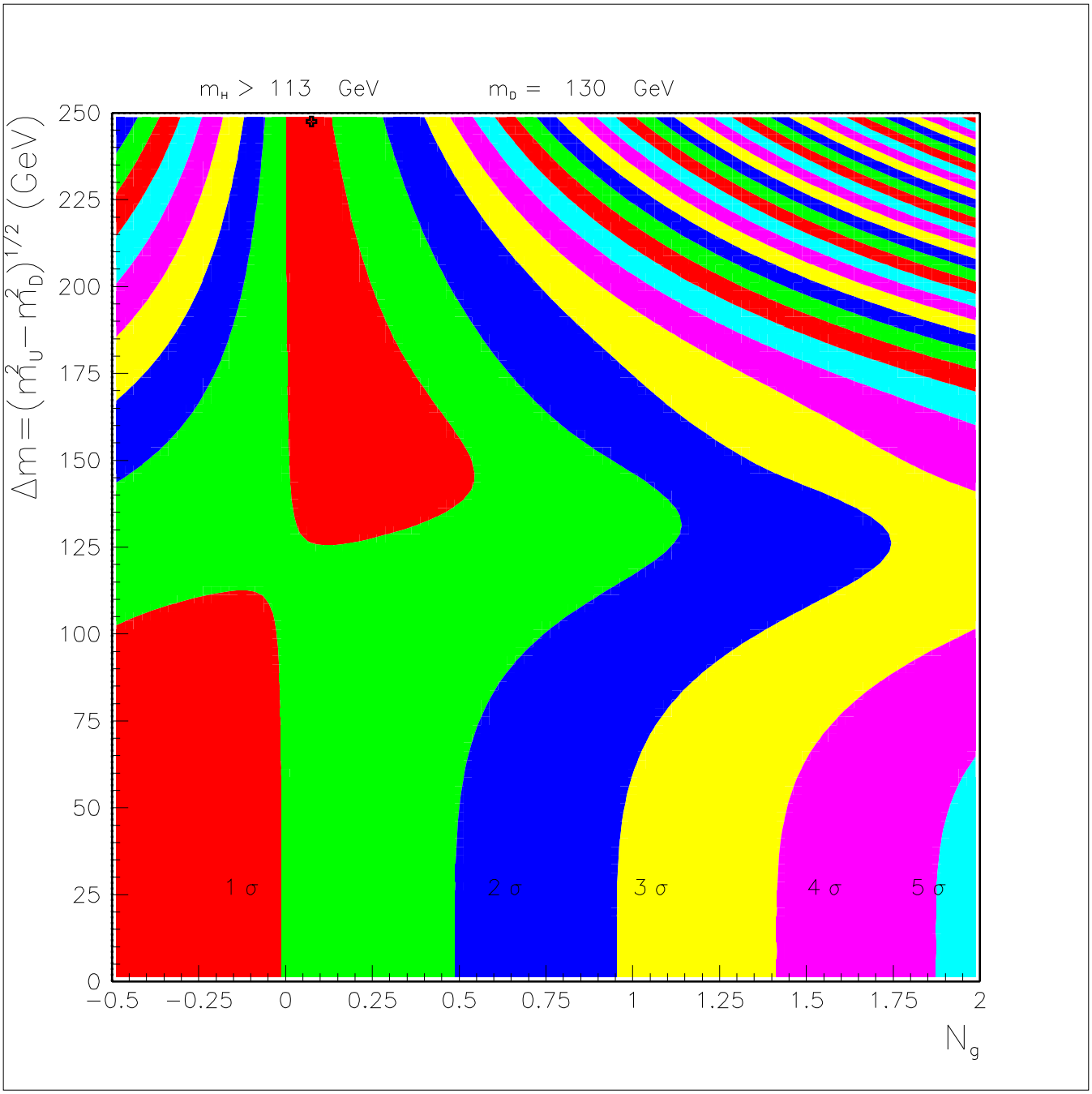
Limits on the fourth generation



Assuming: $m_D = m_E = 130$ GeV , $m_U = m_N$

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

Four-parameter fit $(m_t, m_H \hat{\alpha}_s, \bar{\alpha})$ to OSAKA-2000 data, using LEP-200 limit

$m_H > 113.3$ GeV.