

THE OBJECT AT HAND

Explorer I Satellite

NATIONAL AIR AND SPACE MUSEUM

IT WAS, QUITE LITERALLY, the beep heard round the world. The sound, mildly annoying and profoundly unnerving, was beamed to earth from a small metal sphere called *Sputnik*, launched into space by Russia on October 4, 1957.

As the satellite circled the planet 14 times a day, the small, persistent ping came as a shock to most Americans, who had been lulled into thinking that Russia was inferior to the United States in every way, and certainly in science and engineering. The space race was on. Less than four months later, the spacecraft *Explorer I*—launched 50 years ago, on January 31, 1958—would become America's answer to the new challenge. The slender black-and-white projectile, less than seven feet long, now hangs in the Smithsonian's National Air and Space Museum (NASM).

"In an age when we send massive payloads into orbit, *Explorer* looks primitive," says NASM curator Roger Launius, "because it's so small, and its instruments are so unsophisticated." Nevertheless, as proof that the United States could run with the Soviets, *Explorer* was huge. Getting into the game was far from a smooth process, however, and gaining the lead in the race took years.

The American rocketry elite, including an Army-funded team led by the German (and former Nazi) aerospace engineer Wernher von Braun, may have been chagrined at losing face to the USSR but could not have been surprised. The competition, in fact, had been conducted without much fanfare since shortly after the end of World War II. (As for von Braun, his past, while not unknown, was glossed over by U.S. officials until after his death in 1977.)

While the public and some in the U.S. government were shaken by *Sputnik*, recently declassified documents from the period show that President Dwight D. Eisenhower, aided by the CIA's secret U-2 flights over the Soviet Union, was well-informed on Russian progress. As a former military leader who valued intelligence, Eisenhower had long been determined to put spy satellites into orbit. The president kept his knowledge and his plans secret; at the time, his lack of panic was interpreted by many as indifference.

SPACE RACE

In 1958, Explorer 1 launched America's response to the USSR's Sputnik

BY OWEN EDWARDS

"They thought he was asleep at the switch," historian Michael Neufeld, a curator at NASM, said in a recent PBS "Nova" series documentary, "Sputnik Declassified." (Eisenhower, in fact, presided over the launching of the first spy satellites in 1960, an accomplishment for which he never took credit.)



Inconvenient truth: Von Braun (with *Explorer* in 1958) had once guided Hitler's V-2 rockets.

One hundred and twenty days after the launch of *Sputnik*, von Braun and his scientists sent a Jupiter-C rocket, carrying the 30-pound *Explorer*, into an elliptical orbit. Though the lofting of satellites by the two great powers bore the legitimizing stamp of geophysical research, and *Explorer*'s instruments detected the Van Allen radiation belt of charged particles circling earth, the launches unmistakably demonstrated the muscle behind the two nations' science.

Explorer stayed in orbit for many years before burning up on reentry in 1970. (The Smithsonian's was a backup; its *Sputnik*, however, is a replica.)

Explorer and *Sputnik* have enabled advances from satellite communications to the tracking of hurricanes to global positioning technology. "*Sputnik* did not lead to the Apollo program directly, although it set the context," says Neufeld. "It took more Soviet firsts and a change of administration . . . to lead to the moon decision. As for reconnaissance satellites, *Sputnik* accelerated their appearance, certainly; from that point on, investment was continuous and massive. We didn't do one or the other, we did both."

OWEN EDWARDS is a freelance writer and author of the book *Elegant Solutions*.

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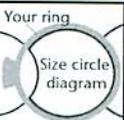
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