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} + s_{\gamma}^{\ 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \left( c_{\gamma}^{\ 4} + s_{\gamma}^{\ 4}
                                                                                                                                                                              \frac{1}{2} \; \mathsf{S}_{\textrm{Y}} \; \mathsf{C}_{\textrm{Y}} \; \frac{1}{\mathsf{m_{\textrm{g}}}^2} \; \overline{\mathsf{y_{\textrm{d}}}}^{\textrm{pr}} \; \left( \mathsf{y_{\textrm{d}}}^{\textrm{ilr}} \; \mathsf{y_{\textrm{d}}}^{\textrm{i3i4}} \; \mathsf{y_{\textrm{u}}}^{\textrm{pi2}} + \mathsf{y_{\textrm{d}}}^{\textrm{pi4}} \; \mathsf{y_{\textrm{d}}}^{\textrm{i3r}} \; \mathsf{y_{\textrm{u}}}^{\textrm{i1i2}} \right) \; \mathsf{LF_{1,1,0}} \left[ \, \mathsf{m_{\tilde{\textrm{d}}}}^{\textrm{r}} \, \mathsf{,} \; \widetilde{\mu} \, \right] \; + \; \mathsf{p_{\textrm{d}}}^{\textrm{pi4}} \; \mathsf{y_{\textrm{d}}}^{\textrm{i3r}} \; \mathsf{y_{\textrm{u}}}^{\textrm{i1i2}} \right] \; \mathsf{LF_{1,1,0}} \left[ \, \mathsf{m_{\tilde{\textrm{d}}}}^{\textrm{r}} \, \mathsf{,} \; \widetilde{\mu} \, \right] \; + \; \mathsf{p_{\textrm{d}}}^{\textrm{pi4}} \; \mathsf{y_{\textrm{d}}}^{\textrm{i3r}} \; \mathsf{y_{\textrm{d}}}^{\textrm{i3r}} \; \mathsf{y_{\textrm{d}}}^{\textrm{i3r}} \, \mathsf{y_{\textrm{d}}}^{\textrm{i3r}} \right] \; \mathsf{LF_{1,1,0}} \left[ \, \mathsf{m_{\tilde{\textrm{d}}}}^{\textrm{r}} \, \mathsf{,} \; \widetilde{\mu} \, \right] \; + \; \mathsf{p_{\textrm{d}}}^{\textrm{pi4}} \; \mathsf{p_{\textrm{d}}}^{\textrm{i3r}} \; \mathsf{y_{\textrm{d}}}^{\textrm{i3r}} 
                                                                                                                                                                              \frac{1}{m_{o}{}^{4}}\;y_{d}^{\,\,13\dot{1}\dot{4}}\;y_{u}^{\,\,1\dot{1}\dot{1}\dot{2}}\;\left(\,s_{\gamma}\;\widetilde{\mu}\;c_{\gamma}\;\overline{y_{e}}^{pr}\;\left(\,-\,3\;s_{\gamma}\;c_{\gamma}\;a_{e}^{\,\,pr}\,+\,\widetilde{\mu}\;y_{e}^{\,\,pr}\;\left(\,-\,2\;c_{\gamma}^{\,\,2}\,+\,s_{\gamma}^{\,\,2}\,\right)\,\right)\,+\,3\,(1+1)^{2}\,\left(\,s_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{\gamma}^{\,\,2}\,\widetilde{\mu}\;c_{
                                                                                                                                                                                                                                                                            \overline{a_{e}}^{\text{pr}} \left( s_{\gamma} \; c_{\gamma} \; a_{e}^{\; \text{pr}} \; \left( c_{\gamma}^{\; 2} - 2 \; s_{\gamma}^{\; 2} \right) \; + \; \widetilde{\mu} \; y_{e}^{\; \text{pr}} \; \left( c_{\gamma}^{\; 4} - s_{\gamma}^{\; 2} \; c_{\gamma}^{\; 2} + s_{\gamma}^{\; 4} \right) \right) \right) \; \text{LF}_{\text{1,1,0}} \left[ m_{\tilde{e}}^{\; \text{r}} \; , \; m_{\tilde{l}}^{\; \text{p}} \right] \; + \; \widetilde{\mu} \; y_{e}^{\; \text{pr}} \; \left( c_{\gamma}^{\; 4} - s_{\gamma}^{\; 2} \; c_{\gamma}^{\; 2} + s_{\gamma}^{\; 4} \right) \right) \; \text{LF}_{\text{1,1,0}} \left[ m_{\tilde{e}}^{\; \text{r}} \; , \; m_{\tilde{l}}^{\; \text{p}} \right] \; + \; \widetilde{\mu} \; y_{e}^{\; \text{pr}} \; \left( c_{\gamma}^{\; 4} - s_{\gamma}^{\; 2} \; c_{\gamma}^{\; 2} + s_{\gamma}^{\; 4} \right) \right) \; \text{LF}_{\text{1,1,0}} \left[ m_{\tilde{e}}^{\; \text{r}} \; , \; m_{\tilde{l}}^{\; \text{p}} \right] \; + \; \widetilde{\mu} \; y_{e}^{\; \text{pr}} \; \left( c_{\gamma}^{\; 4} - s_{\gamma}^{\; 2} \; c_{\gamma}^{\; 2} + s_{\gamma}^{\; 4} \right) \; \right) \; \text{LF}_{\text{1,1,0}} \left[ m_{\tilde{e}}^{\; \text{r}} \; , \; m_{\tilde{l}}^{\; \text{p}} \right] \; + \; \widetilde{\mu} \; y_{e}^{\; \text{pr}} \; \left( c_{\gamma}^{\; 4} - s_{\gamma}^{\; 2} \; c_{\gamma}^{\; 2} + s_{\gamma}^{\; 4} \right) \; \right) \; \text{LF}_{\text{1,1,0}} \left[ m_{\tilde{e}}^{\; \text{r}} \; , \; m_{\tilde{l}}^{\; \text{p}} \right] \; + \; \widetilde{\mu} \; y_{e}^{\; \text{pr}} \; \left( c_{\gamma}^{\; 4} - s_{\gamma}^{\; 2} \; c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right) \; \text{LF}_{\text{1,1,0}} \left[ m_{\tilde{e}}^{\; \text{r}} \; , \; m_{\tilde{l}}^{\; \text{p}} \; c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_{e}^{\; 4} \; c_{\gamma}^{\; 4} \; 
                                                                                                                                                                              \frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\left(s_{\text{y}}\;\widetilde{\mu}\;c_{\text{y}}\;\overline{y_{\text{e}}}^{\text{pr}}\;\left(2\;s_{\text{y}}\;c_{\text{y}}\;a_{\text{e}}^{\text{pr}}+\widetilde{\mu}\;y_{\text{e}}^{\text{pr}}\;\left(c_{\text{y}}^{2}-s_{\text{y}}^{2}\right)\right)\;+
                                                                                                                                                                                                                                                                            \overline{a_e}^{pr} \left( s_{_{Y}} \, c_{_{Y}} \, a_e^{pr} \, \left( - \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, - \, \widetilde{\mu} \, \, y_e^{pr} \, \left( \, c_{_{Y}}^{\, \, 4} + \, s_{_{Y}}^{\, \, 4} \right) \, \right) \, \, \text{LF}_{2,1,0} \left[ \, \textbf{m}_{\tilde{\textbf{l}}}^{\, \, p} \, , \, \, \textbf{m}_{\tilde{\textbf{e}}}^{\, \, r} \, \right] \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, 2} + \, s_{_{Y}}^{\, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, 2} + \, s_{_{Y}}^{\, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, 2} + \, s_{_{Y}}^{\, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, 2} + \, s_{_{Y}}^{\, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, 2} + \, s_{_{Y}}^{\, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, 2} + \, s_{_{Y}}^{\, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, 2} + \, s_{_{Y}}^{\, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, 2} + \, s_{_{Y}}^{\, \, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, \, 2} + \, s_{_{Y}}^{\, \, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, \, 2} + \, s_{_{Y}}^{\, \, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, \, 2} + \, s_{_{Y}}^{\, \, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, \, 2} + \, s_{_{Y}}^{\, \, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, \, 2} + \, s_{_{Y}}^{\, \, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, \, \, 2} + \, s_{_{Y}}^{\, \, \, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, \, \, 2} + \, s_{_{Y}}^{\, \, \, \, 2} \right) \, + \, \widetilde{\mu} \, \, \left( \, c_{_{Y}}^{\, \, \, \, \, \, 2} \right) 
                                                                                                                                                                              \frac{1}{m_{e^{2}}} \; y_{d}^{\, \dot{1}\dot{3}\dot{1}\dot{4}} \; y_{u}^{\, \dot{1}\dot{1}\dot{1}\dot{2}} \; \left( \, s_{\gamma} \; \widetilde{\mu} \; c_{\gamma} \; \overline{y_{e}}^{pr} \; \left( \, - \, 2 \; s_{\gamma} \; c_{\gamma} \; a_{e}^{\, pr} \; + \, \widetilde{\mu} \; y_{e}^{\, pr} \; \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, \right) \; + \, \left( \, - \, c_{\gamma}^{\, 2} \, + \, s_{\gamma}^{\, 2} \, + \, s_{\gamma}^
                                                                                                                                                                                                                                                                            \overline{a_{e}}^{pr}\left(s_{\gamma}\;c_{\gamma}\;a_{e}^{\;pr}\;\left(c_{\gamma}^{\;2}-s_{\gamma}^{\;2}\right)\right.\\ \left.+\;\widetilde{\mu}\;y_{e}^{\;pr}\;\left(c_{\gamma}^{\;4}+s_{\gamma}^{\;4}\right)\right)\right)\;LF_{3,1,-1}\!\left[m_{\tilde{l}}^{\;p},\;m_{\tilde{e}}^{\;r}\right]\\ +\;\widetilde{\mu}\;y_{e}^{\;pr}\left(c_{\gamma}^{\;4}+s_{\gamma}^{\;4}\right)\right)
                                                                                                                                                                      s_{\gamma}\;c_{\gamma}\;y_{d}^{\;i3i4}\;y_{u}^{\;i1i2}\;\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[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;r}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_{\tilde{l}}^{\;p},\;\mathfrak{m}_{\tilde{e}}^{\;p}\right]\;-\;\mathsf{LF}_{3,1,0}\left[\mathfrak{m}_
                                                                                                                                                                      3\; s_{_{Y}}\; c_{_{Y}}\; y_{d}^{\;i3i4}\; y_{u}^{\;i1i2}\; \left(c_{_{Y}}\; \overline{a_{e}}^{pr}\; -\; s_{_{Y}}\; \widetilde{\mu}\; \overline{y_{e}}^{pr}\right)\; \left(c_{_{Y}}\; a_{e}^{\;pr}\; -\; s_{_{Y}}\; \widetilde{\mu}\; y_{e}^{\;pr}\right)\; LF_{4,1,-1}\left[m_{\widetilde{l}}^{\;p}\; ,\; m_{\widetilde{e}}^{\;r}\;\right]\; +\; c_{_{Y}}\; \widetilde{\mu}\; \widetilde{h}_{e}^{\;pr}\; +\; c_{_{Y}}\; \widetilde{\mu}\; \widetilde{h}\; \widetilde{h}\; +\; c_{_{Y}}\; \widetilde{h}\; \widetilde{h}\; \widetilde{h}\; +\; c_{_{Y}}\; \widetilde{h}\; \widetilde{h}\; \widetilde{h}\; +\; c_{_{Y}}\; \widetilde{h}\; \widetilde{h}\; +\; c_{_{Y}}\; \widetilde{h}\; +\; c_{_{Y
                                                                                                                                                                      2\; s_{\gamma}\; c_{\gamma}\; y_{d}^{\textrm{i3i4}}\; y_{u}^{\textrm{i1i2}}\; \left(c_{\gamma}\; \overline{a_{e}}^{\textrm{pr}} - s_{\gamma}\; \widetilde{\mu}\; \overline{y_{e}}^{\textrm{pr}}\right) \; \left(c_{\gamma}\; a_{e}^{\textrm{pr}} - s_{\gamma}\; \widetilde{\mu}\; y_{e}^{\textrm{pr}}\right) \; \mathsf{LF}_{\textrm{5,1,-2}}\big[m_{\tilde{l}}^{\textrm{-p}},\; m_{\tilde{e}}^{\textrm{-r}}\big] \; - \; m_{\tilde{e}}^{\textrm{-p}} = m_{\tilde{e}}^{\textrm{-p}} + m_{\tilde{e}}^{\textrm{-p}} = m_{\tilde{e}}^{\textrm{-p}} = m_{\tilde{e}}^{\textrm{-p}} + m_{\tilde{e}}^{\textrm{-p}} = m_{\tilde{e}}^{\textrm{-p}} = m_{\tilde{e}}^{\textrm{-p}} + m_{\tilde{e}}^{\textrm{-p}} = m_{\tilde{e}
                                                                                                                                                                                                                                                                            _{2} y_{d} <sup>i3i4</sup> y_{u} <sup>i1i2</sup> \left(s_{\gamma} \widetilde{\mu} c_{\gamma} \overline{y_{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) + C_{d}
