

THE FIRST NUCLEAR BOMB AND THE PEOPLE WHO MADE IT

DAY OF TRINITY. By Lansing Lamont. 333 pp. Atheneum, New York, 1965. \$6.95

by Joseph G. Hoffman

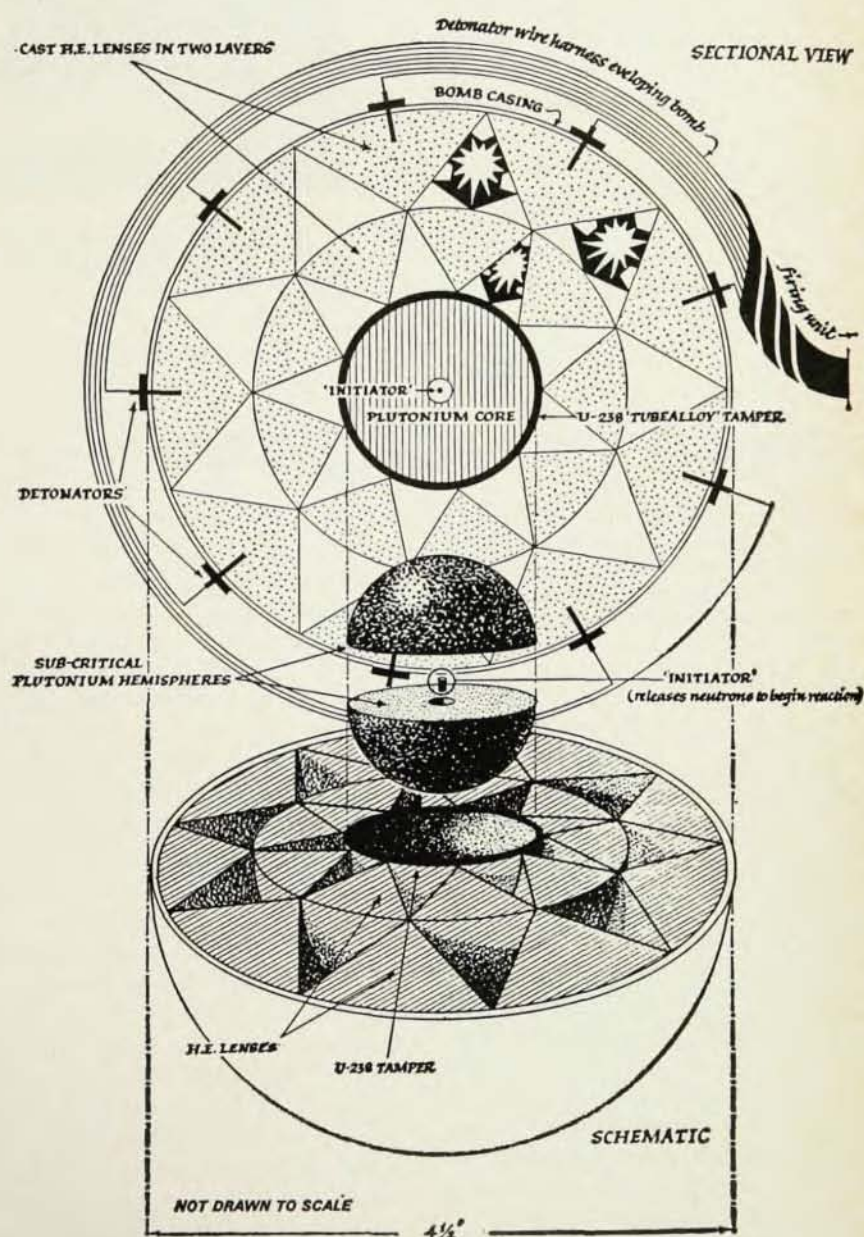
The test of the first nuclear fission bomb, designated as Operation Trinity, still has about it a strong fascination. The story of man's first release of nuclear energy will always have a mythological aura. Lamont presents an exciting account of salient scientific facts as well as of the men who covered on the test of July 16, 1945, the Day of Trinity. The central figure, J. R. Oppenheimer, is followed from his early student days to the technical achievement of a workable nuclear weapon; then to the tragic hearings of 1954; and, finally in 1963, to the Enrico Fermi Award from President Johnson. General Groves is, likewise, followed through the years. The parallel stories and their intertwining enable the author to shed light on the collaborations of the general and the scientist. There is interwoven also, among others, the story of Klaus Fuchs, the communist spy who was eventually convicted in England of giving military information to a foreign power. Skillful handling of the several stories makes for good reading.

