$$m_{H}^{0} \qquad m_{H}^{1}$$

$$\Delta m_{H}^{2} = (m_{H}^{1})^{2} - (m_{H}^{0})^{2} = -\frac{|\lambda_{f}|^{2}}{8\pi^{2}} \Lambda^{2}$$

$$\lambda_{f} = \lambda_{S}$$

$$M = \frac{|\lambda_{S}|^{2}}{8\pi^{2}} \left[ \Lambda^{2} - 2m_{S}^{2} \ln(\Lambda/m_{S}) \right]$$