$$C^{(1)}_{lequ}\,\text{i1\_i2\_i3\_i4\_} \to s_\gamma\, c_\gamma\, \frac{1}{m_\Phi^2}\, y_e^{i1i2}\, y_u^{i3i4} +$$
$$\frac{1}{16\,\pi^2}\Big(\frac{1}{72}\, s_\gamma\, c_\gamma\, \frac{1}{m_\Phi^2}\Big(9\, y_e^{i1i2}\, y_u^{pi4}\left(\overline{y_d}^{pr}\, y_d^{i3r}\left(1+2\,c_\gamma^2+s_\gamma^2\right)+3\,\overline{y_u}^{pr}\, y_u^{i3r}\left(1+c_\gamma^2\right)\right)+$$
$$y_u^{i3i4}\left(9\,\overline{y_e}^{pr}\left(3\,y_e^{pi2}\,y_e^{i1r}\left(1+s_\gamma^2\right)+4\,s_\gamma^2\,y_e^{pr}\,y_e^{i1i2}\right)+\right.$$
$$\left.y_e^{i1i2}\left(31\,g_1^2+27\,g_2^2+48\,g_3^2+108\,c_\gamma^2\,\overline{y_u}^{pr}\,y_u^{pr}\right)\right)\Big)+$$
$$\frac{1}{2}\sum_p g_1^2\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_{2\gamma}\,c_\gamma^2+s_\gamma\,c_{2\gamma}\,c_\gamma-s_{2\gamma}\,s_\gamma^2\right)LF_{1,0}[m_{\tilde d}^{p}]+$$
$$\frac{3}{2}\,\frac{1}{m_\Phi^4}\,\overline{y_d}^{pr}\,y_d^{pr}\,y_e^{i1i2}\,y_u^{i3i4}\left(-s_{2\gamma}\,c_\gamma^2+s_{2\gamma}\,s_\gamma^2+2\,c_\gamma\,s_\gamma^3\right)LF_{1,0}[m_{\tilde d}^{r}]+$$
$$\frac{1}{2}\sum_p g_1^2\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_{2\gamma}\,c_\gamma^2+s_\gamma\,c_{2\gamma}\,c_\gamma-s_{2\gamma}\,s_\gamma^2\right)LF_{1,0}[m_{\tilde e}^{p}]+$$
$$\frac{1}{2}\,\frac{1}{m_\Phi^4}\,\overline{y_e}^{pr}\,y_e^{pr}\,y_e^{i1i2}\,y_u^{i3i4}\left(-s_{2\gamma}\,c_\gamma^2+s_{2\gamma}\,s_\gamma^2+2\,c_\gamma\,s_\gamma^3\right)LF_{1,0}[m_{\tilde e}^{r}]+\frac{1}{2}\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}$$
$$\left(\overline{y_e}^{pr}\,y_e^{pr}\left(-s_{2\gamma}\,c_\gamma^2+s_{2\gamma}\,s_\gamma^2+2\,c_\gamma\,s_\gamma^3\right)-\sum_p g_1^2\left(s_{2\gamma}\,c_\gamma^2+s_\gamma\,c_{2\gamma}\,c_\gamma-s_{2\gamma}\,s_\gamma^2\right)\right)LF_{1,0}[m_{\tilde l}^{p}]+$$
$$\frac{1}{2}\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\left(3\,\overline{y_d}^{pr}\,y_d^{pr}\left(-s_{2\gamma}\,c_\gamma^2+s_{2\gamma}\,s_\gamma^2+2\,c_\gamma\,s_\gamma^3\right)+\right.$$
$$\left.3\,\overline{y_u}^{pr}\,y_u^{pr}\left(s_{2\gamma}\,c_\gamma^2+2\,s_\gamma\,c_\gamma^3-s_{2\gamma}\,s_\gamma^2\right)+\sum_p g_1^2\left(s_{2\gamma}\,c_\gamma^2+s_\gamma\,c_{2\gamma}\,c_\gamma-s_{2\gamma}\,s_\gamma^2\right)\right)LF_{1,0}[m_{\tilde q}^{p}]-$$
$$\sum_p g_1^2\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_{2\gamma}\,c_\gamma^2+s_\gamma\,c_{2\gamma}\,c_\gamma-s_{2\gamma}\,s_\gamma^2\right)LF_{1,0}[m_{\tilde u}^{p}]+$$
$$\frac{3}{2}\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,\overline{y_u}^{pr}\,y_u^{pr}\,y_u^{i3i4}\left(s_{2\gamma}\,c_\gamma^2+2\,s_\gamma\,c_\gamma^3-s_{2\gamma}\,s_\gamma^2\right)LF_{1,0}[m_{\tilde u}^{r}]+\frac{1}{8}\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}$$
$$\left(3\,s_{4\gamma}\,c_\gamma^2\left(g_1^2+g_2^2\right)+2\,s_\gamma\,c_\gamma\left(g_1^2\left(-1+3\,c_{2\gamma}^2\right)+3\,g_2^2\left(-1+c_{2\gamma}^2\right)\right)-3\,s_{4\gamma}\,s_\gamma^2\left(g_1^2+g_2^2\right)\right)$$
