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NIE 11-1-67
4 April 1968
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MEMORANDUM TO HOLDERS

NATIONAL INTELLIGENCE ESTIMATE

NUMBER 11-1-67

The Soviet Space Program

Submitted by

DIRECTOR OF CENTRAL INTELLIGENCE

Concurred in by the

UNITED STATES INTELLIGENCE BOARD

As indicated overleaf

4 April 1968

ATTACHMENT

Authenticated

EXECUTIVE SECRETARY, USIB

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THE SOVIET SPACE PROGRAM

THE PROBLEM

To examine significant developments in the Soviet space program since the publication of NIE 11-1-67, "The Soviet Space Program," dated 2 March 1967, TOP SECRET, and to assess the impact of those developments on future Soviet space efforts with particular emphasis on the manned lunar landing program.

DISCUSSION

1. In the year since publication of NIE 11-1-67, the Soviets have conducted more space launches than in any comparable period since the program began.[1] Scientific and applied satellites, particularly those having military applications, largely account for the increased activity. The Soviets also intensified efforts to develop what we believe to be a fractional orbit bombardment system (FOBS).[2] The photoreconnaissance program continued at the same high rates of the previous two years.

2. In general, the Soviet space program progressed along the lines of our estimate. It included the following significant developments: new spacecraft and launch vehicle development, rendezvous and docking of two unmanned spacecraft, an unsuccessful manned flight attempt (which ended in the death of Cosmonaut Komarov), the successful probe to Venus, an unmanned circumlunar attempt which failed, and a simulated circumlunar mission. Evidence of the past year indicates that the Soviets are continuing to work toward more advanced missions, including a manned lunar landing, and it provides a better basis for estimating the sequence and timing of major events in the Soviet space program.

3. Considering additional evidence and further analysis, we continue to estimate that the Soviet manned lunar landing program is not intended to be competitive with the US Apollo program. We now estimate that the Soviets will attempt a manned lunar landing in the latter half of 1971 or in 1972, and we believe that

[1] See Annex for a detailed breakdown of launches during the past year.

[2] For a discussion of FOBS, see NIE 11-8-67, "Soviet Capabilities for Strategic Attack," dated 26 October 1967, TOP SECRET.

1972 is the more likely date. The earliest possible date, involving a high risk, failure-free program, would be late in 1970. In NIE 11-1-67 we estimated that they would probably make such an attempt in the 1970-1971 period; the second half of 1969 was considered the earliest possible time.

4. The Soviets will probably attempt a manned circumlunar flight both as a preliminary to a manned lunar landing and as an attempt to lessen the psychological impact of the Apollo program. In NIE 11-1-67, we estimated that the Soviets would attempt such a mission in the first half of 1968 or the first half of 1969 (or even as early as late 1967 for an anniversary spectacular). The failure of the unmanned circumlunar test in November 1967 leads us now to estimate that a manned attempt is unlikely before the last half of 1968, with 1969 being more likely. The Soviets soon will probably attempt another unmanned circumlunar flight.

5. Within the next few years the Soviets will probably attempt to orbit a space station which could weigh as much as 50,000 pounds, could carry a crew of 6-8 and could remain in orbit for a year or more. With the Proton booster and suitable upper staging they could do so in the last half of 1969, although 1970 seems more likely. Alternatively, the Soviets could construct a small space station by joining several spacecraft somewhat earlier—in the second half of 1968 or 1969—to perform essentially the same functions. We previously estimated that the earliest the Soviets could orbit such a space station was late 1967 with 1968 being more likely.

6. We continue to believe that the Soviets will establish a large, very long duration space station which would probably weigh several hundred thousand pounds and would be capable of carrying a crew of 20 or more. Our previous estimate, which gave 1970-1971 as the probable date and late 1969 as the earliest possible, was based primarily upon launch vehicle capacity. We now believe that the pacing item will be the highly advanced life support/environmental control technology required, and that such a station will probably not be placed in orbit before the mid-1970's.

