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From the Dawn of Nuclear Physics to the First Atomic Bombs[1] STEPHEN WOOLBRIGHT, JACOB SCHUMACHER, EKATERINA MICHONOVA-ALEXOVA, Erskine College — This work gives a fresh look at the major discoveries leading to nuclear fission within the historical perspective. The focus is on the main contributors to the discoveries in nuclear physics, leading to the idea of fission and its application to the creation of the atomic bombs used at the end of the World War II. The present work is a more complete review on the history of the nuclear physics discoveries and their application to the atomic bomb. In addition to the traditional approach to the topic, focusing mainly on the fundamental physics discoveries in Europe and on the Manhattan Project in the United States, the nuclear research in Japan is also emphasized. Along with that, a review of the existing credible scholar publications, providing evidence for possible atomic bomb research in Japan, is provided. Proper credit is given to the women physicists, whose contributions had not always been recognized. Considering the historical and political situation at the time of the scientific discoveries, thought-provoking questions about decision-making, morality, and responsibility are also addressed. The work refers to the contributions of over 20 Nobel Prize winners.

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