

41st SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The
Next Steps (A4)
SETI 1: SETI Science and Technology (1)

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INTRODUCTION TO SETI SCIENCE AND TECHNOLOGY

Abstract

This brief overview of SETI science and technology has become an annual fixture to lead off the IAA SETI I sessions. It is offered for the benefit of those many students attending the 2012 International Astronautical Congress. These students tend to be long on enthusiasm and short on experience. They can best appreciate the more advanced technical material being presented by the various speakers if they first have a basic understanding of SETI concepts. This introduction is intended not to be exhaustive, but rather representative. Summarizing a half-century of observational SETI science, it explores the nature of radio telescopes, experimental design strategies, SETI instrumentation, signal analysis, and the hallmarks of artificiality which allow us to differentiate between natural astrophysical emissions and intelligent interstellar transmissions.

KEYWORDS:

SETI, radio astronomy, radio telescope, signal analysis, existence proof