

Manhattan Project Chronology

Date	Events
1919	Ernest Rutherford discovers the proton by artificially transmuting an element (nitrogen into oxygen).
1930	Ernest O. Lawrence builds the first cyclotron in Berkeley.
1931	Robert J. Van de Graaff develops the electrostatic generator.
1932	James Chadwick discovers the neutron.
1932	J. D. Cockcroft and E. T. S. Walton first split the atom.
1932	Lawrence, M. Stanley Livingston, and Milton White operate the first cyclotron.
1934	Enrico Fermi produces fission.
December 1938	Otto Hahn and Fritz Strassmann discover the process of fission in uranium.
December 1938	Lise Meitner and Otto Frisch confirm the Hahn-Strassmann discovery and communicate their findings to Niels Bohr.
January 26, 1939	Bohr reports on the Hahn-Strassmann results at a meeting on theoretical physics in Washington, D. C.
August 2, 1939	Albert Einstein writes President Franklin D. Roosevelt, alerting the President to the importance of research on chain reactions and the possibility that research might lead to developing powerful bombs.

August 19, 1939	Roosevelt informs Einstein that he has set up a committee to study uranium.
September 1, 1939	Germany invades Poland.
October 11-12, 1939	Alexander Sachs discusses Einstein's letter with President Roosevelt. Roosevelt decides to act and appoints Lyman J. Briggs head of the Advisory Committee on Uranium.
October 21, 1939	The Uranium Committee meets for the first time.
November 1, 1939	The Uranium Committee recommends that the government purchase graphite and uranium oxide for fission research.
March 1940	John R. Dunning and his colleagues demonstrate that fission is more readily produced in the rare uranium-235 isotope, not the more plentiful uranium-238.
Spring-Summer 1940	Isotope separation methods are investigated.
June 1940	Vannevar Bush is named head of the National Defense Research Committee. The Uranium Committee becomes a scientific subcommittee of Bush's organization.
February 24, 1941	Glenn T. Seaborg's research group discovers plutonium.
March 28, 1941	Seaborg's group demonstrates that plutonium is fissionable.
May 1941	Seaborg proves plutonium is more fissionable than uranium-235.
May 17, 1941	A National Academy of Sciences report emphasizes the necessity of further research.
June 22, 1941	Germany invades the Soviet Union.
June 28, 1941	Bush is named head of the Office of Scientific Research and Development. James B. Conant replaces Bush at the National Defense Research Committee, which becomes an advisory body to the Office of Scientific Research and Development.
July 2, 1941	The British MAUD report concludes that an atomic bomb is feasible.
July 11, 1941	A second National Academy of Sciences report confirms the findings of the first.
July 14, 1941	Bush and Conant receive the MAUD report.
October 9, 1941	Bush briefs Roosevelt and Vice President Henry A. Wallace on the state of atomic bomb research. Roosevelt