```
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}^{\text{i3i2}}\; \left( {y_d}^{\text{i1i4}}\; \left( 5\; {g_1}^2 + 27\; {g_2}^2 - 192\; {g_3}^2 \right) \; - \; 9\; {c_{\gamma}}^2\; {y_d}^{\text{pi4}}\; \overline{y_u}^{\text{pr}}\; {y_u}^{\text{i1r}} \right) \right) \; - \; \left( {y_d}^{\text{i1i}} \right) \; \left( {y_d}^{\text{i1i}
                                                                                                                                                                 \frac{1}{2}\,\sum_{p}\,g_{1}^{\,2}\,\frac{1}{m_{_{0}}^{\,4}}\,y_{d}^{\,i\,3\,i\,4}\,y_{u}^{\,i\,1\,i\,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_{\widetilde{d}}^{\,\,p}\right]\,+\,c_{1}^{\,2}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{1}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{1}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{1}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{1}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m_{\widetilde{d}}^{\,\,p}\right]+\,c_{2}^{\,\,p}\left[m
                                                                                                                                                                                                    \frac{1}{{{m_0}^4}} \; \overline{y_d}^{pr} \; {y_d}^{pr} \; {y_d}^{i3i4} \; {y_u}^{i1i2} \; \left( {s_2}_{\gamma} \; {c_{\gamma}}^2 - {s_2}_{\gamma} \; {s_{\gamma}}^2 - 2 \; {c_{\gamma}} \; {s_{\gamma}}^3 \right) \; LF_{1,0} \left[ {m_{\tilde{d}}^{r}} \right] \; - \left( {m_{\tilde{d}}^{r}} \right) \; - \left( {m
                                                                                                                                                                 \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}{}^{\dot{1}\dot{3}\dot{1}\dot{4}} \; \overline{y_{e}}{}^{pr} \; y_{e}{}^{pr} \; y_{u}{}^{\dot{1}\dot{1}\dot{1}\dot{2}} \; \left(s_{2\,_{\mathrm{Y}}} \, c_{_{\mathrm{Y}}}{}^{2} - s_{2\,_{\mathrm{Y}}} \, s_{_{\mathrm{Y}}}{}^{2} - 2 \; c_{_{\mathrm{Y}}} \, s_{_{\mathrm{Y}}}{}^{3}\right) \; LF_{1,0} \left[m_{\tilde{e}}{}^{r}\right] \; + \\ \frac{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}} \; + \frac{1}{2} \; \frac{1}{m_{_{0}}{}^{4}} \; y_{d}{}^{\dot{1}\dot{3}\dot{1}\dot{4}} \; y_{d}{}^{\dot{1}\dot{1}\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}\dot{1}} \; y_{d}{}^{\dot{1}} \; y_{d}{}^{\dot{1}} \; y_{d}{}^{\dot{1}} \; y_{d}{}^{\dot{1}} \; y_{d}{}^{\dot{1}
                                                                                                                                                                                                \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,\theta}\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,\theta}\left[m_{\tilde{q}}^{-p}\right]\;+\frac{1}{2}\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}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}\right)\left(s_{2\;\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^{\;\;2}+s_{\gamma}^
                                                                                                                                                         \sum_{p} g_{1}^{2} \, \tfrac{1}{m_{\star}^{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_{\tilde{u}}^{\, p} \right] \, - \, \left[ m_{\tilde{u}}^{\, p} \right] \, + \, \left[ m_{\tilde{u}}^{
                                                                                                                                                                                                                    \frac{1}{{{m_0}^4}}\,{y_d}^{i3i4}\,\overline{{y_u}}^{pr}\,{y_u}^{pr}\,{y_u}^{i1i2}\,\left({{s_2}_{\curlyvee}}\,{c_{\curlyvee}}^2+2\,{s_{\curlyvee}}\,{c_{\curlyvee}}^3-{s_2}_{\curlyvee}\,{s_{\curlyvee}}^2\right)\,LF_{1,0}\!\left[{{m_{\tilde{u}}}^r}\right]+
                                                                                                                                                                     \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_{_{\overline{D}}}\right] \; + \; 3\; s_{4\;\gamma}\; s_{\gamma}{}^{2}\; \left(g_{1}{}^{2}+g_{2}{}^{2}\right) \; + \; 3\; s_{4\;\gamma}\; s_{\gamma}{}^{2}\; s_{\gamma}{}^
                                                                                                                                                                         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}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,g_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,2}\,\left(1+\,2\,q_{1}^{\,2}\,+\,27\,q_{2}^{\,2}\right)\,+\,3\,y_{u}^{\,
                                                                                                                                                                                                                                                           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_{o}^{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[ m_{1} \, , \; m_{\bar{d}}^{\, \dot{1}\dot{4}} \right] \; - \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{o}^{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[ m_{1} \, , \; m_{\bar{d}}^{\, \dot{1}\dot{4}} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{o}^{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[ m_{1} \, , \; m_{\bar{d}}^{\, \dot{1}\dot{4}} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{o}^{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[ m_{1} \, , \; m_{\bar{d}}^{\, \dot{1}\dot{4}} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{o}^{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[ m_{1} \, , \; m_{\bar{d}}^{\, \dot{1}\dot{4}} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{o}^{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[ m_{1} \, , \; m_{\bar{d}}^{\, \dot{1}\dot{4}} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{2} \; \frac{1}{m_{o}^{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[ m_{1} \, , \; m_{\bar{d}}^{\, \dot{1}\dot{1}\dot{4}} \right] \; + \; \frac{1}{18} \; s_{\gamma} \; c_{\gamma} \; g_{1}^{\, \dot{1}\dot{1}\dot{1}\dot{1}\dot{1}} \; s_{\gamma} \; c_{\gamma} \; s_{\gamma} 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                \frac{1}{m_0^2} 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_0^2} 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_{\phi}^{2}}
                                                                                                                                                                 \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}] +
                                                                                                                                                                 \frac{4}{9} \, \, s_{\gamma} \, \, c_{\gamma} \, \, g_{1}^{\, 2} \, \, \frac{1}{m_{\omega}^{\, 2}} \, \, y_{d}^{\, i3i4} \, \, y_{u}^{\, i1i2} \, \, LF_{1,1,0} \big[ \, m_{1} \, , \, \, m_{\tilde{u}}^{\, i2} \, \big] \, - \,
                                                                                                                                                             \frac{1}{m_0^4} y_d^{1314} y_u^{1112} (c_{\chi}^2 + s_{\chi}^2) LF_{1,1,-1}[m_1, \tilde{\mu}] +
                                                                                                                                                     \mathsf{m_{1}}\,\widetilde{\mu}\;\mathsf{g_{1}}^{2}\,\frac{1}{\mathsf{m_{0}}^{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]\;+
                                                                                                                                                                 \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,\theta} \left[ \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\, \dot{1}\,\dot{1}} \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} \left[ \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\, \dot{1}\,\dot{1}} \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} \left[ \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\, \dot{1}\,\dot{1}} \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} \left[ \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\, \dot{1}\,\dot{1}} \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} \left[ \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\, \dot{1}\,\dot{1}} \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} \left[ \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\, \dot{1}\,\dot{1}} \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} \left[ \mathsf{m}_{2} \,, \; \mathsf{m}_{\tilde{q}}^{\, \dot{1}\,\dot{1}} \right] \; + \; \frac{3}{8} \; s_{\gamma} \; c_{\gamma} \; g_{2}^{\, \dot{1}\,\dot{1}\,\dot{1}\,\dot{1}} \; s_{\gamma} 
                                                                                                                                                                                                                                                                                                                                                                                                                                             \frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{1,1,0}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3}}\,\right]\,-\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{2}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3}}\,\right]\,+\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{2}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3}}\,\right]\,+\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{2}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3}}\,\right]\,+\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{2}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3}}\,\right]\,+\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{2}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3i}}\,\right]\,+\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{2}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3i}}\,\right]\,+\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{2}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3i}}\,\right]\,+\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{2}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3i}}\,\right]\,+\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{2}^{2}\;\frac{1}{m_{\text{o}}^{2}}\;y_{\text{d}}^{\text{i3i4}}\;y_{\text{u}}^{\text{i1i2}}\;\mathsf{LF}_{2,1,-1}\!\left[\,m_{2}\,,\;m_{\tilde{q}}^{\text{i3i}}\,\right]\,+\,\frac{3}{8}\;s_{\gamma}\;c_{\gamma}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;g_{\gamma}^{2}\;
                                                                                                                                                         3 \, s_{\gamma} \, c_{\gamma} \, g_{2}^{2} \, \frac{1}{m_{0}^{4}} \, y_{d}^{i3i4} \, y_{u}^{i1i2} \, \left( c_{\gamma}^{2} + s_{\gamma}^{2} \right) \, LF_{1,1,-1}[m_{2},\, \widetilde{\mu}] + c_{\gamma}^{2} \, c_{\gamma}^{2} 
                                                                                                                                                     3\;m_{2}\;\widetilde{\mu}\;g_{2}^{2}\;\frac{1}{m_{0}^{\;4}}\;y_{d}^{\;13i4}\;y_{u}^{\;i1i2}\;\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{1}{m_0^2} y_d^{i3i4} y_u^{i1i2} LF_{2,1,-1}[m_3, m_{\bar{d}}^{ii4}] +
