procedures to enable the reader to follow in detail specific procedures. One paper dealing with whole-body irradiation of guinea pigs contains a few points in this reviewer's mind which were not clear; namely, does 220 V, 15 mA as reported to be the characteristics of the x-ray generating equipment really mean 220 kV, 15 mA? A second point in this same paper: When each group of 20 guinea pigs was irradiated simultaneously, were the pigs anesthesized? What was the dosimetry employed to confirm uniformity of the delivered dose?

The conclusions and recommendations are specific and recommend further studies both with the use of radiation for *in vitro, in vivo* studies, and in the development of methods for further investigation of immunization against various protozoal diseases.

For those working directly in the specific areas considered in this report, these papers can serve as a valuable source of reference.

Manual of Dosimetry in Radiotherapy
(by John B. Massey, Technical Reports Series No. 110, International Atomic Energy Agency, Vienna, 1970)

Pages 138

Price $4.00

This report should be of interest to medical physicists (all levels), resident and staff radiotherapists, and health physicists.

This IAEA publication is intended and does provide, as the author notes, "a practical guide to the procedure necessary for achieving good physical accuracy of irradiated volume and dosage in external beam therapy." Primarily intended for users of medical ortho voltage (200 to 400-kV x rays) and ^{60}Co teletherapy equipment, many of the chapter paragraphs may be related to diagnostic and megavoltage equipment.

Seven of the eight chapters are devoted to the practical aspects of medical physics and cover the potential pitfalls of such areas as radiation protection survey, measurement of radiation quality and quantity, the radiation measuring instrument, and bookkeeping (medical, check lists, and treatment records).

Ample illustrations, calculations, and diagrams are provided to illustrate the author's point in each chapter. The chapter dealing with "Measurement of Radiation Output" contains an excellent treatment of phantom measurements, positions, and calculations, both for x rays and teletherapy sources.

All the chapters contain fundamental practical information for the clinical physicist in particular, but this manual could well serve as one of the texts in a health physics or resident training program.

This reviewer certainly hopes that the author and his excellent advisory staff might well contemplate a second manual dealing with inhomogeneities, *in vivo* dosimetry, brachytherapy, and the role of mold technology in radiotherapy.

An excellent treatment in a very straightforward manner.

Neutron Fluence Measurements
(Technical Report Series No. 107, International Atomic Energy Agency, Vienna, 1970)

Pages 184

Price $5.00

This report should be of interest to reactor physicists and engineers, and students of nuclear engineering.

This technical report is an outgrowth of various studies and workshops in which the radiation dose, specifically the neutron dose (referred to as the time integral of the neutron flux density or neutron fluence), is an essential parameter in evaluating and reporting the results of research reactors and reactors in general. A prime goal of this report was the development of a practical guide of promoting consistency in the measurement and reporting of reactor radiations.

The subject is introduced by presenting the basics of neutron spectra and the comparison of both the experimental and theoretical conditions. Measurements of low flux densities, thermal neutron spectra, associated equipment, and the associated discussions are extremely well developed; the same development is provided for intermediate and fast neutron presentation. The inclusion of appropriate mathematical expressions for each considered condition, augmented by suitable tables, diagrams, and illustrations, enables the reader to readily follow the author's purpose. Suitable references at the end of each chapter and at the conclusion of the report enable the reader to develop a suitable perspective of the entire field.

This manual would be extremely useful to both the student and the experienced worker in defining parameters and in maintaining consistency of reports.

Nuclear Accident Dosimetry
(Proceedings of a Panel, Vienna, February 17-21, 1969, International Atomic Energy Agency, Vienna, 1970)

Pages 191

Price $5.00

These proceedings should be of interest to health and safety physicists and engineers, reactor operators, reactor and nuclear physicists, directors of reactor stations, and medical doctors specializing in radiation accidents.

The dosimetric methods and techniques used in assessing doses to individuals exposed to nuclear radiations, including criticality accidents, are included in a series of papers by a panel of experts from various countries.

Three broad objectives were considered:

1. to survey the methods and instruments used in various laboratories for assessing such doses
2. to review the experiences gained in assessing doses to those individuals exposed to nuclear radiations in criticality accidents
3. to recommend programs aimed at improving dosimetry systems with the possibility of cooperation of international bodies of scientists from each country to serve on intercomparison studies.

The panel included papers dealing with the methods and instrumentation employed for evaluation and analysis of gamma and neutron exposures. These techniques included film, ra-

diophotoluminescent, thermoluminescent dosimeters, liquid systems, individual activation dosimeters containing various elemental foils (bare gold, cadmium-covered gold, indium foil, and sulfur disks or pellets), and fission track detectors.

Stationary detectors and detection systems, as well as phantom reconstruction of an incident, were also considered. This was reviewed in detail in the first paper of an accident in Mol in 1965 with both external and internal phantom dosimetry employed.

For accidental neutron dosimetry, topics included the use of whole-body counters for the measuring of sodium activation in the body and ^{32}P production in the hair.

Recommendations of the panel include (a) intercomparison of dosimetry systems both for personnel and area monitoring and (b) the conducting of training programs. It might be noted at this point that a future recommendation as noted by the reviewer would be to include physicians (radiologists, internists, and other medical specialists) into this area of treatment of and caring for those workers so exposed to high levels (150 rads or better) of nuclear radiations.

This monograph contains a wealth of information, data, tables, diagrams, and experimental procedures that can serve those institutions, individuals, and agencies responsible for the adequate protection and assessment of radiation exposures to individuals so employed in these establishments.

Stanely J. Malsky (PhD, New York University) has some 20 years of broad professional experience which includes work as a nuclear physicist for the Department of Defense. In medical physics as related to the treatment of cancer patients, and teaching, he has worked for the Veterans Administration in radiation therapy, with the Brookhaven National Laboratory Medical Division as a nonresident research collaborator. Dr. Malsky is with the Physics Department of Manhattan College as an associate professor of radiological science, and serves as a consultant to the Hospital for Special Surgery, Fordham and Mesericordia Hospitals. Dr. Malsky's interests have been in the fields of miniature solid state dosimetry, health physics, and medical physics. He has published a number of papers in these areas and has been contributing author to various texts. He is a Fellow of several professional societies.