

IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Interactive Presentations - IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS
SYMPOSIUM (IP)

Author: Ms. shuting wang
China Academy of Launch Vehicle Technology, China, 370690074@qq.com

REUSABLE EARTH-MOON TRANSFER STAGE DEPARTING FROM AND RETURNING BACK TO
LEO SPACE STATION FOR MANNED LUNAR EXPLORATION FLIGHT

Abstract

In order to make full use of the China Space Station which will be built around 2022 and to explore the construction of a securer and lower-cost lunar exploration system, the reusable Earth-Moon transfer stage using the LEO space station as a departing and returning platform is proposed. A variety of configurations of the reusable Earth-Moon transfer stage are compared, the manned lunar exploration mission mode based on the transfer stage is conceived, and the orbit and window of the mission are analyzed. The benefits of the reusable Earth-Moon transfer stage and the application suggestions are given to support the decision of future manned lunar exploration project.