                                                                                                                                                                                                                                                                                                                                                                                                                                             \frac{1}{m_{\text{o}}^{2}}\;y_{d}^{\,\text{i3i4}}\;y_{u}^{\,\text{i1i2}}\;\mathsf{LF_{1,1,0}}\left[\,m_{3}\,,\;m_{\overset{\,\text{i}}{d}}^{\,\,\text{i4}}\,\right]\,-\,\frac{2}{3}\;s_{\gamma}\;c_{\gamma}\;g_{3}^{\,2}\;\frac{1}{m_{\text{o}}^{\,\,\text{i}}}
                                                                                                                                                                 \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{1}} \, \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{1}} \, \right] \; + \; \frac{1}{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{1}} \, \right] \; + \; \frac{1}{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{1}} \, \right] \; + \; \frac{1}{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{1}} \, \right] \; + \; \frac{1}{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{1}} \, \right] \; + \; \frac{1}{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{1}} \, \right] \; + \; \frac{1}{3} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{\, \dot{1}} \; s_{\gamma} \; c_{\gamma} \; g_{3}^{\, \dot{1}} \; s_{\gamma} \; c_{\gamma} \; s_{\gamma} \; s_{\gamma} \; c_{\gamma} \; s_{\gamma} \; s_{\gamma} \; s_{\gamma} \; c_{\gamma} \; s_{\gamma} \; s_{\gamma} \; s_{\gamma} \; c_{\gamma} \; s_{\gamma} \; s_{\gamma
                                                                                                                                                                                                                                                                                                                                                                                                                                             \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{q}}^{\text{i3}}\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{q}}^{\text{i3}}\right]\;+
                                                                                                                                                                                                                                                                                                                                                                                                                                             \frac{1}{m_{\text{o}}^2}\; y_{\text{d}}^{\text{i3i4}}\; y_{\text{u}}^{\text{i1i2}}\; \text{LF}_{\text{1,1,0}}\!\left[\,m_3\,,\,m_{\tilde{\text{u}}}^{\text{i2}}\,\right] \; - \; \frac{2}{3}\; s_{\text{y}}\; c_{\text{y}}\; g_3^2\; \frac{1}{m_{\text{o}}^2}\; y_{\text{d}}^{\text{i3i4}}\; y_{\text{u}}^{\text{i1i2}}\; \text{LF}_{\text{2,1,-1}}\!\left[\,m_3\,,\,m_{\tilde{\text{u}}}^{\text{i2}}\,\right] \; + \; \frac{1}{3} \left[\,m_{\text{d}}^2\,,\,m_{\tilde{\text{u}}}^{\text{i2}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{u}}}^{\text{i3i4}}\,,\,m_{\tilde{\text{
                                                                                                                                                         3\;\frac{1}{m_{_{0}}{}^{4}}\;y_{d}^{\;1314}\;y_{u}^{\;1112}\;\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}\;+\;s_{_{Y}}^{\;2}\right)\right)\;+\;1
                                                                                                                                                                                                                                                       \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}_{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}_{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}_{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} \; 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} + s_{\gamma}^{
                                                                                                                                                             \frac{1}{2} \ s_{\gamma} \ c_{\gamma} \ \frac{1}{m_{0}^{\,2}} \ \overline{y_{d}}^{pr} \ \left(y_{d}^{\,i1r} \ y_{d}^{\,i3i4} \ y_{u}^{\,pi2} + y_{d}^{\,pi4} \ y_{d}^{\,i3r} \ y_{u}^{\,i1i2}\right) \ LF_{1,1,0} \left[\, m_{\tilde{d}} \right]^{\,2} \ c_{\tilde{d}}^{\,2} \ c_{\tilde{d}}^{\,2}
                                                                                                                                                                 \frac{1}{{m_{_{0}}}^{4}}\;{y_{d}}^{\text{i3i4}}\;{y_{u}}^{\text{i1i2}}\;\left({s_{_{Y}}}\;\widetilde{\mu}\;{c_{_{Y}}}\;\overline{y_{e}}^{\text{pr}}\;\left(\text{-3}\;{s_{_{Y}}}\;{c_{_{Y}}}\;{a_{e}}^{\text{pr}}\;+\widetilde{\mu}\;{y_{e}}^{\text{pr}}\;\left(\text{-2}\;{c_{_{Y}}}^{2}\;+\;{s_{_{Y}}}^{2}\right)\right)\;+
                                                                                                                                                                                                                                                       \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}_{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}_{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}_{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}_{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}_{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}_{1,1,0} \left[ m_{\tilde{e}}^{\; \text{r}} \; , \; m_{\tilde{l}}^{\; 2} \; c_{\gamma}^{\; 4} + s_{\gamma}^{\; 4} \right] \; + \; \widetilde{\mu} \; y_{e}^{\; 4} \; + \; \widetilde{\mu} \; y_{e}^{\; 4} \; c_{\gamma}^{\; 4} \; c_{\gamma
                                                                                                                                                             \frac{1}{m_{\text{g}}^2}\;y_{\text{d}}^{\,\,1314}\;y_{\text{u}}^{\,\,1112}\;\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_{\gamma} \; c_{\gamma} \; a_{e}^{\; pr} \; \left( - \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \; - \; \widetilde{\mu} \; y_{e}^{\; pr} \; \left( \, c_{\gamma}^{\; 4} + \, s_{\gamma}^{\; 4} \right) \, \right) \; LF_{2,1,0} \left[ \, m_{\widetilde{l}}^{\; p} \, , \; m_{\widetilde{e}}^{\; r} \, \right] \; + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 4} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 4} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 4} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 4} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 4} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 4} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, \left( \, c_{\gamma}^{\; 2} + \, s_{\gamma}^{\; 2} \right) \, + \; c_{\gamma}^{\; 2} \, + \; c_{\gamma}^
                                                                                                                                                                 \frac{1}{m_{\text{g}}^{2}} \; y_{\text{d}}^{\, \text{i3i4}} \; y_{\text{u}}^{\, \text{i1i2}} \; \left( s_{\text{y}} \; \tilde{\mu} \; c_{\text{y}} \; \overline{y_{\text{e}}}^{\text{pr}} \; \left( -2 \; s_{\text{y}} \; c_{\text{y}} \; a_{\text{e}}^{\, \text{pr}} \; + \tilde{\mu} \; y_{\text{e}}^{\, \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) \; + \; \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) \; + \; \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) \; + \; \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) \; + \; \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) \; + \; \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) \; + \; \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) \; + \; \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) \; + \; \left( -c_{\text{y}}^{\, 2} + s_{\text{y}}^{\, 2} \right) \; + \; \left( -c_{\text{y}}^{\, 2} + s_{\text{y}}^{\, 2} \right) 
                                                                                                                                                                                                                                                       \overline{a_{e}}^{pr} \left( s_{\gamma} c_{\gamma} a_{e}^{pr} \left( c_{\gamma}^{2} - s_{\gamma}^{2} \right) + \widetilde{\mu} y_{e}^{pr} \left( c_{\gamma}^{4} + s_{\gamma}^{4} \right) \right) \right) LF_{3,1,-1} [m_{\tilde{1}}^{p}, m_{\tilde{e}}^{r}] +
                                                                                                                                                         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_{3,1,0}\left[\,m_{_{\tilde{l}}}{}^{p}\,,\,m_{_{\tilde{e}}}{}^{r}\,\right]-c_{_{Y}}\,\widetilde{\mu}\,y_{_{e}}{}^{pr}
                                                                                                                                                         3\; 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)\; LF_{4,1,-1}\big[\, m_{\widetilde{l}}^{\;p}\; ,\; m_{\widetilde{e}}^{\;r}\,\big]\; +\; c_{\gamma}\; a_{e}^{\;pr}\; -\; s_{\gamma}\; \widetilde{\mu}\; y_{e}^{\;pr}\big)\; LF_{4,1,-1}\big[\, m_{\widetilde{l}}^{\;p}\; ,\; m_{\widetilde{e}}^{\;r}\,\big]\; +\; c_{\gamma}\; a_{e}^{\;pr}\; -\; c_{\gamma}\; \widetilde{\mu}\; y_{e}^{\;pr}\big]\; LF_{4,1,-1}\big[\, m_{\widetilde{l}}^{\;p}\; ,\; m_{\widetilde{e}}^{\;p}\; \big]\; +\; c_{\gamma}\; a_{e}^{\;p}\; -\; c_{\gamma}\; \widetilde{\mu}\; y_{e}^{\;p}\; -\; c_{\gamma
                                                                                                                                                         2\;\mathsf{s_{\scriptscriptstyle Y}}\;\mathsf{c_{\scriptscriptstyle Y}}\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\left(\mathsf{c_{\scriptscriptstyle Y}}\;\overline{\mathsf{a_e}}^{\mathsf{pr}}\;-\;\mathsf{s_{\scriptscriptstyle Y}}\;\widetilde{\boldsymbol{\mu}}\;\overline{\mathsf{y_e}}^{\mathsf{pr}}\right)\;\left(\mathsf{c_{\scriptscriptstyle Y}}\;\mathsf{a_e}^{\mathsf{pr}}\;-\;\mathsf{s_{\scriptscriptstyle Y}}\;\widetilde{\boldsymbol{\mu}}\;\mathsf{y_e}^{\mathsf{pr}}\right)\;\mathsf{LF_{5,1,-2}}\big[\mathsf{m_{\widetilde{l}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{-p},\;\mathsf{m_{\widetilde{e}}}^{p
                                                                                                                                                         3 \,\, \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}} \,\, \left(\, s_{_{Y}} \,\, \widetilde{\mu} \,\, c_{_{Y}} \,\, \overline{y_{d}}^{pr} \,\, \left(\, -\, 2 \,\, s_{_{Y}} \,\, c_{_{Y}} \,\, a_{d}^{\,pr} \,\, +\, \widetilde{\mu} \,\, y_{d}^{\,pr} \,\, \left(\, -\, c_{_{Y}}^{\,\,2} \,+\, s_{_{Y}}^{\,\,2} \,\right) \,\, \right) \,\, +\, \left(\, -\, c_{_{Y}}^{\,\,2} \,+\, s_{_{Y}}^{\,\,2} \,\right) \,\, +\, \left(\, -\, c_{_{Y}}^{\,\,2} \,+\, s_{_{Y}}^{\,\,2} \,+\, s_{_{Y}}^{\,\,2} \,\right) \,\, +\, \left(\, -\, c_{_{Y}}^{\,\,2} \,+\, s_{_{Y}}^{\,\,2} \,+\, s_{_{Y}}^{\,\,2} \,\right) \,\, +\, \left(\, -\, c_{_{Y}}^{\,\,2} \,+\, s_{_{Y}}^{\,\,2} \,+\, 
                                                                                                                                                                                                                                                       \overline{a_d}^{\text{pr}} \left( s_{_{Y}} \, c_{_{Y}} \, a_d^{\text{pr}} \, \left( c_{_{Y}}^{\ 2} - s_{_{Y}}^{\ 2} \right) \, + \, \widetilde{\mu} \, y_d^{\text{pr}} \, \left( c_{_{Y}}^{\ 4} + s_{_{Y}}^{\ 4} \right) \right) \right) \, \text{LF}_{2,1,0} \left[ \, m_{\bar{q}}^{\ p} \, , \, m_{\bar{d}}^{\ r} \, \right] \, + \, \widetilde{\mu} \, y_d^{\text{pr}} \left( c_{_{Y}}^{\ 4} + s_{_{Y}}^{\ 4} \right) \right) \, .
