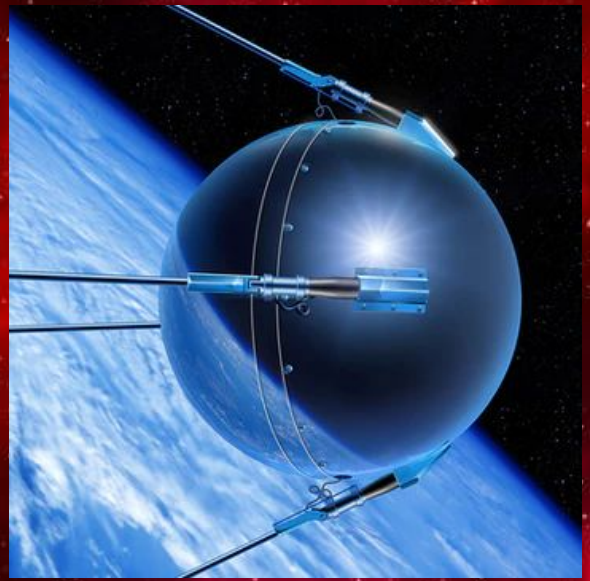
Russian space project. СССР, Россия и космос

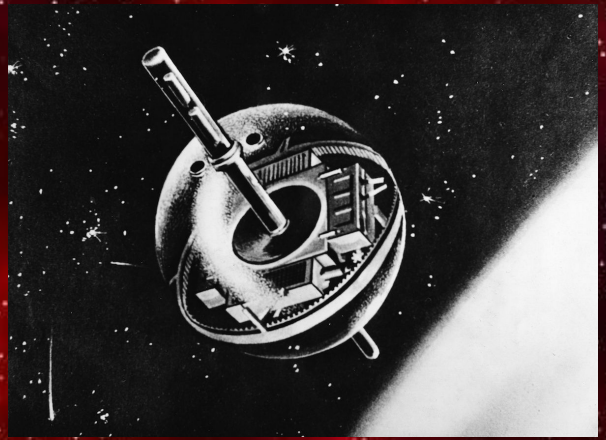
By Charlotte Roberts

Sputnik

Sputnik was each of a series of Soviet artificial satellites, the first of which (launched on 4 October 1957) was the first satellite to be placed in orbit. Sputnik 1 was the first artificial Earth satellite. The Soviet Union launched it into an elliptical low Earth orbit on 4 October 1957, orbiting for three weeks before its batteries died, then silently for two more months before falling back into the atmosphere. The reason that Sputnik was launched up into space was because the craft's primary function was to place a radio transmitter into orbit around the Earth. The word Sputnik is Russian for “companion” or “spouse”. Sputnik was about the size of a beach ball (58 cm.or 22.8 inches in diameter), weighed only 83.6 kg. or 183.9 pounds, and took about 98 minutes to orbit the Earth on its elliptical path. That launch ushered in new political, military, technological, and scientific developments. While the Sputnik launch was a single event, it marked the start of the space age and the U.S.-U.S.S.R space race.The Sputnik launch changed everything. As a technical achievement, Sputnik caught the world's attention and the American public off-guard. Its size was more impressive than Vanguard's intended 3.5-pound payload. In addition, the public feared that the Soviets' ability to launch satellites also translated into the capability to launch ballistic missiles that could carry nuclear weapons from Europe to the U.S.

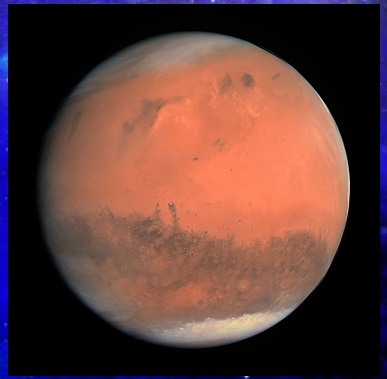
Pictures of Sputnik





Manned Mission to Mars

Russia, today, is studying the psychological impacts a possible crewed expedition to Mars would have on astronauts. Russian researchers have built a mock Mars expedition habitat with the floor space equivalent of a two-story house and is working with European scientists for an experiment that will shut volunteers inside for about 520 days. This study take ages as it is quite hard to survive on mars, as human survival on Mars would require living in artificial Mars habitats with complex life-support systems. One key aspect of this would be water processing systems. Being made mainly of water, a human being would die in a matter of days without it.



famous Soviet astronauts, human and animal

Laika was a Soviet space dog who became one of the first animals in space, and the first animal to orbit the Earth. Laika, a stray mongrel from the streets of Moscow, was selected to be the occupant of the Soviet spacecraft Sputnik 2 that was launched into outer space on 3 November 1957. The experiment aimed to prove that a living passenger could survive being launched into orbit and endure a micro-g environment, paving the way for human spaceflight and providing scientists with some of the first data on how living organisms react to spaceflight environments. Nikolai Mikhailovich Budarin is a retired Russian cosmonaut, a veteran of three extended space missions aboard the Mir Space Station and the International Space Station. He has also performed eight career spacewalks with a total time of 44 hours. Named a cosmonaut candidate in 1989, Budarin's first space mission was a long-term assignment aboard the space station Mir in 1995. Since then, he again made extended stays on Mir in 1998 and the International Space Station Expedition 6 from 2002 to 2003.

