

63rd International Astronautical Congress 2012

46th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)
Tribute to Wernher von Braun, born 100 years ago (3B)

Author: Ms. Angela Yi
University of Alabama in Huntsville, United States, aey0001@uah.edu

THE REDSTONE AND JUPITER ROCKETS - PREDECESSORS TO THE SUCCESSFUL
AMERICAN SPACE PROGRAM

Abstract

At the close of World War II, and the coming of the Cold War against the Soviet Union, the United States found itself in a race for time to advance their research on ballistic missiles. With the help of the Wernher von Braun Rocket Team, the U.S. was able to take advantage of the German V-2 missile technology and combine additional concepts to develop the Redstone Rocket family and the Jupiter series. The Redstone Rocket family consisted of the Redstone, Juno I, and Mercury-Redstone rockets, and the Jupiter rockets were a series of intermediate-range ballistic missiles (IRBM) that were being developed in parallel with the Redstone Rockets. The rockets served as ballistic missiles, sound rockets, and expendable launch systems that later delivered the first American satellite Explorer I and astronauts into space. They were the first American series of large-scaled, liquid-fueled rockets that guided the nation to its successful American Space Program, and their fuel tanks and engines served as the basis for the propellant systems of Saturn I and Saturn IB. As the year 2012 marks the 60th anniversary of the very first launch of the Redstone Rockets, this paper will present the history of these significant rockets as well as the Jupiter rockets and discuss how they have directly and indirectly affected the research and studies of modern rocket advancement.