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There are a variety of models which can be used to study nuclear structure and dynamics. This book gives a comprehensive overview of these various models, concentrating in particular on a description of deformed and rotating nuclei. Following a treatment of the semi-empirical mass formula and nuclear stability, the liquid-drop and simple shell models are introduced and described. The spherical nuclear one-particle potential is introduced and developed to cover the case of deformed nuclei. The latter chapters of the book are devoted to discussions of barrier penetration, fast nuclear rotation, nucleon-nucleon interactions and the pairing interaction. Many problems and solutions are included, which help to illustrate key concepts. The book will be invaluable to graduate students of nuclear physics, and to anyone engaged in research in this field. Dramatic progress has been made in all branches of physics since the National Research Council's 1986 decadal survey of the field. The Physics in a New Era series explores these advances and looks ahead to future goals. The series includes assessments of the major subfields and reports on several smaller subfields, and preparation has begun on an overview volume on the unity

of physics, its relationships to other fields, and its contributions to national needs. Nuclear Physics is the latest volume of the series. The book describes current activity in understanding nuclear structure and symmetries, the behavior of matter at extreme densities, the role of nuclear physics in astrophysics and cosmology, and the instrumentation and facilities used by the field. It makes recommendations on the resources needed for experimental and theoretical advances in the coming decade. The present textbook on nuclear structure takes a unique and complementary approach compared to existing texts on the topic. Avoiding complicated calculations and complex mathematical formalism, it explains nuclear structure by building on a few elementary physical ideas. Even such apparently intricate topics as shell model residual interactions, the Nilsson model, and the RPA analysis of collective vibrations are explained in a simple, intuitive way so that predictions can usually be made without calculations, essentially by inspection. Frequent comparison with data allows the relevance of theoretical approaches to be immediately evident. This edition includes new chapters on exotic nuclei and radioactive beams, and on correlations of collective observables. Completely new discussions are given of isospin, the shell model, nature of collective vibrations, multi-phonon states, superdeformation, band mixing, geometric collective model, fermi gas model, basic properties of simple nuclear potentials, the deuteron, etc. With the amount of new material this new edition is essentially a new book. Covers all the phenomenological and experimental data on nuclear physics and demonstrates the latest experimental developments that can be obtained. Introduces modern theories of fundamental processes, in particular the electroweak standard model, without using the sophisticated underlying quantum field theoretical tools. Incorporates all major present applications of nuclear physics at a level that is both understandable by a majority of physicists and scientists of many other fields, and useful as a first introduction for students who intend to pursue in the domain. Nuclear Dynamics at Low and Medium Energies and Nuclear Structure starting from the basics of the low energy heavy ion collisions, this volume encompasses advanced topics of current interests in the areas of nuclear physics around the Fermi energy domain such as multifragmentation, liquid gas phase transition, isospin physics, thermodynamics of finite systems and nuclear structure of heavy nuclei under exotic conditions. On the experimental side, interaction of radiation with matter, basics of experimental, simulation and data analysis techniques and their applications to large, complicated multi-detector experimental environments have been discussed in detail. Written by distinguished scientists in related fields, this book will be useful for beginners as

well as practitioners in the field of experimental and theoretical nuclear physics around the Fermi energy domain and nuclear structure. A graduate-level one-volume textbook and reference work on the structure and physics of atomic nuclei. Throughout this book the underlying emphasis is on how a nucleus is constituted through the interaction between the nucleons. The book is structured into three parts: the first part contains a detailed treatment of the two-nucleon force and of basic model-independent nuclear properties; the second part discusses the experimental results of nuclear models and their bases in fundamental theory; the third part deals in some detail with alpha-decay and fission. *Aspects of Nuclear Structure and Function* deals with various aspects of nuclear structure and function and covers topics ranging from the ultrastructure of the female gamete to the structure, biochemistry, and functions of the nuclear envelope. Banding patterns in chromosomes, histones and nonhistone proteins, and the transfer of genetic information in polytene cells are also discussed. This book is comprised of six chapters and begins by presenting a comparative view of some aspects of the ultrastructure of the vegetative (growth) aspects of oogenesis, with emphasis on microtubules, intercellular bridges of differentiating oocytes, and vitellogenesis as well as accessory structures of the egg envelope. The following chapters explore the structure, biochemistry, and functions of the nuclear envelope; banding patterns in chromosomes; chromosomal proteins (histones and nonhistone proteins); transfer of genetic information in polytene cells; and the intracellular biology of DNA polymerases in eukaryotic cells, their association with the nucleus, and how this association changes during the mitotic cell cycle. The relationship between eukaryotic DNA polymerases and DNA replication is also examined. This monograph should be a valuable resource for biochemists. This undergraduate textbook breaks down the basics of Nuclear Structure and modern Particle Physics. Based on a comprehensive set of course notes, it covers all the introductory material and latest research developments required by third- and fourth-year physics students. The textbook is divided into two parts. Part I deals with Nuclear Structure, while Part II delves into Particle Physics. Each section contains the most recent science in the field, including experimental data and research on the properties of the top quark and Higgs boson. Detailed mathematical derivations are provided where necessary to help students grasp the physics at a deeper level. Many of these have been conveniently placed in the Appendices and can be omitted if desired. Each chapter ends with a brief summary and includes a number of practice problems, the answers to which are also provided. Results important for the general understanding of nuclear structure have emerged from the study of the nuclei in the mass region around the

