40th SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps (A4)
SETI II : SETI and Society (2)

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A PROTOCOL FOR MESSAGING TO EXTRATERRESTRIALS - LAUNCH OF AN EDUCATIONAL AND INTERACTIVE WEBSITE

Abstract

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Messaging to extraterrestrial intelligence (METI) is a branch of science concerned with constructing and broadcasting a message toward habitable planets [1, 2]. Since the Arecibo message of 1974 [3], the handful of METI broadcasts have increased in content and complexity; however, the lack of an established protocol has produced unorganized or cryptic messages that could be difficult to interpret. Here we construct 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 is understood. A METI protocol considers several factors including signal encoding, message length, information content,transmission method, and transmission periodicity. Soon, the protocol, along with a message, 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, thus allowing us to improve the message and the protocol if need be. Continual testing and improvement of suitable messages will be developed using an interactive website that will engage the public to create and decode messages according to the protocol. Broader impacts of our protocol and message development place high emphasis on education and will engage teaching, training, and learning by planning activities suitable for K-12 students as well as students of higher education. The development of a METI protocol thus serves as both a method to improve the quality of messages to extraterrestrials and a means for astrobiological outreach. A detailed description of the website interface will be presented as well as committee selection.

[1] Zaitsev A. (2006) arXiv:physics/0610031v1. [2] Sagan C. (1973) Communication with Extraterrestrial Intelligence, MIT Press. [3] Drake F. D. and Sagan C. (1973) Nature 245: 257-258.