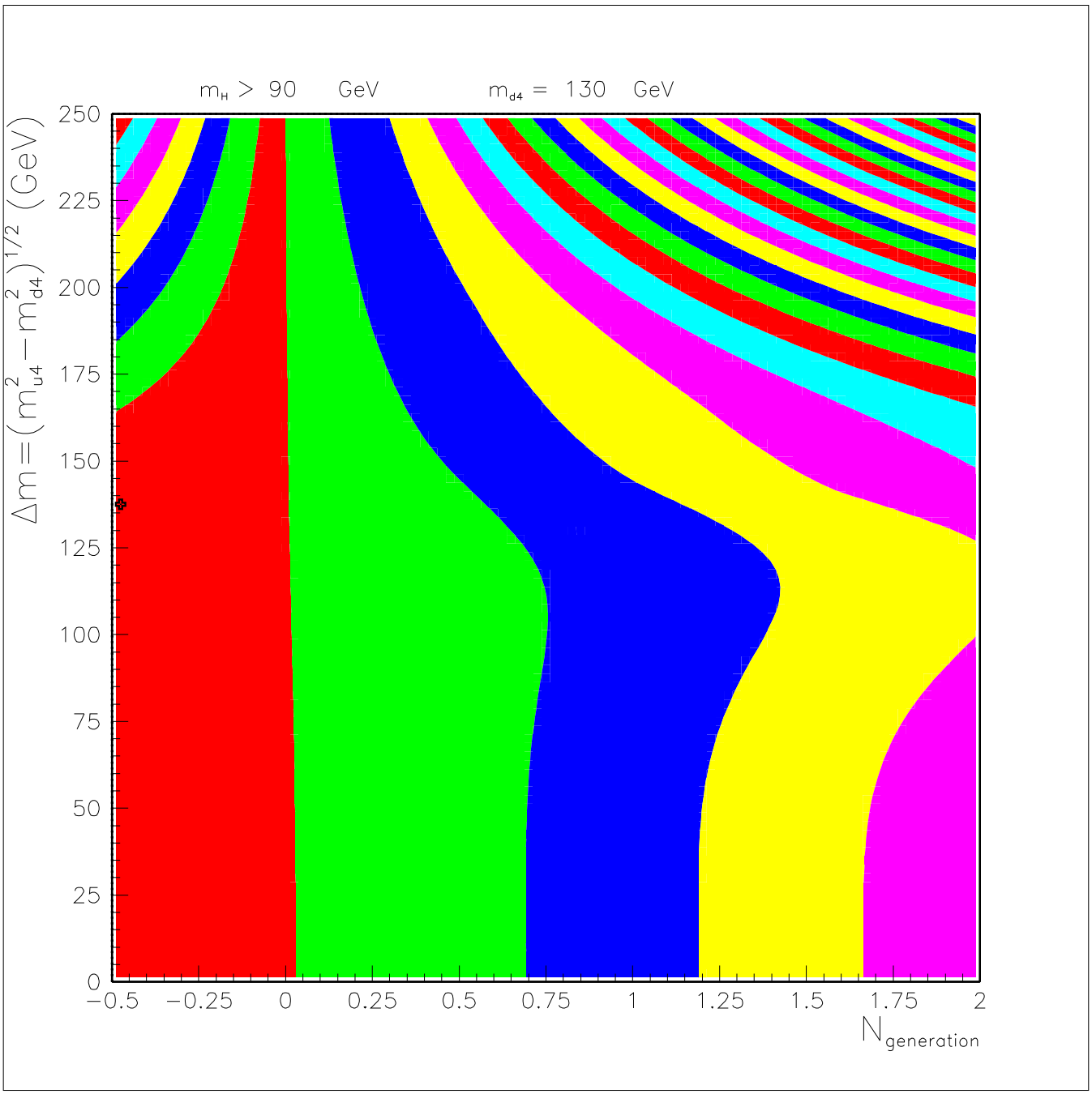
Limits on the fourth generation



Assuming: $m_D = m_E = 130GeV \quad , \qquad m_Q = m_U = m_L = m_N$

Fourth generation contribution: $\delta^4 V_i = 4|m_U^2 - m_D^2|/3m_Z^2$

Three-parameter fit $(m_t, \hat{\alpha}_s, \bar{\alpha})$ is done to EWWG-99 data, assuming $m_H > 90$ GeV.