42nd SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps (A4)
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A PROTOCOL FOR MESSAGING TO EXTRATERRESTRIAL INTELLIGENCE

Abstract

Messaging to extraterrestrial intelligence (METI) is a branch of study concerned with constructing and broadcasting a message toward habitable planets. Since the Arecibo message of 1974, the handful of METI broadcasts have increased in content and complexity, but the lack of an established protocol has produced unorganized or cryptic messages that could be difficult to interpret. Here we outline the development of a self-consistent protocol for messaging to extraterrestrial intelligence that provides constraints and guidelines for the construction of a message in order to maximize the probability that the message effectively communicates. A METI protocol considers several factors including signal encoding, message length, information content, anthropocentrism, transmission method, and transmission periodicity. Once developed, the protocol will be released for testing on different human groups worldwide and across cultural boundaries. An effective message to extraterrestrials should at least be understandable by humans, and releasing the protocol for testing will allow us to improve the protocol and develop potential messages. Through an interactive website, users across the world will be able to create and exchange messages that follow the protocol in order to discover the types of messages better suited for cross-cultural communication. The development of a METI protocol will serve to improve the quality of messages to extraterrestrials, foster international collaboration, and extend astrobiology outreach to the public.