urement. The geochemistry of the principal radioactive elements and their decay products is presented meticulously but all too briefly in the introduction by L. H. Ahrens. There follow 12 chapters by the principal author: one a historical introduction, eight on the various methods of age determination, and one each on sediments, meteorites, and the geologic time scale. The author's efforts to include everything that he found in the literature, from the latest word to the wholly obsolete, produced a vast list of references (about 700 titles), but his unwillingness to sift and evaluate severely detracts from the general utility of the compendium. In Craig's immortal phrase, this is another *clerical* review.

Even more detracting is the steeplechase style, the profusion of factual mistakes, and the far too many grammatical and typographical errors. Some curious notions are presented as fact, and some very distinguished people get their names misspelled, not once, but throughout the book. Most of the dozen or so "original" line drawings have errors. There is a strange sketch of a mass spectrometer tube, which is shaped like a broken reed; a drawing of an ion scource that would never work; and a schema of an electron multiplier with all dynodes connected to the case and a supposed "ion beam" bouncing through. The complicated geologic diagrams tend to obfuscate rather than illustrate the principles in point.

Because of its comprehensive approach and in spite of its drawbacks, *Applied Geochronology* will be useful as a reference. Its stated aim, to "fill the gap" between the analyst and the field geologist, however, has not been realized.

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Momentum Books Series

The three latest additions to the Momentum Books Series fully measure up to the reputation established by the earlier monographs. Each is a slender little volume in paper back, concise, lucid, highly readable, and sufficiently exhaustive. It is the kind of book that the working scientist, the teacher, the inquisitive layman with an energetic mind, and even the professional physicist might slip into his pocket and read with profit and enjoyment on a train journey or during leisure hours. The series is published for the Commission on College Physics. The first general editor for the series was Edward U. Condon, who was ably succeeded by Walter C. Michels. Momentum Books are not exactly light reading, but they afford an easy way of becoming familiar with important and rapidly developing areas in physics.

Radioactivity and Its Measurement (Van Nostrand, Princeton, N.J., 1966. 168 pp., $1.75), by Wilfrid B. Mann and S. B. Garfinkel, is the tenth in the series, and the other two books discussed in this review are respectively 11th and 12th in the series. After a very interesting account of the discovery of radioactivity, Mann and Garfinkle discuss at some length the radioactive transformation series, the interactions of α-, β-, and γ-rays with matter, the energetics of nuclear change, and instrumentation for and standardization of radioactivity measurements. The survey is fairly complete, although the reader might have expected discussion of the biological effects of radioactivity and of the many fascinating applications in areas outside physics.

Plasmas—Laboratory and Cosmic (Van Nostrand, Princeton, N.J., 1966. 154 pp., $1.75), by Forrest I. Boley, deals with a very modern and rather glamorous field of physics. Gaseous plasma in itself is not modern, but the word and the methods of handling it theoretically and experimentally are modern. Laboratory plasma started with the first experiments on electric discharge through gases, and cosmic plasma is as old as the cosmos itself, if not older—is it not another word for the primeval chaos? The four chapters of the book deal with the general properties of a plasma, the plasma as a conducting fluid and wave-propagating medium, laboratory plasmas, and naturally occurring plasmas. The mathematics is a little more advanced than that used in other volumes of this series, but the reader is well rewarded for his effort. The sections on the search for thermonuclear power production and on the recent findings of satellites and space probes make fascinating reading.

A concise and extremely clear presentation of another glamor topic is Ivan Simon's **Infrared Radiation** (Van Nostrand, Princeton, N.J., 1966. 119 pp., $1.50). The topics cover the laws of radiation, sources for infrared radiation (IR), detectors, materials and optics, spectroscopy, and the major applications of IR techniques. One glaring omission is the Michelson interferometer as an IR instrument. The brief paragraph on interferometers deals solely with the Fabry-Perot etalon.

With the frontiers of science advancing rapidly and in many different directions, there is great danger of mutually uncomprehending cultures developing within the scientific community itself. Small and clear monographs like those of the Momentum Series render a great service to the professional scientist by making him familiar with important areas outside his own narrow specialty.

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Wiener Memorial Volume

On 18 March 1964, when Norbert Wiener died, the world lost a great mathematician and thinker. He has left us some 250 papers on matters mathematical, philosophical, cybernetical, and social, as well as ten books. The volume under review, **Selected Papers of Norbert Wiener** (Society for Industrial Mathematics and M.I.T. Press, Cambridge, Mass., 1964. 463 pp., $12.50) contains 12 of Wiener's papers, two sizable introductory articles on his work in mathematics and engineering, and a foreword by his colleagues N. Levinson, Y. W. Lee, and W. T. Martin, respectively. The papers included are:

(1) "Nets and the Dirichlet problem."
(2) "Differential space."
(3) "The Dirichlet problem."
(4) "Generalized harmonic analysis."
(5) "Tauberian theorems."
(6) "Uber eine Klasse Singularer Integralgleichungen."
(7) "The homogeneous chaos."
(8) "The Ergodic theorem."
(9) "Entropy and information."
(10) "Problems of sensory prosthesis."
(11) "Homeostasis in the individual and society."
(12) A factorization of positive hermitian matrices."

Of these papers the first six were published before 1932 and have been hard to get. They are, however, of much interest even now, Nos. 2, 4, 5 being in fact minor classics. As Levinson remarks in his introduction (which, incidentally, is a valuable mathematical exposition of the thread running through Wiener's early thought), these pioneer-