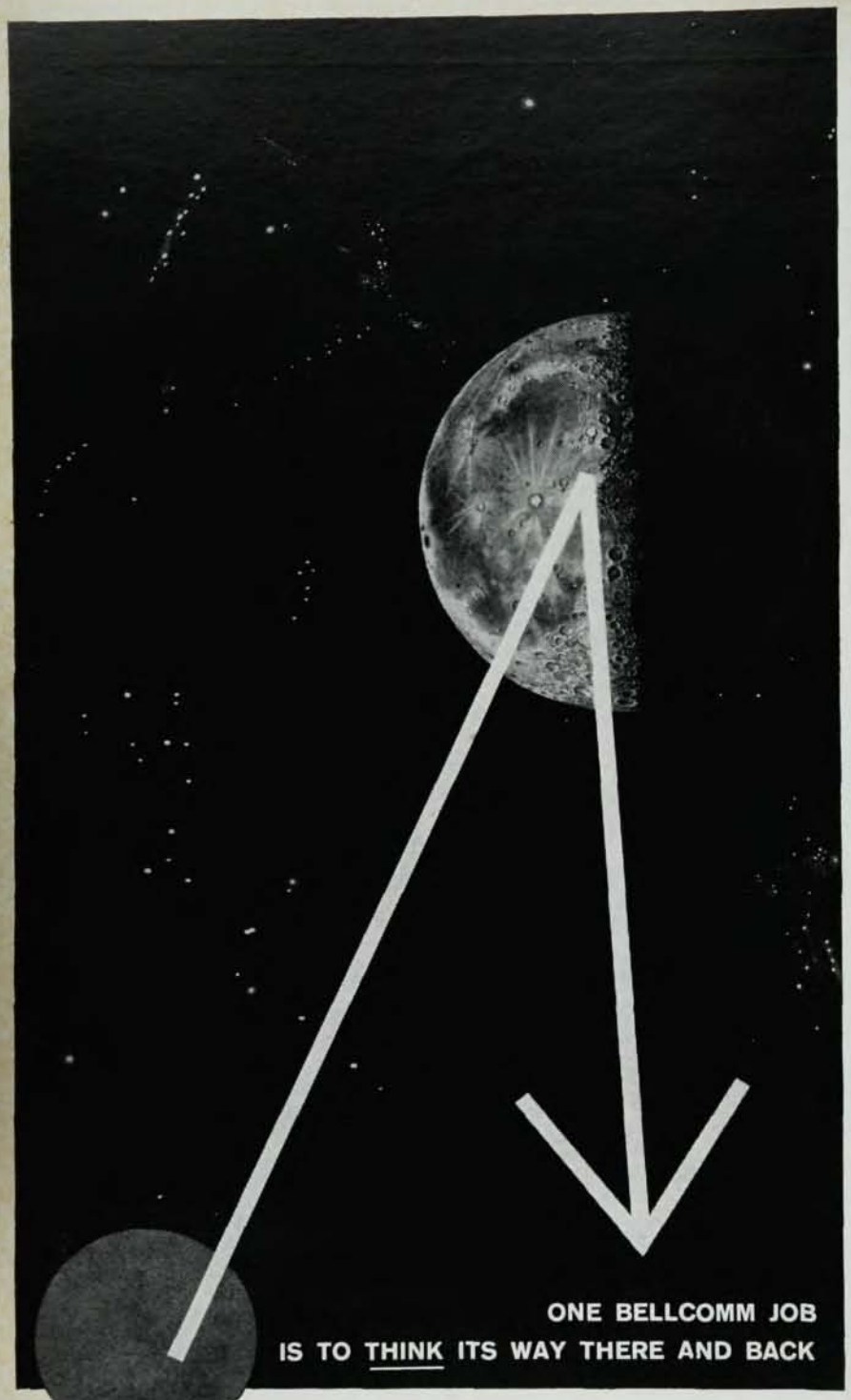

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be made of the rules governing the orientation of the stresses in figures 4.1, 4.2, and 6.2 of Chapter 1, where there seems to be some inconsistency in this respect, probably due to an unstated intention.

Elementary Plasma Physics. By Lev A. Arzimovich. Transl. from the Russian by Scripta Technica. 188 pp. Blaisdell, New York, 1965. Paper $2.25.
Reviewed by Sanborn C. Brown, Massachusetts Institute of Technology.

There has been a real need for some time for a simple, readable account of what plasma physics is all about, and the present book goes far toward filling this need. Very often when students ask for guidance in finding their way into a subject, one tends to give them technical literature or textbooks to read which are really too detailed for the uninitiated. Professor Arzimovich has produced a very readable short book which can be read in a single sitting and which gives a clear picture of plasma physics.

In the Preface the author writes, "We shall attempt to interpret the fundamentals of plasma physics in a manner understandable to a reader with a high school knowledge of mathematics and physics." This is a little optimistic, particularly for the bulk of our American high-school graduates, since he uses trigonometric and exponential functions, vector and scalar products, as well as gradient operators. On the other hand, he explains in very clear language the meaning of his equations so that the intent of the mathematics is clear.

The author spends a fairly large amount of time discussing the motion of charged particles in electric and magnetic fields, and this would make the book very interesting to any undergraduate student who is taking a standard electricity and magnetism course and wants to look into plasma physics as an extension of the details of the more standard kind of E and M material.

