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SENDING AND SEARCHING FOR INTERSTELLAR MESSAGES

Abstract

The quest for reasonable signals from space is aimed at the past. We are really searching for signals that were sent to us (if any actually were) many, many years ago. But those who many, many years ago sent these signals must have considered their transmissions as Messages to the Future. Analogously, any transmission of signals from Earth, for reception by probable extraterrestrials, we consider as a Message directed toward the Future. Our addressees will discover our messages (if they actually do discover them) only many, many years later. Thus, for them, our Message to the Future will appear as a Message from the Past. In particular, this fact implies that, by both sending and searching for reasonable signals, we (as well as they) appear poised exactly halfway between the Past and the Future: namely, in the Present, in the centre of developments!

This realization establishes a natural unity between sending and searching. Thus, there is a close interrelation between Searching for Extraterrestrial Intelligence (SETI) and Messaging to Extraterrestrial Intelligence (METI). For example, the answers to the questions "where to search" and "where to send" are equivalent, in that both require an equivalent selection from the same target star lists. Similar considerations lead to a strategy of time synchronization between sending and searching. Both SETI and METI use large reflectors. The concept of "magic frequencies" may be applicable to both SETI and METI.

Efforts to understand an alien civilization's Interstellar Messages (IMs), and efforts to compose our own IMs so they will be easily understood by unfamiliar Extraterrestrials, are mutually complementary. Furthermore, the METI-question: "how can we benefit from sending IMs, if a response may come only thousands of years later?" begs an equivalent SETI-question: "how can we benefit from searching, if it is impossible now to perceive the motivations and feelings of those who may have sent messages in the distant past?"

A joint consideration of the theoretical and the practical aspects of both sending and searching for IMs, in the framework of a unified, disciplined scientific approach, can be quite fruitful. We seek to resolve the cultural disconnect between those who advocate sending interstellar messages, and others who anathematize those who would transmit.