

How Sputnik changed the Inland area

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Slideshow: The race to space

The Soviet Union's launch of the first artificial satellite into space 50 years ago today changed the Inland area in ways that are still felt today.

Many Inland residents are the children and grandchildren of people who moved here for the aerospace and military-related jobs that were created in the wake of Sputnik. Fears that a Soviet missile attack could be next led to a sharp increase in defense- and space-research spending.

Randy "Mule" Testman was a 4-year-old boy in Redlands on Oct. 4, 1957, when he followed a light - probably belonging to part of Sputnik's rocket - through the night sky.

"People thought we were going to die," Testman, 54, now of Banning, recalled. "It was my first powerful memory. I just remember that the Soviets launched something and it was going over our heads and it was dangerous."

Jerry Turek, of Temecula, laughs now at the paranoia that he and others felt. But the fear at the time was very real.

"Here was the evil empire flying over our sovereign nation," Turek, 71, said. "You had all sorts of things going through your head: these guys could be zeroing in on targets."

The satellite was a crude forebear of today's satellites and was only the size of a beach ball. But its launch came deep in the Cold War, a time when Americans were building bomb shelters and schoolchildren were diving under their desks during nuclear-attack drills.

Sputnik put the Soviets ahead of the United States in the space race and led many Americans to believe that the Soviets would win the nuclear-missile race.

"To the American public in their yards who saw the spent casing of the booster rocket overhead and thought that satellites could drop a nuclear bomb, it was a profound shock and a very profound threat," said Peter Westwick, a historian at the University of California at Santa Barbara and an expert in Cold War science.

Sputnik led to major cultural, political, technological and educational shifts, experts say. The research spawned by Sputnik may have hastened the invention of the Internet, the computer chip and the Global Positioning System. Concern about Soviet scientists' talent spurred an increase in math and science education spending.

Sputnik in history

John F. Kennedy may owe his 1960 election in part to Sputnik. He argued that Vice President Richard M. Nixon was part of an administration that had allowed a "missile gap" to develop between the United States and Soviet Union. Kennedy later found out that the United States was actually ahead, historians say.

After Sputnik, Congress dramatically boosted funding for defense and space research.

Even before the satellite was launched, some were arguing for more aggressive aerospace research, said Allan Boardman, former vice president of The Aerospace Corporation, a non-profit, federally funded research and development center based in El Segundo.

should be spent on space research were pushed off the fence."

Much of the money that poured in from Washington ended up in Southern California, including the Inland area, Westwick said.

Thousands of people moved to Southern California to fill military- and space-related jobs, leading to growth that created additional jobs in real estate, construction and other industries, he said.

Norton Air Force Base, March Air Force Base, Hughes Aircraft and TRW Inc., were among the companies and military installations that expanded in the Inland area after Sputnik, said Inland economist John Husing.

The downside to the region's heavy dependence on the military and aerospace was the economic rollercoaster that followed. Jobs were cut when tension between the Soviets and the United States waned, added again as relations worsened, and slashed by the tens of thousands after the Soviet Union disintegrated and the Cold War ended, Westwick said.

Fear of Soviets

Although Sputnik increased Americans' fear of the Soviets, Zuoyue Wang, an expert on the history of science and technology at Cal Poly Pomona, said that the satellite-based spying by both superpowers that followed Sputnik ended up making war between the United States and the Soviet Union less likely.

Once the two superpowers were able to determine how many nuclear weapons each side had, and what types of potential nuclear-related actions and troop movements were being made, there was less uncertainty and fear of an unexpected attack, he said.

Among the new agencies created in the aftermath of Sputnik was the National Aeronautics and Space Administration. After his election, Kennedy vowed to land a human on the moon. U.S. astronauts landed in 1969, but they haven't returned since 1972.

The Bush administration has vowed to put another U.S. astronaut on the moon by 2020, but Wang said he doubts that will happen.

"I don't see the same kind of psychological effect created by Sputnik in 1957," he said.

Another agency that Sputnik spawned, the Advanced Research Projects Agency, founded in 1958, isn't as well-known as NASA, but research at the agency led to the invention of the Internet.

Scientists at the agency created a decentralized military computer command-and-control system, so if one computer center were destroyed by a Soviet attack, the network would survive.

The decentralized computer networks known as the Internet would eventually have been invented even if Sputnik hadn't been launched, said Paul Dickson, author of "Sputnik: The Shock of the Century."

He argued that the fear of Soviet domination fomented a sense of urgency that led to intensive research that hastened the Internet's creation.

The space race

Sputnik's impact also reached into American classrooms. Congress established loans and scholarships for students studying science, math and foreign languages. Schools altered science curricula.

"Suddenly people thought our students were not being prepared well enough to meet the challenge," said Herbert Brunkhorst, chairman of the Department of Science, Mathematics and Technology Education at Cal State San Bernardino.

get students to work and think like scientists.

Today, Brunkhorst sits on a congressionally created committee to look at, among other things, whether there's again too much emphasis on memorization of scientific facts instead of analysis and solving problems.'

Jerry Loving's father was a science teacher 1957. The Riverside man was 13 at the time and had no plans to follow suit.

Then, while camping with his father at Yellowstone National Park, he saw the light of Sputnik travel through the sky every night for two weeks.

Sputnik helped change his mind. Loving, now 63, realized how critical the study of space and science were.

"I thought, 'You know what? Space is the future,'" Loving said. "Sputnik changed the world. To me it's the most significant thing that happened in the 20th Century."

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