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rewritten,
and
now
in
English

Zel'dovich and Novikov's RELATIVISTIC ASTROPHYSICS

Zel'dovich and Novikov, with their eminent research group in Moscow, are the source of a large portion of our current body of knowledge in relativistic astrophysics. For this edition, the authors and the scientific editors, Kip S. Thorne and W. David Arnett, have substantially revised, expanded, and updated the original *Relyativistskaya Astrofizika* to produce a two-volume work incorporating the many recent developments in this field.

Volume 1, *Stars and Relativity*, now available, introduces, in clear and mathematically simple terms, such fundamental subjects as the general theory of relativity, thermodynamics, and nonequilibrium processes for matter at ultrahigh temperatures and densities, stellar structure and evolution, and stellar dynamics. It then demonstrates how these theoretical tools have been used in the last decade to build models for supernovae, explosions in galaxies, quasars, cosmic X-ray sources, pulsars, and gravitational-wave sources. Volume 2 will explore cosmological observations and the evolution of the universe.

"No book available today comes close to making such a direct tie as this between Einstein's great vision of geometry as dynamic (general relativity) and great issues of central concern to astrophysics today."

—John A. Wheeler, Princeton University

"It is obviously a magnificent book written magnificently."

—S. Chandrasekhar, The University of Chicago

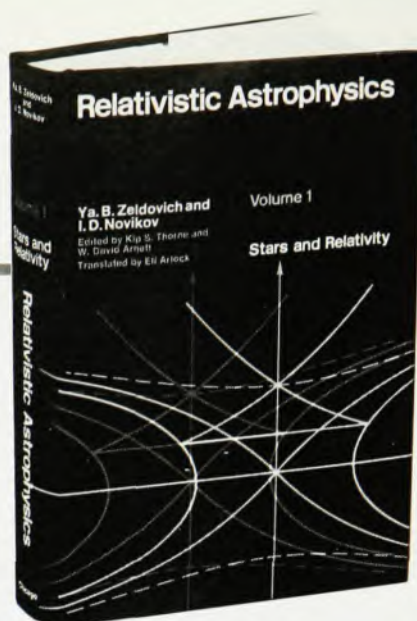
RELATIVISTIC ASTROPHYSICS

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Translated by Eli Arlock

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current literature in plasma physics, there is very little to help the student associate the textual material of the chapters with the unnumbered references at the end of each chapter. This has the effect of making the volume a textbook in theoretical physics rather than a reference book in plasma physics. But this is not a criticism of the book because the authors quite explicitly state that this is their announced purpose.

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Digital Electronics For Scientists

By H. V. Malmstadt, C. G. Enke
545 pp. Benjamin, New York, 1969.
\$9.50

Continuing in the style of their earlier book *Electronics for Scientists* the authors have produced another excellent introduction to practical electronics useful in the laboratory. This time the discussion is essentially limited to switching circuits. After a description of the switching characteristics of diodes and transistors the basic digital modules, logic gates, flip flops, and multi-vibrators, are described and then applied to many illustrations of concepts and devices important in modern instrumentation. As in *Electronics for Scientists* the discussion is qualitative rather than analytical, but while this is a defect in the earlier book it suits the present subject very well, because switching circuits are easier for a novice to understand than are linear circuits. One can expect after reading this book to have a feeling of some degree of practical competence, and for this reason I recommend it highly to graduate students and scientists looking for an introduction to this increasingly important field.

Approximately one quarter of the book contains suggested laboratory experiments to be carried out on the apparatus designed specifically for this purpose by the authors in collaboration with the Heath Company. Entirely apart from any questions about the merit of coupling experiments to specific apparatus, the fact is that many people using this book will have other preferences, and it would have been beneficial to them if this considerable number of pages had been removed from the text and published separately. In fact, the two books by these authors together comprise a good introduction to electronics; by eliminating the experiments from both books, and with some revision of text, enough pages could be saved to permit combining them into one outstanding book.

Gerald Rothberg
Stevens Institute of Technology