$$LF_{1,0}[m_\Phi]+\frac{1}{4}\,s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\left(3\,y_e^{i1i2}\,y_u^{pi4}\left(s_\gamma^2\,\overline{y_d}^{pr}\,y_d^{i3r}-c_\gamma^2\,\overline{y_u}^{pr}\,y_u^{i3r}\right)+\right.$$
$$\left.y_u^{i3i4}\left(-3\,s_\gamma^2\,\overline{y_e}^{pr}\,y_e^{pi2}\,y_e^{i1r}+2\,y_e^{i1i2}\left(g_1^2+3\,g_2^2\right)\right)\right)LF_{1,1}[m_\Phi]+$$
$$\frac{1}{4}\,s_\gamma\,c_\gamma\,y_e^{i1i2}\left(2\,c_\gamma^2\,\overline{y_d}^{pr}\,y_d^{i3r}\,y_u^{pi4}-y_u^{i3i4}\left(g_1^2+3\,g_2^2\right)\right)LF_{1,2}[m_\Phi]-$$
$$s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,0}[m_1,m_{\tilde e}^{i2}]+\frac{1}{2}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,-1}[m_1,m_{\tilde e}^{i2}]-$$
$$\frac{1}{4}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,0}[m_1,m_{\tilde l}^{i1}]+\frac{1}{8}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,-1}[m_1,m_{\tilde l}^{i1}]-$$
$$\frac{1}{36}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,0}[m_1,m_{\tilde q}^{i3}]+$$
$$\frac{1}{72}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,-1}[m_1,m_{\tilde q}^{i3}]-\frac{4}{9}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,0}[m_1,m_{\tilde u}^{i4}]+$$
$$\frac{2}{9}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,-1}[m_1,m_{\tilde u}^{i4}]-s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,-1}[m_1,\tilde\mu]-$$
$$m_1\,\tilde\mu\,g_1^2\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\left(c_\gamma^4-4\,s_\gamma^2\,c_\gamma^2+s_\gamma^4\right)LF_{1,1,0}[m_1,\tilde\mu]-$$
$$\frac{3}{4}\,s_\gamma\,c_\gamma\,g_2^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,0}[m_2,m_{\tilde l}^{i1}]+$$
$$\frac{3}{8}\,s_\gamma\,c_\gamma\,g_2^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,-1}[m_2,m_{\tilde l}^{i1}]-\frac{3}{4}\,s_\gamma\,c_\gamma\,g_2^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,0}[m_2,m_{\tilde q}^{i3}]+$$
$$\frac{3}{8}\,s_\gamma\,c_\gamma\,g_2^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,-1}[m_2,m_{\tilde q}^{i3}]-3\,s_\gamma\,c_\gamma\,g_2^2\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,-1}[m_2,\tilde\mu]-$$
$$3\,m_2\,\tilde\mu\,g_2^2\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\left(c_\gamma^4-4\,s_\gamma^2\,c_\gamma^2+s_\gamma^4\right)LF_{1,1,0}[m_2,\tilde\mu]-$$
$$\frac{4}{3}\,s_\gamma\,c_\gamma\,g_3^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,0}[m_3,m_{\tilde q}^{i3}]+\frac{2}{3}\,s_\gamma\,c_\gamma\,g_3^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,-1}[m_3,m_{\tilde q}^{i3}]-$$
$$\frac{4}{3}\,s_\gamma\,c_\gamma\,g_3^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,0}[m_3,m_{\tilde u}^{i4}]+\frac{2}{3}\,s_\gamma\,c_\gamma\,g_3^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,-1}[m_3,m_{\tilde u}^{i4}]-$$
$$3\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_\gamma\,\tilde\mu\,c_\gamma\,\overline{y_d}^{pr}\left(-3\,s_\gamma\,c_\gamma\,a_d^{pr}+\tilde\mu\,y_d^{pr}\left(-2\,c_\gamma^2+s_\gamma^2\right)\right)+\right.$$
$$\left.\overline{a_d}^{pr}\left(s_\gamma\,c_\gamma\,a_d^{pr}\left(c_\gamma^2-2\,s_\gamma^2\right)+\tilde\mu\,y_d^{pr}\left(c_\gamma^4-s_\gamma^2\,c_\gamma^2+s_\gamma^4\right)\right)\right)$$
