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RADIO PROPAGANDA REPORT

SOVIET OUTER-SPACE PROJECTS AND PROGRAMMING: AUGUST-NOVEMBER 1959



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9 December 1959

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Foreword

This is the fourth in a series of reports tracing Soviet propaganda on outer-space developments since the sputnik launchings. Prior reports in this series were:

RS.22 of 2 February 1959, "Moscow Propaganda on Soviet Astronautics: Indications of Problems and Forecasts of New Achievements"

CD.141 of 13 May 1959, "Soviet Outer-Space Projects: Propaganda Anticipations of New Achievements"

CD.151 of 7 August 1959, "Soviet Outer-Space Projects and Programming: May-July 1959"



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Summary

Moon Probes Pages 2-5

A moon-orbiting rocket (moon satellite) or a soft landing on the moon (with the payload intact) may be the next major Soviet space feat, if propaganda forecasts materialize.

On 4 October, shortly after the successful earth-moon-earth rocket launching, an astronomer said in a Moscow radio talk that "it is now our task" to develop a permanent artificial satellite of the moon. A subsequent broadcast explained that this would require a retro-rocket device to slow down the rocket as it neared the moon.

A soft landing on the moon--which would also require a retro-rocket device--was referred to in a 10 November broadcast as "the next stage, to come quite soon," in Soviet outer-space achievements.

Earth Satellites Pages 5-6

Artificial satellites that would serve as television relay stations continue to be mentioned fairly prominently. References to observation satellites, on the other hand, have been absent from recent propaganda. Solution of the satellite-recovery problem, discussed as a prerequisite to any manned-flight attempt, is portrayed as high on the working agenda.

Manned Space Flight Pages 6-9

Contrary to Western press reports, Soviet media have not referred in so many words to an astronaut-in-training program in the USSR (nor have they acknowledged the existence of the U.S. Mercury Project). Issue No. 42 of OGONEK in October--reported by the Western press to have disclosed the names of three Soviet astronauts in training--in fact named three participants in experiments concerned with penetrating the upper atmosphere, not outer space.

Nevertheless, the OGONEK article was one of three in the Soviet press during October that described in detail, for the first time in Soviet mass media, Soviet laboratory studies of the effects of speed, altitude, and gravitational forces on the human organism.

All three articles conveyed the idea of new progress, although none mentioned a manned-space-flight program as such. Thus the propaganda has continued to be extremely cautious. Care has been taken both to avoid raising premature expectations and to provide assurances that manned flight will not be attempted until there is absolute certainty of the astronaut's safe return.

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Soviet propaganda is cautious in discussing the timing of projected outer-space experiments. No advance notice of an actual launching date has ever been given in the mass propaganda. The most direct statement about the imminence of a launching preceded by about two weeks the first Soviet sputnik success of 4 October 1957: A PRAVDA editorial (17 September) said that "artificial earth satellites are now being made ready for launching." Subsequent propaganda made it clear that more earth-satellite launchings were impending, but was vague about their timing.

More recently, the pattern of propaganda anticipation of moon shots has been inconsistent. It was made clear in propaganda throughout 1958 that moon probes held a high priority, and it was predicted at the end of the year (two days before the cosmic rocket launching) that the USSR would send a rocket around the moon in 1959. Yet there was a lull rather than a rise in anticipatory comment about moon probes in the months preceding Lunik II. The type of launching that was to materialize in Lunik III was forecast explicitly, but the prediction as to its imminence ("the day is not far distant") was carefully imprecise.

Thus the propaganda, although unspecific about timing, has continued to present what has proved to be a fairly accurate general picture of space project priorities. It has indicated which projects were in the forefront of the space research program and has at times, though not consistently, hinted at imminent developments. Boasts about Soviet capabilities and predictions of future accomplishments have been relatively free of exaggeration and misrepresentation--a circumspection that has served to enhance the credibility of the propaganda media with regard to the Soviet space research program. In discussing manned space flight Moscow has been especially careful to avoid arousing premature expectations.

A. Preparatory Propaganda for Luniks II and III

In the period under review, the USSR achieved two outer-space rocket firings within a month: a moon-impact shot on 12 September and a "round the moon" shot on 4 October.

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For a full year beginning in May 1958--after the launching of Sputnik III--propaganda looked toward rockets that would impact, circumnavigate, or orbit the moon as a coming development in Soviet space exploration. During that period, moon shots were given the greatest amount of propaganda attention among future Soviet outer-space projects.

In a French-language broadcast on 31 December 1958, Radio Moscow predicted that the USSR would "undoubtedly" send a rocket "around the moon" in 1959. This prediction was followed almost immediately by the 2 January launching toward the moon of the rocket that eventually went into orbit around the sun.

