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## Chapter 13

PAGES FROM THE HISTORY OF  
THE HUNGARIAN ASTRONAUTICAL SOCIETY\*

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Dealing with the history of the host society of the 34th International Astronautical Federation Congress--first of all--we have to summarize some data about the activities of outstanding Hungarian scientists and engineers in the field of rocketry, jet propulsion and astronautics.

In the middle of the 19th Century the accomplishments of Lajos Martin (1817-1897) were of considerable importance in the domain of rocketry. In the second decade of our century the "aerial torpedo", a ramjet design of Albert Fonó (1881-1972) is worthy of note. Later, in 1928, preceding any other inventors, Fonó got the first patent in the world of the jet drive for airplanes. A good deal of effort was made in Hungary in the thirties to develop war-rockets. Zoltán Bay (1900- ) and his co-workers in the Tungsram Laboratory developed special radar equipment from 1944 in order to get echo-signals from the Moon. This group of Hungarian scientists achieved success in February 1946.

The achievements of Tsiolkovsky, Goddard and Oberth became known in Hungary in the 1920s. Getting acquainted with some of their works popularized astronautics. In this activity, the Stella Astronomical Association (*Stella Csillagászati Egyesület*) and the Hungarian Society of Natural Sciences (*Magyar Természettudományi Társulat*) took a principal part.

Many years later the successor of the said associations, the Society for the Dissemination of Scientific Knowledge (*Tudományos Ismeretterjesztő Társulat*), adopted the idea of astronautics in Hungary again.

## THE HUNGARIAN ASTRONAUTICAL COMMITTEE

In the mid-1950s it became clear that the first artificial satellites were approaching. An initiative originated from the astronomical section of the Society for the Dissemination of Scientific Knowledge to set up a committee of astronautics as

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a basis for a later scientific society. In May 1956 the Hungarian Astronautical Committee, the predecessor of the present society, was instituted by a small group of physicists, astronomers, engineers, meteorologists, physicians and lawyers.<sup>1</sup> In those days, the propagation of astronautical knowledge was the main task of the committee. Some committee members composed the first Hungarian book about astronautics published in 1957.<sup>2</sup>

The orbiting of the first satellites aroused exceptional interest in Hungary. The committee had to meet increased demands for scientific lectures for the general public. Apart from the lectures, the committee members took an active part in giving information on matters concerning astronautics to the press, radio and television.

At this time, the work of the committee more and more exceeded the initial tasks. Various new members joined the committee. With the participation of several old and new committee members, permanent satellite tracking commenced in Hungary using both optical and radio observation methods.

In this early period, two late members of the committee distinguished themselves by their pioneering activity: The first radio tracking experiments in Hungary were realized by Endre Magyari (1900-1968), the first Hungarian research in the field of space medicine is linked with the name of Emil Galla (1909-1959). In 1958 the first astronautical conference in Hungary was organized by the committee.

## THE HUNGARIAN ASTRONAUTICAL SOCIETY

The enlarged tasks demanded the institution of an astronautical society to continue the work of the former committee within a broader range. In its present form, the Hungarian Astronautical Society (*Magyar Asztronautikai Egyesület*)--a scientific body affiliated with the Federation of Technical and Scientific Societies (*Műszaki és Természettudományi Egyesületek Szövetsége*)--was set up in December 1959. Academician Albert Fonó was elected president of the society. Although the prominent scientist was approaching his eighties in those days, he never regarded his position as a mere formal charge. He participated very actively in the everyday work of the society until the end of his life.

According to the program accepted in the statutory meeting, the main mission of the society is "to focus the attention of its members on those timely problems of astronautics which are acceptable to Hungarian science and which contribute to the peaceful uses of outer space."

The first years of the Hungarian Astronautical Society coincided with the speedy progress in space activities. The subsequent successes in spaceflight, the astounding new results in space research, space biology and space technology excited worldwide interest. Gradually these spheres of astronautical activity were definitely formulated in which Hungarian specialists could take an effective part. Under these conditions, the size of membership was well over a hundred in the early 1960s.

Two eminent leading members left their mark on the development of the society in its initial years. Ernő Nagy (1917-1969) held the secretary's office in the years 1959-1964, and György Érdi-Krausz (1899-1972) served as acting secretary from 1964 until his death. Ernő Nagy gained great distinction through his literary pursuits in astronautics. He delivered the first university courses in Hungary about the physics of rocket propulsion. György Érdi-Krausz concerned himself with astronautics and its associated sciences since the 1920s. He was a distinguished specialist in geodesy; his device, a nomographical system for transformation of coordinates (Navicard), was widely put in practice by astronomers in the course of optical satellite-tracking operations.

The Hungarian Astronautical Society suffered grievous losses on account of the death of both its president and its acting secretary in 1972. Under the presidentship of Iván Almár, the board of the society was reorganized in January 1973. At the same time, the organizational structure of the society was changed too; working committees and local sections were established. It is noteworthy that the organizational changes were demanded also by the accelerated development of astronautical activities in our country.

Owing to the recent Hungarian results in the domain of astronautics and the success of the first Hungarian spaceflight, with the participation of further specialists in space sciences, the board of the society was renewed again in January 1982. Some new working committees and local sections were formed.

Besides the center of the society in Budapest, local sections are active now in four other Hungarian towns: in Baja, Debrecen, Kecskemét and Sopron. The various working committees operate at present in the field of satellite geodesy, space biology and medicine, remote sensing, exploration of the Solar System, space technology, space law and the history of astronautics.