$$LF_{1,1,0}[m_{\tilde d}^{r},m_{\tilde q}^{p}]-\frac{1}{2}\,s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,\overline{y_d}^{pr}\,y_d^{i3r}\,y_e^{i1i2}\,y_u^{pi4}\,LF_{1,1,0}[m_{\tilde d}^{r},\tilde\mu]-$$
$$\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_\gamma\,\tilde\mu\,c_\gamma\,\overline{y_e}^{pr}\left(-3\,s_\gamma\,c_\gamma\,a_e^{pr}+\tilde\mu\,y_e^{pr}\left(-2\,c_\gamma^2+s_\gamma^2\right)\right)+\right.$$
$$\left.\overline{a_e}^{pr}\left(s_\gamma\,c_\gamma\,a_e^{pr}\left(c_\gamma^2-2\,s_\gamma^2\right)+\tilde\mu\,y_e^{pr}\left(c_\gamma^4-s_\gamma^2\,c_\gamma^2+s_\gamma^4\right)\right)\right)$$
$$LF_{1,1,0}[m_{\tilde e}^{r},m_{\tilde l}^{p}]-\frac{1}{2}\,s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,\overline{y_e}^{pr}\,y_e^{pi2}\,y_e^{i1r}\,y_u^{i3i4}\,LF_{1,1,0}[m_{\tilde e}^{r},\tilde\mu]+$$
$$\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_\gamma\,\tilde\mu\,c_\gamma\,\overline{y_e}^{pr}\left(-2\,s_\gamma\,c_\gamma\,a_e^{pr}+\tilde\mu\,y_e^{pr}\left(-c_\gamma^2+s_\gamma^2\right)\right)+\right.$$
$$\left.\overline{a_e}^{pr}\left(s_\gamma\,c_\gamma\,a_e^{pr}\left(c_\gamma^2-s_\gamma^2\right)+\tilde\mu\,y_e^{pr}\left(c_\gamma^4+s_\gamma^4\right)\right)\right)LF_{2,1,0}[m_{\tilde l}^{p},m_{\tilde e}^{r}]+$$
$$\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_\gamma\,\tilde\mu\,c_\gamma\,\overline{y_e}^{pr}\left(2\,s_\gamma\,c_\gamma\,a_e^{pr}+\tilde\mu\,y_e^{pr}\left(c_\gamma^2-s_\gamma^2\right)\right)+\right.$$
$$\left.\overline{a_e}^{pr}\left(s_\gamma\,c_\gamma\,a_e^{pr}\left(-c_\gamma^2+s_\gamma^2\right)-\tilde\mu\,y_e^{pr}\left(c_\gamma^4+s_\gamma^4\right)\right)\right)LF_{3,1,-1}[m_{\tilde l}^{p},m_{\tilde e}^{r}]-$$
$$s_\gamma\,c_\gamma\,y_e^{i1i2}\,y_u^{i3i4}\left(c_\gamma\,\overline{a_e}^{pr}-s_\gamma\,\tilde\mu\,\overline{y_e}^{pr}\right)\left(c_\gamma\,a_e^{pr}-s_\gamma\,\tilde\mu\,y_e^{pr}\right)LF_{3,1,0}[m_{\tilde l}^{p},m_{\tilde e}^{r}]+$$
$$3\,s_\gamma\,c_\gamma\,y_e^{i1i2}\,y_u^{i3i4}\left(c_\gamma\,\overline{a_e}^{pr}-s_\gamma\,\tilde\mu\,\overline{y_e}^{pr}\right)\left(c_\gamma\,a_e^{pr}-s_\gamma\,\tilde\mu\,y_e^{pr}\right)LF_{4,1,-1}[m_{\tilde l}^{p},m_{\tilde e}^{r}]-$$
$$2\,s_\gamma\,c_\gamma\,y_e^{i1i2}\,y_u^{i3i4}\left(c_\gamma\,\overline{a_e}^{pr}-s_\gamma\,\tilde\mu\,\overline{y_e}^{pr}\right)\left(c_\gamma\,a_e^{pr}-s_\gamma\,\tilde\mu\,y_e^{pr}\right)LF_{5,1,-2}[m_{\tilde l}^{p},m_{\tilde e}^{r}]-$$
$$s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,\overline{y_e}^{pr}\,y_e^{pi2}\,y_e^{i1r}\,y_u^{i3i4}\,LF_{1,1,0}[m_{\tilde l}^{p},\tilde\mu]+$$
$$3\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_\gamma\,\tilde\mu\,c_\gamma\,\overline{y_d}^{pr}\left(-2\,s_\gamma\,c_\gamma\,a_d^{pr}+\tilde\mu\,y_d^{pr}\left(-c_\gamma^2+s_\gamma^2\right)\right)+\right.$$
$$\left.\overline{a_d}^{pr}\left(s_\gamma\,c_\gamma\,a_d^{pr}\left(c_\gamma^2-s_\gamma^2\right)+\tilde\mu\,y_d^{pr}\left(c_\gamma^4+s_\gamma^4\right)\right)\right)LF_{2,1,0}[m_{\tilde q}^{p},m_{\tilde d}^{r}]-$$
