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more inevitable and less astonishing than is actually the case.

Parker's single-minded pursuit of the "modern theory of elementary particles" provides little insight into the interplay of competing ideas and the even more complex interplay between theory and experiment that is apt to interest the professional scientist. He also provides little insight into the fascinating personalities who have dominated physics in the 20th century. Although the thumbnail sketches of the many physicists discussed are generally accurate, there is no coupling of their characters with their contributions to physics. For example, the general reader might conclude that Wolfgang Pauli and Niels Bohr were very similar in character and that their contributions to physics were also similar and indeed parallel. By effectively eliminating the people Parker has dehumanized modern physics.

On the positive side, this book is wonderfully organized, with the many strands that have contributed to the modern picture of elementary particles coming together logically and clearly. All the physics explanations are clear, concise, accurate and directly to the point. But what could have been an excellent review for both expert and general reader unfortunately is marred by a large number of small errors, which will annoy the careful reader: The electron's charge-to-mass ratio, not its mass-to-charge ratio, is about 2000 times that of hydrogen; Ernest Rutherford is the towering figure of early 20th-century experimental physics; in a cloud chamber with a magnetic field the amount of curvature gives a good estimate not of the mass of a particle, but of its momentum; on the discovery of the muon the late I. I. Rabi asked, "Who ordered that?" not "Who needs them?"; Λ^0 particles do not decay via the strong interaction; according to Murray Gell-Mann the total strangeness in any strong interaction is conserved; and the basis for Sheldon Glashow's introduction of a charmed quark was not the distinctness of the electron and muon neutrinos.

There are also a number of unfortunate typos that will confuse the reader: The quark doublet ($\begin{pmatrix} u \\ d \end{pmatrix}$) appears several times where ($\begin{pmatrix} u \\ s \end{pmatrix}$) is intended, and thus the parallelism with the second and third generations, ($\begin{pmatrix} c \\ s \end{pmatrix}$) and ($\begin{pmatrix} b \\ t \end{pmatrix}$), is obscured; the standard model has the group structure $SU(3) \times SU(2) \times U(1)$ and not $SU(2) \times SU(1) \times SU(3)$; and in proton decay via the exchange of an X particle between a u quark and a d quark, $d \rightarrow e^+$, but $u \rightarrow \bar{u}$ and not u, so

that the decay is $p \rightarrow \pi^0 e^+$. Every one of these errors could have been corrected with only minor emendations to the text by a careful editor with some knowledge of high-energy physics. On page 248 there appears a plot of straight-line Regge trajectories with unlabeled axes. Merely adding labels that indicate this is a plot of J (spin) versus mass squared and a sentence that says the dots represent known particles would make Parker's otherwise excellent explanation clear to all.

From chapter 11 until the end all of the material is speculative, for there have been no experimental results to test supersymmetry or any of the new ideas currently in vogue. All this material is clearly and concisely presented.

In summary, this book provides an excellent introduction for the general reader to the search for a unified description of the forces and the elementary particles of nature. It could have been an excellent overview for the expert as well if only it had been edited carefully.