Belka and Strelka

On August 19, 1960 the Soviet Union launched the Sputnik 5 capsule containing 40 mice, two rats, a rabbit, some fruit flies, plants—and a pair of dogs, Belka ("Whitey") and Strelka ("Little Arrow.") They were the first living creatures to go into orbit and return safely. Strelka, though, lives on through her heirs. The dogs were 2 mix-breed strays that were found wandering the streets of Russia. The tiny canines each weighed about 12 pounds. Within three years, Soviet space dogs would again make history.

What happened to the Russian space program?

After the Space Race When the U.S. announced Skylab, the Soviets eventually built and launched the Salyut station. In 1971, a crew went to Salyut and spent two weeks working aboard the station. Unfortunately, they died during the return flight due to a pressure leak in their Soyuz 11 capsule. Shortly after that mission, the program was suspended and president Boris Yeltsin eventually canceled it on June 30 1993: "After the collapse of the Soviet Union, there simply was no money left to use it for the civilian missions that it could still have performed, mainly space station support.

'Vostok 1' and Yuri Gagarin

Yuri Gagarin was the first person to fly into space. His flight, on April 12, 1961, lasted 108 minutes as he circled the Earth for a little more than one orbit in the Soviet Union's Vostok spacecraft. Following the flight, Gagarin became a cultural hero in the Soviet Union. Even today, more than six decades after the historic flight, Gagarin is widely celebrated in Russian space museums, with numerous artifacts, busts and statues displayed in his honor. His remains are buried at the Kremlin in Moscow, and part of his spacecraft is on display at the RKK Energiya museum. Vostok 1 was the first spaceflight of the Vostok Programme and the first crewed spaceflight in history, which was flown by Yuri Gagarin. The Vostok 3KA space capsule was launched from Baikonur Cosmodrome on April 12, 1961. The orbital spaceflight consisted of a single orbit around Earth which skimmed the upper atmosphere at 169 kilometers (91 nautical miles) at its lowest point. Gagarin parachuted to the ground separately from his capsule after ejecting at 7 km (23,000 ft) altitude.

Valentina Tereshkova

Valentina Tereshkova was the first woman to travel in space. On June 16,1963 Valentina was launched into space aboard vostok 6. She was a member of the Russian State Duma, engineer, and former cosmonaut. Tereshkova's spacecraft was guided by an automatic control system, and she never took manual control. On June 19, after just under three days in space, Vostok 6 reentered the atmosphere, and Tereshkova successfully parachuted to earth after ejecting at 20,000 feet. Before her selection for the Soviet space program, Tereshkova was a textile factory worker and an amateur skydiver. She joined the Air Force as part of the Cosmonaut Corps and was commissioned as an officer after completing her training. After the dissolution of the first group of female cosmonauts in 1969, Tereshkova remained in the space program as a cosmonaut instructor. She later graduated from the Zhukovsky Air Force Engineering Academy and re-qualified for spaceflight but never went to space again. She retired from the Air Force in 1997 having attained the rank of major general.

Voskhod 2' and Alexei Leonov

Alexei Leonov was one of the first 20 Soviet Air Force pilots to train as cosmonauts in 1960. In 1965, he became the first person to exit a spacecraft and walk in space, an experience that nearly ended in tragedy. Leonov's spacewalk was a key moment for space exploration as it demonstrated that future space crews would be able to exit their capsule to perform experiments and repairs. Ten years later, in 1975, Leonov commanded the first rendezvous between a Soviet and American spacecraft. By the end of his second space mission, he had logged a total of 7 days and 32 minutes away from planet Earth. Leonov was also a talented artist, and was best known for his paintings of space scenes. The space pioneer and artist died at the age of 85 on Oct. 11, 2019, and is remembered fondly by astronauts, cosmonauts and space enthusiasts around the world.

'Mir' space station

Mir was a space station that operated in low Earth orbit from 1986 to 2001, operated by the Soviet Union and later by Russia. Mir was the first modular space station and was assembled in orbit from 1986 to 1996. It had a greater mass than any previous spacecraft. At the time it was the largest artificial satellite in orbit. Mir was the first continuously inhabited long-term research station in orbit and held the record for the longest continuous human presence in space at 3,644 days, until it was surpassed by the ISS on 23 October 2010. It holds the record for the longest single human spaceflight, with Valeri Polyakov spending 437 days and 18 hours on the station between 1994 and 1995. Mir was occupied for a total of twelve and a half years out of its fifteen-year lifespan, having the capacity to support a resident crew of three, or larger crews for short visits. The Russian space station Mir, a predecessor to the International Space Station, also met a watery demise in 2001. At the end of its 15 years of operation, Mir plummeted through Earth's atmosphere and splashed into the Pacific Ocean. It served as a floating laboratory for 23,000 scientific and medical experiments. Although Mir was gone by early 2001 and the International Space Station (ISS) was growing rapidly in orbit, the U.S. and Russia were still using spacecraft as statecraft.

Key words

1. Космос - Space
2. Вселенная - universe
3. Планета - Planet
4. Звезда - tar
5. Земля - earth
6. Луна - moon
7. Венера - venus
8. Марс - mars
9. солнечная система - Solar system
10. Галактика - galaxy
11. космический корабль - spaceship
12. Космонавт - cosmonaut