neutron-deficient and neutron-rich Zirconium isotopes. This research report gives the proceedings of a workshop which brought together about 70 experts in the area. Review papers deal with the theoretical interpretation of the unusual properties of these medium-mass nuclei, using the mean field approach, a microscopic description, the interacting boson model and particle rotor calculations. Papers also discuss experimental procedures for studying nuclei far from stability and the possibility of complete spectroscopy. The reviews are supplemented by short contributions presenting very new results. Phenomena discussed include the interplay between subshell effects and the strong proton-neutron interaction in determining nuclear shape, the coexistence of different nuclear shape and the occurrence of fast beta decay. This book introduces nuclear data to the newcomer and provides a basic introduction to the role of nuclear data as the foundation of nuclear structure study. The material presented assumes no prior knowledge of the content or language used in communicating details of nuclear data. The approach builds on basic concepts: from gross properties of nuclei, through properties of quantum excited states, to simple model perspectives. The role of spectroscopy is thoroughly integrated, across all types of measurements, with many illustrations, to show how properties of nuclei are deduced. The basic technical methods needed for the deduction of nuclear properties from raw data are presented in animated figures, video tutorials, and accompanying PowerPoint presentations. The level of presentation provides access for students and researchers in applied areas that use nuclear data, e.g., medical applications and nuclear security. Overall, the book focuses on pedagogy and accessibility to the data aspect of nuclear physics. Part of IOP Series in Nuclear Spectroscopy and Nuclear Structure. There are a variety of models which can be used to study nuclear structure and dynamics. This book gives a comprehensive overview of these various models, concentrating in particular on a description of deformed and rotating nuclei. Following a treatment of the semi-empirical mass formula and nuclear stability, the liquid-drop and simple shell models are introduced and described. The spherical nuclear one-particle potential is introduced and developed to cover the case of deformed nuclei. The latter chapters of the book are devoted to discussions of barrier penetration, fast nuclear rotation, nucleon-nucleon interactions and the pairing interaction. Many problems and solutions are included, which help to illustrate key concepts. The book will be invaluable to graduate students of nuclear physics, and to anyone engaged in research in this field. A variety of standard problems in theoretical nuclear-structure physics is addressed by the well-documented computer codes presented in this book. Most of these codes were available up to now only through personal contact. The subject matter ranges from microscopic models (the shell, Skyrme-Hartree-Fock, and cranked Nilsson models) through collective excitations (RPA, IBA, and geometric model) to the relativistic impulse approximation, three-body calculations, variational Monte Carlo methods, and electron scattering. The 5 1/4" high-density