$$3\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_\gamma\,\tilde\mu\,c_\gamma\,\overline{y_d}^{pr}\left(-2\,s_\gamma\,c_\gamma\,a_d^{pr}+\tilde\mu\,y_d^{pr}\left(-c_\gamma^2+s_\gamma^2\right)\right)+\right.$$
$$\left.\overline{a_d}^{pr}\left(s_\gamma\,c_\gamma\,a_d^{pr}\left(c_\gamma^2-s_\gamma^2\right)+\tilde\mu\,y_d^{pr}\left(c_\gamma^4+s_\gamma^4\right)\right)\right)LF_{3,1,-1}[m_{\tilde q}^{p},m_{\tilde d}^{r}]-$$
$$3\,s_\gamma\,c_\gamma\,y_e^{i1i2}\,y_u^{i3i4}\left(c_\gamma\,\overline{a_d}^{pr}-s_\gamma\,\tilde\mu\,\overline{y_d}^{pr}\right)\left(c_\gamma\,a_d^{pr}-s_\gamma\,\tilde\mu\,y_d^{pr}\right)LF_{3,1,0}[m_{\tilde q}^{p},m_{\tilde d}^{r}]+$$
$$9\,s_\gamma\,c_\gamma\,y_e^{i1i2}\,y_u^{i3i4}\left(c_\gamma\,\overline{a_d}^{pr}-s_\gamma\,\tilde\mu\,\overline{y_d}^{pr}\right)\left(c_\gamma\,a_d^{pr}-s_\gamma\,\tilde\mu\,y_d^{pr}\right)LF_{4,1,-1}[m_{\tilde q}^{p},m_{\tilde d}^{r}]-$$
$$6\,s_\gamma\,c_\gamma\,y_e^{i1i2}\,y_u^{i3i4}\left(c_\gamma\,\overline{a_d}^{pr}-s_\gamma\,\tilde\mu\,\overline{y_d}^{pr}\right)\left(c_\gamma\,a_d^{pr}-s_\gamma\,\tilde\mu\,y_d^{pr}\right)LF_{5,1,-2}[m_{\tilde q}^{p},m_{\tilde d}^{r}]-$$
$$3\,\frac{1}{m_\Phi^4}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_\gamma\,\tilde\mu\,c_\gamma\,\overline{y_u}^{pr}\left(-3\,s_\gamma\,c_\gamma\,a_u^{pr}+\tilde\mu\,y_u^{pr}\left(c_\gamma^2-2\,s_\gamma^2\right)\right)+\right.$$
$$\left.\overline{a_u}^{pr}\left(s_\gamma\,c_\gamma\,a_u^{pr}\left(-2\,c_\gamma^2+s_\gamma^2\right)+\tilde\mu\,y_u^{pr}\left(c_\gamma^4-s_\gamma^2\,c_\gamma^2+s_\gamma^4\right)\right)\right)$$
$$LF_{1,1,0}[m_{\tilde q}^{p},m_{\tilde u}^{r}]-s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,\overline{y_u}^{pr}\,y_u^{pi4}\,y_u^{i3r}\,LF_{1,1,0}[m_{\tilde q}^{p},\tilde\mu]+$$
$$3\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_\gamma\,\tilde\mu\,c_\gamma\,\overline{y_u}^{pr}\left(-2\,s_\gamma\,c_\gamma\,a_u^{pr}+\tilde\mu\,y_u^{pr}\left(c_\gamma^2-s_\gamma^2\right)\right)+\right.$$
$$\left.\overline{a_u}^{pr}\left(s_\gamma\,c_\gamma\,a_u^{pr}\left(-c_\gamma^2+s_\gamma^2\right)+\tilde\mu\,y_u^{pr}\left(c_\gamma^4+s_\gamma^4\right)\right)\right)LF_{2,1,0}[m_{\tilde u}^{r},m_{\tilde q}^{p}]+$$
$$3\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\left(s_\gamma\,\tilde\mu\,c_\gamma\,\overline{y_u}^{pr}\left(2\,s_\gamma\,c_\gamma\,a_u^{pr}+\tilde\mu\,y_u^{pr}\left(-c_\gamma^2+s_\gamma^2\right)\right)+\right.$$
$$\left.\overline{a_u}^{pr}\left(s_\gamma\,c_\gamma\,a_u^{pr}\left(c_\gamma^2-s_\gamma^2\right)-\tilde\mu\,y_u^{pr}\left(c_\gamma^4+s_\gamma^4\right)\right)\right)LF_{3,1,-1}[m_{\tilde u}^{r},m_{\tilde q}^{p}]-$$
$$3\,s_\gamma\,c_\gamma\,y_e^{i1i2}\,y_u^{i3i4}\left(-s_\gamma\,\overline{a_u}^{pr}+\tilde\mu\,c_\gamma\,\overline{y_u}^{pr}\right)\left(-s_\gamma\,a_u^{pr}+\tilde\mu\,c_\gamma\,y_u^{pr}\right)LF_{3,1,0}[m_{\tilde u}^{r},m_{\tilde q}^{p}]+$$
$$9\,s_\gamma\,c_\gamma\,y_e^{i1i2}\,y_u^{i3i4}\left(-s_\gamma\,\overline{a_u}^{pr}+\tilde\mu\,c_\gamma\,\overline{y_u}^{pr}\right)\left(-s_\gamma\,a_u^{pr}+\tilde\mu\,c_\gamma\,y_u^{pr}\right)LF_{4,1,-1}[m_{\tilde u}^{r},m_{\tilde q}^{p}]-$$
