

IAF SPACE PROPULSION SYMPOSIUM (C4)
Interactive Presentations - IAF SPACE PROPULSION SYMPOSIUM (IPB)

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INTERSTELLAR SPACE EXPLORATION USING PHOTON PROPULSION

Abstract

Deep space exploration projects are extremely imperative for understanding the different kinds of phenomena in outer space. Spacecrafts such as voyager-1, Cassini, voyager-2 have significantly helped us to study innumerable events in space. Nevertheless, the competence to explore the incessantly inflating cosmos is highly improbable as these spacecrafts have a substantially low thrust and velocity. Furthermore, these spacecraft require an extensive amount of time to study deep space and they are not very efficient. Whereas by using the recently developed propulsion technologies we can provide better performance and this can be significantly useful for deep space exploration projects. Photon propulsion is one such method, which can provide almost 10 percent of the speed of light. It has high specific impulse and low specific thrust. Additionally, photon propulsion is much more efficient than the prevailing propulsion technologies. However, producing such a large amount of impulse is a stimulating task, hence regulating the spacecraft in these circumstances can be even more tedious. Consequently, it requires an intricate and profound mechanism. This paper presents a mechanism to use the photon propulsion technology via compounding the Beam Laser Propulsion (BLP) method which can advance the performance of the spacecraft. The Beam Laser Propulsion method is highly progressive and this can help the spacecraft to get the obligatory amount of thrust. Beam Laser Propulsion has been tested in several laboratories, and a revised version of beam laser propulsion is discussed and its application to spacecraft photon propulsion.