floppy disk that comes with the book contains the FORTRAN codes of the problems that are tackled in each of the ten chapters. In the text, the precise theoretical foundations and motivations of each model or method are discussed together with the numerical methods employed. Instructions for the use of each code, and how to adapt them to local compilers and/or operating systems if necessary, are included. Nuclear structure Physics connects to some of our fundamental questions about the creation of universe and its basic constituents. At the same time, precise knowledge on the subject has led to develop many important tools of human kind such as proton therapy, radioactive dating etc. This book contains chapters on some of the crucial and trending research topics in nuclear structure, including the nuclei lying on the extremes of spin, isospin and mass. A better theoretical understanding of these topics is important beyond the confines of the nuclear structure community. Additionally, the book will showcase the applicability and success of the different nuclear effective interaction parameters near the drip line, where hints for level reordering have already been seen, and where one can test the isospin-dependence of the interaction. The book offers comprehensive coverage of the most essential topics, including: - Nuclear Structure of Nuclei at or Near Drip-Lines - Synthesis challenges and properties of Superheavy nuclei - Nuclear Structure and Nuclear models - Ab-initio calculations, cluster models, Shell-model/DSM, RMF, Skyrme - Shell Closure, Magicity and other novel features of nuclei at extremes - Structure of Toroidal, Bubble Nuclei, halo and other exotic nuclei These topics are not only very interesting from theoretical nuclear physics perspective but are also quite complimentary for ongoing nuclear physics experimental program worldwide. It is hoped that the book chapters written by experienced and well known researchers/experts will be helpful for the master students, graduate students and researchers and serve as a standard & uptodate research reference book on the topics covered. It is known that nuclear shells play a particularly important role in the collective motion of nuclear matter and, as a consequence, determine the structure of nuclei, nuclear dynamics, nuclear decay models, etc. In 1999 the nuclear shell model turned fifty, and the 49th meeting on Nuclear Spectroscopy and Nuclear Structure was devoted to nuclear shells in their various manifestations. The talks presented at the conference covered a wide range of experimental and theoretical studies. Vol. 2. This book contains different exciting structural phenomenon in weakly deformed nuclei (i.e the nuclei where the neutron or proton number close to shell closure). The detailed gamma ray spectroscopy technique which includes how to measure spin and parity of the exciting states as well as to measure the lifetimes of these states with picoseconds order are described in this book. This book will be helpful for those who start their research carrier with gamma ray spectroscopy. A graduate-level one-volume textbook and reference work on the structure and physics of atomic nuclei. Throughout this book the underlying emphasis is on how a nucleus is constituted through the interaction between the nucleons. The book is structured into three

parts: the first part contains a detailed treatment of the two-nucleon force and of basic model-independent nuclear properties the second part discusses the experimental results of nuclear models and their bases in fundamental theory the third part deals in some detail with alpha-decay and fission. A clear and well-organized review of what is presently known about nuclear structure. Emphasis is less upon mathematical detail than upon the obtaining of a clear perspective which relates the various lines of approach to this complex and rapidly developing field. Particular attention is paid to nuclear models and to the several types of nuclear reactions. Originally published in 1958. The Princeton Legacy Library uses the latest print-on-demand technology to again make available previously out-of-print books from the distinguished backlist of Princeton University Press. These editions preserve the original texts of these important books while presenting them in durable paperback and hardcover editions. The goal of the Princeton Legacy Library is to vastly increase access to the rich scholarly heritage found in the thousands of books published by Princeton University Press since its founding in 1905. "Radiation detection is key to experimental nuclear physics as well as underpinning a wide range of applications in nuclear decommissioning, homeland security and medical imaging. This book presents the state-of-the-art in radiation detection of light and heavy ions, beta particles, gamma rays and neutrons. The underpinning physics of different detector technologies is presented, and their performance is compared and contrasted. Detector technology likely to be encountered in contemporary international laboratories is also emphasized. There is a strong focus on experimental design and mapping detector technology to the needs of a particular measurement problem. This book will be invaluable to PhD students in experimental nuclear physics and nuclear technology, as well as undergraduate students encountering projects based on radiation detection for the first time. Part of IOP Series in Nuclear Spectroscopy and Nuclear Structure." -- Prové de l'editor. The International Conference "Bologna 2000: Structure of the Nucleus at the Dawn of the Century" was devoted to a discipline which has seen a strong revival of research activities in the last decade. New experimental results and theoretical developments in nuclear physics will certainly make important contributions to our knowledge and understanding of Nature's fundamental building blocks. The interest aroused by the Conference among the scientific community was clearly reflected in the large number of participants. These represented the most important nuclear physics laboratories in the world. The Conference covered five major topics of modern nuclear physics: nuclear structure, nucleus-nucleus collisions, hadron dynamics, nuclear astrophysics, and transdisciplinary and peaceful applications of nuclear science. It reviewed recent progress in the field and provided a forum for the discussion of current and future research projects. The scattering of high-energy electrons from nuclear and nucleon targets provides a microscope for examining the structure of these tiny objects. The best

evidence we have on what nuclei and nucleons actually look like comes from electron scattering. This 2001 book examines the motivation for electron scattering and develops the theoretical analysis of the process. It discusses our current theoretical understanding of the underlying structure of nuclei and nucleons at appropriate levels of resolution and sophistication, and summarizes present experimental electron scattering capabilities. Only a working knowledge of quantum mechanics and special relativity is assumed, making this a suitable textbook for graduate and advanced undergraduate courses. It will also provide a valuable summary and reference for researchers already working in electron scattering and other areas of nuclear/particle physics.