$$6\,s_\gamma\,c_\gamma\,y_e^{i1i2}\,y_u^{i3i4}\left(-s_\gamma\,\overline{a_u}^{pr}+\tilde\mu\,c_\gamma\,\overline{y_u}^{pr}\right)\left(-s_\gamma\,a_u^{pr}+\tilde\mu\,c_\gamma\,y_u^{pr}\right)LF_{5,1,-2}[m_{\tilde u}^{r},m_{\tilde q}^{p}]-$$
$$\frac{1}{2}\,s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,\overline{y_u}^{pr}\,y_u^{pi4}\,y_u^{i3r}\,LF_{1,1,0}[m_{\tilde u}^{r},\tilde\mu]+$$
$$m_1\,\tilde\mu\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,0}[\tilde\mu,m_1]\left(c_\gamma^2-s_\gamma^2\right)^2+$$
$$g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\left(2\,s_\gamma\,c_\gamma\,m_\Phi^2-m_1\,\tilde\mu\left(c_\gamma^2-s_\gamma^2\right)^2\right)LF_{3,1,-1}[\tilde\mu,m_1]+$$
$$2\,m_1\,\tilde\mu\,g_1^2\,s_\gamma^2\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{3,1,0}[\tilde\mu,m_1]-4\,s_\gamma\,c_\gamma\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{4,1,-2}[\tilde\mu,m_1]-$$
$$6\,m_1\,\tilde\mu\,g_1^2\,s_\gamma^2\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{4,1,-1}[\tilde\mu,m_1]+$$
$$2\,s_\gamma\,c_\gamma\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{5,1,-3}[\tilde\mu,m_1]+4\,m_1\,\tilde\mu\,g_1^2\,s_\gamma^2\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{5,1,-2}[\tilde\mu,m_1]+$$
$$3\,m_2\,\tilde\mu\,g_2^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,1,0}[\tilde\mu,m_2]\left(c_\gamma^2-s_\gamma^2\right)^2+$$
$$3\,g_2^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\left(2\,s_\gamma\,c_\gamma\,m_\Phi^2-m_2\,\tilde\mu\left(c_\gamma^2-s_\gamma^2\right)^2\right)LF_{3,1,-1}[\tilde\mu,m_2]+$$
$$6\,m_2\,\tilde\mu\,g_2^2\,s_\gamma^2\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{3,1,0}[\tilde\mu,m_2]-12\,s_\gamma\,c_\gamma\,g_2^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{4,1,-2}[\tilde\mu,m_2]-$$
$$18\,m_2\,\tilde\mu\,g_2^2\,s_\gamma^2\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{4,1,-1}[\tilde\mu,m_2]+$$
$$6\,s_\gamma\,c_\gamma\,g_2^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{5,1,-3}[\tilde\mu,m_2]+12\,m_2\,\tilde\mu\,g_2^2\,s_\gamma^2\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{5,1,-2}[\tilde\mu,m_2]+$$
$$\frac{1}{4}\,s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,\overline{y_d}^{pr}\,y_d^{i3r}\,y_e^{i1i2}\,y_u^{pi4}\,LF_{2,1,-1}[\tilde\mu,m_{\tilde d}^{r}]+$$
$$\frac{1}{4}\,s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,\overline{y_e}^{pr}\,y_e^{pi2}\,y_e^{i1r}\,y_u^{i3i4}\,LF_{2,1,-1}[\tilde\mu,m_{\tilde e}^{r}]+$$
$$\frac{1}{2}\,s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,\overline{y_e}^{pr}\,y_e^{pi2}\,y_e^{i1r}\,y_u^{i3i4}\,LF_{2,1,-1}[\tilde\mu,m_{\tilde l}^{p}]+$$
$$\frac{1}{2}\,s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,\overline{y_u}^{pr}\,y_u^{pi4}\,y_u^{i3r}\,LF_{2,1,-1}[\tilde\mu,m_{\tilde q}^{p}]+$$
$$\frac{1}{4}\,s_\gamma\,c_\gamma\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,\overline{y_u}^{pr}\,y_u^{pi4}\,y_u^{i3r}\,LF_{2,1,-1}[\tilde\mu,m_{\tilde u}^{r}]+$$
