

Past Achievements, Future Plans for Space Exploration

Ever since the beginning of time, mankind has been fascinated with wonders of space. Before the mid-1900s, all mankind could do was gaze at the stars from Earth and wonder what it would be like to go into space. Man would look through telescopes and make theories on how the universe worked.

Even with growing knowledge in the field, it was not until 1957 when the first Earth orbiter, the Soviet's Sputnik 1, was sent into space and placed in orbit at an altitude of 1,370 miles and weighed 184 pounds. Later in that year, the Soviets sent Sputnik 2 into space with a dog named Laika. Laika was the first animal to venture into space.

Then in 1958, the United States successfully sent their very own satellite into space. In 1960, the Soviets launched two dogs into space and successfully returned them to Earth. From this point started the space race. The space race was a challenge between the USSR and the United States to see who could land a man on the moon first.

In 1961, the first man in space was cosmonaut Yuri Gagarin who was in space for 60 minutes before returning to Earth in Vostok 1 and was sent by the USSR. Astronaut Shepard flew the first manned sub-orbital space-flight by the Americans. The first true American orbital flight was by John Glen and he stayed in space for five hours in Mercury 6 in 1962. Then in 1963, the USSR sent the first woman into space; her name was Valentina Tereshkova-Nikaleva. They also had the first person to take a space-walk in 1965. In 1968, the National Aeronautics and Space Administration or NASA tested the first Saturn 5 rocket, which would be used for the Apollo missions. The first manned Apollo missions and the first flight around the moon took place in 1968. Finally, on July 21, 1969, the United States placed the first man on the moon winning the space race.

Now, the future of space exploration depends on many factors. Some of these factors are as followed: how much technology advances, how political forces change rivalries as well as partnerships with other nations, and how important space exploration is to the general public. NASA is working on a single-stage-to-orbit (SSTO) vehicle, but until it is until then, NASA plans to use the space shuttle fleet to the year 2012. It is clear that mankind has devoted itself to the exploration of the unknown and that we are committed to find new planets on which man can live and prosper. An interesting spacecraft is the X-33, which is a single stage orbiter. The X-33 will allow companies to put satellites in orbit for a cheaper cost.

Space travel does take its effect on humans though. Piloted space flights have to supply oxygen, food, and water for their occupants and even longer flights need to have a way to dispose of or recycle waste. The even longer flights, spacecrafts will eventually need to become mostly self-sufficient. The astronauts will have to exercise and since the astronauts will be weightless, the shuttle will need to provide more than just the core physical needs for the astronauts to stay healthy.

The weight of the craft is so important that it plays a crucial role in the amount of food supplied by the spacecraft. Most food provided to the astronauts is dehydrated, which is rehydrated by a device that is some what like a water gun, to save space as well as weight.

However, some foods are given in their conventional form such as fruits, candy, and bread. Water is usually provided by fuel cells that also provide electricity to the whole ship. The reaction between Hydrogen and oxygen provides the electricity and creates water as well. A small amount of water is also carried onboard in case of emergencies.

Space exploration has come a long way since the beginning. Mankind has gone to the moon and back, we have sent probes to the furthest reaches of our solar system, we have sent a robot to roam the Martian terrain, we have made spaceships that are reusable, and we can see other galaxies that are billions of light years away. Now we brainstorm on how to explore space even further. Man kind is destined to go to the far reaches of the universe and make contact with other life forms. With all things considered, humans are not far from colonizing space.

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