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SETI 1: SETI Science and Technology (1)

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NOVEL TECHNOSIGNATURES

Abstract

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Technosignatures can represent a sign of technology that can be used to infer the existence of intelligent life elsewhere in the universe. This has usually meant searches for extraterrestrial intelligence using narrow-band radio signals or pulsed lasers. Back in 1960 Freeman Dyson put forward the idea that advanced civilizations may construct large structures in order to capture, for use, the energy of their local star, leading to an object with an unusual infrared signature. Later it was noted that other objects may represent the signature of very advanced instrumentalities, such as interstellar vehicles, beaming stations for propulsion, unusual beacons not using radio or laser radiation but emission of gamma rays, neutrinos or gravitational radiation. Signs may be unintentional or may be directed. Among intended signs we present some models for signaling that might be used by extremely advanced societies not usually considered in the search for extraterrestrial intelligence.