                                                                                                                                                                                                                                                                            \overline{a_d}^{\text{pr}} \left( s_{\gamma} \; c_{\gamma} \; a_d^{\text{pr}} \; \left( c_{\gamma}^{\; 2} - s_{\gamma}^{\; 2} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \right) \right) \; \text{LF}_{2,1,0} \left[ \, m_{\tilde{q}}^{\; p} \, , \; m_{\tilde{d}}^{\; r} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \right) \; \text{LF}_{2,1,0} \left[ \, m_{\tilde{q}}^{\; p} \, , \; m_{\tilde{d}}^{\; r} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right) \; \text{LF}_{2,1,0} \left[ \, m_{\tilde{q}}^{\; p} \, , \; m_{\tilde{d}}^{\; r} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right] \; \text{LF}_{2,1,0} \left[ \, m_{\tilde{q}}^{\; p} \, , \; m_{\tilde{d}}^{\; r} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right] \; \text{LF}_{2,1,0} \left[ \, m_{\tilde{q}}^{\; p} \, , \; m_{\tilde{d}}^{\; r} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right] \; \text{LF}_{2,1,0} \left[ \, m_{\tilde{q}}^{\; p} \, , \; m_{\tilde{d}}^{\; r} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right] \; \text{LF}_{2,1,0} \left[ \, m_{\tilde{q}}^{\; p} \, , \; m_{\tilde{d}}^{\; r} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right] \; \text{LF}_{2,1,0} \left[ \, m_{\tilde{q}}^{\; p} \, , \; m_{\tilde{d}}^{\; r} \, \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right] \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; + \; \widetilde{\mu} \; y_d^{\text{pr}} \; + \; \widetilde{\mu} \; y_d^
                                                                                                                                                                      3 \, \, \frac{1}{m_{\text{D}}^{\, 2}} \, \, y_{\text{d}}^{\, \text{i3i4}} \, \, y_{\text{u}}^{\, \text{i1i2}} \, \, \left( \, s_{\text{Y}} \, \, \widetilde{\mu} \, \, c_{\text{Y}} \, \, \overline{y_{\text{d}}}^{\text{pr}} \, \, \left( \, - \, 2 \, \, s_{\text{Y}} \, \, c_{\text{Y}} \, \, a_{\text{d}}^{\, \text{pr}} \, + \, \widetilde{\mu} \, \, y_{\text{d}}^{\, \text{pr}} \, \, \left( \, - \, c_{\text{Y}}^{\, \, 2} \, + \, s_{\text{Y}}^{\, \, 2} \, \right) \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, 2} \, + \, s_{\text{Y}}^{\, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, 2} \, + \, s_{\text{Y}}^{\, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, 2} \, + \, s_{\text{Y}}^{\, \, 2} \, \right) \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, 2} \, + \, s_{\text{Y}}^{\, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, 2} \, + \, s_{\text{Y}}^{\, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, 2} \, + \, s_{\text{Y}}^{\, \, 2} \, \right) \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, + \, \left( \, - \, c_{\text{Y}}^{\, \, \, 2} \, + \, s_{\text{Y}}^{\, \, \, 2} \, \right) \, +
                                                                                                                                                                                                                                                                            \overline{a_{d}}^{pr} \left( s_{_{Y}} \, c_{_{Y}} \, a_{d}^{pr} \, \left( c_{_{Y}}^{2} - s_{_{Y}}^{2} \right) \right. \\ \left. + \, \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{4} + s_{_{Y}}^{4} \right) \right) \right) \, LF_{3,1,-1} \big[ \, m_{\tilde{q}}^{\,\, p} \, , \, \, m_{\tilde{d}}^{\,\, r} \, \big] \, + \, \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{4} + s_{_{Y}}^{4} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{4} \right) \, \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \, \right) \, . \\ \left. + \, \left( c_{_{Y}}^{2} + c_{_{Y}}^{2} \right) + \widetilde{\mu} \, y_{d}^{pr} \,
                                                                                                                                                                      3\; s_{\scriptscriptstyle Y}\; c_{\scriptscriptstyle Y}\; y_{\scriptscriptstyle d}^{\; i\, 3\, i\, 4}\; y_{\scriptscriptstyle u}^{\; i\, 1\, i\, 2}\; \left(c_{\scriptscriptstyle Y}\; \overline{a_d}^{pr}\; -\; s_{\scriptscriptstyle Y}\; \widetilde{\mu}\; \overline{y_d}^{pr}\right) \; \left(c_{\scriptscriptstyle Y}\; a_d^{\; pr}\; -\; s_{\scriptscriptstyle Y}\; \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}}}^{\;\; p}\; +\; \mathsf{m}_{\tilde{\mathsf{q}}}^{\;\; p}\; ,\; \mathsf{m}_{\tilde{\mathsf{q}}}^{\;\; p}\; +\; \mathsf{m}_{\tilde{\mathsf{q}}}^{\;\; 
                                                                                                                                                                 9\; s_{\gamma}\; c_{\gamma}\; y_{d}^{\textrm{i3i4}}\; y_{u}^{\textrm{i1i2}}\; \left(c_{\gamma}\; \overline{a_{d}}^{\textrm{pr}} - s_{\gamma}\; \widetilde{\mu}\; \overline{y_{d}}^{\textrm{pr}}\right) \; \left(c_{\gamma}\; a_{d}^{\textrm{pr}} - s_{\gamma}\; \widetilde{\mu}\; y_{d}^{\textrm{pr}}\right) \; \mathsf{LF_{4,1,-1}}\big[m_{\tilde{q}}^{\;\;p},\; m_{\tilde{d}}^{\;\;r}\big] \; + \; \mathsf{LF_{4,1,-1}}\big[m_{\tilde{q}}^{\;\;p},\; m_{\tilde{d}}^{\;\;p}\big] \; + \; \mathsf{LF_{4,1,-1}}\big[m_{\tilde{q}}^{\;\;p},\; m_{\tilde{q}}^{\;\;p}\big] \; + \; \mathsf{LF_{4,1,-1}}\big[m_{\tilde{q}}^{\;
                                                                                                                                                                 6\; s_{\scriptscriptstyle Y}\; c_{\scriptscriptstyle Y}\; y_{\scriptscriptstyle d}^{\text{i3i4}}\; y_{\scriptscriptstyle u}^{\text{i1i2}}\; \left(c_{\scriptscriptstyle Y}\; \overline{a_{\scriptscriptstyle d}}^{pr}\; -\; s_{\scriptscriptstyle Y}\; \widetilde{\mu}\; \overline{y_{\scriptscriptstyle d}}^{pr}\right) \; \left(c_{\scriptscriptstyle Y}\; a_{\scriptscriptstyle d}^{pr}\; -\; s_{\scriptscriptstyle Y}\; \widetilde{\mu}\; y_{\scriptscriptstyle d}^{pr}\right) \; \mathsf{LF}_{5,1,-2}\left[\, \mathsf{m}_{\bar{\mathsf{q}}}^{\;\; p}\; ,\; \mathsf{m}_{\bar{\mathsf{d}}}^{\;\; r}\, \right] \; +\; \mathsf{m}_{\bar{\mathsf{q}}}^{\;\; r}\; +\; \mathsf{m}_{\bar{\mathsf{q}}}^{
                                                                                                                                                                      3 \, \, \frac{1}{m_0^{\, 4}} \, \, y_d^{\, i \, 3 \, i \, 4} \, \, y_u^{\, i \, 1 \, i \, 2} \, \, \left( \, s_{\scriptscriptstyle Y} \, \, \widetilde{\mu} \, \, c_{\scriptscriptstyle Y} \, \, \overline{y_u}^{pr} \, \, \left( \, - \, 3 \, \, s_{\scriptscriptstyle Y} \, \, c_{\scriptscriptstyle Y} \, \, a_u^{\, pr} \, + \, \widetilde{\mu} \, \, y_u^{\, pr} \, \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \, \, 2} \, \right) \, + \, \left( \, c_{\scriptscriptstyle Y}^{\, \, \, 2} \, - \, 2 \, \, s_{\scriptscriptstyle Y}^{\, \,
                                                                                                                                                                                                                                                                            \overline{a_{u}}^{\text{pr}} \left( s_{\gamma} \; c_{\gamma} \; a_{u}^{\text{pr}} \; \left( -2 \; c_{\gamma}^{\; 2} + s_{\gamma}^{\; 2} \right) \right. \\ \left. + \; \widetilde{\mu} \; y_{u}^{\text{pr}} \; \left( c_{\gamma}^{\; 4} - s_{\gamma}^{\; 2} \; c_{\gamma}^{\; 2} + s_{\gamma}^{\; 4} \right) \right) \right) \; \text{LF}_{\text{1,1,0}} \left[ m_{\tilde{q}}^{\; p} \; , \; m_{\tilde{u}}^{\; r} \right] + \left. \tilde{\mu} \; y_{u}^{\text{pr}} \; \left( c_{\gamma}^{\; 4} - s_{\gamma}^{\; 2} \; c_{\gamma}^{\; 2} + s_{\gamma}^{\; 4} \right) \right) \right) \; \text{LF}_{\text{1,1,0}} \left[ m_{\tilde{q}}^{\; p} \; , \; m_{\tilde{u}}^{\; r} \right] + \left. \tilde{\mu} \; \tilde{\mu} \; a_{u}^{\; r} \; \right] + \left. \tilde{\mu} \; a_{u}^{\; r} \; a_{u}^{\;
                                                                                                                                                                      s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{o}^{2}} \; \left(y_{d}^{\text{i3i4}} \; \overline{y_{u}}^{\text{pr}} \; y_{u}^{\text{pi2}} \; y_{u}^{\text{i1r}} + \overline{y_{d}}^{\text{pr}} \; y_{d}^{\text{pi4}} \; y_{d}^{\text{i3r}} \; y_{u}^{\text{i1i2}}\right) \; \mathsf{LF}_{1,1,0} \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p} \,, \; \widetilde{\mu}\, \right] \; + \; \left[\, m_{\tilde{q}}^{\; p
                                                                                                                                                                      \overline{a_u}^{\text{pr}} \left( s_{\gamma} \; c_{\gamma} \; a_u^{\text{pr}} \; \left( c_{\gamma}^{\; 2} - s_{\gamma}^{\; 2} \right) \; - \; \widetilde{\mu} \; y_u^{\text{pr}} \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \right) \right) \; \text{LF}_{2,1,0} \left[ m_{\widetilde{u}}^{\; r} \; , \; m_{\widetilde{q}}^{\; r} \right] \; + \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right) \; \text{LF}_{2,1,0} \left[ m_{\widetilde{u}}^{\; r} \; , \; m_{\widetilde{q}}^{\; r} \right] \; + \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right) \; \text{LF}_{2,1,0} \left[ m_{\widetilde{u}}^{\; r} \; , \; m_{\widetilde{q}}^{\; r} \right] \; + \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right) \; \text{LF}_{2,1,0} \left[ m_{\widetilde{u}}^{\; r} \; , \; m_{\widetilde{q}}^{\; r} \right] \; + \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right] \; + \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; + \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \right) \; + \; \left( c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right) \; \left( c_{\gamma}^{\; 4}
                                                                                                                                                                      3 \ \frac{1}{m_{\text{p}}^2} \ y_{\text{d}}^{\, \text{i3i4}} \ y_{\text{u}}^{\, \text{i1i2}} \ \left( s_{\text{y}} \ \widetilde{\mu} \ c_{\text{y}} \ \overline{y_{\text{u}}}^{\text{pr}} \right. \left( -2 \ s_{\text{y}} \ c_{\text{y}} \ a_{\text{u}}^{\text{pr}} + \widetilde{\mu} \ y_{\text{u}}^{\, \text{pr}} \ \left( c_{\text{y}}^{\, 2} - s_{\text{y}}^{\, 2} \right) \right) \ + \\