                                                                                                                                                     \overline{a_{d}}^{pr} \, \left( s_{_{Y}} \, c_{_{Y}} \, a_{d}^{\, pr} \, \left( c_{_{Y}}^{\, 2} - s_{_{Y}}^{\, 2} \right) \, + \, \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) \, \big) \, F_{3,1,-1} \big[ \, m_{\tilde{q}}^{\, \, p} \, , \, \, m_{\tilde{d}}^{\, \, r} \, \big] \, + \, \widetilde{\mu} \, y_{d}^{\, pr} \, \left( c_{_{Y}}^{\, 2} + s_{_{Y}}^{\, 4} \right) \, \big) \, F_{3,1,-1} \big[ \, m_{\tilde{q}}^{\, \, p} \, , \, \, m_{\tilde{d}}^{\, \, r} \, \big] \, + \, \widetilde{\mu} \, y_{d}^{\, pr} \, \left( c_{_{Y}}^{\, 2} + s_{_{Y}}^{\, 4} \right) \, \big) \, F_{3,1,-1} \big[ \, m_{\tilde{q}}^{\, \, p} \, , \, \, m_{\tilde{d}}^{\, \, r} \, \big] \, + \, \widetilde{\mu} \, y_{d}^{\, pr} \, \left( c_{_{Y}}^{\, 2} + s_{_{Y}}^{\, 4} \right) \, \big) \, F_{3,1,-1} \big[ \, m_{\tilde{q}}^{\, \, p} \, , \, \, m_{\tilde{d}}^{\, \, r} \, \big] \, + \, \widetilde{\mu} \, y_{d}^{\, pr} \, \left( c_{_{Y}}^{\, 2} + s_{_{Y}}^{\, 4} \right) \, \big) \, F_{3,1,-1} \big[ \, m_{\tilde{q}}^{\, \, p} \, , \, \, m_{\tilde{d}}^{\, \, r} \, \big] \, + \, \widetilde{\mu} \, y_{d}^{\, pr} \, \left( c_{_{Y}}^{\, \, 2} + s_{_{Y}}^{\, 2} \right) \, + \, \widetilde{\mu} \, y_{d}^{\, pr} \, \left( c_{_{Y}}^{\, \, p} + s_{_{Y}}^{\, \, p} \right) \, + \, \widetilde{\mu} \, y_{d}^{\, pr} \, \left( c_{_{Y}}^{\, \, p} + s_{_{Y}}^{\, \, p} \right) \, + \, \widetilde{\mu} \, y_{d}^{\, pr} \, \left( c_{_{Y}}^{\, \, p} + s_{_{Y}}^{\, \, p} \right) \, + \, \widetilde{\mu} \, y_{d}^{\, p} \, + \, \widetilde{\mu} \, y_{d}^{\, p} \, \right) \, + \, \widetilde{\mu} \, y_{d}^{\, p} \, + \, \widetilde{\mu} \, y_{d}^{\, p}
                                                                                                                                                     3\;\mathsf{s_{\scriptscriptstyle Y}}\;\mathsf{c_{\scriptscriptstyle Y}}\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\left(\mathsf{c_{\scriptscriptstyle Y}}\;\overline{\mathsf{a_d}}^{\mathsf{pr}}-\mathsf{s_{\scriptscriptstyle Y}}\;\widetilde{\boldsymbol{\mu}}\;\overline{\mathsf{y_d}}^{\mathsf{pr}}\right)\;\left(\mathsf{c_{\scriptscriptstyle Y}}\;\mathsf{a_d}^{\mathsf{pr}}-\mathsf{s_{\scriptscriptstyle Y}}\;\widetilde{\boldsymbol{\mu}}\;\mathsf{y_d}^{\mathsf{pr}}\right)\;\mathsf{LF_{3,1,0}}\left[\,\mathsf{m_{\tilde{q}}}^{\,\mathsf{p}}\,,\;\mathsf{m_{\tilde{d}}}^{\,\mathsf{r}}\,\right]\;-\;\mathsf{m_{\tilde{q}}}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{\,\mathsf{pr}}\;\mathsf{a_d}^{
                                                                                                                                                     9\; s_{\gamma}\; c_{\gamma}\; y_{d}^{\;i\,3\,i\,4}\; y_{u}^{\;i\,1\,i\,2}\; \left(c_{\gamma}\; \overline{a_{d}}^{pr}\; -\; s_{\gamma}\; \widetilde{\mu}\; \overline{y_{d}}^{pr}\right) \; \left(c_{\gamma}\; a_{d}^{\;pr}\; -\; s_{\gamma}\; \widetilde{\mu}\; y_{d}^{\;pr}\right) \; LF_{4,1,-1}\left[m_{\tilde{q}}^{\;p}\; ,\; m_{\tilde{d}}^{\;r}\right] \; +\; c_{\gamma}\; a_{d}^{\;pr}\; +\; c_{\gamma}\; a_{d}^{\;pr}\; -\; c_{\gamma}\; \widetilde{\mu}\; y_{d}^{\;pr}\right] \; LF_{4,1,-1}\left[m_{\tilde{q}}^{\;p}\; ,\; m_{\tilde{d}}^{\;r}\right] \; +\; c_{\gamma}\; a_{d}^{\;pr}\; +\; c_{\gamma}\; a_{\alpha}\; a_{\alpha}^{\;pr}\; +\; c_{\gamma}\; a_{\alpha}^{\;pr}\; +\; c_{\gamma}\; a_{\alpha}^{\;pr}\; +\; c_{\gamma}\; a_{\alpha}^{\;pr}\; +\; c_{\gamma}\; a_
                                                                                                                                                     6\; s_{\gamma}\; c_{\gamma}\; y_{d}^{\;i\,3\,i\,4}\; y_{u}^{\;i\,1\,i\,2}\; \left(c_{\gamma}\; \overline{a_{d}}^{\,p\,r}\; -\; s_{\gamma}\; \widetilde{\mu}\; \overline{y_{d}}^{\,p\,r}\right)\; \left(c_{\gamma}\; a_{d}^{\,p\,r}\; -\; s_{\gamma}\; \widetilde{\mu}\; y_{d}^{\,p\,r}\right)\; LF_{5,1,-2}\left[\, m_{\tilde{q}}^{\,\,p}\; ,\; m_{\tilde{d}}^{\,\,r}\; \right]\; +\; c_{\gamma}\; a_{d}^{\,\,p\,r}\; -\; c_{\gamma}\; \widetilde{\mu}\; y_{d}^{\,\,p\,r}\; +\; c_{\gamma}\; \widetilde{\mu}\; y_{d}^{\,\,p\,r}
                                                                                                                                                         3 \; \frac{1}{{m_{\scriptscriptstyle D}}^4} \; y_{d} \\ ^{\dot{1}3\dot{1}4} \; y_{u} \\ ^{\dot{1}1\dot{1}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}^{\; 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_{\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] \; + \; \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] \; + \; \overline{y_{d}}^{\; p} \; y_{d}^{\; p}
                                                                                                                                                         3 \; \frac{1}{m_{\text{m}}^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}} \; \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) \; + \\ \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) \; + \; \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) \; + \; \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) \; + \; \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) \; + \; \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) \; + \; \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) \; + \; \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) \; + \; \left( - \, c_{\text{Y}}^{\, 2} + \, s_{\text{Y}}^{\, 
                                                                                                                                                                                                                                                       \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[ \text{m}_{\tilde{u}}^{\; r} \; , \; \text{m}_{\tilde{q}}^{\; p} \right] \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_{\gamma}^{\; 2} + c_{\gamma}^{\; 2} \right) \; + \; \left( c_
                                                                                                                                                     3 \, \, \frac{1}{m_{\text{m}}^{\, 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}} \, \, \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) \, + \, \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) \, \, + \, \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) \, \, + \, \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) \, \, + \, \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) \, \, + \, \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) \, \, + \, \left( \, c_{\text{y}}^{\, \, 2} \, - \, s_{\text{y}}^{\, \, 2} \, - \, s_{\text{y}}^{\, \, 2} \right) \, \, + \, \left( \, c_{\text{y}}^{\, \, 2} \, - \, s_{\text{y}}^{\, \, 2} \, - \, s_{\text{y}}^{\, \, 2} \, - \, s_{\text{y}}^{\, \, 2} \right) \, \, \, + \, \left( \, c_{\text{y}}^{\, \, 2} \, - \, s_{\text{y}}^{\, \, 2} \, - \, s_{\text{y}}^{\, \, 2} \, - \, s_{\text{y}}^{\, \, 2} \, \right) \, \, + \, \left( \, c_{\text{y}}^{\, \, 2} \, - \, s_{\text{y}}^{\, \, 2} \, - \, s_{\text{
                                                                                                                                                                                                                                                           \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}_{3,1,-1}\big[\bar{m_u}^{\text{r}},\,\bar{m_q}^{\text{p}}\big]\,+\,\widetilde{\mu}\,y_u^{\text{pr}}\left(c_{\gamma}^{\,4}+\,s_{\gamma}^{\,4}\right)\big]
                                                                                                                                                         3\; s_{\gamma}\; c_{\gamma}\; y_{d}^{\;i3i4}\; y_{u}^{\;i1i2}\; \left(-\, s_{\gamma}\; \overline{a_{u}}^{pr} + \widetilde{\mu}\; c_{\gamma}\; \overline{y_{u}}^{pr}\right) \; \left(-\, s_{\gamma}\; a_{u}^{\;pr} + \widetilde{\mu}\; c_{\gamma}\; y_{u}^{\;pr}\right) \; \mathsf{LF}_{3,1,0}\left[\, \mathsf{m}_{\widetilde{u}}^{\;\;r}\,,\; \mathsf{m}_{\widetilde{q}}^{\;\;p}\,\right] \; - \; \mathsf{LF}_{3,1,0}\left[\, \mathsf{m}_{\widetilde{u}}^{\;\;r}\,,\; \mathsf{m}_{\widetilde{u}}^{\;\;p}\,\right] \; - \; \mathsf{LF}_{3,1,0}\left[\, \mathsf{m}_{\widetilde{u}}^{\;\;r}\,,\; \mathsf{m}_{\widetilde{u}}^{\;\;p}\,\right] \; - \; \mathsf{LF}_{3,1,0}\left[\, \mathsf{m}_{\widetilde{u}}^{\;\;r}\,,\; \mathsf{m}_{\widetilde{u}}^{\;\;r}\,,\; \mathsf{m}_{\widetilde{u}}^{\;\;r}\,\right] \; - \; \mathsf{LF}_{3,1,0}\left[\, \mathsf{m}_{\widetilde{u}}^{\;\;r}\,,\; \mathsf{m}_{\widetilde{u}}^{\;\;r
                                                                                                                                                     9 \; \mathsf{s_{\scriptscriptstyle Y}} \; \mathsf{c_{\scriptscriptstyle Y}} \; \mathsf{y_d}^{\mathsf{i3i4}} \; \mathsf{y_u}^{\mathsf{i1i2}} \; \left( - \, \mathsf{s_{\scriptscriptstyle Y}} \; \overline{\mathsf{a_u}}^{\mathsf{pr}} + \, \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; \overline{\mathsf{y_u}}^{\mathsf{pr}} \right) \; \left( - \, \mathsf{s_{\scriptscriptstyle Y}} \; \mathsf{a_u}^{\mathsf{pr}} + \, \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; \mathsf{y_u}^{\mathsf{pr}} \right) \; \mathsf{LF_{4,1,-1}} \left[ \, \mathsf{m_{\tilde{u}}}^{\mathsf{r}} \, \mathsf{r} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{p}} \, \right] \; + \, \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; \mathsf{y_u}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; \right] \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; \mathsf{y_u}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; \right) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; \mathsf{y_u}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; \mathsf{y_u}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; \mathsf{y_u}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; ) \; + \; \widetilde{\boldsymbol{\mu}} \; \mathsf{c_{\scriptscriptstyle Y}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr}} \; , \; \mathsf{m_{\tilde{q}}}^{\mathsf{pr
