$$
\begin{aligned}
&M_H^2 \to \\
&m_H^2 + \hbar \Big(\frac{1}{4} m_H^2 \left(g_1^2 + 3 g_2^2\right) \left(c_\gamma^2 + s_\gamma^2\right) + \frac{1}{2} \sum_p c_{2\gamma} g_1^2 \, LF_{1,0}\left[m_{\tilde{d}}^p\right] - 3 c_\gamma^2 \overline{y_d}^{pr} y_d^{pr} \, LF_{1,0}\left[m_{\tilde{d}}^r\right] + \frac{1}{2} \sum_p c_{2\gamma} \\
&\quad g_1^2 \, LF_{1,0}\left[m_{\tilde{e}}^p\right] - c_\gamma^2 \overline{y_e}^{pr} y_e^{pr} \, LF_{1,0}\left[m_{\tilde{e}}^r\right] + \left(-c_\gamma^2 \overline{y_e}^{pr} y_e^{pr} - \frac{1}{2} \sum_p c_{2\gamma} g_1^2\right) LF_{1,0}\left[m_{\tilde{l}}^p\right] + \\
&\left(-3 c_\gamma^2 \overline{y_d}^{pr} y_d^{pr} - 3 s_\gamma^2 \overline{y_u}^{pr} y_u^{pr} + \frac{1}{2} \sum_p c_{2\gamma} g_1^2\right) LF_{1,0}\left[m_{\tilde{q}}^p\right] - \sum_p c_{2\gamma} g_1^2 \, LF_{1,0}\left[m_{\tilde{u}}^p\right] - \\
&3 s_\gamma^2 \overline{y_u}^{pr} y_u^{pr} \, LF_{1,0}\left[m_{\tilde{u}}^r\right] + \frac{1}{8} \left(g_1^2 \left(1 + 3 c_{4\gamma}\right) + 3 g_2^2 \left(-1 + c_{4\gamma}\right)\right) LF_{1,0}[m_\Phi] + \\
&g_1^2 \left(c_\gamma^2 + s_\gamma^2\right) LF_{1,1,-1}[m_1, \tilde{\mu}] + 2 m_1 s_\gamma \tilde{\mu} c_\gamma g_1^2 \, LF_{1,1,0}[m_1, \tilde{\mu}] + \\
&3 g_2^2 \left(c_\gamma^2 + s_\gamma^2\right) LF_{1,1,-1}[m_2, \tilde{\mu}] + 6 m_2 s_\gamma \tilde{\mu} c_\gamma g_2^2 \, LF_{1,1,0}[m_2, \tilde{\mu}] - \\
&3 \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_{1,1,0}\left[m_{\tilde{d}}^r, m_{\tilde{q}}^p\right] - \\
&\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_{1,1,0}\left[m_{\tilde{e}}^r, m_{\tilde{l}}^p\right] + \\
&m_H^2 \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_{2,1,0}\left[m_{\tilde{l}}^p, m_{\tilde{e}}^r\right] - \\
&m_H^2 \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,-1}\left[m_{\tilde{l}}^p, m_{\tilde{e}}^r\right] - \\
&m_H^{22} \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}\left[m_{\tilde{l}}^p, m_{\tilde{e}}^r\right] + \\
&3 m_H^{22} \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}\left[m_{\tilde{l}}^p, m_{\tilde{e}}^r\right] - \\
&2 m_H^{22} \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}\left[m_{\tilde{l}}^p, m_{\tilde{e}}^r\right] + \\
&3 m_H^2 \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_{2,1,0}\left[m_{\tilde{q}}^p, m_{\tilde{d}}^r\right] - \\
&3 m_H^2 \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,-1}\left[m_{\tilde{q}}^p, m_{\tilde{d}}^r\right] - \\
&3 m_H^{22} \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}\left[m_{\tilde{q}}^p, m_{\tilde{d}}^r\right] + \\
