

trenchant but more technically demanding criticisms.

Sadly, it will be easy for those who take seriously the nontechnical writings of the authors under attack here to read Sokal and Bricmont as every bit as naive, simple-minded, self-important and ridiculous as their victims will surely appear to most readers of PHYSICS TODAY. Instead of narrowing an unfortunate breach between two scholarly communities, this book will broaden it.

The final quarter of the book contains the text of Sokal's famous Trojan horse—the nonsensical paper he published as a hoax in *Social Text*—along with an appreciative exegesis of that parody, and a commentary by Sokal on the broader political implications of these disputes. There is also a 55-page critique of relativism in the philosophy and sociology of science, which it would require another review to comment on. (*Fashionable Nonsense* was originally published in France as *Impostures Intellectuelles* (Editions Odile Jacob, 1997).)

N. DAVID MERMIN
Cornell University
Ithaca, New York

Peace and War: Reminiscences of a Life on the Frontiers of Science

▶ Robert Serber
with Robert P. Crease
Columbia U. P., New York, 1998.
241 pp. \$29.95 hc ISBN
0-231-10546-0

The subtitle to Robert Serber's *Peace and War* states accurately what this book is: reminiscences of a life on the frontiers of science. That life was anything but ordinary. Serber, who died in June 1997 at the age of 88, was a major theoretical physicist of this century in the US. His research and insights spurred progress at a number of scientific frontiers and left indelible imprints in such diverse areas as condensed matter, nuclear, accelerator and particle physics. His contributions to the American atomic bomb project, from its beginnings at Berkeley through the Los Alamos days and on to Tinian Island and Hiroshima and Nagasaki, following the Japanese surrender, were major and uniquely fascinating. And the reminiscences recounted in his book have a special charm. Serber, writing perceptively in a laconic and candid style, with the aid of Robert Crease (a science historian who contributes an interesting introduction to this book), leads the reader

on a chronological journey through his life of rich and varied experiences and his close associations with many of the major figures of modern physics.

The reader walks away at the end of this book with new insights into the human side of the scientific process; into the trials and tensions of life in the wartime pressure cooker (and behind some of the headlines and romanticized myths) that was Los Alamos; into the first impressions of life, death and survival at ground zero, where the two atomic bombs were dropped; and into the political strains and stresses—and casualties—that occurred as American physicists, returning to peacetime research after World War II became enmeshed in policy disputes.

Serber first met Robert Oppenheimer in 1934, when Serber was 25 and Oppie was 30, at the University of Michigan's famous summer school, and for the next 33 years, until Oppie's death in 1967, the two had a very close personal and professional relationship. This relationship forms one of the major threads running through the book. Out of it, Serber weaves a vivid picture of Oppie that reveals aspects of the personal life and human side of the great teacher and creator, during the 1930s, of the preeminent school of modern theoretical physics in the US. These insights add depth and shadings to the familiar image of this extraordinary physicist, who was the leader and soul of the atomic bomb project at Los Alamos but was publicly persecuted in the post-World War II era of the loyalty oath and the communist scare. Serber also candidly describes his own tribulations during this unfortunate period.

In a series of informative letters written to his wife, Charlotte, and reprinted in the book, Serber tells of his fascinating experiences in the Pacific, as a member of the team sent to Tinian Island for the final assembly of the atom bombs—both the uranium-235 gun assembly, known as "Little Boy," which was dropped over Hiroshima, and the plutonium-239 implosion bomb, known as "Fat Man," destined for Nagasaki. Flying was anything but routine in those times, and military snafus were frequent, including one that had Serber bumped from the second following plane on the bombing mission to Nagasaki, on which he was supposed to have served as photographer, with the result that no photos of that event were taken.

However, he and several colleagues did make it to ground zero at both Hiroshima and Nagasaki shortly after the end of hostilities, to observe and measure the bombs' devastation using their scientists' nuclear knowledge and

trained eyes. They arrived at Nagasaki before the first occupation forces and remained in Japan for more than a month, moving around and getting stuck in the usual assortment of mix-ups that characterized those days immediately following the war. His letters from Japan give graphic descriptions of the devastation as well as of some of his technical work, such as determining the altitude of the bomb's flash and the size of the fireball by measuring the shadow and penumbra in a room in the Hiroshima post office that faced the blast one mile from ground zero.

The concluding chapters of this short memoir describe Serber's readjustments to civilian life after World War II. He spent five years as a physics professor at the University of California, Berkeley, before the political schism in American physics on nuclear policy, and the decision to build the H-bomb, drove him east, to Brookhaven National Laboratory and Columbia University. He concludes his memoir with a description of the death of Oppie, his close relationship with Oppie's surviving family and his own retirement years and new family.

Throughout this book, the reader has a feeling of "you are there." The reader becomes a witness to a number of very exciting events in science, because Serber was there as a participant. He describes these events, including their human dimensions, simply and directly, without allowing himself to get in the way. Any physicist with an interest in the years when American physics came of age will enjoy and gain new insights from this charming reminiscence.

SIDNEY DRELL
Stanford Linear Accelerator Center
Stanford, California

Comets: Creators and Destroyers

▶ David H. Levy
Touchstone (Simon & Schuster),
New York, 1998. 256 pp.
\$12.00 pb ISBN 0-684-85255-1

As an avid sky-watcher, both amateur (when out stargazing and Moon-watching) and professional (while studying comets, their dust, nuclei, and x rays for a living), I found David Levy's *Comets* fascinating and easy to read. Aimed at an audience of educated nonscientists and containing only a single equation (the simple, algebraic Drake equation describing the probability of extraterrestrial civilizations), the book is written from both historical and personal viewpoints.