$$m_1\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_u^{i3i4}\left(s_\gamma\,a_e^{i1i2}+\tilde\mu\,c_\gamma\,y_e^{i1i2}\right)LF_{1,1,1,0}[m_1,m_{\tilde e}^{i2},m_{\tilde l}^{i1}]+$$
$$\frac{1}{4}\,m_1\,s_\gamma\,g_1^2\,y_u^{i3i4}\left(c_\gamma\,a_e^{i1i2}-s_\gamma\,\tilde\mu\,y_e^{i1i2}\right)LF_{2,2,1,-1}[m_1,m_{\tilde e}^{i2},m_{\tilde l}^{i1}]+$$
$$s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,-1}[m_1,m_{\tilde e}^{i2},\tilde\mu]-$$
$$m_1\,\tilde\mu\,g_1^2\,\frac{1}{m_\Phi^2}\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,0}[m_1,m_{\tilde e}^{i2},\tilde\mu]+$$
$$\frac{1}{4}\,m_1\,s_\gamma\,g_1^2\,y_u^{i3i4}\left(c_\gamma\,a_e^{i1i2}-s_\gamma\,\tilde\mu\,y_e^{i1i2}\right)LF_{2,2,1,-1}[m_1,m_{\tilde l}^{i1},m_{\tilde e}^{i2}]-$$
$$\frac{1}{2}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,-1}[m_1,m_{\tilde l}^{i1},\tilde\mu]+$$
$$\frac{1}{2}\,m_1\,\tilde\mu\,g_1^2\,\frac{1}{m_\Phi^2}\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,0}[m_1,m_{\tilde l}^{i1},\tilde\mu]+$$
$$\frac{2}{9}\,m_1\,s_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\left(c_\gamma\,a_u^{i3i4}+s_\gamma\,\tilde\mu\,y_u^{i3i4}\right)LF_{1,1,1,0}[m_1,m_{\tilde q}^{i3},m_{\tilde u}^{i4}]+$$
$$\frac{1}{18}\,m_1\,c_\gamma\,g_1^2\,y_e^{i1i2}\left(s_\gamma\,a_u^{i3i4}-\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{2,2,1,-1}[m_1,m_{\tilde q}^{i3},m_{\tilde u}^{i4}]-$$
$$\frac{1}{6}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,-1}[m_1,m_{\tilde q}^{i3},\tilde\mu]+$$
$$\frac{1}{6}\,m_1\,\tilde\mu\,g_1^2\,\frac{1}{m_\Phi^2}\,s_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,0}[m_1,m_{\tilde q}^{i3},\tilde\mu]+$$
$$\frac{1}{18}\,m_1\,c_\gamma\,g_1^2\,y_e^{i1i2}\left(s_\gamma\,a_u^{i3i4}-\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{2,2,1,-1}[m_1,m_{\tilde u}^{i4},m_{\tilde q}^{i3}]+$$
$$\frac{2}{3}\,s_\gamma\,c_\gamma\,g_1^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,-1}[m_1,m_{\tilde u}^{i4},\tilde\mu]-$$
$$\frac{2}{3}\,m_1\,\tilde\mu\,g_1^2\,\frac{1}{m_\Phi^2}\,s_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,0}[m_1,m_{\tilde u}^{i4},\tilde\mu]-$$
$$\frac{1}{2}\,s_\gamma\,c_\gamma\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-2}[m_1,\tilde\mu,m_{\tilde e}^{i2}]-$$
$$\frac{1}{2}\,m_1\,\tilde\mu\,g_1^2\,s_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-1}[m_1,\tilde\mu,m_{\tilde e}^{i2}]+$$
$$\frac{1}{4}\,s_\gamma\,c_\gamma\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-2}[m_1,\tilde\mu,m_{\tilde l}^{i1}]+$$
$$\frac{1}{4}\,m_1\,\tilde\mu\,g_1^2\,s_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-1}[m_1,\tilde\mu,m_{\tilde l}^{i1}]+$$
$$\frac{1}{12}\,s_\gamma\,c_\gamma\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-2}[m_1,\tilde\mu,m_{\tilde q}^{i3}]+$$
$$\frac{1}{12}\,m_1\,\tilde\mu\,g_1^2\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-1}[m_1,\tilde\mu,m_{\tilde q}^{i3}]-$$
$$\frac{1}{3}\,s_\gamma\,c_\gamma\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-2}[m_1,\tilde\mu,m_{\tilde u}^{i4}]-$$
