Each of the four sections is followed by a general discussion, which has clearly been carefully edited but without losing the spontaneity of some of the comments. The book is well printed and reasonably well bound; the index, however, contains some errors but it is of a higher standard than is sometimes found in published proceedings.

I. S. LONGMUIR

STAFF OF RUSSIAN LIFE

Biochemistry of Grain and Breadmaking

Edited by V. L. Kretovich. Translated from the Russian by N. Kaner. Edited by E. Seijffers. Pp. xi+259. (Jerusalem: Israel Program for Scientific Translations; London: Oldbourne Press, 1965.) 81*s*.

FOOD technologists, plant breeders and cereal chemists in particular will read this book with interest and profit. It is a collection of thirty papers read at the All Union Conference on Biochemistry and Breadmaking in Moscow in 1960. The Conference was held by a decision of the twenty-first Congress of the Communist Party of the Soviet Union as part of the National Seven Year Plan. Twenty-six of the papers are concerned with wheat and the remaining four with maize, rice, barley and sorghum. The Conference was held in 1960 and it is easy to say that the papers are now dated. This would be most misleading. Some of the problems may have lost a little of their novelty, but they still remain, and this book brings them together, defines them very clearly and, wherever possible, relates them.

The Conference was opened by N. M. Sisakyan, biological secretary of the Academy of Sciences, who stated that the Soviet Union is "a grain producing world power with unlimited possibilities", and in which "the crop yields and grain quality should be the highest in the world". He read out two resolutions approved by the Academy of Sciences, one of which is certainly worth pondering over: "The importance of a more concentrated effort in tackling the major research problems must be impressed on scientists and scientific organizations. They must be encouraged to display the maximum possible initiative and creative ability, and must keep informed on the progress of science and participate in the discussions taken on the scientific research policy".

A masterly paper by Prof. Kretovich opened the Conference and outlined the scope of the field of research involved in the decision of the twenty-first Congress. Here and there he highlighted certain aspects with important practical applications, such as the possibilities of breeding maize and wheat with a high lysine content, the protein complex of flour and the changes it undergoes during breadmaking, and the proper drying of damp grain. He also emphasized the part that electronics can play in the development of automatic analytical methods for use in the handling of cereals and in the operations of milling and baking.

It is invidious to single out individual papers, but I read with particular interest that on the effects of irradiation on the baking properties of wheat by Sosedov and Vakar, on the biochemical effects of wheat conditioning by Zotova and Kretovich, on the structure of cereal proteins by Reznichenko, and on the action of oxidizing and reducing agents on gluten by Shklovskii. Another paper, by Auerman *et al.*, in making a strong case for the widespread use of ascorbic acid as a bread improver, is of particular interest in Britain in the light of recent developments in rapid breadmaking in which ascorbic acid is an essential ingredient.

My most striking impression is perhaps the close similarity both of the problems and of the manner in which they are being tackled in the U.S.S.R. and in Britain. This perhaps is not surprising, yet apart from some references to the work of Chibnall and Sanger on the chemistry of proteins, there are practically no references to papers published outside the Soviet Union. But then how many references to Russian work would be found even in a review paper on any aspect of cereal chemistry published in Britain? The book certainly suggests that an International Scientific Conference focused on the staff of life would present no difficulties over a programme, would be well worth while, and any recommendations regarding future research would be unanimous. As Academician Sisakyan pointed out, the biochemistry of grain and that of breadmaking are of the utmost scientific and practical importance and play a major part in his country's economy. In this respect the U.S.S.R. is not unique.

T. MORAN

Weak Interaction of Elementary Particles

By L. B. Okun'. Translated from the Russian by S. and M. Nikolić. Translation edited by J. Bernstein. (International Series of Monographs in Natural Philosophy, Vol. 5.) Pp. x+292. (London and New York: Pergamon Press, Ltd., 1965.) 60*s*. net.

THIS book by Prof. L. B. Okun' of the Institute of Theoretical and Experimental Physics, Moscow, is intended for graduate students who are specializing in high energy physics. It really starts from the beginnings of the subject, so that it can be put into the hands of a research student as soon as he starts work, provided only that he has had a reasonable general grounding in quantum mechanics.

In just under three hundred pages it goes systematically through the subject of weak interactions. It starts with a general discussion of the fundamental interactions and defines the operations of space, time, and particle (charge) reversal. Then follows a series of chapters on pure leptonic, semi-leptonic and non-leptonic decays. Calculations are presented in considerable detail, and there is no resort to "it can be shown" or "it is easy to see".

The book is based on lectures originally given in 1960 and still carries the flavour of that period with its major emphasis on parity non-conservation. Some revision has been made during the translation in 1964, which consists mainly of a long additional chapter on unitary symmetry. There is, of course, no mention of the recent discovery that charge-parity is also not universally conserved. This matters less than it might, because it has not yet been incorporated in any satisfactory way into the general theory, but remains for the moment an isolated freak effect of the neutral K-complex.

Okun' is one of the best-known high-energy theoretical physicists of the U.S.S.R. with a world-wide reputation for his clear thinking and incisive critical approach. The translation has been edited by J. Bernstein, also a high-energy physicist of international repute, who has contributed to the *New Yorker*, and takes a pride in finding the felicitous phrase. The result is something rare—particularly when the transition is from Russian into English—a first-rate translation of an excellent book.

P. T. MATTHEWS

Selected Problems in Quantum Mechanics

Collected and edited by D. ter Haar. Revised and augmented second edition of Gol'dman, Krivchenkov, Kogan and Galitskii, "Problems in Quantum Mechanics". Pp. vii+402. (London: Infosearch, Ltd., 1964. Distributed outside the U.S.A. by Macmillan and Co., Ltd., London.) 50*s*.

THE second edition of this excellent collection of problems is certainly to be welcomed. The problems, with detailed solutions, cover most aspects of non-relativistic quantum mechanics, with a range of difficulties covering the whole spectrum of undergraduate and postgraduate teaching. The changes from the first edition are an increase in the number of problems from 333 to 404 and a greatly improved typography.