                                                                                                                                                                                                                                                                            \overline{a_{u}}^{pr} \left( s_{\gamma} \; c_{\gamma} \; a_{u}^{\; pr} \; \left( - \, c_{\gamma}^{\; \; 2} + \, s_{\gamma}^{\; \; 2} \right) \; + \; \widetilde{\mu} \; y_{u}^{\; pr} \; \left( \, c_{\gamma}^{\; \; 4} + \, s_{\gamma}^{\; \; 4} \right) \, \right) \; \right) \; \text{LF}_{3,1,-1} \left[ \, m_{\tilde{u}}^{\; \; r} \; , \; m_{\tilde{q}}^{\; \; p} \, \right] \; + \; \widetilde{\mu} \; y_{u}^{\; \; pr} \; \left( \, c_{\gamma}^{\; \; 4} + \, s_{\gamma}^{\; \; 4} \right) \, \right) \; \text{LF}_{3,1,-1} \left[ \, m_{\tilde{u}}^{\; \; r} \; , \; m_{\tilde{q}}^{\; \; p} \, \right] \; + \; \widetilde{\mu} \; y_{u}^{\; \; pr} \; \left( \, c_{\gamma}^{\; \; 4} + \, s_{\gamma}^{\; \; 4} \right) \, \right) \; \text{LF}_{3,1,-1} \left[ \, m_{\tilde{u}}^{\; \; r} \; , \; m_{\tilde{q}}^{\; \; p} \, \right] \; + \; \widetilde{\mu} \; y_{u}^{\; \; pr} \; \left( \, c_{\gamma}^{\; \; 4} + \, s_{\gamma}^{\; \; 4} \right) \; \right] \; \text{LF}_{3,1,-1} \left[ \, m_{\tilde{u}}^{\; \; r} \; , \; m_{\tilde{q}}^{\; \; p} \, \right] \; + \; \widetilde{\mu} \; y_{u}^{\; \; pr} \; \left( \, c_{\gamma}^{\; \; 4} + \, s_{\gamma}^{\; \; 4} \right) \; \right] \; \text{LF}_{3,1,-1} \left[ \, m_{\tilde{u}}^{\; \; r} \; , \; m_{\tilde{q}}^{\; \; p} \, \right] \; + \; \widetilde{\mu} \; y_{u}^{\; \; pr} \; \left( \, c_{\gamma}^{\; \; 4} + \, s_{\gamma}^{\; \; 4} \right) \; \right] \; \text{LF}_{3,1,-1} \left[ \, m_{\tilde{u}}^{\; \; r} \; , \; m_{\tilde{q}}^{\; \; p} \, \right] \; + \; \widetilde{\mu} \; y_{u}^{\; \; pr} \; \left( \, c_{\gamma}^{\; \; 4} + \, s_{\gamma}^{\; \; 4} \right) \; \right] \; \text{LF}_{3,1,-1} \left[ \, m_{\tilde{u}}^{\; \; r} \; , \; m_{\tilde{q}}^{\; \; p} \, \right] \; + \; \widetilde{\mu} \; y_{u}^{\; \; pr} \; \left( \, c_{\gamma}^{\; \; p} \; , \; m_{\tilde{q}}^{\; \; p} \; \right) \; + \; \widetilde{\mu} \; y_{u}^{\; \; p} \; \left( \, c_{\gamma}^{\; \; p} \; , \; m_{\tilde{q}}^{\; \; p} \; \right) \; + \; \widetilde{\mu} \; y_{u}^{\; \; p} \; \right] \; + \; \widetilde{\mu} \; y_{u}^{\; \; p} \; + \; \widetilde{\mu} \; y_{
                                                                                                                                                                      6\; s_{_{Y}}\; c_{_{Y}}\; y_{_{d}}{}^{\text{i3i4}}\; y_{_{u}}{}^{\text{i1i2}}\; \left(-\, s_{_{Y}}\; \overline{a_{_{u}}}{}^{\text{pr}} + \widetilde{\mu}\; c_{_{Y}}\; \overline{y_{_{u}}}{}^{\text{pr}}\right) \; \left(-\, s_{_{Y}}\; a_{_{u}}{}^{\text{pr}} + \widetilde{\mu}\; c_{_{Y}}\; y_{_{u}}{}^{\text{pr}}\right) \; \mathsf{LF_{5,1,-2}}\left[m_{\bar{u}}{}^{\text{r}}\;,\; m_{\bar{q}}{}^{\text{p}}\right] \; + \, \widetilde{\mu}\; c_{_{Y}}\; y_{_{u}}{}^{\text{pr}} + \widetilde{\mu}\; c_{_{Y}}\; y_{_{u}}{}^{\text{pr}}\right] \; + \, \widetilde{\mu}\; c_{_{Y}}\; y_{_{u}}{}^{\text{pr}} + \, \widetilde{\mu}\; c_{_{Y}}\; y_{_{u}}{}^{\text{pr}} + \, \widetilde{\mu}\; c_{_{Y}}\; y_{_{u}}{}^{\text{pr}} + \, \widetilde{\mu}\; c_{_{Y}}\; y_{_{u}}{}^{\text{pr}}\right) \; + \, \widetilde{\mu}\; c_{_{Y}}\; y_{_{u}}{}^{\text{pr}} +
                                                                                                                                                                                                            {\rm s_{\gamma}}\; {\rm c_{\gamma}}\; \frac{1}{{\rm m_{o}}^{2}}\; \overline{{\rm y_{u}}}^{\rm pr}\; \left({\rm y_{d}}^{\rm i3i4}\; {\rm y_{u}}^{\rm pi2}\; {\rm y_{u}}^{\rm i1r} + {\rm y_{d}}^{\rm pi4}\; {\rm y_{u}}^{\rm i1i2}\; {\rm y_{u}}^{\rm i3r}\right)\; {\rm LF_{1,1,0}}\left[\,{\rm m_{\tilde{u}}}^{\rm r}\,,\; \widetilde{\mu}\,\right] \; - \; {\rm constant}\; 
                                                                                                                                                                 \mathbf{m_{1}} \; \widetilde{\mu} \; \mathbf{g_{1}}^{2} \; \frac{1}{\mathbf{m_{e}}^{2}} \; \mathbf{y_{d}}^{\mathbf{i3i4}} \; \mathbf{y_{u}}^{\mathbf{i1i2}} \; \mathbf{LF_{2,1,0}} \left[ \widetilde{\mu} \; , \; \mathbf{m_{1}} \right] \; \left( \mathbf{c_{\chi}}^{2} - \mathbf{s_{\chi}}^{2} \right)^{2} \; + \\ \mathbf{m_{1}} \; \widetilde{\mu} \; \mathbf{g_{1}}^{2} \; \mathbf{m_{2}}^{2} \; \mathbf{y_{d}}^{\mathbf{i3i4}} \; \mathbf{y_{u}}^{\mathbf{i1i2}} \; \mathbf{LF_{2,1,0}} \left[ \widetilde{\mu} \; , \; \mathbf{m_{1}} \right] \; \left( \mathbf{c_{\chi}}^{2} - \mathbf{s_{\chi}}^{2} \right)^{2} \; + \\ \mathbf{m_{1}} \; \widetilde{\mu} \; \mathbf{g_{1}}^{2} \; \mathbf{g
                                                                                                                                                                 2\;\mathsf{m_1}\stackrel{\cdot}{\tilde{\mu}}\;\mathsf{g_1}^2\;\mathsf{s_{\gamma}}^2\;\mathsf{c_{\gamma}}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{3,1,0}}[\,\widetilde{\mu}\,,\,\mathsf{m_1}\,]\;+\;4\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_1}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{4,1,-2}}[\,\widetilde{\mu}\,,\,\mathsf{m_1}\,]\;+\;4\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_1}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{4,1,-2}}[\,\widetilde{\mu}\,,\,\mathsf{m_1}\,]\;+\;4\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_1}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{4,1,-2}}[\,\widetilde{\mu}\,,\,\mathsf{m_1}\,]\;+\;4\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_1}^2\;\mathsf{g_1}^2\;\mathsf{g_1}^2\;\mathsf{g_2}^2\;\mathsf{g_1}^2\;\mathsf{g_2}^2\;\mathsf{g_1}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_1}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2}^2\;\mathsf{g_2
                                                                                                                                                                      6 \mathrm{m_1}\,\widetilde{\mu}\,\mathrm{g_1}^2\,\mathrm{s_{\gamma}}^2\,\mathrm{c_{\gamma}}^2\,\mathrm{y_d}^{\mathrm{i3i4}}\,\mathrm{y_u}^{\mathrm{i1i2}}\,\mathrm{LF_{4,1,-1}}\,[\widetilde{\mu}\,,\,\mathrm{m_1}] -
                                                                                                                                                                      2\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{1}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-3}}[\,\widetilde{\mu}\,,\,\mathsf{m_{1}}\,]\;-4\;\mathsf{m_{1}}\;\widetilde{\mu}\;\mathsf{g_{1}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}[\,\widetilde{\mu}\,,\,\mathsf{m_{1}}\,]\;-4\;\mathsf{m_{1}}\;\widetilde{\mu}\;\mathsf{g_{1}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}[\,\widetilde{\mu}\,,\,\mathsf{m_{1}}\,]\;-4\;\mathsf{m_{1}}\;\widetilde{\mu}\;\mathsf{g_{1}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}[\,\widetilde{\mu}\,,\,\mathsf{m_{1}}\,]\;-4\;\mathsf{m_{1}}\;\widetilde{\mu}\;\mathsf{g_{1}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}[\,\widetilde{\mu}\,,\,\mathsf{m_{1}}\,]\;-4\;\mathsf{m_{1}}\;\widetilde{\mu}\;\mathsf{g_{1}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}[\,\widetilde{\mu}\,,\,\,\mathsf{m_{1}}\,]\;-4\;\mathsf{m_{1}}\;\widetilde{\mu}\;\mathsf{g_{1}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}[\,\widetilde{\mu}\,,\,\,\mathsf{m_{1}}\,]\;-4\;\mathsf{m_{1}}\;\widetilde{\mu}\;\mathsf{g_{1}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}[\,\widetilde{\mu}\,,\,\,\mathsf{m_{1}}\,]\;
                                                                                                                                                                      3 \; m_2 \; \widetilde{\mu} \; g_2^2 \; \frac{1}{m_0^2} \; y_d^{\, \textbf{i3i4}} \; y_u^{\, \textbf{i1i2}} \; \mathsf{LF}_{\textbf{2,1,0}} \left[ \, \widetilde{\mu} \, , \; m_2 \, \right] \; \left( \, c_{\gamma}^{\, \, 2} - s_{\gamma}^{\, \, 2} \, \right)^{\, 2} \; + \\
                                                                                                                                                                      3\;g_{2}^{2}\;\frac{1}{\mathsf{m}_{\varpi}^{2}}\;y_{d}^{\,\dot{1}3\dot{1}4}\;y_{u}^{\,\dot{1}1\dot{1}2}\;\left(-\,2\;s_{\gamma}\;c_{\gamma}\;\mathsf{m}_{\varpi}^{\,2}\,+\,\mathsf{m}_{2}\;\widetilde{\mu}\;\left(c_{\gamma}^{\,2}\,-\,s_{\gamma}^{\,2}\right)^{\,2}\right)\;\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}_{2}\,\right]\,-\,\mathsf{LF}_{3,1,-1}\left[\,\widetilde{\mu}\,,\;\mathsf{m}
                                                                                                                                                                      6\;\mathsf{m_2}\;\widetilde{\mu}\;\mathsf{g_2}^2\;\mathsf{s_\gamma}^2\;\mathsf{c_\gamma}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{3,1,0}}\;[\widetilde{\mu}\;,\;\mathsf{m_2}\;]\;+\;12\;\mathsf{s_\gamma}\;\mathsf{c_\gamma}\;\mathsf{g_2}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{4,1,-2}}\;[\widetilde{\mu}\;,\;\mathsf{m_2}\;]\;+\;12\;\mathsf{s_\gamma}\;\mathsf{c_\gamma}\;\mathsf{g_2}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{4,1,-2}}\;[\widetilde{\mu}\;,\;\mathsf{m_2}\;]\;+\;12\;\mathsf{s_\gamma}\;\mathsf{c_\gamma}\;\mathsf{g_2}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{4,1,-2}}\;[\widetilde{\mu}\;,\;\mathsf{m_2}\;]\;+\;12\;\mathsf{s_\gamma}\;\mathsf{c_\gamma}\;\mathsf{g_2}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i3i
                                                                                                                                                                 18 m_2 \tilde{\mu} g_2^2 s_{\gamma}^2 c_{\gamma}^2 y_d^{i3i4} y_u^{i1i2} LF_{4,1,-1} [\tilde{\mu}, m_2] -
                                                                                                                                                                      6\;\mathsf{s_{\gamma}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{2}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-3}}\left[\widetilde{\mu}\;\mathsf{,}\;\mathsf{m_{2}}\right]\;-\;\mathsf{12}\;\mathsf{m_{2}}\;\widetilde{\mu}\;\mathsf{g_{2}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}\left[\widetilde{\mu}\;\mathsf{,}\;\mathsf{m_{2}}\right]\;-\;\mathsf{12}\;\mathsf{m_{2}}\;\widetilde{\mu}\;\mathsf{g_{2}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}\left[\widetilde{\mu}\;\mathsf{,}\;\mathsf{m_{2}}\right]\;-\;\mathsf{12}\;\mathsf{m_{2}}\;\widetilde{\mu}\;\mathsf{g_{2}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{c_{\gamma}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;\mathsf{LF_{5,1,-2}}\left[\widetilde{\mu}\;\mathsf{,}\;\mathsf{m_{2}}\right]\;-\;\mathsf{12}\;\mathsf{m_{2}}\;\widetilde{\mu}\;\mathsf{g_{2}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2}\;\mathsf{s_{\gamma}}^{2