$$\frac{1}{3}\,m_1\,\tilde\mu\,g_1^2\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-1}[m_1,\tilde\mu,m_{\tilde u}^{i4}]+$$
$$\frac{3}{2}\,s_\gamma\,c_\gamma\,g_2^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,-1}[m_2,m_{\tilde l}^{i1},\tilde\mu]-$$
$$\frac{3}{2}\,m_2\,\tilde\mu\,g_2^2\,\frac{1}{m_\Phi^2}\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,0}[m_2,m_{\tilde l}^{i1},\tilde\mu]+$$
$$\frac{3}{2}\,s_\gamma\,c_\gamma\,g_2^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,-1}[m_2,m_{\tilde q}^{i3},\tilde\mu]-$$
$$\frac{3}{2}\,m_2\,\tilde\mu\,g_2^2\,\frac{1}{m_\Phi^2}\,s_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,0}[m_2,m_{\tilde q}^{i3},\tilde\mu]-$$
$$\frac{3}{4}\,s_\gamma\,c_\gamma\,g_2^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-2}[m_2,\tilde\mu,m_{\tilde l}^{i1}]-$$
$$\frac{3}{4}\,m_2\,\tilde\mu\,g_2^2\,s_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-1}[m_2,\tilde\mu,m_{\tilde l}^{i1}]-$$
$$\frac{3}{4}\,s_\gamma\,c_\gamma\,g_2^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-2}[m_2,\tilde\mu,m_{\tilde q}^{i3}]-$$
$$\frac{3}{4}\,m_2\,\tilde\mu\,g_2^2\,c_\gamma^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{2,2,1,-1}[m_2,\tilde\mu,m_{\tilde q}^{i3}]+$$
$$\frac{8}{3}\,m_3\,s_\gamma\,g_3^2\,\frac{1}{m_\Phi^2}\,y_e^{i1i2}\left(c_\gamma\,a_u^{i3i4}+s_\gamma\,\tilde\mu\,y_u^{i3i4}\right)LF_{1,1,1,0}[m_3,m_{\tilde q}^{i3},m_{\tilde u}^{i4}]+$$
$$\frac{2}{3}\,m_3\,c_\gamma\,g_3^2\,y_e^{i1i2}\left(s_\gamma\,a_u^{i3i4}-\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{2,2,1,-1}[m_3,m_{\tilde q}^{i3},m_{\tilde u}^{i4}]+$$
$$\frac{2}{3}\,m_3\,c_\gamma\,g_3^2\,y_e^{i1i2}\left(s_\gamma\,a_u^{i3i4}-\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{2,2,1,-1}[m_3,m_{\tilde u}^{i4},m_{\tilde q}^{i3}]+$$
$$s_\gamma\,\tilde\mu\,\frac{1}{m_\Phi^2}\,y_d^{i3r}\,y_e^{i1i2}\,y_u^{pi4}\left(s_\gamma\,\overline{a_d}^{pr}+\tilde\mu\,c_\gamma\,\overline{y_d}^{pr}\right)LF_{1,1,1,0}[m_{\tilde d}^{r},m_{\tilde q}^{p},\tilde\mu]+$$
$$\frac{1}{2}\,\tilde\mu\,c_\gamma\,y_d^{i3r}\,y_e^{i1i2}\,y_u^{pi4}\left(c_\gamma\,\overline{a_d}^{pr}-s_\gamma\,\tilde\mu\,\overline{y_d}^{pr}\right)LF_{2,1,1,0}[m_{\tilde d}^{r},m_{\tilde q}^{p},\tilde\mu]+$$
$$\frac{1}{2}\,\tilde\mu\,c_\gamma\,y_d^{i3r}\,y_e^{i1i2}\,y_u^{pi4}\left(-c_\gamma\,\overline{a_d}^{pr}+s_\gamma\,\tilde\mu\,\overline{y_d}^{pr}\right)LF_{3,1,1,-1}[m_{\tilde d}^{r},m_{\tilde q}^{p},\tilde\mu]+$$
$$\frac{1}{4}\,\tilde\mu\,c_\gamma\,y_d^{i3r}\,y_e^{i1i2}\,y_u^{pi4}\left(-c_\gamma\,\overline{a_d}^{pr}+s_\gamma\,\tilde\mu\,\overline{y_d}^{pr}\right)LF_{2,2,1,-1}[m_{\tilde d}^{r},\tilde\mu,m_{\tilde q}^{p}]+$$
$$\frac{1}{2}\,m_1\,s_\gamma\,g_1^2\,y_u^{i3i4}\left(-c_\gamma\,a_e^{i1i2}+s_\gamma\,\tilde\mu\,y_e^{i1i2}\right)LF_{2,1,1,0}[m_{\tilde e}^{i2},m_1,m_{\tilde l}^{i1}]+$$
$$\frac{1}{2}\,m_1\,s_\gamma\,g_1^2\,y_u^{i3i4}\left(c_\gamma\,a_e^{i1i2}-s_\gamma\,\tilde\mu\,y_e^{i1i2}\right)LF_{3,1,1,-1}[m_{\tilde e}^{i2},m_1,m_{\tilde l}^{i1}]+$$
$$\frac{1}{2}\,m_1\,s_\gamma\,g_1^2\,y_u^{i3i4}\left(-c_\gamma\,a_e^{i1i2}+s_\gamma\,\tilde\mu\,y_e^{i1i2}\right)LF_{2,1,1,0}[m_{\tilde l}^{i1},m_1,m_{\tilde e}^{i2}]+$$
