

**Erratum: Electroweak breaking and the μ problem in supergravity models
with an additional U(1)
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We report an error in the renormalization group equations (RGE's) (A13)–(A21). The normalization of the U(1) gauge couplings requires that in Eqs. (A13)–(A21) and (B18)–(B19), g_1^2 should be replaced by $\frac{3}{5}g_1^2$, and $g_1'^2$ should be replaced by $\rho g_1'^2$, where ρ is given by

$$\rho = \frac{2}{6Q_Q^2 + 3(Q_U^2 + Q_D^2) + 2Q_L^2 + Q_E^2}. \quad (1)$$

The correction to the RGE's specified above modifies the results for the values of the parameters at the electroweak scale (B6)–(B13), and hence the quantitative details of the analysis presented in Sec. V. However, the details of this analysis depended on our (arbitrary) choice of U(1)' charges specified in Appendix A. By choosing a different set of U(1)' charges, we find results for the low energy parameters that are within 10–15 % of Eqs. (B6)–(B13). With the choice of charges $Q_1 = Q_2 = -1$, $Q_S = 2$, $Q_Q = Q_U = \frac{1}{2}$, and $Q_L = Q_E = Q_D = 0$, the results are as follows.

Yukawa couplings:

$$h_s(M_Z) = 0.70, \quad h_Q(M_Z) = 1.074. \quad (2)$$

Trilinear couplings:

$$A_Q(M_Z) = -0.047 A^0 + 0.109 A_Q^0 + 1.97 M_{1/2}, \quad (3)$$

$$A(M_Z) = 0.316 A^0 - 0.230 A_Q^0 - 0.162 M_{1/2}. \quad (4)$$

Soft mass-squared parameters:

$$\begin{aligned} m_1^2(M_Z) = & -0.13 m_2^2 + 0.8 m_1^2 - 0.2 m_S^2 + 0.062 m_U^2 + 0.062 m_Q^2 \\ & - 0.056 A^2 + 0.0083 A_Q^2 + 0.61 (M_{1/2})^2 + 0.034 A^0 A_Q^0 \\ & - 0.051 A^0 M_{1/2} + 0.044 A_Q^0 M_{1/2}, \end{aligned} \quad (5)$$

$$\begin{aligned} m_2^2(M_Z) = & 0.47 m_2^2 - 0.12 m_1^2 - 0.12 m_S^2 - 0.41 m_U^2 - 0.41 m_Q^2 \\ & - 0.031 A^2 - 0.039 A_Q^2 - 3.21 (M_{1/2})^2 + 0.034 A^0 A_Q^0 \\ & + 0.035 A^0 M_{1/2} - 0.18 A_Q^0 M_{1/2}, \end{aligned} \quad (6)$$

$$\begin{aligned} m_S^2(M_Z) = & -0.25 m_2^2 - 0.38 m_1^2 + 0.62 m_S^2 + 0.12 m_U^2 + 0.12 m_Q^2 \\ & - 0.11 A^2 + 0.017 A_Q^2 + 0.42 (M_{1/2})^2 + 0.068 A^0 A_Q^0 \\ & - 0.1 A^0 M_{1/2} + 0.087 A_Q^0 M_{1/2}, \end{aligned} \quad (7)$$

$$\begin{aligned} m_U^2(M_Z) = & -0.27 m_2^2 + 0.05 m_1^2 + 0.05 m_S^2 + 0.68 m_U^2 - 0.32 m_Q^2 \\ & + 0.017 A^2 - 0.032 A_Q^2 + 4.1 (M_{1/2})^2 + 0.00 A^0 A_Q^0 \\ & + 0.06 A^0 M_{1/2} - 0.15 A_Q^0 M_{1/2}, \end{aligned} \quad (8)$$

$$\begin{aligned}
m_Q^2(M_Z) = & -0.14 m_2^{02} + 0.024 m_1^{02} + 0.024 m_s^{02} - 0.16 m_U^{02} + 0.84 m_Q^{02} \\
& + 0.0084 A^{02} - 0.016 A_Q^{02} + 5.8(M_{1/2})^2 + 0.00 A^0 A_Q^0 \\
& + 0.028 A^0 M_{1/2} - 0.073 A_Q^0 M_{1/2}.
\end{aligned} \tag{9}$$

The only other modifications are in the tables and figures of Sec. V. The corrected versions can be found in Ref. [1] listed below.

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[1] M. Cvetič, D. A. Demir, J. R. Espinosa, L. Everett, and P. Langacker, hep-ph/9703317.