kind of vagueness is merely factual: "Rutherford . . . found that they [alpha particles] were absorbed very easily by sheets of metal a few hundredths of a millimeter thick, but that they could pentrate thin gold foil. (Gold is the most malleable substance known. It can be hammered or rolled extremely thin without tearing.)" Well, how thin? What is needed here is a number, not reassurance to the goldbeater. A more excusable and yet more damaging kind of imprecision is seen in the following: "He proposed that the plum-pudding model (which was only intuitive anyway) be replaced by a planetary or nuclear model. . . ." The word *intuitive* is probably meaningless here; but its connotations do injustice to Thomson's model, which was the outcome of a penetrating dynamical analysis. Finally, and least defensibly, we find logical fuzziness: ". . . to understand the large scattering angles through which some of the alpha particles were deflected, he [Rutherford] had to assume that they had encountered something small and relatively massive. . . ." Replace "some of the alpha particles" by "so many of the alpha particles" and the description becomes accurate. For Rutherford's problem was to distinguish between *single* scattering by centers concentrated in charge and mass (nuclei), and *multiple* scattering by less effective centers (electrons). If single scattering could have been assumed, the observation of only one large scattering would have been sufficient to disprove the pudding. Only a study of *distributions* could differentiate between the two mechanisms. The oversimplification just cited may be admissible in popular-science writing, but not in a text which has much earlier introduced and emphasized the notion of distribution.

To counteract the circumstance that it takes more space to say what is wrong about a book than what is right, let it be stated that *Physics of the Atom* is an understandable, stimulating, and wide-ranging introduction to modern physics.

A la Mémoire de Quinze Savants Français Lauréats de l'Institut Assassinés par les Allemands, 1940–1945. 148 pp. Gauthier-Villars, Paris, France, 1959. *Reviewed by L. Marton, National Bureau of Standards.*

MEMORIAL volumes of any kind are often hard to review, particularly when their contents cover a large variety of subjects. They usually are produced out of some sentimental reason, and one may have mixed feelings concerning the sentiment provoking the issuing of such a volume. This book is dedicated to the memory of fifteen French scientists, all of whom had been laureates of the French Academy. As the title indicates, all of them died during the war years; they were condemned to death by the Germans or put to death without legal procedures. There were three mathematicians, three chemists, four biologists, and five physicists. The physicists listed are Henri Abraham, Eugene Bloch, Georges Bruhat, Louis Cartan, and Fernand Holweck. Like their colleagues in the other branches of science, some of them were at the end of their very distinguished careers, others at the peak of production, and some were quite young and very promising. Their untimely disappearance was certainly a great loss to French science and science in general.

Although written about fifteen years after the war, the book is reminiscent in style of the writing of the immediate postwar years. While I agree in principle with the sentiments expressed by the twenty-one contributors, I felt somewhat uneasy about the timeliness of the publication and I wondered at first if it is right at this late date to evoke all these memories of the cruelties and inhumanities of the war years. Don't misunderstand me. I deplore as much as do the writers of this volume the facts presented there. I knew Fernand Holweck very well, and I had known several others in whose memory this volume had been written. But my first reaction was that maybe we ought to work for peace and try to bury some of these wartime memories in order to promote peaceful understanding between different nations.

Lately I became convinced that my first attitude was wrong. The cruelty and barbarism deplored by the writers of this volume still exist in humanity. They are merely dormant, and endless vigilance is needed to keep them dormant. In this respect, it is good to be reminded from time to time that such things as described in this volume can happen, and all of us must be alert to prevent these things from being repeated. I am sure that all honest people, independent of nationality or race or religion, will agree with this statement. Recent worldwide flare-ups of religious and racial troubles are but symptoms of a submerged sickness. It is in this spirit that publication of this memorial volume is probably a good thing.

As to the contents of the volume, they cannot be judged from a unified viewpoint. There is a great disparity in the presentation. Some of the memorials are purely reminiscences of the men with very little about their scientific contributions. Others make an attempt at a scientific evaluation. On the whole, I would have preferred to have more solid evaluation of the work of most of the men—they really merited it. Each biography is accompanied by a portrait, but the printing of these portraits is deplorable. While the volume has not been proofread too seriously, and while its binding is somewhat deficient, the type is clear.

A Guided Tour Through Space and Time. By Eva Fenyo. 181 pp. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1959. $3.50. *Reviewed by R. Bruce Lindsay, Brown University.*

POPULAR and semipopular presentations of the concepts of modern physics have appeared in large numbers and with various degrees of sophistication and reliability. The volume under review is another attempt in this direction. It is ambitious since the author has tried to crowd into less than 200 small pages