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SEEKING INTELLIGENCE FAR BEYOND OUR OWN

Abstract

If technologically active civilizations are short-lived (L <10,000 years), then the chances that SETI experiments will succeed in detecting a signal (as opposed to finding an artifact) are small. Ergo, realistic SETI programs should assume that the transmitting societies they seek are considerably more advanced than us. Simple timescale arguments, based on the pace of terrestrial technology development, imply that searches should be attuned to finding post-biological sentience.

We consider how this might be done by (1) discussing the preferred galactic habitats for artificial intelligence, and (2) investigating possible signaling schemes appropriate to very long-lived intelligence, including extensive electromagnetic intragalactic networks, physical information transfer, and the setting up of a quantum-entangled network capable of instantaneous communication.