The well told story always makes the reader wish for more detail. But this is not a carefully detailed account. It is a retelling in broad outlines of recollections of events of 20 years ago. For example, the beginning year of Los Alamos, say from March 1943 on, is vaguely telescoped into 1944 although the former was the year in which the necessity for two different bomb models was determined. The story is not clear about who first formulated the necessity for

an implosion bomb. Another example, the trajectory of the radioactive cloud and its fallout, is unclear even in broadest outlines. On page 252 it is stated that radioactive fallout occurred in an oval extending 10 miles north of the Trinity crater. Actually

there was relatively little fallout in the first 12 miles north of the crater because of the "skip" effect.

The opinions, held in 20 years retrospect, and expressed by many different leaders about events surrounding the first use of nuclear



"The Gadget"
Illustration from Day of Trinity

The reviewer, now a professor at the State University of New York at Buffalo, was a group leader at Los Alamos and was present at the Trinity test.

energy are recorded here. The author conveys the results of many illuminating interviews. His own point of view, as a result of direct conversations on the momentous matters concerned, becomes especially interesting, particularly because he pulls no punches in putting his story across. Early in the book he lists candidly the reasons why Oppenheimer should not have been head of the Los Alamos operation. Later on the candor turns into brutal frankness when he recounts the Oppenheimer Affair of 1954. This is one of many highlights of the book and will probably stand as the most restrained possible version of the security hearings. Many different opinions from the physics community could properly have been added—but these may fill another book.

Although it is not a historically accurate account, this is a highly commendable work because it broaches forthrightly a wide range of topics of profound concern to basic scientists.



The general and the scientist: Leslie R. Groves and J. Robert Oppenheimer in a 1945 photo. From Day of Trinity.

HISTORIOGRAPHY IS CORRECTING THE LAST WORD

KEPLER'S CONVERSATION WITH GALILEO'S SIDEREAL MESSENGER. First Complete Translation with an Introduction and Notes. By Edward Rosen. 164 pp. Johnson Reprint Corp., New York, 1965. \$9.00.

by L. Marton

In reading the present translation of Kepler's work, I was more surprised by the psychological features than the physical ones. The writing of history, be it the history of science or the history of human events, is always full of pitfalls. Anybody writing on a historical subject says what he thinks is the last word and then somebody comes along and corrects him extensively. This happens here, and in view of the very extensive remarks, amounting to corrections, on the part of Professor Rosen, I would like to add one comment myself with regard to assertions that Kepler tended to oppose Galileo.

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The reviewer is chief of International Relations for the National Bureau of Standards.

I had the opportunity to read recently a somewhat related book entitled, *Optics, The Science of Vision*, by Vasco Ronchi. Professor Ronchi is a recognized authority on the history of optics, and on page 46 of his book, speaking of Galileo's publication of the *Sidereal Messenger*, in March 1610, he makes the following comments: "Questioned from all sides, Kepler kept quiet, for he too was perplexed. Finally in August 1610, he laid hands on a telescope made by Galileo, who had sent it to the Elector of Cologne. Kepler carried out observation with the mental disposition of a man intent on destroying, but he ended up agreeing that Galileo was right." That the above statement is inaccurate seems to be proved by the introduction to Professor Rosen's translation. According to this introduction, Galileo sent a copy of his message to the ambassador of Tuscany in Prague early in April (it was published in March). "The ambassador had this copy of

Galileo's message and delivered it to Kepler and on April 8, 1610, the same emissary conveyed an invitation to the Imperial Mathematician to visit the ambassador on April 13. When Kepler kept this appointment, the ambassador read Galileo's request to him. The official couriers were scheduled to return to Tuscany in less than a week, and Kepler promised to have his response to Galileo's message ready before they departed. Kepler's letter of April 19, . . . was put in the ambassador's hand on that day." . . . "Many other people were eager to know Kepler's opinion about Galileo's message. Instead of replying to each one individually, the Imperial Mathematician decided to have his letter of April 19 printed at his own expense. . . ." "Then on May 3, 1610 he dedicated the little work to the ambassador and it was published in Prague."

As to Ronchi's remark about Kepler being perplexed, may I quote another sentence of Kepler's from his