Erratum: Magnetic structure and magnetization of helical antiferromagnets in high magnetic fields perpendicular to the helix axis at zero temperature [Phys. Rev. B **96, 104405 (2017)]**

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The prefactors of 2 in the second and third terms of Eqs. (6) and (9a) are typographical errors and should not be present. In addition, a typographical error in the normalization of the energies is present: energies are normalized by $S^2 J_2$ instead of $S J_2$. Hence the reduced magnetic field in Eq. (7) is $h_x = g\mu_B H_x / (S J_2)$ and similarly for the reduced critical field h_c and transition field h_t . The correct Eqs. (6) and (9) are

$$E_n = \frac{S}{2} \left\{ S J_0 + S J_1 [\cos(\phi_{n+1} - \phi_n) + \cos(\phi_{n-1} - \phi_n)] + S J_2 [\cos(\phi_{n+2} - \phi_n) + \cos(\phi_{n-2} - \phi_n)] \right\} - \mu_n H_x \cos \phi_n, \quad (6)$$

$$\frac{E_n}{S^2 J_2} = \frac{1}{2} \left\{ J_0 + J_1 [\cos(\phi_{n+1} - \phi_n) + \cos(\phi_{n-1} - \phi_n)] + [\cos(\phi_{n+2} - \phi_n) + \cos(\phi_{n-2} - \phi_n)] \right\} - h_x \cos \phi_n, \quad (9a)$$

$$\frac{E_{\text{ave}}}{S^2 J_2} = \frac{1}{n_\lambda} \sum_{n=0}^{n_\lambda-1} \frac{E_n}{S^2 J_2}. \quad (9b)$$

The energy normalization typographical error is also present in the left sides of Eqs. (13a), (13c), and (19) and in the expression for the reduced field h_x in the abscissa labels in Figs. 12 to 30. All numerical values presented in the tables and figures are obtained from the correct equations and are hence unchanged. Two lines below Eq. (14), “ kd ” should be “ kd/π ”.