                                                                                                                                                     6\; s_{\gamma}\; c_{\gamma}\; y_{d}^{\textrm{i3i4}}\; y_{u}^{\textrm{i1i2}}\; \left(-\, s_{\gamma}\; \overline{a_{u}}^{\textrm{pr}} + \widetilde{\mu}\; c_{\gamma}\; \overline{y_{u}}^{\textrm{pr}}\right) \; \left(-\, s_{\gamma}\; a_{u}^{\;\textrm{pr}} + \widetilde{\mu}\; c_{\gamma}\; y_{u}^{\;\textrm{pr}}\right) \; \mathsf{LF}_{5,1,-2}\left[\, \mathsf{m}_{\widetilde{u}}^{\;\textrm{r}} \, \mathsf{,} \; \mathsf{m}_{\widetilde{q}}^{\;\textrm{p}}\,\right] \; + \; \widetilde{\mathsf{m}}_{\widetilde{q}}^{\;\textrm{pr}} \; \mathsf{m}_{\widetilde{q}}^{\;\textrm{pr}} \; \mathsf{m}_{\widetilde{q}}^{\;\textrm{p
                                                                                                                                                             \frac{1}{2} \; \mathsf{S}_{\gamma} \; \mathsf{C}_{\gamma} \; \frac{1}{\mathsf{m_{0}}^{2}} \; \overline{\mathsf{y_{u}}}^{\mathsf{pr}} \; \left( \mathsf{y_{d}}^{\mathsf{i3i4}} \; \mathsf{y_{u}}^{\mathsf{pi2}} \; \mathsf{y_{u}}^{\mathsf{i1r}} + \mathsf{y_{d}}^{\mathsf{pi4}} \; \mathsf{y_{u}}^{\mathsf{i1i2}} \; \mathsf{y_{u}}^{\mathsf{i3r}} \right) \; \mathsf{LF_{1,1,0}} \left[ \mathsf{m_{\tilde{u}}}^{\mathsf{r}} \text{, } \widetilde{\mu} \right] - \mathsf{m_{\tilde{u}}}^{\mathsf{pi}} \; \mathsf{v_{u}}^{\mathsf{pi4}} \; \mathsf{v_{u}}^{\mathsf{pi4}} \; \mathsf{v_{u}}^{\mathsf{pi4}} \; \mathsf{v_{u}}^{\mathsf{pi4}} \right] - \mathsf{v_{u}}^{\mathsf{pi4}} \; \mathsf{v_
                                                                                                                                                     \mathsf{m_1} \; \widetilde{\mu} \; \mathsf{g_1}^2 \; \tfrac{1}{\mathsf{m_0}^2} \; \mathsf{y_d}^{\mathsf{i3i4}} \; \mathsf{y_u}^{\mathsf{i1i2}} \; \mathsf{LF_{2,1,0}} \left[ \, \widetilde{\mu} \, , \; \mathsf{m_1} \, \right] \; \left( \, c_{\gamma}^{\; 2} \, - \, s_{\gamma}^{\; 2} \, \right)^2 \, + \, c_{\gamma}^2 
                                                                                                                                                         g_{1}^{2} \, \tfrac{1}{m_{\star}^{2}} \, y_{d}^{\, \dot{1} \dot{3} \dot{1} \dot{4}} \, y_{u}^{\, \dot{1} \dot{1} \dot{1} \dot{2}} \, \left( -2 \, s_{\gamma} \, c_{\gamma} \, m_{\bar{p}}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) + m_{1} \, \widetilde{\mu} \, \left( c_{\gamma}^{\, 2} - s_{\gamma}^{\, 2} \right)^{\, 2} \right) \, LF_{3,1,-1} [\, \widetilde{\mu} \, , \, m_{1} \, ] \, - \, 2 \, s_{\gamma}^{\, 2} \, \left( -2 \, s_{\gamma} \, c_{\gamma} \, m_{\bar{p}}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) + m_{1} \, \widetilde{\mu} \, \left( c_{\gamma}^{\, 2} - s_{\gamma}^{\, 2} \right)^{\, 2} \right) \, LF_{3,1,-1} [\, \widetilde{\mu} \, , \, m_{1} \, ] \, - \, 2 \, s_{\gamma}^{\, 2} \, \left( -2 \, s_{\gamma} \, c_{\gamma} \, m_{\bar{p}}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) + m_{1} \, \widetilde{\mu} \, \left( c_{\gamma}^{\, 2} - s_{\gamma}^{\, 2} \right)^{\, 2} \right) \, LF_{3,1,-1} [\, \widetilde{\mu} \, , \, m_{1} \, ] \, - \, 2 \, s_{\gamma}^{\, 2} \, \left( -2 \, s_{\gamma} \, c_{\gamma} \, m_{\bar{p}}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) + m_{1} \, \widetilde{\mu} \, \left( c_{\gamma}^{\, 2} - s_{\gamma}^{\, 2} \right)^{\, 2} \right) \, LF_{3,1,-1} [\, \widetilde{\mu} \, , \, m_{1} \, ] \, - \, 2 \, s_{\gamma}^{\, 2} \, \left( -2 \, s_{\gamma} \, c_{\gamma} \, m_{\bar{p}}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) + m_{1} \, \widetilde{\mu} \, \left( c_{\gamma}^{\, 2} - s_{\gamma}^{\, 2} \right)^{\, 2} \right) \, LF_{3,1,-1} [\, \widetilde{\mu} \, , \, m_{1} \, ] \, - \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, LF_{3,1,-1} [\, \widetilde{\mu} \, , \, m_{1} \, ] \, - \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, + \, 2 \, s_{\gamma}^{\, 
                                                                                                                                                         2 m_1 \widetilde{\mu} g_1^2 s_y^2 c_y^2 y_d^{i3i4} y_u^{i1i2} LF_{3,1,0} [\widetilde{\mu}, m_1] +
                                                                                                                                                         4 s_{\gamma} c_{\gamma} g_{1}^{2} y_{d}^{i3i4} y_{u}^{i1i2} (c_{\gamma}^{2} + s_{\gamma}^{2}) LF_{4,1,-2} [\tilde{\mu}, m_{1}] +
                                                                                                                                                         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 \, s_{\gamma} \, c_{\gamma} \, g_{1}^{\, 2} \, y_{d}^{\, i3i4} \, y_{u}^{\, i1i2} \, \left( c_{\gamma}^{\, 2} + s_{\gamma}^{\, 2} \right) \, LF_{5,1,-3} \left[ \widetilde{\mu} \, , \, m_{1} \, \right] \, - \, c_{\gamma}^{\, 2} \, c_{\gamma}^{\, 
                                                                                                                                                         4 m_1 \tilde{\mu} g_1^2 s_{\gamma}^2 c_{\gamma}^2 y_d^{i3i4} y_u^{i1i2} LF_{5,1,-2} [\tilde{\mu}, m_1] -
                                                                                                                                                         3 \; m_2 \; \widetilde{\mu} \; g_2^2 \; \frac{1}{m_\text{o}^2} \; y_\text{d}^{\, \dot{1} \, \dot{3} \, \dot{1} \, 4} \; y_\text{u}^{\, \dot{1} \, \dot{1} \, \dot{1} \, 2} \; \mathsf{LF}_{2, 1, \theta} \left[\, \widetilde{\mu} \, , \; m_2 \, \right] \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma^{\, 2} \, - \, s_\gamma^{\, 2} \, \right)^{\, 2} \, + \, \frac{1}{2} \; \left(\, c_\gamma
                                                                                                                                                         6 \, m_2 \, \widetilde{\mu} \, g_2^2 \, s_{\gamma}^2 \, c_{\gamma}^2 \, y_d^{\, i3i4} \, y_u^{\, i1i2} \, LF_{3,1,0} \, [\, \widetilde{\mu} \, , \, m_2 \, ] \, + \,
                                                                                                                                                         12 s_{\gamma} c_{\gamma} g_{2}^{2} y_{d}^{i3i4} y_{u}^{i1i2} (c_{\gamma}^{2} + s_{\gamma}^{2}) LF_{4,1,-2} [\tilde{\mu}, m_{2}] +
                                                                                                                                                         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 s_{\gamma} c_{\gamma} g_{2}^{2} y_{d}^{i3i4} y_{u}^{i1i2} (c_{\gamma}^{2} + s_{\gamma}^{2}) LF_{5,1,-3} [\tilde{\mu}, m_{2}] -
                                                                                                                                                         12 m_2 \, \tilde{\mu} \, g_2^{\, 2} \, s_{\gamma}^{\, 2} \, c_{\gamma}^{\, 2} \, y_d^{\, i3i4} \, y_u^{\, i1i2} \, LF_{5,1,-2} \, [\, \tilde{\mu} \, , \, m_2 \, ] -
                                                                                                                                                             \frac{1}{4} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\omega}^{2}} \; \overline{y_{d}}^{\text{pr}} \; \left( y_{d}^{\; \text{ilr}} \; y_{d}^{\; \text{i3i4}} \; y_{u}^{\; \text{pi2}} + y_{d}^{\; \text{pi4}} \; y_{d}^{\; \text{i3r}} \; y_{u}^{\; \text{i1i2}} \right) \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] \; - \left[ \widetilde{\mu} \; , \; \mathsf{m}_{\widetilde{d}}^{\; \text{r}} \right] 
                                                                                                                                                                 \frac{1}{2} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{\text{o}}^{\,2}} \; \left( y_{\text{d}}^{\,i3i4} \, \overline{y_{\text{u}}}^{\text{pr}} \; y_{\text{u}}^{\,pi2} \; y_{\text{u}}^{\,i1r} + \overline{y_{\text{d}}}^{\text{pr}} \; y_{\text{d}}^{\,pi4} \; y_{\text{d}}^{\,i3r} \; y_{\text{u}}^{\,i1i2} \right) \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] - \left( m_{\text{e}}^{\,\,p} \right) \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \! \left[ \widetilde{\mu} \, , \; m_{\text{q}}^{\,\,p} \right] \; \mathsf{LF}_{2,1,-1} \; \mathsf{LF}_{2,1} \; \mathsf{
                                                                                                                                                             \frac{1}{4} \; s_{\gamma} \; c_{\gamma} \; \frac{1}{m_{o}^{2}} \; \overline{y_{u}}^{pr} \; \left( y_{d}^{\; 13i4} \; y_{u}^{\; pi2} \; y_{u}^{\; 11r} \; + \; y_{d}^{\; pi4} \; y_{u}^{\; 11i2} \; y_{u}^{\; 13r} \right) \; \mathsf{LF}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F}_{2,1,-1} \left[ \widetilde{\mu} \; , \; m_{\widetilde{u}}^{\; r} \right] \; + \; \mathcal{F
