

Arabic Astronomical and Astrological Sciences in Latin Translation

A Critical Bibliography. By Francis J. Carmody. Pp. vi+193. (Berkeley and Los Angeles: University of California Press; London: Cambridge University Press, 1956.) 21s. net.

THE purpose of this bibliography is to present in a co-ordinated form all known translations into Latin of Arabic works on astronomy. Most of the known Arabic works were translated into Latin during the medieval and renaissance periods by scholars who were specialists. In these translations they were able to exert a marked influence on European thought. The translations are of use to a far greater number of scholars than the Arabic originals would be; moreover, many of the original Arabic texts have not survived.

This bibliography has been prepared with great care by co-ordinating and corroborating the various editions and manuscripts. Several hundred manuscript texts have been examined at first hand. Works on astrology have been included as many of them contain technical information on such matters, for example, as planetary theories and improvements in astronomical constants. Mathematical works have also been included where they touch on the borderline of astronomy and deal with such matters as optics or the astrolabe.

A chronological arrangement of authors has been followed. Some brief notes about each author are given, followed by lists of editions and of manuscripts and some idea of the reliability of each. The contents of each work are described and an estimate of its significance is given. The locations of the several manuscript copies believed to be suitable for research are listed.

The preparation of this bibliography has evidently entailed an immense amount of research. It will provide an invaluable reference source for all students of Arabic astronomy. H. SPENCER JONES

Unione Internazionale di Chimica Pura e Applicata
Simposio Internazionale di Chimica Macromolecolare,
Milano-Torino, 26 Settembre-2 Ottobre, 1954.
(Supplemento a *La Ricerca Scientifica*, Anno 25.)
Pp. xix+954. (Roma: Consiglio Nazionale delle
Ricerche; New York: Interscience Publishers, Inc.;
London: Interscience Publishers, Ltd., 1955.) 12,000
lire; 19.20 dollars.

THIS volume comprises some 106 papers contributed to the International Symposium on Macromolecular Chemistry, which was held under the auspices of the International Union of Pure and Applied Chemistry, in Milan and Turin, during September 1954.

The editors and printers have carried out their difficult and laborious task well, and the result is a substantial volume which gives an excellent permanent record, not only of the papers contributed, but also of the discussion remarks. The majority of papers are in English or French; but in all cases a lengthy résumé is given in Italian, French and German; so that the volume as a whole is a very valuable contribution to the international literature on this subject; it is clearly a necessity for the libraries of all institutions and laboratories concerned with macromolecular chemistry. It is only unfortunate, but quite understandable, that so much time should have elapsed between the conference and the volume. The subjects of the discussion were: (1)

building reactions of macromolecules; (2) transformation reactions of macromolecules; (3) block polymers and graft polymers, preparation and properties; (4) cellulose and derivatives; (5) molecular weight determination and distribution; (6) branched polymers; (7) fibre-forming high polymers; (8) crystallization and transitions; (9) proteins; (10) general properties of polymers. J. A. V. BUTLER

Welt, Ich und Zeit

Nach unveröffentlichten Manuskripten Edmund Husserls. Von Gerd Brand. Pp. xviii+1012. (Den Haag: Martinus Nijhoff; London: B. T. Batsford, Ltd., 1955.) 9.50 florins.

THIS scholarly volume deals with the unpublished Husserl manuscripts. They represent the state of affairs existing at the end of the philosopher's life, and comprise his heroic attempts (never perhaps, in his estimation, wholly successful) to set phenomenology fairly and squarely upon an irreproachable methodological basis. Thus is explained the division of the work into two parts. In the first, no more than a general introduction to the subject is achieved, whereas in the second Husserl brings to bear his constitutive analysis with that particular brand of rigour which impelled him to regard phenomenology as a portion of a living science.

So, his meditations upon the return to experience occupy about one-third of the book, and his concept of temporality as fundamental for such experience the remaining two-thirds. The contrast is between occasional truths—with which we have to be satisfied in everyday life—and final validity. Observed historically, this means that the choice for Europe (as Husserl saw it) is between decay into barbarism or the rebirth of a spirit of philosophy in which objectivity would play a major part. It seems safe to deduce from these pages that something less violent than the "Enlightenment" of French savants is envisaged, but at the same time a system capable of eliminating the crudities of a merely pragmatic theory of knowledge. F. I. G. RAWLINS

The Theory of Differential Equations

By Dr. J. C. Burkill. (University Mathematical Texts.) Pp. ix+102. (Edinburgh and London: Oliver and Boyd, Ltd., 1956.) 8s. 6d. net.

INCE'S volume in the "University Mathematical Texts" gave an account of standard forms of explicit solution of ordinary differential equations. Dr. Burkill's companion volume takes this material as known, and proceeds to discuss conditions under which the existence of a solution may be proved, and those properties of the solution which may be deduced from the nature of the differential equation. The theory of the linear equation is concisely but thoroughly developed, an introduction to the Sturm-Liouville theory is given, solutions by means of infinite series and by contour integrals are carefully discussed. Chapters on the Legendre and Bessel functions serve as illustrations of general methods, and there is a brief introduction to asymptotic series. To cover this ground in a hundred small pages demands expository skill of no mean order, and it is a measure of the author's mastery to find a lucid account, easily intelligible to any good honours student, in so small a compass. Both as a text in itself, and as an introduction to more comprehensive treatises in this field, this book is a worthy member of the excellent series to which it belongs.

T. A. A. BROADBENT