of energids per cell is assumed to equal the number of genetic complements as well as the number of viable cells that eventually may emerge from it without replication of its genetic material. (In eucaryotic cells, polyenergidy occurs in the form of cells containing several nuclei each or as polyploidy, referring to the co-existence of genollles within the boundaries of a single nucleus. Obviously terms such as "poly nucleated" and "polyploid" arc inappropriate for protocaryotic cells.) The number of energids pCI' cell can be subject to variation as a response to certain environmental conditions 01' during certain phases of a developmental cycle. The absence in protocaryotic nuclear bodies of structural components other than DNA markedly affects their structure and morphology. Since the protocaryon essentially is an accumulation of DNA, the amount, molecular organization and chemical state of the DNA are basic determinants of nuclear shape and fine structure. Therefore, the organized DNA molecule (the genophor) must be considered the principal subject of any treatise dealing with nuclear cytology in bacteria and Cyanophyceae. The nucleus guides the life processes of the cell by directing cellular reproduction, differentiation during development, and metabolism. The study of the structure and function of the nucleus along with its genetic material serves as the foundation for the science of genetics.

Principles of Nuclear Structure and Function provides a comprehensive overview of the cell nucleus by illustrating the connection between function and the architecture of the nucleus. Richly illustrated throughout, each chapter includes an overview, detailed examples, summary points, references, and callout boxes highlighting methods and cutting-edge technology. The appendix provides a useful list of related Web sites. Some of the subjects reviewed within Principles of Nuclear Structure and Function include: * Nuclear structure, replication, damage, and repair * Regulation of gene expression * The cell cycle * Meiosis and recombination This timely volume presents functional studies within their proper structural context and is an informative profile of the cell and molecular biology in nuclei and chromatin. For those studying cell biology, along with molecular and cell biologists, geneticists, and reproductive biologists, Principles of Nuclear Structure and Function is a definitive resource. Visit www.wiley.com/cook for supplementary information, including additional Web resources, downloadable figures, and

discussion questions. Nuclear Structure covers material usually discussed in courses about nuclear structure. The presentation, although recommends and not necessarily requires the reader to have some knowledge of introductory nuclear physics at an elementary or undergraduate level, requires a good knowledge of the elements of quantum mechanics, including an introduction to Dirac theory. The text covers topics such as nucleon-nucleon forces, the boson-exchange model, high-energy electron scattering, and the single particle shell model. Also covered are topics such as single-particle potentials, spin-orbit interactions, the individual-particle model, states of different nuclei, electromagnetic interactions with nuclei, and beta-decay. The book is recommended for nuclear physics students who have background knowledge on nuclear structure and would like to know more about the topic. The book contains the papers presented in the French-Japan Symposium on Nuclear Structure Problems, held in January 2011 at RIKEN Wako Campus with 100 participants. Based on the long history of collaboration between France and Japan in the field of nuclear physics, various problems in recent and future studies are discussed. Emphasis is on the structure of nuclei far from the stability, reactions involving stable and unstable nuclei, nuclear processes and properties of astrophysical interest, synthesis of super-heavy elements, and instrumentation and accelerator projects. Contents:GANIL-SPIRAL2: A New ERA (S Gales)Nuclear Physics in Japan and RIKEN Nishina Center (H En'yo)Nuclear Physics Programs at RIBF (H Sakurai)Unbound States of the Drip-Line Nucleus ^{24}O (V Lapoux, S Boissinot, E C Pollacco, F Flavigny, C Louchart, L Nalpas, A Obertelli, H Otsu, H Baba, R J Chen, N Fukuda, N Inabe, D Kameda, M Matsushita, T Motobayashi, T Onishi, E Y Nikolskii, M Nishimura, H Sakurai, M Takechi, S Takeuchi, Y Togano, K Yoneda, A Yoshida, K Yoshida, A Matta, Y Blumenfeld, S Franchoo, F Hammache, Ph Rosier, E Rindel, P Gangnant, Ch Houarner, J F Libin and F Saillant)High-Resolution Ion-Optical Analysis of RI-Beams with the Sharaq Spectrometer (T Uesaka, S Michimasa, H Tokieda, S Shimoura, S Ota, Y Sasamoto, H Miya, S Kawase, Y Kikuchi, K Kisamori, M Takaki, H Matsubara, M Dozono, S Noji, K Miki, K Yako, H Sakai, H Takeda, D Kameda, T Ohnishi, Y Yanagisawa, T Kubo, H Baba, T Kawabata, P Roussel-Chomaz, M Sasano and G P A Berg)Nuclear Moments of μ -Second Isomeric Fragments at BigRIPS (R Chevrier, J M Daugas, L Gaudefroy, M Hass, H Haas, H Ueno, N Aoi, N Fukuda, Y Ichikawa, N Inabe, M Ishihara, D Kameda, T Kubo, T Ohnishi, H Takeda, H Watanabe, A Yoshimi, K Asahi, T Furukawa, H Hayashi, H Iijima, T Inoue, Y Ishii, T Nanao, K Suzuki, M Tsuchiya, D L Balabanski, G Georgiev, S Cootenier, G Neyens and M Rajabali)Production of Spin-Aligned RI Beams via the Two-Step Fragmentation Reaction (H Ueno, Y Ichikawa, Y Ishii, T Furukawa, A Yoshimi, D Kameda, H Watanabe, N Aoi, K Asahi, D L Balabanski, R Chevrier, J M Daugas, N Fukuda, G Georgiev, H Hayashi, H Iijima, N Inabe, T Inoue, M Ishihara, T Kubo, T Nanao, T Ohnishi, K Suzuki, M Tsuchiya, H Takeda and M M Rajabali)Recent Studies of Transfer Reactions with MUST2 at GANIL and RIKEN (D Beaumel)Lifetime

