

(ANL), for about fifteen years. At ANL he conducted the training program (for a team of Belgian Scientists) that initiated effort at ANL that later became the International School of Nuclear Science and Engineering. He was active in scientific applications to the nuclear reactor field during the Manhattan Project. For many years his principal interests have been in nuclear reactor research, design, and operation.

A. Plasma Physics and Controlled Nuclear Fusion Research, Vol. I

B. Plasma Physics and Controlled Nuclear Fusion Research, Vol. II

C. Nuclear Fusion—Special Supplement 1970 World Survey of Major Facilities in Controlled Fusion

Author International Atomic Energy Agency

Publisher Unipub, Inc.

Pages A. 993
B. 836
C. 250

Price A. \$23.00
B. \$19.50
C. \$ 6.00

Reviewer W. M. Farr

Periodically, most disciplines have a meeting which is definitive in the sense that the state-of-the-art is defined by the papers and discussion that transpire. Meetings which fit into that class are the triennial conferences on plasma physics and controlled nuclear fusion research sponsored by the International Atomic Energy Authority. First held in 1961 at Salzburg, then again in 1965 at Culham and in 1968 at Novosibirsk, these meetings bring together at one time and in one place representatives from almost the entire controlled fusion community of the world. Here we have one of the few opportunities for a meeting of minds by physicists and engineers from all the countries involved in fusion re-

search on both sides of the iron curtain. Considering the importance of such a meeting, a copy of the proceedings is a necessity for anyone seriously interested in controlled fusion research. The proceedings are essentially an encyclopedia covering every aspect of the subject.

Roughly speaking, there are three basic areas covered in the course of the meeting: toroidal devices, open-ended devices, and basic plasma physics. Each receives an excellent review paper in the introduction to Vol. I by L. A. Artsimovich, S. J. Buchsbaum, and M. Trocheris, respectively. These are highly recommended to the more casual reader who would like a statement of progress in fusion research set in a historical perspective.

There are, of course, hazards associated with a state-of-the-art document. The results presented at Novosibirsk reflect the thinking of researchers at some point prior to June 1968, and this fact should be kept in mind. What was considered timely and of great significance in 1968 may or may not be so thought of today. For example, in the review paper on closed devices, the Tokamaks do not receive nearly the attention which they are currently obtaining from fusion researchers.

Another word of caution. Unfortunately, of the contributions by Russian and French scientists, only the review articles appear in translation, so that anyone wishing to study the details of the Russian or French work must have a command of the respective language.

A useful addition to the proceedings is the supplementary volume that lists, worldwide, each of the major institutions involved in fusion research. This volume is somewhat more up to date, containing information current as of the spring of 1970. Cataloged information includes the personnel and major experiments taking place at each institution.

W. M. Farr (PhD, University of Michigan) is an assistant professor of nuclear engineering at the University of Arizona. He has worked on controlled fusion problems at Oak Ridge National Laboratory and Culham Laboratory, England. His research interests are in theoretical plasma physics, particularly micro-instabilities.

Neutron Capture Gamma-Ray Spectroscopy

Editor IAEA

Publisher Unipub, Inc.

Pages 708

Price \$20.00

Reviewer John L. Meason

The published proceedings of the International Symposium on *Neutron Capture Gamma-Ray Spectroscopy* is a broad collection of research on this topic. A particular point of gratification is to find that one entire section of this book consists of research papers devoted uniquely to the description of experimental techniques. In addition to several theoretical papers, the bulk of the other information consists of research reports on level schemes derived from thermal, resonance, and fast-neutron capture reaction data.

The publication of the proceedings of this symposium provides an excellent source of reference on the subjects of neutron capture spectroscopy and nuclear level structure. A large portion of the information contained in this book is invaluable to the nuclear spectroscopist studying nuclear level structure from the decay of radioactive nuclides. The nuclear level structure measurements by neutron capture provides additional data to that already accumulated by radioactive decay and particle reactions.

It is interesting to note that very little attention was directed toward data processing of the Ge(Li) gamma-ray spectra, for example, such as the techniques described by Routti, UCRL-19452 (1969). There was, however, one paper (Michaelis and Horsch) that devoted two sections of their paper to the techniques of Ge(Li) gamma-ray spectrum analysis and calibration procedures.

Within the past several years a new isomer of ^{68}Cu has been identified [*Phys. Rev.*, 188, 4 (1969)] and its population of the nuclear levels in ^{68}Zn measured. The experimental work by Ottman et al. on the neutron capture of ^{67}Zn provides additional information on this particular problem.

Neutron Capture Gamma-Ray Spectroscopy would be an excellent

reference book for the nuclear spectroscopist, regardless of his approach to studying nuclear level structure, i.e., radioactive decay, particle reactions, or neutron capture reactions.