                                                                                                                                                                 \frac{1}{9} \; m_1 \; c_{\gamma} \; g_1^2 \; \frac{1}{m_0^2} \; y_u^{\, \text{ili2}} \; \left( s_{\gamma} \; a_d^{\, \text{i3i4}} + \widetilde{\mu} \; c_{\gamma} \; y_d^{\, \text{i3i4}} \right) \; \mathsf{LF}_{1,1,1,0} \left[ m_1 \,, \; m_{\tilde{d}}^{\, \text{i4}} \,, \; m_{\tilde{q}}^{\, \text{i3}} \right] \; + \\ \frac{1}{9} \; m_1 \; c_{\gamma} \; g_1^2 \; \frac{1}{m_0^2} \; y_u^{\, \text{i1i2}} \; \left( s_{\gamma} \; a_d^{\, \text{i3i4}} + \widetilde{\mu} \; c_{\gamma} \; y_d^{\, \text{i3i4}} \right) \; \mathsf{LF}_{1,1,1,0} \left[ m_1 \,, \; m_{\tilde{d}}^{\, \text{i4}} \,, \; m_{\tilde{q}}^{\, \text{i3}} \right] \; + \\ \frac{1}{9} \; m_1 \; c_{\gamma} \; g_1^2 \; \frac{1}{m_0^2} \; y_u^{\, \text{i1i2}} \; \left( s_{\gamma} \; a_d^{\, \text{i3i4}} + \widetilde{\mu} \; c_{\gamma} \; y_d^{\, \text{i3i4}} \right) \; \mathsf{LF}_{1,1,1,0} \left[ m_1 \,, \; m_{\tilde{d}}^{\, \text{i4}} \,, \; m_{\tilde{q}}^{\, \text{i3i}} \right] \; + \\ \frac{1}{9} \; m_1 \; c_{\gamma} \; g_1^2 \; \frac{1}{m_0^2} \; y_u^{\, \text{i3i2}} \; \left( s_{\gamma} \; a_d^{\, \text{i3i4}} + \widetilde{\mu} \; c_{\gamma} \; y_d^{\, \text{i3i4}} \right) \; \mathsf{LF}_{1,1,1,0} \left[ m_1 \,, \; m_{\tilde{d}}^{\, \text{i4}} \,, \; m_{\tilde{q}}^{\, \text{i3i}} \right] \; + \\ \frac{1}{9} \; m_1 \; c_{\gamma} \; g_1^2 \; \frac{1}{m_0^2} \; y_u^{\, \text{i3i2}} \; \left( s_{\gamma} \; a_d^{\, \text{i3i4}} + \widetilde{\mu} \; c_{\gamma} \; y_d^{\, \text{i3i4}} \right) \; \mathsf{LF}_{1,1,1,0} \left[ m_1 \,, \; m_{\tilde{d}}^{\, \text{i3i4}} \,, \; m_{\tilde{q}}^{\, \text{i3i4}} \right] \; + \\ \frac{1}{9} \; m_1 \; c_{\gamma} \; g_1^2 \; \frac{1}{m_0^2} \; y_u^{\, \text{i3i4}} \; \left( s_{\gamma} \; a_d^{\, \text{i3i4}} + \widetilde{\mu} \; c_{\gamma} \; y_d^{\, \text{i3i4}} \right) \; \mathsf{LF}_{1,1,1,1,0} \left[ m_1 \,, \; m_{\tilde{d}} \; m_1 \;, \; m_{\tilde{d}} \; m_1 \;, \; m_{\tilde{d}} \; m_1 \;, \; m_{\tilde{d}} \; m_2 \;, \; m_1 \;, \; m_2 \;, 
                                                                                                                                                                 \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{i4}} \, , \, \, \mathsf{m_{\tilde{q}}}^{\mathsf{i3}} \big] \; - \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3i4}} + \; \mathsf{m_{\tilde{q}}}^{\mathsf{i3i4
                                                                                                                                                             \frac{1}{3} \; \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_{1,1,1,-1}} \big[ \mathsf{m_{1}} \text{, } \mathsf{m_{d}}^{\mathsf{-i4}} \text{, } \widetilde{\mu} \big] \; + \\
                                                                                                                                                                                                                                                                                                                                                                                                                         \frac{1}{m_{o}^{2}} c_{\gamma}^{2} y_{d}^{i3i4} y_{u}^{i1i2} LF_{1,1,1,0}[m_{1}, m_{\tilde{d}}^{i4}, \tilde{\mu}]
                                                                                                                                                             \frac{2}{9} \ m_1 \ s_{\gamma} \ g_1{}^2 \ \frac{1}{m_{_0}{}^2} \ y_d{}^{\text{i3i4}} \ \left( c_{\gamma} \ a_u{}^{\text{i1i2}} + s_{\gamma} \ \tilde{\mu} \ y_u{}^{\text{i1i2}} \right) \ LF_{1,1,1,0} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \text{, } m_{\tilde{u}}{}^{\text{i2}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}}{}^{\text{i1}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_{\tilde{q}} \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_1 \text{, } m_1 \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_1 \text{, } m_1 \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_1 \text{, } m_1 \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_1 \text{, } m_1 \right] \ + c_{\tilde{q}} \left[ m_1 \text{, } m_1 \text{, } m_2 \right] \ + c_{\tilde{q}}
                                                                                                                                                                 \frac{1}{18} \; \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}~{\rm S_{\Upsilon}}~{\rm C_{\Upsilon}}~{\rm g_1}^2~\frac{1}{{\rm m_0}^2}~{\rm y_d}^{\rm i3i4}~{\rm y_u}^{\rm i1i2}~{\rm LF_{1,1,1,-1}}\big[\rm m_1,~m_{\tilde{q}}^{\rm i1},~\tilde{\mu}\big]
                                                                                                                                                                 \frac{1}{6}~\text{m}_1~\widetilde{\mu}~\text{g}_1^{~2}~\frac{1}{\text{m}_0^{~2}}~\text{s}_\text{Y}^{~2}~\text{y}_\text{d}^{~13i4}~\text{y}_\text{u}^{~11i2}~\text{LF}_{1,1,1,0}\left[\text{m}_1,~\text{m}_{\tilde{q}}^{~i1},~\widetilde{\mu}\right]~+
                                                                                                                                                             \frac{1}{36} \; m_1 \; s_\gamma \; g_1^{\; 2} \; y_u^{\; \text{ili2}} \; \left( c_\gamma \; a_d^{\; \text{i3i4}} - s_\gamma \; \widetilde{\mu} \; y_d^{\; \text{i3i4}} \right) \; \mathsf{LF}_{2,2,1,-1} \big[ m_1 \, , \; m_{\tilde{q}}^{\; \text{i3}} \, , \; m_{\tilde{d}}^{\; \text{i4}} \big] \; - \; m_{\tilde{q}}^{\; \text{i4}} \; + \; m_{\tilde{q}}^{\; \text{i4}} \; +
                                                                                                                                                                 \frac{1}{6}~{\rm S_{\gamma}}~{\rm C_{\gamma}}~{\rm g_1}^2~\frac{1}{{\rm m_0}^2}~{\rm y_d}^{\rm i3i4}~{\rm y_u}^{\rm i1i2}~{\rm LF_{1,1,1,-1}}\big[{\rm m_1,~m_{\tilde{q}}}^{\rm i3},~\widetilde{\mu}\big]~+
                                                                                                                                                                 \frac{1}{6} \,\, m_1 \,\, \widetilde{\mu} \,\, g_1^{\, 2} \,\, \frac{1}{m_0^{\, 2}} \,\, c_{\gamma}^{\, 2} \,\, y_d^{\, \dot{1}3\dot{1}4} \,\, y_u^{\, \dot{1}1\dot{1}2} \,\, \mathsf{LF}_{1,1,1,0} \big[ \, m_1 \,, \,\, m_{\tilde{q}}^{\, \dot{1}3} \,, \,\, \widetilde{\mu} \, \big] \,\, + \,\, c_{\gamma}^{\, \dot{1}3} \,\, m_0^{\, \dot{1}3} \,\, m_0^{\, \dot{1}3\dot{1}4} \,\, g_1^{\, \dot{1}3\dot
                                                                                                                                                             \frac{1}{18} \ \mathsf{m_1} \ \mathsf{c_{\gamma}} \ \mathsf{g_1}^2 \ \mathsf{y_d}^{\texttt{i3i4}} \ \left( - \, \mathsf{s_{\gamma}} \ \mathsf{a_u}^{\texttt{i1i2}} + \widetilde{\mu} \ \mathsf{c_{\gamma}} \ \mathsf{y_u}^{\texttt{i1i2}} \right) \ \mathsf{LF_{2,2,1,-1}} \big[ \, \mathsf{m_1} \, , \ \mathsf{m_{\tilde{u}}}^{\texttt{i2}} \, , \ \mathsf{m_{\tilde{q}}}^{\texttt{i1}} \big] \ - \\ \\ \mathsf{m_{1}} \ \mathsf{m_{2}} \ \mathsf{m_{2}}^{\texttt{i1}} \ \mathsf{m_{2}}^{\texttt{i2}} + \widetilde{\mu} \ \mathsf{m_{2}}^{\texttt{i1}} \, \mathsf{m_{2}}^{\texttt{i1}} \,
                                                                                                                                                                 \frac{2}{3} \, s_{\gamma} \, c_{\gamma} \, g_{1}^{2} \, \frac{1}{m_{0}^{2}} \, y_{d}^{1314} \, y_{u}^{1112} \, LF_{1,1,1,-1}[m_{1}, m_{\tilde{u}}^{12}, \tilde{\mu}] +
                                                                                                                                                             \frac{2}{3} \; \mathsf{m_1} \; \tilde{\mu} \; \mathsf{g_1}^2 \; \frac{1}{\mathsf{m_u}^2} \; \mathsf{s_{\gamma}}^2 \; \mathsf{y_d}^{\mathsf{i3i4}} \; \mathsf{y_u}^{\mathsf{i1i2}} \; \mathsf{LF_{1,1,1,0}} \big[ \, \mathsf{m_1} \, , \, \, \mathsf{m_u}^{\mathsf{i2}} \, , \, \, \tilde{\mu} \, \big] \; + \\
                                                                                                                                                                 \frac{1}{6} \, s_{\gamma} \, c_{\gamma} \, g_{1}^{2} \, y_{d}^{i3i4} \, y_{u}^{i1i2} \, LF_{2,2,1,-2} [m_{1}, \, \tilde{\mu}, \, m_{\tilde{d}}^{i4}] + 
                                                                                                                                                                                                    \mathbf{m_{1}} \; \tilde{\mu} \; \mathbf{g_{1}}^{2} \; \mathbf{s_{\gamma}}^{2} \; \mathbf{y_{d}}^{\mathbf{i3i4}} \; \mathbf{y_{u}}^{\mathbf{i1i2}} \; \mathsf{LF_{2,2,1,-1}} \big[ \mathbf{m_{1}}, \; \tilde{\mu}, \; \mathbf{m_{\tilde{d}}}^{\mathbf{i4}} \big] \; - \;
                                                                                                                                                                                                            \frac{1}{12} \, 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_{\widetilde{q}}^{\ i1} \big] +
                                                                                                                                                                     \frac{1}{12} s_{\gamma} c_{\gamma} g_{1}^{2} y_{d}^{i3i4} y_{u}^{i1i2} LF_{2,2,1,-2}[m_{1},\,\widetilde{\mu},\,m_{\widetilde{q}}^{i3}] +
                                                                                                                                                                             \frac{1}{12} \, m_1 \, \widetilde{\mu} \, g_1^2 \, s_{\gamma}^2 \, y_d^{i3i4} \, y_u^{i1i2} \, LF_{2,2,1,-1} \big[ m_1, \, \widetilde{\mu}, \, m_{\tilde{q}}^{i3} \big] +
                                                                                                                                                                 \frac{1}{3} \, s_{\gamma} \, c_{\gamma} \, g_{1}^{2} \, y_{d}^{i3i4} \, y_{u}^{i1i2} \, LF_{2,2,1,-2} [m_{1}, \, \tilde{\mu}, \, m_{\tilde{u}}^{i2}] +
                                                                                                                                                                                                m_1 \tilde{\mu} g_1^2 c_{\gamma}^2 y_d^{i3i4} y_u^{i1i2} LF_{2,2,1,-1}[m_1, \tilde{\mu}, m_{\tilde{u}}^{i2}] -
                                                                                                                                                             \frac{3}{2}\;\mathsf{m_2}\;\widetilde{\mu}\;\mathsf{g_2}^2\;\frac{1}{\mathsf{m_0}^2}\;\mathsf{s_\gamma}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{1,1,1,0}}\big[\mathsf{m_2}\,,\,\mathsf{m_{\tilde{q}}}^{\mathsf{i1}},\,\widetilde{\mu}\big]\;-