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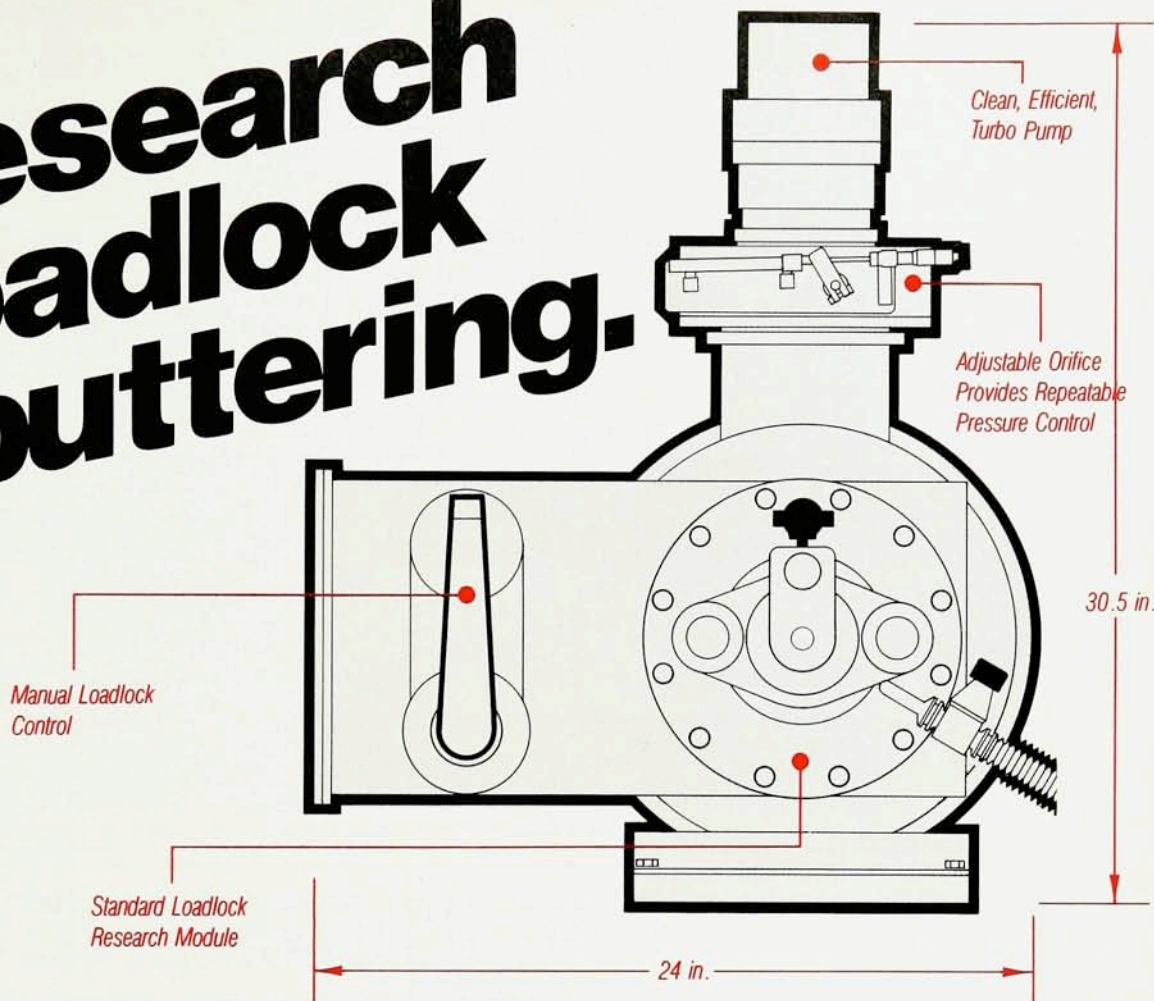
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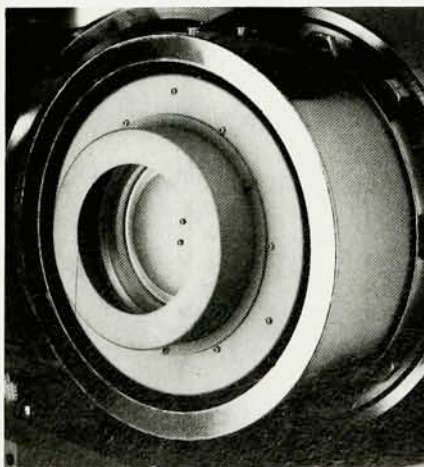
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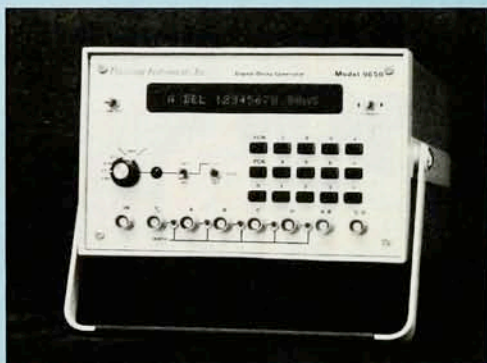