                                                                                                                                                                              \frac{1}{4} \; \mathsf{S}_{\textrm{Y}} \; \mathsf{C}_{\textrm{Y}} \; \frac{1}{\mathsf{m}_{\textrm{g}}^{2}} \; \overline{\mathsf{y}_{\textrm{d}}}^{\textrm{pr}} \; \left( \mathsf{y}_{\textrm{d}}^{\textrm{ilr}} \; \mathsf{y}_{\textrm{d}}^{\textrm{i3i4}} \; \mathsf{y}_{\textrm{u}}^{\textrm{pi2}} + \mathsf{y}_{\textrm{d}}^{\textrm{pi4}} \; \mathsf{y}_{\textrm{d}}^{\textrm{i3r}} \; \mathsf{y}_{\textrm{u}}^{\textrm{i1i2}} \right) \; \mathsf{LF}_{2,1,-1} \big[ \widetilde{\mu} \; , \; \mathsf{m}_{\breve{\textrm{d}}}^{\textrm{r}} \big] \; - \; \mathsf{m}_{\breve{\textrm{d}}}^{\textrm{r}} \big[ \; \mathsf{m}_{\textrm{d}}^{\textrm{r}} \; \mathsf{m}_{\textrm{d}}^{\textrm{r}} \big] \; + \; \mathsf{v}_{\textrm{d}}^{\textrm{pi4}} \; \mathsf{y}_{\textrm{d}}^{\textrm{i3r}} \; \mathsf{y}_{\textrm{u}}^{\textrm{i1i2}} \big] \; \mathsf{LF}_{2,1,-1} \big[ \; \widetilde{\mu} \; , \; \mathsf{m}_{\breve{\textrm{d}}}^{\textrm{r}} \; \mathsf{m}_{\textrm{d}}^{\textrm{r}} \; \mathsf{m}_{\textrm{d}}^{\textrm{r}} \big] \; + \; \mathsf{v}_{\textrm{d}}^{\textrm{pi4}} \; \mathsf{v}_{\textrm{d}}^{\textrm{pi4}} \; \mathsf{v}_{\textrm{d}}^{\textrm{i3r}} \; \mathsf{v}_{\textrm{d}}^{\textrm{i3r}} \big[ \; \mathsf{v}_{\textrm{d}}^{\textrm{r}} \; \mathsf{v}_{\textrm{d}}^{\textrm{r}} \; \mathsf{v}_{\textrm{d}}^{\textrm{r}} \, \mathsf{v}_{\textrm{d}}^{\textrm{r}} \big] \; + \; \mathsf{v}_{\textrm{d}}^{\textrm{pi4}} \; \mathsf{v}_{\textrm{d}}^{\textrm{r}} \; \mathsf{v}_{\textrm{d}}^{\textrm{r}} \, \mathsf{v}_{\textrm{
                                                                                                                                                                              \frac{1}{2} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{o}^{2}} \; \left( y_{d}^{\, \text{i3i4}} \; \overline{y_{u}}^{\text{pr}} \; y_{u}^{\, \text{pi2}} \; y_{u}^{\, \text{i1r}} + \overline{y_{d}}^{\text{pr}} \; y_{d}^{\, \text{pi4}} \; y_{d}^{\, \text{i3r}} \; y_{u}^{\, \text{i1i2}} \right) \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \, p} \right] \; - \; \mathsf{LF}_{2,1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\bar{q}}^{\, \,
                                                                                                                                                                          \frac{1}{4} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{o}^{2}} \; \overline{y_{u}}^{pr} \; \left( y_{d}^{\text{i3i4}} \; y_{u}^{\text{pi2}} \; y_{u}^{\text{i1r}} + y_{d}^{\text{pi4}} \; y_{u}^{\text{i1i2}} \; y_{u}^{\text{i3r}} \right) \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; (1 + c_{\gamma})^{-1} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; (1 + c_{\gamma})^{-1} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; (1 + c_{\gamma})^{-1} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; c_{\gamma} \; \left[ \widetilde{\mu} 
                                                                                                                                                                                                            \mathsf{m_1} \; \mathsf{c_{Y}} \; \mathsf{g_1}^2 \; \tfrac{1}{\mathsf{m_0}^2} \; \mathsf{y_u}^{\text{ili2}} \; \left( \mathsf{s_{Y}} \; \mathsf{a_d}^{\text{i3i4}} + \widetilde{\mu} \; \mathsf{c_{Y}} \; \mathsf{y_d}^{\text{i3i4}} \right) \; \mathsf{LF_{1,1,1,0}} \left[ \mathsf{m_1} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i4}} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \right] \; + \\ \mathsf{m_1} \; \mathsf{c_{Y}} \; \mathsf{y_d}^{\text{i3i4}} + \widetilde{\mu} \; \mathsf{c_{Y}} \; \mathsf{y_d}^{\text{i3i4}} \right] \; \mathsf{LF_{1,1,1,0}} \left[ \mathsf{m_1} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i4}} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \right] \; + \\ \mathsf{m_1} \; \mathsf{c_{Y}} \; \mathsf{y_d}^{\text{i3i4}} + \widetilde{\mu} \; \mathsf{c_{Y}} \; \mathsf{y_d}^{\text{i3i4}} \right] \; \mathsf{LF_{1,1,1,0}} \left[ \mathsf{m_1} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i3}} \right] \; + \\ \mathsf{m_2} \; \mathsf{m_3} \; \mathsf{m_3}^{\text{i3i4}} + \widetilde{\mu} \; \mathsf{m_3}^{\text{i3i4}} + \widetilde{\mu} \; \mathsf{m_3}^{\text{i3i4}} + \widetilde{\mu} \; \mathsf{m_3}^{\text{i3i4}} \right] \; \mathsf{LF_{1,1,1,0}} \left[ \mathsf{m_1} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i3i4}} \, , \; \mathsf{m_{\tilde{q}}}^{\text{i3i4}} \right] \; + \\ \mathsf{m_2} \; \mathsf{m_3} \; \mathsf{m_3} \; \mathsf{m_3}^{\text{i3i4}} + \widetilde{\mu} \; \mathsf{m_3}^{\text{i3i4}} + \widetilde{\mu} \; \mathsf{m_3}^{\text{i3i4}} + \widetilde{\mu} \; \mathsf{m_3}^{\text{i3i4}} \right] \; + \\ \mathsf{m_3} \; \mathsf{
                                                                                                                                                                              \frac{1}{36} \; \mathsf{m_1} \; \mathsf{s_{Y}} \; \mathsf{g_1}^2 \; \mathsf{y_u}^{\texttt{ili2}} \; \left( \mathsf{c_{Y}} \; \mathsf{a_d}^{\texttt{i3i4}} - \mathsf{s_{Y}} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\texttt{i3i4}} \right) \; \mathsf{LF_{2,2,1,-1}} \big[ \, \mathsf{m_1} \, , \; \mathsf{m_{\tilde{d}}}^{\texttt{i4}} \, , \; \mathsf{m_{\tilde{q}}}^{\texttt{i3}} \big] \; - \; \mathsf{m_{\tilde{q}}}^{\texttt{i3}} \; \mathsf{m_{\tilde{q}}}^{\texttt{i3}} \, , \; \mathsf
                                                                                                                                                                                  \frac{1}{3} s_{\gamma} c_{\gamma} g_{1}^{2} \frac{1}{m_{e}^{2}} y_{d}^{1314} y_{u}^{1112} LF_{1,1,1,-1}[m_{1},m_{\bar{d}}^{14},\widetilde{\mu}] +
                                                                                                                                                                          \frac{1}{3} \; m_1 \; \tilde{\mu} \; g_1^{\; 2} \; \frac{1}{m_{\scriptscriptstyle D}^{\; 2}} \; c_{\scriptscriptstyle \Upsilon}^{\; \; 2} \; y_d^{\; i3i4} \; y_u^{\; i1i2} \; \mathsf{LF}_{1,1,1,0} \big[ \, m_1 \, , \; m_{\bar{d}}^{\; \; i4} \, , \; \tilde{\mu} \, \big] \; - \; c_{\scriptscriptstyle \Upsilon}^{\; \; 2} \; y_d^{\; i3i4} \; y_u^{\; \; i1i2} \; \mathsf{LF}_{1,1,1,0} \big[ \, m_1 \, , \; m_{\bar{d}}^{\; \; i4} \, , \; \tilde{\mu} \, \big] \; - \; c_{\scriptscriptstyle \Upsilon}^{\; \; 2} \; y_d^{\; \; i3i4} \; y_u^{\; \; \; i1i2} \; \mathsf{LF}_{1,1,1,0} \big[ \, m_1 \, , \; m_{\bar{d}}^{\; \; i4} \, , \; \tilde{\mu} \, \big] \; - \; c_{\scriptscriptstyle \Upsilon}^{\; \; 2} \; y_d^{\; \; i3i4} \; y_u^{\; \; \; \; i1i2} \; \mathsf{LF}_{1,1,1,0} \big[ \, m_1 \, , \; m_{\bar{d}}^{\; \; i4} \, , \; \tilde{\mu} \, \big] \; - \; c_{\scriptscriptstyle \Upsilon}^{\; \; 2} \; y_d^{\; \; \; i3i4} \; y_u^{\; \; \; \; i1i2} \; \mathsf{LF}_{1,1,1,0} \big[ \, m_1 \, , \; m_{\bar{d}}^{\; \; \; i4} \, , \; \tilde{\mu} \, \big] \; - \; c_{\scriptscriptstyle \Upsilon}^{\; \; 2} \; y_d^{\; \; \; \; i3i4} \; y_u^{\; \; \; \; \; i1i2} \; \mathsf{LF}_{1,1,1,0} \big[ \, m_1 \, , \; m_{\bar{d}}^{\; \; \; i4} \, , \; \tilde{\mu} \, \big] \; - \; c_{\scriptscriptstyle \Upsilon}^{\; \; \; i4} \; y_u^{\; \; \; \; i4i4} \; , \; \tilde{\mu}^{\; \; i4i4} \; , \; \tilde{\mu}^{\; \; \; i4i4} \; , \; \tilde{\mu}^{\; \;
                                                                                                                                                                          \frac{2}{9} \; m_1 \; s_{\gamma} \; g_1{}^2 \; \frac{1}{m_0{}^2} \; y_d{}^{i3i4} \; \left( c_{\gamma} \; a_u{}^{i1i2} + s_{\gamma} \; \widetilde{\mu} \; y_u{}^{i1i2} \right) \; LF_{1,1,1,0} \left[ m_1 \, , \; m_{\tilde{q}}{}^{i1} \, , \; m_{\tilde{u}}{}^{i2} \right] \; + \; \frac{1}{3} \; m_1 \; s_{\gamma} \; g_1{}^2 \; \frac{1}{m_0{}^2} \; y_d{}^{i3i4} \; \left( c_{\gamma} \; a_u{}^{i1i2} + s_{\gamma} \; \widetilde{\mu} \; y_u{}^{i1i2} \right) \; LF_{1,1,1,0} \left[ m_1 \, , \; m_{\tilde{q}}{}^{i1} \, , \; m_{\tilde{u}}{}^{i2} \right] \; + \; \frac{1}{3} \; m_1 \; s_{\gamma} \; g_1{}^2 \; \frac{1}{m_0{}^2} \; y_d{}^{i3i4} \; \left( c_{\gamma} \; a_u{}^{i1i2} + s_{\gamma} \; \widetilde{\mu} \; y_u{}^{i1i2} \right) \; LF_{1,1,1,0} \left[ m_1 \, , \; m_{\tilde{q}}{}^{i1} \, , \; m_{\tilde{u}}{}^{i2} \right] \; + \; \frac{1}{3} \; m_1 \; s_{\gamma} \; g_1{}^2 \; \frac{1}{m_0{}^2} \; y_d{}^{i3i4} \; \left( c_{\gamma} \; a_u{}^{i1i2} + s_{\gamma} \; \widetilde{\mu} \; y_u{}^{i1i2} \right) \; LF_{1,1,1,0} \left[ m_1 \, , \; m_{\tilde{q}}{}^{i1} \, , \; m_{\tilde{u}}{}^{i2} \right] \; + \; \frac{1}{3} \; m_1 \; s_{\gamma} \; \frac{1}{m_0{}^2} \; 
                                                                                                                                                                                                                                 \mathsf{m_1} \; \mathsf{c_{Y}} \; \mathsf{g_1}^2 \; \mathsf{y_d}^{\mathsf{i3i4}} \; \left( - \, \mathsf{s_{Y}} \; \mathsf{a_u}^{\mathsf{i1i2}} + \widetilde{\mu} \; \mathsf{c_{Y}} \; \mathsf{y_u}^{\mathsf{i1i2}} \right) \; \mathsf{LF_{2,2,1,-1}} \big[ \, \mathsf{m_1} \, , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i1}} \, , \; \mathsf{m_{\tilde{u}}}^{\mathsf{i2}} \big] \; + \\
                                                                                                                                                                          \frac{1}{6} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{\; 2} \; \frac{1}{m_{0}^{\; 2}} \; y_{d}^{\; 1314} \; y_{u}^{\; 1112} \; LF_{1,1,1,-1} \big[ \, m_{1} \, , \; m_{\bar{q}}^{\; \; 11} \, , \; \tilde{\mu} \, \big] \; - \; \frac{1}{2} \; m_{1}^{\; 2} \; , \; \tilde{\mu} \, \Big] \; - \; \frac{1}{2} \; m_{1}^{\; 2} \; m_{2}^{\; 2} \; m_{1}^{\; 2} \; m_{2}^{\; 2} \; m_{2}
                                                                                                                                                                              \frac{1}{6} \, m_1 \, \widetilde{\mu} \, g_1^2 \, \frac{1}{m_0^2} \, s_{\gamma}^2 \, y_d^{\, i3i4} \, y_u^{\, i1i2} \, LF_{1,1,1,0} \big[ m_1, \, m_{\tilde{q}}^{\, i1}, \, \widetilde{\mu} \big] +
                                                                                                                                                                              \frac{1}{36} \; \mathsf{m_1} \; \mathsf{s_{Y}} \; \mathsf{g_1}^2 \; \mathsf{y_u}^{\mathsf{ili2}} \; \left( \mathsf{c_{Y}} \; \mathsf{a_d}^{\mathsf{i3i4}} - \mathsf{s_{Y}} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\mathsf{i3i4}} \right) \; \mathsf{LF_{2,2,1,-1}} \big[ \, \mathsf{m_1} \, , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \, , \; \mathsf{m_{\tilde{d}}}^{\mathsf{i4}} \big] \; - \; \mathsf{m_{\tilde{q}}}^{\mathsf{i4}} \, . 
