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Descrizione fisica	1 online resource (XVIII, 538 p. 190 illus., 27 illus. in color.)
Collana	Undergraduate Lecture Notes in Physics, , 2192-4791
Disciplina	539.709
Soggetti	Física nuclear Història de la física Nuclear physics Heavy ions Physics Nuclear chemistry Nuclear Physics, Heavy Ions, Hadrons History and Philosophical Foundations of Physics Nuclear Chemistry Llibres electrònics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Introduction and Overview -- A Short History of Nuclear Physics to the Mid-1930s -- The Discovery and Interpretation of Nuclear Fission -- Organizing the Manhattan Project, 1939-1943 -- Oak Ridge, CP-1, and the Clinton Engineer Works -- The Hanford Engineer Works -- Los Alamos, Trinity, and Tinian -- Hiroshima and Nagasaki -- The German Nuclear Program -- The Legacy of Manhattan -- Glossary -- Index.
Sommario/riassunto	The development of atomic bombs under the auspices of the U.S. Army's Manhattan Project during World War II is considered to be the outstanding news story of the twentieth century. In this book, a physicist and expert on the history of the Project presents a comprehensive overview of this momentous achievement. The first three chapters cover the history of nuclear physics from the discovery of radioactivity to the discovery of fission, and would be ideal for

instructors of a sophomore-level "Modern Physics" course. Student-level exercises at the ends of the chapters are accompanied by answers. Chapter 7 covers the physics of first-generation fission weapons at a similar level, again accompanied by exercises and answers. For the interested layman and for non-science students and instructors, the book includes extensive qualitative material on the history, organization, implementation, and results of the Manhattan Project and the Hiroshima and Nagasaki bombing missions. The reader also learns about the legacy of the Project as reflected in the current world stockpiles of nuclear weapons. This second edition contains important revisions and additions, including a new chapter on the German atomic bomb program and new sections on British and Canadian contributions to the Manhattan project and on feed materials. Several other sections have been expanded; reader feedback has been helpful in introducing minor corrections and improved explanations; and, last but not least, the second edition includes a detailed index. .
