Erratum: Helical spin dynamics in commensurate magnets: A study on brochantite, Cu₄SO₄(OH)₆ [Phys. Rev. Research 5, 033111 (2023)]

S. E. Nikitin, Tao Xie, A. Gazizulina, B. Ouladdiaf, J. A. Rodríguez Velamazán, I. F. Díaz-Ortega, H. Nojiri, L. M. Anovitz, A. M. dos Santos, O. Prokhnenko, and A. Podlesnyak[®]

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It was brought to our attention that in the original paper, Fig. 2(c) contains an error in the labels designating the magnetic field direction. Consequently, the \mathbf{a}^* and \mathbf{b}^* labels are interchanged in the last paragraph of page 3. The revised Fig. 2(c) below contains the corrected labels. The last two sentences on page 3 should read as follows: "For the field applied along the \mathbf{a}^* direction, there is a metamagneticlike transition at $B_C \approx 5$ T and for $B \parallel \mathbf{b}^*$ a weaker jump in magnetization is detected at 13.9 T (in both cases the critical field B_C is determined from the derivative dM/dB). This suggests that the AFM easy axis lies in the *ab*-plane close to the \mathbf{a}^* direction."

The above error has implications on the magnetic structure determination described in Sec. III B, Neutron diffraction, pp. 3 and 4. As the magnetic structure analyses had been based on the wrongly assigned magnetization curve, the magnetic moments were constrained to the *b* direction. Changing the moment orientation to be along the *a* axis in agreement with the magnetization results in the magnetic structure displayed in the revised Fig. 3(b) below. The corresponding sentences in the main text, p. 4 last paragraph, have to read as follows: "Taking into account the magnetization data, one would assume the moment direction to be close to the *a* axis, resulting in the magnetic SG $P2'_1/a$ (Γ_4). Restricting ourselves to a collinear magnetic structure, one gets the one shown in Fig. 3(b) with an estimated magnetic moment of about $0.30 \pm 0.15\mu_B$."

The subsequent linear spin-wave analysis of the original paper remains unchanged. All the calculations and the rest of the figures in the original paper are correct. Therefore, none of the results and conclusions of our original paper are affected by the mentioned errors.



FIG. 2. (c) Field dependence of magnetization measured along three principal directions at T = 1.5 K. The low-field data shown by solid lines were measured in dc field PPMS. The high-field data plotted by dashed lines were obtained using the pulsed-field setup. As there is no hysteresis, only the field-up sweep is shown.

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FIG. 3. (b) Magnetic structure of $Cu_4SO_4(OH)_6$. Only Cu ions are shown. View along the c^* axis.