

EPILOGUE

Michael D. Papagiannis
Department of Astronomy
Boston University
Boston, MA 02215, USA

The publication of this Volume brings to completion a very exciting seven year period. It started in the summer of 1978 when we began planning for the activities of the forthcoming IAU General Assembly in Montreal in 1979. In response to an inquiry for suggestions by Dr. R.M. Bonnet, the President of Commission 44 - Space Astronomy, I proposed to organize a one-day Session on "Strategies for the Search for Life in the Universe", though I felt that this suggestion was a very long shot because the IAU was generally perceived as too reserved for such avant-garde subjects. To my surprize it was not rejected and I was encouraged to proceed. Toby Owen, the President of Commission 16 - Physics of Planets, who was then working on a book on the Search for Life in the Universe, came to my support. We also won van der Laan, the President of Commission 40 - Radio Astronomy, and the rest is history. The meeting at the 17-th General Assembly (1979) was very successful, the Proceedings were published by Reidel (1980), we formed the new Commission at the 18-th General Assembly (1982), we held with great success our first IAU Symposium (1984), and we published the Volume of the Proceedings (1985) as we march toward the 19-th General Assembly when my term as the first President of IAU Commission 51 will be completed. I am deeply gratified that what started as a long shot idea is now a vigorous reality, an IAU Commission with more than 250 members which I am sure will continue to grow and prosper under the capable new leadership of Frank Drake and George Marx.

It is interesting that this first term of our new Commission coincided with several anniversaries of great importance to the objectives of our Commission. In 1982, e.g., we celebrated the 50 years of Radio Astornomy from the time Karl Jansky discovered at Bell Labs radio noise from the galactic center. We also celebrated the 25 years from the launching of Sputnik in 1957, which opened the doors of the space era. In 1984 we honored Philip Morrison during our Symposium for the 25-years from the publication in Nature in 1959 of the historic paper by him and Cocconi that made the first strong appeal for an experimental Search for Extra-Terrestrial Intelligence (SETI), and in

557

M. D. Papagiannis (ed.), The Search for Extraterrestrial Life: Recent Developments, 557-559.
© 1985 by the IAU.

1985 we are celebrating the 25-th anniversary of Project OZMA, the first SETI project carried out by Frank Drake in 1960 at NRAO.

It is indeed mind-boggling to think of how far we have come in such a short time. From Jansky's wooden contraption on motorcycle wheels to the VLA with its 27 fully steerable antennas on 30 kilometers of railway tracks, in less than 50 years. From the first airplane of Orville and Wilbur Wright to Sputnik in just over 50 years, and from Sputnik to man on the Moon in just a dozen years. Finally it has been only 25 years from the single channel receiver of Frank Drake's Project OZMA to the 8 million channel spectrum analyzers now under construction.

Frank Drake, like all pioneers, would have been hard pressed to imagine in 1960 the technological progress that was to follow in the next 25 years, but even if he could, I am sure he would have still carried out his search then rather than wait, because we simply do not know in advance the level of technology that is needed to make a major discovery or to achieve a new conquest. Should the brothers Wright have waited for the discovery of the jet engine before trying for their first flight? Obviously no, since they managed to achieve their goal even with their primitive biplane. Others tried and failed, but even these failures help build up the momentum for future successes. In 1883, e.g., Sir Oliver Lodge tried to detect radio noise from the Sun by hiding a primitive radio receiver behind a blackboard. He was not successful and blamed his failure to terrestrial interference from the busy streets of Liverpool. The first real detection of solar radio radiation occurred 50 years later in 1942. It is, however, frontrunners like Sir Oliver Lodge that open the road for an eventual success and higher technology. It was the pioneering work of Robert Goddard, Konstantin Tsiolkovsky and Werner von Braun that paved the way to the first Sputnik and to having now Pioneer getting ready to leave our Solar System and become the first man-made objects to travel in the Galaxy.

We live in a very strange period, an era full of splendid opportunities but also of grave dangers. It is a unique privilege to have been around to see the first airplanes, the first radio telescopes, the first satellites, and the first men on the Moon. It is even more exciting to have been part of these efforts. But we have also witnessed the first atom bomb and the first hydrogen bomb. Let us hope that we will have the wisdom to maximize the opportunities and to minimize the dangers. There is a glorious future of new discoveries and new knowledge ahead of us, and certainly trying to find out if life and especially life with intelligence and technology is ubiquitous in our Galaxy represents the fulfillment of an old dream of all humankind.

We have at last the opportunity to carry out this task. We have good technology which is rapidly getting even better. We have the trained and dedicated scientists ready to carry out this mission, and we have finally gained the support of the international scientific community. Let us go ahead with all our strength, but let us also keep in mind that the search for extraterrestrial life is a sensitive subject that can easily lead to misunderstandings. We must provide sensible leadership and show the world that we can proceed with scientific

professionalism and without inflated statements and premature headlines. I am sure that the resolution of this profound question through our work will lead to a deeper understanding of the Cosmos and our place in it. The prize is immense, the time has come, let us proceed.