

emphasized that the results obtained in this paper are applicable directly only to experiments with very small samples, in which only one pair of parametrically excited spin waves appears above the threshold. If we use the estimates given in Ref. 11 for the nonlinear self-action amplitudes S and Φ for ferromagnets in the case of decay into two spin waves ($S \sim \mu_0 M_0 / \mathcal{N}$, $\Phi \sim \mu_0 M_0 / \mathcal{N}^{1/2}$, where \mathcal{N} is the number of unit cells in the crystal, and M_0 is the magnetic moment per unit volume), then we can obtain for the threshold of the onset of the self-oscillations ($x_0 \sim x_1$) the estimate $\Delta h/h_c \sim \hbar\gamma/\mu_0 M_0$, and consequently the self-oscillations should occur immediately after the threshold of the parametric resonance is exceeded. Actually, however, in experiments on parametric excitation of the spin waves above threshold, there is always excited a rather wide packet of waves.¹² If the individual waves in the packet are strongly enough correlated with one another, one can expect the qualitative picture of the phenomenon to remain the same (but the threshold of the stochastic self-oscillations increases compared with the estimate given above, by a factor equal to the number of individual waves in the packet). On the whole we hope the results of the present paper to attract stronger attention to the study of self-oscillations in parametric excitation of spin waves in magnetically ordered crystals.

The authors are deeply grateful to I. M. Lifshitz for interest in the work and to Yu. L. Klimontovich, G. M. Zaslavskii, and Ya. G. Sinai for helpful discussions.

¹We assume that the dimensions of the crystal are small enough and that modes with other (discrete) wave vectors do not enter in the resonance region.

²As a check, we simulated numerically the dynamics of the system without assuming equality of the amplitudes and of the damping of the secondary waves; this simulation revealed no

qualitative deviations from the results presented below.

³The value of x' is given by a root of a transcendental equation; at $F=2$ and $x_1=2$ it lies in the interval.

⁴This part of the work was performed at the Computation Center of the Institute of Physics Problems of the USSR Academy of Sciences. The authors thank the staff of the Computation Center for help with the calculations.

⁵Usually, in the determination of K , one must not use too large values of t , for if the phase trajectories do not go off to infinity, the distance between them cannot increase without limit. Since in the definition of $k(t)$ we do not regard the phases Ψ or χ that differ by an integer multiple of 2π as identical, no such difficulties arise here.

⁶The system (12) cannot have a stochastic behavior, since it contains only two variables.

¹Z. Nitecki, *Differentiable Dynamics*, MIT Press, 1971.

²E. Lorenz, *J. Atmos. Sci.* **20**, 130 (1963).

³M. I. Rabinovich, *Usp. Fiz. Nauk* **125**, 123 (1978) [*Sov. Phys. Usp.* **21**, 443 (1978)].

⁴R. Balescu, *Equilibrium and Nonequilibrium Statistical Mechanics*, Wiley, 1975, Vol. II.

⁵Ya. G. Sinai, in: *Nelineinyye volny (Nonlinear Waves)*, Nauka, 1979, p. 192.

⁶V. E. Zakharov, V. S. L'vov, and S. S. Starobinets, *Usp. Fiz. Nauk* **114**, 609 (1974) [*Sov. Phys. Usp.* **17**, 896 (1975)].

⁷G. M. Zaslavskii, *Statisticheskaya neobratimost' v nelineinykh sistemakh (Statistical Irreversibility in Nonlinear Systems)*, Nauka, 1970.

⁸G. Benettin, L. Galgani, and J.-M. Strelcyn, *Phys. Rev. A* **14**, 2338 (1976); G. Benettin, C. Froeschle, and J. P. Scheidecker, *Phys. Rev. A* **19**, 2454 (1979).

⁹N. Morioka and T. Shimizu, *Phys. Lett.* **66A**, 182, 447 (1978).

¹⁰O. E. Rossler, *Z. Naturforsch. Teil A* **31**, 259 (1976).

¹¹A. I. Akhiezer, V. G. Bar'yakhtar, and S. V. Peletinskii, *Spinovye volny (Spin Waves)*, Nauka, 1967, pp. 179–180.

¹²V. S. L'vov and V. B. Cherepanov, *Zh. Eksp. Teor. Fiz.* **76**, 2266 (1979) [*Sov. Phys. JETP* **49**, 1145 (1979)].

Translated by J. G. Adashko

ERRATA

Erratum: Spatial dispersion of spin susceptibility of conduction electrons in a superconductor [Sov. Phys. JETP 49, 291–295 (1979)]

B. I. Kochelaev, L. R. Tagirov, and M. G. Khusainov

Zh. Eksp. Teor. Fiz. **76**, 578–587 (February 1979)

PACS numbers: 74.30.Ci, 74.70.Nr

Equation (5.2) on p. 294 should read:

$$\begin{aligned} \chi(r) = & -\frac{g^2 \mu_B^2}{2} \left(\frac{N(0)\pi}{p_0 r} \right)^2 T \sum_{\omega} \left\{ \left[\frac{u^2}{1+u^2} \cos(2p_0 r + 2\Phi) + \frac{1}{1+u^2} \right] \right. \\ & \times \exp \left[-\frac{r}{l_p} \left(1 - \frac{l_p}{l_s} + \frac{\Delta(1+u^2)^{1/2}}{\epsilon_0} p_0 l_p \right) \right] + \frac{3r}{l_p} \frac{1}{1+u^2} \left(1 - \frac{l_p}{l_s} + \frac{\Delta(1+u^2)^{1/2}}{\epsilon_0} p_0 l_p \right) \\ & \times \exp \left\{ -\frac{r}{l_p} \left[3 \left(1 - \frac{l_p}{l_s} + \frac{\Delta(1+u^2)^{1/2}}{\epsilon_0} p_0 l_p \right) \left(\frac{\Delta(1+u^2)^{1/2}}{\epsilon_0} p_0 l_p - \frac{2l_p}{3l_s} \frac{2u^2+1}{1+u^2} \right) \right]^{1/2} \right\}. \end{aligned}$$