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Chapter 17

The First Soviet Space Flight Organizations*

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In the early 1920s the works of K. E. Tsiolkovsky, R. H. Goddard, H. Oberth, R. Esnault-Pelterie, and other scientists who were developing the theory of spaceflight made the idea of the possibility of such flight to celestial bodies widespread. Scientific works and fiction devoted to this topic were published in different countries. Attempts were made to create different organizations from people who were interested in these problems.

In the Soviet Union the issue of the creation of such an organization was raised by the Soviet rocketry pioneer F. A. Tsander. In January 1924 he formulated the urgent need to constitute the Society of Researchers and Enthusiasts of Interplanetary Travels. He made it in his speech presented at a meeting of the Theoretical Section of the Moscow Society of Enthusiasts of Astronomy.¹

In April of that year the Section of Rocket Propulsion (Section of Interplanetary Connections—in some sources) was created within the Military-Scientific Society of the N. E. Zhukovsky Air Force Academy. This section made its goal to unite all the people working on this issue in the Soviet Union, to get as

* Although this paper was scheduled to be presented at the Thirty-Fourth Symposium of the International Academy of Astronautics, Rio de Janeiro, Brazil, 2000, it was not actually presented due to severe illness of both authors. It is being included in these proceedings as a tribute to the authors, since they have both passed away before the publication of this volume. For more details about the authors, see the pages which follow this paper.

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much Western information on comparable works as possible, to spread correct information about the current works on interplanetary connections, and also to publish and to perform independent research.²

The section decided to establish a competition on the best project of a small rocket to study the upper atmosphere. The section did serious research work on in-depth theoretical questions of interplanetary connections. The section comprised 25 members. It had close connections with Tsiolkovsky. A number of presentations including those of V. P. Vetchinkin and F. A. Tsander were delivered at the section's meetings.

The primary goal of the founders of the Section of Interplanetary Connections was to recruit as many researchers and engineers as possible. As mentioned above, they planned to start research and promotion activity. A monthly magazine on the problems of spaceflight and rocketry was planned to be published. Members of the section understood that they did not have enough resources to reach all the goals they had marked. Wide support from the scientific and engineering community was needed. That was especially true for the creation of a laboratory for rocket engine design, which would be a major step in the practical implementation of the section's plans. The section was to become a broader and more representative organization.

All these events prepared the ground for such a society. On 30 May 1924, M. Ya. Lapirov-Skoblo made a presentation titled "Interplanetary Travels (How Science and Technology Solve the Problem)" at the Big Hall of the Polytechnics Museum in Moscow. After the presentation a list of presenters willing to become members was composed at the Hall. More than 200 people joined the list on the first day. Many researchers, engineers, and politicians, including V. P. Vetchinkin, F. E. Dzerzhinsky, G. M. Kramarov, M. Ya. Lapirov-Skoblo, Ya. I. Perelman, F. A. Tsander, and K. E. Tsiolkovsky, became members of the society.

On 20 June of the same year, the first gathering of the society was conducted. The charter of the society was approved and the chair was elected. G. M. Kramarov was chair; M. G. Leiteisen was secretary; and F. A. Tsander, V. P. Kapersky, M. A. Rezunov, M. G. Serebrennikov, V. I. Tchernov were members. The society unanimously voted to elect K. E. Tsiolkovsky as the Honorable Chair of the society. The adopted charter stated, among other paragraphs:

1. The main goal of the Society is to endeavor beyond-atmosphere flights using rocket propulsion and other scientifically proven means.
2. In pursuing this goal the Society works on:
 - (a) Independent research work;

(b) Unification of all the persons on territory of the U.S.S.R. which work in the field of interplanetary travels and/or develop related scientific problems;

(c) Collection of all the related information available from Western sources;

(d) Spreading correct information about the current situation in research of interplanetary travels. With this purpose in mind, the Society shall prepare lecturers, presentations, establish libraries, exhibitions, publish popular and scientific original and translated literature.

3. The Society does not establish implementation of an interplanetary flight as an immediate goal. The Society tries to solve problems associated with use of technical means mentioned in reference 1. Those include: high altitude research, high altitude flights, further development of rockets, design and development of high efficiency rocket engines, etc.³

A member of the Bureau, V. I. Tchernov published an article in newspapers describing the main goals of the society:

1. Unite all researchers and inventors working on this topic, and also all citizens of the U.S.S.R. interested in the topic;
2. Contact Dr. R. H. Goddard (USA) and Prof. H. Oberth (Germany);
3. Join the efforts, in faster possible realization of ideas on interplanetary travel. That could be done via creation of a volunteer laboratory, raising funds, and testing of small-scale rockets;
4. Go public via printed media, clarifying the ideas and making them popular.⁴

The society had more than 200 members, as mentioned above. It consisted of three sections: science and research, popular science, and literature and propaganda. Members of the society delivered public lectures, the propaganda activity focused on the idea of interplanetary travel. On 15 July the organizational meeting of science and research (rocketry section) was opened by the program speech of F. A. Tsander, chair of that section.⁵

Tsander formulated the primary goals of the section. In his opinion, these goals should include theoretical research works, design and development of elements of projects, and practical laboratory works for testing theoretical conclusions and proposals. He stressed that these activities should be closely connected.

