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DESTINY+: TECHNOLOGY DEMONSTRATION FROM THE EARTH TO DEEP SPACE AND EXPLORATION OF ASTEROID 3200 PHAETHON

Abstract

DESTINY+ (Demonstration and Experiment of Space Technology for INterplanetary voYage, Phaethon fLyby and dUst Science) was selected for ISAS small class mission launched by Epsilon S rocketin2016. DESTINY+ is a joint mission between engineering that demonstrate technologies for future low-cost and high-frequency deep space exploration and science that conduct in-situ observations of dust which may have brought life to Earth. DESTINY+ will demonstrate the high performance electric propelled vehicle technology and execute the flyby exploration of asteroid 3200 Phaethon. DESTINY+ starts its voyage from a low elliptic orbit, spirals up the orbits, fly-by the Moon, escapes from the Earth, and depart for the asteroid 3200 Phaethon. It will detect and analyze interplanetary and interstellar dust particles during deep space cruise. This paper will introduce an overview of the DESTINY+ mission.