WYATT SPREE

# Spaceships

Cars but for space

## History

A German V-2 became the first spacecraft when it reached an altitude of 189 km in June 1944 in Peenemünde, Germany.[9] Sputnik 1 was the first artificial satellite. It was launched into an elliptical low Earth orbit (LEO) by the Soviet Union on 4 October 1957. The 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.[10][11] Apart from its value as a technological first, Sputnik 1 also helped to identify the upper atmospheric layer's density, through measuring the satellite's orbital changes. It also provided data on radio-signal distribution in the ionosphere. Pressurized nitrogen in the satellite's false body provided the first opportunity for meteoroid detection. Sputnik 1 was launched during the International Geophysical Year from Site No.1/5, at the 5th Tyuratam range, in Kazakh SSR (now at the Baikonur Cosmodrome). The satellite traveled at 29,000 kilometres per hour (18,000 mph), taking 96.2 minutes to complete an orbit, and emitted radio signals at 20.005 and 40.002 MHz

While Sputnik 1 was the first spacecraft to orbit the Earth, other man-made objects had previously reached an altitude of 100 km, which is the height required by the international organization Fédération Aéronautique Internationale to count as a spaceflight. This altitude is called the Kármán line. In particular, in the 1940s there were several test launches of the V-2 rocket, some of which reached altitudes well over 100 km.

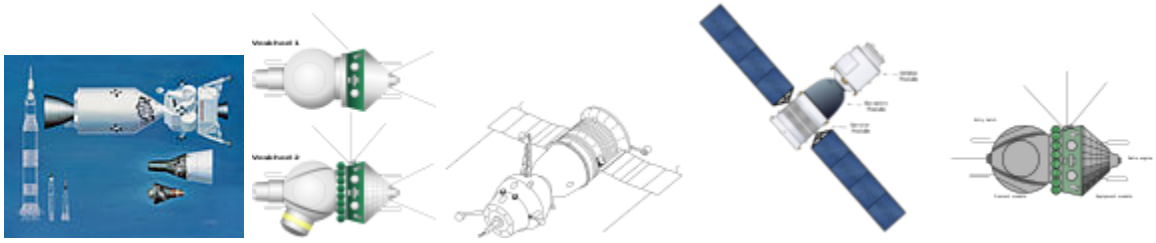
## Spacecraft Types

As of 2016, only three nations have flown crewed spacecraft: USSR/Russia, USA, and China. The first crewed spacecraft was Vostok 1, which carried Soviet cosmonaut Yuri Gagarin into space in 1961, and completed a full Earth orbit. There were five other crewed missions which used a Vostok spacecraft.[12] The second crewed spacecraft was named Freedom 7, and it performed a sub-orbital spaceflight in 1961 carrying American astronaut Alan Shepard to an altitude of just over 187 kilometers (116 mi). There were five other crewed missions using Mercury spacecraft.

Other Soviet crewed spacecraft include the Voskhod, Soyuz, flown uncrewed as Zond/L1, L3, TKS, and the Salyut and Mir crewed space stations. Other American

crewed spacecraft include the Gemini spacecraft, the Apollo spacecraft including the Apollo Lunar Module, the Skylab space station, the Space Shuttle with undetached European Spacelab and private US Spacehab space stations-modules, and the SpaceX Crew Dragon configuration of their Dragon 2. US company Boeing also developed and flown a spacecraft of their own, the CST-100, commonly referred to as Starliner, but a crewed flight is yet to occur. China developed, but did not fly Shuguang, and is currently using Shenzhou (its first crewed mission was in 2003).

Except for the Space Shuttle, all of the recoverable crewed orbital spacecraft were space capsules.



The International Space Station, crewed since November 2000, is a joint venture between Russia, the United States, Canada and several other countries.

## Earth-orbit satellites

- Explorer 1 – first US satellite
- Project SCORE – first communications satellite
- Solar and Heliospheric Observatory (SOHO) - orbits the Sun near L1
- Sputnik 1 – world's first artificial satellite
- Sputnik 2 – first animal in orbit (Laika)
- Korabl-Sputnik 2 – first capsule recovered from orbit (Vostok precursor) – animals survived
- Syncom – first geosynchronous communications satellite
- Hubble Space Telescope – largest orbital observatory
- X-37 – spaceplane