Commemorating the late leading personalities of the Hungarian Astronautical Society, the Federation of Technical and Scientific Societies established two memorial plaques: that for Albert Fonó and Ernő Nagy. The two Hungarian cosmonauts, Bertalan Farkas and Béla Magyari, were honored for the first time with one of the above-mentioned awards in 1980.

## **THE ACTIVITIES OF THE SOCIETY**

Because of its program, our society organized from the beginning different membership meetings, various public lectures, and motion picture presentations concerning astronautics. Apart from these, the society--chiefly in its recent period--has been the organizer or co-organizer of bigger special or general programs too: About forty conferences, symposia, colloquia, seminars and other scientific meetings have taken place between 1967 and 1983, some of them with the participation of foreign scientists and cosmonauts.<sup>3</sup>

Many lectures were conducted by the society. Various members displayed remarkable literary activity. The informatory publication of the society, *Asztronautikai Tájékoztató* has appeared since 1961. Altogether 38 numbers were published till now. We must emphasize our latest contribution to astronomical literature: a comprehensive special encyclopedia: *Űrhajózási Lexikon*, which came out in 1981.<sup>4</sup>

An interim commission of the Hungarian Astronautical Society has concerned itself with the problems of Hungarian space terminology between 1963 and 1968. Among other things, this commission worked out the Hungarian version of the Sanger Decimal Classification of Astronautics.<sup>5</sup> We compiled a special Decimal Classification of Satellite Geodesy, top.<sup>6</sup> A collection of astronomical abbreviations and acronyms was published in 1964.<sup>7</sup> Our society contributed to the organization of some astronomical exhibitions in the Hungarian Transport Museum, the Hungarian War History Museum, and the Budapest Planetarium.

In 1959, at the 10th International Astronautical Federation Congress, the Hungarian Astronautical Committee was represented and its delegate was acknowledged as an observer by the General Assembly of the International Astronautical Federation (IAF). The observer's status was retained in the following congresses. The Hungarian Astronautical Society became a voting member of the IAF at the 13th Congress in 1962.

In the past two decades, the society has taken part in the annual IAF congresses, International Academy of Astronautics (IAA) symposia and International Institute of Space Law (IISL) colloquia. More than fifty Hungarian papers were read at these programs. Several members of our society are active in the organs of the IAF, IAA, and IISL.<sup>8</sup> Many of our members engage in the activities of the Hungarian National Committee of COSPAR. It is worthy of note that the 23rd Plenary Meeting of COSPAR was held in Budapest in 1980.

## THE PRESENT AND THE FUTURE

For the time being the active membership of our society amounts to about 300. A considerable number of our members are engaged in doing work in one or other field of astronautics, chiefly in the framework of the Intercosmos Program.

The history of nearly three decades of the society reflects the imposing advance of astronautics. This course of events accelerates incessantly. The Hungarian Astronautical Society does everything possible to promote the increasing contribution of Hungarian science and technology to the further progress of astronautics as well as expedite the practical applications of space results in Hungary.

## REFERENCES

- Almár I.: A MTESZ Központi Asztronautikai Szakosztályának története és jelenlegi működése, *Csillagászati Évkönyv* vol. 1976, pp.109-114.
- Nagy I. Gy.: A Központi Asztronautikai Szakosztály története, *Asztronautikai Tájékoztató* 31, (1976), pp. 3-19.

## NOTES

1. Cf. the secretary's report on the statutory meeting of the Hungarian Astronautical Committee by I. Almár in *Csillagok Világa* vol. 1956. pp.149-152.
2. *Az űrhajózás* by I. Almár, L. Aujeszky, E. Galla, I. Gy. Nagy, J. Sinka. Editor: A. Kutas-Péter.
3. General programs:  
Astronautical Symposium (1967, 1971, 1976, 1981),  
Conference on Some Timely Problems of Astronautics (1972).  
Special programs:  
Seminar on Physics of Ionosphere and Magnetosphere of the Earth (1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982);  
Conference on Space Medicine (1973);  
International Symposium on Satellite Observations (1974);  
Symposium on Remote Sensing (1974, 1976, 1978, 1980);  
Seminar on Satellite Geodesy (1975, 1977, 1981);  
Conference on Satellite Geodesy (1982);  
Colloquium on Planetology (1977, 1978, 1982, 1983);  
Symposium on Physics of the Upper Atmosphere (1977, 1981);  
Seminar on Geodesy and Geodynamics (1978);  
International Symposium on Solar Physics (1977);  
International Conference on Cometary Exploration (1982).
4. Editorial Board: I. Almár (editor-in-chief), T. Echter, Cs. Ferencz, A. Horváth (editor), M. Ill, I. Gy. Nagy, Gy. Szentesi.
5. *Asztronautikai Tájékoztató* 13 (1966).
6. *.Ibid.* 15 (1967).
7. *.Ibid.* 9 (1964).
8. The participation of members of the Hungarian Astronautical Society in different, IAF, IAA, and IISL offices:  
I. Abonyi - IAF International Program Committee member 1978-1980;  
I. Almár - IAA corresponding member since 1980, IAF Vice-President since 1982;  
Gy. Barta - IAA corresponding member since 1973;  
A. Fonó - IAA corresponding member 1968-1972;  
Gy. Gál - IISL member of the Board since 1979;  
T. Gánti - IAF Bioastronautics Committee member since 1978;  
I. Herczeg - IISL member of the Board 1962-1978;  
J. Hideg - IAF Bioastronautics Committee member since 1980;  
Gy. Marx - IAA corresponding member 1968-1979, member since 1979, IAF Vice-President 1974-1976;  
I. Gy. Nagy - IAA History of Astronautics Committee member since 1979.