After the 2 January rocket launching, another moon shot was pictured in the propaganda for some months as the most imminent of Soviet space experiments. Discussions of prospective moon probes continued to figure prominently in the propaganda up to May of this year. (Moscow media did not, however, carry the prediction attributed by Peking's New China News Agency to Soviet scientist Khlebtsevich that a rocket--presumably Soviet--would impact the moon before 1960.)

Between May 1959 and the firing of Lunik II on 12 September, forecasts of a moon shot became very infrequent and noncommittal as to timing. But the fact that the media singled out no other Soviet space experiment as more imminent than a moon shot indicated that there had been no basic change in project planning.

Although there was no resumption of propaganda looking toward an early moon shot in the weeks just preceding the Lunik II launching, voluminous propaganda following that success contained anticipations of Lunik III. Among the many forecasts of yet another moon shot was this statement in a Moscow home service talk on 23 September:

It can be expected that a space rocket will be launched with television equipment that will be able to transmit pictures of the ... external appearance of the moon as the rocket approaches its surface The day is not far distant when a rocket with television equipment will be able to fly round the moon, photograph it, and send the pictures back to earth.

This broadcast preceded by 11 days the launching of the rocket that transmitted pictures of the other side of the moon to earth.

B. Propaganda Hints of Coming Developments

Further Soviet moon probes are depicted in the propaganda as being close at hand, as are launchings of more advanced earth satellites.

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Rocket flights to Venus and Mars, while said to be well within the capabilities of present Soviet technology, are portrayed as more remote undertakings because of such special considerations as the need to await a favorable launching time* and to solve the problem of super-long-range radio communications. Although the propaganda has recently spoken enthusiastically about the rapid strides of Soviet scientists toward putting a man in outer space, the attainment of this goal is still represented as fairly distant.

1. Moon Rockets

The two moon-rocket projects that are portrayed as most feasible for the near future are (1) a moon-orbiting rocket (satellite of the moon) and (2) a soft landing on the moon's surface.

Astronomer Kukarkin, frequently a spokesman on outer-space topics, told the Soviet domestic radio audience on 4 October--shortly after the announcement of the firing of the earth-moon-earth rocket--that a moon-orbiting rocket would come next:

It is now our task to achieve a speed near the moon which will turn the rocket's last stage or the container into a permanent artificial satellite of the moon. Such a satellite could yield information permanently, while the third Soviet space rocket will yield valuable information only for a time and will then return to earth.

In a foreign-language broadcast on 13 October, science magazine editor V. Livantovskiy made a similar statement about Soviet intentions:

Now that we have successfully launched several space rockets, we can attempt something new. It would be interesting to launch a man-made satellite of the moon. But a rocket moving by inertia could not settle into a permanent elliptical orbit around the moon. A small rocket engine would have to be switched on for a few seconds near the moon to slow down the rocket. Then the weak gravitation of the moon could pull in the rocket to make it a satellite of that body.

* According to A. Sternfeld in the 18 September SOVIET RUSSIA, rockets to the moon can be launched on any day, but interplanetary flights "require that the planet be in a definite position, and hence are connected with the so-called navigational season."

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In a broadcast to North America on 2 November, Kukarkin was more emphatic though less precise about plans for more moon probes:

More rockets and interplanetary stations will definitely be sent in the direction of the moon. These will take more photos of the moon from different angles. Of special interest will be color photos, not only of the moon but also of other planets.

The possibility of a soft landing on the moon as the next development in Soviet outer space exploration was advanced by mathematician K. Shestoskiy, according to a 10 November Moscow broadcast to North America. In answer to a question as to what Soviet scientists planned next in exploring outer space, Shestoskiy said he believed that

the next stage, to come quite soon, will be the creation of another automatic station which would be landed on the moon intact.

2. Earth Satellites

Although the USSR has not launched an earth satellite since May 1958, earth-satellite projects of various kinds have continued to be featured in comment speculating on coming developments in Soviet outer-space research. Of earth-satellite projects discussed earlier in the year, only reconnaissance satellites are no longer singled out for comment.

Foremost among satellite projects mentioned in recent propaganda are television relay stations and satellite-recovery experiments. Scientist Siforov, for example, wrote in the 9 October IZVESTIA of the imminent use of sputniks for telecasts that would blanket vast areas of the earth's surface. "The day is not far off," he said, "when several rockets will raise sputnik-based relay stations to an altitude of 40,000 kilometers, and television signals will be relayed far and wide."

Professor S. Katayev, in an IZVESTIA article on 6 November, saw prospects for solving telecasting problems by means of earth-oriented satellite relay stations:

Only one satellite-borne transmitting station is necessary to have a telecast reach every part of Soviet territory. Such a sputnik, put into an approximately circular orbit in the equator plane some 36,000 kilometers above the earth, will hang above the earth's surface, as it were, given equality of the angular velocity of the sputnik and the earth.

Soviet scientific commentators point out that solution of the satellite-recovery problem is prerequisite to any manned flight attempt. Implying

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that the recovery problem is high on the working agenda of space scientists, President of the USSR Academy of Medical Sciences Bakulev was quoted by TASS on 4 October as saying, "It is obvious that one of the next stages in conquering space will be the return of an ejected space station to earth."