                                                                                                                                                                                       \frac{1}{6} \, s_{\gamma} \, c_{\gamma} \, g_{1}^{2} \, \frac{1}{m_{o}^{2}} \, y_{d}^{i3i4} \, y_{u}^{i1i2} \, LF_{1,1,1,-1} \big[ m_{1}, \, m_{\bar{q}}^{i3}, \, \widetilde{\mu} \big] +
                                                                                                                                                                          \frac{1}{6}~m_1~\widetilde{\mu}~g_1^2~\frac{1}{m_o^2}~c_\gamma^2~y_d^{\phantom{\dagger}3\dot{1}4}~y_u^{\phantom{\dagger}1\dot{1}\dot{1}2}~\mathsf{LF}_{1,1,1,0}\left[m_1,~m_{\bar{q}}^{\phantom{\dagger}\dot{1}3},~\widetilde{\mu}\right]~+
                                                                                                                                                                              \frac{1}{18} \; \mathbf{m_1} \; \mathbf{c_{\gamma}} \; \mathbf{g_1}^2 \; \mathbf{y_d}^{\mathbf{i3i4}} \; \left( - \, \mathbf{s_{\gamma}} \; \mathbf{a_u}^{\mathbf{i1i2}} + \widetilde{\mu} \; \mathbf{c_{\gamma}} \; \mathbf{y_u}^{\mathbf{i1i2}} \right) \; \mathbf{LF_{2,2,1,-1}} \left[ \, \mathbf{m_1} \, , \; \mathbf{m_{\tilde{u}}}^{\mathbf{i2}} \, , \; \mathbf{m_{\tilde{q}}}^{\mathbf{i1}} \, \right] \; - \; \mathbf{m_{\tilde{u}}}^{\mathbf{i2}} \; , \; \mathbf{m_{\tilde{u}}}^{\mathbf{i2}} 
                                                                                                                                                                              \frac{2}{3} \, s_{\gamma} \, c_{\gamma} \, g_{1}^{2} \, \frac{1}{m_{o}^{2}} \, y_{d}^{i3i4} \, y_{u}^{i1i2} \, LF_{1,1,1,-1} [m_{1}, m_{\tilde{u}}^{i2}, \tilde{\mu}] +
                                                                                                                                                                          \frac{2}{3}~m_1~\widetilde{\mu}~g_1^2~\frac{1}{m_o^2}~s_\gamma^2~y_d^{~13i4}~y_u^{~11i2}~LF_{1,1,1,0}\bigl[\,m_1,~m_{\tilde{u}}^{~i2},~\widetilde{\mu}\,\bigr]~+
                                                                                                                                                                                                                \mathsf{s_{Y}} \, \mathsf{c_{Y}} \, \mathsf{g_{1}}^{2} \, \mathsf{y_{d}}^{\mathsf{i3i4}} \, \mathsf{y_{u}}^{\mathsf{i1i2}} \, \mathsf{LF_{2,2,1,-2}} \big[ \mathsf{m_{1}}, \, \widetilde{\mu}, \, \mathsf{m_{\tilde{d}}}^{\mathsf{i4}} \big] \, + \\
                                                                                                                                                                                                                \mathbf{m_{1}} \; \tilde{\mu} \; \mathbf{g_{1}}^{2} \; \mathbf{s_{\gamma}}^{2} \; \mathbf{y_{d}}^{\mathbf{i3i4}} \; \mathbf{y_{u}}^{\mathbf{i1i2}} \; \mathbf{LF_{2,2,1,-1}} \big[ \mathbf{m_{1}}, \; \tilde{\mu}, \; \mathbf{m_{\tilde{d}}}^{\mathbf{i4}} \big] \; - \; \\
                                                                                                                                                                                                                                 \mathsf{s}_{\gamma}\,\mathsf{c}_{\gamma}\,\mathsf{g_{1}}^{2}\,\mathsf{y_{d}}^{\mathsf{i3i4}}\,\mathsf{y_{u}}^{\mathsf{i1i2}}\,\mathsf{LF}_{\mathsf{2,2,1,-2}}\big[\mathsf{m}_{\mathsf{1}},\,\widetilde{\mu}\,,\,\mathsf{m_{\tilde{q}}}^{\mathsf{i1}}\big]\,-\,
                                                                                                                                                                          \frac{\text{1}}{\text{12}} \text{ m}_{1} \, \widetilde{\mu} \, \text{g}_{1}^{\, 2} \, \text{c}_{\gamma}^{\, 2} \, \text{y}_{\text{d}}^{\, \text{i3i4}} \, \text{y}_{\text{u}}^{\, \text{i1i2}} \, \text{LF}_{2,2,1,,-1} \big[ \, \text{m}_{\text{1}} \, , \, \widetilde{\mu} \, , \, \text{m}_{\tilde{\text{q}}}^{\, \, \text{i1}} \big] \, + \\
                                                                                                                                                                                               \frac{1}{12} \, s_{\gamma} \, c_{\gamma} \, g_{1}^{\, 2} \, y_{d}^{\, i3i4} \, y_{u}^{\, i1i2} \, LF_{2,2,1,-2} \big[ m_{1}, \, \tilde{\mu}, \, m_{\tilde{q}}^{\, i3} \big] \, + \,
                                                                                                                                                                                                                    _{5}^{6} m<sub>1</sub> \widetilde{\mu} g<sub>1</sub><sup>2</sup> s<sub>\chi</sub><sup>2</sup> y<sub>d</sub><sup>i3i4</sup> y<sub>u</sub><sup>i1i2</sup> LF<sub>2,2,1,-1</sub>[m<sub>1</sub>, \widetilde{\mu}, m<sub>q</sub><sup>i3</sup>] +
                                                                                                                                                                              \frac{1}{3} \, s_{\gamma} \, c_{\gamma} \, g_{1}^{2} \, y_{d}^{i3i4} \, y_{u}^{i1i2} \, LF_{2,2,1,-2} \big[ m_{1}, \, \tilde{\mu}, \, m_{\tilde{u}}^{i2} \big] + 
                                                                                                                                                                              \frac{1}{3} \, m_1 \, \widetilde{\mu} \, g_1^2 \, c_{\gamma}^2 \, y_d^{i3i4} \, y_u^{i1i2} \, LF_{2,2,1,-1} \big[ m_1, \, \widetilde{\mu}, \, m_{\tilde{u}}^{i2} \big] -
                                                                                                                                                                          \frac{3}{2}~m_2~\tilde{\mu}~g_2^2~\frac{1}{m_0^2}~s_\gamma^2~y_d^{~i3i4}~y_u^{~i1i2}~LF_{1,1,1,0}\big[\,m_2\,,~m_{\tilde{q}}^{~i1}\,,~\tilde{\mu}\,\big]~-
                                                                                                                                                                                                                    s_{\gamma} c_{\gamma} g_{2}^{2} \frac{1}{m_{o}^{2}} y_{d}^{i3i4} y_{u}^{i1i2} LF_{1,1,1,-1}[m_{2}, m_{\tilde{q}}^{i3}, \tilde{\mu}] +
                                                                                                                                                                          \frac{3}{2} m_2 \tilde{\mu} g_2^2 \frac{1}{m_0^2} c_\gamma^2 y_d^{i3i4} y_u^{i1i2} LF<sub>1,1,1,0</sub> \left[m_2, m_{\tilde{q}}^{i3}, \tilde{\mu}\right] +
                                                                                                                                                                                                            s_{\gamma} c_{\gamma} g_2^2 y_d^{\dagger 3 i 4} y_u^{\dagger 1 i 2} LF_{2,2,1,-2}[m_2, \tilde{\mu}, m_{\tilde{q}}^{\dagger 1}] +
                                                                                                                                                                                                                m_2 \tilde{\mu} g_2^2 c_{\gamma}^2 y_d^{i3i4} y_u^{i1i2} LF_{2,2,1,-1}[m_2, \tilde{\mu}, m_{\tilde{q}}]
                                                                                                                                                                                                                    \textbf{s}_{\gamma} \; \textbf{c}_{\gamma} \; \textbf{g_2}^2 \; \textbf{y_d}^{\textbf{i3i4}} \; \textbf{y_u}^{\textbf{i1i2}} \; \textbf{LF_{2,2,1,-2}} \big[ \, \textbf{m}_{\textbf{2}} \, , \; \tilde{\mu} \, , \; \textbf{m}_{\tilde{\textbf{q}}}^{\textbf{i3}} \big] \; + \\
                                                                                                                                                                                                                \mathbf{m_2}\;\tilde{\boldsymbol{\mu}}\;\mathbf{g_2}^2\;\mathbf{s_{\gamma}}^2\;\mathbf{y_d}^{\mathbf{i3i4}}\;\mathbf{y_u}^{\mathbf{i1i2}}\;\mathbf{LF_{2,2,1,-1}}\big[\mathbf{m_2}\,,\,\tilde{\boldsymbol{\mu}}\,,\,\mathbf{m_{\tilde{q}}}^{\mathbf{i2i}}
                                                                                                                                                                                                                \textbf{m}_{3}\;\textbf{c}_{\gamma}\;\textbf{g}_{3}^{\;2}\;\frac{1}{\textbf{m}_{o}^{\;2}}\;\textbf{y}_{u}^{\;\textrm{ili2}}\;\left(\textbf{s}_{\gamma}\;\textbf{a}_{d}^{\;\textrm{i3i4}}+\widetilde{\mu}\;\textbf{c}_{\gamma}\;\textbf{y}_{d}^{\;\textrm{i3i4}}\right)\;\textrm{LF}_{\textrm{1,1,1,0}}\left[\textbf{m}_{\textrm{3}}\;,\;\textbf{m}_{\textrm{d}}^{\;\textrm{i4}}\;,\;\textbf{m}_{\textrm{q}}\right]
                                                                                                                                                                                                                \mathsf{m_3} \; \mathsf{s_{_{Y}}} \; \mathsf{g_{3}}^2 \; \tfrac{1}{\mathsf{m_{_{0}}}^2} \; \mathsf{y_d}^{\text{i3i4}} \; \left( \mathsf{c_{_{Y}}} \; \mathsf{a_u}^{\text{i1i2}} + \mathsf{s_{_{Y}}} \, \widetilde{\boldsymbol{\mu}} \; \mathsf{y_u}^{\text{i1i2}} \right) \; \mathsf{LF_{1,1,1,0}} \left[ \mathsf{m_{3}} \, , \, \mathsf{m_{\tilde{q}}}^{\text{i1}} , \, \mathsf{m_{\tilde{u}}}^{\text{i2}} \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}
