

Abstracts

Submillimeter Spectroscopy of Weak Antiferromagnets in Magnetic Fields Up to 300 kOe

E.G. Rudashevsky, A.S. Prokhorov and L.V. Velikov. "Submillimeter Spectroscopy of Weak Antiferromagnets in Magnetic Fields Up to 300 kOe." 1974 Transactions on Microwave Theory and Techniques 22.12 (Dec. 1974, Part I [T-MTT] (Special Issue on the Proceedings of the First International Conference on Submillimeter Waves and Their Applications)): 1064-1069.

The dynamic properties of antiferromagnets with Dzyaloshinsky interaction were investigated at wavelengths 0.3-14 mm, in magnetic fields up to 300 kOe and temperature 4.2-400 K. The problems of impurities, field induced phase transitions, types of spin oscillation, etc., for different types of antiferromagnets with Dzyaloshinsky interaction are discussed. Based on the investigation results, a new approach to the physics of magnetic phenomena, using the complete rational basis of invariants and avoiding potential series expansion, has been developed.

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