$$\frac{1}{2}\,m_1\,s_\gamma\,g_1^2\,y_u^{i3i4}\left(c_\gamma\,a_e^{i1i2}-s_\gamma\,\tilde\mu\,y_e^{i1i2}\right)LF_{3,1,1,-1}[m_{\tilde l}^{i1},m_1,m_{\tilde e}^{i2}]+$$
$$\frac{1}{2}\,\tilde\mu\,c_\gamma\,y_d^{i3r}\,y_e^{i1i2}\,y_u^{pi4}\left(c_\gamma\,\overline{a_d}^{pr}-s_\gamma\,\tilde\mu\,\overline{y_d}^{pr}\right)LF_{2,1,1,0}[m_{\tilde q}^{p},m_{\tilde d}^{r},\tilde\mu]+$$
$$\frac{1}{2}\,\tilde\mu\,c_\gamma\,y_d^{i3r}\,y_e^{i1i2}\,y_u^{pi4}\left(-c_\gamma\,\overline{a_d}^{pr}+s_\gamma\,\tilde\mu\,\overline{y_d}^{pr}\right)LF_{3,1,1,-1}[m_{\tilde q}^{p},m_{\tilde d}^{r},\tilde\mu]+$$
$$\frac{1}{4}\,\tilde\mu\,c_\gamma\,y_d^{i3r}\,y_e^{i1i2}\,y_u^{pi4}\left(-c_\gamma\,\overline{a_d}^{pr}+s_\gamma\,\tilde\mu\,\overline{y_d}^{pr}\right)LF_{2,2,1,-1}[m_{\tilde q}^{p},\tilde\mu,m_{\tilde d}^{r}]+$$
$$\frac{1}{9}\,m_1\,c_\gamma\,g_1^2\,y_e^{i1i2}\left(-s_\gamma\,a_u^{i3i4}+\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{2,1,1,0}[m_{\tilde q}^{i3},m_1,m_{\tilde u}^{i4}]+$$
$$\frac{1}{9}\,m_1\,c_\gamma\,g_1^2\,y_e^{i1i2}\left(s_\gamma\,a_u^{i3i4}-\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{3,1,1,-1}[m_{\tilde q}^{i3},m_1,m_{\tilde u}^{i4}]+$$
$$\frac{4}{3}\,m_3\,c_\gamma\,g_3^2\,y_e^{i1i2}\left(-s_\gamma\,a_u^{i3i4}+\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{2,1,1,0}[m_{\tilde q}^{i3},m_3,m_{\tilde u}^{i4}]+$$
$$\frac{4}{3}\,m_3\,c_\gamma\,g_3^2\,y_e^{i1i2}\left(s_\gamma\,a_u^{i3i4}-\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{3,1,1,-1}[m_{\tilde q}^{i3},m_3,m_{\tilde u}^{i4}]+$$
$$\frac{1}{9}\,m_1\,c_\gamma\,g_1^2\,y_e^{i1i2}\left(-s_\gamma\,a_u^{i3i4}+\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{2,1,1,0}[m_{\tilde u}^{i4},m_1,m_{\tilde q}^{i3}]+$$
$$\frac{1}{9}\,m_1\,c_\gamma\,g_1^2\,y_e^{i1i2}\left(s_\gamma\,a_u^{i3i4}-\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{3,1,1,-1}[m_{\tilde u}^{i4},m_1,m_{\tilde q}^{i3}]+$$
$$\frac{4}{3}\,m_3\,c_\gamma\,g_3^2\,y_e^{i1i2}\left(-s_\gamma\,a_u^{i3i4}+\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{2,1,1,0}[m_{\tilde u}^{i4},m_3,m_{\tilde q}^{i3}]+$$
$$\frac{4}{3}\,m_3\,c_\gamma\,g_3^2\,y_e^{i1i2}\left(s_\gamma\,a_u^{i3i4}-\tilde\mu\,c_\gamma\,y_u^{i3i4}\right)LF_{3,1,1,-1}[m_{\tilde u}^{i4},m_3,m_{\tilde q}^{i3}]-$$
$$\frac{1}{6}\,m_1\,\tilde\mu\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,1,0}[m_1,m_{\tilde e}^{i2},m_{\tilde q}^{i3},\tilde\mu]+$$
$$\frac{2}{3}\,m_1\,\tilde\mu\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,1,0}[m_1,m_{\tilde e}^{i2},m_{\tilde u}^{i4},\tilde\mu]+$$
$$\frac{1}{12}\,m_1\,\tilde\mu\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,1,0}[m_1,m_{\tilde l}^{i1},m_{\tilde q}^{i3},\tilde\mu]-$$
$$\frac{1}{3}\,m_1\,\tilde\mu\,g_1^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,1,0}[m_1,m_{\tilde l}^{i1},m_{\tilde u}^{i4},\tilde\mu]+$$
$$\frac{3}{4}\,m_2\,\tilde\mu\,g_2^2\,y_e^{i1i2}\,y_u^{i3i4}\,LF_{1,1,1,1,0}[m_2,m_{\tilde l}^{i1},m_{\tilde q}^{i3},\tilde\mu]\Big)$$