                                                                                                                                                                                                                \textbf{m}_{3} \; \textbf{c}_{\gamma} \; \textbf{g}_{3}^{\; 2} \; \textbf{y}_{d}^{\; \textbf{i} \, \textbf{3} \, \textbf{i} \, \textbf{4}} \; \left( - \, \textbf{s}_{\gamma} \; \textbf{a}_{u}^{\; \, \textbf{i} \, \textbf{1} \, \textbf{i} \, \textbf{2}} + \, \widetilde{\mu} \; \textbf{c}_{\gamma} \; \textbf{y}_{u}^{\; \, \textbf{i} \, \textbf{1} \, \textbf{i} \, \textbf{2}} \right) \; \textbf{LF}_{\textbf{2},\textbf{2},\textbf{1},\textbf{-1}} \left[ \, \textbf{m}_{3} \, , \; \textbf{m}_{\tilde{q}}^{\; \, \textbf{i} \, \textbf{1}} \, , \; \textbf{m}_{\tilde{u}}^{\; \, \, \textbf{i} \, \textbf{2}} \right] \; + \, \widetilde{\mu} \; \textbf{c}_{\gamma} \; \textbf{y}_{u}^{\; \, \, \textbf{i} \, \textbf{1} \, \textbf{2}} \right] \; \textbf{LF}_{\textbf{2},\textbf{2},\textbf{1},\textbf{-1}} \left[ \, \textbf{m}_{3} \, , \; \textbf{m}_{\tilde{q}}^{\; \, \, \textbf{i} \, \textbf{1}} \, , \; \textbf{m}_{\tilde{u}}^{\; \, \, \textbf{i} \, \textbf{2}} \right] \; + \, \widetilde{\mu} \; \textbf{c}_{\gamma} \; \textbf{y}_{u}^{\; \, \, \, \textbf{i} \, \textbf{1}} \, , \; \textbf{m}_{\tilde{q}}^{\; \, \, \textbf{i} \, \textbf{3}} \; , \; \textbf{m}_{\tilde{q}}^{\; \, \, \textbf{i} \, \textbf{3}} \right] \; + \, \widetilde{\mu} \; \textbf{c}_{\gamma} \; \textbf{y}_{u}^{\; \, \, \, \textbf{i} \, \textbf{1}} \; \textbf{c}_{\gamma} \; \textbf{c}_{\gamma}
                                                                                                                                                                          \frac{2}{3}\;\mathsf{m_3}\;\mathsf{s_{Y}}\;\mathsf{g_{3}}^2\;\mathsf{y_u}^{\text{ili2}}\;\left(-\,\mathsf{c_{Y}}\;\mathsf{a_d}^{\,\text{i3i4}}\,+\,\mathsf{s_{Y}}\;\widetilde{\mu}\;\mathsf{y_d}^{\,\text{i3i4}}\right)\;\mathsf{LF_{2,2,1,-1}}\!\left[\mathsf{m_{3}}\,,\,\mathsf{m_{\tilde{q}}^{\,\text{i3}}}^{\,\text{i3}}\,,\,\mathsf{m_{\tilde{d}}^{\,\text{i4}}}\right]\,+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\,+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\right]\,+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^{\,\text{i3i4}}}\;+\,\mathsf{m_{\tilde{q}}^
                                                                                                                                                                                                                \mathsf{m_{3}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{3}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\left(-\,\mathsf{s_{\gamma}}\;\mathsf{a_{u}}^{\mathsf{i1i2}}+\widetilde{\mu}\;\mathsf{c_{\gamma}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\right)\;\mathsf{LF_{2,2,1,-1}}\big[\,\mathsf{m_{3}}\,,\;\mathsf{m_{\tilde{u}}}^{\mathsf{i2}}\,,\;\mathsf{m_{\tilde{q}}}^{\mathsf{i1}}\big]\;-
                                                                                                                                                                      s_{\gamma}\;\widetilde{\mu}\;\frac{1}{m_{o}^{2}}\;y_{d}^{\text{iir}}\;y_{d}^{\text{i3i4}}\;y_{u}^{\text{pi2}}\;\left(s_{\gamma}\;\overline{a_{d}}^{\text{pr}}+\widetilde{\mu}\;c_{\gamma}\;\overline{y_{d}}^{\text{pr}}\right)\;\mathsf{LF}_{1,1,1,0}\left[m_{\bar{d}}^{\text{-r}},\;m_{\bar{q}}^{\text{-p}},\;\widetilde{\mu}\right]\;+\left(m_{\bar{d}}^{\text{-r}},\;m_{\bar{q}}^{\text{-p}},\;\widetilde{\mu}\right)\;
                                                                                                                                                                                                                \widetilde{\mu} \ c_{\gamma} \ y_{d}^{\ ilr} \ y_{d}^{\ i3i4} \ y_{u}^{\ pi2} \ \left( - c_{\gamma} \ \overline{a_{d}}^{pr} + s_{\gamma} \ \widetilde{\mu} \ \overline{y_{d}}^{pr} \right) \ LF_{2,1,1,0} \left[ m_{\bar{d}}^{\ r}, \ m_{\bar{q}}^{\ p}, \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\bar{d}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\bar{d}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\bar{d}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\bar{d}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\bar{d}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\bar{d}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\bar{d}}^{\ r}, \ m_{\bar{q}}^{\ r}, \ m_{\bar
                                                                                                                                                                                                                \widetilde{\mu} \; \mathbf{c_{\gamma}} \; \mathbf{y_d}^{\texttt{ilr}} \; \mathbf{y_d}^{\texttt{i3i4}} \; \mathbf{y_u}^{\texttt{pi2}} \; \left( \mathbf{c_{\gamma}} \; \overline{\mathbf{a_d}}^{\texttt{pr}} - \mathbf{s_{\gamma}} \; \widetilde{\mu} \; \overline{\mathbf{y_d}}^{\texttt{pr}} \right) \; \mathsf{LF_{3,1,1,-1}} \left[ \mathbf{m_{\tilde{d}}^{-r}}, \; \mathbf{m_{\tilde{q}}^{-p}}, \; \widetilde{\mu} \right] \; + \; \mathsf{Im}_{\tilde{d}}^{-r} \; \mathsf{
                                                                                                                                                                                                                \widetilde{\mu} \; c_{\gamma} \; y_{d}^{\text{ilr}} \; y_{d}^{\text{i3i4}} \; y_{u}^{\text{pi2}} \; \left( c_{\gamma} \; \overline{a_{d}}^{\text{pr}} - s_{\gamma} \; \widetilde{\mu} \; \overline{y_{d}}^{\text{pr}} \right) \; \mathsf{LF}_{2,2,1,-1} \big[ \, \mathsf{m}_{\bar{d}}^{\text{-r}} \, , \; \widetilde{\mu} \, , \; \mathsf{m}_{\bar{q}}^{\text{-p}} \big] \; + \; \mathsf{m}_{\bar{d}}^{\text{-pr}} \, , \; \mathsf{m}_{\bar{d}}^{\text{-pr}} \, , \; \mathsf{LF}_{2,2,1,-1} \big[ \, \mathsf{m}_{\bar{d}}^{\text{-r}} \, , \; \mathsf{LF}_{2,2,1,-1} \, \big[ \, \mathsf{LF}_{2,2,1,-1} \, \big[ \, \mathsf{LF}_{2,2,1,-1} \, , \; \mathsf{LF}_{2,2,1,-1} \, \big[ \, \mathsf{LF}_{2,2,1,-1} \, , \; \mathsf{LF}_{2,2,1,-1} \, , \; \mathsf{LF}_{2,2,1,-1} \, \big[ \, \mathsf{LF}_{2,2,1,-1} \, , \; \mathsf{LF}_{2,2,1,-1} \, , \; \mathsf{LF}_{2,2,1,-1} \, , \; \mathsf{LF}_{2,2,1,-1} \, \big[ \, \mathsf{LF}_{2,2,1,-1} \, , \; \mathsf{LF}_{2,2,1} \, , \; \mathsf{LF}_{2,2,1,-1} \, , \; \mathsf{LF}_{2,2,1} \, , \; \mathsf
                                                                                                                                                                                                                                 \mathsf{m_1} \, \mathsf{s_{Y}} \, \mathsf{g_{1}}^2 \, \mathsf{y_u}^{\text{ili2}} \, \left( - \, \mathsf{c_{Y}} \, \, \mathsf{a_d}^{\text{i3i4}} + \, \mathsf{s_{Y}} \, \widetilde{\boldsymbol{\mu}} \, \, \mathsf{y_d}^{\text{i3i4}} \right) \, \mathsf{LF_{2,1,1,0}} \big[ \, \mathsf{m_{\tilde{d}}}^{\text{i4}}, \, \, \mathsf{m_1}, \, \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \big] \, + \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \, \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \, \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \, \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \big] \, + \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \, \, \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \, \, \mathsf{m_{\tilde{q}}}^
                                                                                                                                                                              \frac{1}{18} \; \mathsf{m_1} \; \mathsf{s_{Y}} \; \mathsf{g_1}^2 \; \mathsf{y_u}^{\mathsf{ili2}} \; \left( \mathsf{c_{Y}} \; \mathsf{a_d}^{\mathsf{i3i4}} - \mathsf{s_{Y}} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\mathsf{i3i4}} \right) \; \mathsf{LF_{3,1,1,-1}} \big[ \, \mathsf{m_{\tilde{d}}}^{\mathsf{i4}}, \; \mathsf{m_1}, \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \big] \; + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \big] \; + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \big] \; + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}}
                                                                                                                                                                                                            \mathsf{m_3} \; \mathsf{s_{\gamma}} \; \mathsf{g_{3}}^2 \; \mathsf{y_u}^{\texttt{ili2}} \; \left( \mathsf{c_{\gamma}} \; \mathsf{a_d}^{\texttt{i3i4}} - \mathsf{s_{\gamma}} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\texttt{i3i4}} \right) \; \mathsf{LF_{2,1,1,0}} \left[ \, \mathsf{m_{\tilde{d}}}^{\texttt{i4}} \, , \; \mathsf{m_{3}} \, , \; \mathsf{m_{\tilde{q}}}^{\texttt{i3}} \, \right] \; + \; \mathsf{m_{3}} \; \mathsf{m_{3}}
                                                                                                                                                                          \widetilde{\mu} \ c_{\gamma} \ y_{d}^{\ ilr} \ y_{d}^{\ i3i4} \ y_{u}^{\ pi2} \ \left( - c_{\gamma} \ \overline{a_{d}}^{pr} + s_{\gamma} \ \widetilde{\mu} \ \overline{y_{d}}^{pr} \right) \ LF_{2,1,1,0} \left[ \ m_{\tilde{q}}^{\ p} \ , \ m_{\tilde{d}}^{\ r} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{q}}^{\ p} \ , \ m_{\tilde{d}}^{\ r} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{q}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{q}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{q}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{q}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}^{\ p} \ , \ \widetilde{\mu} \right] + c_{\gamma} \left[ m_{\tilde{d}}^{\ p} \ , \ m_{\tilde{d}}
                                                                                                                                                                                                            \widetilde{\mu} \; \mathbf{c_{\gamma}} \; \mathbf{y_d}^{\texttt{i1r}} \; \mathbf{y_d}^{\texttt{i3i4}} \; \mathbf{y_u}^{\texttt{pi2}} \; \left( \mathbf{c_{\gamma}} \; \overline{\mathbf{a_d}}^{\texttt{pr}} - \mathbf{s_{\gamma}} \; \widetilde{\mu} \; \overline{\mathbf{y_d}}^{\texttt{pr}} \right) \; \mathsf{LF_{3,1,1,-1}} \left[ \mathbf{m_{\bar{q}}}^{\texttt{p}} , \; \mathbf{m_{\bar{d}}}^{\texttt{r}} , \; \widetilde{\mu} \right] \; - \; \mathbf{a_{\bar{d}}}^{\texttt{pr}} \; \mathbf{a_{\bar{d}}}^{\texttt{pr}} = \mathbf{a_{\bar{d}}}^{\texttt{pr}} \; \mathbf{a_{\bar{d}}}^