                                                                                                                                                                 \frac{3}{2} s_{\gamma} c_{\gamma} g_{2}^{2} \frac{1}{m_{0}^{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] +
                                                                                                                                                                                                    \mathsf{s}_{\gamma}\,\mathsf{c}_{\gamma}\,\mathsf{g_2}^2\,\mathsf{y_d}^{\mathsf{i3i4}}\,\mathsf{y_u}^{\mathsf{i1i2}}\,\mathsf{LF_{2,2,1,-2}}\big[\mathsf{m}_2\,,\,\widetilde{\mu}\,,\,\mathsf{m_{\tilde{q}}}^{\mathsf{i1}}\big]\,\,+\,\,
                                                                                                                                                                                                \mathsf{m_2}\,\tilde{\mu}\,\mathsf{g_2}^2\,\mathsf{c_{\gamma}}^2\,\mathsf{y_d}^{\mathsf{i3i4}}\,\mathsf{y_u}^{\mathsf{i1i2}}\,\mathsf{LF_{2,2,1,-1}}\big[\mathsf{m_2}\,,\,\tilde{\mu}\,,\,\mathsf{m_{\tilde{q}}}^{\mathsf{i1}}\big]\,+
                                                                                                                                                                                                    \mathsf{s}_{\gamma}\,\mathsf{c}_{\gamma}\,\mathsf{g_2}^2\,\mathsf{y_d}^{\mathsf{i3i4}}\,\mathsf{y_u}^{\mathsf{i1i2}}\,\mathsf{LF_{2,2,1,-2}}\big[\mathsf{m}_2\,,\,\widetilde{\mu}\,,\,\mathsf{m}_{\tilde{\mathsf{q}}}^{\mathsf{i3}}\big]\;+\;
                                                                                                                                                             \frac{\text{3}}{\text{4}}~\text{m}_2~\tilde{\mu}~\text{g}_2^{~2}~\text{s}_{\gamma}^{~2}~\text{y}_\text{d}^{~\text{i3i4}}~\text{y}_\text{u}^{~\text{i1i2}}~\text{LF}_{\text{2,2,1,-1}}\big[\text{m}_2\text{,}~\tilde{\mu}\text{,}~\text{m}_{\tilde{q}}^{~\text{i3}}\big]~-
                                                                                                                                                                                                \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}_{\tilde{\textrm{d}}}^{\;\textrm{i4}}\;,\;\textbf{m}_{\tilde{\textrm{q}}}^{\;\textrm{i3}}\right]\;+
                                                                                                                                                                                            \text{m}_{3} \; \text{s}_{\gamma} \; \text{g}_{3}^{\; 2} \; \frac{1}{\text{m}_{\text{g}}^{\; 2}} \; \text{y}_{\text{d}}^{\; 13\dot{1}4} \; \left( \text{c}_{\gamma} \; \text{a}_{\text{u}}^{\; 11\dot{1}2} + \text{s}_{\gamma} \; \tilde{\mu} \; \text{y}_{\text{u}}^{\; 11\dot{1}2} \right) \; \text{LF}_{1,1,1,0} \left[ \text{m}_{3} \; , \; \text{m}_{\tilde{\text{q}}}^{\; \dot{1}1} \; , \; \text{m}_{\tilde{\text{u}}}^{\; \dot{1}2} \right] \; + \; \text{constants} \; \text{The sum of the sum of t
                                                                                                                                                                                                    \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_{2,2,1,-1}}\big[\,\mathsf{m_{3}}\,,\, \mathsf{m_{\tilde{q}}}^{\;\mathsf{i1}}\,,\, \mathsf{m_{\tilde{u}}}^{\;\mathsf{i2}}\big]\; +\, \widetilde{\mu}^{\;\mathsf{i1i2}}\, \mathsf{h_{\tilde{u}}}^{\;\mathsf{i2i}}\, \mathsf{h_
                                                                                                                                                                                                    \mathsf{m_3}\; \mathsf{c_{Y}}\; \mathsf{g_3}^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_3}\,,\; \mathsf{m_{\tilde{u}}}^{\,\mathsf{i2}}\,,\; \mathsf{m_{\tilde{q}}}^{\,\mathsf{i1}}\big] \; - \; \mathsf{m_{\tilde{q}}}^{\,\mathsf{i1}}\, \mathsf{m_{\tilde{q}}}^{\,\mathsf{i1}
                                                                                                                                                         s_{\gamma}\;\widetilde{\mu}\;\tfrac{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}}^{\;\;r}\;,\;m_{\bar{q}}^{\;\;p}\;,\;\widetilde{\mu}\right]\;+
                                                                                                                                                                                                \widetilde{\mu} \; c_{\gamma} \; y_{d}^{\; \text{ilr}} \; y_{d}^{\; \text{i3i4}} \; y_{u}^{\; \text{pi2}} \; \left( - \, c_{\gamma} \; \overline{a_{d}}^{pr} + \, s_{\gamma} \; \widetilde{\mu} \; \overline{y_{d}}^{pr} \right) \; \text{LF}_{2,\text{1,1,0}} \left[ \, m_{\tilde{d}}^{\; \, r} \, , \; m_{\tilde{q}}^{\; \, p} \, , \; \widetilde{\mu} \, \right] \; + \; c_{\gamma} \; \widetilde{\mu} \; \widetilde{\mu}
                                                                                                                                                                 \frac{1}{2}\;\widetilde{\mu}\;c_{\curlyvee}\;y_{d}^{\textrm{ilr}}\;y_{d}^{\textrm{i3i4}}\;y_{u}^{\textrm{pi2}}\;\left(c_{\curlyvee}\;\overline{a_{d}}^{\textrm{pr}}-s_{\curlyvee}\;\widetilde{\mu}\;\overline{y_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\!\left[\mathsf{m}_{\bar{d}}^{\textrm{r}},\;\mathsf{m}_{\bar{q}}^{\textrm{p}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{r}},\;\mathsf{m}_{\bar{q}}^{\textrm{p}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{pr}},\;\mathsf{m}_{\bar{q}}^{\textrm{pr}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{pr}},\;\mathsf{m}_{\bar{q}}^{\textrm{pr}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{pr}},\;\mathsf{m}_{\bar{q}}^{\textrm{pr}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{pr}},\;\mathsf{m}_{\bar{q}}^{\textrm{pr}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{pr}},\;\mathsf{m}_{\bar{q}}^{\textrm{pr}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{pr}},\;\mathsf{m}_{\bar{q}}^{\textrm{pr}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{pr}},\;\mathsf{m}_{\bar{q}}^{\textrm{pr}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{pr}},\;\mathsf{m}_{\bar{q}}^{\textrm{pr}},\;\widetilde{\mu}\right]\;+\;\left(c_{\curlyvee}^{\textrm{pr}},\;\widetilde{a_{d}}^{\textrm{pr}}\right)\;\mathsf{LF}_{3,1,1,-1}\left[\mathsf{m}_{\bar{d}}^{\textrm{pr}},\;\widetilde{\mu}\right]\;+\;\left(c_{\mathclap}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)\;+\;\left(c_{\intercal}^{\textrm{pr}},\;\widetilde{\mu}\right)
                                                                                                                                                                                                    \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}}^{\; \bar{p}} \, \big] \; + \; \mathsf{m}_{\bar{d}}^{\; \text{r}} \; , \; \mathsf{m
                                                                                                                                                                                                                \mathbf{m_{1}} \; \mathbf{s_{\gamma}} \; \mathbf{g_{1}}^{2} \; \mathbf{y_{u}}^{\text{ili2}} \; \left( - \, \mathbf{c_{\gamma}} \; \mathbf{a_{d}}^{\text{i3i4}} + \, \mathbf{s_{\gamma}} \, \widetilde{\boldsymbol{\mu}} \; \mathbf{y_{d}}^{\text{i3i4}} \right) \; \mathsf{LF_{2,1,1,0}} \left[ \, \mathbf{m_{\tilde{d}}}^{\text{i4}} \, , \; \mathbf{m_{1}} \, , \; \mathbf{m_{\tilde{q}}} \, \right] \; \mathsf{m_{1}} \; \mathsf{m_{1}} \; \mathsf{m_{1}} \; \mathsf{m_{2}} \; \mathsf{m_
                                                                                                                                                                                                                \mathsf{m_1} \, \mathsf{s_{\gamma}} \, \mathsf{g_1}^2 \, \mathsf{y_u}^{\text{ili2}} \, \left( \mathsf{c_{\gamma}} \, \mathsf{a_d}^{\text{i3i4}} - \mathsf{s_{\gamma}} \, \widetilde{\boldsymbol{\mu}} \, \mathsf{y_d}^{\text{i3i4}} \right) \, \mathsf{LF_{3,1,1,-1}} \big[ \, \mathsf{m_{\tilde{d}}}^{\text{i4}}, \, \mathsf{m_1}, \, \mathsf{m_{\tilde{q}}} \, \mathsf{m_1} \big] \, \mathsf{m_{\tilde{q}}} \, \mathsf{m_1} \, \mathsf{m_{\tilde{q}}} \, \mathsf{m_2} \, \mathsf{m_3} \, 
                                                                                                                                                                 \frac{4}{3}\,\mathsf{m}_3\,\mathsf{s}_{\gamma}\,\mathsf{g}_3{}^2\,\mathsf{y}_{\mathsf{u}}{}^{\mathsf{i}\,\mathsf{1}\,\mathsf{i}\,\mathsf{2}}\,\left(\mathsf{c}_{\gamma}\,\mathsf{a}_{\mathsf{d}}{}^{\mathsf{i}\,\mathsf{3}\,\mathsf{i}\,\mathsf{4}}-\mathsf{s}_{\gamma}\,\tilde{\mu}\,\mathsf{y}_{\mathsf{d}}{}^{\mathsf{i}\,\mathsf{3}\,\mathsf{i}\,\mathsf{4}}\right)\,\mathsf{LF}_{\mathsf{2},\mathsf{1},\mathsf{1},\mathsf{0}}\!\left[\mathsf{m}_{\bar{\mathsf{d}}}{}^{\mathsf{i}\,\mathsf{4}},\,\mathsf{m}_3,\,\mathsf{m}_{\bar{\mathsf{q}}}{}^{\mathsf{i}\,\mathsf{3}}\right]\,+\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}{}^{\mathsf{q}\,\mathsf{3}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}{}^{\mathsf{q}\,\mathsf{3}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_{\mathsf{q}}\,\mathsf{m}_
                                                                                                                                                             \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_{2,1,1,0}} \left[ \, \mathbf{m_{\tilde{q}}}^{\, p} \, , \; \mathbf{m_{\tilde{d}}}^{\, r} \, , \; \widetilde{\mu} \, \right] \; + \; \mathbf{a_{\tilde{q}}}^{\, p} \; , \; \mathbf{a_{
                                                                                                                                                                                                \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_{3,1,1,-1} \left[m_{\tilde{q}}^{\ p}, \ m_{\tilde{d}}^{\ p}\right]
