Erratum: Magnetic Moment Manipulation by a Josephson Current **[Phys. Rev. Lett. 102, 017001 (2009)]**

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There was an error in the sign of the vector product of $\mathbf{M}$ and $\mathbf{H}_{\text{eff}}$ in the Landau-Lifshitz-Gilbert equation, Eq. (6) in the original Letter, which effectively corresponds to the sign change of gyromagnetic ratio γ . Therefore the presented results correspond simply to the inverted direction of the spin precession. This does not affect the qualitative conclusions of the Letter but leads to some sign changes in the formulas.

Equation (9) should read

$$m_x = \frac{\Gamma \omega \cos \omega t}{1 - \omega^2} \quad \text{and} \quad m_y = \frac{\Gamma \sin \omega t}{1 - \omega^2}. \quad (1)$$

Equation (11) should read

$$m_y(t) = \frac{\omega_+ - \omega_-}{r} \sin \omega t - \frac{\alpha_+ + \alpha_-}{r} \cos \omega t. \quad (2)$$

Expression (12) should read

$$\omega_{\pm} = \frac{\Gamma r \omega \pm 1}{2 \Omega_{\pm}} \quad \text{and} \quad \alpha_{\pm} = \frac{\Gamma r \alpha \omega}{2 \Omega_{\pm}} \quad (3)$$

with $\Omega_{\pm} = (\omega \pm 1)^2 + \alpha^2 \omega^2$.

FIG. 2. Results of numerical analysis of the magnetic moment dynamics of the φ_0 -junction. (a) Reversal of m_z from analytical expression Eq. (15) (dashed curve) and numerical one (normal curve). The other curves are related to the $\mathbf{M}$ trajectory: (b) in strong damping case (c) and (d) in the strong coupling regime revealing incomplete and complete magnetic moment reversal, respectively.

Equation (13) should read

$$I(t) = I_c \sin \omega t - I_c \frac{\omega_+ - \omega_-}{2} \sin 2\omega t + I_c \frac{\alpha_+ + \alpha_-}{2} \cos 2\omega t + I_0(\alpha). \quad (4)$$

Equation (14) should read

$$I_0(\alpha) = I_c \frac{\alpha \Gamma r \omega}{4} \left(\frac{1}{\Omega_-} + \frac{1}{\Omega_+} \right). \quad (5)$$

The results of numerical analysis of the magnetic moment dynamics for the parameters used in Fig. 2 have been updated.

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