                                                                                                                                                                 \widetilde{\mu} \ c_{\text{Y}} \ \tfrac{1}{m_{\text{g}}^2} \ y_{\text{d}}^{\text{pi4}} \ y_{\text{u}}^{\text{i1i2}} \ y_{\text{u}}^{\text{i3r}} \ \left( c_{\text{Y}} \ \overline{a_{\text{u}}}^{\text{pr}} + s_{\text{Y}} \ \widetilde{\mu} \ \overline{y_{\text{u}}}^{\text{pr}} \right) \ LF_{1,1,1,0} \left[ m_{\tilde{q}}^{\text{ p}}, \ m_{\tilde{u}}^{\text{ r}}, \ \widetilde{\mu} \right] + c_{\text{Y}} \ \widetilde{\mu} \ \overline{y_{\text{u}}}^{\text{pr}} + s_{\text{Y}} \ \widetilde{\mu} \ \overline{y_{\text{u}}}^{\text{pr}} \right] \ LF_{1,1,1,0} \left[ m_{\tilde{q}}^{\text{ p}}, m_{\tilde{u}}^{\text{ r}}, \ \widetilde{\mu} \right] + c_{\text{Y}} \ \widetilde{\mu} 
                                                                                                                                                                                                                    s_{\gamma}\,\widetilde{\mu}\,y_{d}^{\text{pi4}}\,y_{u}^{\text{iii2}}\,y_{u}^{\text{i3r}}\,\left(-\,s_{\gamma}\,\overline{a_{u}}^{\text{pr}}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\overline{y_{u}}^{\text{pr}}\right)\,LF_{2,1,1,0}\left[\,m_{\tilde{q}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,r}\,,\,\widetilde{\mu}\,\right]\,+\,C_{1}^{\,\,p}\,\left(-\,s_{\gamma}\,\overline{a_{u}}^{\,\,p}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\overline{y_{u}}^{\,\,p}\,\right)\,LF_{2,1,1,0}\left[\,m_{\tilde{q}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,r}\,,\,\widetilde{\mu}\,\right]\,+\,C_{1}^{\,\,p}\,\left(-\,s_{\gamma}\,\overline{a_{u}}^{\,\,p}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\overline{y_{u}}^{\,\,p}\,\right)\,LF_{2,1,1,0}\left[\,m_{\tilde{q}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,r}\,,\,\widetilde{\mu}\,\right]\,+\,C_{1}^{\,\,p}\,\left(-\,s_{\gamma}\,\overline{a_{u}}^{\,\,p}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\overline{y_{u}}^{\,\,p}\,\right)\,LF_{2,1,1,0}\left[\,m_{\tilde{q}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,r}\,,\,\widetilde{\mu}\,\right]\,+\,C_{1}^{\,\,p}\,\left(-\,s_{\gamma}\,\overline{a_{u}}^{\,\,p}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\overline{y_{u}}^{\,\,p}\,\right)\,LF_{2,1,1,0}\left[\,m_{\tilde{q}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,\widetilde{\mu}\,\right]\,+\,C_{1}^{\,\,p}\,\left(-\,s_{\gamma}\,\overline{a_{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,\,p}\,,\,m_{\tilde{u}}^{\,p}\,,\,m_{\tilde{u}}^{\,p}\,,\,m_{\tilde{u}}^{\,p}\,,\,m_{\tilde{u}}^{\,p}\,,\,m_{\tilde{u}}^{\,p}\,,\,m_{\tilde{u}}^{\,p}
                                                                                                                                                                                                                s_{\gamma}\,\widetilde{\mu}\,\,y_{d}^{\,pi4}\,\,y_{u}^{\,\,i1i2}\,\,y_{u}^{\,\,i3r}\,\left(s_{\gamma}\,\,\overline{a_{u}}^{pr}\,-\,\widetilde{\mu}\,\,c_{\gamma}\,\,\overline{y_{u}}^{pr}\right)\,\,\mathsf{LF}_{3,1,1,-1}\!\left[\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\,\,\tilde{\mathsf{p}}}\!\,\mathsf{p}\,,\,\,\mathsf{m}_{\tilde{\mathsf{u}}}^{\,\,r}\,,\,\,\widetilde{\mu}\,\right]\,+\,\,(s_{\gamma}\,\,\overline{a_{u}}^{pr}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{\mathsf{q}}}\,,\,\,s_{u}^{\,\,\tilde{
                                                                                                                                                                                                            \widetilde{\mu} \; \mathbf{c}_{\mathrm{Y}} \; \mathbf{y_d}^{\mathrm{ilr}} \; \mathbf{y_d}^{\mathrm{i3i4}} \; \mathbf{y_u}^{\mathrm{pi2}} \; \left( \mathbf{c}_{\mathrm{Y}} \; \overline{\mathbf{a_d}}^{\mathrm{pr}} - \mathbf{s}_{\mathrm{Y}} \; \widetilde{\mu} \; \overline{\mathbf{y_d}}^{\mathrm{pr}} \right) \; \mathsf{LF_{2,2,1,-1}} \big[ \, \mathbf{m_{\tilde{q}}}^{\mathrm{p}} \, \mathbf{,} \; \widetilde{\mu} \, \mathbf{,} \; \mathbf{m_{\tilde{d}}}^{\mathrm{r}} \, \big] \; + \; \mathbf{m_{\tilde{q}}}^{\mathrm{pr}} \, \mathbf{m_{\tilde{q}}}
                                                                                                                                                                                                                    \textbf{m_{1}} \ \textbf{c_{\gamma}} \ \textbf{g_{1}}^{2} \ \textbf{y_{d}}^{\textbf{i3i4}} \ \left(\textbf{s_{\gamma}} \ \textbf{a_{u}}^{\textbf{i1i2}} - \widetilde{\mu} \ \textbf{c_{\gamma}} \ \textbf{y_{u}}^{\textbf{i1i2}}\right) \ \textbf{LF_{2,1,1,0}} \left[\textbf{m_{\tilde{q}}}^{\textbf{i1}}, \ \textbf{m_{1}}, \ \textbf{m_{\tilde{u}}}^{\textbf{i2}}\right] \ + \\
                                                                                                                                                                                                                    \mathsf{m_{1}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{1}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\left(-\,\mathsf{s_{\gamma}}\;\mathsf{a_{u}}^{\mathsf{i1i2}}+\widetilde{\mu}\;\mathsf{c_{\gamma}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\right)\;\mathsf{LF_{3,1,1,-1}}\!\left[\mathsf{m_{\tilde{q}}}^{\mathsf{i1}}\;,\;\mathsf{m_{1}}\;,\;\mathsf{m_{\tilde{u}}}^{\mathsf{i2}}\right]\;+
                                                                                                                                                                                                                \mathsf{m_{3}}\; \mathsf{c_{\gamma}}\; \mathsf{g_{3}}^{2}\; \mathsf{y_{d}}^{\mathsf{i3i4}}\; \left(\mathsf{s_{\gamma}}\; \mathsf{a_{u}}^{\mathsf{i1i2}} - \widetilde{\mu}\; \mathsf{c_{\gamma}}\; \mathsf{y_{u}}^{\mathsf{i1i2}}\right)\; \mathsf{LF_{2,1,1,0}}\left[\mathsf{m_{\tilde{q}}}^{\mathsf{i1}}\; ,\; \mathsf{m_{3}}\; ,\; \mathsf{m_{\tilde{u}}}^{\mathsf{i2}}\right]\; + \\
                                                                                                                                                                                                                    \mathsf{m_{3}}\; c_{\gamma}\; {\mathsf{g_{3}}}^{2}\; {\mathsf{y_{d}}}^{\mathsf{i3i4}}\; \left(-\, \mathsf{s_{\gamma}}\; \mathsf{a_{u}}^{\,\,\mathsf{i1i2}}\, +\, \widetilde{\mu}\; c_{\gamma}\; \mathsf{y_{u}}^{\,\,\mathsf{i1i2}}\right)\; \mathsf{LF_{3,1,1,-1}}\big[\, \mathsf{m_{\bar{q}}}^{\,\,\mathsf{i1}}\;,\; \mathsf{m_{3}}\;,\; \mathsf{m_{\bar{u}}}^{\,\,\mathsf{i2}}\big]\; +\, \widetilde{\mathsf{m_{3}}}^{\,\,\mathsf{i2}}\, +\, \widetilde{\mathsf{m_{3}}}^{\,\,\mathsf{i3}}\, +\, \widetilde{\mathsf{m_{
                                                                                                                                                                                                                                 \mathsf{m_1} \; \mathsf{s_{Y}} \; \mathsf{g_1}^2 \; \mathsf{y_u}^{\texttt{ili2}} \; \left( - \, \mathsf{c_{Y}} \; \mathsf{a_d}^{\texttt{i3i4}} + \, \mathsf{s_{Y}} \; \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\texttt{i3i4}} \right) \; \mathsf{LF_{2,1,1,0}} \left[ \, \mathsf{m_{\tilde{q}}}^{} \right]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   [13, m_1, m_{\tilde{d}}] +
                                                                                                                                                                                                                                  m_1 \, s_{\gamma} \, g_1^{\, 2} \, y_u^{\, i \, 1 \, i \, 2} \, \left( c_{\gamma} \, a_d^{\, i \, 3 \, i \, 4} - s_{\gamma} \, \widetilde{\mu} \, y_d^{\, i \, 3 \, i \, 4} \right) \, LF_{3,1,1,-1} \big[ \, m_{\tilde{q}}^{\, i \, 3} \, , \, m_1 \, , \, m_{\tilde{d}}^{\, i \, 4} \big] \, + \, c_{\tilde{q}}^{\, i \, 3} \, , \, m_1 \, , \, m_{\tilde{d}}^{\, i \, 4} \, . \, 
                                                                                                                                                                          \frac{1}{4}\,m_3\,s_{\gamma}\,g_{3}{}^2\,y_{u}{}^{i\,1i\,2}\,\left(c_{\gamma}\,a_{d}{}^{i\,3i\,4}-s_{\gamma}\,\widetilde{\mu}\,y_{d}{}^{i\,3i\,4}\right)\,\mathsf{LF}_{2,1,1,0}\!\left[m_{\tilde{q}}{}^{i\,3},\,m_{3},\,m_{\tilde{d}}{}^{i\,4}\right]\,+
                                                                                                                                                                              \mathsf{s}_{\scriptscriptstyle Y}\,\widetilde{\mu}\,\,\mathsf{y_d}^{\mathsf{pi4}}\,\,\mathsf{y_u}^{\mathsf{iii2}}\,\,\mathsf{y_u}^{\mathsf{i3r}}\,\left(-\,\mathsf{s}_{\scriptscriptstyle Y}\,\overline{\mathsf{a_u}}^{\mathsf{pr}}\,+\,\widetilde{\mu}\,\,\mathsf{c}_{\scriptscriptstyle Y}\,\overline{\mathsf{y_u}}^{\mathsf{pr}}\right)\,\,\mathsf{LF_{2,1,1,0}}\!\left[\mathsf{m_{\tilde{u}}}^{\mathsf{r}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\widetilde{\mu}\right]\,+\,\mathsf{m_{\tilde{u}}}^{\mathsf{pr}}\,\,\mathsf{m_{\tilde{u}}}^{\mathsf{pr}}\,,\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{\tilde{q}}}^{\mathsf{p}},\,\,\mathsf{m_{
                                                                                                                                                                                                                s_{\scriptscriptstyle Y}\,\tilde{\mu}\,y_{\scriptscriptstyle d}{}^{\text{pi4}}\,y_{\scriptscriptstyle u}{}^{\text{iii2}}\,y_{\scriptscriptstyle u}{}^{\text{i3r}}\,\left(s_{\scriptscriptstyle Y}\,\overline{a_{\scriptscriptstyle u}}{}^{\text{pr}}-\tilde{\mu}\,c_{\scriptscriptstyle Y}\,\overline{y_{\scriptscriptstyle u}}{}^{\text{pr}}\right)\,\mathsf{LF_{3,1,1,-1}}\big[\mathsf{m}_{\tilde{\mathsf{u}}}{}^{\text{r}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\tilde{\mu}\big]\,+\,\mathsf{m}_{\tilde{\mathsf{u}}}{}^{\text{pr}}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}}{}^{\text{p}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}},\,\mathsf{m}_{\tilde{\mathsf{q}}}
                                                                                                                                                                                                            s_{\gamma}\,\widetilde{\mu}\,\,y_{d}^{\,pi4}\,\,y_{u}^{\,i1i2}\,\,y_{u}^{\,i3r}\,\left(s_{\gamma}\,\,\overline{a_{u}}^{pr}\,-\,\widetilde{\mu}\,\,c_{\gamma}\,\,\overline{y_{u}}^{pr}\right)\,LF_{2,2,1,-1}\!\left[\boldsymbol{m_{\tilde{u}}}^{r},\,\widetilde{\mu}\,,\,\boldsymbol{m_{\tilde{q}}}^{p}\right]\,+\,C_{2,2,1,-1}^{\,pi}\left[\boldsymbol{m_{\tilde{u}}}^{r},\,\widetilde{\mu}^{r},\,\widetilde{\mu}^{r},\,\widetilde{\mu}^{r}\right]