An exceptionally detailed discussion of the recovery problem was carried by the Moscow radio on 12 September. In a talk to foreign audiences on the possibility of launching manned satellites, N. Varvarov made these remarks about the problem of recovery:

Current research is aimed at recovering the whole sputnik, both the shell and its contents, or at least the jettisoned equipment in cases when the data recorded by the scientific instruments in question cannot be transmitted to earth by radio.

There are two known methods for retarding the speed of a descending space ship: by countering its motion with the reverse propulsion of a jet engine, and by utilizing the retarding force of air resistance. The first method requires a lot of fuel, and the second is dangerous because the flying ship gets too hot. It is likely that a solution will be found in a rational combination of both methods.

3. Manned Space Flight

Soviet propaganda looking toward manned space flight continues to be cautious and circumspect. Emphasizing the health and safety problems, Soviet scientific spokesmen reiterate earlier admonitions against too much haste in preparing for manned flights. In a SOVIET AVIATION article on 15 September--shortly after the successful moon-impact shot--Prof. Kukarkin, vice president of the International Astronomical Union, reiterated the now-standard assurance that "no man will fly in space rockets until his life, health, and safe return to earth are guaranteed." This, Kukarkin said, is the reason for the intensive Soviet program of experiments with animals.

Similarly, President of the USSR Academy of Medical Sciences Bakulev wrote in the 9 October MEDITSINSKIY RABOTNIK that "manned flights beyond the earth's atmosphere will be possible only when Soviet scientists are absolutely certain that the health and life of the space-ship crew is not in danger."

TASS on 10 October quoted Professor Sedov as saying that the "necessary technical conditions for manned space flights have not yet been created."

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Sedov emphasized that it "will not be easy to organize" manned flights to other celestial bodies and that "any haste is out of the question." Mathematician K. Shestoskiy expressed a similar view, according to a Moscow broadcast to foreign audiences on 10 November. Stressing that "it is most important not to rush into launching a man into outer space," Shestoskiy said there will be "a whole series of preliminary unmanned flights," and "that is the next stage in our work."

No Direct Reference to Astronaut-in-Training Program: Contrary to Western press reports, Soviet media have not yet directly referred to an existing astronaut-in-training program in the USSR (nor have they acknowledged the existence of the U.S. Mercury Project). Issue No. 42 of the popular weekly OGONEK--reported in the Western press in mid-October to have disclosed the names of three astronauts in training--actually referred to experiments concerned with penetration of the upper atmosphere, not outer space. The experiments may in fact be related to a man-in-space project, but the article did not say so.

Nevertheless, the OGONEK article was one of the first in the Soviet press to discuss in detail laboratory studies of the effects of speed, altitude, and in particular G-forces on the human organism. Similar articles, similarly accompanied by photographs of test chambers and men in protective flying gear, were carried in the 14 October SOVIET AVIATION and the 21 October KOMSOMOLSKAYA PRAVDA. Like the OGONEK article, they made no direct reference to the outer-space program. Thus, while the publication of these articles may be intended to convey the impression that the USSR is moving rapidly toward solution of the problems involved in putting a man into outer space, an apparent effort is being made not to encourage premature expectations of a manned space flight attempt.

Soviet scientists at international meetings have for the most part made guarded statements entirely consistent with the propaganda media's circumspection, and have even explicitly denied stories about Soviet astronauts in training.* One Soviet scientist,

* According to a 26 November New York TIMES report on the meeting of the American Rocket Society in Washington last month, Soviet rocket experts attending the meeting declared "that the Soviet Union had no man-in-space program as such, but rather only a general research program into the problems of space flight." When asked about "stories that had emanated from the Soviet Union concerning Soviet astronauts-in-training," Prof. A.A. Blagonravov reportedly "dismissed the stories as the result of journalistic imagination."

At a press conference held in connection with the Washington meeting, Professor Sedov reportedly said that the USSR had no plan or

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however--Academician Andrei Kuznetsov, who headed the Soviet delegation to the Second World Congress of Aviation and Space Medicine--did lead reporters to believe his country had trained a man for space flight: ~~REUTERS~~ quoted him as having said in Rome on 29 October, "I cannot tell you for certain and it is only my personal opinion, but I believe the man himself is ready." Soviet media did not report this remark. In general they have steered clear of citing any remarks, even cautious ones, about the imminence of manned space flight.

target date for placing a man in space in the near future. He was said to have stressed that the problems of assuring the safe return of a man from space were "a long way from practical solution." This statement was consonant with a remark by Sedov at a London press conference on 1 September. Sedov denied that the USSR had tested any capsules for manned flight and told reporters that it was impossible at that time to predict when a manned space flight could be undertaken. He also denied that the USSR had selected any "special men" to train for a manned space probe.

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