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bibliography of magnetometers

P. H. SERSON and F. PRIMDAHL

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Contents

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Abstract. A reference list of selected papers describing techniques and instruments for measuring the earth's magnetic field was prepared for the International Association of Geomagnetism and Aeronomy. It includes nearly 200 references, concentrating on developments since 1950 in methods of geomagnetic measurement.

Résumé. Les auteurs ont préparé, pour l'Association internationale de géomagnétisme et d'aéronomie, une liste d'études choisies décrivant les techniques et les appareils de mesure du champ magnétique terrestre. La liste comporte près de 200 titres spécialement sélectionnés pour montrer l'évolution depuis 1950 dans les méthodes de mesure géomagnétique.

Introduction

The preparation of a report on recent developments in instruments and methods for geomagnetic measurements was proposed by Professor N.V. Pushkov in 1967, as a joint project of Commission I (Observatories and Instruments) and Commission IX (History) of the International Association of Geomagnetism and Aeronomy. It was agreed that Commission I should compile a reference list of selected papers beginning about 1950, when several new techniques were introduced.

The number of papers on magnetometers published in the last 20 years probably exceeds 1,000, and a complete list is impracticable. Accordingly, this bibliography is limited to techniques for the direct measurement of the geomagnetic field, thus excluding laboratory measurements of the magnetic properties or rocks and other materials. Since several excellent reviews with extensive bibliographies were published about 1960, we have concentrated on the more recent literature, but some of the fundamental early references have been retained.

The bibliography is organized in seven sections as follows:

1. General reviews
2. Instruments with suspended magnets
3. Fluxgate magnetometers
4. Proton-precession magnetometers
5. Optically-pumped magnetometers
6. Measurement of components with proton or optically-pumped magnetometers
7. Miscellaneous types of magnetometers.

In regard to Section 3, the reader is referred to an earlier publication listing over 100 papers on fluxgate magnetometers with a short note on the contents of each (Primdahl, F., Bibliography of fluxgate magnetometers, *Pub. Earth Physics Branch, 41, No. 1,* 1-14, 1970). The present publication includes only a supplementary list of references to fluxgate instruments and related devices.

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