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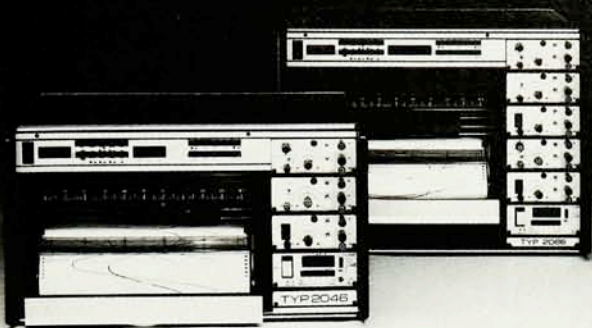
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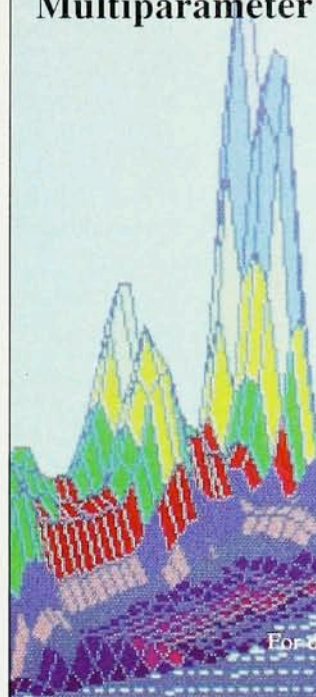
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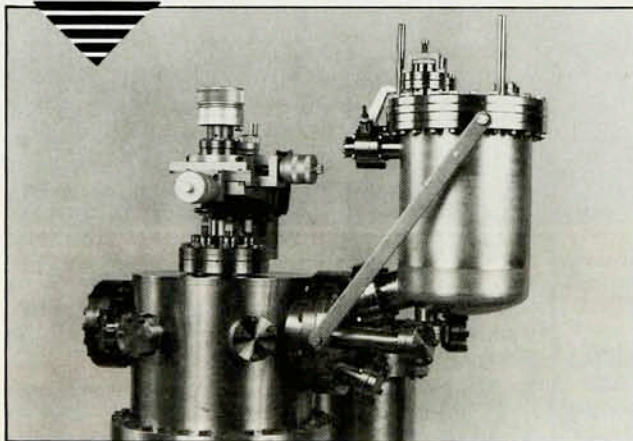
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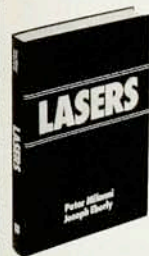


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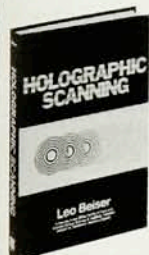


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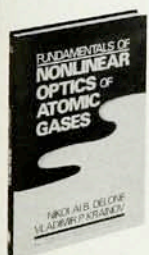


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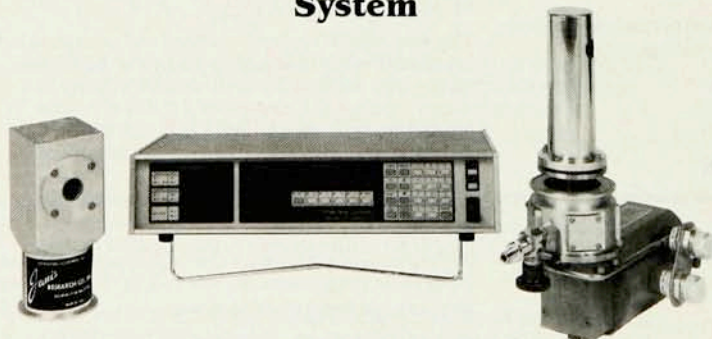


