level (A.D. 1100–1200) all over the Amazon drainage, and it is probably autochthonous to that jungle-covered basin.

Meggers calls her final epoch preceding the Inca takeover the "Integration Period," but it seems to have been nothing of the sort. Ecuador was always Balkanized. Perhaps it was the exposure of native Ecuadorian peoples to such a heterogeneity of influences that precluded the rise of any well-defined art style (the mark of a homogeneous civilization). In this, there is close similarity to other great trading cultures such as those of the Phoenicians and other peoples of the ancient Levant or of the highly cosmopolitan tribes of central Asia. International commerce and great art apparently do not mix, at least in the ancient world.

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Microwave Spectroscopy

Ferromagnetic Resonance. S. V. VONSOVSKII, Ed. Translated from the Russian edition (1961) by H. S. H. Massey. D. ter Haar, translation editor. Pergamon, New York, 1966. 339 pp., illus. $10.

This book is a collection of review articles on the phenomenon of resonant absorption of microwaves in ferromagnetic materials. As the editor points out in the foreword, the authors of these chapters have themselves made significant contributions to the subject and therefore the work is (at least in part) original. It is a very lucid collection and contains a sufficient amount of detail so that it will make not only a good reference work but also an interesting book for new students who wish to start work on ferromagnetic resonance. It is somewhat dated in that few if any references later than 1963 are cited, and the papers more recent than 1960 that are cited are, very naturally, Russian.

There are nine chapters. The first, by Vonsovskii, is an elementary survey. Chapter 2, by G. V. Skrotskii and L. V. Kurbatov, is a more detailed discussion of the phenomenological theory. It contains a very clear account of the various phenomenological equations which have been introduced since the classic work of Landau and Lifshitz in 1935 and presents solutions for a few typical cases. Special cases such as effects of multiple domain structure are also discussed. In chapter 3 E. A. Turov discusses the magnetic resonance phenomenon as an excitation of spin waves. Thin-film spin-wave resonance, ferromagnons excited by high-frequency electromagnetic fields, and spin waves in antiferromagnetic systems are described. The special roles of anisotropy fields and demagnetizing fields are also included. M. I. Kaganov (chapter 4) deals mainly with insulating ferromagnetics. The discussion concerns itself only with magnon-phonon relaxation processes. The ferromagnetic system is assumed to be ideal, that is, free from dislocations, impurities, surface flaws, and so on. Chapter 5, by Turov, concerns ferromagnetic resonance in metals and discusses particularly the role of conduction electrons, that is, the exchange-conductivity mechanism. The case of short mean free paths (normal skin effect) is discussed in detail, but the situation at low temperatures (anomalous skin effect) is discussed only in a rather oversimplified manner; the main conclusions essentially agree with the more sophisticated recent theoretical work. In the next chapter Turov continues with a survey of the experimental data on line widths and their comparison with the theoretical work described in the earlier chapters. In the latter part of this chapter other sources of line-broadening, such as inhomogeneities, are considered. Chapter 7, by V. G. Bar'yakhtar and M. I. Kaganov, is concerned with further details of spin-wave excitations by an external high-frequency field, in particular the case of nonuniform high-frequency fields is discussed. Walker modes are described in considerable detail. Next, A. G. Gurevich (chapter 8) deals with nonlinear processes in ultra-high-frequency fields. He concerns himself mostly with a study of various ferrite devices. Ya. A. Monosov and A. V. Vashkovskii describe nonlinear phenomena in ferrites in chapter 9. The first part of this chapter gives data on long-wave oscillations in a ferrite, and the second part deals with phenomena when the ultra-high-frequency power is considerably increased.

In this volume there is somewhat more coherence and continuity than is usual in a mere collection of papers. It should therefore prove quite useful to workers in the field.

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Superconductivity and Helium

Quantum Fluids. Proceedings of the Sussex University Symposium (Brighton, England), August 1965. Edited by D. F. BREWER. North-Holland, Amsterdam; Interscience (Wiley), New York, 1966. 368 pp., illus. $13.50.

The symposium whose proceedings are reviewed here was intended primarily as an informal discussion meeting, with emphasis on problems pertaining to both helium and superconductivity. D. F. Brewer has done a creditable job of transforming the proceedings into a useful reference volume.

About 34 papers presented at the symposium comprise the framework of the book. These papers vary from fairly general reviews to quite specific reports on recent experiments. Review papers are presented by P. W. Anderson, J. Bardeen, G. Careri, P. G. Gennes, E. P. Gross, B. D. Josephson, P. C. Martin, P. Nozières, P. L. Richards, W. F. Vinen, J. C. Wheatley, and A. D. B. Woods. Many of the papers are concerned with vortex lines in the superfluid. Wheatley's describes experiments on He^3 performed at very low temperatures (near 3.5 millidegrees).

Several papers discuss the properties of ions in liquid He^4. Discussions of microscopic theories of helium, tunneling, flow properties of superfluids, and inelastic neutron scattering from He^4 are also included among the papers. Roughly one third of the book relates to superconductivity, one third to He^4, and the remaining third to He^3 and He^3-He^4 mixtures. Author and subject indexes are included.

The majority of the papers are of a specialized nature and require some previous familiarity with the field. Assuming this familiarity, however, most of them are quite readable. Edited transcripts of the discussions that followed each paper are included; these are of considerable interest, although, because of their necessarily brief nature, some of the remarks contained in the discussions may not be immediately celar to the reader. *Quantum Fluids* is recommended for interesting reading as well as a reference for those concerned with research on quantum fluids.

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