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experimentally observed phenomena, which nuclear structure theories need to look into and detail the information that supports those theories. The second part of the book deals with the phenomenological nucleon-nucleon potentials derived from phase shift analysis of nucleon-nucleon scattering. Part III talks about the phenomenological parameters used to describe their various nuclear models. The last part of the book deals with the technology of nuclear structure theory. The book will be of great use to nuclear physicists who wish to gain a better understanding of the nuclear structure theory. The principal goals of the study were to articulate the scientific rationale and objectives of the field and then to take a long-term strategic view of U.S. nuclear science in the global context for setting future directions for the field. Nuclear Physics: Exploring the Heart of Matter provides a long-term assessment of an outlook for nuclear physics. The first phase of the report articulates the scientific rationale and objectives of the field, while the second phase provides a global context for the field and its long-term priorities and proposes a framework for progress through 2020 and beyond. In the second phase of the study, also developing a framework for progress through 2020 and beyond, the committee carefully considered the balance between universities and government facilities in terms of research and workforce development and the role of international collaborations in leveraging future investments. Nuclear physics today is a diverse field, encompassing research that spans dimensions from a tiny fraction of the volume of the individual particles (neutrons and protons) in the atomic nucleus to the enormous scales of astrophysical objects in the cosmos. Nuclear Physics: Exploring the Heart of Matter explains the research objectives, which include the desire not only to better understand the nature of matter interacting at the nuclear level, but also to describe the state of the universe that existed at the big bang. This report explains how the universe can now be studied in the most advanced colliding-beam accelerators, where strong forces are the dominant interactions, as well as the nature of neutrinos. Stable nuclei -- Empirical evidence for the magic numbers -- Review of electronic structure of atoms -- Individual orbits in the nucleus -- Properties of nuclear ground states -- Discussion of the empirical data for odd-[A] nuclei -- Determination of parity and occupation numbers by the angular distribution of (d, p) and (d, n) reactions -- Quadruple moments and isotope shifts -- Decay, in particular for nuclei of odd [A] -- Light nuclei -- Nuclei of even [A] -- General facts about nuclear spectroscopy -- Isomerism in nuclei of odd [A]. This book reviews the basic models and theories of nuclear structure and gives an in-depth analysis of their experimental and mathematical foundations. It shows the relationships between the models and exhibits the value of following the strategy of: looking for patterns in all the data available, developing phenomenological models to explain them, and finally giving the models a foundation in a fundamental microscopic theory of interacting neutrons and protons. This unique book takes a newcomer from an introduction to nuclear structure physics to the frontiers of the subject along a painless path. It provides both the experimental

