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Chapter 1

Teófilo M. Tabanera (1909–1981): The Divulger*

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Introduction

The Argentinean engineer, Teófilo M. Tabanera, is credited as being the first and principal disseminator of space activities in Argentina and South America. He was the only Latino American signatory of the Foundation Act of the International Astronautical Federation, was one of its vice presidents for seven consecutive periods, and was president of several of its committees. He was also a founder of the International Academy of Astronautics (IAA), created within the same.

He held important positions in several organizations related to electricity and petroleum, and, in 1930, he published a pioneering article about the future of space travel. In 1945, Teófilo M. Tabanera was the first Argentine member of the British Interplanetary Society (BIS) and later, of the American Astronautical Society (AAS). He was a founding member and president of the Interamerican

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The advance of science, especially in modern times, needs an ambiance of favorable specific knowledge, hence the importance of popularization of its objectives and achievements. Teófilo M. Tabanera lectured widely, especially on all subjects of astronautics and education via satellites, one of his main subjects. A tireless promoter of joint space ventures in South America, especially through the use of satellites for remote sensing, agriculture, and education, he was a nominated member of most of the organizations devoted to such studies in the area.

Studies, First Works and Teaching

Tabanera was born on 30 December 1909 in San Rafael, Province of Mendoza, Argentina. After his primary and secondary studies in Mendoza, he graduated in 1936 as a mechanical and electrical engineer from La Plata National University in the Faculty of Physical and Mathematical Sciences.

Later, postgraduate studies on pipelines and electricity were taken in the United States and Germany. During the 1930s and 1940s, he held different management positions at the National Petroleum Company. During that time, he directed the construction of several pipelines, the most notorious La Plata—Buenos Aires, and several electricity lines. He then became technical manager and sub general manager of the State Gas Company. Later, and until his death in 1981, he continued serving in different private oil and electricity companies. In the years between 1948 and 1952, Tabanera was a professor of transportation technology in the Physical and Mathematical Sciences department of La Plata University. Furthermore, he was a visiting professor at the John Kennedy University in Argentina, lecturing on subjects of his specialty in Argentina and South America, most of them related to space activities.

Tabanera and Space Activities

Although Tabanera's official space activities began in early 1950, his interest in space went back earlier, when space travel was considered purely as science fiction. In 1930, in the magazine *Mendoza, Revista Ilustrada de Actualidades* (*Mendoza Illustrated News Magazine*),[1] he wrote "La Luna nos espera" ("The Moon is waiting for us"). With a pioneer mind, he said: "Before what we imagine, the Moon will be reached. This world is too small for us; we must search expansion outside." Later he made a comparison easy for Argentineans to

understand: "Before making the first railway Mendoza—Buenos Aires, we made a short one Buenos Aires to Palermo[2]; arriving to the Moon, will give us certainty of reaching Mars and beyond.... Let's try first our natural satellite, that maybe show us a lot of surprises; throwing away, maybe some of the investigations made through telescopes." He finished with encouraging words, as it was his life: "To my view we need little time to solve all the details, choose the best method and decide when to begin the trip. From now on, I will accompany the first." These were brave words, sure to be seen as crazy for many readers of a province magazine.

Beginning in 1947, Tabanera began his work as a disseminator of space activities with his first book on the subject *Space Exploration,* in which he exposed his current ideas.[3] Later he continued with *What is Astronautics?* (1952)[4]; *Man Faced with Space* (1964)[5]; *Satellites and Education* (1971)[6] and his last publication, *Argentine Before the Challenge of the Third Millennium* (1979)[7]; all in Spanish.

Tabanera collaborated and co-edited other works, such as *Space Sciences and Technology* (Academic Press, United States); *Advances in Space Sciences* (Pergamon Press, United States); *Raumfahrt Wohin?* (Bechtle Verlag, Germany); and *Astronautical Multilingual Dictionary* (International Astronautical Academy, Paris) in English and German. In 1945, he became the first Argentine member of the British Interplanetary Society. At the first meeting of the future International Astronautical Federation in Paris, 1950, he was the author of one of the seven papers presented. The title was "Usefulness of Satellites."

