

52nd IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) –
The Next Steps (A4)
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HOW TO DISTINGUISH A POTENTIAL SPACESHIP IN SEARCH FOR EXTRATERRESTRIAL
INTELLIGENCE?

Abstract

The search for extraterrestrial life has been around since Jules Verne. Although science fiction was the origin of extraterrestrial life, it has progressed to become a branch of science. Moreover, scientific hypotheses such as the Drake Equation estimate the possibility of life existing in the galaxy. Moreover, the concepts like the Dyson Sphere have allowed scientists to ponder the existence and the level of technology in potential extraterrestrial civilizations. Hence, SETI Research has been going on for many decades and it has been of interest to NASA as well as to other space agencies and research organizations across the world. Naturally, mankind is curious about the possibility of life in the universe and multitude of tools are used for this purpose. Besides radio astronomy methods, the sending of a recording of human voices via the Voyager program is also SETI Research. However, it is important to understand if extraterrestrial life exists, then they will also be searching for us, and thus we would expect them to use spacecraft as reconnaissance to understand Earth. Unfortunately, the society has a very superficial understanding of the possibility of the existence of extraterrestrial spacecraft and almost every unknown object is unfortunately labelled as UFO, which possibly dilutes the importance of SETI research in the eyes of the public. It is perhaps better to take a more didactic and clinical approach to SETI by understanding technological implications. One interesting way this can be achieved is by understanding the public's perception of spaceships in SETI research and to eliminate the myth of UFO,s so that the topic can be discussed more scientifically. This paper focuses on space dynamics, space propulsion, and aerodynamics re-entry of potential ETI spaceships to create a meaningful platform to understand how ETI spacecraft can perform and what it will look like. It will also serve a dual purpose of creating an ideal spacecraft to cross the interstellar void and then the ideal ETI spacecraft concept can be reverse engineered to create an interstellar capable spacecraft within this century. Thus, while this paper focuses on the perception of the society, it also delves into technical realm to present the society with possibilities for the future of SETI, as well as for the future of advanced spaceflight. The concept of flying saucers is disproven, while showing what a potential ETI ship will need to look like and how it will need to function.