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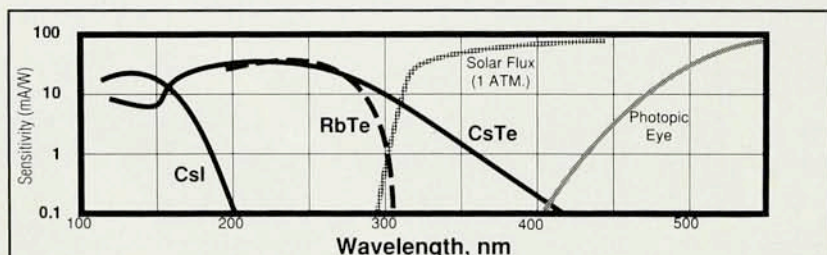
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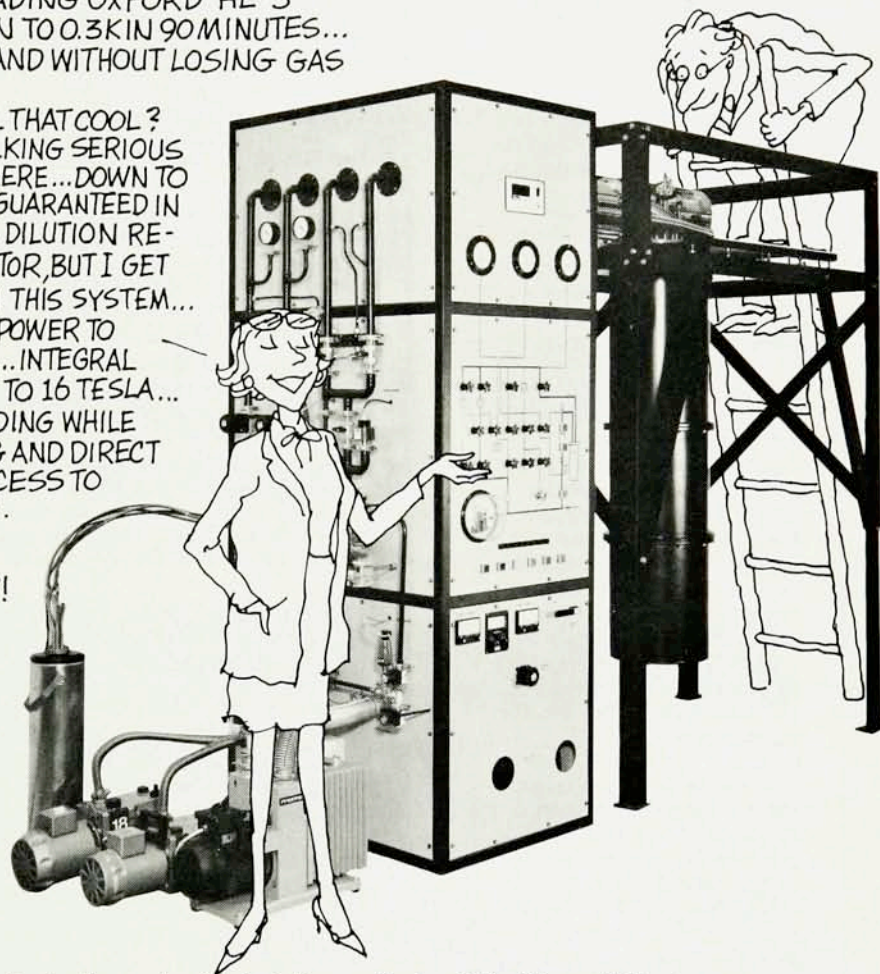
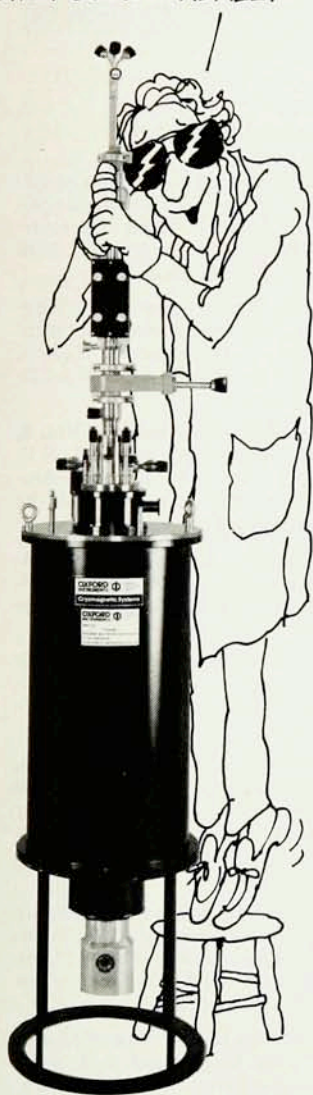
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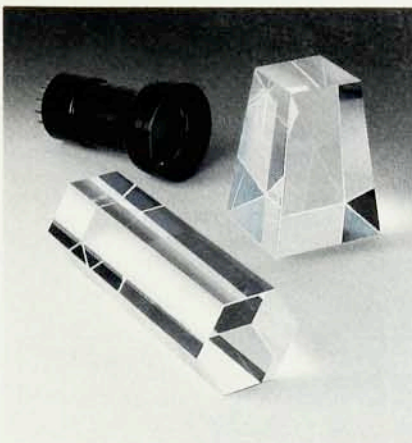
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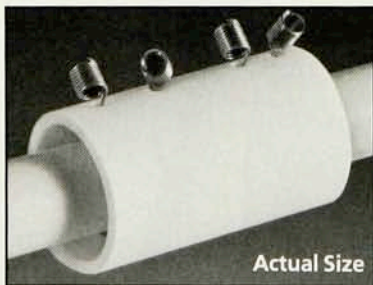
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