                                                                                                                                                     \widetilde{\mu} \ c_{\gamma} \ \tfrac{1}{m_{\text{g}}^2} \ y_{\text{d}}^{\text{pi4}} \ y_{\text{u}}^{\text{ili2}} \ y_{\text{u}}^{\text{i3r}} \ \left( c_{\gamma} \ \overline{a_{\text{u}}}^{\text{pr}} + s_{\gamma} \ \widetilde{\mu} \ \overline{y_{\text{u}}}^{\text{pr}} \right) \ \mathsf{LF}_{1,1,1,0} \left[ \ \mathsf{m}_{\tilde{q}}^{\text{ p}}, \ \mathsf{m}_{\tilde{u}}^{\text{ r}}, \ \widetilde{\mu} \right] + \mathsf{m}_{\tilde{u}}^{\text{pr}} + \mathsf{m}_{\tilde{u}}^{\text{pr}} \right] \ \mathsf{LF}_{1,1,1,0} \left[ \ \mathsf{m}_{\tilde{q}}^{\text{ p}}, \ \mathsf{m}_{\tilde{u}}^{\text{ r}}, \ \widetilde{\mu}_{\tilde{u}}^{\text{ r}} \right] + \mathsf{m}_{\tilde{u}}^{\text{pr}} \right] \ \mathsf{LF}_{1,1,1,0} \left[ \ \mathsf{m}_{\tilde{q}}^{\text{ p}}, \ \mathsf{m}_{\tilde{u}}^{\text{ r}}, \ \widetilde{\mu}_{\tilde{u}}^{\text{ r}} \right] + \mathsf{m}_{\tilde{u}}^{\text{ r}} \right] + \mathsf{m}_{\tilde{u}}^{\text{ r}} \left[ \ \mathsf{m}_{\tilde{u}}^{\text{ r}}, \ \mathsf{m}_{\tilde{u}}^{\text{ r}}, \ \mathsf{m}_{\tilde{u}}^{\text{ r}}, \ \mathsf{m}_{\tilde{u}}^{\text{ r}}, \ \mathsf{m}_{\tilde{u}}^{\text{ r}} \right] + \mathsf{m}_{\tilde{u}}^{\text{ r}} \left[ \ \mathsf{m}_{\tilde{u}}^{\text{ r}}, \ \mathsf{m}_{\tilde{u}}^{\text{ r
                                                                                                                                                                                                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}_{2,1,1,0}\left[\,\mathsf{m}_{\tilde{q}}^{\,\,p}\,,\,\,\mathsf{m}_{\tilde{u}}^{\,\,r}\,,\,\,\widetilde{\mu}\,\right]\,+\,(-\,s_{\gamma}\,\overline{a_{u}}^{pr}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\,\overline{y_{u}}^{pr})\,\,\mathsf{LF}_{2,1,1,0}\left[\,\mathsf{m}_{\tilde{q}}^{\,\,p}\,,\,\,\mathsf{m}_{\tilde{u}}^{\,\,r}\,,\,\,\widetilde{\mu}\,\right]\,+\,(-\,s_{\gamma}\,\overline{a_{u}}^{pr}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\,\overline{y_{u}}^{pr})\,\,\mathsf{LF}_{2,1,1,0}\left[\,\mathsf{m}_{\tilde{q}}^{\,\,p}\,,\,\,\mathsf{m}_{\tilde{u}}^{\,\,r}\,,\,\,\widetilde{\mu}\,\right]\,+\,(-\,s_{\gamma}\,\overline{a_{u}}^{pr}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\,\overline{y_{u}}^{pr})\,\,\mathsf{LF}_{2,1,1,0}\left[\,\mathsf{m}_{\tilde{q}}^{\,\,p}\,,\,\,\mathsf{m}_{\tilde{u}}^{\,\,r}\,,\,\,\widetilde{\mu}\,\right]\,+\,(-\,s_{\gamma}\,\overline{a_{u}}^{pr}\,+\,\widetilde{\mu}\,\,c_{\gamma}\,\,\overline{y_{u}}^{pr})\,\,\mathsf{LF}_{2,1,1,0}\left[\,\mathsf{m}_{\tilde{q}}^{\,\,p}\,,\,\,\mathsf{m}_{\tilde{u}}^{\,\,r}\,,\,\,\widetilde{\mu}\,\,\right]
                                                                                                                                                                                                s_{_{Y}}\,\tilde{\mu}\,y_{d}^{\,\text{pi4}}\,y_{u}^{\,\,\text{ili2}}\,y_{u}^{\,\,\text{i3r}}\,\left(s_{_{Y}}\,\overline{a_{u}}^{\,\text{pr}}-\tilde{\mu}\,\,c_{_{Y}}\,\overline{y_{u}}^{\,\text{pr}}\right)\,\text{LF}_{3,1,1,-1}\!\left[\textbf{m}_{\tilde{q}}^{\,\,\text{p}},\,\textbf{m}_{\tilde{u}}^{\,\,\text{r}},\,\tilde{\mu}\right]+\frac{1}{2}\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\,\text{LF}_{3,1,1,-1}\!\left[\textbf{m}_{\tilde{q}}^{\,\,\text{p}},\,\textbf{m}_{\tilde{u}}^{\,\,\text{r}},\,\tilde{\mu}\right]+\frac{1}{2}\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text{pr}}\right)\left(s_{_{Y}}\,\overline{y_{u}}^{\,\,\text
                                                                                                                                                                     \frac{1}{4}\;\widetilde{\mu}\;\mathbf{c}_{\gamma}\;\mathbf{y_{d}}^{\text{ilr}}\;\mathbf{y_{d}}^{\text{i3i4}}\;\mathbf{y_{u}}^{\text{pi2}}\;\left(\mathbf{c}_{\gamma}\;\overline{\mathbf{a_{d}}}^{\text{pr}}-\mathbf{s}_{\gamma}\;\widetilde{\mu}\;\overline{\mathbf{y_{d}}}^{\text{pr}}\right)\;\mathsf{LF_{2,2,1,-1}}\!\left[\mathbf{m_{\tilde{q}}}^{\text{p}},\;\widetilde{\mu},\;\mathbf{m_{\tilde{d}}}^{\text{r}}\right]\;+
                                                                                                                                                                                                s_{_{Y}}\,\tilde{\mu}\,\,y_{d}^{\,\text{pi4}}\,\,y_{u}^{\,\,\text{ili2}}\,\,y_{u}^{\,\,\text{i3r}}\,\left(s_{_{Y}}\,\overline{a_{u}}^{\text{pr}}-\tilde{\mu}\,\,c_{_{Y}}\,\overline{y_{u}}^{\text{pr}}\right)\,\,\text{LF}_{2,2,1,-1}\big[\,\text{m}_{\tilde{q}}^{\,\,\text{p}}\,,\,\,\tilde{\mu}\,,\,\,\text{m}_{\tilde{u}}^{\,\,\text{r}}\,\big]\,\,+\,\,\,\text{m}_{\tilde{u}}^{\,\,\text{r}}\,\,
                                                                                                                                                                 \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{\boldsymbol{\mu}}\;\mathbf{c_{\gamma}}\;\mathbf{y_{u}}^{\mathbf{i1i2}}\right)\;\mathbf{LF_{3,1,1,-1}}\!\left[\,\mathbf{m_{\tilde{q}}}^{\mathbf{i1}}\,,\;\mathbf{m_{1}},\;\mathbf{m_{\tilde{u}}}^{\mathbf{i2}}\,\right]\;+\,\widetilde{\boldsymbol{\mu}}^{\mathbf{i2}}
                                                                                                                                                                 \frac{4}{3}\;\mathsf{m_{3}}\;\mathsf{c_{\gamma}}\;\mathsf{g_{3}}^{2}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\;\left(\mathsf{s_{\gamma}}\;\mathsf{a_{u}}^{\mathsf{i1i2}}-\tilde{\mu}\;\mathsf{c_{\gamma}}\;\mathsf{y_{u}}^{\mathsf{i1i2}}\right)\;\mathsf{LF_{2,1,1,0}}\!\left[\mathsf{m_{\tilde{q}}}^{\mathsf{-}\mathsf{i1}},\;\mathsf{m_{3}},\;\mathsf{m_{\tilde{u}}}^{\mathsf{i2}}\right]\;\mathsf{+}\;
                                                                                                                                                                                                    \mathsf{m_{3}}\; c_{\gamma}\; \mathsf{g_{3}}^{2}\; \mathsf{y_{d}}^{\mathbf{i3i4}}\; \left(-\,\mathsf{s_{\gamma}}\; \mathsf{a_{u}}^{\,\,\mathbf{i1i2}}\,+\,\widetilde{\mu}\; c_{\gamma}\; \mathsf{y_{u}}^{\,\,\mathbf{i1i2}}\right)\; \mathsf{LF_{3,1,1,-1}}\big[\,\mathsf{m_{\tilde{q}}}^{\,\,\mathbf{i1}}\,,\;\mathsf{m_{3}}\,,\;\mathsf{m_{\tilde{u}}}^{\,\,\mathbf{i2}}\big]\; +\, \widetilde{\mu}^{\,\,\mathbf{i1i2}}\,,\; \mathsf{LF_{3,1,1,-1}}\big[\,\mathsf{m_{\tilde{q}}}^{\,\,\mathbf{i1}}\,,\;\mathsf{m_{3}}\,,\;\mathsf{m_{\tilde{u}}}^{\,\,\mathbf{i2}}\,\big]\; +\, \widetilde{\mu}^{\,\,\mathbf{i1i2}}\,,\; \mathsf{LF_{3,1,1,1}}^{\,\,\mathbf{i1i2}}\,,\; \mathsf{LF_{3,1,1,1,1}}^{\,\,\mathbf{i1i2}}\,,\; \mathsf{m_{3}}\,,\; \mathsf{m_{\tilde{u}}}^{\,\,\mathbf{i2i2}}\,\big]\; +\, \widetilde{\mu}^{\,\,\mathbf{i1i2}}\,,\; \mathsf{LF_{3,1,1,1,1}}^{\,\,\mathbf{i1i2}}\,,\; \mathsf{m_{3}}\,,\; \mathsf{m_{\tilde{u}}}^{\,\,\mathbf{i2i2}}\,,\; \mathsf{LF_{3,1,1,1,1}}^{\,\,\mathbf{i1i2}}\,,\; \mathsf{m_{3}}\,,\; \mathsf{m_{\tilde{u}}}^{\,\,\mathbf{i2i2}}\,,\; \mathsf{m_{3}}^{\,\,\mathbf{i2i2}}\,,\; \mathsf{m
                                                                                                                                                                                                                \mathsf{m_1} \; \mathsf{s_{\gamma}} \; \mathsf{g_1}^2 \; \mathsf{y_u}^{\text{ili2}} \; \left( - \, \mathsf{c_{\gamma}} \; \mathsf{a_d}^{\text{i3i4}} + \, \mathsf{s_{\gamma}} \, \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\text{i3i4}} \right) \; \mathsf{LF_{2,1,1,0}} \left[ \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \, , \; \mathsf{m_1} \, , \; \mathsf{m_{\tilde{d}}}^{\text{i4}} \, \right] \; + \; \mathsf{m_{\tilde{q}}}^{\text{i4}} \; + \; \mathsf{s_{\gamma}} \, \widetilde{\boldsymbol{\mu}} \; \mathsf{y_d}^{\text{i3i4}} \right) \; \mathsf{LF_{2,1,1,0}} \left[ \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \, , \; \mathsf{m_1} \, , \; \mathsf{m_{\tilde{d}}}^{\text{i4}} \, \right] \; + \; \mathsf{m_{\tilde{q}}}^{\text{i4}} \; + \; \mathsf{m_{\tilde{q}}}^{\text{i4}} \, \right] \; + \; \mathsf{m_{\tilde{q}}}^{\text{i4}} \; + \; \mathsf{m_{\tilde{q}}}^{\text{i4}
                                                                                                                                                                                                                \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_{3,1,1,-1}} \big[ \, \mathsf{m_{\tilde{q}}}^{\text{i3}} \, , \, \, \mathsf{m_1} \, , \, \, \mathsf{m_{\tilde{d}}}^{\text{i4}} \big] \, + \, \, \mathsf{m_{\tilde{q}}}^{\text{i4}} \, , \, \, \mathsf{m_2}^{\text{i4}} \, , \, \, \mathsf{m_3}^{\text{i4}} \, , \, \, 
                                                                                                                                                                                            m_3 \, s_{\gamma} \, g_3^2 \, 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_{2,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_3 \, , \, m_{\tilde{d}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 3} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,1,1,0} \left[ \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,1,1,1,1,1} \left[ \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, , \, m_{\tilde{q}}^{\, \, i \, 4} \, \right] \, + \, c_{\alpha,1,1,1,1} \left[ \, m_{\tilde{q}}^{\, \, i \, 4
                                                                                                                                                                                                \mathsf{m_{3}}\;\mathsf{s_{\gamma}}\;\mathsf{g_{3}}^{2}\;\mathsf{y_{u}}^{\mathsf{ili2}}\;\left(-\,\mathsf{c_{\gamma}}\;\mathsf{a_{d}}^{\mathsf{i3i4}}+\,\mathsf{s_{\gamma}}\;\widetilde{\mu}\;\mathsf{y_{d}}^{\mathsf{i3i4}}\right)\;\mathsf{LF_{3,1,1,-1}}\!\left[\,\mathsf{m_{\tilde{q}}}\right]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [^{i3}, m_3, m_{	ilde{d}}^{i4}] +
