

Back to the Soviet Era: Exploring the Baikonur Cosmodrome

The Baikonur Cosmodrome, the world's first and largest operational space launch facility, situated in the middle of Kazakhstan's steppes had tremendous historic significance. It was the launch pad for a whole new chapter of civilization. In 2000, from June 2 to 4, the 45th anniversary of Baikonur cosmodrome was celebrated with great fanfare.



The location of the base of Soviet space program was of prime strategic importance, and after much consideration, an ideal spot was found in the vast steppes of Kazakhstan close to the mining town of Baikonur. The name in Kazakh means "wealthy brown", i.e. "fertile land with many herbs".

In 1954, when the project was conceived, it was referred to as an "experimental range", since no such word as cosmodrome existed in the Russian language. When one of the construction workers asked Sergei Korolev, the Soviet rocket engineer, what was going to be built here in the middle of nowhere he was told "Stadium I – the biggest stadium in the world". It was the period of the so called "cold war" and great secrecy surrounded the site. The USA was keeping track of the number of nuclear weapons in the USSR, and trying to maintain an equal or greater stockpile.

One year before that, on 12 August 1953, the first soviet hydrogen bomb had been tested in Semipalatinsk at the nuclear experimental range. Viacheslav Malyshev, the Vice Chairman of the Cabinet, understanding the destructive power of the bomb and envisioning the creation of a rocket, invited Sergei Korolev to discuss the matter and he and scientist Sergei Krukov came up with a sketch of the legendary R-7, which would ultimately carry up to 4.5 megatons of nuclear energy to a target. Malyshev never did get to see the first rocket, as he died from serious radiation he was exposed to while watching the detonation of the hydrogen bomb.



Marshall Georgiy Jukov was commissioned to find the ideal site for the testing ground. The town of Baikonur was remote, in the endless steppes of Kazakhstan, yet thanks to its location close to the then still intact Aral Sea and its bustling ports accessible by rail and road, the location allowed for the easy shipment of building materials. Also, during the entire launch process, rockets would have to stay above Soviet territory so their trajectories could be monitored.

Border areas would not do. Parallel to the construction of the base at Tyura-Tam (old name of Baikonur) in 1955, about 300 km further north another project was realized – namely the construction of a fake wooden rocket model and launch pad to detract the attention of foreign secret service agencies. And indeed, on 21 August 1957, as a complete surprise to the world, the first R-7 was successfully launched, and on 4 October of that same year, the R-7 catapulted the first "sputnik" satellite onto the orbit.

With the secret out at last, the name Cosmodrome was established and on 12 April 1961 Yuri Gagarin blasted off from here to become the first man to orbit the Earth in his spaceship "Vostok". The flight lasted for 108 min. By then, the space industry had attracted a great workforce, so the town of Baikonur, having grown into a city, was renamed Leninsk and the rocket site was referred to as Baikonur.



There were not only moments of triumph though. Prior to Gagarin's first journey to space, a rocket exploded on the ground, and over 100 victims perished. After the successful journey in space of the first female cosmonaut in June 1963, another rocket explosion took place, again at the cost of human life.

In 1994, Russia re-launched its space program at Baikonur. Baikonur is fully equipped with facilities for launching both manned and unmanned spacecraft. It supports several generations of Russian spacecraft: Soyuz, Proton, Tsyklon, Dnepr, Zenit and Buran. During the temporary lapse of the United States' Space Shuttle program after the Columbia Disaster in 2003 it played an essential role in operating and resupplying of the International Space Station (ISS) with Soyuz and Progress spacecraft.

At present, Russia has a rent agreement with Kazakhstan allowing them to use the site until 2050. It is managed jointly by the Russian Federal Space Agency and the Russian Space Forces. The shape of the area rented is an ellipse, measuring 90 kilometers east to west, by 85 kilometers north to south, with the cosmodrome at the centre.

Thanks to the Russian space program, the city and the cosmodrome are growing and developing.

For several years now it is possible to visit Baikonur as a tourist and to explore the vastness of the

Kazakh steppes around the cosmodrome which is a fantastic and memorable experience for all adventurous travelers, not only for those interested in the history of space technology. Visitors can walk around the Baikonur city, and tour the cosmodrome and its sights. At the world's oldest and largest cosmodrome the travelers can see all the Russian rockets, all launching pads, all assembly building vehicles. Among the most popular landmarks are the "Proton" launch complex, space shuttle "Buran", Gagarin's launch site, the test complex of the heavy transport rocket "Soyuz", memorial house of Yuri Gagarin and visionary Sergey Korolev, the launch complex "Zenit" and much more.



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