I imagine that Professor Arzimovich did not consider a translation of his book when he originally wrote it. It is a little surprising that he makes no reference whatever to specific contributions outside the Soviet Union. Thus he credits progress to Ioffe, Sakharov,

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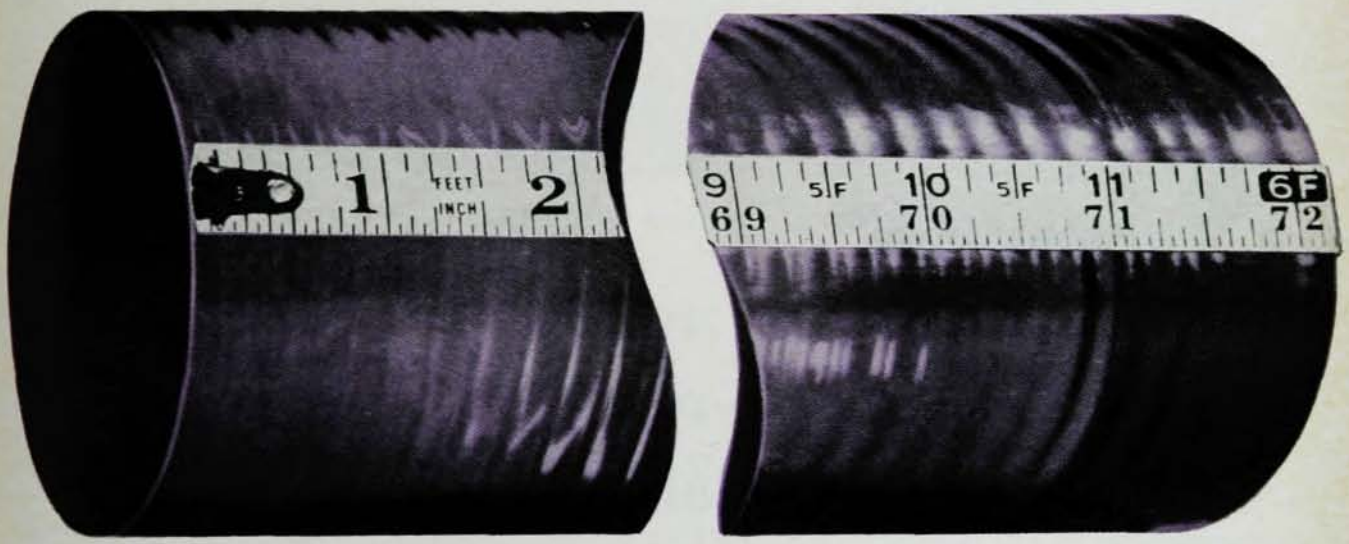

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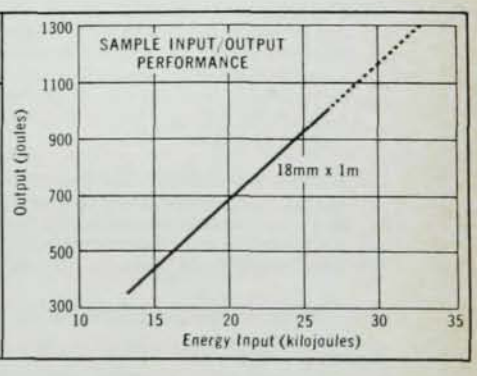

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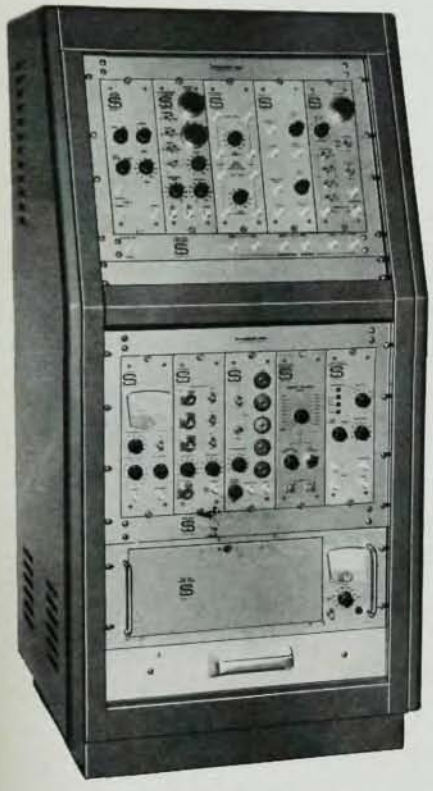

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Tamm, and Trubnakov without any mention of non-Russian physicists. Also the only thermonuclear machine he discusses by name is the Tokamak installation. Since Arzimovich is as knowledgeable about fusion work in the United States and in England as he is about the Russian work, one can only assume that this concentration on Russian developments comes from the original form of the manuscript which must have been written for domestic Russian use. It is too bad that the author did not modify his manuscript for translation so that it would not have this parochial flavor in its examples.

Since physics is physics independent of the country of origin, this is not a serious drawback to the book, but for use in American universities some other source book will probably be suggested as well, so that contact will be made with some of the large fusion machines in this country and in England. A few items of historical inaccuracy have crept into the book. Arzimovich states that the word plasma was introduced by Langmuir in 1923 when, in fact, it was introduced in 1929. A few questionable statements of Russian priority will be recognized only by the plasma physicists who were involved in the developments of the Sherwood Project.

In summary I can recommend the book for the general reader and will suggest it myself to those who are somewhat knowledgeable about physics but who want to find out with what plasma physicists are concerned.

The Quest. By Tom Allen. 323 pp. Chilton Books, Philadelphia and New York, 1965. Cloth $4.95.
Reviewed by J. Allen Hynek, Lindheimer Astronomical Research Center, Northwestern University.

The Quest is a captivating, popularly written, optimistic book for the layman on the present state of scientific thought about life elsewhere in the universe. Optimistic, because the author, formerly a feature writer on the New York *Daily News*, although ostensibly reporting the facts, is clearly sitting on the sidelines cheering for the extraterrestrial-life team. Nonetheless, his approach is honest, exhibits an excellent, if not profound,