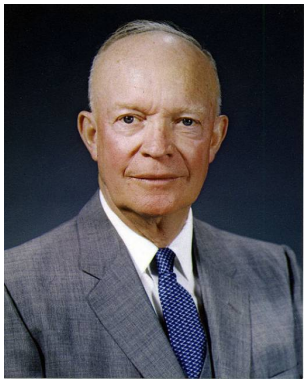
President's Message Relayed from Atlas Satellite--Dwight D. Eisenhower (December 19, 1958)

Added to the National Registry: 2012

Essay by Amy Fletcher (guest post)*

The Atlas rocket



Dwight D. Eisenhower

On December 19, 1958, the United States of America reached a milestone in the space race when President Eisenhower relayed a Christmas message to the world from the SCORE satellite, his voice becoming the first ever to be transmitted through space.

The message was sent from a pre-recorded tape carried on an Atlas Rocket and transmitted by Project Signal Communications by Orbiting Relay Equipment (SCORE), the world's first communications satellite. President Eisenhower's message was brief, but the achievement was momentous:

> *This is the President of the United States speaking. Through the marvels of scientific advance, my voice is coming to you from a satellite circling in outer space. My message is a simple one: Through this unique means I convey to you and to all mankind, America's wish for peace on Earth and goodwill toward men everywhere.*

The Cold War between the United States and the Soviet Union (1946-1989) was at full throttle in 1958. Much of the battle took place on the technological playing field. Both powers sought to demonstrate the superiority of their economic and political systems via dominance in key sectors such as nuclear energy, computers, and space. By the 1950s, the space race took center stage in this global contest between liberal democracy and Soviet communism and captivated public and mass media attention.

The United States succeeded in putting the first man on the moon on July 20, 1969. However, on October 4, 1957, the Soviet Union launched *Sputnik 1* into low-earth orbit. Sputnik (which loosely translates as "fellow traveler") could circle the globe in approximately 96 minutes and was able to transmit signals for three weeks before its batteries failed. *Sputnik 1* had an onboard radio-transmitter that relayed data from the ionosphere, and its iconic "beep, beep, beep" was heard around the world.

Though President Eisenhower reportedly knew via intelligence briefings that the United States maintained overall superiority in space technology, *Sputnik 1* captured the world's attention and was a publicity victory for the Soviet Union. Senator Joseph McCarthy's infamous hearings into alleged Communist infiltration of the United States had ended only three years earlier in 1954 and the House Un-American Activities Committee (HUAC) remained active until its dissolution in 1975. In this context, a Russian technological coup of this magnitude could not be ignored. In 1958, partially in response, the United States Congress authorized the creation of both the

National Aeronautics and Space Administration (NASA) and the Advanced Research Projects Agency (ARPA) to pursue space dominance.

The ongoing development of the Atlas family of rockets also remained a US priority. The Atlas program began after World War II. The Atlas A, the first US operational intercontinental ballistic missile, was test launched in June 1957. In 1958, an Atlas rocket--named for the Titan god of endurance and strength--would carry SCORE into orbit. The satellite weighed 150 pounds and had two tape recorders that could transmit to Earth via short-wave radio frequency.

The project engineers initially planned to play a standard pre-recorded test message to evaluate SCORE's transmission capacity. However, President Eisenhower agreed to tape a holiday-themed message to be broadcast to the world from space.

The US Signal Research and Development Laboratory (Fort Monmouth, New Jersey) had developed SCORE in top secrecy. When SCORE finally launched atop an Atlas B rocket in Cape Canaveral, Florida, on December 18, 1958, only 35 people knew about the intent to transmit Eisenhower's message. Another 53 people involved in the project at the highest security level had earlier been told the launch was canceled.

On December 19, during the satellite's second orbit, Eisenhower's message was switched on via radio signals sent from Cape Canaveral. Shortwave radio could successfully pick-up the weak signals. The message was then rebroadcast around the world on radio and television newscasts to congratulations and acclaim.

In March 2013, the Library of Congress added the 30-second recording of President Eisenhower's message to the National Recording Registry, due to its cultural, artistic, and historic importance to America's aural legacy. It is also a key artifact in the history of space satellites and communication.

The US-Soviet space race began to wind down in the 1970s, due to America's success in reaching the moon, Soviet retrenchment, and new geopolitical priorities. However, a new era, Space 2.0, is emerging in the 21st century, harnessing both public and private stakeholders' renewed interest in space exploration and possibly settlement on the moon or Mars. In our digital age, aural research, and preservation of the sounds of space exploration will remain a crucial task for scholars, engineers, and astronauts.

On February 18, 2021, NASA's Perseverance Rover landed on Mars, having launched from Cape Canaveral on July 30, 2020. The rover's SUPERCAM instrument began to capture sounds on this first official sol--or Martian--day of the project. NASA describes the sound as being like what one hears when holding a seashell to the ear (https://mars.nasa.gov/resources/25713/first-audio-recording-of-sounds-on-mars/). Considerably creepier and more fun are the Sounds for Halloween that NASA released in October 2020 (https://www.nasa.gov/vision/universe/features/halloween_sounds.html/). These sounds are produced when scientists convert radio emissions captured by NASA spacecraft into sound waves.

As this aural legacy from outer space continues to accumulate, and we push further into the cosmos, perhaps a future American President will broadcast a holiday message from Mars to Earth.

Amy Fletcher is an independent scholar and freelance writer specializing in politics and technology. She focuses on the comparative history of space exploration in the United States

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*The views expressed in this essay are those of the author and may not be those of the Library of Congress.