

"Proposal for the First Launches of Artificial Earth Satellites Before the Beginning of the International Geophysical Year"

This document was signed by Chief Designer Sergey P. Korolev on 5 January 1957 and sent to the USSR Council of Ministers. At the time, the 'Object D' program had fallen behind schedule. Cognizant of U.S. plans to launch a satellite during the International Geophysical Year (IGY), Korolev requested permission to launch two modest satellites, called 'Simple Satellites,' *before* the beginning of the IGY, in order to preempt the United States. The Soviet government granted approval for the program on 15 February 1957.

Two satellites were developed as part of the effort, Simple Satellite No. 1 (PS-1) and Simple Satellite No. 2 (PS-2). The first was launched on 4 October 1957 and named Sputnik. The second was launched on 3 November 1957 with the dog Layka and named Sputnik-2.

Source: Source: M. V. Keldysh, ed., *Tvorcheskoye naslediyе Akademika Sergeya Pavlovicha Koroleva: izbrannyye trudy i dokumenty* (Moscow: Nauka, 1980), pp. 369-370.

**Proposals  
of First Launches of Artificial Earth Satellites  
before the Beginning  
of the International Year of Geophysics<sup>1</sup>**

[1957]

We are asking for permission to prepare and launch two rockets upgraded to the version of artificial earth satellites during the period of April - June 1957, before the official opening of the International Year of Geophysics to be held from July 1957 to December 1958.

The standard debugging of the rockets has been carried out, and a first rocket for launch according to the test schedule is to be ready by March 1957.

The preparatory operations for first launches of the rocket have been carried out with difficulties and lag behind schedule, however, the laboratory and stand test results obtained so far show that, with extensive operations, the rocket launches can be started in March 1957. The rocket can be adapted, by way of certain modifications, for launching an artificial earth satellite with a small payload of instruments of about 25 kg.

Therefore, a central rocket stage weighing 7,700 kg with a separable spherical satellite container 450 mm in diameter and 40 to 50 kg in weight, could be put in orbit of an artificial satellite at an altitude of 225 to 500 km.

The instruments installed on board the satellite can include a special short-wave transmitter with power supplies for seven to ten days of operation.

Two rockets upgraded for these launches could be ready in April - June 1957 and launched immediately after the first successful launches of the intercontinental missile.

Simultaneous launches of these rockets will allow a number of aspects that have to be tested during the flight tests of the rockets to be verified in flight (launch, propulsion operation, operation of the side-mounted and central parts, operation of the control system, separation, etc.).

According to the decision of January 30, 1956, a launch vehicle for an artificial earth satellite has been developed on the basis of the intercontinental missile, with the weight of the satellite container of about 1,200 kg, having a large variety of equipment for scientific research, test animals, etc.

The first launch of this satellite is scheduled in 1957, and it can be carried out at the end of 1957, bearing in mind a lot of problems in development and debugging of scientific hardware.

At the same time, a very intensive preparations have been underway in the United States of America for launching an artificial earth satellite. The most ~~notorious~~ project is code named *Well-known*

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<sup>1</sup> Memorandum sent by S. P. Korolev to the Government. Finally, a decision was made to develop and launch two modifications of a trivial satellite PS-1 and PS-2, on board which a part of the research program was implemented, that had been scheduled on board Object D. PS-1 and PS-2 satellites were launched on October 4, and November 3, 1957, respectively.

"Vanguard"

"~~Avant-Garde~~," on the basis of a three-stage rocket, using "Redstone" rocket as the first stage. The satellites are in the form of a spherical container 50 cm in diameter that weighs about 10 kg.

The USA attempted to launch a three-stage rocket with a satellite at the Patrick Base, Florida in September 1956, and this attempt was kept secret. <sup>^</sup> [sic]

The Americans failed to launch the satellite, and the third stage of the rocket, probably with the spherical container, had flown over a distance of about 3,000 miles or about 4,800 km. This flight was then publicized in the press as an outstanding national record. They emphasized that the US rockets can fly higher and farther than all rockets in the world, including Soviet rockets.

As reported in the press, the USA is again going to try and launch an artificial earth satellite in an effort to achieve superiority.

The USA pay particular attention to the ground tracking facilities for an artificial earth satellite. For that purpose, in addition to the use of technical equipment of the US Army and Navy, they invite civilians, in particular amateur astronomers, radio hams, and people under the guidance of the Academy of Sciences, to conduct observations.

Bearing in mind the status of the problem of an eventual launch of an artificial earth satellite in the USSR and USA in the nearest future, we are asking that the following proposals be approved:

1. The industrial ministries, within the framework of the established cooperation, with participation of the USSR Academy of Sciences shall prepare two rockets in the artificial earth satellite modification for launch in April - June 1957.

2. A competent Interministerial Coordination Commission shall be established for managing all operations associated with the first two launches of the artificial earth satellite in the USSR.

3. Necessary measures will be taken for utilizing all technical equipment available in the USSR Academy of Sciences and industrial ministries with the aim of creating, within three months, on the territory of the USSR, a tracking system for all kinds of observation (radio, optical, and others) for monitoring the flight of the artificial earth satellite.

4. Information about the spherical container of the artificial earth satellite shall be published in the press.