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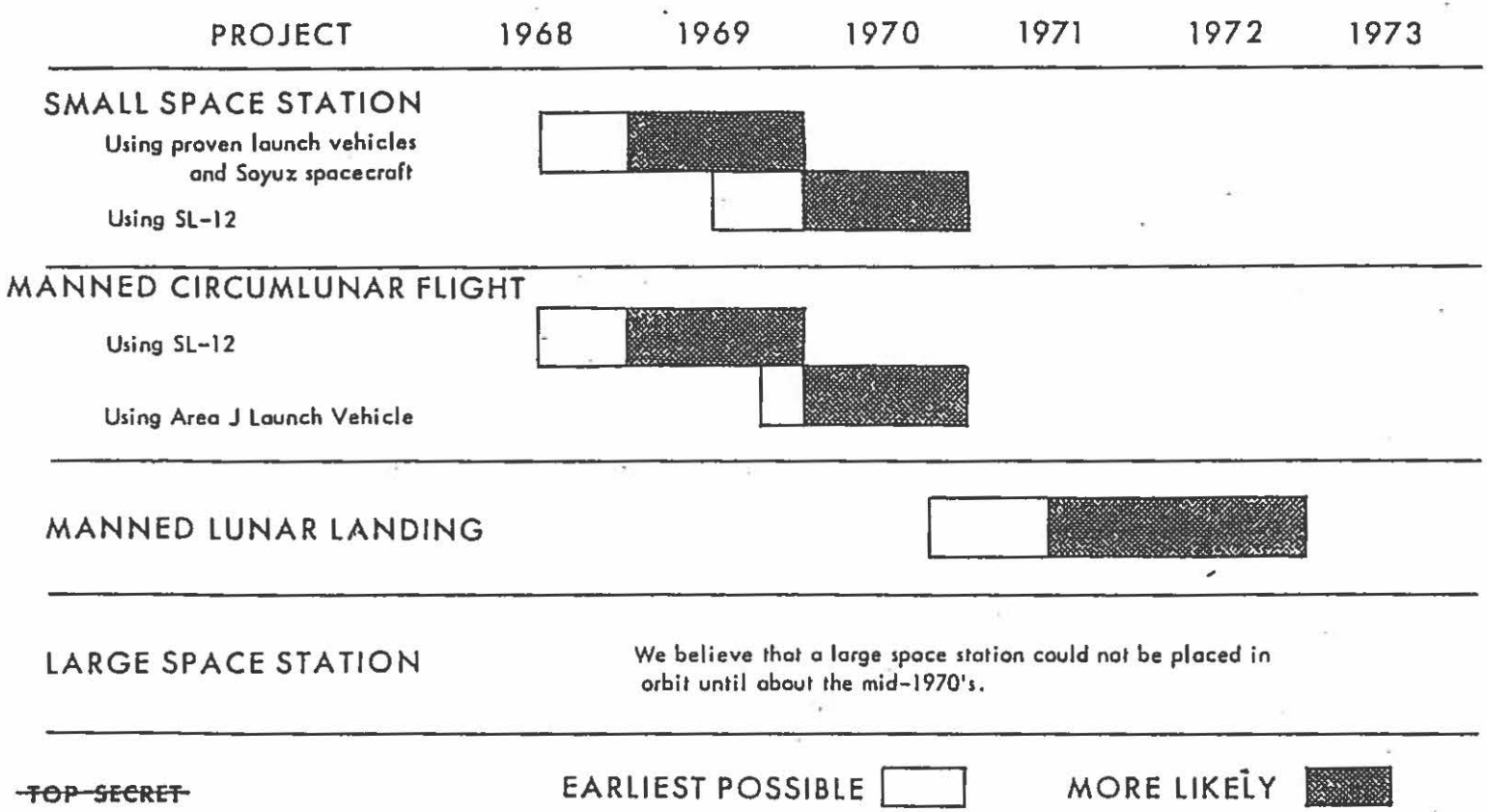
Estimated Timing of the Major Soviet Manned Space Flight Projects Over the Next Five Years



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SOVIET CHRONOLOGICAL SPACE LOG FOR THE PERIOD
1 MARCH 1967 THROUGH 3 APRIL 1968

