1. Record Nr. UNINA9910300385703321 Autore Reed Bruce Cameron Titolo The History and Science of the Manhattan Project [[electronic resource] /] / by Bruce Cameron Reed Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 2014 **ISBN** 3-642-40297-6 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (XVI, 472 p. 173 illus.) Collana Undergraduate Lecture Notes in Physics, , 2192-4791 539,709 Disciplina Soggetti Nuclear physics Heavy ions **Physics** Nuclear chemistry Nuclear Physics, Heavy Ions, Hadrons History and Philosophical Foundations of Physics **Nuclear Chemistry** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Introduction and Overview -- A Short History of Nuclear Physics to the Nota di contenuto 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 Legacy of Manhattan -- Glossary. The development of atomic bombs under the auspices of the U.S. Sommario/riassunto 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. Studentlevel 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. .