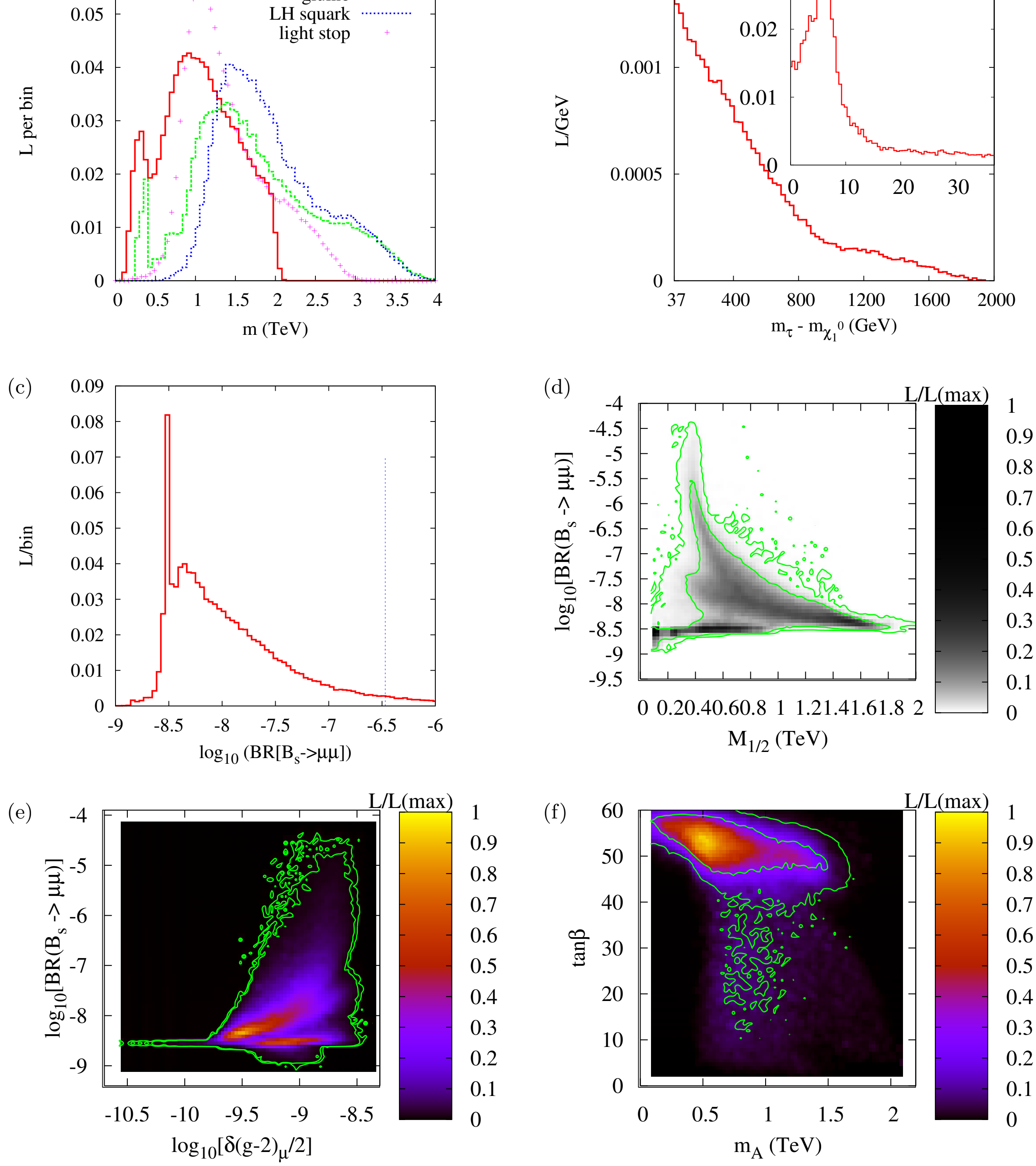

FIG. 4: (a) Selected sparticle mass likelihood distributions in mSUGRA, (b) stau-neutralino mass difference likelihood distribution where the insert shows a blow-up of the quasi mass-degenerate region. (c) branching ratio for the decay $B_s \to \mu^+\mu^-$. The Tevatron upper bound is displayed by a vertical line. (d) Likelihood density marginalised to the 2d plane $BR(B_s \to \mu^+\mu^-)$ versus $M_{1/2}$. (e) Correlation between $BR(B_s \to \mu^+\mu^-)$ and $(g-2)_\mu$. (f) Likelihood marginalised to the $\tan\beta$-M_A plane. The contours show the 68% and 95% confidence level limits.

alongside the neutralino relic density $\Omega_{DM}h^2$. We see that the fractional mass splitting takes values between 0.1 and 0.23 in the range of m_0 shown. This is the stop-co-annihilation regime, and we see that around $m_0 \sim 786$ GeV, $\Delta \sim 0.2$ corresponding to $\Omega_{DM}h^2$ roughly compatible with the WMAP constraint. Unfortunately, we also see that the lightest CP-even Higgs mass is predicted to be 110.3 GeV here and is ruled out by the LEP2 Higgs limits shown in Table III ($\sin^2(\beta-\alpha) = 1.0$) for this range of parameters). This problem is remedied by going to higher values of m_t, since m_{h^0} then goes up, but of course this comes with an associated penalty in the likelihood from being away from the empirically central values of m_t. In Fig. 5b, we display predictions for $BR[b \to s\gamma]$ and $\delta(g-2)_\mu/2$ along the chosen range for m_0. These predictions are both lower than the empirically derived