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A Bibliography on the Search for Extraterrestrial Intelligence

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A Bibliography on the Search for Extraterrestrial Intelligence

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“The Universe is full of magical things, patiently waiting for our wits to grow sharper.”
Eden Phillpotts

INTRODUCTION

Few questions excite the human imagination as do: “Are we alone in the universe?” and, if we are not alone then, “Where are “They?”” The concept of innumerable populated worlds in the universe has existed for millenia, but only in comparatively recent times has serious thought been given to how we might communicate with our presumed extraterrestrial neighbors. Willey Ley and Wernher von Braun note in their book, *The Exploration of Mars* (ref. 722), that the Pierre Guzman Prize of 100,000 francs was offered by the French Academy of Sciences in 1900 to “whoever succeeded in establishing communication with another world *other than Mars*.” In 1900, communication with supposed intelligent beings on Mars was considered too easy to merit an award! Present scientific understanding holds little hope that advanced nonhuman intelligence exists elsewhere in this solar system (whales and porpoises, perhaps, excepted). If contact is to be made with other intelligence in the universe, man must bridge the gulf of interstellar space, which for the nearest stellar neighbor is 500,000 times larger than Earth’s closest approach to the red planet.

In 1959 Giuseppe Cocconi and Philip Morrison proposed in a pioneering article in *Nature* that the 21-cm neutral hydrogen wavelength be monitored by radio telescopes for signs of communicative intelligence on planets of the nearer stars. In the early 1960’s the literature of interstellar communication — searching for extraterrestrial intelligence (SETI) — was miniscule. Following the publication in 1963 of A. G. W. Cameron’s *Interstellar Communication*, a veritable explosion of journal articles and books about SETI began to appear. A first step in keeping track of this expanding literature was taken in 1967 with the publication by Robert L. Forward of a “Bibliography of Interstellar Travel and Communication.” This initial bibliography was supplemented considerably from the body of growing literature and was issued as a research report by Hughes Research Laboratories in May, 1971 by Eugene Mallove and Robert L. Forward. Subsequent updating of this bibliography by Mallove, Forward, and Paprotny led to its serialized publication in the *Journal of the British Interplanetary Society* (red-cover interstellar studies issues) in 1974, 1975, and 1976. Another version of this same bibliography was published in 1974 in *Interstellar Communication: Scientific Perspectives*, edited by Cyril Ponnampertuma and A. G. W. Cameron.

The present “Bibliography on Searching for Extraterrestrial Intelligence” is a uniform compilation and update of the previous bibliographies through February 1977. The major decision to omit references dealing with interstellar transport was made in order to reflect the thrust of the intensified research on listening for signals from extraterrestrial intelligence. In this bibliography of 1488 references, the entries are ordered alphabetically by first author and are consecutively

numbered. A topic index having the organization shown on pages 3 and 4 precedes the list of references. An effort was made to define topics more narrowly than in previous bibliographies. The vast majority of works was obtained, scanned, and classified into one or more topics, thus acknowledging the breadth of some of the references. Works which were unavailable for reading or which were untranslated were assigned to most probable topics based on their title, authorship, and source.

Following the topic index is a periodical and source index which may be useful in recalling forgotten references and in exhaustively obtaining SETI material from journals which may be convenient to a particular researcher.

In compiling the bibliography, prominent scientific journals were scanned for possible entries. Certain periodicals contain a wealth of relevant material and others have very little, so a certain degree of unevenness in the search was inevitable. The *International Aerospace Abstracts* were used to find many of the technical articles. Material in a more popular vein was obtained from the *Reader's Guide*. Cross references to other literature in articles which were obtained were also valuable in finding additional references. Many Eastern European and other international works were obtained by Zbigniew Paprotny of Poland. Some references were gathered from suggestions sent by people from various nations following publication of the earlier bibliographies.

The authors wish to apologize for any important omissions or errors which may have occurred. Letters with corrections or suggestions for additions which might affect future editions of this report should be sent to Dr. Mary Connors at NASA Ames Research Center, Moffett Field, California.

The universal appeal of the SETI problem has been overwhelmingly apparent from the international character of the expanding literature. People the world over are increasingly aware of the very real prospects for contacting other civilizations. At present there are only dim intimations of the true scope of the problem, crude and speculative probabilities with which to judge the chances of a successful search. Men widely debate the consequences of contact — some fear the prospect. The consequences of failure to detect signals may be even greater and may be an ominous portent for our civilization, but if signals from distant life are now beaming our way, sooner or later we will find them!

Ames Research Center
National Aeronautics and Space Administration
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