

The various chapters (by T. S. Stevens, J. D. Loudon, E. Hoggarth, and N. Campbell) are uniformly written and maintain the high standard set by the previous volumes. Owners of volumes I to III will need no further recommendation.

EDWARD LEETE

*Department of Chemistry,
University of California, Los Angeles*

Proceedings of the Rehovoth Conference on Nuclear Structure. Held at the Weizmann Institute of Science, Rehovoth, 8–14 Sept. 1957, under the auspices of the International Union of Pure and Applied Physics. H. J. Lipkin, Ed. North-Holland, Amsterdam; Interscience, New York, 1958. xvi + 614 pp. Illus. + plates. \$12.50.

The rapid growth of the volume of publications makes it almost impossible even for the specialist to keep abreast of current scientific work. Large conferences, devoted to a reasonably narrow field, increasingly become the means of communication among physicists. The proceedings of such conferences are almost the only up-to-date record of the available results and of the current thinking in a field. The present volume, appearing only five months after the conference took place, is bound to become useful, both by refreshing the memory of the participants of the conference and also by serving as an orientation, and perhaps even as an introduction to the subject, for those who were not present. It shares with other similar volumes the characteristic of great readability which records of verbal proceedings have, and also a certain sketchiness, which is, unfortunately, quite unavoidable.

The volume contains about 125 contributions. Most of these are, naturally, short communications. However, there are more or less comprehensive summaries on all the principal subjects of discussion: the shell-model (Eden on the theoretical foundation and Kurath on some of the detailed results); the unified model (Mottelson and Peierls); group-theoretical methods (Racah and Flowers); electromagnetic transitions (Wilkinson); finite size of the nucleus (Rose); beta decay and parity (Konopinski on theory and Langer on measurements); extranuclear effects (Abragam on theory and Frauenfelder on measurements); instruments (Gerholm); and measurement of short life-times (Devons and S. G. Cohen). About two-thirds of all the contributions were theoretical in nature, about one-third experimental. The average length of the summary pa-

pers is perhaps a shade shorter than most readers would prefer: few of them extend to more than ten pages. Some of the short communications do not cover a page.

The Rehovoth Conference had its full share of announcements of new and important results; these give added zest to such gatherings and a significance beyond that of disseminating information. Apart from a discussion of the parity problem (by Lee and by Wu), there was a discussion of the calculation of binding energies based on the shell-model, by Talmi; Elliott's views of the unified model—which promise to grow much beyond their present importance—were reviewed by Flowers; Peierls spoke on his and Yoccoz' views on the same subject; and Bromley reviewed evidence for collective properties of light nuclei. Very probably other important ideas have been proposed, the significance of which I have failed to appreciate. There are also three interesting and detailed articles on specific subjects: one by Bergstrom on the nuclei in the Pb^{208} region, one by Zweifel on the K -capture phenomenon, and one by Steffen on the measurement of β - γ angular correlations.

It must have been an interesting and spirited conference, and the record of it does great credit to the editor. There was also some good-natured fun, recorded at the end of the volume. It should be noted that Pauli appears twice in the group picture of the participants but only once as contributor.

EUGENE P. WIGNER

*Department of Physics,
Princeton University*

Puzzle-Math. George Gamow and Marvin Stern. Viking, New York, 1958. 119 pp. Illus. \$2.50.

This is a very enjoyable collection of 32 amusingly told little stories. Each story consists of two parts. The first part, printed in ordinary type, leads up to a neatly formulated puzzle; the second part, printed in italics, presents the solution of the puzzle. The ambitious reader should lay down the book when he has finished the ordinary type; he should try to find the solution by himself and, having found it, compare it with the italics. In doing so, he will learn more and have more fun than the lazy reader who reads the italics right away. Yet even the lazy reader may derive a lot of pleasure and profit from these little stories, because they are not pointless. There are whimsical details, some of which are emphasized by amusing drawings. Yet behind such details

there is an essential mathematical principle in some stories, or an instructive method of solution or a side glance on physics in other stories. Still, the great majority of the puzzles are in all details accessible to the intelligent layman. Less than half a dozen solutions use a little high-school algebra, and in some of these cases the reader can skip the algebra and still understand the main point.

In such matters, it is difficult to be original. Three or four problems were new to me. I knew the rest, except certain details of presentation; of course, details of presentation are important here. I saw certain old acquaintances, with which friends used to tease me when I was an undergraduate, printed here the first time. And so the authors deserve praise also as collectors of mathematical folklore.

G. POLYA

*Department of Mathematics,
Stanford University*

Problema Protivorakovikh Antibiotikov.

(Problem of Anticancerous Antibiotics.) N. G. Klueva and G. I. Roskin. Gosudarstvenoi Kontrolnoi Institut Sivorotok i Vaksin imeni L. A. Tarasevicha, Moscow, U.S.S.R., 1957. 247 pp. 10 rubles.

Shortly after World War II, considerable interest was aroused by the work of Nina Klueva and Gregory Roskin of Moscow, who reported that lysates of *Trypanosoma cruzi* (called "KR" from the initials of the authors) inhibited the growth of tumors in mice and had beneficial effects in some patients with cancer. Hauschka [*Cancer Research* 7, 717 (1947)] and Belkin [*ibid*, 9, 560 (1949)] could not duplicate the effects in mice, although their work included trypanosomes from the same source as those used in Moscow. Malisoff [*Science* 106, 591 (1947)] claimed to have reproduced the findings, but his work was shown to be faulty.

Discussion of the KR preparation then became enmeshed in political complications and disappeared from the Soviet medical literature until 1956. This book summarizes the investigations and includes the findings in the use of the lysate in over 100 patients; of these cases 30 are reported in some detail. Unfortunately, the data raise more questions than they answer.

Daily intramuscular injections were administered for several months to 24 patients with carcinoma of the lip. The authors state that some effect was observed in 19 patients, and reports are presented on nine. Review of these suggests that these include three acceptable