Erratum: Spin-wave interaction in two-dimensional ferromagnets with dipolar forces [Phys. Rev. B 77, 144433 (2008)]

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Magnon damping is considered incorrectly in the near vicinity of the point $\mathbf{k}=\mathbf{0}$ in two-dimensional (2D) ferromagnet (FMs) with large and classical spins. We used in these cases Eq. (53) in which, strictly speaking, the upper limit of the integral should read $\sqrt{D/\alpha S\omega_0}$. When $S\sim 1$ and $T\ll T_C$, one has $t\ll D/\alpha S\omega_0$ and the upper limit in the integral can be replaced by infinity. In contrast, when $S\gtrsim \ln(4\pi S(D/[S\omega_0])^{3/2})$ and $T\gg D$ we have $t\gg D/\alpha S\omega_0$ and the finite upper limit of the integral comes into play. As a result Eq. (59) is valid at $[\Delta_{\gg}/(S\omega_0)]^2\gg k\gtrsim\Delta_{\gg}/D$, the upper limit of the integral in Eq. (63) should read $\sqrt{j/\alpha w}$, and the peak in the ratio $\Gamma_{\mathbf{k}}/\epsilon_{\mathbf{k}}$ is located at $k\sim\Delta_{\gg}/D$ and $k\sim\Delta_{\infty}/j$ in the case of large S and classical spins, respectively. Equation (63) transforms into Eq. (59) at $\Delta_{\infty}/\sqrt{jw}\gg k\gtrsim\Delta_{\infty}/j$ (with Δ_{∞} put instead of $\Delta_{\gg}$). Curves in Fig. 6 for $S=30$ and classical 2D FM change only in the near vicinity of the point $\mathbf{k}=\mathbf{0}$. The correct version of Fig. 6 is shown below. The figure caption needs no correction. Notice that Eq. (59) gives the upper bound of the peak height in classical 2D FM that is reached in the limit $j/w\to\infty$. The peak height in any quantum 2D FM is smaller than the value given by Eq. (59).

Only the conclusion about location of the peak in the ratio $\Gamma_{\mathbf{k}}/\epsilon_{\mathbf{k}}$ in classical 2D FM is affected by this Erratum.

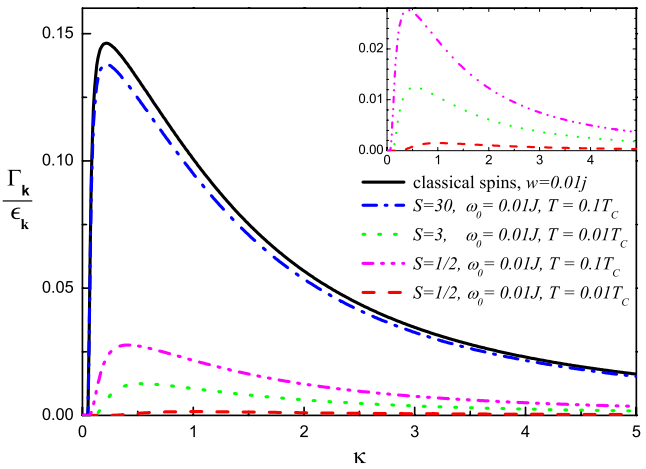

FIG. 6. (Color online) Corrected version of Fig. 6.

