

Sputnik essay examples

[Countries](#), [United States](#)



1. Introduction

The satellites are the artificial objects that are placed in the orbit with the help of gravitational force of earth and centrifugal force of satellite, this type of objects are called artificial satellites. The first artificial satellites are launched by the Soviet Union called sputnik 1. The sputnik 1 of large size and then the latest technology has reduced the size of the satellite. Then after thousands of satellites are placed in the orbit earth. The some satellites called space station has been launched in space by parts and it has been assembled in the space as a complete object. More than 50 countries have their own satellite launching capability out of that 10 countries can manufacture their own satellites and they can launch. There are thousands of satellites are placed in the orbit out of that few hundred are operational and more than thousand satellites are unused. The deactivated satellite segments are remains in the space as the space debris. The satellite has been used for the different purposes like military satellite, observational satellite, communication satellite, weather satellite, research satellite which is placed in the orbit called low earth orbit, polar orbit and geostationary orbit. About 6, 600 satellites had been launched and according to the latest estimates 3, 600 satellites remain in the respected orbit. The satellite is used in many ways the important example is the communication. The communication is the main advantage in the satellite technology. The other uses are weather monitoring, disaster management etc.

2. Sputnik Origin

The Sputnik 1 is the first artificial; satellite of Soviet Union. The satellite of 58cm in diameter and it was made of the polished metal. The satellite carries

four external radio antennas to transmit radio pulse all over the world. The Soviet Union has launched a satellite in the elliptical low earth orbit on 4th Oct of 1957. The satellite object was visible all around the world and its radio pulse was detectable all over the world. The Sputnik 1 launched during international geophysical year. The satellite traveled about 29, 000 kilometers per hour. The orbital time period of the sputnik 1 is 96. 2 minutes. The radio signal gives the information about the ionospheric behavior. The radio signal frequency was about 20. 002 and 40. 002 MHz and it was monitored by all over the world. The successful launch of unmanned space vehicle shocks and frightens many Americans, as the tiny object was placed in the space by Soviet Union shocks America that they are so far in the space technology. Americans also fear that the new invention of USSR has brought the USSR to the peak and also Americans felt that the USSR was so advanced in the weapon technology. Such a show made by USSR in space technology made to achieve economic and political relationship with the African and Asian countries. The Sputnik 1 gave lot of information about the ionosphere and the signal was detectable by all over the world. The domination of USSR in the space technology forces the America to launch its first unmanned satellite called Explorer during 1958. The space race starts to begin between USSR and the America, which resulted in the moon launch made by the American, takes the space technology in to the peak. After then lot of satellites are been launched by the various countries. The different use of satellites has been launched like communication satellite, navigation satellite, weather satellite etc.

3. Sputnik Construction Project

The Sputnik 1 project was planned many years back, 17 Dec 1954. Sargei Korolev addressed Dimitri Unstinov who was the defence minister of of soviet union proposing the Sputnik 1 project. The report was submitted to the Mikhail Tikhonravov. But at the same time the US president Dwight D Einsenhover announced the world that the US is planning to launch the artificial satellite in the international geophysical year. The two nations start the space race. On 8th of august the US has approved the idea of creating the artificial satellite, at the same time USSR is working hard to build its own artificial satellite and prepare it soon for launch. The Sputnik project was assigned to the different departments of USSR. The USSR academy of science was responsible of supplying the equipments for building satellites. The ministary of defense industry was assigned to build the satellite. The ministry of ship building was taking responsibility of making the gyroscopic equipments. The ministry of machine building was responsible for developing the launch pad, making transportation facilities. The ministry of defense was responsible for conducting the launch. The departments mentioned above had taken lot of initiatives to complete the project within the time. Before launching the space agency measured the density of the atmosphere, its ion composition, magnetic field, cosmic rays etc. The ground station was installed in order to track the satellite orbit, and to pass the command to the satellite. More than 15 measuring stations has been installed and the enter ground setup was completed and now the next step is of selecting the launch pad.

4. Launch Vehicle proportion and Launch site Selection

The two stage of R 7 rocket was initially designed. The decision is to build

and the CPSU central committee and the council of the ministers of USSR. The first launch of an R 7 rocket made on 1957 but unfortunately in the 98th second the rocket fired and launch was failed from the 400km from the site. The three attempts were made to launch the second rocket 8K71 NO 6, which was failed due to the mistake made in the rocket assembly. The unsuccessful launch of R 7 was took place on the 15th of July. The launch of fourth rocket was made on the 21st of august was successful, its parts has been separated in the space and the rocket entered in the atmosphere. and it was destroyed in the height of 10km because of thermodynamics overload after travelling 6, 000km. On the 22nd of the September the modified rocket of R 7 was later named as the Sputnik 1 and indexed as 8K71PS, the Soviet Union was preparing for the launch. The R 7 was designed to carry the heavier object called Object D, and the idea is to reduce the initial mass of 280 to 272. 83 tons and its initial mass at the launch was 267 short tons, its length was about 29, 167 meters.

5. Launch and the Mission

The Sputnik rocket was launched at 19: 28: 31 UTS on 1957. The side booster was separated at 116: 38 seconds. At the second stage the engine was shut down at 294. 6 seconds. The second reached the height of 223Km above the Earth surface, travels at the velocity of 7, 780m/s. After 3. 14 seconds PS 1 has been separated from the second stage. The designers, engineers and the technicians who designed the rocket watched the launch and after the launch they rushed to mobile radio station to listen to the satellite signal. They waited for 90minutes to ensure that the satellite made its first orbit.

6. Reaction

The 150 monitoring stations of US monitored the Russian satellite sputnik and other countries were alerted to during the night time to watch the new Russian satellite. The USSR asked the radio armature and commercial station of record the satellite sound in the magnetic tapes. The USSR announced that any one possessing radio and short wave equipment can able to access the new Russian satellite. The USSR launch of sputnik shocked the American and forced them to create Advanced Research Project Agency in 1958. The Advanced research project agency united some of the brilliant people from the America and they build an American first satellite in the 18months. Later Advanced Research Project agency concentrated in the communication technology.

7. Conclusion

The space race was been started by USSR and later the space technology was largely improved, U S created its own satellite called Explorer 1 and moon launch was made. Later many countries started to achieve in the space technology. The many problems in the space have been fixed by the latest technology. The initiative take by USSR has brought the some revolution in the space technology. The sputnik after the serious of failure in the rocket during testing made the USSR scientist to reach the target of sending the object to the space soon. Developed countries like USSR and U S have achieved something in the space technology. The USSR development in the space technology is the remarkable one.

References

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