                                                                                                                                                                                                    \mathbf{s_{\gamma}}\,\widetilde{\boldsymbol{\mu}}\,\,\mathbf{y_{d}}^{\text{pi4}}\,\,\mathbf{y_{u}}^{\text{ili2}}\,\,\mathbf{y_{u}}^{\text{i3r}}\,\left(-\,\mathbf{s_{\gamma}}\,\,\overline{\mathbf{a_{u}}}^{\text{pr}}\,+\,\widetilde{\boldsymbol{\mu}}\,\,\mathbf{c_{\gamma}}\,\,\overline{\mathbf{y_{u}}}^{\text{pr}}\right)\,\,\mathbf{LF_{2,1,1,0}}\left[\,\mathbf{m_{\tilde{u}}}^{\text{r}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{p}}\,,\,\,\widetilde{\boldsymbol{\mu}}\,\right]\,+\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\text{pr}}\,,\,\,\mathbf
                                                                                                                                                                                                    \mathbf{s}_{\mathrm{Y}}\,\tilde{\boldsymbol{\mu}}\,\,\mathbf{y_{d}}^{\mathsf{pi4}}\,\,\mathbf{y_{u}}^{\mathsf{i1i2}}\,\,\mathbf{y_{u}}^{\mathsf{i3r}}\,\,\left(\mathbf{s}_{\mathrm{Y}}\,\overline{\mathbf{a_{u}}}^{\mathsf{pr}}-\tilde{\boldsymbol{\mu}}\,\,\mathbf{c}_{\mathrm{Y}}\,\,\overline{\mathbf{y_{u}}}^{\mathsf{pr}}\right)\,\,\mathsf{LF_{3,1,1,-1}}\big[\,\mathbf{m_{\tilde{u}}}^{\mathsf{r}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\tilde{\boldsymbol{\mu}}\,\big]\,\,+\,\,\mathbf{m_{\tilde{u}}}^{\mathsf{pr}}\,\,\mathbf{m_{\tilde{u}}}^{\mathsf{pr}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_{\tilde{q}}}^{\mathsf{p}}\,,\,\,\mathbf{m_
                                                                                                                                                                                                    \textbf{s}_{\gamma}\,\tilde{\boldsymbol{\mu}}\,\,\textbf{y}_{\textbf{d}}^{\,\,\text{pi4}}\,\,\textbf{y}_{\textbf{u}}^{\,\,\text{ili2}}\,\,\textbf{y}_{\textbf{u}}^{\,\,\text{i3r}}\,\left(\textbf{s}_{\gamma}\,\,\overline{\textbf{a}_{\textbf{u}}}^{\,\,\text{pr}}\,-\,\tilde{\boldsymbol{\mu}}\,\,\textbf{c}_{\gamma}\,\,\overline{\textbf{y}_{\textbf{u}}}^{\,\,\text{pr}}\right)\,\,\textbf{LF}_{\textbf{2},\textbf{2},\textbf{1},\textbf{-1}}\big[\,\textbf{m}_{\tilde{\textbf{u}}}^{\,\,\text{r}}\,\textbf{,}\,\,\tilde{\boldsymbol{\mu}}\,,\,\,\textbf{m}_{\tilde{\textbf{q}}}^{\,\,\text{p}}\,\big]\,\,+\,\,\textbf{m}_{\tilde{\textbf{q}}}^{\,\,\text{pr}}\,\,
                                                                                                                                                                                                    \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{u}}}^{\textbf{i2}}, \ \textbf{m_{1}}, \ \textbf{m_{\tilde{q}}}^{\textbf{i1}}\right] \ + \\
                                                                                                                                                                                                    \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_{3,1,1,-1}} \left[ \, \mathbf{m_{\tilde{u}}}^{\mathbf{i2}} \, \mathbf{,} \; \mathbf{m_{1}} \, \mathbf{,} \; \mathbf{m_{\tilde{q}}}^{\mathbf{i1}} \, \right] \; + \\ \mathbf{m_{1}} \; \mathbf{c_{\gamma}} \; \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_{3,1,1,-1}} \left[ \, \mathbf{m_{\tilde{u}}}^{\mathbf{i2}} \, \mathbf{,} \; \mathbf{m_{1}} \, \mathbf{,} \; \mathbf{m_{\tilde{q}}}^{\mathbf{i1}} \, \right] \; + \\ \mathbf{m_{1}} \; \mathbf{c_{\gamma}} \; \mathbf{a_{u}}^{\mathbf{i1i2}} \; \mathbf{a_{
                                                                                                                                                                                            \mathsf{m_{3}}\; \mathsf{c_{\gamma}}\; \mathsf{g_{3}}^{2}\; \mathsf{y_{d}}^{\mathtt{i3i4}}\; \left(\mathsf{s_{\gamma}}\; \mathsf{a_{u}}^{\mathtt{i1i2}} - \widetilde{\mu}\; \mathsf{c_{\gamma}}\; \mathsf{y_{u}}^{\mathtt{i1i2}}\right)\; \mathsf{LF_{2,1,1,0}}\left[\mathsf{m_{\tilde{u}}}^{\mathtt{i2}},\; \mathsf{m_{3}},\; \mathsf{m_{\tilde{q}}}^{\mathtt{i1}}\right]\; + \\
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            i3i4 \left(-s_{\gamma} a_{u}^{\text{i1i2}} + \widetilde{\mu} c_{\gamma} y_{u}^{\text{i1i2}}\right) LF_{3,1,1,-1}[m_{\tilde{u}}]
                                                                                                                                                                                                                \mathsf{m_1}\,\widetilde{\boldsymbol{\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}},\,\widetilde{\boldsymbol{\mu}}\,\big]\;+
                                                                                                                                                                                                                \mathsf{m_1}\,\widetilde{\mu}\,\,\mathsf{g_1}^2\,\left(-\,3\,\,\mathsf{y_d}^{\,\mathsf{i}\,\mathsf{3}\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{y_u}^{\,\mathsf{i}\,\mathsf{1}\,\mathsf{i}\,\mathsf{2}}\,+\,\mathsf{y_d}^{\,\mathsf{i}\,\mathsf{1}\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{y_u}^{\,\mathsf{i}\,\mathsf{3}\,\mathsf{i}\,\mathsf{2}}\right)\,\,\mathsf{LF_{1,1,1,1,0}}\left[\,\mathsf{m_1},\,\mathsf{m_{\bar{d}}}^{\,\mathsf{i}\,\mathsf{4}},\,\mathsf{m_{\bar{u}}}^{\,\mathsf{i}\,\mathsf{2}},\,\widetilde{\mu}\,\right]\,-\,\mathsf{m_1}\,\,\mathsf{m_2}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_2}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_2}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{i}\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{3}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf{4}}\,\,\mathsf{m_3}^{\,\mathsf
                                                                                                                                                                             \frac{27}{54} \, m_1 \, \tilde{\mu} \, g_1^2 \, y_d^{i1i4} \, y_u^{i3i2} \, LF_{1,1,1,1,0} [m_1, m_{\tilde{q}}^{i1}, m_{\tilde{q}}^{i3}]
                                                                                                                                                                                                                \textbf{m}_{1}\,\tilde{\mu}\,\,\textbf{g}_{1}^{\,\,2}\,\textbf{y}_{d}^{\,\,\text{ili4}}\,\,\textbf{y}_{u}^{\,\,\text{i3i2}}\,\,\textbf{LF}_{1,1,1,1,0}\left[\,\textbf{m}_{1}\,,\,\textbf{m}_{\tilde{q}}^{\,\,\text{il}}\,,\,\textbf{m}_{\tilde{u}}^{\,\,\text{i2}}\,,\,\tilde{\mu}\,\right]\,+
                                                                                                                                                                         \frac{1}{18} m_1 \widetilde{\mu} g_1^2 y_d^{i3i4} y_u^{i1i2} LF_{1,1,1,1,0} \left[m_1, m_{\tilde{q}}^{i3}, m_{\tilde{q}}^{i1}, \widetilde{\mu}\right] +
                                                                                                                                                                                                \mathbf{m_2}\,\widetilde{\mu}\,\mathbf{g_2}^2\,\mathbf{y_d}^{\mathsf{ili4}}\,\mathbf{y_u}^{\mathsf{i3i2}}\,\mathsf{LF_{1,1,1,1,0}}\big[\mathbf{m_2},\,\mathbf{m_{	ilde{q}}}^{\mathsf{i1}},\,\mathbf{m_{	ilde{q}}}^{\mathsf{i3}},\,\widetilde{\mu}\big] -
                                                                                                                                                                 \frac{3}{2}\;\mathsf{m_2}\;\tilde{\mu}\;\mathsf{g_2}^2\;\mathsf{y_d}^{\mathsf{i3i4}}\;\mathsf{y_u}^{\mathsf{i1i2}}\;\mathsf{LF_{1,1,1,1,0}}\big[\mathsf{m_2},\,\mathsf{m_{\tilde{q}}}^{\mathsf{i3}},\,\mathsf{m_{\tilde{q}}}^{\mathsf{i1}},\,\tilde{\mu}\big]\;\mathsf{-}\;
                                                                                                                                                                                                    \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{d}}}^{\text{i4}},\,\mathbf{m_{\tilde{q}}}^{\text{i3}},\,\tilde{\mu}\big]\,-\,
                                                                                                                                                                                                \textbf{m}_{3}\;\tilde{\mu}\;\textbf{g}_{3}^{\;2}\;\textbf{y}_{d}^{\;\textrm{ili4}}\;\textbf{y}_{u}^{\;\textrm{i3i2}}\;\textbf{LF}_{\textrm{1,1,1,1,0}}\left[\,\textbf{m}_{3}\,,\;\textbf{m}_{\bar{d}}^{\;\textrm{i4}}\,,\;\textbf{m}_{\tilde{u}}^{\;\textrm{i2}}\,,\;\tilde{\mu}\,\right]\;+
                                                                                                                                                                                                    \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_{3}}\;\mathcal{L}^{\mathsf{a}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3}}\;\mathsf{m_{3
                                                                                                                                                                                                    \mathbf{m_{3}}\,\tilde{\mu}\,\mathbf{g_{3}}^{2}\,\mathbf{y_{d}}^{\mathtt{ili4}}\,\mathbf{y_{u}}^{\mathtt{i3i2}}\,\mathsf{LF_{1,1,1,1,0}}\big[\mathbf{m_{3}},\,\mathbf{m_{\tilde{q}}}^{\mathtt{i1}},\,\mathbf{m_{\tilde{u}}}^{\mathtt{i2}},\,\tilde{\mu}\big]
                                                                                                                                                                                                    \mathsf{m_{3}}\,\tilde{\mu}\,\,\mathsf{g_{3}}^{2}\,\left(\mathsf{y_{d}}^{\,\mathsf{i3i4}}\,\mathsf{y_{u}}^{\,\mathsf{i1i2}}\,+\,\mathsf{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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