

Standards Of Proof For The Detection Of Extra-Terrestrial Intelligence

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The privatization of SETI has resulted in global participation in signal detection and analysis activities by a wide range of non- professionals. The SETI community welcomes this grass-roots support, every bit as much as the optical observing community honors the significant scientific contributions of the world's amateur astronomers. However as SETI observatories spring up on college campuses and in home gardens worldwide, a need emerges for establishing rigorous signal verification protocols and stringent standards of proof.

SETI progress can be significantly hampered by both Type I and Type II experimental error. We recognize the possibility that overly rigorous verification standards can result in an unacceptably high incidence of false negatives. This risk must be balanced against the negative impact on SETI activities everywhere, should lax verification procedures result in the reporting of false positives. This paper proposes verification and reporting protocols that seek a middle ground.

A related problem is that non-professional involvement in SETI science increases the opportunity for the perpetration of hoaxes. The SETI League, Inc. has already been peripherally involved in three separate false claims of ETI contact. Such claims call for a prompt but measured response, so as not to subject the SETI community to charges of complicity in conspiracy or cover-up activities. We explore here the dilemma of encouraging grass-roots participation while avoiding association with fraudulent and pseudo-scientific claims.