                                                                                                                                                                                                                m_1 c_{\gamma} g_1^2 y_d^{i3i4} (s_{\gamma} a_u^{i1i2} - \tilde{\mu} c_{\gamma} y_u^{i1i2}) LF_{2,1,1,0} [m_{\tilde{u}}^{i2}, m_1, m_{\tilde{q}}^{i1}] +
                                                                                                                                                                                                                         \mathbf{m_{1}} \; \mathbf{c_{\gamma}} \; \mathbf{g_{1}}^{2} \; \mathbf{y_{d}}^{\mathbf{i3i4}} \; \left( - \, \mathbf{s_{\gamma}} \; a_{u}^{\;\; \mathbf{i1i2}} \, + \, \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\gamma}} \; \mathbf{y_{u}}^{\;\; \mathbf{i1i2}} \right) \; \mathbf{LF_{3,1,1,-1}} \left[ \, \mathbf{m_{\tilde{u}}}^{\;\; \mathbf{i2}} \, , \; \mathbf{m_{1}} \, , \; \mathbf{m_{\tilde{q}}}^{\;\; \mathbf{i1}} \, \right] \; + \, \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\gamma}} \; \mathbf{y_{u}}^{\;\; \mathbf{i1i2}} \right) \; \mathbf{LF_{3,1,1,-1}} \left[ \, \mathbf{m_{\tilde{u}}}^{\;\; \mathbf{i2}} \, , \; \mathbf{m_{1}} \, , \; \mathbf{m_{\tilde{q}}}^{\;\; \mathbf{i1}} \, \right] \; + \, \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\gamma}} \; \mathbf{y_{u}}^{\;\; \mathbf{i1i2}} \, \right] \; \mathbf{LF_{3,1,1,-1}} \left[ \, \mathbf{m_{\tilde{u}}}^{\;\; \mathbf{i2}} \, , \; \mathbf{m_{1}} \, , \; \mathbf{m_{\tilde{q}}}^{\;\; \mathbf{i1}} \, \right] \; + \, \widetilde{\boldsymbol{\mu}} \; \mathbf{c_{\gamma}} \; \mathbf{v_{u}}^{\;\; \mathbf{i1i2}} \, \right] \; \mathbf{c_{\gamma}} \; \mathbf{v_{u}}^{\;\; \mathbf{i1i2}} \; \mathbf{v_{u}}^{\;\; \mathbf{i1i2}
                                                                                                                                                                                                                    \text{m}_{3}\;c_{\gamma}\;g_{3}^{\;2}\;y_{d}^{\;i3i4}\;\left(\text{s}_{\gamma}\;a_{u}^{\;i1i2}-\widetilde{\mu}\;c_{\gamma}\;y_{u}^{\;i1i2}\right)\;L\text{F}_{2,\text{1,1,0}}\!\left[\text{m}_{\tilde{u}}^{\;i2}\text{, m}_{3}\text{, m}_{\tilde{q}}^{\;i1}\right]\;+
                                                                                                                                                                                                                \mathsf{m_{3}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{3}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\left(-\,\mathsf{s_{\gamma}}\;\mathsf{a_{u}}^{\,\mathsf{i1i2}}\,+\,\widetilde{\mu}\;\mathsf{c_{\gamma}}\;\mathsf{y_{u}}^{\,\mathsf{i1i2}}\right)\;\mathsf{LF_{3,1,1,-1}}\!\left[\,\mathsf{m_{\tilde{u}}}^{\,\mathsf{i2}}\,,\;\mathsf{m_{3}}\,,\;\mathsf{m_{\tilde{q}}}^{\,\mathsf{i1}}\,\right]\;+\,\widetilde{\mu}\;\mathsf{c_{\gamma}}\;\mathsf{y_{u}}^{\,\mathsf{i1i2}}\left(-\,\mathsf{s_{\gamma}}\;\mathsf{a_{u}}^{\,\mathsf{i1i2}}\,+\,\widetilde{\mu}\;\mathsf{c_{\gamma}}\;\mathsf{y_{u}}^{\,\mathsf{i1i2}}\right)\;\mathsf{LF_{3,1,1,-1}}\left[\,\mathsf{m_{\tilde{u}}}^{\,\mathsf{i2}}\,,\;\mathsf{m_{3}}\,,\;\mathsf{m_{\tilde{q}}}^{\,\mathsf{i1}}\,\right]\;+\,\widetilde{\mu}\;\mathsf{c_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}\;\mathsf{a_{\gamma}}
                                                                                                                                                                              \frac{1}{27} \; \mathsf{m_1} \; \tilde{\mu} \; \mathsf{g_1}^2 \; \mathsf{y_d}^{\mathsf{ili4}} \; \mathsf{y_u}^{\mathsf{i3i2}} \; \mathsf{LF_{1,1,1,1,0}} \big[ \, \mathsf{m_1} , \; \mathsf{m_{\tilde{d}}}^{\mathsf{i4}} , \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} , \; \tilde{\mu} \, \big] \; + \; \mathsf{m_{\tilde{d}}}^{\mathsf{i3}} \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \; 
                                                                                                                                                                                                                                 \mathsf{m_1}\; \tilde{\mu}\; \mathsf{g_1}^2 \; \left( -3\; \mathsf{y_d}^{\mathsf{i3i4}}\; \mathsf{y_u}^{\mathsf{i1i2}} + \mathsf{y_d}^{\mathsf{i1i4}}\; \mathsf{y_u}^{\mathsf{i3i2}} \right) \; \mathsf{LF_{1,1,1,1,0}} \left[ \, \mathsf{m_1} , \, \mathsf{m_{\tilde{d}}}^{\mathsf{i4}} , \, \mathsf{m_{\tilde{u}}}^{\mathsf{i2}} , \, \tilde{\mu} \, \right] \; - \; \mathsf{m_{\tilde{d}}}^{\mathsf{i3i4}} \; \mathsf{m_{\tilde{d}}}^{\mathsf{i3i4}} \; \mathsf{m_{\tilde{d}}}^{\mathsf{i3i4}} \; \mathsf{m_{\tilde{d}}}^{\mathsf{i3i4}} \right] \; - \; \mathsf{m_{\tilde{d}}}^{\mathsf{i3i4}} \; \mathsf{m_{\tilde
                                                                                                                                                                              \frac{1}{54}~\text{M}_{1}~\tilde{\mu}~\text{g}_{1}^{~2}~\text{y}_{\text{d}}^{~\text{i}\,\text{1}\,\text{i}\,\text{4}}~\text{y}_{\text{u}}^{~\text{i}\,\text{3}\,\text{i}\,\text{2}}~\text{LF}_{\text{1,1,1,1,0}}\left[\,\text{m}_{\text{1}}~,~\text{m}_{\tilde{\text{q}}}^{~\text{i}\,\text{1}}~,~\text{m}_{\tilde{\text{q}}}^{~\text{i}\,\text{3}}~,~\tilde{\mu}\,\right]~-
                                                                                                                                                                                                                                              \mathsf{m_1}\,\widetilde{\mu}\;\mathsf{g_1}^2\,\mathsf{y_d}^{\mathsf{ili4}}\,\mathsf{y_u}^{\mathsf{i3i2}}\;\mathsf{LF_{1,1,1,1,0}}\big[\,\mathsf{m_1},\,\mathsf{m_{\tilde{q}}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [^{	ext{i1}}, \mathsf{m}_{	ilde{\mathsf{u}}}^{	ext{i2}}, \widetilde{\mu}] +
                                                                                                                                                                                  \mathbf{m_2}\;\tilde{\boldsymbol{\mu}}\;\mathbf{g_2}^2\;\mathbf{y_d}^{\text{ili4}}\;\mathbf{y_u}^{\text{i3i2}}\;\mathsf{LF_{1,1,1,1,0}}\left[\,\mathbf{m_2},\,\mathbf{m_{\tilde{q}}}^{\text{i1}},\,\mathbf{m_{\tilde{q}}}^{\text{i3}},\,\tilde{\boldsymbol{\mu}}\,\right]\;-
                                                                                                                                                                                                                \mathbf{m_{2}}\;\tilde{\mu}\;\mathbf{g_{2}}^{2}\;\mathbf{y_{d}}^{\mathbf{i3i4}}\;\mathbf{y_{u}}^{\mathbf{i1i2}}\;\mathsf{LF_{1,1,1,1,0}}\left[\,\mathbf{m_{2}},\;\mathbf{m_{\tilde{q}}}^{\mathbf{i3}},\;\mathbf{m_{\tilde{q}}}^{\mathbf{i1}},\;\tilde{\mu}\,\right]\;-
                                                                                                                                                                                                                         \mathbf{m_3}\;\tilde{\boldsymbol{\mu}}\;\mathbf{g_3}^2\;\mathbf{y_d}^{\mathbf{i}\mathbf{1}\mathbf{i}\mathbf{4}}\;\mathbf{y_u}^{\mathbf{i}\mathbf{3}\mathbf{i}\mathbf{2}}\;\mathbf{LF_{1,1,1,1,0}}\left[\,\mathbf{m_3}\,,\,\mathbf{m_{\tilde{d}}}^{\mathbf{i}\mathbf{4}}\,,\,\mathbf{m_{\tilde{q}}}^{\mathbf{i}\mathbf{3}}\,,\,\tilde{\boldsymbol{\mu}}\,\right]\;-
                                                                                                                                                                                                                    \mathsf{m_3}\,\tilde{\mu}\;\mathsf{g_3}^2\;\mathsf{y_d}^{\mathsf{ili4}}\;\mathsf{y_u}^{\mathsf{i3i2}}\;\mathsf{LF_{1,1,1,1,0}}\big[\mathsf{m_3}\,,\,\mathsf{m_{\bar{d}}}^{\mathsf{i4}}\,,\,\mathsf{m_{\tilde{u}}}^{\mathsf{i2}}\,,\,\tilde{\mu}\big]\;+\;
                                                                                                                                                                                                                    \mathsf{m_3}\, \tilde{\mu}\, \mathsf{g_3}^2\, \left( \mathsf{3}\, \mathsf{y_d}^{\mathsf{i3i4}}\, \mathsf{y_u}^{\mathsf{i1i2}} + \mathsf{y_d}^{\mathsf{i1i4}}\, \mathsf{y_u}^{\mathsf{i3i2}} \right)\, \mathsf{LF_{1,1,1,1,0}} \left[ \mathsf{m_3}\, ,\, \mathsf{m_{\tilde{q}}}^{\mathsf{i1}},\, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}},\, \tilde{\mu} \right] - \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \left( \mathsf{m_3} \right) \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \right) \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \right) \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \mathsf{m_{\tilde{q}}^{\mathsf{i3}} + \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} + \mathsf{m_{
                                                                                                                                                                                                                \mathbf{m_{3}}\;\tilde{\mu}\;\mathbf{g_{3}}^{2}\;\mathbf{y_{d}}^{\text{ili4}}\;\mathbf{y_{u}}^{\text{i3i2}}\;\mathsf{LF_{1,1,1,1,0}}\big[\,\mathbf{m_{3}},\,\mathbf{m_{\tilde{q}}}^{\text{il}},\,\mathbf{m_{\tilde{u}}}^{\text{i2}},\,\tilde{\mu}\,\big]\;-
                                                                                                                                                                                                                \mathsf{m_{3}}\;\tilde{\mu}\;\mathsf{g_{3}}^{2}\;\left(\mathsf{y_{d}}^{\mathsf{i3i4}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\;+\;3\;\mathsf{y_{d}}^{\mathsf{i1i4}}\;\mathsf{y_{u}}^{\mathsf{i3i2}}\right)\;\mathsf{LF_{1,1,1,1,0}}\!\left[\mathsf{m_{3}}\;,\;\mathsf{m_{\tilde{q}}}^{\mathsf{i3}}\;,\;\mathsf{m_{\tilde{q}}}^{\mathsf{i1}}\;,\;\tilde{\mu}\;\right]\right)
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