

43rd SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The  
Next Steps (A4)  
SETI 1: SETI Science and Technology (1)

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A PLACE FOR SETI RESEARCH AND OBSERVATIONS IN THE NASA ASTROBIOLOGY  
ROADMAP

**Abstract**

NASA is currently undertaking to restructure and update their Astrobiology Roadmap [1], to replace the version published in 2008 [2]. In the somewhat complicated and mostly virtual meetings held to accomplish that task, there are a number of threads that could easily be dropped. SETI as a concept, and particularly SETI as the name for a scientific endeavor, is one of them. That being said, there is the opportunity to ensure that the concept of SETI is not lost from this NASA reference, and at least one hopeful sign that it is being included. In the current version of the Astrobiology Roadmap [2], the reference to SETI is by concept-only, but the concept is at least clear. Under Objective 7.2—“Biosignatures to be sought in nearby planetary systems” it notes that the task is to “learn how to identify and measure biosignatures that can reveal the existence of life or technology through remote observations,” and an “Example Investigation” is “develop novel approaches to detect evidence of distant technologies.” As of this writing, however, the concept paper for the updated roadmap [1] entitled “How can we identify habitable planets and search for life beyond our Solar System?” does not contain any reference to the detection of technology as a sign of life, nor as an observing strategy. Nonetheless, the concept paper on “How can we enhance the utility of biosignatures as a tool to search for life in the solar system and beyond?” does have the statement in a table featuring different biosignature types, under “the search for evidence of present-day biospheres on exoplanets” lists “remotely observable atmospheric and surface components, signs of technology” as a category of biosignature to be sought. How the then-current draft or final version of the “new” Astrobiology Roadmap deals with the concept of SETI will be reported in this paper.

Refs. 1. <https://astrobiologyfuture.org/> 2. Des Marais, et al. The NASA Astrobiology Roadmap. *Astrobiology* 8:715–730, 2008