**Erratum: Ultrahigh Bandwidth Spin Noise Spectroscopy: Detection of
Large g -Factor Fluctuations in Highly- n -Doped GaAs
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Fabian Berski, Hendrik Kuhn, Jan G. Lonnemann, Jens Hübner, and Michael Oestreich
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Equation (1) of this Letter contains a misprint and should read

$$d/(d\Delta t)\sigma_\theta^2 \propto \{\omega_L\tau \sin(\omega_L\Delta t) + \cos(\omega_L\Delta t)\}e^{-\Delta t/\tau_s}$$

for the derivative of the autocorrelation function of the stochastic Faraday rotation angle $\langle\theta_i\theta_i(\Delta t)\rangle$ with $\theta_i \in [-\pi\ldots\pi]$; i.e., the prefactor of the cosine must be unity [1]. We note that all data evaluations were performed with the correct formula; i.e., all conclusions and findings are left unaffected.

- [1] The deviation becomes significant if $\omega_L\tau \gg 1$ is not fulfilled, e.g., in the limit of low magnetic fields, as it has correctly been pointed out by B. C. Pursley, X. Song, and V. Sih, *Appl. Phys. Lett.* **107**, 182102 (2015).