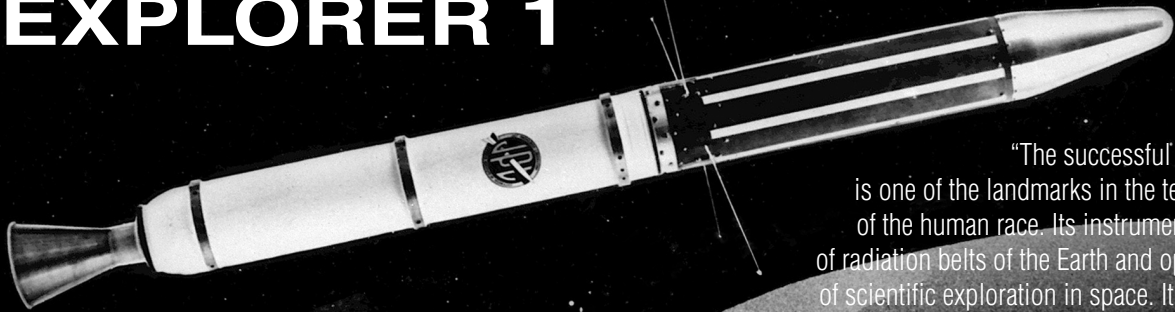


EXPLORER 1



“The successful orbiting of Explorer I in 1958 is one of the landmarks in the technical and scientific history of the human race. Its instrumentation revealed the existence of radiation belts of the Earth and opened up a massive new field of scientific exploration in space. It inspired an entire generation of young men and women in the United States to higher achievement and propelled the Western world into the space age.”

— James A. Van Allen



EXPLORER 1

Explorer 1 was the first U.S. satellite in space and the first satellite to carry science instruments. Launched on a Jupiter-C rocket from Cape Canaveral, Florida, on Jan. 31, 1958 by the U.S. Army Ballistic Missile Agency under the direction of Wernher von Braun, the satellite was designed and built by the Jet Propulsion Laboratory in less than three months.

The satellite carried a micrometeorite detector, temperature sensors and a cosmic ray experiment designed by James A. Van Allen of the University of Iowa. Revealing a much lower cosmic ray count than expected, Van Allen theorized that the instrument may have been saturated by very strong radiation from a belt of charged particles trapped in space by Earth's magnetic field. The existence of these radiation belts was confirmed by the launch of Explorer 3 two months later, and they became known as the Van Allen belts in honor of their discoverer.

Explorer 1 ushered in a new understanding of our planet's interconnected systems through space-based observations and inspired decades of achievement in Earth and space science.

William Pickering, James A. Van Allen and Wernher von Braun (left to right) hold up a model of the Explorer 1 satellite at a press conference announcing its successful orbit.