Date	Soviet Designation	Type	Outcome
3 March 67	Cosmos 145	Scientific	Success
10 March 67	Cosmos 146	Launch Vehicle Test (SL-12)	Failure
13 March 67	Cosmos 147	Photoreconnaissance	Success
16 March 67	Cosmos 148	Scientific	Success
21 March 67	Cosmos 149	Scientific	Success
22 March 67	Cosmos 150	Photoreconnaissance	Success
22 March 67	None	SS-X-6	Failure
24 March 67	Cosmos 151	Undetermined	Success
25 March 67	Cosmos 152	Scientific	Success
4 April 67	Cosmos 153	Photoreconnaissance	Success
8 April 67	Cosmos 154	Launch Vehicle Test (SL-12)	Failure
12 April 67	Cosmos 155	Photoreconnaissance	Success
23 April 67	Soyuz 1	Manned Satellite	Failed during recovery
27 April 67	Cosmos 156	Meteorological	Success
12 May 67	Cosmos 157	Photoreconnaissance	Success
15 May 67	Cosmos 158	Undetermined	Failure
16 May 67	Cosmos 159	Scientific	Success
17 May 67	Cosmos 160	SS-X-6	Failure
22 May 67	Cosmos 161	Photoreconnaissance	Success
24 May 67	Molniya 1/5	Communications	Success
1 June 67	Cosmos 162	Photoreconnaissance	Success
5 June 67	Cosmos 163	Scientific	Success
8 June 67	Cosmos 164	Photoreconnaissance	Success
12 June 67	Venus 4	Probe to Venus	Success
12 June 67	Cosmos 165	Scientific	Success
16 June 67	Cosmos 166	Scientific	Success
17 June 67	Cosmos 167	Probe to Venus	Failure
20 June 67	None	Photoreconnaissance	Failure
4 July 67	Cosmos 168	Photoreconnaissance	Success
17 July 67	Cosmos 169	SS-X-6	Success
21 July 67	None	Photoreconnaissance	Failure
31 July 67	Cosmos 170	SS-X-6	Success
8 Aug 67	Cosmos 171	SS-X-6	Success
9 Aug 67	Cosmos 172	Photoreconnaissance	Success
24 Aug 67	Cosmos 173	Scientific	Success
31 Aug 67	Cosmos 174	Communications	Success
1 Sept 67	None	Photoreconnaissance	Failure
11 Sept 67	Cosmos 175	Photoreconnaissance	Success
12 Sept 67	Cosmos 176	Scientific	Success
16 Sept 67	Cosmos 177	Photoreconnaissance	Success
19 Sept 67	Cosmos 178	SS-X-6	Success
22 Sept 67	Cosmos 179	SS-X-6	Success
26 Sept 67	Cosmos 180	Photoreconnaissance	Success
3 Oct 67	Molniya 1/6	Communications	Success
11 Oct 67	Cosmos 181	Photoreconnaissance	Success
12 Oct 67	None	Vertical Scientific (2,375 n.m. altitude)	Success
16 Oct 67	Cosmos 182	Photoreconnaissance	Success
18 Oct 67	Cosmos 183	SS-X-6	Success

SOVIET CHRONOLOGICAL SPACE LOG FOR THE PERIOD 1 MARCH 1967 THROUGH 3 APRIL 1968 (*Continued*)

Date	Soviet Designation	Type	Outcome
22 Oct 67	Molniya 1/7	Communications	Success
24 Oct 67	Cosmos 184	Meteorological	Success
27 Oct 67	Cosmos 185	Maneuverable	Success
27 Oct 67	Cosmos 186	Unmanned Capsule (used in rendezvous and docking)	Success
28 Oct 67	Cosmos 187	SS-X-6	Success
30 Oct 67	Cosmos 188	Unmanned Capsule (used in rendezvous and docking)	Success
30 Oct 67	Cosmos 189	Navigational	Failure
3 Nov 67	Cosmos 190	Photoreconnaissance	Success
21 Nov 67	Cosmos 191	Scientific	Success
22 Nov 67	None	Lunar Probe	Failure
23 Nov 67	Cosmos 192	Navigational	Success
25 Nov 67	Cosmos 193	Photoreconnaissance	Success
3 Dec 67	Cosmos 194	Photoreconnaissance	Success
16 Dec 67	Cosmos 195	Photoreconnaissance	Success
19 Dec 67	Cosmos 196	Scientific	Success
26 Dec 67	Cosmos 197	Scientific	Success
27 Dec 67	Cosmos 198	Maneuverable	Success
16 Jan 68	Cosmos 199	Photoreconnaissance	Failure
19 Jan 68	Cosmos 200	Navigational	Success
6 Feb 68	Cosmos 201	Photoreconnaissance	Success
7 Feb 68	None	Lunar Probe	Failure
12 Feb 68	None	Possible Weapons Test	Failure
20 Feb 68	Cosmos 202	Scientific	Success
20 Feb 68	Cosmos 203	Navigational	Success
2 March 68	Zond 4	Circumlunar Simulation	Partial Success*
5 March 68	Cosmos 204	Scientific	Success
5 March 68	Cosmos 205	Photoreconnaissance	Success
6 March 68	None	Scientific	Failure
14 March 68	Cosmos 206	Meteorological	Success
16 March 68	Cosmos 207	Photoreconnaissance	Success
21 March 68	Cosmos 208	Photoreconnaissance	Success
22 March 68	Cosmos 209	Maneuverable	Success
28 March 68	None	Vertical Scientific	Failure
3 April 68	Cosmos 210	Photoreconnaissance	Unknown as of date of publication

* All phases of this mission appeared successful except reentry/recovery.

Soviet Space Launch Vehicles
Estimated Payloads

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