John L. Meason (PhD, University of Arkansas, 1965), is currently with the Nuclear Operations and Support Branch, Nuclear Weapon Effects Division in White Sands Missile Range, New Mexico. His research interest is in nuclear spectroscopy (by radioactive nuclide decay) and neutron and gamma-ray dosimetry as applied to fast reactors.

Handling of Nuclear Information

Author IAEA

Publisher Unipub, Inc.

Pages 674

Price \$18.00

Reviewer Margaret Butler

In February 1970 the International Atomic Energy Agency convened its first symposium on library science and information technology. The meeting was held in Vienna and timed to introduce to this, its most concerned audience, the International Nuclear Information System (INIS). This book is a collection of the papers presented at the conference, supplemented with the edited discussion and rapporteurs' summaries of the three major topics: information sciences, primary and secondary information, and indexing.

Following an introductory paper on Science and Documentation delivered by Gross of Brazil, the meeting was divided into nine topical half-day sessions. This volume follows the same chronological organization. The opening session contains five papers on National and Institutional Information Centers. The first describes the information services provided by Atomic Energy of Canada Limited to its own Chalk River Laboratories, Whiteshell Research Establishment, Ottawa, and Toronto Divisions, and to Canadian universities and industry. The second paper covers library, documentation, and translation services at

the Karlsruhe Nuclear Research Center in Germany, while the third details the nuclear information dissemination activities of the French Commissariat à l'énergie atomique (CEA). Octave DuTemple authored the next paper—a survey of nuclear information services in the nongovernment sector, stressing the role of the American Nuclear Society. The final paper of the session, a report on the radioisotope information center at the Czechoslovak Institute for Research, Production and Use of Isotopes serves to introduce the second session, "Specialized Information Centres."

Second session papers include descriptions of a CEA-developed automatic system, SAPRISTI, for handling data and documentation on light element reactions; the international neutron data system as implemented by the four participating centers at Brookhaven, Obninsk, Saclay, and Vienna; the DESY elementary particle physics information system used to prepare the biweekly *High Energy Physics Index*; and the Excerpta Medica Foundation's automated production of their abstract journal, *Nuclear Medicine*. An experimental nuclear physicist at EURATOM comments on the procedures employed for the evaluation of nuclear data and some of the problems involved; mechanized processing of patent literature at the Brevatome Documentation Center in Paris is discussed; Argonne Code Center and Oak Ridge Information Analysis Centers are described; and efforts currently underway in Germany to make Eastern nuclear literature more generally available are reported—a varied offering.

The third and fourth sessions are devoted to the single topic of "Information Services: Manual, Mechanized, and Computerized." Except for a paper describing the conventional information service operation at the United Kingdom Atomic Energy Authority's Risley establishment the information services reported on are computer-based systems, primarily designed to perform bibliographic search and dissemination or current awareness services. Activities covered are the Grenoble CEA SYDOLAB bibliographic search system, the Swedish ABACUS document retrieval and selective dissemination of information (SDI) program utilizing a variety of commercially available

tape services, UKAEA mechanization of current awareness services at Culham and Harwell, operational experience with the EURATOM Nuclear Documentation System (ENDS), the Russian SDI program at the Central Research Institute of Information and Technical and Economic Studies on Atomic Science and Technology, the Berkeley Lawrence Radiation Laboratory's SDI experiment based on the NSA tape service, and the mechanized preparation of the Brazilian Bibliography of Physics. Three additional papers discuss current and anticipated cost effectiveness of automated information retrieval, a mathematical model of a large-scale scientific information service, and the status of the EURATOM Russian-English machine translation program.

Session five is concerned with "Primary Publications"; the publications described in this session are the Pakistan Atomic Energy Commission's journal, *The Nucleus*; the Russian journal, *Atomnaja Energija* with its unique deposition policy, and those produced by the American Institute of Physics, the USSR Nuclear Publishing House (Atomizdat), and the Joint Institute for Nuclear Research in Dubna. A survey article on publishing habits and publication procedures is included as well.

"Secondary Publications" treated in session six are the French *Le Bulletin Signalétique du CNRS Nuclear Physics Chemistry and Technology Series* and the CEA Nuclear Literature Index; the USAEC's Nuclear Science Abstracts and Preprints in Particles and Fields; the Soviet VINITI abstract journals; and Nuclear Science Abstracts of Japan.

The seventh session is divided between the subjects of "Nuclear Libraries and Services" and "Organization and Coordination of Scientific Conferences." Following an invited paper on the documentation needs of developing countries which stresses the bilateral value of their participation in international systems, there are papers describing the Bhabha Atomic Research Centre library, the automated library system under development at the EURATOM Research Center in Ispra, and the one in operation at the Canadian Chalk River library, and a review of USAEC library experience using a joint book acquisitions system. IAEA, USAEC, and ANS activities in