In the following congress (London, 1951), he was the only Latin American signatory of the foundation act of the IAF and became one of its vice presidents for seven consecutive years. Later he was a founding member of the International Academy of Astronautics. Always present at the IAF Congress and Committee on Space Research meetings, he chaired various committees, especially on telecommunications and educational satellites. In addition, he was Argentine's delegate to the Committee on the Peaceful Uses of Outer Space and at the United Nations Educational, Scientific, and Cultural Organization. He was present at all the Apollo launches and the first launch of the Space Shuttle *Columbia.*

In Argentina, in 1948, Tabanera was the founder and first president of the Argentine Interplanetary Society, later Argentine Association of Space Sciences. This organization published, during a period of ten years, the only monthly magazine on space subjects in South America. He was also the president of the National Commission for Geo-Heliophysical Studies and founder and president of the Interamerican Committee on Space Investigations. He was also the founding member of the National Newberian Institute, devoted to aeronautical and

space history. These memberships made him a member of almost all space organizations in South America.

The Divulger

Since his first article, published in 1930 (besides his studies and technical contributions on oil, gas, and electricity), it can be said that Tabanera was "the right man, at the right place," for the dissemination of space activities in Argentina and South America.

With a permanent presence at all international meetings and in contact with the most important people devoted to the subject, he began to divulgate the information and knowledge he acquired. His pocket-size book *What is Astronautics?* (1952) was a best seller with multiple editions. In such a little and important book, the author explained, in daily language, the possibilities and future of space activities. First, he began by placing the reader in space scenarios, and then in 12 chapters he explained the basic knowledge of rocketry, motors, different types of propulsion, satellites, the future of space stations, and humans in outer space. Most readers became space addicts because of this book.

Several papers in Argentina and other South American countries, published his contributions, always with the same purpose. A good example is his contribution "The Four Elements of the Shuttle" [8] in which he explained all the elements of this vehicle and their purposes. Having created a real conscience on the matter, Tabanera devoted time to organize studies in the field of space science in his country. His efforts finally arrived at the organization of the Comision Nacional de Investigaciones Espaciales, of which he was the first president.

Tabanera and Education via Satellites

At the 1969 Vienna meeting of the United Nations, he lectured on teleeducation in the Spanish South America. Then in 1969, at the IAF Congress, he presented a paper on teleeducation and chaired the committee. This subject would be, until his death, the most important for him.

He wrote in *Satellites and Education,* after an evaluation of the impact of technology in life, "The pressure of new requirements and the changes in education, faced the need for new education techniques." From then on, after analyzing the development and importance of television in education, he understood the

importance of satellites for a wide coverage, particularly in remote zones, as is common in South America.

Then, with a remarkable anticipation for the time, in 1971, Tabanera studied the best way to organize such devices and the need for special education programs, supporting documents, and education of professors. With respect to the work of international organizations, his presentations at several IAF Congresses and to its committees were of real importance.

Conclusion

Teófilo M. Tabanera was a remarkable person. With an open mind for new events, he dedicated his life to the advancement of science. He believed in all new forms of education and that education was the best way to improve quality of life, especially in South American countries.

On the occasion of his death, one of the principal Argentine newspapers said "The disappearance of Ing. Teófilo Tabanera implies for our country the loss of a lucid observer and an intelligence visionary who attempted, using methods within his reach—particularly through the wisdom of his reflective writings—to bring knowledge that put his country on a basis of equity and justice within the world's scientific and technological community."[9]

In Tabanera's obituary, Frederick I. Ordway III said "Teófilo Tabanera's sterling qualities of gentlemen, friend, husband and father, ardent apostle of space flight, and tireless investigator will serve as an example to be emulated for decades to come."[10]

References

[1] *Mendoza, Revista Ilustrada de Actualidades*, Año I, N.9 y 10 (10-11-1930).

[2] More than 1,000 km as compared to 15 km.

[3] Ed. Sol (1947).

[4] Ed. Columba (1952).

[5] Ed. Atlántida (1964).

[6] Ed. Estrada (1971).

[7] Ed. Ateneo (1979).

[8] *La Nación* (10 Abril 1951).

[9] *La Nación* (30 Junio 1981).

[10] *Acta Astronautica*, V. 9, N. 3, p 17.