&9 m_H^{22} \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}\left[m_{\tilde{q}}^p, m_{\tilde{d}}^r\right] - \\
&6 m_H^{22} \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}\left[m_{\tilde{q}}^p, m_{\tilde{d}}^r\right] - \\
&3 \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_{1,1,0}\left[m_{\tilde{q}}^p, m_{\tilde{u}}^r\right] + \\
&3 m_H^2 \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_{2,1,0}\left[m_{\tilde{u}}^r, m_{\tilde{q}}^p\right] - \\
&3 m_H^2 \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,-1}\left[m_{\tilde{u}}^r, m_{\tilde{q}}^p\right] - \\
&3 m_H^{22} \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}\left[m_{\tilde{u}}^r, m_{\tilde{q}}^p\right] + \\
&9 m_H^{22} \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}\left[m_{\tilde{u}}^r, m_{\tilde{q}}^p\right] - \\
&6 m_H^{22} \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}\left[m_{\tilde{u}}^r, m_{\tilde{q}}^p\right] - \\
&\frac{3}{2} m_H^2 g_1^2 \left(c_\gamma^2 + s_\gamma^2\right) LF_{2,1,-1}[\tilde{\mu}, m_1] - 2 m_1 m_H^2 s_\gamma \tilde{\mu} c_\gamma g_1^2 \, LF_{2,1,0}[\tilde{\mu}, m_1] + \\
&m_H^2 g_1^2 \left(c_\gamma^2 + s_\gamma^2\right) LF_{3,1,-2}[\tilde{\mu}, m_1] + 2 m_H^2 g_1^2 \left(m_H^2 \left(c_\gamma^2 + s_\gamma^2\right) + m_1 s_\gamma \tilde{\mu} c_\gamma\right) LF_{3,1,-1}[\tilde{\mu}, m_1] + \\
&2 m_1 s_\gamma \tilde{\mu} c_\gamma g_1^2 m_H^{22} \, LF_{3,1,0}[\tilde{\mu}, m_1] - 4 g_1^2 m_H^{22} \left(c_\gamma^2 + s_\gamma^2\right) LF_{4,1,-2}[\tilde{\mu}, m_1] - \\
&6 m_1 s_\gamma \tilde{\mu} c_\gamma g_1^2 m_H^{22} \, LF_{4,1,-1}[\tilde{\mu}, m_1] + 2 g_1^2 m_H^{22} \left(c_\gamma^2 + s_\gamma^2\right) LF_{5,1,-3}[\tilde{\mu}, m_1] + \\
&4 m_1 s_\gamma \tilde{\mu} c_\gamma g_1^2 m_H^{22} \, LF_{5,1,-2}[\tilde{\mu}, m_1] - \frac{9}{2} m_H^2 g_2^2 \left(c_\gamma^2 + s_\gamma^2\right) LF_{2,1,-1}[\tilde{\mu}, m_2] - \\
&6 m_2 m_H^2 s_\gamma \tilde{\mu} c_\gamma g_2^2 \, LF_{2,1,0}[\tilde{\mu}, m_2] + 3 m_H^2 g_2^2 \left(c_\gamma^2 + s_\gamma^2\right) LF_{3,1,-2}[\tilde{\mu}, m_2] + \\
&6 m_H^2 g_2^2 \left(m_H^2 \left(c_\gamma^2 + s_\gamma^2\right) + m_2 s_\gamma \tilde{\mu} c_\gamma\right) LF_{3,1,-1}[\tilde{\mu}, m_2] + 6 m_2 s_\gamma \tilde{\mu} c_\gamma g_2^2 m_H^{22} \, LF_{3,1,0}[\tilde{\mu}, m_2] - \\
&12 g_2^2 m_H^{22} \left(c_\gamma^2 + s_\gamma^2\right) LF_{4,1,-2}[\tilde{\mu}, m_2] - 18 m_2 s_\gamma \tilde{\mu} c_\gamma g_2^2 m_H^{22} \, LF_{4,1,-1}[\tilde{\mu}, m_2] + \\
&6 g_2^2 m_H^{22} \left(c_\gamma^2 + s_\gamma^2\right) LF_{5,1,-3}[\tilde{\mu}, m_2] + 12 m_2 s_\gamma \tilde{\mu} c_\gamma g_2^2 m_H^{22} \, LF_{5,1,-2}[\tilde{\mu}, m_2] \Big)
\end{aligned}
$$