and mathematical foundations of the essential models in a way that is accessible to a broad range of experimental and theoretical physicists. Thus, the book provides a unique resource and an exposition of the essential principles, mathematical structures, assumptions, and observational data on which the models and theories are based. It avoids discussion of many non-essential variations and technical details of the models. This book, the first of a two-volume set, provides a comprehensive introduction to quantum mechanics for advanced undergraduate and postgraduate students entering the field of nuclear structure studies via two-state systems: both polarized photons and spin-1/2 particles. This leads to the logic behind the physical structure and an axiomatic formulation using linear spaces and operators. The one-dimensional harmonic oscillator is used to illustrate the mechanics of quantized systems, reaching to time dependence and coherent states. Measurement theory is introduced. The transformation theory of space and time leads to wave functions. The role of group theory and rotations then leads to the quantization of angular momentum. Central force problems are handled algebraically. The development is completed with quantization of motion of a charged particle in a magnetic field. Part of IOP Series in Nuclear Spectroscopy and Nuclear Structure. This textbook is a unique and ambitious primer of nuclear physics, which introduces recent theoretical and experimental progresses starting from basics in fundamental quantum mechanics. The highlight is to offer an overview of nuclear structure phenomena relevant to recent key findings such as unstable halo nuclei, superheavy elements, neutron stars, nucleosynthesis, the standard model, lattice quantum chromodynamics (LQCD), and chiral effective theory. An additional attraction is that general properties of nuclei are comprehensively explained from both the theoretical and experimental viewpoints. The book begins with the conceptual and mathematical basics of quantum mechanics, and goes into the main point of nuclear physics - nuclear structure, radioactive ion beam physics, and nuclear reactions. The last chapters devote interdisciplinary topics in association with astrophysics and particle physics. A number of illustrations and exercises with complete solutions are given. Each chapter is comprehensively written starting from fundamentals to gradually reach modern aspects of nuclear physics with the objective to provide an effective description of the cutting edge in the field. Nuclear structure Physics connects to some of our fundamental questions about the creation of universe and its basic constituents. At the same time, precise knowledge on the subject has led to develop many important tools of human kind such as proton therapy, radioactive dating etc. This book contains chapters on some of the crucial and trending research topics in nuclear structure, including the nuclei lying on the extremes of spin, isospin and mass. A better theoretical understanding of these topics is

important beyond the confines of the nuclear structure community. Additionally, the book will showcase the applicability and success of the different nuclear effective interaction parameters near the drip line, where hints for level reordering have already been seen, and where one can test the isospin-dependence of the interaction. The book offers comprehensive coverage of the most essential topics, including:

- Nuclear Structure of Nuclei at or Near Drip-Lines
- Synthesis challenges and properties of Superheavy nuclei
- Nuclear Structure and Nuclear models - Ab-initio calculations, cluster models, Shell-model/DSM, RMF, Skyrme
- Shell Closure, Magicity and other novel features of nuclei at extremes
- Structure of Toroidal, Bubble Nuclei, halo and other exotic nuclei

These topics are not only very interesting from theoretical nuclear physics perspective but are also quite complimentary for ongoing nuclear physics experimental program worldwide. It is hoped that the book chapters written by experienced and well known researchers/experts will be helpful for the master students, graduate students and researchers and serve as a standard & uptodate research reference book on the topics covered. After the success of the previous summer schools organized by the Nuclear Physics Division of the Netherlands' Physical Society in 1975 and 1977, we thought it worthwhile to continue this tradition. The immediate very positive reactions received from all invited speakers encouraged us to proceed with the organization. Although the number of students had to be restricted to about one hundred, the international character of the School was evident from about thirty nationalities which were represented. The material contained in this book covers the talks given by all speakers invited to lecture on the subject of nuclear structure research. These proceedings should therefore serve as an excellent introduction to many topics of current interest in this exciting field. We hope that the lectures and discussions as well as the many informal contacts made during the various social activities will greatly stimulate interest in nuclear structure investigations among all the participants. The organization of the summer school has been made possible by substantial support given by the Scientific Affairs Division of the North Atlantic Treaty Organization, the Netherlands' Ministry of Education and Science and the Netherlands' Physical Society. The invaluable help of the "Bureau Congressen" of the Ministry of Education and Science and the friendly assistance of the management of the College of Agriculture in Dronten contributed greatly to the pleasant atmosphere during the summer school.

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