Tsander also outlined several immediate goals of the section, including:

- Tests of small rockets on different types of fuel (he believes that announced competition of projects of rockets for upper-atmosphere research would foster further development of such a rockets);
- Manufacturing and tests of models of planes propelled by rocket engines;
- Manufacturing and tests of rocket engines on liquid fuel including liquid oxygen;
- Tests of high-altitude suits and many other tasks including design of “glass house of aviation lightness,” tests in aerodynamic tubes, tests of atmospheric air as an additional fuel component, tests of ultra thin film for solar pressure measurements, etc.

There was a clear understanding that the society needed its own magazine and this inspired the management of the society to start preparatory work on publishing a *Raketa* (Rocket) magazine. The idea of this magazine first emerged in the Section of Interplanetary Connections of the Air Fleet Academy. On 21 May the Secretary M. Leiteisen of the section sent a letter to K. E. Tsiolkovsky. He wrote that the section was struggling to start publishing a magazine on problems of space exploration and asked Tsiolkovsky to send an article of appropriate format for a new magazine.⁶ On 31 May after the Society of Exploration of Interplanetary Travels (OIMS—Russian acronym) was created, Leiteisen wrote a more focused letter. Tsiolkovsky congratulated them with success and promised to send his new work titled “Life in Space Ether.” Besides Tsiolkovsky, other authors for the first issue included F. A. Tsander, V. P. Vetchinkin, and M. A. Rezunov. Everything was ready for publishing the first issue of the magazine that tentatively was titled *Raketa*. Mozharovsky, member of the society, prepared the draft cover. It portrayed stars on a black sky and a rocket with a fire jet from its tail. Despite these efforts, members of OIMS could not overcome numerous obstacles related to the process of publishing a magazine. Even the first issue was not published. The plans did not materialize. The society was not approved officially. It was considered untimely. It lingered for a short period of time and had to cease all its activities.

Historians who studied the history of the Society of Exploration of Interplanetary Travels raised the question many times whether this attempt was untimely, not being prepared by existing levels of science and technology and therefore stillborn. It is true that the entity did not possess adequate resources and funds for serious research work and laboratory tests. It is also true that the society

absorbed many accidental members, since most of those joining the society in 1924 never contributed to the development of rocketry in any way.

It was extremely difficult to count on even modest success, given the lack of state support. After less than one year, the society ceased its activity. At the same time, there is no doubt that it played a certain role in promoting the ideas of spaceflight and in identifying people interested in those problems. Connections were established among people who had worked in complete isolation in this new scientific and engineering field. A number of members of the society took part in the creation of the Group for Studies of Rocket Propulsion and other public organizations working on the development of rocketry in the Soviet Union.

Besides the Society of Exploration of Interplanetary Travels, several groups of enthusiasts promoted ideas of spaceflight in the Soviet Union. In 1925 the scientific group for studies of the universe was created in Kiev. Academician D. A. Grave became the head of the group. E. O. Paton, B. I. Sresnevsky, and other researchers and engineers joined the group.⁷ The Kiev group prepared (together with the section of the Kiev Society of Engineers and Technicians) an exhibition on problems of exploration of interplanetary space. The exhibition opened on 19 June 1925. Unfortunately, the data on activities of the Kiev group is scarce and not much more can be added than the information mentioned here.

The “First International Exhibition of Models of Interplanetary Crafts and Mechanisms” was conducted in Moscow from April to June 1927. A group of enthusiasts from the Association of Inventors organized the exhibition. In 1926 they also created a sector of propaganda and promotion of ideas of interplanetary flights.⁸ The exhibition reflected the scientific and technological works of numerous Soviet and foreign scientists, engineers, and researchers working on solving problems related to spaceflights. Works of K. E. Tsiolkovsky, R. H. Goddard, H. Oberth, F. A. Tsander, W. Hohmann, M. Valier, and others were presented. Models of rockets designed by Tsander, Esnault-Pelterie, Valier, Ulinsky, and others were also presented.

In 1929, a Scientific Section of Interplanetary Connections was created at the Leningrad Institute of Transport Engineers. N. A. Rynin, Ya. I. Perelman, and other specialists from Leningrad worked in this section. Another scientific group for studies of the feasibility of interplanetary connections and studies of rocket propulsion was created at the Leningrad Polytechnics Institute. It comprised graduation students from aviation chambers including I. F. Goncharov, N. I. Efremov, G. L. Lvanov, G. A. Molukov, V. A. Fedulov, and others.

The facts and features portrayed in this article clearly show the role of the Society of Exploration of Interplanetary Travels and of other sections and groups on studies of problems of spaceflights and rocketry that were created in the So-

viet Union in the 1920s. These groups and other public organizations could not start practical implementation of their concepts at that time. It is important that they played critical roles in the promotion of ideas about spaceflight in public, and in making interest in these problems widespread.

References and Notes

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- ² *Tekhnika i Zhizn*, 1924, N 12, p. 1.
- ³ Copy of OIMS Charter, personal archive of the chair of the Society, G. M. Kramarov.
- ⁴ V. Tchernov, *Society of Researchers of Interplanetary Travels* (Iskra, 1924), N 8, p. 35.
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- ⁶ Letter from M. Leiteisen to K. E. Tsiolkovsky, RAN Archive, F. 555, op. 4, N. 356.
- ⁷ The information on the Kiev scientific group is based on the letter of the chair of that group A. Ya. Fedorov, the secretary A. Lobak, and a member of the board A. Korsakova addressed to K. E. Tsiolkovsky (16 August 1925). RAN Archive, razr. 4 op. 14, d. 195, pp. 10–12.
- ⁸ The information on the exhibition is based on the memories of the exhibition's organizers. RAN Archive, razr. 4 op. 14, d. 198.